ORIGIN ENERGY RESOURCES LIMITED

Childers Cove 1
WELL COMPLETION REPORT

PEP 154 - VICTORIA

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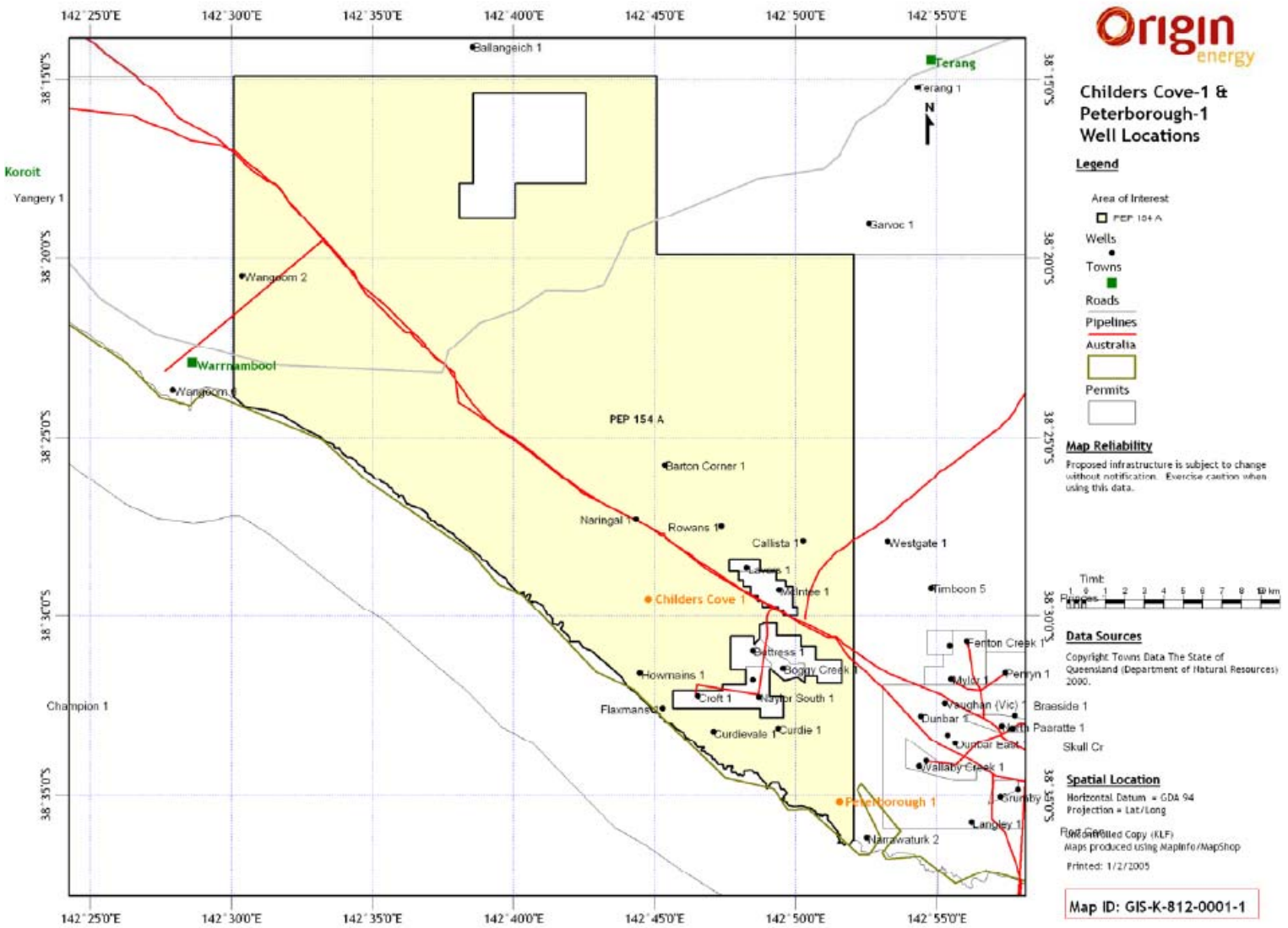
FIGURE 1 LOCATION MAP



GENERAL DATA

Location:	Latitude:	38°29'31.96"S
	Longitude:	142°44'46.66"E
	Station:	CDP 10345
	Line:	Heystesbury 3D I-line 2267/2268
Elevation:	GL:	46.2 metres
	RT:	51.5 metres
Map:		
Grid: (MGA94)	Easting:	0 652 295.00
	Northing:	5 738 126.00
Date Spudded:	19/09/2005	18:00 hours
Reached TD	03/10/2005	08:00 hours
Date rig release:	06/10/2005	20:00 hours
Type Structure:	Low side fault block	

Status:	P & A	
Rig:	Century Rig-7	
Total Depth:	Driller: 2658.0m Logger: 2656.8m	
Plugs:	1. 2570-2500m 2. 2349-2289m 3. 1950-1890m 4. 1320-1260m 5. 1255-1195m 6. 575-510m	
Casing :	Size	Shoe
(a) Surface	245mm	544.5m
(b) Production	n/a	n/a

STRATIGRAPHIC UNITS PENETRATED

AGE	FORMATION	Depth (mRT)	Depth (mSS)	Thickness (m)
M.-L. Miocene	Port Campbell Limestone	5.3	46.2	215.7
E.-M. Miocene	Gellibrand Marl	221.0	-169.5	374.0
L. Oligocene	Clifton Formation	595.0	-543.5	20.7
L. Eocene	Narrawaturk Marl	615.7	-564.2	43.4
M.-L. Eocene	Mepunga Formation	659.1	-607.6	84.3
E. Eocene	Dilwyn Formation	743.4	-691.9	312.9
L. Paleocene	Pember Mudstone	1056.3	-1004.8	80.7
E. Paleocene	Pebble Point Formation	1137.0	-1085.5	62.5
	*Massacre Shale**	*1199.5*	-1148.0	33.9
L. Cretaceous	Paaratte Formation	1233.4	-1181.9	513.0
L. Cretaceous	Skull Creek Mudstone	1746.4	-1694.9	175.7
L. Cretaceous	Nullawarre Greensand	1922.1	-1870.6	91.9
L. Cretaceous	Belfast Mudstone	2014.0	-1962.5	304.5
L. Cretaceous	Flaxmans Formation	2318.7	-2267.0	216.2
L. Cretaceous	*Waarre C**	*2535.2*	*-2483.2*	29.5
L. Cretaceous	*Waarre B**	*2563.7*	*-2512.7*	19.4
L. Cretaceous	*Waarre A**	*2584.1*	*-2532.1*	40.9
E. Cretaceous	Eumeralla Formation	2625.1	-2573.0	33.5
	Total Depth (CDL 7)	*2658.0*	*-2606.5*	

WIRELINE LOGS

Type Log	Run	Interval	Max Temp Recorded
Suite 1 (KCL/PHPA mud @ 2656m)			
MDN-MPD-CAL-MDL-MML-MSS-GR	1	2549 to CS, GR to surface	93.5°C
MDN-MPD-CAL-MDL-MML-MSS-GR	2	2660 to 2360	
MFT-MCG	3	15 points	

FORMATION TESTS

No	Interval / Formation (m)	Periods (mins)	EMP IP/FP (psi)	EMP FSIP (psi)	Fluid to surface (mins)	Surface Press. (max) (psi)	TC mm	Rev Out	Result
	None								

FULL HOLE CORES

No.	Interval	Formation	Cut (m)	Rec.(m)
	None			

PERFORATIONS

Interval (mGL)	Formation	Shots / ft.
None		

LOG INTERPRETATION

Formation	Interval mRT	Sand (m)	**Pay (m)	Ave Ø (%)	Ave Sw (%)
Flaxmans	2318.6 to 2535.3	0	NA	NA	NA
Waarre C	2535.3 to 2564.8	15	0	11.7	80-90
Waarre B	2564.9 to 2584.3	0	NA	NA	NA
Waarre A	2584.3 to 2624.9	12	0 (tight)	<10	50-70

SIDEWALL CORES

Depth (m)	Lithology - (Recovered-cm)
None	

Depth (m)	Lithology - (Recovered-cm)

SUMMARY:

Childers Cove 1 gas exploration wildcat well was drilled in the south-eastern corner of PEP 154 approximately 10.0 kilometres southeast of the costal town of Warrnambool. The well was targeting potential reservoirs of the Late Cretaceous Flaxmans and Waarre Formations in a previously untested low side fault/stratigraphic pinch-out play. The presence of gas was suggested by a strong amplitude anomaly and associated AVO response at the base of the Late Cretaceous Sherbrook Group.

Childers Cove 1 was spudded on the 19 September 2005. A 311mm (12¼") surface hole was drilled to 550.0m and 245mm (9⅝") surface casing was set at 544.5m. The 216mm (8½") main hole was then mud drilled, using an Anderdrift tool to an initial total depth of 2545mRT, taking surveys at almost every 30m.

Precision was rigged up and ran one suite of MCG-MDN-MPD-MSS-MLE-MMR logs, which reached to a depth of 2529mRT. Although no reservoir unit was found to be present in the primary objective it was decided to deepen the well and to fully evaluate the underlying Waarre Formation. The main hole was drilled to a final total depth of 2658mRT.

While drilling additional hole, gas peaks were observed with gas levels of 560, 682, 402 and 305 units respectively. Precision was rigged up again and a MCG-MDN-MPD-MSS-MLE-MMR suite was run over the additional section. A third wireline log run run (MCG-MFT) was conducted to obtain formation pressure data.

The logs verified the presence of Waarre C, Waarre B and Waarre A units below the amplitude anomaly but also confirmed the Waarre C to be water wet. The gas peaks were derived from tight Waarre A sands. Since no gas pay was present in the well, Childers Cove 1 was plugged and abandoned and the rig released at 20:00 hours on 6 October, 2005.

Wellsite Geologists: J Hobday **Card Prepared by:** J Hobday **Date:** 10/05

1. GENERAL DATA

Well Name:	Childers Cove 1
Surface Location: (GDA 94)	Latitude: 38° 29' 31.96"S Longitude: 142° 44' 46.66"E
(MGA 94 Zone 54)	Easting: 652295.00 Northing: 5738126.00
Elevations:	GL: 46.2 m AHD RT: 51.5 m AHD (Century Rig-7)
Petroleum Tenement:	PEP 154
Permit Operator: Other Participants:	ORIGIN ENERGY RESOURCES LIMITED Beach Petroleum Limited
Total Depth (TD):	Driller: 2658.0 metres Logger: 2656.0 metres
Status:	Plugged and Abandoned

2. DRILLING DATA

Date Drilling Commenced:	18:00 hours 19 September 2005
Date Drilling Completed:	08:00 hours 3 October 2005
Date Rig Released:	20:00 hours 6 October 2005

TABLE 1 DRILLING CONTRACTORS AND RIGS

Surface Hole	
Drilling Contractor:	Century Drilling Limited
Drilling Rig:	RIG # 7 COOPER LTO 750

Production Hole	
Drilling Contractor:	Century Drilling Limited
Drilling Rig:	RIG # 7 COOPER LTO 750

Casing Rig	
Service Rig Contractor:	Century Drilling Limited
Service Rig:	RIG # 7 COOPER LTO 750

3. DRILLING SUMMARY

(a) Rig Specifications

DRAWWORKS:	Cooper 750HP Double Drum Drawworks.
CARRIER:	Cooper LTO 750 Carrier with triple front and rear axles 54,000 lb front and 70,000 lb rear. All necessary highway equipment. Unit levelled with hydraulic jacks when stationary.
SUBSTRUCTURE:	DSI 17 ft high substructure with 14 ft clearance under rotary beam, raised with travelling block and pinned at working height. Maximum Rotary: API rated for 350,000 lbs Maximum Setback: API rated for 300,000 lbs Base 12 ft wide x 39 ft long, plated bottom and top seal welded, set back area for 12,000 ft 4-1/2" drill pipe. Working floor 12 ft long x 18 ft wide. Travelling dimensions – 6ft high x 12ft wide x 39 ft long, weight 48,700 lbs (excluding rotary table).
ENGINES:	Two (2) CAT 3406-C diesel engines with Allison Model 5860 CLT torquematic transmission
BRAKE:	202 Parmac Hydromatic
MAST:	Pemco Derrick Model 120-350-C. 120 Ft clear height from ground to underside of crown. Static hook capacity with 8 lines – 338,000 pounds.
CATHEADS:	Hydraulic make-up and break-out unit, mounted in mast
TRAVELLING BLOCK/HOOK:	Ideco Model UTB-160 capacity 160 tons with 4 x 42 ins. Sheaves grooved for 1-1/8" line
WINCHES:	One (1) hydraulic winch – Braden Model PD-12A One (1) hydraulic service winch PD-10 One (1) "Toku" air operated man rider winch
SWIVEL:	Ideco TL-200 ton capacity
RIG LIGHTING:	Electrical Power Systems Lighting system with fluorescent lights for mast, floor, pipe rack area, cellar, engine, pump and mud tank area Explosion-proof lights
KELLY DRIVE:	Varco 27 HDP Pin Drive with rollers to suit 5-1/4" hexagonal kelly
ROTARY TABLE:	One (1) Ideco SR-23-E with 23" opening
MUD PUMPS:	Two (2) National 8-P-80 Triplex Mud Pump driven by CAT D398 TAC engine. 800hp each.

MIXING PUMP:	One (1) Harrisburg 6” x 8” Centrifugal Pump powered by a 60HP 1800 RPM electric motor
MUD AGITATORS:	Three (3) Duck 5 HP (2 suction, 1 intermediate)
SHALE SHAKERS:	Two (2) DFE SCR-01 Linear Motion
DEGASSER:	Drilco Mud/Gas Separator capable of handling a maximum of 700 GPM of fluid One (1) Poor Boy Degasser – 20 foot long 40 inch diameter (see attached drawing)
DESILTER:	Desilter 10 x 5” cones charged with Harrisburg 6 x 8 Centrifugal Pump driven by 60 HP 1800 RPM electric motor
DESANDER:	Harrisburg DSN 1000 Unit with 2 x 10 inch cones charged with a 6 x 8 Centrifugal Pump with a 10 inch Impellor and a 60 HP 1800 RPM electric motor
GENERATOR:	Two (2) CAT 3408DIT, 275 Kw prime, 325 Kw Standby, 60 Hz 230/460 Generating Sets
BOP’s:	One (1) 13-5/8” - 5000 psi Shaffer LWS ram-type double gate studded hydraulic BOP with 9-5/8”, 7”, 5-1/2”, 4-1/2”, 3-1/2”, 2-7/8”, 2-3/8” and CSO Rams One (1) 13-5/8” – 5000 psi Hydril GK Annular B.O.P. studded top and flange bottom
ACCUMULATORS:	One (1) Koomey Accumulator Model 80108-105 – 3000 psi 120 gallon capacity (10 bottles)
UPPER KELLY COCK:	Hydril 5000 psi Upper Kelly Cock with 6-5/8” Reg. LH Pin and Box Connections
LOWER KELLY COCK:	Hydril Kelly Guard 5000 psi Lower Kelly Cock with 4-1/2” IF Connections
DRILL PIPE SAFETY VALVE:	One (1) x 4” IF Inside BOP (Gray) One (1) x 4” IF Full Opening Stabbing Valve
AIR COMPRESSORS:	1 x Sullair 30 HP Model 10-30H 1 x Atlas Copco 20 HP
POWER TONGS:	Farr Model 16-18 hydraulic unit complete with jaws to suit 13-3/8”, 9-5/8”, 7” and 5-1/2” operated from Rig Hydraulic System
SPOOLS:	One (1) DSA 13-5/8” – 5000 psi x 13-5/8” – 3000 psi One (1) DSA 13-5/8” – 5000 psi x 11” – 5000 psi One (1) DSA 13-5/8” – 5000 psi x 11” – 3000 psi One (1) DSA 13-5/8” – 5000 psi x 7-1/16” – 5000 psi One (1) Flanged Spool 13-13/8” – 5000 psi x 13-5/8” – 5000 psi with 2” – 5000 psi x 3” – 5000 psi Outlets (23” high) Flanged Spacer Spool 13-5/8” – 5000 psi x 13-5/8” – 5000 psi (23” high)

		Dimension	Capacity
MUD TANKS:	Three (3)	Length x Width x Height	
	off	1150 x 3000 x 1900	41 bbls
	Pill	2740 x 3000 x 1900	98 bbls
	Premix	4790 x 3000 x 1900	172 bbls
	Suction	4800 x 3000 x 1900	172 bbls
	Int.	1200 x 3000 x 1900	43 bbls
	Desilter	1200 x 3000 x 1900	43 bbls
	Desander	1800 x 3000 x 1900	64 bbls
	Degasser		

KILL LINE VALVE: 2 x 2-1/16" – 5000 psi Gate Valve Manual CIW

CHOKE LINE VALVES: 1 x 3-1/8" – 5000 psi Gate Valve Manual CIW
1 x 3-1/8" – 5000 psi Hydraulic Gate Valve CIW

CHOKE MANIFOLD: 1 x 3-1/8" – 5000 psi Unit complete with
1 x 3-1/8" Adjustable Choke CIW

DRILL PIPE: 10,000 ft – 4-1/2" 16.6 lb/ft Grade 'G-105' 18 degree taper with
6-3/8" tool joints and 4" IF connections

PUP JOINTS: One (1) x 5' x 4-1/2" OD, 'G-105' with 4" IF connections
One (1) x 10' x 4-1/2" OD, 'G-105' with 4" F connections
One (1) x 15' x 4-1/2" OD, 'G-105' with 4"IF connections

HEVI-WATE DRILL PIPE: Six (6) joints – 4-1/2" with 4" IF connections

DRILL COLLARS: Four (4) only 8" OD Drill Collars with 6-5/8" Reg. Connections
Twenty six (26) only 6-1/4" OD Drill Collars, with slip recesses and hardbanded with 4" IF (NC45) connections

KELLIES: One (1) only 5-1/4" Hexagonal 38ft working space (40ft overall) with 6-5/8" Reg. LH Box x 4" IF pin

FISHING TOOLS: One (1) only Bowen 6-1/4" OD Type 'Z' Hydraulic Jar
One (1) only Bowen 9-5/8" Series 150 FS Overshot
One (1) only Bowen 8-1/8" Series 150 FS Overshot
One (1) only 7-7/8" Reverse Circulating Junk Basket
One (1) only 7-3/4" OD Reverse Circulating Junk Basket
One (1) only Junk Sub – 8-1/2" hole
One (1) only Flat Bottom Mill for 8-1/2" hole

WIRELINE SURVEY UNIT: One (1) Mathey Electric Hydraulic Powered Slick Line Unit complete with 12,000 ft x 0.92" diameter line

SUBSTITUTES:	Three (3) only 4-1/2” IF x 4” IF (NC46) cross over Saver Subs Twelve (12) only 4” IF lifting nubbins Two (2) only 6-5/8” Reg lift subs Two (2) only 4” IF Box x 4-1/2” Reg box bit sub (4R float recess) Two (2) only 6-5/8” Reg Box x 6-5/8” Reg box bit sub (5F-6R float recess) Three (3) only 4-1/2” IF Box x 4” IF Pin Cross Over Subs Two (2) only 4” IF Box x 4-1/2” IF Pin Cross Over Subs One (1) only 4” IF Box x 6-5/8” Reg. Box Cross Over Sub One (1) only 4” IF Pin x 2” LP Pin (circulating) 12” long
HANDLING TOOLS	One (1) Set BJ type B Tongs complete with hangers range 3-1/2” – 13-3/8” One (1) Set forged elevator links 108” x 2-3/4” capacity 250 tons Two (2) Sets 4-1/2” Drill Pipe Elevators One (1) Set 9-5/8” H150 Casing Elevators One (1) Set 7” H150 Casing Elevators One (1) Set 5-1/2” H150 Casing Elevators One (1) Set 9-5/8” Single Joint Elevators One (1) Set 7” Single Joint Elevators One (1) Set 5-1/2” Single Joint Elevators One (1) Set 9-5/8” CMSXL Casing Slips One (1) Set 7” CMSXL Casing Slips One (1) Set 5-1/2” SDL-M Casing Slips Two (2) Sets 4-1/2” Model SDXL Drill Pipe Slips One (1) Set 6-3/4” – 8-1/4” DSC-L Drill Collar Slips One (1) Set 5” – 7” DSC-L Drill Collar Slips One (1) Safety Clamp 6-3/4” – 8-1/4” Type MP-R One (1) Varco Casing Bushing with No 1, 2 & 3 Insert Bowl to handle 2-3/8” – 13-3/8” Casing
THREAD PROTECTORS:	Three (3) x 9-5/8” Klampon Style Three (3) x 7” Klampon Style Three (3) x 5-1/2” Klampon Style
KELLY SPINNER	Foster Model 77 Hydraulic Kelly Spinner operated by Rig Hydraulic System
PIPE SPINNER	Weatherford Lamb Model 13000-J-29 Spinnerhawk
WELDING EQUIPMENT	One (1) Cigweld, 270amp Diesel Powered Welder One (1) Oxy-Acetylene Welder and Cutting Set
DOGHOUSE:	One (1) steel unit 16ft x 7ft x 8ft
GENERATORS :	One (1) steel unit to accommodate generators
CATWALKS:	One (1) Set incorporating Junk Rack 48ft long x 5ft wide x 42 inches high
PIPE RACKS:	One (1) Set 6 tumble-type each 28ft x 42 inches high
DAY FUEL TANK:	One (1) Tank 10ft x 8ft 6ins x 2ft (4870 litres capacity)

WATER / FUEL TANK:	One (1) unit 23ft long x 9ft 6ins wide x 8ft high (300 bbls) with fuel storage tank (capacity 25,000 LTS)
OIL STORAGE:	One (1) skid-mounted oil storage unit
DRILLING RATE RECORDER:	Totco 6 pen record-o-graph (penetration, weight, pump pressure, rotary torque and rotary RPM)
DEVIATION RECORDER:	One (1) only Totco Double Recorder 0 – 8 degrees
INSTRUMENTS & INDICATORS:	Martin Decker FS Weight Indicator National FS Deadline Anchor complete with E160 load cell Totco DCT-25 Tong Torque Indicator Totco Rotary Torque Unit (Relative Indicator) Totco Stroke Rate Meter complete with limit switches for No. 1 and No. 2 pump accumulated strokes Totco RPM tachometer system MFC101A Mud Flow Fill System Totco Pitometer Model 'L2' 2 Pump pressure sensors and gauges – 1 for SIPP, 1 for SICP
MUD TESTING:	One (1) only Baroid Mud Field Test Kit
RATHOLE DRILLER:	Wichita Engineering Rathole Driller for 5-1/4" Kelly
MUD SAVER:	Katch Can unit with 4-1/2" Sealing Rubbers
CELLAR PUMP:	One (1) only Wilden Air diaphragm unit 3"
WATER PUMP:	One (1) only Flex-Tool fully submersible Model 212, driven by 3 phase electric motor. Capacity 61,000 litres/hour
FIRE EXTINGUISHERS:	One (1) Set as required by State Mining Regulations for Rig and Camp
PIPE BINS:	Four (4) only 36ft long x 10ft wide x 42 inches high
CUP TESTER:	Cameron Type 'F' cup tester with 4" IF connections
TRANSPORT EQUIPMENT & MOTOR VEHICLES:	One (1) only Caterpillar, model 950 Payloader (or equivalent) One (1) only 4 X 4 Toyota Utility with Satellite Telephone System One (1) only 4 X 4 Toyota Crew Car with Satellite Telephone System
RIG ACCOMMODATION:	One (1) skid-mounted Rig Manager/Operator Engineer Unit 40ft x 10ft x 10ft One (1) skid-mounted Geologist/Mud Engineer Unit 40ft x 10ft x 10ft One (1) skid mounted 10 person Enviroflow Unit One (1) skid-mounted Office Communications Building 2 - 10ft x 20ft Offices

COMMUNICATION:	One (1) Satellite Telephone/Fax System
CAMP AND EQUIPMENT:	1 Camp Generator House 31 ft long x 10 ft wide skid mounted complete with 2 3306 T 130 Kw, 50 Hz, 200 – 400 volt generators, camp distribution panel. 6794 litres fuel storage, 12,000 litres fresh water storage and 24,000 litres shower water storage. 1 Ablution / Laundry 40ft x 10ft x 10ft 4 x 8 Man Bunkhouses 40ft x 10ft x 10ft 1 Kitchen / Dining Room 40ft x 10ft x 10ft 1 Cooler / Freezer 1 Recreation Room 40ft x 10ft x 10ft 1 Enviroflow unit 30ft x 9ft 10” x 10ft 6” 1 VIP Ablution Building including accommodation and ensuite facilities for two (2) females

(b) Operations Summary

The operations summary for Childers Cove 1 has been compiled from the tour sheets and daily drilling reports. Chris Dann, Bryan Webb, Seton Porter and Quinton Cahill provided onsite drilling supervision for Origin Energy Resources Limited. Further details are provided in the time/depth curve and the time analysis chart in Appendix 10.

Childers Cove 1 was spudded at 18:00 hours 19 September 2005. The 311 mm (12 ¼") surface hole was drilled to 550.0 m using Century Rig-7. The hole was circulated clean prior to pulling out and running surface casing. A total of 45 joints of 245 mm (9⅝") K-55 casing were run and set at 544.5 m. The casing was cemented to surface with 15.8 ppg Class G cement.

After drilling out cement the production hole was drilled by Century Rig 7. The 216mm (8 ½") hole was drilled with a Hughes HC605S drill bit to 2545 m (ITD). The initial total depth was reach on the 30 September 2005. Precision Wireline Services conducted wireline logging consisting of: MCG-MDN-MPD-MSS-MLE-MMR (Run1).

Childers Cove 1 resumed drilling with the Hughes HC605S being re-run to a final total depth of 2658mRT on 3 of October 2005. Precision was rigged up and a second wireline log run, MCG-MDN-MPD-MSS-MLE-MMR suite was conducted which reached a depth of 2656.8mRT. A third run was then conducted which consisted of a MCG-MFT formation pressure tools. Since no gas pay was present in the well, Childers Cove 1 was plugged and abandoned and the rig released at 20:00 hours on 6 October 2005.

TABLE 2 HOLE SIZES AND DEPTHS

Surface Hole	
Size	311 mm (12¼")
Interval	0 m – 550.0 m
Casing	245 mm (9⅝")
Depth	544.5 m
Production Hole	
Size	216 mm (8½")
Interval	499.0 m –2658.0 m (TD)
Casing	NA
Depth	NA

TABLE 3 CASING AND CEMENTING SUMMARY

Surface	
Size	9⅝" / 245 mm
Weight	36 lb/ft
Grade	K-55
Shoe Setting Depth	544.5 m
Quantity of Cement	140bbls lead @ 13.2ppg and 56bbls tail slurry at 15.8. Displace with 138bbls of water.
Interval Cemented	To surface
Production	
No production casing was set in Childers Cove 1	

TABLE 4 SUMMARY OF MUD SYSTEM

a.	Spud – 550m	Fluid	PHGel Mud
		Additives	Trugel 13A, Caustic Soda (Dry), Soda Ash, Potassium Chloride.
b.	550m – 2658m	Fluid	KCl / PHPA / Polymer
		Additives	Caustic Soda (Dry), Potassium Chloride, Glute 25, Polypluss Powder, Duotec, Polypac UL, M-I BARite, OS-1, M-I BAR, Defoam A, Sodium Bicarbonate, Kwik Seal Fine

TABLE 5 PLUG AND CEMENTING SUMMARY

No.	**Set at**	**To**	**Sack and Type**
1	2570.0	2500.0	95 sacks of G cement
2	2349.0	2289.0	80 sacks of G cement
3	1950.0	1890.0	80 sacks of G cement
4	1320.0	1260.0	95 sacks of G cement
5	1225.0	1195	95 sacks of G cement
6	575.0	510.0	110 sacks of G cement

(c) Hole Deviation

Childers Cove 1 was planned as a vertical well. The hole was continuously being monitored during the drilling operation. The Anderdrift measurements indicate that Childers Cove 1 can be considered as a vertical hole (Appendix 7).

(d) Lost Time

A time breakdown and the time/depth curve for Childers Cove 1 are included in Appendix 10.

4. LOGGING AND TESTING

(a) Mudlogging

Geoservices Overseas Oilfield Services SA provided mudlogging services. Cuttings gas was monitored from spud to total depth. A mudlog recording lithology, penetration rate, mud gas and other data was prepared and is enclosed in Appendix 4.

Ditch Cutting Samples

10m cutting samples were collected from surface casing shoe to 500m, 5m samples from 500m to 1800m, and 3m samples from 1800m to total depth. The cuttings samples and sets were:

TABLE 6 CUTTING SAMPLES

Set	Size	No	Type	In	For
A	500 g	1	Unwashed & air dried	Cloth bag	Origin
B & C	250 g	2	Washed & air dried	Minigrip bag	MPD & DPI
D	100 g	1	Washed & air dried	Minigrip bag	Origin
E		2	Washed	Samplex tray	Origin

(b) Coring

None

(c) Sidewall Cores

None

(d) Testing

None

(e) Wireline Logging

Wireline logs were run by Precision Wireline. PDF log files are contained in Appendix 5.

TABLE 7 ELECTRIC LOG SUMMARY

Type Log	Run	Interval	Max Temp Recorded
Suite 1 (KCL/PHPA mud @ 2658m)			
MDN-MPD-CAL-MDL-MML-MSS-GR	1	2532 to surface	
Suite 2 (KCL/PHPA mud @ 2658m)			
MDN-MPD-CAL-MDL-MML-MSS-GR	2	2658 to surface	95.5°C
MFT-GR	3	15 points	

A total of 15 pressure tests were attempted with the MFT-tool. Three tests are interpreted to represent good data points. A total of 10 points are considered curtailed (tight/low permeability) and 1 point as supercharged. The pressure data are contained in Appendix 6.

(f) Velocity Survey

No checkshot survey was conducted for Childers Cove 1.

5. PRE-DRILLING SUMMARY

Childers Cove 1 is proposed as a vertical gas exploration well in PEP 154 targeting the basal Sherbrook Group sandstones of the Waarre Formation and/or Flaxmans Formation. The Waarre Formation is the productive reservoir unit in the Port Campbell Embayment. All previous gas discoveries in the Port Campbell Embayment group within a maximum radial distance of 25 kilometres from the proposed Childers Cove 1 well location. In contrast to the existing gas discoveries which are all located on high side fault blocks, the proposed exploration well is planned to test a new play type that combines a "low side fault block" with a "stratigraphic pinch-out" play. The main technical justification for Childers Cove 1 results from the presence of a strong amplitude anomaly and supporting AVO response at the Waarre/Flaxmans reservoir level. Despite being located in the proven hydrocarbon system of the Port Campbell Embayment the main risks associated with Childers Cove are related to the structural and stratigraphic closure of the trap, especially the yet unproven effectiveness of a low side fault play for the Waarre Formation. Childers Cove is partially covered by the merged Heytesbury-Nirranda 3D seismic data. In addition to that the large-scale structural setting and outline of the prospect is covered by several 2D seismic lines.

The existing 3D and 2D seismic data over Childers Cove exhibit a higher amplitude package between the Belfast Mudstone and the late Early Cretaceous unconformity at the top of the Eumeralla Formation. Amplitude anomalies and AVO responses commonly indicate the presence of gas on the onshore 3D seismic data. Enhanced amplitudes on 2D seismic appear to also coincide with existing gas accumulations. This correlation is substantiated by previous gas discoveries and it was this diagnostic feature which led to the recognition of the Childers Cove prospect. The risk and uncertainty associated with the interpreted new play type combination trap are outweighed by the potential size of the Childers Cove prospect.

The Childers Cove prospect is estimated to contain a mean success volume of 14.6 BCF of recoverable gas. The P90 and P10 cases equate to 9.0 and 21.0 BCF of recoverable gas respectively.

6. DRILLING RATIONALE

(a) Regional Geology

The development of the Otway Basin was initiated during the Late Jurassic to Early Cretaceous as an extensive rift-valley system. The early rift related sediments comprise a monotonous series of non-marine, mainly fluviatile with minor lacustrine sandstone-, siltstone- and mudstone deposits. These sediments record a large influx of volcanic material and form the lowermost Otway Group including the early half graben fills of the Crayfish Group and the overlying Eumeralla Formation.

The top of the Otway Group is marked by a regional unconformity surface and significant amounts of uplift and erosion of Otway Group sediments (mainly Eumeralla Formation) has occurred along the former basin margins prior to the deposition of the Sherbrook Group which records the onset of renewed basin-wide subsidence during Cenomanian times. On seismic data the contact between the Eumeralla Formation and the overlying Waarre Formation may be seen as a true angular unconformity but more often appears to be conformable.

The Sherbrook Group was deposited as a restricted marine transgressive/regressive cycle over portions of the former rift valleys. The Waarre Formation forms the basal unit of the Sherbrook Group and represents a marginal-marine environment that included beaches, barrier islands, lagoonal swamps and tidal inlets. The overlying Belfast Mudstone is related to a prodeltaic environment and is mainly characterised by pyritic and to a minor extent glauconitic claystone. The Belfast Mudstone constitutes the main regional seal for the underlying prospective Waarre Formation.

Towards the basin margin the Belfast Mudstone thins considerably and grades into siltstone and localized sandstone. Moreover, a clear distinction between the Belfast Mudstone and the overlying Nullawarre Greensands as well as the Skull Creek Mudstone is not always possible on seismic data and a transitional relationship for all three units at least in parts of the Port Campbell Embayment appears to be most likely. The overlying upper Sherbrook Group is a sand dominated sequence of which the Paraatte Formation is interpreted to represent the “Lower Delta Plain” overlain by the “Upper Delta Plain” Timboon Sandstone Member. The entire Paaratte Formation is believed to form a thick regressive sequence.

The Lower Tertiary Wangerrip Group preserves a second major transgressive/ regressive cycle in the Otway Basin. The transgressive Pebble Point Formation includes potential reservoir sands at the base of the Tertiary which is then overlain by the prodeltaic Pember Mudstone. The Pember Mudstone could act as seal for the underlying clean sandstones within the Pebble Point Formation. The overlying Dilwyn Formation becomes increasingly arenaceous towards the top of the sequence.

Finally the upper Tertiary units of the Otway Basin are characterized by open marine deposits of the Nirranda and Heytesbury Groups. The associated lithologies display an increasingly carbonate-rich nature, reflecting the ongoing separation between Australia and Antarctica.

A simplified stratigraphic overview for PEP 154 is included in Figure 2.

The depositional sequences outlined above were controlled and accompanied by a complex sequence of structural events. The large-scale basin development can be reasonably well explained using observed lithologies, interpreted depositional environments and thickness variations across the entire Otway Basin. In contrast the early

tectonic evolution of individual sub-basins is less well established due to poor seismic imaging of basement structures.

The complex fault framework observable today and the related hydrocarbon traps within the Port Campbell Embayment resulted from the reactivation of Late Jurassic and Early Cretaceous rift structures and basement faults during the Late Cretaceous and Tertiary basin development. Renewed tectonic activity started during the deposition of the Belfast Mudstone which appears to have in-filled the newly forming accommodation space associated with extensional and/or trans-tensional fault movement. Local erosion and re-deposition of basal Sherbrook Group sediments (Waarre Formation) prior to the deposition of the Belfast Mudstone is suggested from individual seismic lines but has not been mapped and proven on a more regional scale.

(b) Previous Discoveries

The Port Campbell Embayment represents a proven hydrocarbon province with a total of 12 commercial gas discoveries and related production licences located in PEP 154 and surrounding permits (Table 8). Gas production commenced with the North Paaratte Field in 1986, however, most fields are either depleted or close to depletion.

TABLE 8 GAS DISCOVERIES IN THE PORT CAMPBELL EMBAYMENT

Onshore / Port Campbell Gas Field (> 4 BCF only)	Discovery	OGIP (original gas in place) [BCF]
North Paaratte	1979	15.8
Wallaby Creek	1981	17.8
Iona	1988	27.0
Mylor	1996	13
Fenton Creek	1997	7.5
Penryn	2000	6.0
MacIntee	2001	22.8
Tregony	2001	11.0
Croft	2002	8.7
Seamer	2002	4.5
Naylor	2003	8.7

(c) Prospect Description

Childers Cove 1 is proposed to test a new, AVO supported Waarre play type which combines a low side fault block setting with a stratigraphic pinch-out. A stratigraphic trapping mechanism is required to provide closure in the up-dip direction of the 'Childers Cove Low Side Fault Block'. Figure 3 contains a depth structure map for the base Belfast Mudstone at Childers Cove. The larger structure may be viewed as a small-scale pull-apart basin in which the prospect stretches along the central basin axis. The available seismic data demonstrate that the existing amplitude anomaly and related AVO response is restricted to the north-western portion of the 'Childers Cove Mini Basin' which resembles the hanging wall block or downthrown side of the 'Childers Cove Fault' in Figure 3. The interpreted fault configuration underlines the concept of a laterally confined and rather localized depositional setting that could be related to the initial formation of the small pull-apart basin. The Childers Cove Trough is bounded by the 'Childers Cove Fault', the 'Transfer Fault East" and the 'Transfer Fault West' as illustrated in Figure 3.

The Childers Cove play concept invokes an isolated and probably reworked, high quality sandstone that could have been deposited along the Childers Cove Trough axis. It is believed that tectonic activity could have started shortly after the regional deposition of the Waarre Formation and had then continued throughout the deposition of the Belfast Mudstone which is substantiated by the observed thickness variation across the individual fault blocks. In this view erosion or partial removal of the Waarre Formation from the surrounding highs could have sourced a laterally confined, highly sand-prone equivalent of the Flaxmans Formation. The possible absence of 'Waarre C' at Howmains 1 which is located 4.5 kilometres towards the south and up-dip from Childers Cove supported this model.

Childers Cove constitutes a true low side fault play towards the north and west where it requires the main 'Childers Cove Fault' and 'Transfer West Fault' to seal (Figure 3). The potential reservoir units at Childers Cove are juxtaposed against the Eumeralla Formation in the footwall of the two faults. In eastward direction the 3D seismic data indicate a pinch-out of the higher amplitude package. The deepest portion of the Childers Cove Trough is situated in the hanging wall of the 'East Transfer Fault' so that additional dip closure is provided in this direction.

The southern closure of the prospect is most critical as it lies outside the existing 3D seismic coverage where the reservoir layers are interpreted to pinch-out up-dip. The existing 2D seismic data over the southern prospect margin indicate the presence of small-scale faults which either dip towards the north ('North 1 Fault' and 'North 2 Fault' in Figure 3) or towards the south ('South 1 Fault' in Figure 3). The faults which are genetically linked to the Childers Cove pull-apart structure show relatively small displacements. Although the faults are difficult to correlate across the existing 2D seismic grid, they could provide additional "fault seal" and closure, especially in the case of an already thinned reservoir. It is however unlikely that the entire structure can be closed off

by faults since a potential spillway exists between the two north dipping faults and towards Howmains 1 (Figure 3) according to the seismic interpretation.

In addition to this, some uncertainty exists for the interpreted southward continuation of the Transfer West Fault in Figure 3. The two relevant 2D seismic lines are of rather poor quality and the fault could also bend towards the southwest or otherwise could somehow terminate abruptly. The exact relationship between the 'Transfer West Fault' and the 'North 2 Fault' is seismically unresolved and stratigraphic closure may also be required for the south-western margin of the Childers Cove prospect.

(d) Geophysical Data

Figure 4 illustrates the existing 2D seismic grid and additional 3D seismic coverage over the Childers Cove prospect. The merged Heytesbury-Nirranda 3D covers a fair portion over Childers Cove and the presence of a strong seismic amplitude anomaly has been mentioned in the previous section. A 3D seismic traverse through the central trough axis is contained in Figure 5. Figure 6 shows the same seismic traverse path in an enhanced amplitude display. The fact that the dimming of amplitudes at the edge of the anomaly coincides with an apparent thinning and disappearance of the seismic event has been interpreted to reflect the presence of a true stratigraphic pinch-out as illustrated in Figure 7. This interpretation is also supported by the regional mapping and correlation of the top of the Eumeralla Formation. Figure 8 illustrates the interpreted thickness variation for the base Belfast Formation to top Eumeralla Formation interval on a composite seismic montage running from Buttress 1 to Homains 1 and from Buttress 1 towards Childers Cove.

Assuming a correct interpretation for the Eumeralla Formation, the higher amplitude package at Childers Cove would be restricted to the western portion of the Childers Cove Trough. An alternative interpretation in which the high amplitude package at Childers Cove is interpreted as Waarre Formation requires the presence of a larger but poorly imaged fault in the 3D-data (Figure 9B). Although the Transfer West and Transfer East Faults are not well resolved at the edge of the Heytesbury 3D (Figure 9A), the interpretation shown in Figure 10B could not be substantiated by the integration and interpretation of all the available seismic 2D/3D-data. Nevertheless a correlation of the higher amplitudes with the Waarre Formation cannot be ruled out exclusively.

(e) AVO Study

The AVO analysis was carried out using PSTM gathers supplied by Santos for the merged Heytesbury-Nirranda 3D. AVO intercept (A) and AVO gradient (B) volumes were calculated using an input angle range of 0-30 degrees. An A versus B cross-plot was generated for a 100ms interval about the near top Waarre horizon pick (see example in Figure 10). The graph shows a well defined water-saturated background trend, with gas sands expected to plot away from this trend. A fluid factor volume, defined as the magnitude of the deviation from the background trend, was generated, from which amplitude maps were extracted within the target interval.

A comparative study of the wells within the merged 3D area revealed that the presence of an AVO anomaly correlates well with the presence of gas (Table 9). The main conclusions of the AVO study can be summarized as follows: PSTM gathers at Childers Cove show an increasing amplitude with offset, resulting in an AVO (fluid factor) anomaly similar in magnitude and character to nearby gas discoveries such as McIntee 1 (Figure 11).

TABLE 9 AVO ANOMALIES PRESENT OR ABSENT

	AVO Anomaly?
Boggy Creek 1	
Buttress 1	
Croft 1	
Dunbar 1	
Fenton Creek 1	
Grumby 1	
Langley 1	
Lavers 1	
McIntee 1	
Mylor 1	
Naylor 1	
North Paaratte 1	
North Paaratte 2	
Penryn 1	
Penryn 2	
Port Campbell 1	
Seamer 1	
Skull Creek 1	
Tregony 1	
Wallaby Creek 1	
Wallaby Creek 2	
Wild Dog Road 1	

	AVO Anomaly?
Port Campbell 3	
Vogel 1	
Blackwood 1	
Braeside 1	
Callista 1	
Curdie 1	
Curdievale 1	
Dunbar East 1	
Naringal 1	
Naylor South 1	
Rowans 1	

	AVO Anomaly?
Skull Creek North-1	
Vaughan-1	
Port Campbell-3	
Melba-1	
Port Campbell-4	

(f) Reservoir

The Late Cretaceous Waarre Formation is the main sandstone reservoir unit in the Port Campbell Embayment. It unconformably overlies the Early Cretaceous Eumeralla Formation and is either overlain by the Flaxmans Formation or by the Belfast Mudstone, the principal top seal. The transition from Waarre to Flaxmans to Belfast Formations represents the incursion of marine conditions into the Port Campbell Embayment. The Waarre Formation in the past has been subdivided into several units, Waarre A to D respectively (Buffin, 1989). This has been achieved on the basis of recognized facies types and associated sandstone petrology. However, the identification of these units in well logs and the resulting lateral extrapolation of facies belts are sometimes difficult. A general practice appears to have been to assign the cleanest of all sandstone layers present in a given well

section as the Waarre C. No clear distinction exists for the upper Waarre D unit and the Flaxmans Formation and both names have been used in the past. Still the overall concept of regionally distributed high quality Waarre reservoir sandstone is generally valid and has been proven for the Port Campbell embayment by the existing wells and gas fields. The lateral continuity of a high net-to-gross sandstone unit above the Eumeralla Formation is also demonstrated by the general occurrence of a higher amplitude package on seismic data.

At Childers Cove the higher amplitude package could represent the Waarre Formation although this interpretation is not supported by the mapping and correlation of the top of the Eumeralla Formation as illustrated in Figure 8. In this case the observed termination of the high amplitude events may be related to erosion and truncation of the Waarre Formation at the base Belfast Mudstone unconformity surface. An alternative concept of a sand dominated Flaxmans Formation which is overlying the Waarre at Childers Cove has been discussed before.

Based on the geophysical interpretation the potential reservoir units at Childers Cove should have comparable reservoir characteristics to the 'Waarre C' in the neighbouring gas wells. The Waarre and the 'Waarre C' in particular has been described as excellent reservoir sandstone with porosity values over 20 % and measured permeability values exceeding 1 Darcy. In the reserve estimate for Childers Cove a mean porosity between 12 and 16 % has been combined with a net-to-gross ratio between 35 and 65 % which reflects the observed variation of net pay in the neighbouring gas wells. The sandstone packages are generally from 3 to 15m thick and are blocky in shape. The basal Waarre is interpreted to be shallow marine to marginal marine. After the transgression in the lower part of the Waarre, the formation became more regressive, depositing the best reservoir sands in the lower coastal and delta areas.

(g) Seal

Whereas the Belfast Mudstone constitutes a proven top seal for the Waarre Formation it also represents the preferred lateral fault juxtaposition against a high side fault blocks. In a low side fault setting the Waarre units are juxtaposed against the Eumeralla Formation and this play has not yet been proven in the Port Campbell Embayment. Therefore fault seal represents a key risk for Childers Cove. In addition to that a base seal is also required for the pinch-out element of the prospect. The effectiveness of intra-formational seals within the Waarre Formation is known from the offshore Otway Basin at Casino.

The mudstone dominated 'Waarre D' or Flaxmans Formation is often developed as a top seal unit in addition to the overlying Belfast Mudstone. Several non-reservoir mudstones are distributed within the Waarre Formation itself as documented by several wells. This fact indicates a discontinuous occurrence of reservoir sands associated with some heterogeneity in the facies architecture. In this perspective the presence of adequate base seals appears to be less critical with respect to fault integrity.

(h) Source and Migration

Coals within the Early Cretaceous Eumeralla Formation are interpreted as the main source interval underlying the Late Cretaceous Waarre Formation. In contrast the presence of early rift related Crayfish Group sediments which could contain fluvial-lacustrine shales in the Casterton Formation and overlying units is largely unknown. Moreover, the actual thickness distribution for the Eumeralla Formation and the related basement/cover rift geometry and presence of buried, early rift segments remain unresolved in the existing seismic data. This is different from the Tyrendarra Embayment towards the west where a complex framework of Crayfish Group halfgrabens and overlying Eumeralla Formation is clearly documented by the available seismic data. Burial and maturation studies from this area have indicated a two stage hydrocarbon generation history with expulsion from deeply buried Crayfish Group sediments towards the end of the Early Cretaceous followed by expulsion from the Eumeralla Formation where it underwent sufficient burial during the Tertiary.

In the Port Campbell Embayment the top of the Eumeralla Formation below the Waarre Formation is immature to early mature for oil. This suggests that the existing gas fields have been charged from deeply buried Eumeralla source intervals and that gas had migrated upward along deep seated, pre-existing and/or re-activated fault systems. Again a Crayfish Group source cannot be excluded. The exact timing of expulsion and gas charge is largely unknown and strongly depends on the top Eumeralla maturation profile and variable depth to the relevant source intervals.

(i) CO_2 Issues

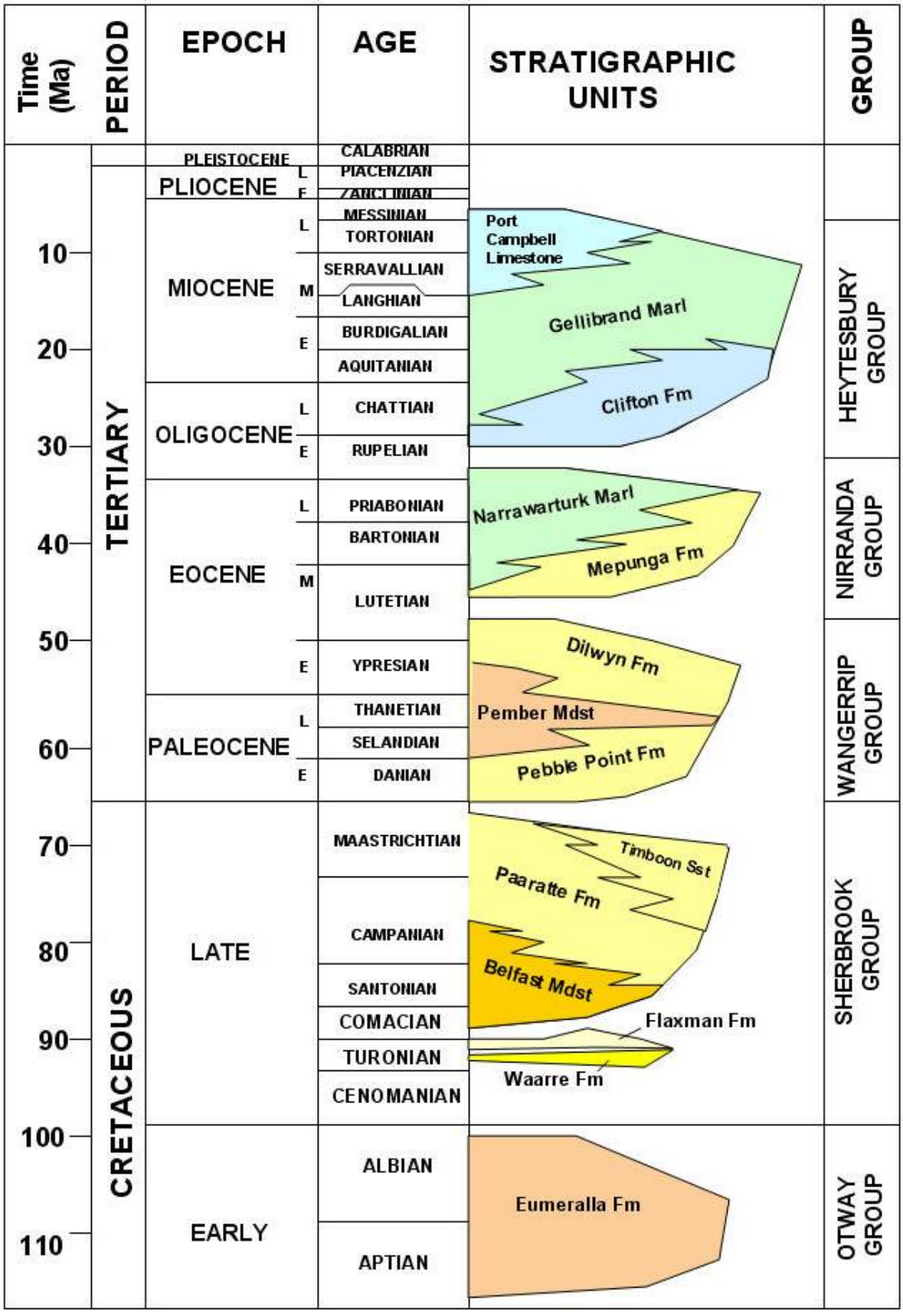
The presence of $C0_2$ is a known risk and manifested by the discoveries of the Buttress and Boggy Creek $C0_2$ accumulations. There is no doubt that $C0_2$ flushing or contamination is related to subsurface magmatic intrusions and migration of $C0_2$ along fault surface that could have dilated during the emplacement of magmatic dikes. However, the occurrence of $C0_2$ in direct proximity to $C0_2$–free gas fields indicates the unpredictable nature of $C0_2$ distribution in the area. The risk of finding $C0_2$ is generally accounted for under charge risk or built into the volumetrics. At Peterborough the risk of finding significant amounts of $C0_2$ was estimated to be 20 percent based on the occurrence and distribution of $C0_2$ accumulations in the Port Campbell Embayment.

(j) Key Risks

The key risks for Childers Cove are seen in the unproven play type which requires a fault juxtaposition seal of Waarre Formation against Eumeralla units. Moreover, uncertainty exists for the interpreted stratigraphic trapping mechanism since no 3D seismic data exist over the critical southern margin of the Childers Cove prospect. In addition to that some risk must be attributed to trap breaching due to late-stage fault reactivation. Fault breaching may have occurred at Melba 1 where log data point towards the presence of residual gas.

On the other hand the nearby gas fields suggest only minor risks for the preservation of reservoir, the absence of source and insufficient charge. The risk of CO_2 contamination has been discussed above. Main risk categories were estimated as shown below resulting in an overall chance of success between 10 to 15 percent for Childers Cove 1.

FIGURE 2 STRATIGRAPHIC OVERVIEW



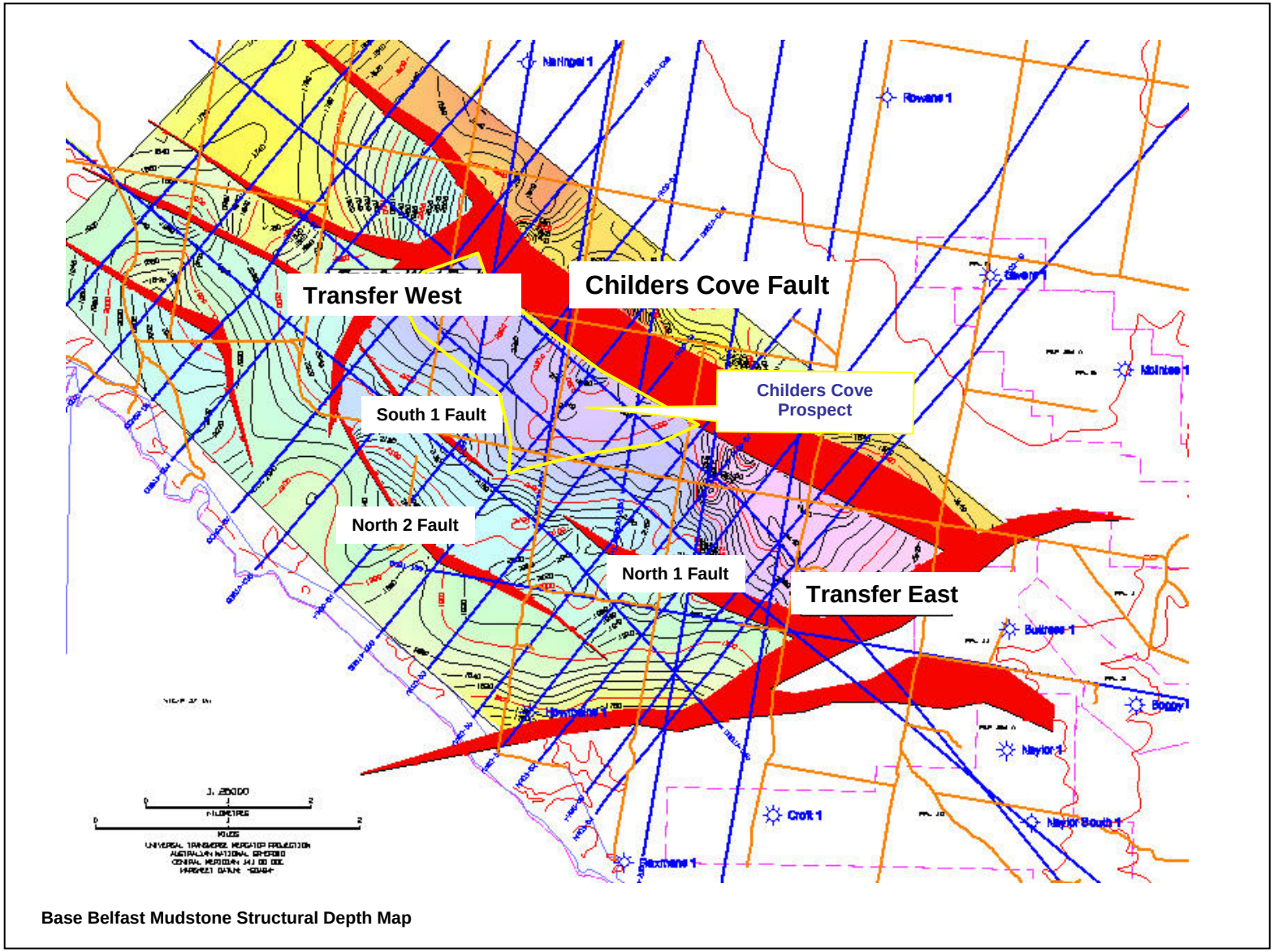


FIGURE 3 CHILDERS COVE PROSPECT – STRUCTURAL OVERVIEW

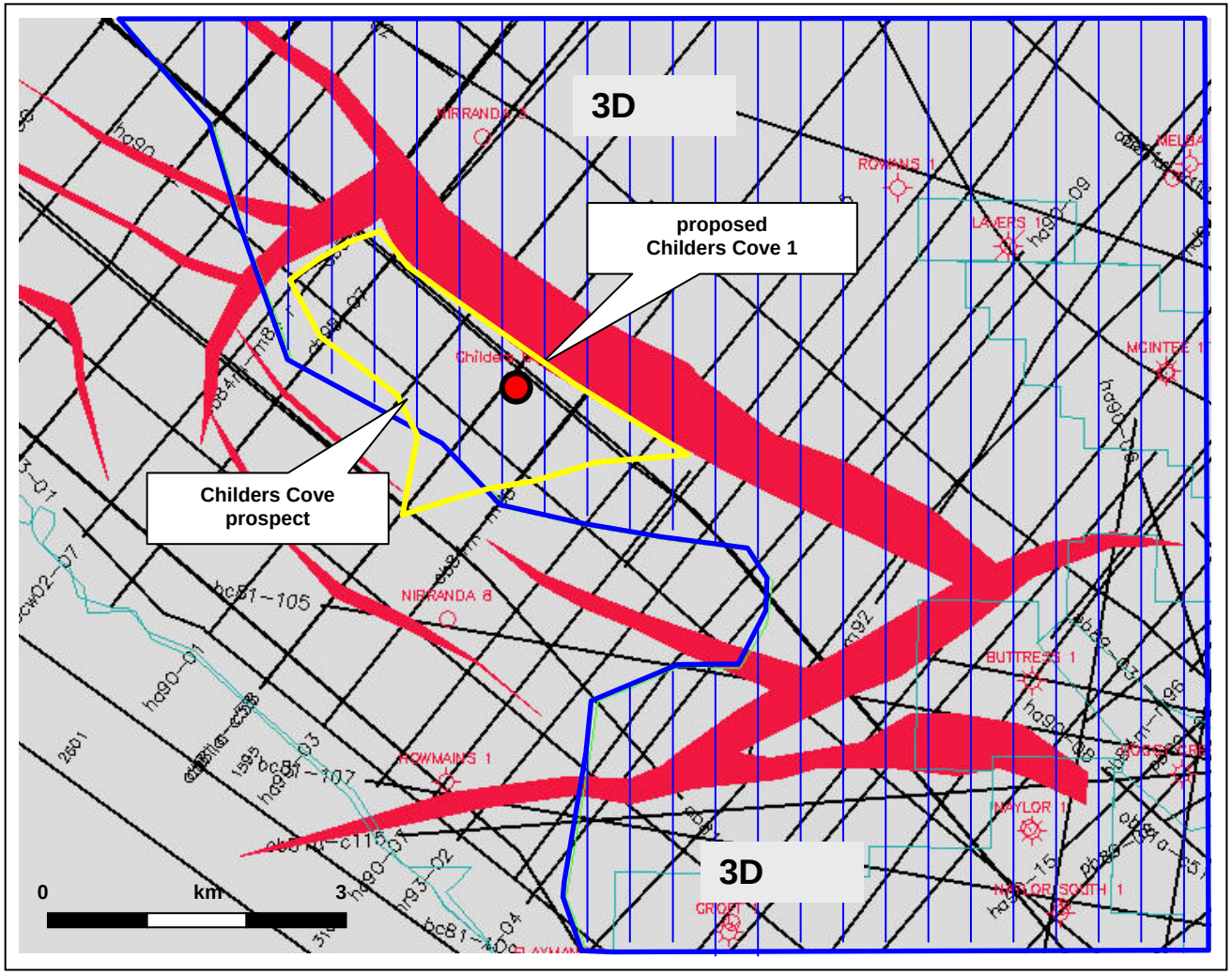


FIGURE 4 CHILDERS COVE PROSPECT – SEISMIC COVERAGE

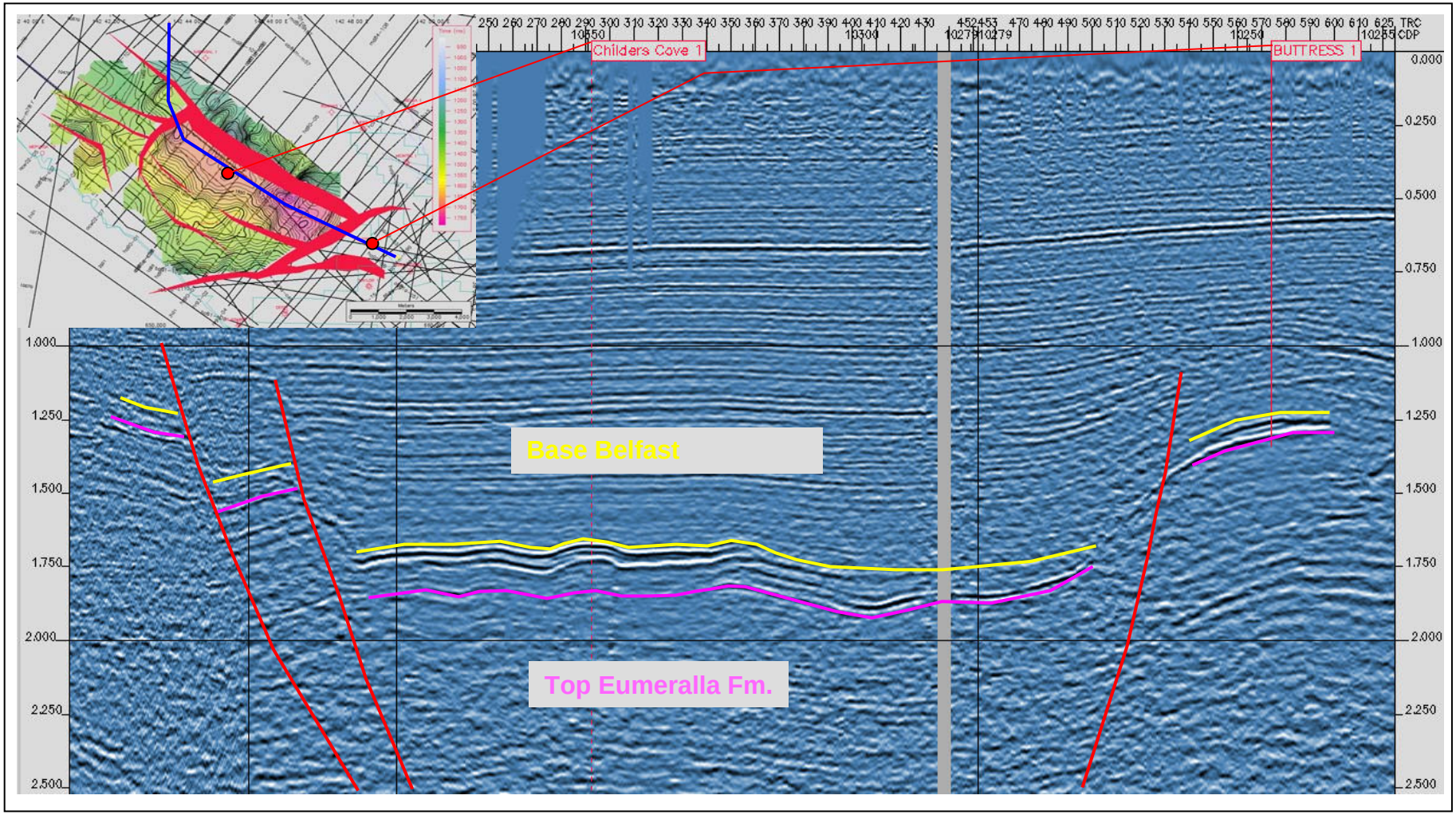


FIGURE 5 3D-SEISMIC TRAVERSE ACROSS CHILDERS COVE PULL-APART STRUCTURE

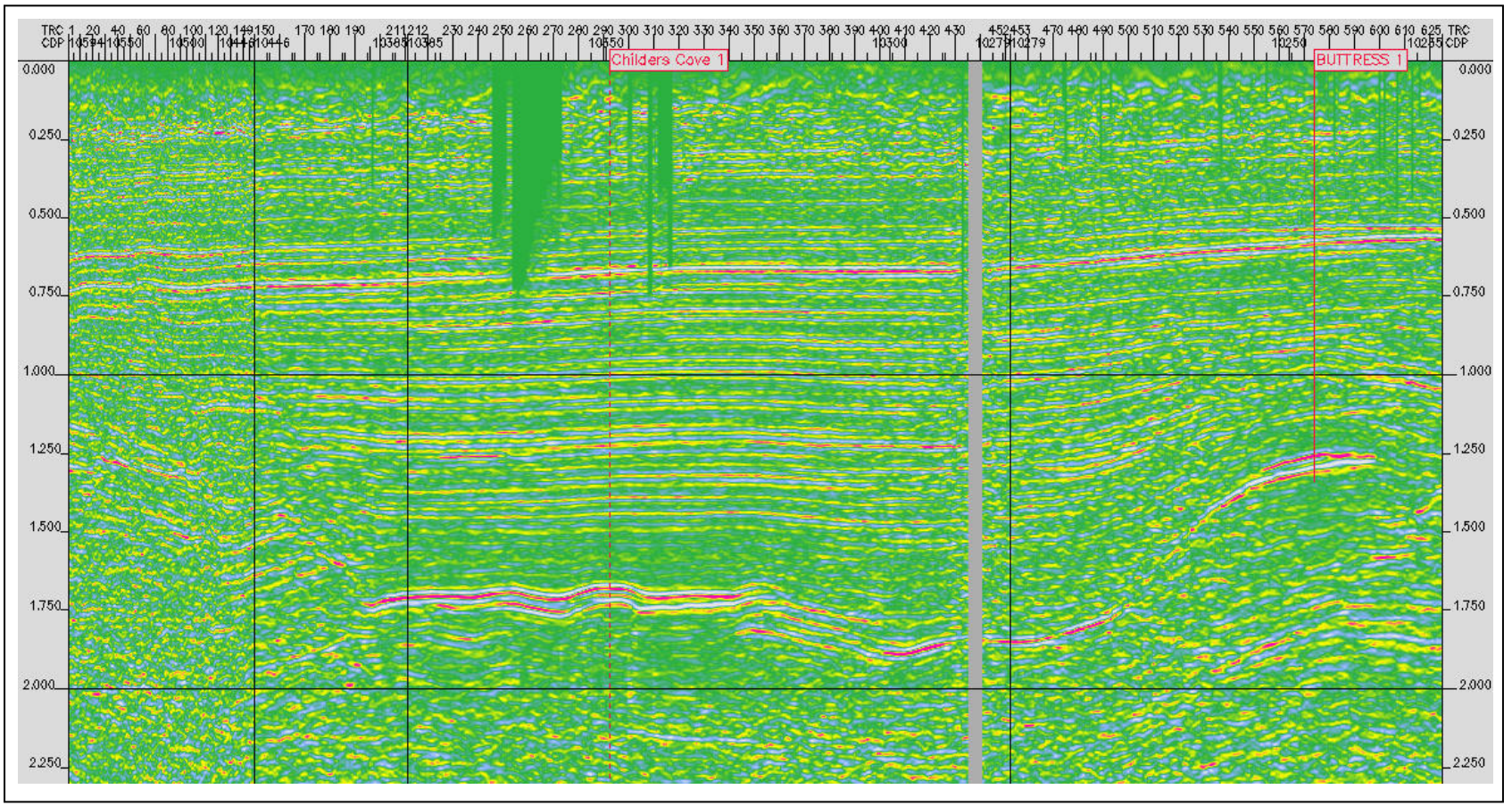


FIGURE 6 3D-SEISMIC TRAVERSE – ENHANCED AMPLITUDE DISPLAY

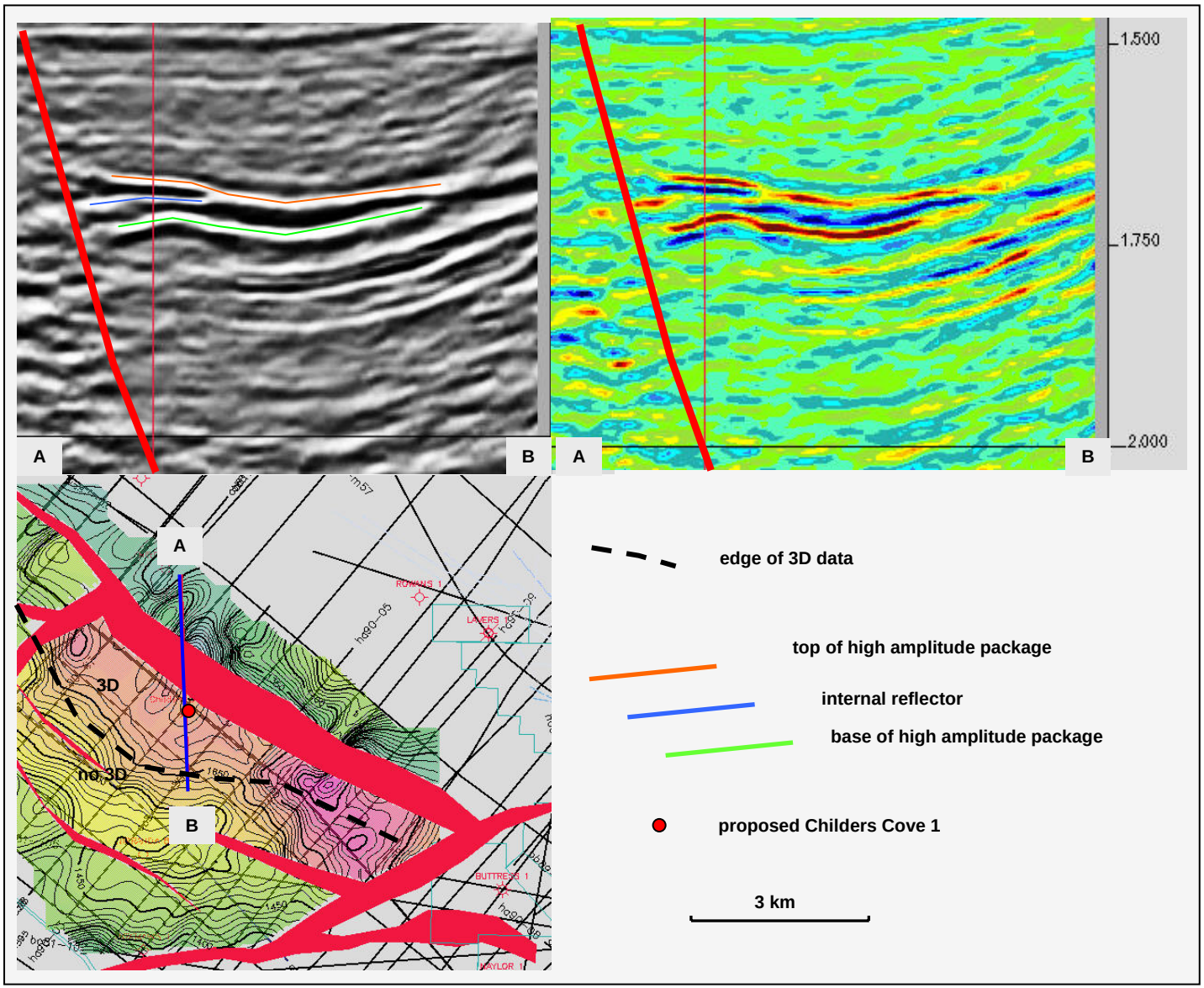


FIGURE 7 3D TRAVERSE OVER CHILDERS COVE 1 SCHOWING STRATIGRAPHIC PINCH-OUT

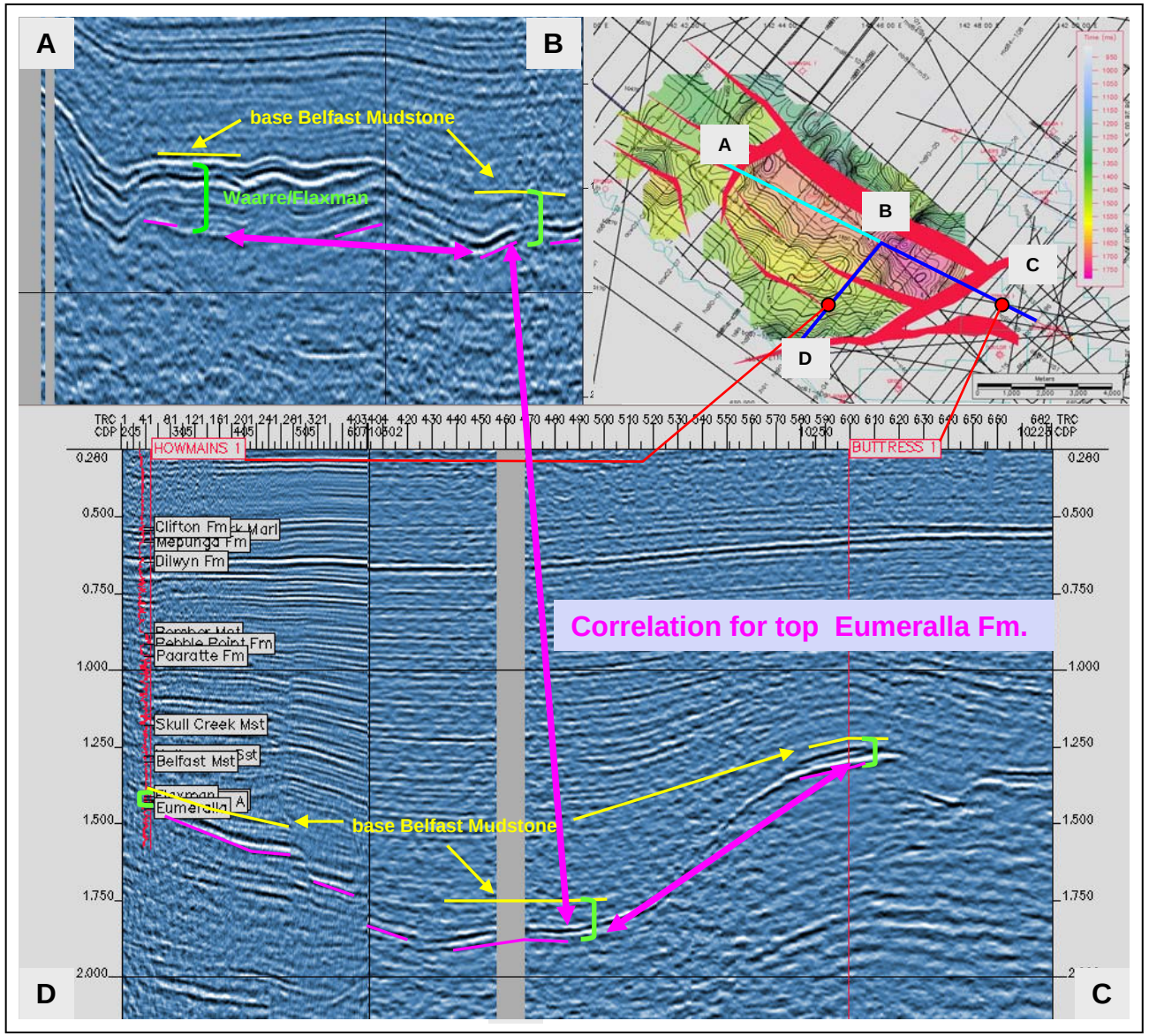


FIGURE 8 BASE BELFAST MUDSTONE TO EUMERALLA FM.THICKNESS CORRELATION

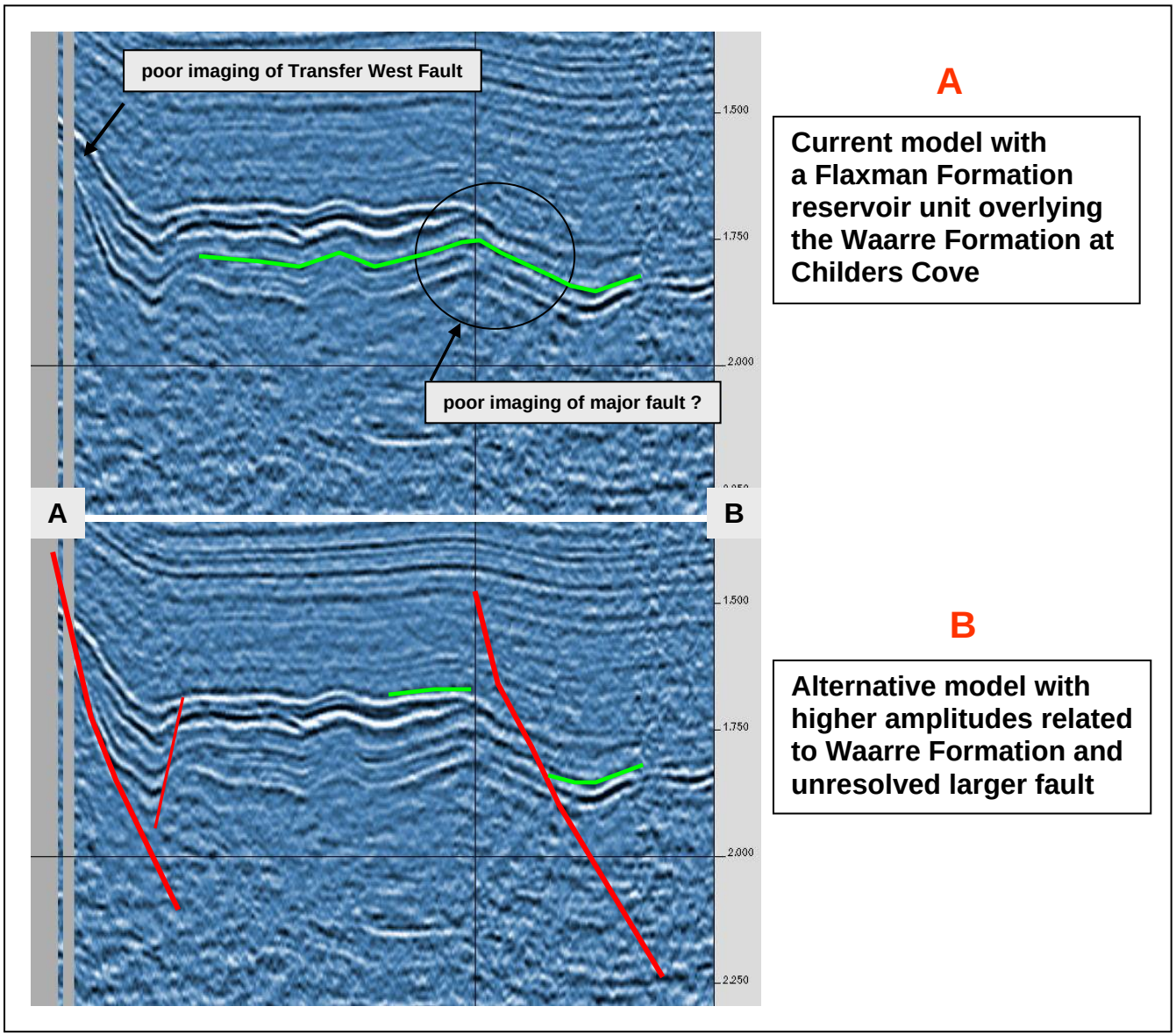


FIGURE 9 PRE_DRILL SEISMIC INTERPRETATION MODELS

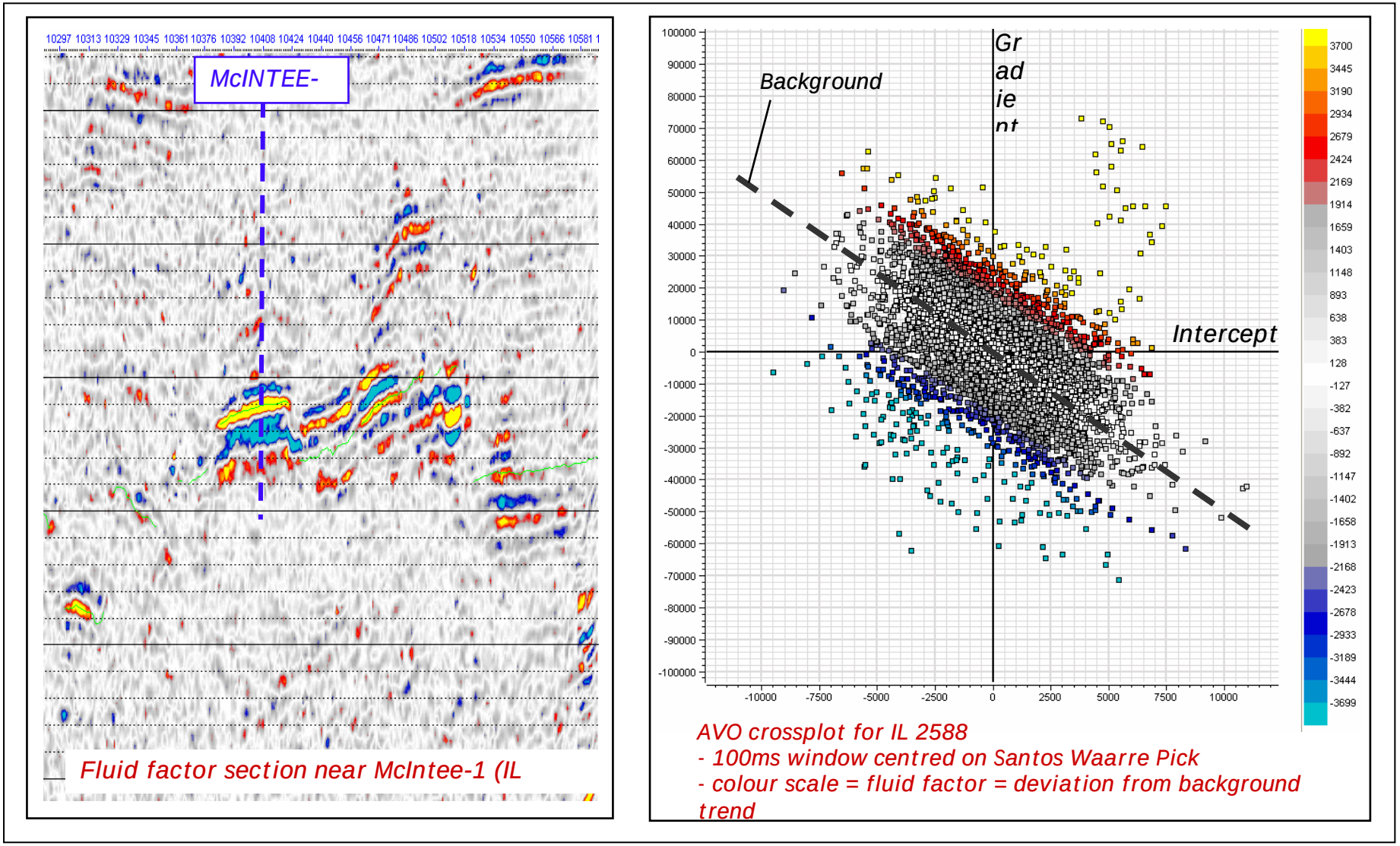
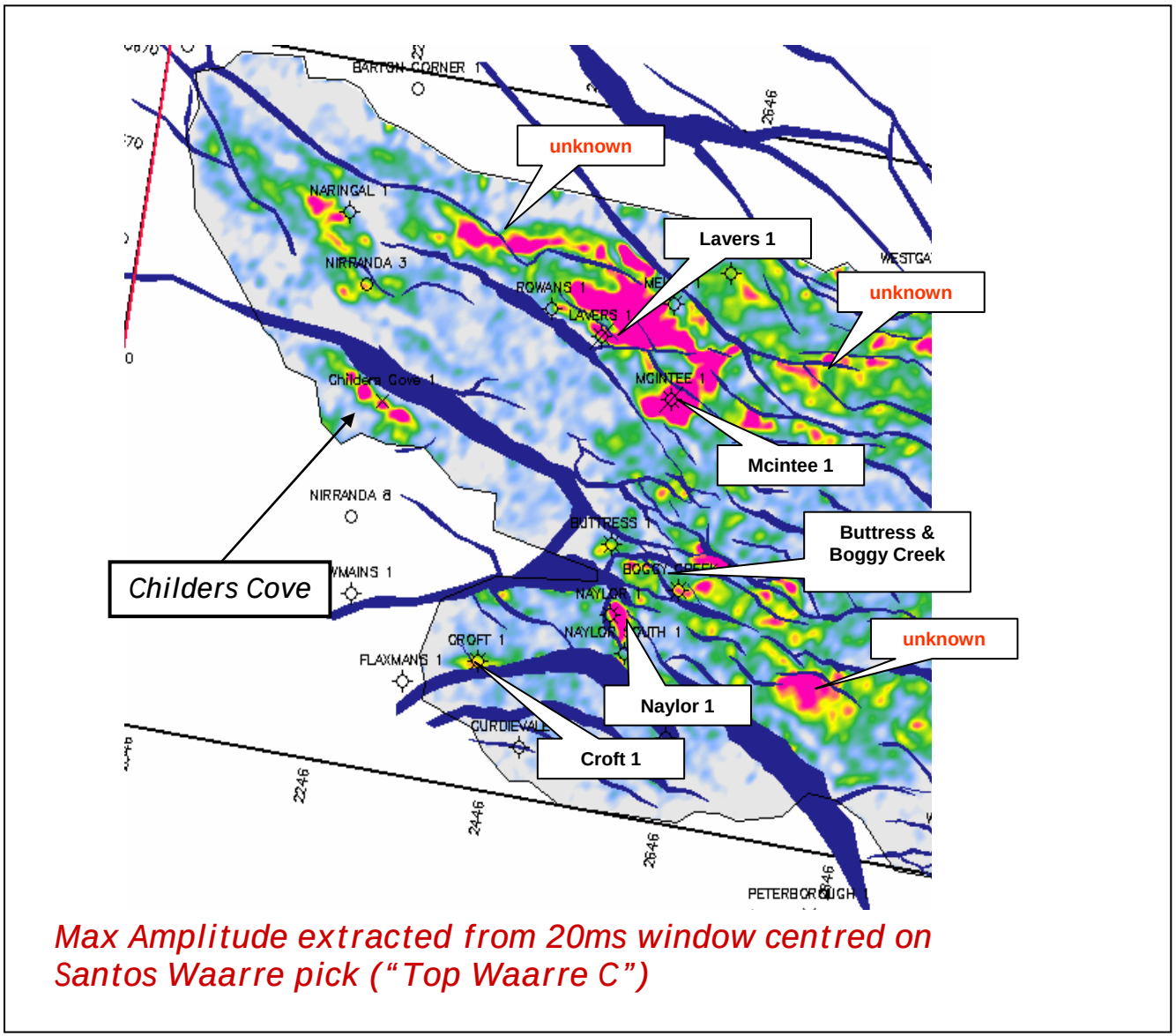


FIGURE 10 CROSS-PLOT OF AVO INTERCEPT VERSUS AVO GRADIENT



Max Amplitude extracted from 20ms window centred on Santos Waarre pick ("Top Waarre C")

FIGURE 11 FLUID FACTOR AMPLITUDE MAP

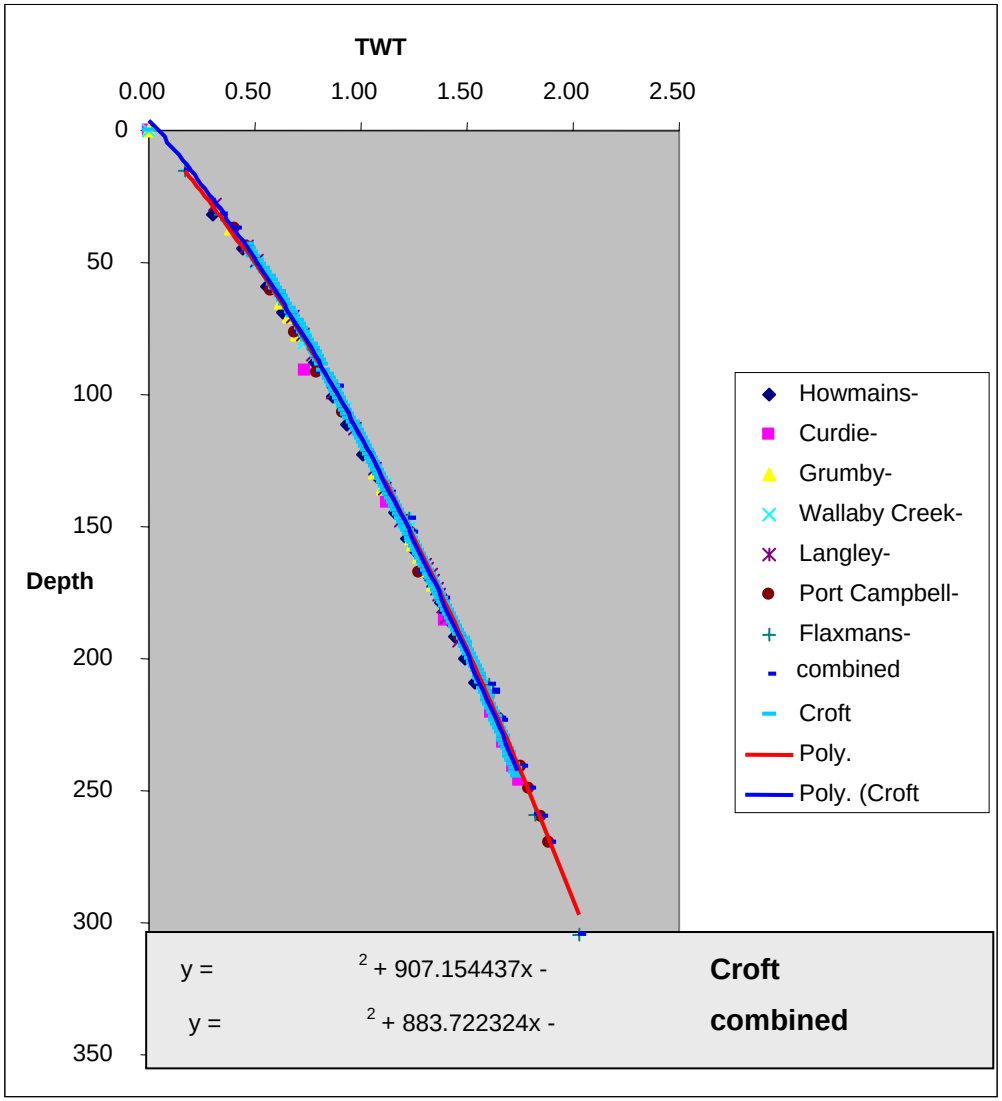


FIGURE 12 TIME-DEPTH RELATIONSHIP

7. RESULTS OF DRILLING

(a) Stratigraphy

The following table lists the formations intersected in Childers Cove 1, together with sub-sea elevations and thicknesses. Lithological descriptions below are referred to Logger's Depth.

TABLE 10 FORMATIONS INTERSECTED IN CHILDERS COVE 1

AGE	FORMATION	Depth (mRT)	Depth (mSS)	Thickness (m)
M.-L. Miocene	Port Campbell Limestone	5.3	46.2	215.7
E.-M. Miocene	Gellibrand Marl	221.0	-169.5	374.0
L. Oligocene	Clifton Formation	595.0	-543.5	20.7
L. Eocene	Narrawaturk Marl	615.7	-564.2	43.4
M.-L. Eocene	Mepunga Formation	659.1	-607.6	84.3
E. Eocene	Dilwyn Formation	743.4	-691.9	312.9
L. Paleocene	Pember Mudstone	1056.3	-1004.8	80.7
E. Paleocene	Pebble Point Formation	1137.0	-1085.5	62.5
	*Massacre Shale**	*1199.5*	-1148.0	33.9
L. Cretaceous	Paaratte Formation	1233.4	-1181.9	513.0
L. Cretaceous	Skull Creek Mudstone	1746.4	-1694.9	175.7
L. Cretaceous	Nullawarre Greensand	1922.1	-1870.6	91.9
L. Cretaceous	Belfast Mudstone	2014.0	-1962.5	304.5
L. Cretaceous	Flaxmans Formation	2318.7	-2267.0	216.2
L. Cretaceous	*Waarre C**	*2535.2*	*-2483.2*	29.5
L. Cretaceous	*Waarre B**	*2563.7*	*-2512.7*	19.4
L. Cretaceous	*Waarre A**	*2584.1*	*-2532.1*	40.9
E. Cretaceous	Eumeralla Formation	2625.1	-2573.0	33.5
	Total Depth (CDL 7)	*2658.0*	*-2606.5*	

Samples were collected, washed and described at 10m intervals from the surface to 500m, 5m intervals from 500m to 1800m and 3m intervals from 1800m to total depth at 2070m.

A summary of the stratigraphic section encountered in Peterborough 1/ST1 is described below. The detailed cuttings descriptions are listed in Appendix 8.

PORT CAMPBELL LIMESTONE	
5.3 – 221.0	Thickness: 215.7m
5.3 – 221.0	Massive LIMESTONE with trace MARL at later depths LIMESTONE, off white, yellowish grey, pale olive, minor medium light grey, sparitic, micritic, commonly to abundant shell and coral fragments, rare green lithics, trace pyrite nodules, crystalline, microcrystalline in part, unconsolidated, friable to moderately hard. MARL, light to occasionally medium grey, commonly shell and coral fragments, trace pyrite nodules, soft to dispersive, amorphous.
GELLIBRAND MARL	
221.0 – 595.0	Thickness: 374.0m
221.0 – 595.0	Massive MARLs. MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro-carbonaceous specks, very soft to soft, dispersive, slightly firm in part,

	blocky, amorphous.
CLIFTON FORMATION	
595.0 – 615.7	Thickness: 20.7m
595.0 – 615.7	Interbedded SILTSTONE, MARL, LIMESTONE and trace SANDSTONE. SANDSTONE, dominantly reddish orange, minor orangish grey, trace clear to translucent, fine to medium, moderately poor sorted, sub-angular to sub-rounded, minor angular grains, strong calcareous cement, orange to red argillaceous matrix, common Fe staining, common fossiliferous and shell fragments, loose, unconsolidated, friable to occasional moderately hard, poor porosity, no fluorescence. SILTSTONE, moderately reddish brown, orangish brown, minor brownish grey, argillaceous, calcareous, grading to CLAYSTONE in part, abundant Fe staining, dispersive to soft, minor firm, blocky to sub-blocky, amorphous. MARL, greenish grey to predominantly dark grayish green, dark grey, argillaceous, calcareous, minor pale brownish orange fossiliferous fragments, soft to firm, sub-blocky to sub-fissile, amorphous in part. LIMESTONE, off white to predominantly brownish orange, argillaceous, fossiliferous, microcrystalline to crystalline, moderately hard to occasional hard.
NARRAWATURK MARL	
615.7 – 659.1	Thickness: 43.4m
615.7 – 659.1	MARL with minor SILTSTONE, LIMESTONE and SANDSTONE. SANDSTONE, dominantly reddish orange, minor orange grey, trace clear to translucent, fine to medium, moderately poor sorted, sub-angular to sub-rounded, minor angular grains, strong calcareous cement, orangish red argillaceous matrix, common Fe staining, common fossiliferous and shell fragments, loose, unconsolidated, friable to occasional moderately hard aggregates, poor visual and inferred porosity, no fluorescence. SILTSTONE, orangish brown, reddish brown, argillaceous, common grading to CLAYSTONE, slightly arenaceous in part, calcareous common Fe staining, soft to predominantly firm, dispersive in part, sub-blocky to sub-fissile, amorphous in part. MARL, brownish grey to minor brownish black, very argillaceous, calcareous, minor to localized common glauconite grains, occasional pyrite nodules and fossiliferous fragments, soft to dispersive, sub-blocky to amorphous. LIMESTONE, orangish brown, reddish brown, lutitic, argillaceous, microcrystalline to crystalline, Fe staining, soft to firm, moderately hard to hard in part.
MEPUNGA FORMATION	
659.1 – 743.4	Thickness: 84.3m
659.1 – 743.4	SANDSTONE with SILTSTONE interbeds and trace LIMESTONE. SANDSTONE, translucent yellow, opaque brown, minor clear to frosted, coarse to very coarse, moderately sorted, sub-rounded to rounded, occasional sub-angular, weak siliceous and calcareous cement, trace brown argillaceous matrix, clean and unconsolidated, loose, good inferred porosity, no fluorescence. SILTSTONE, light to medium grayish brown, getting more dark brownish grey at depths, occasional pale yellowish brown, dominantly argillaceous, trace calcareous, minor disseminated pyrite, green lithics, dominantly sub-blocky, amorphous. MARL, off white to brownish grey, argillaceous, calcareous, common to occasional glauconite grains, minor pyrite nodules, soft to dispersive, sub-blocky to amorphous. LIMESTONE, milky to dusky white, lutitic, oolitic, microcrystalline, soft to very soft.

DILWYN FORMATION	
743.4 – 1056.3	Thickness: 312.9m
743.4 – 1056.3	SANDSTONE with Interbedded SILTSTONE. SANDSTONE, translucent to clear, opaque pale brown, frosted, fine to very coarse, dominantly medium to coarse, moderately well sorted, sub-rounded to sub-angular, rounded very coarse grains, weak to moderately calcareous cement, rare brown argillaceous matrix, localized common pyrite nodules, loose and clean, minor unconsolidated, fair to good inferred porosity, no fluorescence. SILTSTONE, medium to dark brown, grayish brown, pale to medium grey, argillaceous, trace arenaceous, occasional pyrite nodules, trace black lithics, soft to dispersive, localized firm, sub-blocky to amorphous.
PEMBER MUDSTONE	
1056.3 – 1137.0	Thickness: 80.7m
1056.3 – 1137.0	SILTSTONE with Interbedded SANDSTONE. SILTSTONE, pale brownish grey to light olive grey, greenish grey, argillaceous, commonly disseminated pyrite, dispersive to soft, minor to locally commonly moderately to moderately hard in part, predominantly sub-blocky to blocky, rare sub-fissile, commonly grading to CLAYSTONE, amorphous. SANDSTONE, translucent to transparent, frosted, rare opaque, occasionally pale yellow to light orange, dominantly medium to fine grains, moderately well sorted, sub-angular to predominantly sub-rounded, strong siliceous cement, no visual matrix, trace pyrite, loose and clean, moderately hard to hard aggregates, fair inferred and poor visual porosity, no fluorescence.
PEBBLE POINT FORMATION	
1137.0 – 1199.5	Thickness: 62.5m
1137.0 – 1199.5	SANDSTONE with minor Interbedded SILTSTONE. SANDSTONE, pale yellowish grey to light yellowish grey, translucent, fine to coarse, predominantly medium grains, moderately well sorted, weak to locally moderately strong siliceous cement, no visual matrix, minor pyrite nodules, loose and clean, rare moderately hard to hard aggregates, fair inferred and poor visual porosity, no fluorescence.
MASSACRE SHALE	
1199.5 – 1233.4	Thickness: 33.9m
1199.5 – 1233.4	SILTSTONE, with interbedded SANDSTONE. SANDSTONE, clear to translucent, frosted, pale grey, trace yellowish grey, very fine to medium, minor coarse, dominantly fine, moderately well to localized well sorted, sub-angular to sub-rounded, trace angular very coarse fractured grains, trace weak calcareous and siliceous cement, trace grayish brown argillaceous matrix, common muscovite flecks, loose and predominantly clean, fair porosity, no fluorescence. SILTSTONE, medium greenish grey to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, predominantly soft to dispersive, rare firm to moderately hard, sub-blocky to blocky, amorphous.
PAARATTE FORMATION	
1233.4 – 1746.4	Thickness: 513.0m
1233.4 – 1287.0	SANDSTONE with SILTSTONE interbeds SANDSTONE, translucent to transparent, clear, minor yellowish grey, predominantly medium to fine grains, coarse grains /p, moderately well sorted, strong siliceous cement, no visual matrix, trace carbonaceous specks, trace pyrite nodules, loose, moderately hard to hard aggregates, fair inferred and poor visual porosity, no fluorescence.

	SILTSTONE, light to medium grey, slightly brownish grey, argillaceous, arenaceous, grading to very fine SANDSTONE, common micromicaceous, soft to minor firm, common dispersive to soft, blocky to sub-blocky, trace sub-fissile in part, common amorphous.
1287.0 – 1670.0	Interbedded SANDSTONE and SILTSTONE. SANDSTONE, translucent to clear, frosted, opaque to milky in part, medium to coarse, common very coarse, occasional fine, sub-angular to sub-rounded, occasional angular, moderately sorted, weak siliceous cement, trace nod pyrite, carbonaceous fragments, loose and clean, good inferred porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, argillaceous, minor to common carbonaceous specks, occasional disseminated pyrite, trace glauconite, soft, dispersive in part, rare firm, sub-blocky to blocky, common amorphous.
1670.0 – 1746.4	SILTSTONE with interbedded SANDSTONE. SANDSTONE, clear, translucent, light grey to colourless, predominantly medium to fine, rare coarse grains, predominantly sub-angular. Minor sub-rounded, weak siliceous cement, no visual matrix, trace pyrite, common carbonaceous specks, loose, hard to very hard in part, fair inferred and poor to fair visual porosity, no fluorescence. SILTSTONE, medium to dark grey, light grey, arenaceous, argillaceous in part, occasional carbonaceous specks and flecks, minor disseminated pyrite, soft to dispersive, blocky to amorphous.
SKULL CREEK MUDSTONE	
1746.4 – 1922.1	Thickness: 175.7m
1746.4 – 1922.1	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent to clear, pale grey to off white, very fine to fine, well sorted, trace weak calcareous cement, abundant off white pale grey argillaceous and kaolinite matrix, trace carbonaceous specks, trace nod pyrite, friable, poor visual porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, light grey, argillaceous, minor arenaceous, rare glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous, blocky in part.
NULLAWARRE GREENSANDS	
1922.1 – 2014.0	Thickness: 91.9m
1922.1 – 2014.0	SILTSTONE with trace interbedded SANDSTONE. SANDSTONE, light yellowish grey, light orange, translucent, clear, colourless, very fine to medium, moderately to well sorted, trace siliceous cement, no visual matrix, glauconite, loose and clean, generally fair porosity, no fluorescence. SILTSTONE, light grey, light greenish grey, olive grey, light brownish grey, dominantly arenaceous, localized common argillaceous in part, trace glauconite, carbonaceous specks, dispersive in part, firm to minor moderately hard, blocky to sub-blocky, slightly sub-fissile in part, amorphous.
BELFAST MUDSTONE	
2014.0 – 2318.7	Thickness: 304.7m
2014.0 – 2318.7	Massive SILTSTONE with minor SANDSTONE lenses and trace LIMESTONE. SANDSTONE, off white to brownish grey, very fine, occasional fine, generally very well sorted, sub-angular to sub-rounded, very weak calcareous cement, generally siliceous, abundant argillaceous matrix, common glauconite, unconsolidated, very poor to tight visual porosity, n/p. SILTSTONE, predominantly grey to brownish grey, very argillaceous, grading to CLAYSTONE in part, localized common glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly

	moderately calcareous, sub-fissile to sub-blocky. LIMESTONE, cream, minor argillaceous/fossiliferous, soft to brittle.
FLAXMANS FORMATION	
2318.7 –2535.2	Thickness: 29.5
2318.7 – 2360.0	Massive SILTSTONE with minor SANDSTONE interbeds. SANDSTONE, translucent, pale yellow, slightly pale grey, clear, very fine to medium, rare coarse to very coarse grains, moderately to well sorted, a to sub-rounded, trace strong siliceous cement, white to pale grey argillaceous matrix, rare and very coarse fractured grains, carbonaceous specks, glauconite, loose, moderately hard aggregates, poor inferred and very poor visual porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, olive grey, dark greenish grey, argillaceous, arenaceous in part, carbonaceous specks, soft to firm, moderately hard to hard, sub-blocky, abundant sub-fissile to fissile in part.
2360.0 – 2388.0	Interbedded SILTSTONE and SANDSTONE. SANDSTONE, clear to translucent, pale grey, dusky yellowish green, grayish green, frosted, fine to medium, rare coarse grains, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, pale greenish argillaceous matrix, abundant glauconite and chlorite, loose, poor to localized fair visual and inferred porosity, no fluorescence. SILTSTONE, dark greenish grey, dusky green, medium to dark grey, argillaceous, minor arenaceous, soft to firm, sub-blocky to sub-fissile, fissile in part.
2388.0 – 2403.0	Massive SILTSTONE. SILTSTONE, pale reddish brown, grayish brown, common brick red, very argillaceous, common grading to CLAYSTONE, minor arenaceous in part, moderately calcareous in part, , predominantly amorphous with occasional blocky aggregates.
2403.0 – 2471.0	SILTSTONE with SANDSTONE interbeds. SANDSTONE, medium to dark grayish brown, minor very light brownish cream, common mottled with green and dark lithics, very fine, very well sorted, sub-angular to sub-rounded, moderately strong calcareous cement, dominantly argillaceous to silty matrix, common lithics and minor chlorite, common friable to moderately firm, in part, occasional firm to moderately hard, very poor to tight visual porosity, no fluorescence. SILTSTONE, light to medium grey, grayish brown, minor mottled grey and green in part, very argillaceous grading to CLAYSTONE in part, minor arenaceous in part, moderately calcareous in part, common sticky, generally very soft to trace firm, fissile, common dispersive.
2471.0 – 2535.2	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent, pale yellow, clear, pale grey, pale green in part, medium to very coarse, poor to localized moderately sorted, weak to localized moderately calcareous and weak siliceous cement, trace white and very pale grey argillaceous matrix, common angular fractured very coarse grains, trace whitish orange lithics, loose, unconsolidated, moderately hard to hard aggregates, fair inferred and tight to very poor visual porosity ,no fluorescence, trace mineral fluorescence at base of interval, dull yellow, bluish, no cut. SILTSTONE, light grey, greenish grey, medium grey in part, light brown, light orange, yellowish to light orange, medium reddish brown. Arenaceous, argillaceous, calcareous in part, occasional grading to very fine SANDSTONE in part, glauconite, chlorite, pyrite nodules (more prevalent at base of interval), micromicaceous. Dispersive, moderately hard to very hard in part, dispersive, blocky to sub-fissile, predominantly sub-blocky to sub-fissile, amorphous.

WARRE 'C' FORMATION	
2535.2 – 2563.7	Thickness: 28.5m
2535.2 – 2563.7	Interbedded SILTSTONE and SANDSTONE. Translucent, frosted, milky, pale grey, pale yellow, pale greenish grey, minor clear, medium to very coarse grains, predominantly coarse to medium, very poor to locally moderately sorted, angular to sub-rounded, predominantly sub-angular, minor very coarse angular fractured quartz fragments, moderately to locally strong calcareous cement, white argillaceous matrix, minor pyrite nodules, minor yellowish orange lithics, minor pale green and black lithics, loose, unconsolidated, minor firm to moderately hard aggregates, poor to locally good inferred and poor to very poor visual porosity, trace mineral fluorescence, no cut. SILTSTONE, 1) brownish grey, olive grey, light medium to dark grey, slightly light brown in part, occasionally dark greenish black, arenaceous, argillaceous in part, carbonaceous material and specks, trace micromicaceous, rare pyrite with glauconite inclusions, firm to very hard, blocky to sub-fissile. 2) (TUFF?) white to very pale grey, very argillaceous, dispersive, amorphous.
WARRE 'B' FORMATION	
2563.7 – 2584.1	Thickness: 20.4m
2563.7 – 2584.1	SILTSTONE with interbedded SANDSTONE. SILTSTONE, light grey to off white, medium to dark grey, minor olive grey, brownish grey, argillaceous, arenaceous in part, minor carbonaceous specks and micro-laminations, chlorite, rare LIMESTONE material, disseminated and nodular pyrite, firm to moderately hard, hard in part, sub-fissile to sub-blocky, fissile in part. SANDSTONE, clear to translucent, frosted, very fine to fine, occasionally medium, moderately well sorted, sub-angular to sub-rounded, strong calcareous cement, white kaolinitic matrix, minor pyrite nodules, loose, unconsolidated, moderately hard to hard aggregates, poor to fair inferred and tight to very poor visual porosity, no fluorescence.
WARRE 'A' FORMATION	
2584.1 – 2625.1	Thickness: 41.0m
2584.1 – 2625.1	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent to clear, milky, frosted, minor clear, very fine to medium, predominantly fine, moderately well sorted, sub-angular to sub-rounded, strong calcareous and trace to rare pyrite cement, white argillaceous kaolinite matrix, nod and disseminated pyrite, loose, unconsolidated, moderately hard to very hard aggregates, poor to fair and very poor to tight visual porosity, rare fluorescence. SILTSTONE, 1) light grey, brownish grey, light brownish grey, olive grey, dark grey in part, minor dark olive grey, argillaceous, minor arenaceous, minor carbonaceous specks and lams, chlorite in part, trace LIMESTONE specks and material, disseminated and nod pyrite, firm to moderately hard, hard in part, sub-fissile to sub-blocky, amorphous in part. SILTSTONE, 2) (TUFF?) white to very pale grey, very argillaceous, dispersive, amorphous.
	FLUORESCENCE, 2589-2596m, trace, dim to moderately bright, whitish blue, pinpoint, very slow whitish blooming crush cut, thin dull ring residue.
EUMERALLA FORMATION	
2625.1 – (2658.0)	Thickness: 32.9+m
2625.1 – (2647.0	Massive SILTSTONE / TUFF. SILTSTONE / TUFF, light greenish grey, off white, trace greenish red, trace yellowish orange, very argillaceous, very calcareous in part, common

	chlorite in part, common dispersive, very soft, occasional slightly firm in part, abundant amorphous, rare sub-blocky aggregates.
TOTAL DEPTH	
Driller:	2658.0m
Logger:	2656.8m (Extrapolated log depth)

(b) Stratigraphic Prognosis

The depth prognosis for Childers Cove 1 was based on a simple time-depth function which is related to the available check shot data from Croft 1. Although Croft 1 is not the closest of the nearby wells the well trajectory and depth to the Waarre Formation at Peterborough 1 are most similar to Croft 1.

Actual versus predicted formation tops for Childers Cove 1 are tabled below:

TABLE 11 ACTUAL VERSUS PREDICTED DEPTH AND THICKNESSES

Formation	Depth (mSS) prognosed	Depth (mKB) prognosed	Depth (mKB) actual	Depth (mSS) actual	Diff.
Port Campbell Limestone	46.2 (GL)	5.3	5.3	NA	NA
Gellibrand Marl	-93	144.5	221	-169.5	76.5 L
Clifton Fm	-511	562.5	595	-543.5	32.5 L
Narrawaturk Marl	-541	592.5	615.7	-564.2	23.2 L
Mepunga Fm	-610	661.5	659.1	-607.6	2.4 H
Dilwyn Fm	-699	750.5	743.4	691.9	7.1 H
Pember Mudstone	-1085	1136.5	1056.3	1004.8	80.2 H
Pebble Point Fm	-1144	1195.5	1137.0	1085.5	58.5 H
Massacre Shale	--------	--------	1199.5	1148.0	NA
Paaratte Fm	-1234	1285.5	1233.4	1181.9	52.1 H
Skull Creek Mudstone	-1705	1756.5	1746.4	1694.9	10.1 H
Nullawarre Greensand	-1871	1922.5	1922.1	1870.6	0.4 H
Belfast Mudstone	-1977	2028.5	2014.0	1962.5	14.5 H
Flaxmans Fm.	-2294	2345.5	2318.7	2267.0	27.0
Waarre C	-2431	2482.5	2535.2	-2483.2	52.2
Waarre B	NA	NA	2563.7	-2512.7	NA
Waarre A	NA	NA	2584.1	-2532.1	NA
Eumeralla Fm	-2652	2703.5	2625.1	-2573.0	79 H
TD					

A comparison with the post drilling time/depth curve obtained from Childers Cove 1 tied to the seismic data has revealed that the Croft 1 time depth curve predicts correct values down to the Belfast Mudstone at a depth of approximately -1962 TVDSS. The actual errors in the prognosis for the upper well portion are related to the picking of the seismic event. From the Belfast Mudstone onwards and down to the Eumeralla Formation, the error of the used time/depth function steadily increases from 10 to 65 meters high to prognosis.

(c) Hydrocarbon Summary

No gas shows were present in Childers Cove 1 until 1621mRT. From that point a background gas was seen at 5 to 10 units until 2293mRT, where the gas increased to a level of 5 to 25 units to 2531mRT. At 2531mRT a considerable gas increase was noted to be as high as 258 units and gas ratios of 81/8/5/3/3. Another gas peak was seen at

2541mRT with readings of 250 units and gases also at 81/8/5/3/3. A very slight mineral fluorescence was noted, but when analysed resulted in no cut, and no other samples showed further fluorescence.

Childers Cove 1 continued to drill ahead to 2658mRT, where gas peaks were again noted at 2582, 2593.5, 2608 and 2613.5mRT, with gas peaks of 513, 683, 276, and 402 units respectively. The gas ratios were recorded to be 89/8/3/Tr.

Fluorescence was noted in sample from 2589.0 to 2596.0mRT. With only traces of dim to moderately bright whitish blue pinpoint, a very slow whitish blooming crush cut, and a very thin ring residue, it quickly depleted and no further fluorescence was noted for the rest of the well.

8. SUMMARY AND CONCLUSIONS

Childers Cove 1 was targeting potential reservoirs primarily in the Late Cretaceous Flaxmans Formation and secondarily in the Waarre Formation in a previously untested, combined low side fault and stratigraphic pinch-out play. The presence of gas was suggested by a strong amplitude anomaly and associated AVO response in the basal portion of the Late Cretaceous Sherbrook Group which was interpreted to represent the Flaxmans Formation.

The well failed to encounter suitable reservoir units in the primary target zone. The strong amplitudes were found to be related to several high density layers within the Flaxmans Formation. The nature of the high density lithologies remains unknown but they could be related to limonite or siderite cementations.

Childers Cove 1 proved the pre-drill seismic interpretation to be correct which prognosed a very thick and previously undrilled Flaxmans sequence overlying the Waarre Formation. This unit appears to be restricted to the Childers Cove sub-basin but may be found elsewhere in synchronously developed structures. Unfortunately Childers Cove 1 failed to proof the existence of potential sandstone reservoirs within this thick Flaxmans unit.

From the results of the underlying Waarre Formation it is suggests that the low side fault play is not working at this location mainly due to the water bearing Waarre C unit in contrast to the presence of some tight gas present in the Waarre A sands. On the other hand the presence of Waarre C at Childers Cove 1 and the absence of this unit at Howmains 1 indicate that a suitable stratigraphic trap could be present up-dip of the Childers Cove 1 location. A similar situation may exist elsewhere in the basin which could be targeted in future exploration efforts.

The main lesson learnt from Childers Cove 1 is that it represents another example of a non hydrocarbon related amplitude anomaly and AVO response in the basal Sherbrook Group

section above the Eumeralla Formation. The results from this well should be considered during future amplitude analysis and related AVO studies.

9. REFERENCES

1 ORIGIN ENERGY LIMITED: PEP 154 Childers Cove 1 Well Proposal, unpublished document December 2004

2 ORIGIN ENERGY LIMITED: PEP 154 Childers Cove 1 Drilling Programme, unpublished document March 2005

APPENDIX 1

DAILY DRILLING REPORTS

DAILY DRILLING REPORT

19/09/05

REPORT # 01

WELL	**Childers Cove 1**	**24:00 DEPTH**	**84m**	**24 HR PROG**	**84m**	**CUM. COSTS**	**$1,312,924**
RIG	Century Resources Ltd # 7	**FORMATION**	Limestone	**PTD**	2075m	**DAILY COSTS**	$1,312,923.67
OP's TO 06:00	Drill 12 1/4" hole from 84m to 176m						
REMARKS:	No PVT working, Flow show system 50%. Incident during connection involving Le					**PERSONNEL ON SITE:**	**37**
LAST CASING	20 "	**SET AT**	27.0m	**LOT**		**MAASP**		**BOP TEST**	NIL	**TEST DUE**	
AFD's: 53	**SAFETY**	1. Drilling mouse and rat hole, Stair safety, 3 points of contact				**WEATHER AM**	Clear and cold
		2. Picking up BHA, operating tongs, team work, communication.				**PM**	Clear and cold

BIT INFORMATION			
WOB(kLb)	0-10	**JET V(fps)**	
RPM	120	**H S I**	
BIT NUMBER		**1**	**A**
Size (in)		12.25	
Make		Varel	
Type		CH1GMS	
IADC Code		117	
Serial Number		198598	
T.F.A.(")		0.589	
Depth In (m)		27	
Depth Out (m)		IN	27
Total Meters		57	27
Hours		3.5	
ROP		16.3	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	
AV - DP (fpm)	
AV - DC (fpm)	
SPP (psi)	1100
SPP (calculated)	

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE		**RATE**	
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	
0° at 50m	
0° at 102m	
0° at 148m	

BHA # 1	
TOOL	**LENGTH**
Bit	0.30
Bit Sub	0.94
Ander drift	3.01
Drill collars x 2	18.47
X/O	0.79
Stab	1.41
X/O	0.79
Drill Collar x 14	128.83
Hwdp x 4	37.55
BHA LENGTH (m)	192.09
BHA WEIGHT(kLb)	41.4
STRING WT (kLb)	35.6
HOOK LOAD (kLb)	35.0
WT BELOW JARS (kLb)	
DRAG UP (kLb)	
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	1-2
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	44250 Litres
DAILY USAGE	-44250 Litres
CUM. FUEL USED	-44250 Litres
CUM. MUD MIXED	564 Bbls
CUM. MUD LOSSES	70 Bbls
CUM. GEL	5625 kg
CUM. BARITES	

MUD PROPERTIES	
Time	23:30
Depth (m)	84
Temp (° C)	19
Mud Type	Spud
Density (ppg)	8.80
ECD (ppg)	
Viscosity (sec)	42
PV / YP (cp/lb)	10 / 19
Gells (s/m)	6 / 12
API Filt. (cc)	
Cake (/32")	
Solids (% Vol)	2
Sand (% Vol)	0.25
MBT	20
pH (strip)	9.5
Chlorides (mg/l)	
KCL (%)	
PHPA (ppb)	
ALC - 50 (K)	
Circ. Vol. (Bbl)	361

CHEMICAL USAGE	
Caustic Soda	2
Trugel 13A	225
Soda Ash	3

OPERATION	**HRS**	**CUM**
Casing		
Cementing		
Circ & Condition		
Coring		
D/O Cement		
Drilling	3.5	3.5
Handle BHA		
LOT / FIT		
N/U & Test BOP's		
P & A		
Repairs		
Rig Move		
Rig Service		
Safety	2.5	2.5
Survey		
Tight hole / Fishing		
Tripping		
Wait on Cement		
Wash / Ream		
Well Control		
Well Test		
Wellhead		
Wiper Trip		
Wireline		
Other	18.0	18.0
TOTALS	24.0	24.0

DAILY MUD COSTS	$1,996.67
CUM. MUD COSTS	**$1,996.67**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
	18:00	Complete rig up of drilling equipment. Note no PVT or Flow show equipment operational.
18:00	20:30	Spud Childers cove and commence drilling 12 1/4" hole from 27m to 74m. Take survey at 50m, zero on Anderdrift
20:30	23:00	Incident during connection on rig floor involving Leigh Walton. Non injury
23:00	0:00	Continue to drill 12 1/4" hole from 74m to 84m

SUPERVISOR:	Dann/Porter/Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

20/09/05

REPORT # 02

WELL	**Childers Cove 1**	**24:00 DEPTH**	**547m**	**24 HR PROG**	**463m**	**CUM. COSTS**	**$1,371,896**
RIG	Century Resources Ltd # 7	**FORMATION**	Gellibrand Marl	**PTD**	2075m	**DAILY COSTS**	$58,972.48

OP's TO 06:00 Drill from 547m to 550m, circ hole clean, wiper trip to conductor shoe @27m. Back on bottom at 0600hrs, hole good

REMARKS: **PERSONNEL ON SITE:** **38**

LAST CASING	20 "	**SET AT**	27.0m	**LOT**		**MAASP**		**BOP TEST**	NIL	**TEST DUE**	

AFD's: 54	**SAFETY**	1. Incident discussed and priliminary findings explained	**WEATHER AM** Overcast
		2. Incident discussed and priliminary findings explained	**PM** Overcast

BIT INFORMATION			
WOB(kLb)	10-17	**JET V(fps)**	313
RPM	120	**H S I**	2.25
BIT NUMBER		**1**	
Size (in)		12.25	
Make		Varel	
Type		CH1GMS	
IADC Code		117	
Serial Number		198598	
T.F.A.(")		0.589	
Depth In (m)		27	
Depth Out (m)		IN	
Total Meters		520	
Hours		25.5	
ROP		20.4	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	575
AV - DP (fpm)	109
AV - DC (fpm)	127
SPP (psi)	1500
SPP (calculated)	1090

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	95	**RATE**	95
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	
0° at 238m	0° at 400m
0° at 297m	0° at 447m
0° at 353m	0° at 503m

BHA # 1	
TOOL	**LENGTH**
Bit	0.30
Bit Sub	0.94
Ander drift	3.01
Drill collars x 2	18.47
X/O	0.79
Stab	1.41
X/O	0.79
Drill Collar x 14	128.83
Hwdp x 4	37.55
BHA LENGTH (m)	192.09
BHA WEIGHT(kLb)	41.3
STRING WT (kLb)	60.2
HOOK LOAD (kLb)	74.0
WT BELOW JARS (kLb)	
DRAG UP (kLb)	1.0
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	0-10
TORQUE OFF (Amps/Rel.)	0-40

ENVIRONMENTAL DATA	
FUEL ON SITE	40600 Litres
DAILY USAGE	3650 Litres
CUM. FUEL USED	9350 Litres
CUM. MUD MIXED	1619 Bbls
CUM. MUD LOSSES	802 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	18:30
Depth (m)	430
Temp (° C)	34
Mud Type	Spud
Density (ppg)	9.00
ECD (ppg)	9.28
Viscosity (sec)	65
PV / YP (cp/lb)	10 / 38
Gells (s/m)	18 / 37
API Filt. (cc)	
Cake (/32")	
Solids (% Vol)	4
Sand (% Vol)	0.5
MBT	32
pH (strip)	8.5
Chlorides (mg/l)	
KCL (%)	2
PHPA (ppb)	
ALC - 50 (K)	
Circ. Vol. (Bbl)	632

CHEMICAL USAGE	
Trugel 13A	15
Pot chloride	203

OPERATION	**HRS**	**CUM**
Casing		
Cementing		
Circ & Condition		
Coring		
D/O Cement		
Drilling	22.0	25.5
Handle BHA		
LOT / FIT		
N/U & Test BOP's		
P & A		
Repairs		
Rig Move		18.0
Rig Service	1.0	1.0
Safety		2.5
Survey		
Tight hole / Fishing		
Tripping		
Wait on Cement		
Wash / Ream		
Well Control		
Well Test		
Wellhead		
Wiper Trip		
Wireline		
Other	1.0	1.0
TOTALS	24.0	48.0

DAILY MUD COSTS	$3,852.48
CUM. MUD COSTS	**$5,849.15**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	0:30	Clear flow-line
0:30	6:30	Drill 12-1/4" hole from 84 to 185m
6:30	7:00	Repair swab on No 2 pump
7:00	9:30	Drill 12-1/4" hole from 185 to 241m
9:30	10:00	Rig service
10:00	10:30	Drill 12-1/4" hole from 241 to 250m
10:30	11:00	Clear flow-line
11:00	0:00	Drill 12-1/4" hole from 250 to 547mm

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

21/09/05

REPORT # 03

WELL	**Childers Cove 1**	**24:00 DEPTH**	**550m**	**24 HR PROG**	**3m**	**CUM. COSTS**	**$1,510,920**
RIG	Century Resources Ltd # 7	**FORMATION**	Gellibrand Marl	**PTD**	2075m	**DAILY COSTS**	$139,024.00
OP's TO 06:00	WOC. Cut conductor/ rough cut casing. Dress off for weld-on section.						
REMARKS:	Lost returns while cementing, work pipe to regain, ok. String stuck 2.5m high.					**PERSONNEL ON SITE:**	**41**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**		**MAASP**		**BOP TEST**	NIL	**TEST DUE**	
AFD's: 55	**SAFETY**	1. POOH and run casing				**WEATHER AM**	Overcast
		2. Run casing and Cellar work				**PM**	Overcast

BIT INFORMATION			
WOB(kLb)	10-17	**JET V(fps)**	313
RPM	120	**H S I**	2.25
BIT NUMBER		**1**	
Size (in)		12.25	
Make		Varel	
Type		CH1GMS	
IADC Code		117	
Serial Number		198598	
T.F.A.(")		0.589	
Depth In (m)		27	
Depth Out (m)		550	
Total Meters		523	
Hours		26	
ROP		20.1	
Condition Out		2 1 WT A E I NO TD	

FLOW DATA	
CIRC. RATE (gpm)	575
AV - DP (fpm)	109
AV - DC (fpm)	127
SPP (psi)	1500
SPP (calculated)	1130

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	95	**RATE**	95
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	

BHA # 1	
TOOL	**LENGTH**
Bit	0.30
Bit Sub	0.94
Ander drift	3.01
Drill collars x 2	18.47
X/O	0.79
Stab	1.41
X/O	0.79
Drill Collar x 14	128.83
Hwdp x 4	37.55
BHA LENGTH (m)	192.09
BHA WEIGHT(kLb)	41.3
STRING WT (kLb)	60.4
HOOK LOAD (kLb)	74.0
WT BELOW JARS (kLb)	
DRAG UP (kLb)	
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	37600 Litres
DAILY USAGE	3000 Litres
CUM. FUEL USED	12350 Litres
CUM. MUD MIXED	1619 Bbls
CUM. MUD LOSSES	1650 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	1:00
Depth (m)	550
Temp (° C)	37
Mud Type	Spud
Density (ppg)	9.00
ECD (ppg)	9.54
Viscosity (sec)	43
PV / YP (cp/lb)	10 / 33
Gells (s/m)	10 / 18
API Filt. (cc)	
Cake (/32")	
Solids (% Vol)	3
Sand (% Vol)	0.5
MBT	
pH (strip)	8.5
Chlorides (mg/l)	
KCL (%)	2.2
PHPA (ppb)	
ALC - 50 (K)	
Circ. Vol. (Bbl)	

CHEMICAL USAGE	

OPERATION	**HRS**	**CUM**
Casing	8.0	8.0
Cementing	1.5	1.5
Circ & Condition	3.0	3.0
Coring		
D/O Cement		
Drilling	0.5	26.0
Handle BHA		
LOT / FIT		
N/U & Test BOP's		
P & A		
Repairs		
Rig Move		18.0
Rig Service		1.0
Safety		2.5
Survey		
Tight hole / Fishing		
Tripping	4.0	4.0
Wait on Cement	2.0	2.0
Wash / Ream		
Well Control		
Well Test		
Wellhead		
Wiper Trip	5.0	5.0
Wireline		
Other		1.0
TOTALS	24.0	72.0

DAILY MUD COSTS	
CUM. MUD COSTS	**$5,849.15**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	0:30	Drill 12-1/4" hole from 547 to 550mm
0:30	1:00	Circulate hole clean
1:00	4:00	POOH to conductor @27m. 5-10k overpull max. Hole in good condition.
4:00	6:00	Run in hole to btm, wash 5m of fill. 5-10k drag at 323m. Hole in good condition
6:00	8:30	Circulate hole clean. Problems with Rig pumps, washed Module on number 1.
8:30	12:30	POOH from 550m to run casing. Lay out anderdrift, stab and bit.
12:30	15:00	Rig up to run 9 5/8"casing
15:00	19:00	Run 45 joints of 9-5/8" casing to a shoe depth of 544.5m
19:00	19:30	Circulate casing volume and hole clean. Hold pre cmt job safety meeting.
19:30	20:30	Install Halliburton cement head, pump pre-flush & pressure test lines
20:30	22:00	Mix & pump 140bbls lead @13.2ppg & 56 bbls Tail @15.8ppg. Work pipe to maintain returns. Displace with 139bbls of water
22:00	0:00	Wait on cement
	Note:	During pumping of cement slurry returns were lost. Work string to regain full returns.
		Continue to work string over 3m travel while displacing slurry to ensure good retruns.
		String became stuck while working string.
		Commence prperation for weld-on 3k well head

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

22/09/05

REPORT # 04

WELL	**Childers Cove 1**	**24:00 DEPTH**	**550m**	**24 HR PROG**		**CUM. COSTS**	**$1,560,710**
RIG	Century Resources Ltd # 7	**FORMATION**	Gellibrand Marl	**PTD**	2075m	**DAILY COSTS**	$49,789.50
OP's TO 06:00	Commence Installation of weld on A section, complete at 5am. Cooling.						
REMARKS:	"A" section on location at 23:00hrs					**PERSONNEL ON SITE:**	**38**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**		**MAASP**		**BOP TEST**	NIL	**TEST DUE**	
AFD's: 56	**SAFETY**	1. Nippling up BOPs, Mud pump module Repairs				**WEATHER AM**	Overcast
		2. Nippling up BOPs, Mud pump module Repairs				**PM**	Overcast

BIT INFORMATION						**MUD PROPERTIES**		**OPERATION**	**HRS**	**CUM**
WOB(kLb)		**JET V(fps)**		**TOOL**	**LENGTH**	Time	Mixing	Casing		8.0
RPM		**H S I**				Depth (m)	550	Cementing		1.5
BIT NUMBER						Temp (° C)		Circ & Condition		3.0
Size (in)						Mud Type	KCL/PHPA	Coring		
Make						Density (ppg)	mixing	D/O Cement		
Type						ECD (ppg)		Drilling		26.0
IADC Code						Viscosity (sec)		Handle BHA		
Serial Number						PV / YP (cp/lb)		LOT / FIT		
T.F.A.(")						Gells (s/m)		N/U & Test BOP's	17.5	17.5
Depth In (m)						API Filt. (cc)		P & A		
Depth Out (m)						Cake (/32")		Repairs		
Total Meters						Solids (% Vol)		Rig Move		18.0
Hours						Sand (% Vol)		Rig Service		1.0
ROP						MBT		Safety		2.5
Condition Out				**BHA LENGTH (m)**		pH (strip)		Survey		
FLOW DATA				**BHA WEIGHT(kLb)**		Chlorides (mg/l)		Tight hole / Fishing		
CIRC. RATE (gpm)				**STRING WT (kLb)**		KCL (%)		Tripping		4.0
AV - DP (fpm)				**HOOK LOAD (kLb)**		PHPA (ppb)		Wait on Cement	1.5	3.5
AV - DC (fpm)				**WT BELOW JARS (kLb)**		ALC - 50 (K)		Wash / Ream		
SPP (psi)				**DRAG UP (kLb)**		Circ. Vol. (Bbl)		Well Control		
SPP (calculated)				**DRAG DOWN (kLb)**		**CHEMICAL USAGE**		Well Test		
PUMP #1		**PUMP #2**		**TORQUE ON (Amps/Rel.)**		Duo-Tec	8	Wellhead	5.0	5.0
8-P-80		**8-P-80**		**TORQUE OFF (Amps/Rel.)**		Glute 25	1	Wiper Trip		5.0
RATE		**RATE**		**ENVIRONMENTAL DATA**		Polyplus	4	Wireline		
LINER	6.0"	**LINER**	6.0"	FUEL ON SITE	36200 Litres	Polypac UL	8	Other		1.0
STROKE	8.5"	**STROKE**	8.5"	DAILY USAGE	1400 Litres	Sod Bicarb	2	**TOTALS**	24.0	96.0
				CUM. FUEL USED	13750 Litres	Pot chloride/KCL	100	DAILY MUD COSTS		$5,719.50
SURVEYS				CUM. MUD MIXED	1619 Bbls			CUM. MUD COSTS		**$11,568.65**
				CUM. MUD LOSSES	1650 Bbls			**AFE COST - C&S**		$2,847,416
				CUM. GEL	6000 kg			**AFE COST - P&A**		$2,588,872
				CUM. BARITES				**AFE COST - C&C**		

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	1:30	Wait on cement
1:30	3:30	Rough cut 9 5/8" casing.
3:30	5:00	Lay out landing joint and cut joint, halliburton head and x/o's.
5:00	6:30	Final cut 9 5/8" casing and dress for slip on SOW 5k Braiden head.
6:30	21:00	Install rental 13 5/8" annular on DBL Bop. Pressure test Choke and Kill manifold. Slip and cut drilling line.
21:00	0:00	Pressure test Kelly hose, Kelly cocks and stand pipe manifiold. 250/2500psi, 5/5mins. Prepare SOW 5k well head

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

23/09/05

REPORT # 05

WELL	**Childers Cove 1**	**24:00 DEPTH**	**550m**	**24 HR PROG**		**CUM. COSTS**	**$1,615,310**
RIG	Century Resources Ltd # 7	**FORMATION**	Gellibrand Marl	**PTD**	2075m	**DAILY COSTS**	$54,600.75
OP's TO 06:00	Complete 2 last choke and kill line tests, Run wear busing, make up 8 1/2" BHA						
REMARKS:	Mud pump modual work continuing.					**PERSONNEL ON SITE:**	**36**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**		**MAASP**	
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 57	**SAFETY**	1. Cellar deck work/ 3rd party welder				**WEATHER AM**	Cloudy/Cold
		2. safety alert reviews/ Nipple up/ Cellar deck work.				**PM**	Cloudy/Cold

BIT INFORMATION			
WOB(kLb)		**JET V(fps)**	
RPM		**H S I**	
BIT NUMBER			
Size (in)			
Make			
Type			
IADC Code			
Serial Number			
T.F.A.(")			
Depth In (m)			
Depth Out (m)			
Total Meters			
Hours			
ROP			
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	
AV - DP (fpm)	
AV - DC (fpm)	
SPP (psi)	
SPP (calculated)	

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE		**RATE**	
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	

TOOL	**LENGTH**
BHA LENGTH (m)	
BHA WEIGHT(kLb)	
STRING WT (kLb)	
HOOK LOAD (kLb)	
WT BELOW JARS (kLb)	
DRAG UP (kLb)	
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	34950 Litres
DAILY USAGE	1250 Litres
CUM. FUEL USED	15000 Litres
CUM. MUD MIXED	1780 Bbls
CUM. MUD LOSSES	1650 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	12:00
Depth (m)	550
Temp (° C)	
Mud Type	KCL/PHPA
Density (ppg)	8.60
ECD (ppg)	
Viscosity (sec)	54
PV / YP (cp/lb)	13 / 17
Gells (s/m)	5 / 7
API Filt. (cc)	10
Cake (/32")	1
Solids (% Vol)	
Sand (% Vol)	
MBT	
pH (strip)	8.4
Chlorides (mg/l)	23000
KCL (%)	4
PHPA (ppb)	0.5
ALC - 50 (K)	**0**
Circ. Vol. (Bbl)	333

CHEMICAL USAGE	
Defoam	1
Duo-Tec	4
Glute 25	1
Polyplus	2
Polypac UL	4
Sod Bicarb	1
Pot chloride/KCL	50

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		3.0
Coring		
D/O Cement		
Drilling		26.0
Handle BHA		
LOT / FIT		
N/U & Test BOP's	24.0	41.5
P & A		
Repairs		
Rig Move		18.0
Rig Service		1.0
Safety		2.5
Survey		
Tight hole / Fishing		
Tripping		4.0
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead		5.0
Wiper Trip		5.0
Wireline		
Other		1.0
TOTALS	24.0	120.0

DAILY MUD COSTS	$3,010.75
CUM. MUD COSTS	**$14,579.40**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	5:00	Weld SOW 5k "A", complete testing of surface equipment and safety valves. Install geolograph
5:00	7:00	Wrap well head and allow cool down period
7:00	18:00	External pressure test weld. Nipple up DSA. Nipple up 13 5/8 BOPs, choke and kill ,lines, flare line.
18:00	0:00	Test BR's & csg 250.2500psi 15/15mins, UPR 250/2500psi 15/15mins, Ann 250/2000psi 5/5mins, HCR's/valves 250/2500 5/5mins

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

24/09/05

REPORT # 06

WELL	**Childers Cove 1**	**24:00 DEPTH**	**765m**	**24 HR PROG**	**215m**	**CUM. COSTS**	**$1,715,432**
RIG	Century Resources Ltd # 7	**FORMATION**	Dilwyn	**PTD**	2075m	**DAILY COSTS**	$100,121.22
OP's TO 06:00	Drill 8 1/2" hole from 765m to 924m.						
REMARKS:	Take Anderdrift surveys every 30m, all surveys to 6am zero.					**PERSONNEL ON SITE:**	
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**536psi**
		BOP TEST	23/09/05	**TEST DUE**	14/10/05		
AFD's: 58	**SAFETY**	1. Winch operation/ BHA handling/ tool box talks				**WEATHER AM**	Cloudy/Cold
		2. Alerts/near miss on rig 3/ DC in derrick/ Single joint p/ups.				**PM**	Cloudy/Cold

BIT INFORMATION			
WOB(kLb)	5-10	**JET V(fps)**	243
RPM	120	**H S I**	2.85
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		M223	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		215	
Hours		7.5	
ROP		28.7	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	606
AV - DP (fpm)	285
AV - DC (fpm)	447
SPP (psi)	1100
SPP (calculated)	1000

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	100	**RATE**	100
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 250 @ 70		SCR: 400 @ 100	

SURVEYS	
0° at 580m	0° at 700m
0° at 610m	0° at 760m
0° at 640m	0° at 820m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.6
STRING WT (kLb)	74.5
HOOK LOAD (kLb)	90.0
WT BELOW JARS (kLb)	34.2
DRAG UP (kLb)	5.0
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	0-50
TORQUE OFF (Amps/Rel.)	0

ENVIRONMENTAL DATA	
FUEL ON SITE	33150 Litres
DAILY USAGE	1800 Litres
CUM. FUEL USED	16800 Litres
CUM. MUD MIXED	1934 Bbls
CUM. MUD LOSSES	1819 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	2400
Depth (m)	765
Temp (° C)	37
Mud Type	KCL/PHPA
Density (ppg)	8.65
ECD (ppg)	9.09
Viscosity (sec)	47
PV / YP (cp/lb)	12 / 18
Gells (s/m)	7 / 9
API Filt. (cc)	7
Cake (/32")	1
Solids (% Vol)	6
Sand (% Vol)	0.75
MBT	3
pH (strip)	9.5
Chlorides (mg/l)	22000
KCL (%)	4.2
PHPA (ppb)	0.75
ALC - 50 (K)	
Circ. Vol. (Bbl)	405

CHEMICAL USAGE	
Defoam	1
Duo-Tec	6
Glute 25	1
Kwikseal F	34
Polyplus	8
Polypac UL	5
Sod Bicarb	2
Pot chloride/KCL	90

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		3.0
Coring		
D/O Cement	2.0	2.0
Drilling	7.5	33.5
Handle BHA	4.0	4.0
LOT / FIT	0.5	0.5
N/U & Test BOP's	2.0	43.5
P & A		
Repairs	4.5	4.5
Rig Move		18.0
Rig Service		1.0
Safety		2.5
Survey		
Tight hole / Fishing		
Tripping	2.0	6.0
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead	1.0	6.0
Wiper Trip		5.0
Wireline		
Other	0.5	1.5
TOTALS	24.0	144.0

DAILY MUD COSTS	$6,791.22
CUM. MUD COSTS	**$21,370.62**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	2:00	Complete testing of Choke valves and wing valves. Check all hydraulic connections on Bops.
2:00	3:00	Make up and run wear bushing,
3:00	3:30	Clean up rig floor of all Nipple up equipment, excess equipment
3:30	7:30	Make up 8 1/2" bha
7:30	9:30	RIH 8 1/2" drilling bha on 4 1/2" drill pipe, tag cmt at 523m
9:30	14:00	Wait on #1 mud pump repairs. Second hand module fitted to #1 mud pump.
14:00	16:00	Drill cement/ Flt collar/ shoe/ shoe track to 550m
16:00	16:30	Drill 3m of new formation from 550m to 553m
16:30	17:00	Complete FIT. EMW 14.4ppg. 544.5m TVD shoe,
17:00	0:00	Drill 8 1/2" hole from 553m to 765m, survey @30m intervals with Anderdrift.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

25/09/05

REPORT # 07

WELL	**Childers Cove 1**	**24:00 DEPTH**	**1327m**	**24 HR PROG**	**562m**	**CUM. COSTS**	**$1,768,091**
RIG	Century Resources Ltd # 7	**FORMATION**	Paarette	**PTD**	2075m	**DAILY COSTS**	$52,658.95
OP's TO 06:00	Continue to drill from 1327m to 1439m						
REMARKS:	Weekly safety meeting. BOP drills, pit drill.					**PERSONNEL ON SITE:**	**35**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**513psi**
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 59	**SAFETY**	1. Making a connection				**WEATHER AM**	Fine & cool
		2. Weekly safety meeting. Discuss incidents & PTWS				**PM**	Fine & cool

BIT INFORMATION			
WOB(kLb)	7-15	**JET V(fps)**	253
RPM	120	**H S I**	3.30
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		M223	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		777	
Hours		31	
ROP		25.1	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	630
AV - DP (fpm)	297
AV - DC (fpm)	465
SPP (psi)	1650
SPP (calculated)	1420

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	104	**RATE**	104
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 400 @ 70		SCR: 700 @ 100	

SURVEYS	
0° at 1150m	0° at 1240m
0° at 1180m	0° at 1270m
0° at 1210m	0° at 1300m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.4
STRING WT (kLb)	104.2
HOOK LOAD (kLb)	110.0
WT BELOW JARS (kLb)	34.0
DRAG UP (kLb)	5.0
DRAG DOWN (kLb)	5.0
TORQUE ON (Amps/Rel.)	0-50
TORQUE OFF (Amps/Rel.)	0-25

ENVIRONMENTAL DATA	
FUEL ON SITE	28550 Litres
DAILY USAGE	4600 Litres
CUM. FUEL USED	21400 Litres
CUM. MUD MIXED	2380 Bbls
CUM. MUD LOSSES	2130 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	2400
Depth (m)	1327
Temp (° C)	46
Mud Type	KCL/PHPA
Density (ppg)	8.90
ECD (ppg)	9.47
Viscosity (sec)	52
PV / YP (cp/lb)	15 / 28
Gells (s/m)	6 / 8
API Filt. (cc)	5.8
Cake (/32")	1
Solids (% Vol)	7
Sand (% Vol)	0.5
MBT	4
pH (strip)	8.7
Chlorides (mg/l)	21000
KCL (%)	4
PHPA (ppb)	1
ALC - 50 (K)	**0**
Circ. Vol. (Bbl)	627

CHEMICAL USAGE	
Duo-Tec	10
Glute 25	2
Polyplus	3
Polypac UL	24
Sod Bicarb	2
Pot chloride/KCL	155

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		3.0
Coring		
D/O Cement		2.0
Drilling	23.5	57.0
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		4.5
Rig Move		18.0
Rig Service		1.0
Safety		2.5
Survey	0.5	0.5
Tight hole / Fishing		
Tripping		6.0
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	168.0

DAILY MUD COSTS	$9,328.95
CUM. MUD COSTS	**$30,699.57**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	11:30	Drill 8 1/2" hole from 765m to 1056m, survey @30m intervals with Anderdrift. All zero degrees
11:30	12:00	Wireline survey with Totco, zero degrees at 1044m
12:00	0:00	Drill 8 1/2" hole from 1056m to 1327m, survey @30m intervals with Anderdrift.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

26/09/05

REPORT # 08

WELL	**Childers Cove 1**	**24:00 DEPTH**	**1742m**	**24 HR PROG**	**415m**	**CUM. COSTS**	**$1,821,992**
RIG	Century Resources Ltd # 7	**FORMATION**	Paarette	**PTD**	2075m	**DAILY COSTS**	$52,901.52
OP's TO 06:00	Continue to drill 8 1/2" hole from 1742m to 1815m						
REMARKS:	Held BOP drills with both crews, flow check all drilling breaks.					**PERSONNEL ON SITE:**	**37**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**504psi**
		BOP TEST	23/09/05	**TEST DUE**	14/10/05		
AFD's: 60	**SAFETY**	1. Hydraulic winch operations. Benefits of tool box talks				**WEATHER AM**	Fine/Cold
		2. Discuss BOP drills				**PM**	Cloudy/Cold

BIT INFORMATION			
WOB(kLb)	10-15	**JET V(fps)**	243
RPM	90-120	**H S I**	2.97
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		1192	
Hours		54	
ROP		22.1	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	606
AV - DP (fpm)	285
AV - DC (fpm)	447
SPP (psi)	1750
SPP (calculated)	1800

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	100	**RATE**	100
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 540 @ 70		SCR: 760 @ 100	

SURVEYS	
0° at 1373m	0° at 1457m
0.5° at 1393m	0° at 1654m
0.5° at 1438m	0.5° at 1740m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.4
STRING WT (kLb)	126.1
HOOK LOAD (kLb)	143.0
WT BELOW JARS (kLb)	34.0
DRAG UP (kLb)	5.0
DRAG DOWN (kLb)	5.0
TORQUE ON (Amps/Rel.)	0-30
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	23400 Litres
DAILY USAGE	5150 Litres
CUM. FUEL USED	26550 Litres
CUM. MUD MIXED	2794 Bbls
CUM. MUD LOSSES	2392 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	24:00
Depth (m)	1742
Temp (° C)	53
Mud Type	KCL/PHPA
Density (ppg)	9.00
ECD (ppg)	9.79
Viscosity (sec)	61
PV / YP (cp/lb)	23 / 31
Gells (s/m)	9 / 13
API Filt. (cc)	5.5
Cake (/32")	1
Solids (% Vol)	8
Sand (% Vol)	0.5
MBT	5
pH (strip)	8.7
Chlorides (mg/l)	22000
KCL (%)	4.2
PHPA (ppb)	1.4
ALC - 50 (K)	**0**
Circ. Vol. (Bbl)	795

CHEMICAL USAGE	
Duo-Tec	2
Glute 25	1
Polyplus	13
Polypac UL	35
Sod Bicarb	3
Pot chloride/KCL	128
OS-1/Sod Sulphite	4

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		3.0
Coring		
D/O Cement		2.0
Drilling	23.0	80.0
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		4.5
Rig Move		18.0
Rig Service	1.0	2.0
Safety		2.5
Survey		0.5
Tight hole / Fishing		
Tripping		6.0
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	192.0

DAILY MUD COSTS	$9,571.52
CUM. MUD COSTS	**$40,271.09**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	4:30	Drill 8 1/2" hole from 1327m to 1421m, survey @ 30m intervals with Anderdrift. 1/2 degree at 1393m, others zero degrees
4:30	5:00	Work on No 2 pump
5:00	16:30	Drill 8 1/2" hole from 1421m to 1546m, survey @ 30m intervals with Anderdrift.
16:30	17:00	Change out cap seal on number 2 mud pump
17:00	0:00	Drill 8 1/2" hole from 1546m to 1742, survey @ 30m intervals with Anderdrift. 1/2 degree at 1740m,

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

27/09/05

REPORT # 09

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2058m**	**24 HR PROG**	**316m**	**CUM. COSTS**	**$1,879,896**
RIG	Century Resources Ltd # 7	**FORMATION**	Belfast M/Stone	**PTD**	2075m	**DAILY COSTS**	$57,904.29
OP's TO 06:00	Drill 8 1/2" hole from 2058m to 2152m						
REMARKS:	Skull Ck at 1757m, N/Warre G/Sands at 1919.5m, Belfast M/Stone at 2027m					**PERSONNEL ON SITE:**	**35**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**504psi**
		BOP TEST	23/09/05	**TEST DUE**	14/10/05		
AFD's: 61	**SAFETY**	1. Discuss well control procedures, held bop drill, stretcher drill.				**WEATHER AM**	Fine
		2. Discussed safety alert involving elevators. Daily Hazobs				**PM**	Fine

BIT INFORMATION			
WOB(kLb)	10-20	**JET V(fps)**	231
RPM	100-110	**H S I**	2.54
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		1508	
Hours		75.5	
ROP		20.0	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	575
AV - DP (fpm)	271
AV - DC (fpm)	425
SPP (psi)	2100
SPP (calculated)	1870

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	95	**RATE**	95
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 680 @ 70		SCR: 940 @ 100	

SURVEYS	
.5° at 1765m	.5° at 1878m
.5° at 1812m	1.5° at 1952m
1° at 1850m	1° at 1980m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.4
STRING WT (kLb)	143.0
HOOK LOAD (kLb)	150.0
WT BELOW JARS (kLb)	34.0
DRAG UP (kLb)	8.0
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	0-50
TORQUE OFF (Amps/Rel.)	0-10

ENVIRONMENTAL DATA	
FUEL ON SITE	17550 Litres
DAILY USAGE	5850 Litres
CUM. FUEL USED	32400 Litres
CUM. MUD MIXED	3394 Bbls
CUM. MUD LOSSES	3014 Bbls
CUM. GEL	6000 kg
CUM. BARITES	

MUD PROPERTIES	
Time	24:00
Depth (m)	2058
Temp (° C)	56
Mud Type	KCL/PHPA
Density (ppg)	9.00
ECD (ppg)	9.78
Viscosity (sec)	65
PV / YP (cp/lb)	25 / 35
Gells (s/m)	7 / 10
API Filt. (cc)	5.1
Cake (/32")	1
Solids (% Vol)	10
Sand (% Vol)	0.75
MBT	7.5
pH (strip)	8.8
Chlorides (mg/l)	22000
KCL (%)	4
PHPA (ppb)	1.5
ALC - 50 (K)	
Circ. Vol. (Bbl)	876

CHEMICAL USAGE	
Duo-Tec	7
Glute 25	1
Polyplus	15
Polypac UL	43
Sod Bicarb	5
Pot chloride/KCL	196
OS-1/Sod Sulphite	5

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		3.0
Coring		
D/O Cement		2.0
Drilling	21.5	101.5
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs	1.0	5.5
Rig Move		18.0
Rig Service	0.5	2.5
Safety		2.5
Survey	1.0	1.5
Tight hole / Fishing		
Tripping		6.0
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	216.0

DAILY MUD COSTS	$13,574.29
CUM. MUD COSTS	**$53,845.38**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	4:00	Drill 8 1/2" hole from 1742 to 1796m, survey @ 30m intervals with Anderdrift. 1/2 degree at 1796m,
4:00	4:30	Repair Geoservices depth counter on Drawworks
4:30	13:30	Drill 8 1/2" hole from 1796 to 1936m, survey @ 30m intervals with Anderdrift. 1/2 degree at 1794, 1 degree at 1850, 1/2 at 1878m
13:30	14:30	Survey, Anderdrift not operating. Run Totco, 1/2 degree at 1924m
14:30	17:30	Drill 8 1/2" hole from 1936m to 1965, survey @ 30m intervals with Anderdrift. 1.5 degree at 1952m,
17:30	18:00	Service rig
18:00	18:30	Draw works drive shaft fell off. Refit and install bolts.
18:30	0:00	Drill 8 1/2" hole from 1965m to 2058m, survey @ 30m intervals with Anderdrift. 1 degree at 2049m,

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

28/09/05

REPORT # 10

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2246m**	**24 HR PROG**	**188m**	**CUM. COSTS**	**$1,930,478**
RIG	Century Resources Ltd # 7	**FORMATION**	Belfast M/Stone	**PTD**	2075m	**DAILY COSTS**	$50,581.49

OP's TO 06:00 Circ btms up from shoe. Slip Drilling line. Service Blocks and drilling equipment. RIH to 2120m. Hole ok,

REMARKS: Change out suction module on Mud pump #2. **PERSONNEL ON SITE:** **36**

LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**504psi**	**BOP TEST**	23/09/05	**TEST DUE**	14/10/05

AFD's: 62 **SAFETY** 1. Drilling ahead, H/Keeping on mud tanks; 2. POOH. Racking back pipe

WEATHER AM Showers

PM Rain

BIT INFORMATION

WOB(kLb)	10-15	**JET V(fps)**	219
RPM	100	**H S I**	2.16
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		1696	
Hours		88.5	
ROP		19.2	
Condition Out			

FLOW DATA

CIRC. RATE (gpm)	545
AV - DP (fpm)	257
AV - DC (fpm)	402
SPP (psi)	2100
SPP (calculated)	1820

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	90	**RATE**	90
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 650 @ 70		SCR: 980 @ 100	

SURVEYS

1° at 2093m	2.5° at 2186m
1° at 2149m	3.5° at 2215m
3° at 2177m	3.5° at 2244m

BHA # 2

TOOL	LENGTH
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.4
STRING WT (kLb)	153.0
HOOK LOAD (kLb)	153.0
WT BELOW JARS (kLb)	34.0
DRAG UP (kLb)	5.0
DRAG DOWN (kLb)	2.0
TORQUE ON (Amps/Rel.)	0-40
TORQUE OFF (Amps/Rel.)	50-150

ENVIRONMENTAL DATA

FUEL ON SITE	34500 Litres
DAILY USAGE	5300 Litres
CUM. FUEL USED	37700 Litres
CUM. MUD MIXED	3713 Bbls
CUM. MUD LOSSES	3394 Bbls
CUM. GEL	6000 kg
CUM. BARITES	1000 kg

MUD PROPERTIES

Time	20:00
Depth (m)	2246
Temp (° C)	
Mud Type	KCL/PHPA
Density (ppg)	9.00
ECD (ppg)	9.71
Viscosity (sec)	60
PV / YP (cp/lb)	25 / 34
Gells (s/m)	6 / 11
API Filt. (cc)	4.8
Cake (/32")	1
Solids (% Vol)	11
Sand (% Vol)	0.5
MBT	10
pH (strip)	8.7
Chlorides (mg/l)	22000
KCL (%)	4
PHPA (ppb)	1.25
ALC - 50 (K)	
Circ. Vol. (Bbl)	599

CHEMICAL USAGE

Barite	40
Duo-Tec	4
Glute 25	3
Polypac UL	21
Sod Bicarb	3
Pot chloride/KCL	100
OS-1/Sod Sulphite	4

OPERATION

	HRS	CUM
Casing		8.0
Cementing		1.5
Circ & Condition	1.0	4.0
Coring		
D/O Cement		2.0
Drilling	13.0	114.5
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs	0.5	6.0
Rig Move		18.0
Rig Service		2.5
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	9.5	15.5
Wait on Cement		3.5
Wash / Ream		
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	240.0

DAILY MUD COSTS	$6,551.49
CUM. MUD COSTS	**$60,396.87**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	4:00	Drill 8-1/2" hole from 2058 to 2114m - A/drift surveys: 1 deg at 2065 & 2093m
4:00	4:30	Replace swab in No 1 pump
4:30	13:30	Drill 8 1/2" hole f/ 2114m to 2246m. A/drift surveys at: 1 deg @2121, @2149m, 3 deg @2177, 2.5 @2186, 3.5 @2215 & 2244m
13:30	14:00	Circulate hole clean
14:00	14:30	Flow check, pump slug & pick up elevators
14:30	21:00	POOH from 2246m. Hole good up to 1731m then tight with 10 - 30 klbs overpull until 1240m.
21:00	0:00	Cont to POOH from 1240m with 5-15k overpull to 528m. Work slip area twice , no overpull on second wipe
		Max overpull on trip out 30klbs. Once hole was wiped once then the string passed at neutral string wt.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

29/09/05

REPORT # 11

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2377m**	**24 HR PROG**	**131m**	**CUM. COSTS**	**$1,978,719**
RIG	Century Resources Ltd # 7	**FORMATION**	Waare	**PTD**	2075m	**DAILY COSTS**	$48,241.58
OP's TO 06:00	Continue to drill 8 1/2" hole from 2377m to 2451m						
REMARKS:	Top Amplitude at 2335m					**PERSONNEL ON SITE:**	**34**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**466psi**
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 63	**SAFETY**	1. Slip line & run in hole				**WEATHER AM**	Rain/wind/fine
		2. Discuss general housekeeping				**PM**	Rain/wind/fine

BIT INFORMATION			
WOB(kLb)	10-18	**JET V(fps)**	204
RPM	100	**H S I**	1.84
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		IN	
Total Meters		1827	
Hours		102.5	
ROP		17.8	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	509
AV - DP (fpm)	240
AV - DC (fpm)	376
SPP (psi)	1900
SPP (calculated)	1800

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	84	**RATE**	84
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 600 @ 70		SCR: 920 @ 100	

SURVEYS	
3° at 2280m	3° at 2349m
3° at 2290m	3° at 2377m
3° at 2318m	2.5° at 2433m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.1
STRING WT (kLb)	158.8
HOOK LOAD (kLb)	180.0
WT BELOW JARS (kLb)	33.7
DRAG UP (kLb)	3.0
DRAG DOWN (kLb)	3.0
TORQUE ON (Amps/Rel.)	0-40
TORQUE OFF (Amps/Rel.)	40-150

ENVIRONMENTAL DATA	
FUEL ON SITE	31400 Litres
DAILY USAGE	3100 Litres
CUM. FUEL USED	40800 Litres
CUM. MUD MIXED	3880 Bbls
CUM. MUD LOSSES	3453 Bbls
CUM. GEL	6000 kg
CUM. BARITES	5400 kg

MUD PROPERTIES	
Time	24:00
Depth (m)	2377
Temp (° C)	58
Mud Type	KCL/PHPA
Density (ppg)	9.40
ECD (ppg)	10.10
Viscosity (sec)	66
PV / YP (cp/lb)	27 / 34
Gells (s/m)	6 / 10
API Filt. (cc)	5
Cake (/32")	1
Solids (% Vol)	8
Sand (% Vol)	0.6
MBT	10
pH (strip)	9.5
Chlorides (mg/l)	26000
KCL (%)	4.3
PHPA (ppb)	1
ALC - 50 (K)	
Circ. Vol. (Bbl)	868

CHEMICAL USAGE	
Barite	176
Caustic Soda	5
Duo-Tec	3
Glute 25	1
Polyplus	4
Sod Bicarb	1
Pot chloride/KCL	43

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition	0.5	4.5
Coring		
D/O Cement		2.0
Drilling	14.0	128.5
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service	1.0	3.5
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	5.0	20.5
Wait on Cement		3.5
Wash / Ream	3.5	3.5
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	264.0

DAILY MUD COSTS	$3,811.58
CUM. MUD COSTS	**$64,208.45**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	0:30	Circulate btms up from shoe.
0:30	1:00	Slip drilling line
1:00	1:30	Service Rig and drilling equipment, Shut down draw works motors and check all drive shaft universals
1:30	6:30	RIH from 528m to 2120m
6:30	10:00	Wash & ream to bottom, laid out singles & washed them down
10:00	0:00	Drill 8-1/2" hole from 2246m to 2377m. Flow check drilling breaks @ 2335, 2360m.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

30/09/05

REPORT # 12

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2545m**	**24 HR PROG**	**168m**	**CUM. COSTS**	**$2,025,776**
RIG	Century Resources Ltd # 7	**FORMATION**	Waare	**PTD**	2075m	**DAILY COSTS**	$47,056.51
OP's TO 06:00	POOH f 2545m t 1756m, 40k o-pull, pump out 20m. Pull to 1440m 10-20k O-pull, wipe once, ok.Swabbing/ circulate.						
REMARKS:	Tight hole at 1756m, work and wipe string as required, max overpull 40k.					**PERSONNEL ON SITE:**	**38**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**457psi**
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 64	**SAFETY**	1. Removing DP from bins & putting them on racks				**WEATHER AM**	Overcast, light sho
		2. Racking back pipe on floor				**PM**	Cold/ few showers

BIT INFORMATION			
WOB(kLb)	10-20	**JET V(fps)**	196
RPM	100	**H S I**	1.63
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		2545	
Total Meters		1995	
Hours		121	
ROP		16.5	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	487
AV - DP (fpm)	230
AV - DC (fpm)	360
SPP (psi)	1900
SPP (calculated)	1700

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	84	**RATE**	77
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 600 @ 70		SCR: 920 @ 100	

SURVEYS	
3° at 2412m	2.5° at 2470m
2.5° at 2433m	3.5° at 2495m
3° at 2440m	

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	44.0
STRING WT (kLb)	167.4
HOOK LOAD (kLb)	185.0
WT BELOW JARS (kLb)	33.7
DRAG UP (kLb)	2.0
DRAG DOWN (kLb)	2.0
TORQUE ON (Amps/Rel.)	0-30
TORQUE OFF (Amps/Rel.)	40-60

ENVIRONMENTAL DATA	
FUEL ON SITE	25850 Litres
DAILY USAGE	5550 Litres
CUM. FUEL USED	46350 Litres
CUM. MUD MIXED	4040 Bbls
CUM. MUD LOSSES	3643 Bbls
CUM. GEL	6000 kg
CUM. BARITES	8000 kg

MUD PROPERTIES	
Time	20:00
Depth (m)	2545
Temp (° C)	62
Mud Type	KCL/PHPA
Density (ppg)	9.50
ECD (ppg)	10.13
Viscosity (sec)	59
PV / YP (cp/lb)	24 / 35
Gells (s/m)	5 / 11
API Filt. (cc)	4
Cake (/32")	1
Solids (% Vol)	8.6
Sand (% Vol)	0.25
MBT	7.5
pH (strip)	8.6
Chlorides (mg/l)	26000
KCL (%)	4.2
PHPA (ppb)	0.7
ALC - 50 (K)	
Circ. Vol. (Bbl)	902

CHEMICAL USAGE	
Barite	104
Duo-Tec	2
Glute 25	4
Polyplus	1
Pot chloride/KCL	43
OS-1/Sod Sulphite	2

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition	2.0	6.5
Coring		
D/O Cement		2.0
Drilling	18.5	147.0
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service	0.5	4.0
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	3.0	23.5
Wait on Cement		3.5
Wash / Ream		3.5
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		
Other		1.5
TOTALS	24.0	288.0

DAILY MUD COSTS	$2,801.51
CUM. MUD COSTS	**$67,009.96**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	8:30	Drill 8-1/2" hole from 2377m to 2479m. Surveys, 3 deg at 2412m, 2.5 deg at 2433m, 3 deg at 2440m, 2.5 deg at 2470m
8:30	9:00	Rig service
9:00	19:00	Drill 8-1/2" hole from 2479m to 2545m. Flow check drilling breaks
19:00	20:00	Circ hole clean @2545m TD
20:00	21:30	POOH from 2545m to 2100m. Hole in premium condition with zero overpull to report.
21:30	23:00	RIH from 2100m to 2545m TD. No fill to report. No Drag.
23:00	0:00	Circulate hole clean for Logging

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

01/10/05

REPORT # 13

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2545m**	**24 HR PROG**	**0m**	**CUM. COSTS**	**$2,189,935**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$164,158.68
OP's TO 06:00	Wait on logging results. Make up Bit 2RR2 and run in hole BHA.						
REMARKS:	Circulation required on trip out due to hole not taking fluid & signs of swabbing					**PERSONNEL ON SITE:**	**40**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**452psi**
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 65	**SAFETY**	1. POOH to log 2. Running wireline logs				**WEATHER AM** **PM**	Shwrs o/night, fin Fine & sunny

BIT INFORMATION			
WOB(kLb)		**JET V(fps)**	
RPM		**H S I**	
BIT NUMBER		**2**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		550	
Depth Out (m)		2545	
Total Meters		1995	
Hours		121	
ROP		16.5	
Condition Out		2 2 WT N X I NO TD	

FLOW DATA	
CIRC. RATE (gpm)	
AV - DP (fpm)	
AV - DC (fpm)	
SPP (psi)	
SPP (calculated)	

PUMP #1		PUMP #2	
8-P-80		**8-P-80**	
RATE		**RATE**	
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	43.9
STRING WT (kLb)	167.3
HOOK LOAD (kLb)	
WT BELOW JARS (kLb)	33.6
DRAG UP (kLb)	
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	23450 Litres
DAILY USAGE	2400 Litres
CUM. FUEL USED	48750 Litres
CUM. MUD MIXED	4040 Bbls
CUM. MUD LOSSES	3739 Bbls
CUM. GEL	6000 kg
CUM. BARITES	10450 kg

MUD PROPERTIES	
Time	12:00
Depth (m)	2545
Temp (° C)	
Mud Type	KCL/PHPA
Density (ppg)	9.55
ECD (ppg)	
Viscosity (sec)	60
PV / YP (cp/lb)	24 / 35
Gells (s/m)	5 / 11
API Filt. (cc)	4
Cake (/32")	1
Solids (% Vol)	8.6
Sand (% Vol)	0.25
MBT	7.5
pH (strip)	7.5
Chlorides (mg/l)	26000
KCL (%)	4.3
PHPA (ppb)	0.8
ALC - 50 (K)	
Circ. Vol. (Bbl)	822

CHEMICAL USAGE	
Barite	98
OS-1/Sod Sulphite	2

OPERATION	HRS	CUM
Casing		8.0
Cementing		1.5
Circ & Condition		6.5
Coring		
D/O Cement		2.0
Drilling		147.0
Handle BHA		4.0
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service	1.0	5.0
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	10.5	34.0
Wait on Cement		3.5
Wash / Ream	3.0	6.5
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline	9.5	9.5
Other		1.5
TOTALS	24.0	312.0

DAILY MUD COSTS	$876.68
CUM. MUD COSTS	**$67,886.64**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	3:00	POOH from 2545m TD to 1758m, little or no drag
3:00	6:00	Pick up kelly at times & wash & ream tight spots up to 1425m.
6:00	10:00	POOH from 1425m to csg shoe @544.5m, over-pull less than 15klbs, work pipe across slip area.
10:00	11:00	Slip & cut line
11:00	14:30	POOH from shoe @544.5. Lay out HWDP & Anderdrift, Stabs and bit.
14:30	15:00	Rig up Precision Logging
15:00	23:30	Run in Hole and log as per program MCG,MDN,MPD,MSS,MLE,MMR. To a depth of 2529m
23:30	0:00	Rig down wire line equipment.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

02/10/05

REPORT # 14

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2616m**	**24 HR PROG**	**71m**	**CUM. COSTS**	**$2,241,646**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$51,816.27

OP's TO 06:00 Drill 8 1/2" hole from 2616m to 2646m.

REMARKS: Drill ahead to a TD of 2660m to give the required rat hole for logging. **PERSONNEL ON SITE:** **38**

LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**448psi**	**BOP TEST**	23/09/05	**TEST DUE**	14/10/05

AFD's: 66

SAFETY 1. Weekly safety meeting
2. Weekly safety meeting

WEATHER AM Fine
PM Fine

BIT INFORMATION			
WOB(kLb)	10-20	**JET V(fps)**	201
RPM	110	**H S I**	1.78
BIT NUMBER		**2RR1**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		2545	
Depth Out (m)		IN	
Total Meters		71	
Hours		10.5	
ROP		6.8	
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	500
AV - DP (fpm)	235
AV - DC (fpm)	369
SPP (psi)	1950
SPP (calculated)	1770

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	81	**RATE**	84
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 610 @ 70		SCR: 920 @ 100	

SURVEYS
4.5° at 2564m

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	43.9
STRING WT (kLb)	170.9
HOOK LOAD (kLb)	190.0
WT BELOW JARS (kLb)	33.6
DRAG UP (kLb)	3.0
DRAG DOWN (kLb)	3.0
TORQUE ON (Amps/Rel.)	40-120
TORQUE OFF (Amps/Rel.)	10-30

ENVIRONMENTAL DATA	
FUEL ON SITE	21000 Litres
DAILY USAGE	2450 Litres
CUM. FUEL USED	51200 Litres
CUM. MUD MIXED	4432 Bbls
CUM. MUD LOSSES	3939 Bbls
CUM. GEL	6000 kg
CUM. BARITES	10450 kg

MUD PROPERTIES	
Time	24:00
Depth (m)	2616
Temp (° C)	65
Mud Type	KCL/PHPA
Density (ppg)	9.60
ECD (ppg)	10.26
Viscosity (sec)	62
PV / YP (cp/lb)	22 / 35
Gells (s/m)	6 / 10
API Filt. (cc)	4.2
Cake (/32")	1
Solids (% Vol)	9.5
Sand (% Vol)	0.5
MBT	10
pH (strip)	9.3
Chlorides (mg/l)	27000
KCL (%)	5.3
PHPA (ppb)	0.9
ALC - 50 (K)	
Circ. Vol. (Bbl)	946

CHEMICAL USAGE	
Caustic Soda	2
Duo-Tec	5
Glute 25	2
Polyplus	5
Polypac UL	15
Sod Bicarb	1
Pot chloride/KCL	125
OS-1/Sod Sulphite	4

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		6.5
Coring		
D/O Cement		2.0
Drilling	10.5	157.5
Handle BHA	1.5	5.5
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service		5.0
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	9.5	43.5
Wait on Cement		3.5
Wash / Ream	1.0	7.5
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		9.5
Other	1.5	3.0
TOTALS	24.0	336.0

DAILY MUD COSTS	$6,786.27
CUM. MUD COSTS	**$74,568.39**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	1:30	Wait on orders
1:30	2:30	Make up BHA with Bit #2 RR1, anderdrift, stab's
2:30	4:30	RIH BHA from derrick.
4:30	5:00	Pick up HWDP layed out on trip out of hole.
5:00	7:00	RIH to 1044m
7:00	7:30	Fill pipe & break circulation
7:30	9:30	RIH to 2402m. Tight hole at 2402m
9:30	10:00	Fill pipe and break circulation. Wash down from 2402m to 2411m
10:00	13:00	RIH to 2514m, 0-20klbs drag
13:00	13:30	Wash and ream from 2414m to 2545m, 20klbs drag
13:30	0:00	Drill 8 1/2" hole from 2545m to 2616m. Flow check all drilling breaks.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

03/10/05

REPORT # 15

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2658m**	**24 HR PROG**	**42m**	**CUM. COSTS**	**$2,290,454**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$48,807.47

OP's TO 06:00 Log from 2656.8m to 2400m. Rig down wire line equipment, RIH BHA from derrick to lay out.

REMARKS: **PERSONNEL ON SITE:** **38**

LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**448psi**	**BOP TEST**	23/09/05	**TEST DUE**	14/10/05

AFD's: 67 **SAFETY** 1. Drilling ahead & POH; 2. Racking back DP on floor

WEATHER AM Fine

PM Fine

BIT INFORMATION			
WOB(kLb)	10-20	**JET V(fps)**	204
RPM	120	**H S I**	1.88
BIT NUMBER		**2RR1**	
Size (in)		8.5	
Make		Hughes	
Type		HC605S	
IADC Code		S323	
Serial Number		7002589	
T.F.A.(")		0.798	
Depth In (m)		2545	
Depth Out (m)		2658	
Total Meters		113	
Hours		18	
ROP		6.3	
Condition Out		3 2 WT N X I NO TD	

FLOW DATA	
CIRC. RATE (gpm)	509
AV - DP (fpm)	240
AV - DC (fpm)	376
SPP (psi)	1950
SPP (calculated)	1900

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE	84	**RATE**	84
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"
SCR: 610 @ 70		SCR: 920 @ 100	

SURVEYS

BHA # 2	
TOOL	**LENGTH**
Bit	0.27
Near Bit Stab	1.27
Ander drift	3.01
Drill collars x 1	9.18
String Stab	1.35
Drill collars x 14	129.26
Drilling Jars	9.56
Drill Collar x 2	18.04
Hwdp x 4	37.55
BHA LENGTH (m)	209.49
BHA WEIGHT(kLb)	43.9
STRING WT (kLb)	173.1
HOOK LOAD (kLb)	190.0
WT BELOW JARS (kLb)	33.6
DRAG UP (kLb)	3.0
DRAG DOWN (kLb)	3.0
TORQUE ON (Amps/Rel.)	40-121
TORQUE OFF (Amps/Rel.)	10-31

ENVIRONMENTAL DATA	
FUEL ON SITE	16650 Litres
DAILY USAGE	4350 Litres
CUM. FUEL USED	55550 Litres
CUM. MUD MIXED	4432 Bbls
CUM. MUD LOSSES	4119 Bbls
CUM. GEL	6000 kg
CUM. BARITES	12625 kg

MUD PROPERTIES	
Time	21:00
Depth (m)	2658
Temp (° C)	63
Mud Type	KCL/PHPA
Density (ppg)	9.60
ECD (ppg)	10.24
Viscosity (sec)	58
PV / YP (cp/lb)	25 / 33
Gells (s/m)	5 / 10
API Filt. (cc)	5
Cake (/32")	1
Solids (% Vol)	9.6
Sand (% Vol)	0.5
MBT	8
pH (strip)	9.1
Chlorides (mg/l)	28000
KCL (%)	5.4
PHPA (ppb)	0.75
ALC - 50 (K)	
Circ. Vol. (Bbl)	843

CHEMICAL USAGE	
Barite	87
Duo-Tec	2
Polyplus	-1
Polypac UL	1
Pot chloride/KCL	14

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition	2.5	9.0
Coring		
D/O Cement		2.0
Drilling	7.5	165.0
Handle BHA		5.5
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service	0.5	5.5
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	10.0	53.5
Wait on Cement		3.5
Wash / Ream	0.5	8.0
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline	3.0	12.5
Other		3.0
TOTALS	24.0	360.0

DAILY MUD COSTS	$1,477.47
CUM. MUD COSTS	**$76,045.86**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	1:00	Continue to drill 8 1/2" hole from 2616m to 2620m
1:00	1:30	Change swab in No 1 pump
1:30	8:00	Drill 8-1/2" hole from 2620 to 2658m
8:00	9:00	Circulate hole clean
9:00	9:30	Pump slug & hoist on wiper trip to 2571m
9:30	10:00	Wash & ream up from 2571 to 2552m
10:00	10:30	POOH
10:30	11:30	Run in hole & wash 2 singles to bottom, 4m of fill otherwise hole good
11:30	13:00	Circulate hole clean, spot 250m Hi-Vis pill on bottom, pump slug
13:00	21:00	POOH from 2658m to surface, 30k drag @2561-2543, @1634-1625, @1203-1193m
21:00	21:30	Clean up rig floor, Hold pre task safety meeting and rig up Precision wire line.
21:30	0:00	Run in Hole and log as per program MCG,MDN,MPD,MSS,MLE,MMR.

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

04/10/05

REPORT # 16

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2658m**	**24 HR PROG**		**CUM. COSTS**	**$2,411,934**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$121,480.00
OP's TO 06:00	Take pressure reading #4, tool failure, POOH , run back up tool. Logs complete @05:57						
REMARKS:						**PERSONNEL ON SITE:**	**40**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	**448psi**
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 68	**SAFETY**	1. Logging & tripping				**WEATHER AM**	Fine
		2. Running in Drill Pipe				**PM**	Fine

BIT INFORMATION			
WOB(kLb)		**JET V(fps)**	
RPM		**H S I**	
BIT NUMBER			
Size (in)			
Make			
Type			
IADC Code			
Serial Number			
T.F.A.(")			
Depth In (m)			
Depth Out (m)			
Total Meters			
Hours			
ROP			
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	
AV - DP (fpm)	
AV - DC (fpm)	
SPP (psi)	
SPP (calculated)	

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE		**RATE**	
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS	

	TOOL	**LENGTH**
BHA LENGTH (m)		
BHA WEIGHT(kLb)		
STRING WT (kLb)		
HOOK LOAD (kLb)		
WT BELOW JARS (kLb)		
DRAG UP (kLb)		
DRAG DOWN (kLb)		
TORQUE ON (Amps/Rel.)		
TORQUE OFF (Amps/Rel.)		

ENVIRONMENTAL DATA	
FUEL ON SITE	14750 Litres
DAILY USAGE	1900 Litres
CUM. FUEL USED	57450 Litres
CUM. MUD MIXED	4432 Bbls
CUM. MUD LOSSES	4144 Bbls
CUM. GEL	6000 kg
CUM. BARITES	12625 kg

MUD PROPERTIES	
Time	19:30
Depth (m)	2658
Temp (° C)	
Mud Type	KCL/PHPA
Density (ppg)	9.60
ECD (ppg)	
Viscosity (sec)	58
PV / YP (cp/lb)	26 / 31
Gells (s/m)	5 / 10
API Filt. (cc)	5
Cake (/32")	1
Solids (% Vol)	9.2
Sand (% Vol)	0.5
MBT	8
pH (strip)	9
Chlorides (mg/l)	28000
KCL (%)	5.5
PHPA (ppb)	0.75
ALC - 50 (K)	
Circ. Vol. (Bbl)	787

CHEMICAL USAGE	

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		9.0
Coring		
D/O Cement		2.0
Drilling		165.0
Handle BHA		5.5
LOT / FIT		0.5
N/U & Test BOP's		43.5
P & A		
Repairs		6.0
Rig Move		18.0
Rig Service	0.5	6.0
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping	6.5	60.0
Wait on Cement		3.5
Wash / Ream		8.0
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline	12.0	24.5
Other	5.0	8.0
TOTALS	24.0	384.0

DAILY MUD COSTS	
CUM. MUD COSTS	**$76,045.86**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	4:00	Log as per program MCG,MDN,MPD,MSS,MLE,MMR. To a depth of 2656m
4:00	4:30	Rig down Precision loggers
4:30	8:30	Run in hole with BHA then lay it out
8:30	10:30	Pick up 2-7/8" tubing stinger & run in hole to run P & A plugs
10:30	11:00	Slip line
11:00	12:30	Wait on orders
12:30	13:00	Hoist & rack pipe back in derrick
13:00	16:30	Wait on Precision MFT engineer to return to rig, rig up Precision
16:30	17:00	Rig up tools MCG, MFT.
17:00	22:30	RIH and take pressure readings at points #1, 2, 3. Tool failure.
22:30	23:00	Pull to shoe,
23:00	23:30	Cycle tools at shoe, operating ok.
23:30	0:00	RIH MCG, MFT

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	John Hobday	**MUD CO:**	M-I

DAILY DRILLING REPORT

05/10/05

REPORT # 17

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2658m**	**24 HR PROG**		**CUM. COSTS**	**$2,543,414**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$131,479.92
OP's TO 06:00	POOH, Plug #5, POOH, Plug #6, POOH.Service break Kelly. Cont lay out pipe.						
REMARKS:						**PERSONNEL ON SITE:**	**38**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 69	**SAFETY**	1. Running BHA and laying out same				**WEATHER AM**	Overcast
		2. Preventitive maitanence on drilling equiopment(tail shafts)				**PM**	cold

BIT INFORMATION						**MUD PROPERTIES**		**OPERATION**	**HRS**	**CUM**
WOB(kLb)		**JET V(fps)**		**TOOL**	**LENGTH**	Time		Casing		8.0
RPM		**H S I**				Depth (m)	2658	Cementing		1.5
BIT NUMBER						Temp (° C)		Circ & Condition	1.0	10.0
Size (in)						Mud Type	KCL/PHPA	Coring		
Make						Density (ppg)		D/O Cement		2.0
Type						ECD (ppg)		Drilling		165.0
IADC Code						Viscosity (sec)		Handle BHA		5.5
Serial Number						PV / YP (cp/lb)		LOT / FIT		0.5
T.F.A.(")						Gells (s/m)		N/U & Test BOP's		43.5
Depth In (m)						API Filt. (cc)		P & A	8.5	8.5
Depth Out (m)						Cake (/32")		Repairs		6.0
Total Meters						Solids (% Vol)		Rig Move		18.0
Hours						Sand (% Vol)		Rig Service		6.0
ROP						MBT		Safety		2.5
Condition Out				**BHA LENGTH (m)**		pH (strip)		Survey		1.5
FLOW DATA				**BHA WEIGHT(kLb)**		Chlorides (mg/l)		Tight hole / Fishing		
CIRC. RATE (gpm)				**STRING WT (kLb)**		KCL (%)		Tripping	5.5	65.5
AV - DP (fpm)				**HOOK LOAD (kLb)**		PHPA (ppb)		Wait on Cement		3.5
AV - DC (fpm)				**WT BELOW JARS (kLb)**		ALC - 50 (K)		Wash / Ream		8.0
SPP (psi)				**DRAG UP (kLb)**		Circ. Vol. (Bbl)		Well Control		
SPP (calculated)				**DRAG DOWN (kLb)**		**CHEMICAL USAGE**		Well Test		
PUMP #1		**PUMP #2**		**TORQUE ON (Amps/Rel.)**		Barite	13	Wellhead		6.0
8-P-80		**8-P-80**		**TORQUE OFF (Amps/Rel.)**				Wiper Trip		5.0
RATE		**RATE**		**ENVIRONMENTAL DATA**				Wireline	7.0	31.5
LINER	6.0"	**LINER**	6.0"	FUEL ON SITE				Other	2.0	10.0
STROKE	8.5"	**STROKE**	8.5"	DAILY USAGE				**TOTALS**	24.0	408.0
				CUM. FUEL USED	72200 Litres			DAILY MUD COSTS		$101.92
SURVEYS				CUM. MUD MIXED	4432 Bbls			CUM. MUD COSTS		**$76,147.78**
				CUM. MUD LOSSES	4144 Bbls			**AFE COST - C&S**		$2,847,416
				CUM. GEL	6000 kg			**AFE COST - P&A**		$2,588,872
				CUM. BARITES	12950 kg			**AFE COST - C&C**		

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	6:00	Run MCG, MFT
6:00	7:00	Rig down Precision E-Loggers
7:00	9:00	Wait on orders
9:00	14:30	Run in hole with cementing stinger
14:30	15:30	Circulate hole clean
15:30	16:00	Run P & A Plug No 1, 2570 - 2500m, 95 sacks of G cement
16:00	17:30	Pull up out of cement & lay out pipe
17:30	18:30	Run P & A Plug No 2, 2349 - 2289m, 80 sacks of G cement
18:30	20:30	Pull up out of cement & lay out pipe
20:30	21:00	Run P & A Plug No 3, 1950 - 1890m, 80 sacks of G cement
21:00	23:30	Pull up out of cement & lay out pipe
23:30	0:00	Run P & A Plug No 4, 1320 - 1260m, 95 sacks of G cement

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	**MUD CO:**	M-I

DAILY DRILLING REPORT

06/10/05

REPORT # 18

WELL	**Childers Cove 1**	**24:00 DEPTH**	**2658m**	**24 HR PROG**		**CUM. COSTS**	**$2,618,933**
RIG	Century Resources Ltd # 7	**FORMATION**	Eumeralla	**PTD**	2075m	**DAILY COSTS**	$75,519.00
OP's TO 06:00	Rig down & prepare to move to Woodside well						
REMARKS:	Rig release time 20:00hrs.					**PERSONNEL ON SITE:**	**33**
LAST CASING	9 5/8"	**SET AT**	544.5m	**LOT**	14.4ppg	**MAASP**	
BOP TEST	23/09/05	**TEST DUE**	14/10/05				
AFD's: 70	**SAFETY**	1. Cementing & laying out pipe				**WEATHER AM**	Fine
		2. Nipple down BOPs, complete laying out drill pipe.				**PM**	Overcast

BIT INFORMATION			
WOB(kLb)		**JET V(fps)**	
RPM		**H S I**	
BIT NUMBER			
Size (in)			
Make			
Type			
IADC Code			
Serial Number			
T.F.A.(")			
Depth In (m)			
Depth Out (m)			
Total Meters			
Hours			
ROP			
Condition Out			

FLOW DATA	
CIRC. RATE (gpm)	
AV - DP (fpm)	
AV - DC (fpm)	
SPP (psi)	
SPP (calculated)	

PUMP #1		**PUMP #2**	
8-P-80		**8-P-80**	
RATE		**RATE**	
LINER	6.0"	**LINER**	6.0"
STROKE	8.5"	**STROKE**	8.5"

SURVEYS

TOOL	**LENGTH**
BHA LENGTH (m)	
BHA WEIGHT(kLb)	
STRING WT (kLb)	
HOOK LOAD (kLb)	
WT BELOW JARS (kLb)	
DRAG UP (kLb)	
DRAG DOWN (kLb)	
TORQUE ON (Amps/Rel.)	
TORQUE OFF (Amps/Rel.)	

ENVIRONMENTAL DATA	
FUEL ON SITE	8800 Litres
DAILY USAGE	1100 Litres
CUM. FUEL USED	63400 Litres
CUM. MUD MIXED	4432 Bbls
CUM. MUD LOSSES	4144 Bbls
CUM. GEL	6000 kg
CUM. BARITES	12950 kg

MUD PROPERTIES
Time
Depth (m)
Temp (° C)
Mud Type
Density (ppg)
ECD (ppg)
Viscosity (sec)
PV / YP (cp/lb)
Gells (s/m)
API Filt. (cc)
Cake (/32")
Solids (% Vol)
Sand (% Vol)
MBT
pH (strip)
Chlorides (mg/l)
KCL (%)
PHPA (ppb)
ALC - 50 (K)
Circ. Vol. (Bbl)

CHEMICAL USAGE	

OPERATION	**HRS**	**CUM**
Casing		8.0
Cementing		1.5
Circ & Condition		10.0
Coring		
D/O Cement		2.0
Drilling		165.0
Handle BHA		5.5
LOT / FIT		0.5
N/U & Test BOP's	6.5	50.0
P & A	13.5	22.0
Repairs		6.0
Rig Move		18.0
Rig Service		6.0
Safety		2.5
Survey		1.5
Tight hole / Fishing		
Tripping		65.5
Wait on Cement		3.5
Wash / Ream		8.0
Well Control		
Well Test		
Wellhead		6.0
Wiper Trip		5.0
Wireline		31.5
Other		10.0
TOTALS	20.0	428.0

DAILY MUD COSTS	
CUM. MUD COSTS	**$76,147.78**
AFE COST - C&S	$2,847,416
AFE COST - P&A	$2,588,872
AFE COST - C&C	

HOURLY OPERATIONS SUMMARY 0000 to 2400

From	To	Description
0:00	0:30	Continue with P & A Plug No 4, 1320 - 1260m, 95 sacks of G cement
0:30	1:00	Pull up out of cement & lay out pipe
1:00	1:30	Run P & A Plug No 5, 1255 - 1195m, 95 sacks of G cement
1:30	3:30	Pull up out of cement & lay out pipe
3:30	4:00	Run P & A Plug No 6, 575 - 510m, 110 sacks of G cement
4:00	4:30	Pull up out of cement & lay out pipe
4:30	5:30	Break kelly
5:30	8:00	Lay down pipe
8:00	9:30	Lay down kelly, kelly spinner, swivel & bushings
9:30	11:00	Run in & tag cement at 499m, set 15klbs weight on plug. Pressure test to 750psi for 5 minutes.
11:00	13:30	Lay out pipe
13:30	20:00	Nipple down BOP's, clean mud tanks. Set surface cement plug & weld on cap & well sign
		Rig released from Childer's Cove 1 at 20:00hrs for move to Woodside operations

SUPERVISOR:	S.Porter / B.Webb	**GEOLOGIST:**	**MUD CO:**	M-I

APPENDIX 2

DAILY GEOLOGICAL REPORTS

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	0	**DAYS FROM SPUD:**	0	**DATE:**	17/09/05
0000hrs Depth:	**0**	**Last Depth:**	**0**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	19/09/05 –0m – Continue rigging up for spud.						
REMARKS:	***This is only a draft to show the sub-sea depths for reference using the finalised survey data.***						

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:		**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.17	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.47	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0		(~51.5aprox.)	
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone			5.3	46.2			9.7		
Gellibrand Marl			144.5	-93.0			-149.2		
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**										
Gas			**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	1	**DAYS FROM SPUD:**	1	**DATE:**	19/09/05
0000hrs Depth:	**84**	**Last Depth:**	**spud**	**24 HR PROGRESS:**	**84**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	20/09/05 –176m – drilling ahead 12 ½" top hole in the Port Campbell Limestone, possibly the Gellibrand Marl (awaiting for more lagged sample for confirmation).						
REMARKS:	Childers Cove-1 spudded at 1800hrs on the 19th of September, 2005.						

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl			144.5	-93.0			-149.2		
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
Spud	-	176.0	0.3-5.4 **(1.5)**	Massive LIMESTONE with trace MARL at later depths. LIMESTONE, off white, yellowish grey, pale olive, minor medium light grey, sparitic, micritic, common to abundant shell and coral fragments, trace green lithics, trace pyrite nodules, crystalline, microcrystalline in part, unconsolidated, friable to moderately hard. MARL, light to occasional medium grey, common shell and coral fragments, trace pyrite nodules, soft to dispersive, amorphous.

Gas	**Units:**	Nil	**Composition (%):**	- / - / - / - / -
Show Details / %CO2	Nil			

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	2	**DAYS FROM SPUD:**	2	**DATE:**	20/09/05
0000hrs Depth:	**547**	**Last Depth:**	**84**	**24 HR PROGRESS:**	**463**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	21/09/05 –550m – Drilled to CSG TD, conduct wiper trip, and circulating after wiper trip preparing to POH.						
REMARKS:	Geoservices was/is able to monitor drilling and tripping, although computer problems created the data unable to be stored. Thus, drill parameters and tripping details were monitored by computer, but recorded by hand. Geoservices H/O will rectify this inconvenience before drilling 8 ½" main hole.						

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
Spud	-	213.0	0.3-5.4 **(1.5)**	Massive LIMESTONE with trace MARL at later depths. LIMESTONE, off white, yellowish grey, pale olive, minor medium light grey, sparitic, micritic, common to abundant shell and coral fragments, trace green lithics, trace pyrite nodules, crystalline, microcrystalline in part, unconsolidated, friable to moderately hard. MARL, light to occasional medium grey, common shell and coral fragments, trace pyrite nodules, soft to dispersive, amorphous.

Gas	**Units:**	Nil	**Composition (%):**	- / - / - / - / -
Show Details / %CO2	Nil			

Interval			ROP (ave)	Lithology Description										
213.0	-	550.0	*	Massive MARL. MARL, light to medium grey, light olive grey, slightly greenish grey, argillaceous, calcareous, minor micro carbonaceous specks, very soft to soft, predominantly dispersive, rare firm in part, blocky to sub-blocky, dominantly amorphous.										
Gas			**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2			Nil											

* Lost digital data due to computer problems, analog data not prepared by time of reporting.

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	3	**DAYS FROM SPUD:**	3	**DATE:**	21/09/05
0000hrs Depth:	**550**	**Last Depth:**	**547**	**24 HR PROGRESS:**	**3**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	22/09/05 –551m – Continue dressing casing to weld on well head.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**										
Gas			**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	4	**DAYS FROM SPUD:**	4	**DATE:**	22/09/05
0000hrs Depth:	**550**	**Last Depth:**	**550**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	23/09/05 –551m – Cooling, and nippleing up BOP						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**										
Gas			**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	5	**DAYS FROM SPUD:**	5	**DATE:**	23/09/05
0000hrs Depth:	**550**	**Last Depth:**	**550**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	24/09/05 –550m – RIH to drill 8 ½" main hole.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation			562.5	-511.0			-526.8		
Narrawaturk Marl			592.5	-541.0			-546.2		
Mepunga Formation			661.5	-610.0			-664.0		
Dilwyn Formation			750.5	-699.0			-717.4		
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**										
Gas			**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	6	**DAYS FROM SPUD:**	6	**DATE:**	24/09/05
0000hrs Depth:	**765**	**Last Depth:**	**550**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	25/09/05 –924m – Drilling 8 ½" main hole in the Dilwyn Formation.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone			1136.5	-1085.0			-936.3		
Pebble Point Formation			1195.5	-1144.0			-1021.1		
Paaratte Formation			1285.5	-1234.0			-1175.2		
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
213.0	-	595.5	0.2-8.0 **(1.3)**	Massive MARL. MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro carbonaceous specks, very soft to soft, dispersive, slightly firm in part, blocky, amorphous.

Gas	**Units:**	Nil	**Composition (%):**	-	/	-	/	-	/	-	/	-
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description
595.5	-	623.0	0.5-1.7 **(0.8)**	Interbedded SILTSTONE, MARL, LIMESTONE and trace SANDSTONE. SANDSTONE, dominantly reddish orange, minor orangish grey, trace clear to translucent, fine to medium, moderately poor sorted, sub-angular to sub-rounded, minor angular grains, strong calcareous cement, orange to red argillaceous matrix, common Fe staining, common fossiliferous and shell fragments, loose, unconsolidated, friable to occasional moderately hard, poor porosity, no fluorescence. SILTSTONE, moderately reddish brown, orangish brown, minor brownish grey, argillaceous, calcareous, grading to CLAYSTONE in part, abundant Fe staining, dispersive to soft, minor firm, blocky to sub-blocky, amorphous. MARL, greenish grey to predominantly dark grayish green, dark grey, argillaceous, calcareous, minor pale brownish orange fossiliferous fragments, soft to firm, sub-blocky to sub-fissile, amorphous in part. LIMESTONE, off white to predominantly brownish orange, argillaceous, fossiliferous, microcrystalline to crystalline, moderately hard to occasional hard.

Gas	Units:	Nil	Composition (%):	-	/	-	/	-	/	-	/	-
Show Details / %CO2	Nil											

623.0	-	645.0	0.4-1.1 **(0.7)**	MARL with minor SILTSTONE, LIMESTONE and SANDSTONE. SANDSTONE, dominantly reddish orange, minor orange grey, trace clear to translucent, fine to medium, moderately poor sorted, sub-angular to sub-rounded, minor angular grains, strong calcareous cement, orangish red argillaceous matrix, common Fe staining, common fossiliferous and shell fragments, loose, unconsolidated, friable to occasional moderately hard aggregates, poor visual and inferred porosity, no fluorescence. SILTSTONE, orangish brown, reddish brown, argillaceous, common grading to CLAYSTONE, slightly arenaceous in part, calcareous common Fe staining, soft to predominantly firm, dispersive in part, sub-blocky to sub-fissile, amorphous in part. MARL, brownish grey to minor brownish black, very argillaceous, calcareous, minor to localized common glauconite grains, occasional pyrite nodules and fossiliferous fragments, soft to dispersive, sub-blocky to amorphous. LIMESTONE, orangish brown, reddish brown, lutitic, argillaceous, microcrystalline to crystalline, Fe staining, soft to firm, moderately hard to hard in part.

Gas	Units:	Nil	Composition (%):	-	/	-	/	-	/	-	/	-
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description
645.0	-	775.0	0.3-5.3 **(0.9)**	SANDSTONE with SILTSTONE interbeds and trace LIMESTONE. SANDSTONE, translucent yellow, opaque brown, minor clear to frosted, coarse to very coarse, moderately sorted, sub-rounded to rounded, occasional sub-angular, weak siliceous and calcareous cement, trace brown argillaceous matrix, clean and unconsolidated, loose, good inferred porosity, no fluorescence. SILTSTONE, light to medium grayish brown, getting more dark brownish grey at depths, occasional pale yellowish brown, dominantly argillaceous, trace calcareous, minor disseminated pyrite, green lithics, dominantly sub-blocky, amorphous. MARL, off white to brownish grey, argillaceous, calcareous, common to occasional glauconite grains, minor pyrite nodules, soft to dispersive, sub-blocky to amorphous. LIMESTONE, milky to dusky white, lutitic, oolitic, microcrystalline, soft to very soft.

Gas	Units:	Nil	Composition (%):	-	/	-	/	-	/	-	/	-
Show Details / %CO2	Nil											

775.5	-	(924.0)	0.3-7.6 **(0.7)**	SANDSTONE with Interbedded SILTSTONE. SANDSTONE, translucent to clear, opaque pale brown, frosted, fine to very coarse, dominantly medium to coarse, moderately well sorted, sub-rounded to sub-angular, rounded very coarse grains, weak to moderately calcareous cement, rare brown argillaceous matrix, localized common pyrite nodules, loose and clean, minor unconsolidated, fair to good inferred porosity, no fluorescence. SILTSTONE, medium to dark brown, grayish brown, pale to medium grey, argillaceous, trace arenaceous, occasional pyrite nodules, trace black lithics, soft to dispersive, localized firm, sub-blocky to amorphous.

Gas	Units:	Nil	Composition (%):	-	/	-	/	-	/	-	/	-
Show Details / %CO2	Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	7	**DAYS FROM SPUD:**	7	**DATE:**	25/09/05
0000hrs Depth:	**1327**	**Last Depth:**	**765**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	26/09/05 - 1439m – Drilling 8 ½" main hole in the Paaratte Formation.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone			1756.5	-1705.0			-1643.7		
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
775.5	-	1191.0	0.3-36.2 **(1.1)**	SANDSTONE with Interbedded SILTSTONE. SANDSTONE, translucent to clear, opaque pale brown, frosted, fine to very coarse, dominantly medium to coarse, moderately well sorted, sub-rounded to sub-angular, rounded very coarse grains, weak to moderately calcareous cement, rare brown argillaceous matrix, localized common pyrite nodules, loose and clean, minor unconsolidated, fair to good inferred porosity, no fluorescence. SILTSTONE, medium to dark brown, grayish brown, pale to medium grey, argillaceous, trace arenaceous, occasional pyrite nodules, trace black lithics, soft to dispersive, localized firm, sub-blocky to amorphous.

Gas	**Units:**	Nil	**Composition (%):**	- / - / - / - / -
Show Details / %CO2	Nil			

Interval			ROP (ave)	Lithology Description
1191.0	-	1225.0	0.6-9.2 **(1.7)**	SILTSTONE, with interbedded SANDSTONE. SANDSTONE, clear to translucent, frosted, pale grey, trace yellowish grey, very fine to medium, minor coarse, dominantly fine, moderately well to localized well sorted, sub-angular to sub-rounded, trace angular very coarse fractured grains, trace weak calcareous and siliceous cement, trace grayish brown argillaceous matrix, common muscovite flecks, loose and predominantly clean, fair porosity, no fluorescence. SILTSTONE, medium greenish grey to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, predominantly soft to dispersive, rare firm to moderately hard, sub-blocky to blocky, amorphous.

Gas	Units:	Nil	Composition (%):	- / - / - / - / -
Show Details / %CO2	Nil			

1225.0	-	1287.0	0.4-2.9 **(1.3)**	SANDSTONE with SILTSTONE interbeds SANDSTONE, translucent to transparent, clear, minor yellowish grey, predominantly medium to fine grains, coarse grains /p, moderately well sorted, strong siliceous cement, no visual matrix, trace carbonaceous specks, trace pyrite nodules, loose, moderately hard to hard aggregates, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, light to medium grey, slightly brownish grey, argillaceous, arenaceous, grading to very fine SANDSTONE, common micromicaceous, soft to minor firm, common dispersive to soft, blocky to sub-blocky, trace sub-fissile in part, common amorphous.

Gas	Units:	Nil	Composition (%):	- / - / - / - / -
Show Details / %CO2	Nil			

1287.0	-	(1439.0)	0.7-6.8 **(1.6)**	Interbedded SANDSTONE and SILTSTONE. SANDSTONE, translucent to clear, frosted, opaque to milky in part, medium to coarse, common very coarse, occasional fine, sub-angular to sub-rounded, occasional angular, moderately sorted, weak siliceous cement, trace nod pyrite, carbonaceous fragments, loose and clean, good inferred porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, argillaceous, minor to common carbonaceous specks, occasional disseminated pyrite, trace glauconite, soft, dispersive in part, rare firm, sub-blocky to blocky, common amorphous.

Gas	Units:	Nil	Composition (%):	- / - / - / - / -
Show Details / %CO2	Nil			

DAILY GEOLOGICAL REPORT
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WELL:	Childers Cove-1	**REPORT No.:**	8	**DAYS FROM SPUD:**	8	**DATE:**	26/09/05
0000hrs Depth:	**1742**	**Last Depth:**	**1327**	**24 HR PROGRESS:**	**415**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	27/09/05 – 1815m – Drilling 8 ½" main hole in the Skull Creek Mudstone.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1757.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green			1922.5	-1871.0			-1740.2		
Belfast Mudstone			2028.5	-1977.0			-1757.0		
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
1287.0	-	1670.0	0.5-44.6 **(1.9)**	Interbedded SANDSTONE and SILTSTONE. SANDSTONE, translucent to clear, frosted, opaque to milky in part, medium to coarse, common very coarse, occasional fine, sub-angular to sub-rounded, occasional angular, moderately sorted, weak siliceous cement, trace nod pyrite, carbonaceous fragments, loose and clean, good inferred porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, argillaceous, minor to common carbonaceous specks, occasional disseminated pyrite, trace glauconite, soft, dispersive in part, rare firm, sub-blocky to blocky, common amorphous.

Gas	**Units:**	Tr	**Composition (%):**	100	/	0	/	0	/	0	/	0
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description										
1670.0	-	1757.0	0.9-46.5 **(3.3)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, clear, translucent, light grey to colourless, predominantly medium to fine, rare coarse grains, predominantly sub-angular. Minor sub-rounded, weak siliceous cement, no visual matrix, trace pyrite, common carbonaceous specks, loose, hard to very hard in part, fair inferred and poor to fair visual porosity, no fluorescence. SILTSTONE, medium to dark grey, light grey, arenaceous, argillaceous in part, occasional carbonaceous specks and flecks, minor disseminated pyrite, soft to dispersive, blocky to amorphous.										
Gas			**Units:**	Tr-3	**Composition (%):**	95	/	5	/	0	/	0	/	0
Show Details / %CO2			Nil											

1757.0	-	(1815.0)	1.3-9.0 **(2.9)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent to clear, pale grey to off white, very fine to fine, well sorted, trace weak calcareous cement, abundant off white pale grey argillaceous and kaolinite matrix, trace carbonaceous specks, trace nod pyrite, friable, poor visual porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, light grey, argillaceous, minor arenaceous, rare glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous, blocky in part.										
Gas			**Units:**	Tr-4	**Composition (%):**	96	/	4	/	0	/	0	/	0
Show Details / %CO2			Nil											

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WELL:	Childers Cove-1	**REPORT No.:**	9	**DAYS FROM SPUD:**	9	**DATE:**	27/09/05
0000hrs Depth:	**2058**	**Last Depth:**	**1742**	**24 HR PROGRESS:**	**316**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	28/09/05 – 2152m – Drilling 8 ½" main hole in the Belfast Mudstone.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1757.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1919.5	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2027.0	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
1757.0	-	1919.5	1.0-30.9 **(2.5)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent to clear, pale grey to off white, very fine to fine, well sorted, trace weak calcareous cement, abundant off white pale grey argillaceous and kaolinite matrix, trace carbonaceous specks, trace nod pyrite, friable, poor visual porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, light grey, argillaceous, minor arenaceous, rare glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous, blocky in part.

Gas	**Units:**	Tr-7	**Composition (%):**	98	/	2	/	0	/	0	/	0
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description										
1919.5	-	2027.0	0.7-24.2 **(3.1)**	SILTSTONE with trace interbedded SANDSTONE. SANDSTONE, light yellowish grey, light orange, translucent, clear, colourless, very fine to medium, moderately to well sorted, trace siliceous cement, no visual matrix, glauconite, loose and clean, generally fair porosity, no fluorescence. SILTSTONE, light grey, light greenish grey, olive grey, light brownish grey, dominantly arenaceous, localized common argillaceous in part, trace glauconite, carbonaceous specks, dispersive in part, firm to minor moderately hard, blocky to sub-blocky, slightly sub-fissile in part, amorphous.										
Gas			**Units:**	Tr-7	**Composition (%):**	97	**/**	3	**/**	0	**/**	0	**/**	0
Show Details / %CO2			Nil											

2027.0	-	xx	1.2-16.1 **(2.1)**	Massive SILTSTONE with minor SANDSTONE lenses and trace LIMESTONE. SANDSTONE, off white to brownish grey, very fine, occasional fine, generally very well sorted, sub-angular to sub-rounded, very weak calcareous cement, generally sill, abundant argillaceous matrix, common glauconite, unconsolidated, very poor to tight visual porosity, n/p. SILTSTONE, predominantly grey to brownish grey, very argillaceous, grading to CLAYSTONE in part, localized common glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly moderately calcareous, sub-fissile to sub-blocky. LIMESTONE, cream, minor argillaceous/fossiliferous, soft to brittle.										
Gas			**Units:**	1-9	**Composition (%):**	96	**/**	4	**/**	0	**/**	0	**/**	0
Show Details / %CO2			Nil											

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WELL:	Childers Cove-1	**REPORT No.:**	10	**DAYS FROM SPUD:**	10	**DATE:**	28/09/05
0000hrs Depth:	**2246**	**Last Depth:**	**2058**	**24 HR PROGRESS:**	**188**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	29/09/05 – 2246m – RIH after wiper trip to shoe, drill 8 ½" main hole in the Belfast Mudstone.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**		554.5	**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1757.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1919.5	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2027.0	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes			2345.5	-2294.0			-1965.8		
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
2027.0	-	(2246)	1.2-16.1 **(2.1)**	Massive SILTSTONE with minor SANDSTONE lenses and trace LIMESTONE. SANDSTONE, off white to brownish grey, very fine, occasional fine, generally very well sorted, sub-angular to sub-rounded, very weak calcareous cement, generally siliceous, abundant argillaceous matrix, common glauconite, unconsolidated, very poor to tight visual porosity, n/p. SILTSTONE, predominantly grey to brownish grey, very argillaceous, grading to CLAYSTONE in part, localized common glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly moderately calcareous, sub-fissile to sub-blocky. LIMESTONE, cream, minor argillaceous/fossiliferous, soft to brittle.

Gas	**Units:**	1-9	**Composition (%):**	96	/	4	/	Tr	/	0	/	0
Show Details / %CO2	Nil											

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WELL:	Childers Cove-1	**REPORT No.:**	11	**DAYS FROM SPUD:**	11	**DATE:**	29/09/05
0000hrs Depth:	**2377**	**Last Depth:**	**2246**	**24 HR PROGRESS:**	**131**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	30/09/05 – 2451m –Drill 8 ½" main hole in the Top Amplitude.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1757.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1919.5	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2027.0	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes	2335.0	-2283.5	2345.5	-2294.0	10.5	L	-1965.8	317.7	L
???	2360.0	-2308.5	-	-	-	-			
???	2381.0	-2329.5	-	-	-	-			
???	2403.0	-2351.5	-	-	-	-			
Base Amplitudes			2482.5	-2431.0			-		
TD CDL-7 (shallow)			**2532.5**	**-2481.0**			-		
Eumeralla Formation			2703.5	-2652.0			-2028.2		
TD CDL-7 (success case)			**2743.5**	**-2692.0**			**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
2027.0	-	2335.0	1.1-25.5 **(2.9)**	Massive SILTSTONE with minor SANDSTONE lenses and trace LIMESTONE. SANDSTONE, off white to brownish grey, very fine, occasional fine, generally very well sorted, sub-angular to sub-rounded, very weak calcareous cement, generally sill, abundant argillaceous matrix, common glauconite, unconsolidated, very poor to tight visual porosity, n/p. SILTSTONE, predominantly grey to brownish grey, dark brownish grey, slightly greenish grey in part, very argillaceous, grading to CLAYSTONE in part, localized common glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly moderately calcareous, sub-fissile to sub-blocky. LIMESTONE, cream, minor argillaceous/fossiliferous, soft to brittle.

Gas	**Units:**	1-23	**Composition (%):**	97	/	3	/	0	/	0	/	0
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description
2335.0	-	2360.0	1.6-8.8 **(3.7)**	Massive SILTSTONE with minor SANDSTONE interbeds. SANDSTONE, translucent, pale yellow, slightly pale grey, clear, very fine to medium, rare coarse to very coarse grains, moderately to well sorted, a to sub-rounded, trace strong siliceous cement, white to pale grey argillaceous matrix, rare and very coarse fractured grains, carbonaceous specks, glauconite, loose, moderately hard aggregates, poor inferred and very poor visual porosity, no fluorescence. SILTSTONE, medium to dark grey, grayish brown, olive grey, dark greenish grey, argillaceous, arenaceous in part, carbonaceous specks, soft to firm, moderately hard to hard, sub-blocky, abundant sub-fissile to fissile in part.

Gas	Units:	8-27	Composition (%):	99	/	1	/	0	/	0	/	0
Show Details / %CO2	Nil											

2360.0	-	2381.0	1.4-4.4 **(1.9)**	Interbedded SILTSTONE and SANDSTONE. SANDSTONE, clear to translucent, pale grey, dusky yellowish green, grayish green, frosted, fine to medium, rare coarse grains, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, pale greenish argillaceous matrix, abundant glauconite and chlorite, loose, poor to localized fair visual and inferred porosity, no fluorescence. SILTSTONE, dark greenish grey, dusky green, medium to dark grey, argillaceous, minor arenaceous, soft to firm, sub-blocky to sub-fissile, fissile in part.

Gas	Units:	4-14	Composition (%):	100	/	0	/	0	/	0	/	0
Show Details / %CO2	Nil											

2381.0	-	2403.0	1.4-5.4 **(5.4)**	Massive SILTSTONE, SILTSTONE, pale reddish brown, grayish brown, common brick red, very argillaceous, common grading to CLAYSTONE, minor arenaceous in part, moderately calcareous in part, , predominantly amorphous with occasional blocky aggregates.

Gas	Units:	4-11	Composition (%):	100	/	0	/	0	/	0	/	0
Show Details / %CO2	Nil											

2403.0	-	(2451.0)	2.5-12.6 **(4.4)**	SILTSTONE with SANDSTONE interbeds. SANDSTONE, medium to dark grayish brown, minor very light brownish cream, common mottled with green and dark lithics, very fine, very well sorted, sub-angular to sub-rounded, moderately strong calcareous cement, dominantly argillaceous to silty matrix, common lithics and minor chlorite, common friable to moderately firm, in part, occasional firm to moderately hard, very poor to tight visual porosity, no fluorescence. SILTSTONE, light to medium grey, grayish brown, minor mottled grey and green in part, very argillaceous grading to CLAYSTONE in part, minor arenaceous in part, moderately calcareous in part, common sticky, generally very soft to trace firm, fissile – dispersive, common dispersive.

Gas	Units:	4-11	Composition (%):	99	/	1	/	0	/	0	/	0
Show Details / %CO2	Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	12	**DAYS FROM SPUD:**	12	**DATE:**	30/09/05
0000hrs Depth:	**2545**	**Last Depth:**	**2377**	**24 HR PROGRESS:**	**168**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	01/10/05 – 2545m –POOH after reaching TD at 19:00hrs on 30/09/2005. Preparing for Precision Wireline.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:	19:00hrs 30/09/05	**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**			**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	645.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	775.0	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1191.0	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1225.0	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1287.0	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1757.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1919.5	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2027.0	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes	2335.0	-2283.5	2345.5	-2294.0	10.5	L	-1965.8	317.7	L
???	2360.0	-2308.5	-	-	-	-			
???	2381.0	-2329.5	-	-	-	-			
???	2403.0	-2351.5	-	-	-	-			
Base Amplitudes	2471.0	-2419.5	2482.5	-2431.0	11.5	H	-		
TD CDL-7 (shallow)	**2545.0**		**2532.5**	**-2481.0**			-		
Eumeralla Formation	2481.0	-2429.5	2703.5	-2652.0	-	-	-2028.2	401.3	L
TD CDL-7 (success case)	**N/A**	**N/A**	**2743.5**	**-2692.0**	**-**	**-**	**-**		

Tops are wellsite picks

Interval			**ROP (ave)**	**Lithology Description**
2403.0	-	2471.0	2.5-12.6 **(4.4)**	SILTSTONE with SANDSTONE interbeds. SANDSTONE, medium to dark grayish brown, minor very light brownish cream, common mottled with green and dark lithics, very fine, very well sorted, sub-angular to sub-rounded, moderately strong calcareous cement, dominantly argillaceous to silty matrix, common lithics and minor chlorite, common friable to moderately firm, in part, occasional firm to moderately hard, very poor to tight visual porosity, no fluorescence. SILTSTONE, light to medium grey, grayish brown, minor mottled grey and green in part, very argillaceous grading to CLAYSTONE in part, minor arenaceous in part, moderately calcareous in part, common sticky, generally very soft to trace firm, fissile – dispersive, common dispersive.

Gas	**Units:**	4-11	**Composition (%):**	99	/	1	/	0	/	0	/	0
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description
2471.0	-	2545.0	1.3-22.9 **(7.0)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent, pale yellow, clear, pale grey, pale green in part, medium to very coarse, poor to localized moderately sorted, weak to localized moderately calcareous and weak siliceous cement, trace white and very pale grey argillaceous matrix, common angular fractured very coarse grains, trace whitish orange lithics, loose, unconsolidated, moderately hard to hard aggregates, fair inferred and tight to very poor visual porosity ,no fluorescence, trace mineral fluorescence at base of interval, dull yellow, bluish, no cut. SILTSTONE, light grey, greenish grey, medium grey in part, light brown, light orange, yellowish to light orange, medium reddish brown. Arenaceous, argillaceous, calcareous in part, occasional grading to very fine SANDSTONE in part, glauconite, chlorite, pyrite nodules (more prevalent at base of interval), micromicaceous. Dispersive, moderately hard to very hard in part, dispersive, blocky to sub-fissile, predominantly sub-blocky to sub-fissile, amorphous.

Gas	Units:	2-259	Composition (%):	94	/	5	/	1	/	0	/	0
Show Details / %CO2	Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	13	**DAYS FROM SPUD:**	13	**DATE:**	01/10/05
0000hrs Depth:	**2545**	**Last Depth:**	**2545**	**24 HR PROGRESS:**	**0**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	02/10/05 – 2545m – RIH to drill 8 ½" main hole.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**	2545.0	**Metres R.T.**
TD Reached Date:	19:00hrs 30/09/05	**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**		544.5	**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	659.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	743.4	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1056.3	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1137.3	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1237.4	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1746.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1926.0	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2027.0	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes	2335.0	-2283.5	2345.5	-2294.0	10.5	L	-1965.8	317.7	L
???	2360.0	-2308.5	-	-	-	-			
???	2381.0	-2329.5	-	-	-	-			
???	2403.0	-2351.5	-	-	-	-			
Base Amplitudes	2471.0	-2419.5	2482.5	-2431.0	11.5	H	-		
TD CDL-7 (shallow)	**2545.0**	**-2493.5**	**2532.5**	**-2481.0**			-		
Eumeralla Formation	?2481.0	?-2429.5	2703.5	-2652.0	-	-	-2028.2	401.3	L
TD CDL-7 (success case)	**N/A**	**N/A**	**2743.5**	**-2692.0**	**-**	**-**	**-**		

Tops are wellsite picks- changes may be made after town confirmation with wireline logs.

Interval			**ROP (ave)**	**Lithology Description**										
Gas			**Units:**	4-11	**Composition (%):**	99	/	1	/	0	/	0	/	0
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	14	**DAYS FROM SPUD:**	14	**DATE:**	02/10/05
0000hrs Depth:	**2616**	**Last Depth:**	**2545**	**24 HR PROGRESS:**	**71**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	03/10/05 – 2647m – Drilling 8 ½" main hole in the Eumeralla Formation to TD.						
REMARKS:							

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**		**Metres R.T.**
TD Reached Date:		**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**		544.5	**Metres R.T.**
			178mm Casing Shoe =			**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	659.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	743.4	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1056.3	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1137.3	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1237.4	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1746.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1926.0	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2013.9	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes	2318.7	-2283.5	2345.5	-2294.0	10.5	L	-1965.8	317.7	L
Base Amplitudes	2471.0	-2419.5	2482.5	-2431.0	11.5	H	-		
TD CDL-7 (shallow)	**2545.0**	**-2493.5**	**2532.5**	**-2481.0**			-		
Eumeralla Formation	?2481.0	?-2429.5	2703.5	-2652.0	-	-	-2028.2	401.3	L
TD CDL-7 (success case)	**N/A**	**N/A**	**2743.5**	**-2692.0**	**-**	**-**	**-**		

Tops are wellsite picks
Wireline picks

Interval			**ROP (ave)**	**Lithology Description**
2471.0	-	2551.0	1.3-22.9 **(6.9)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent, frosted, milky, pale yellow, pale greenish, minor clear, very poor sorted, coarse to very coarse, minor to trace medium grains, angular to sub-rounded, dominantly angular very coarse fractured grains, moderately to localized strong calcareous cement, trace to rare white argillaceous matrix, minor pyrite nodules, minor pale green and dark greenish black lithics, loose, poor to localized good porosity, no fluorescence. SILTSTONE, light grey, greenish grey, medium grey in part, light brown, light orange, yellowish to light orange, medium reddish brown. Arenaceous, argillaceous, calcareous in part, occasional grading to very fine SANDSTONE in part, glauconite, chlorite, pyrite nodules (more prevalent at base of interval), micromicaceous. Dispersive, moderately hard to very hard in part, dispersive, blocky to sub-fissile, predominantly sub-blocky to sub-fissile, amorphous.

Gas	**Units:**	5-683	**Composition (%):**	94	/	5	/	1	/	0	/	0
Show Details / %CO2	Nil											

Interval			ROP (ave)	Lithology Description										
2551.0	-	2622.0	1.1-26.3 **(7.2)**	SILTSTONE with interbedded SANDSTONE. SANDSTONE, translucent to clear, milky, frosted, minor clear, very fine to medium, predominantly fine, moderately well sorted, sub-angular to sub-rounded, strong calcareous and trace to rare pyrite cement, white argillaceous kaolinite matrix, nod and disseminated pyrite, loose, unconsolidated, moderately hard to very hard aggregates, poor to fair and very poor to tight visual porosity, no fluorescence. SILTSTONE, 1) light grey, brownish grey, light brownish grey, olive grey, dark grey in part, minor dark olive grey, argillaceous, minor arenaceous, minor carbonaceous specks and lams, chlorite in part, trace LIMESTONE specks and material, disseminated and nod pyrite, firm to moderately hard, hard in part, sub-fissile to sub-blocky, amorphous in part. SILTSTONE, 2) (TUFF?) white to very pale grey, very argillaceous, dispersive, amorphous.									
Gas			**Units:**	1-259	**Composition (%):**	88	**/**	7	**/**	4	**/**	1	**/**	0
Show Details / %CO2			**FLUORESCENCE (Trace):** 2589-2596 – dim – moderately bright whitish blue, pinpoint, very slow whitish blue blooming crush cut, very thin dull yellowish white ring residue.											

2622.0	-	(2647.0)	3.3-38.1 **(10.5)**	Massive TUFF. TUFF, light greenish grey, off white, trace greenish red, trace yellowish orange, very argillaceous, very calcareous in part, common chlorite in part, common dispersive, very soft, occasional slightly firm in part, abundant amorphous, rare sub-blocky aggregates.										
Gas			**Units:**	6-17	**Composition (%):**	94	**/**	5	**/**	1	**/**	0	**/**	0
Show Details / %CO2			Nil											

DAILY GEOLOGICAL REPORT
ORIGIN ENERGY RESOURCES LIMITED.

WELL:	Childers Cove-1	**REPORT No.:**	15	**DAYS FROM SPUD:**	15	**DATE:**	03/10/05
0000hrs Depth:	**2658**	**Last Depth:**	**2616**	**24 HR PROGRESS:**	**42**	**PTD:**	**2536.0mRT(1)**
0600 OPS:	04/10/05 – 2658m – RIH with P & A programme						
REMARKS:	Childers Cove-1 reached a TD of 2658mRT at 08:00hrs on 3rd October, 2005.						

PRIMARY OBJECTIVES:	**Prognosed**	**SECONDARY OBJECTIVES:**	**Prognosed**
Flaxman/Waarre Formation	**2349.0 m R.T.**		

Spud Date:	18:00hrs 19/09/05	**Surface Latitude:**	38°29'31.96"	**T.D. =**	2658.0	**Metres R.T.**
TD Reached Date:	08:00hrs 03/10/05	**Surface Longitude:**	142°44'46.66"	**G.L. =**	46.2	**Metres ASL**
Rig release Date:		**Surface E (MGA94):**	0 652 295.0	**R.T. =**	51.5	**Metres ASL**
Rig	Century Rig-7	**Surface N (MGA94):**	5 738 126.0			
Nearby Wells / Facilities are			**244mm Casing Shoe =**		544.5	**Metres R.T.**
			178mm Casing Shoe =		N/A	**Metres R.T.**

Fm. Tops (* Geophysical Picks)	Wellsite (mRT)	Wellsite (mSS)	Prognosed Depth (mRT)	Prognosed Depth (mSS)	Diff	H/L	Sub-Sea Depth Comparisons P-1ST1	Diff	H/L
Port Campbell Limestone	5.3	46.2	5.3	46.2			5.3		
Gellibrand Marl	213.0	-161.5	144.5	-93.0	68.5	L	-149.2	12.3	L
Clifton Formation	595.5	-544.0	562.5	-511.0	33.0	L	-526.8	17.2	L
Narrawaturk Marl	623.0	-571.5	592.5	-541.0	30.5	L	-546.2	25.3	L
Mepunga Formation	659.0	-593.5	661.5	-610.0	16.5	H	-664.0	70.3	H
Dilwyn Formation	743.4	-723.5	750.5	-699.0	24.5	L	-717.4	6.1	L
Pember Mudstone	1056.3	-1139.5	1136.5	-1085.0	54.5	L	-936.3	203.2	L
Pebble Point Formation	1137.3	-1173.5	1195.5	-1144.0	29.5	L	-1021.1	152.4	L
Paaratte Formation	1237.4	-1235.5	1285.5	-1234.0	1.5	L	-1175.2	60.3	L
Skull Creek Mudstone	1746.0	-1705.5	1756.5	-1705.0	0.5	L	-1643.7	61.8	L
Nullawarre Green	1926.0	-1868.0	1922.5	-1871.0	2.0	H	-1740.2	127.8	L
Belfast Mudstone	2013.9	-1975.5	2028.5	-1977.0	1.5	H	-1757.0	218.5	L
Top Amplitudes	2318.7	-2283.5	2345.5	-2294.0	10.5	L	-1965.8	317.7	L
Base Amplitudes	2471.0	-2419.5	2482.5	-2431.0	11.5	H	-		
TD CDL-7 (shallow)	**2545.0**	**-2493.5**	**2532.5**	**-2481.0**	12.5	L	-		
Eumeralla Formation	2435.0	-23838.	2703.5	-2652.0	268.5	H	-2028.2	401.3	L
TD CDL-7 (success case)	**2658**	**-2606.5**	**2743.5**	**-2692.0**	**85.5**	**H**	**-**		

Tops are wellsite picks
Wireline picks

2622.0	-	2658.0 TD	3.3-38.1 **(10.5)**	Massive TUFF. TUFF, light greenish grey, off white, trace greenish red, trace yellowish orange, very argillaceous, very calcareous in part, common chlorite in part, common dispersive, very soft, occasional slightly firm in part, abundant amorphous, rare sub-blocky aggregates.

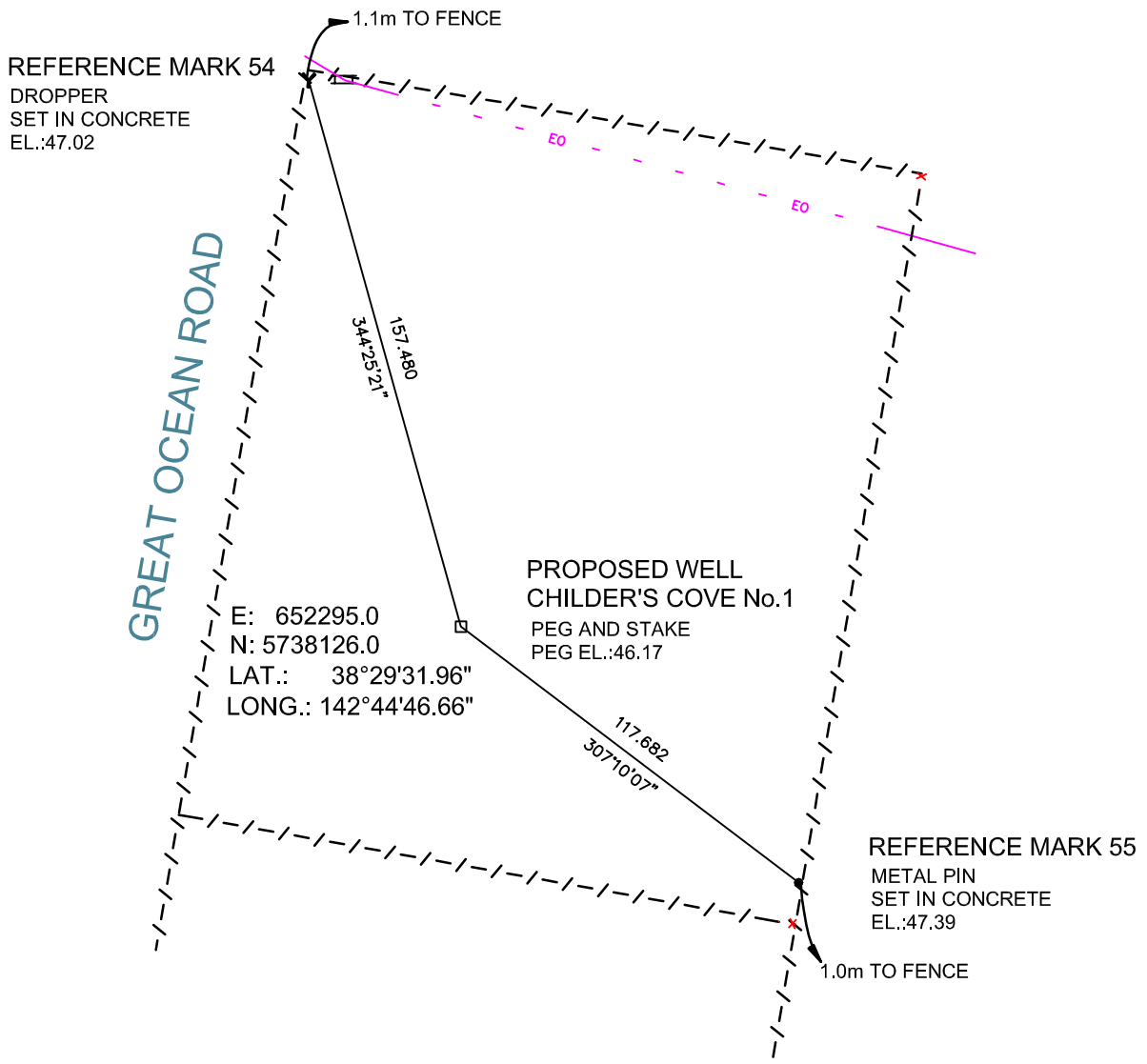
Gas	**Units:**	6-17	**Composition (%):**	95	/	4	/	1	/	0	/	0
Show Details / %CO2	Nil											

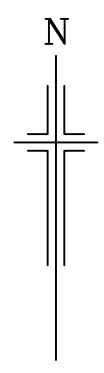
APPENDIX 3

WELL LOCATION SURVEY

ORIGINAL SHEET SIZE A3

LOCATION SURVEY
CHILDER'S COVE No.1
PARISH OF NIRRANDA





0 50 100 150 200 m

SCALE 1:2000

PLOTTED: 24/08/2005 FILE: G001905BORE–MGA–AHD·DWG

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Facsimile (08) 8724 9193

REF: G001905.00
REV: RS 31/01/2005
CAD: G001905bore-MGA-AHD.dwg

LEGEND

- PEG
- SURVEY MARK
- FENCE
- GATE
- STOBIE
- ELEC OVERHEAD

NOTES:

COORDINATES: MGA
HEIGHT DATUM: AHD
COORDINATES BASED ON: PSM NIRRANDA 57
HEIGHTS BASED ON: NIRRANDA 57
FB: 514 / 86

APPENDIX 4

MUD LOG

FORMATION EVALUATION LOG
WELL : CHILDERS COVE #1

Origin energy

Geoservices

COMPANY	ORIGIN ENERGY ORIGIN ENERGY	SPUD DATE	19-09-2005
RIG	CENTURY 7	TD DATE	03-10-2005
AREA	PEP 154	TD DRILLER	2658mRT
STATE/COUNTRY	VICTORIA, AUSTRALIA	TD WIRELINE	2657mRT
LOCATION	38° 29' 31.96" S 142° 44' 46.66" E	LOGGED FROM	34mRT
GROUND LVL	46.17m	LOGGED TO	2658mRT
RT HEIGHT	5.3m	FINAL STATUS	P & A
DEPTH REF	ROTARY TABLE		

WELL CONFIGURATION

BIT SIZE	HOLE DEPTH (m)	CASING SIZE	CASING DEPTH (m)
311mm	551m	245mm	544.5m
216mm	2658m		

LOGGING ENGINEERS

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SCALE 1/ 200

SYMBOLS

- NEW BIT RUN
- NEW CORE BIT RUN
- CASING SHOE
- LINER HANGER
- MUD LOSS / MUD GAIN
- Recovered SIDEWALL CORES
- Not Recovered
- CORED INTERVAL (1)
- DST INTERVAL (1)

FLUORESCENCE
- NO SHOW
- WEAK SHOW
- FAIR SHOW
- GOOD SHOW

ABBREVIATIONS

NB NEW BIT	DS DIRECTIONAL SURVEY
NCB NEW CORE BIT	WT WIPER TRIP
RRB RE-RUN BIT	POOH PULL OUT OF HOLE
CS CASING SHOE	RIH RUN IN HOLE
SWC SIDE WALL CORE	AZI AZIMUTH
EL ELECTRIC LOG	INCL INCLINATION
WOB WEIGHT ON BIT	LCM LOST CIRCULATION MATERIAL
RPM REVOLUTIONS/MINUTE	DC DEPTH CORRECTION
SPP STAND PIPE PRESSURE	DST DRILL STEM TEST
SPM STROKES/MINUTE	RMG REAMING
CR CIRCULATED RETURNS	ML MUD LOSSES
PR POOR RETURNS	FR FLOW RATE
NR NO RETURNS	FC FLOW CHECK
TG TRIP GAS	BR BIT RUN
CG CONNECTION GAS	MMCFD Million Cubic Feet/Day
WTG WIPER TRIP GAS	U UNITS OF GAS
SG SWAB GAS	FLUOR FLUORESCENCE

MUD DATA

MW MUD WEIGHT	sg(kg/l)
MG MUD GRADIENT	KPA/mt
FV FLUID VISCOSITY	sec
PV PLASTIC VISCOSITY	Cp
YP YIELD POINT	lb/cf2
Gel GEL STRENGTH	lb/cf2
pH ACIDITY	
F FILTRATE	cm3/30
Ck CAKE THICKNESS	cm/32
S SALINITY	kg/m3
SD SAND CONTENT	%
O OIL CONTENT	%
WL WATER LOSS	cm3/30
Sol SOLIDS CONTENT	%
Cl CHLORIDES	
KCl POTASSIUM CHLORIDE	mg/l
Ca CALCIUM CONTENT	

CLAYSTONE, SILTSTONE, CONGLOMERATE, COARSE SST, MEDIUM SST, FINE SANDSTONE, VF SANDSTONE, BRECCIA, LIMESTONE, DOLOMITIC LIMEST, DOLOMITE, COAL, GYPSUM, HALITE, CEMENT, CALCARENITE, TUFF, VOLCANIC ROCK, IGNEOUS ROCK, METAMORPHICS, FERRUGINOUS, FORAMINIFERA, BRYOZOA, FELDSPAR, CALCAREOUS, DOLOMITIC, CARBONACEOUS, CHERTY, GLAUCONITE, MICACEOUS, PYRITE, BROKEN FOSSILS, MICROFOSSILS, FOSSILS, LITHICS, SIDERITE

0 ROP min/m 20
20 ROP min/m 40
0 RPM 300
0 WOB (tons) 50

DEPTH (mdRT) (m)
0
10

SIDEWALL CORES

CUTTINGS 0 % 100

LITH

OIL SHOWS G F W

TOTAL GAS units 0 100
TOTAL GAS units 100 1100

CHROMATOLOG(ppm)
C1 iC4
C2 nC4
C3 iC5
nC5
100 1K 10K

BITS
SHOES
CORED INTERVALS
DST INTERVALS

GEOLOGICAL DESCRIPTIONS
COMMENTS

20

30

40

19/09/05

50

60

70

GEOSERVICES LOG FROM 34m
TAG BOTTOM @ 16m

NO GAS

CHILDERS COVE #1 SPUDDED ON 19-09-05 @ 18:00HRS

BIT #1RR VAREL CH1GMS
SIZE: 12 ¼" JETS: 3x16
IN: 16m OUT:551m
RUN: 535m HRS:11.3
COND: 2-1-WT-A-E-NO-TD

LIMESTONE:off wh,yelsh gry,pl brn i/p,spar,abdt shell & coral frags, xln,uncons,fri-mod hd.

LIMESTONE:off wh,yelsh gry,pl brn i/p,mnr dk yelsh orng,spar,abdt shell & coral frags,xln,uncons,fri-mod hd.

WOB 3-5 klbs
RPM 72-100
SPP 690-1320 psi
FLOW 223-651 gpm

20/09/05

MW 1.05
FV 42
PV 10
YP 19
Gel 6/12/18
WL -
pH 9.5
Ck -
Sol -
Cl -

80

90

100

110

120

WOB 2-5 klbs
RPM 87-103
SPP 1182-1214 psi
FLOW 548-558 gpm

130

NO GAS

0 100

100 1100

NO GAS

LIMESTONE:off wh,yelsh gry,pl brn,pl olv i/p,mnr dk yelsh orng,spar,abdt shell & coral frags,xln,uncons,fri-mod hd.

LIMESTONE:off wh,yelsh gry,pl olv, mnr med lt gry,spar,micr i/p,shell & coral frags,xln,uncons,fri-mod hd.

SURVEY @ 90.4m: 0.00°

LIMESTONE:yelsh gry,lt olv gry,mnr off wh,spar,micr i/p,com shell & coral frags,tr-rr grn liths,xln,uncons fri-mod hd.

SURVEY @ 102m: 0.00°

LIMESTONE:lt olv gry,grnsh gry-off wh,spar,tr micr,foss,abdt shell & coral frags,mnr-com grn liths,xln, fri-mod hd,uncons i/p.

140

150

160

170

180

190

WOB 3-7 klbs
RPM 97-104
SPP 1350-1410 psi
FLOW 560-583 gpm

0

100

100

1100

NO GAS

LIMESTONE:wh-off wh,yelsh gry,lt olv gry,spar,micr i/p,com shell & coral frags,mnr grn liths,tr blk lith spks,xln,fri-dom mod hd, uncons i/p.

SURVEY @ 148.0m: 0.00°

LIMESTONE:off wh-yelsh gry,lt olv gry,tr dk grnsh gry,spar,com loc micr,tr arg,tr MARL frags,com foss frags,tr grn & blks liths,xln, dom mod hd-hd,fri i/p.

LIMESTONE:wh-off wh,grnsh-gry,tr yelsh gry,spar,com micr,tr arg,tr MARL,mnr-com foss mat,grn & blk liths,xln,mod hd-hd,fri i/p.

LIMESTONE:off wh,lt olv gry,grnsh gry,spar,com loc micr,tr MARL,com foss mat xln fri-mod hd

200

210

220

WOB 6-21 klbs
RPM 104-111
SPP 1350-1410 psi
FLOW 576-588 gpm

230

240

250

0 100

100 1100

NO GAS

foss mat,xln,fri-mod hd.

LIMESTONE:off wh-lt olv gry,grnsh gry,spar,com loc micr,tr MARL,com foss mat,tr grn & blk liths,xln,fri-mod hd.

LIMESTONE:off wh-lt olv gry,grnsh gry,spar,com loc micr,tr MARL,com foss mat,tr grn & blk liths,xln,fri-mod hd.

SURVEY @ 238.0m: 0.00°

LIMESTONE:off wh-lt olv gry,grnsh gry,spar,com loc micr,tr MARL,com foss mat,tr grn & blk liths,xln,fri-mod hd.

LIMESTONE:lt gry,lt olv gry,med grnsh gry,arg,loc com shell & coral frags,mnr dk spks,v sft-sft,blky,dom amorph.

260

270

WOB 8-14 klbs
RPM 80-112
SPP 620-1500 psi
FLOW 360-585 gpm

280

NO GAS

0 100

100 1100

LIMESTONE:lt gry,lt olv gry,med grnsh gry,arg,loc com shell & coral frags,mnr dk spks,v sft-sft,blky,dom amorph.

290

LIMESTONE:lt gry,lt olv gry,med grnsh gry,arg,loc com shell & coral frags,mnr dk spks,v sft-sft,blky,dom amorph.

SURVEY @ 297.0m: 0.00°

300

LIMESTONE:lt gry,lt olv gry,med grnsh gry,arg,loc com shell & coral frags,mnr dk spks,v sft-sft,blky,dom amorph.

310

MW 1.05
FV 42
PV 8
YP 18
Gel 10/24/38
WL -
pH 8.5
Ck -
Sol -2
Cl -2.5

320

WOB 8-14 klbs
RPM 107-130
SPP 1450-1500 psi
FLOW 530-570 gpm

330

340

350

360

DATA LOST
355m-375m

370

WOB 8-13 klbs
RPM 80-110
SPP 620-1500 psi
FLOW 360-585 gpm

380

NO GAS

0 100

100 1100

NO GAS

MARL:med gry,grnsh gry,arg,occ spar LMST frags,occ foss mat,v sft-sft,sbblky-amorph.

MARL:med gry,grnsh gry,arg,occ spar LMST frags,occ foss mat,v sft-sft,sbblky-amorph.

MARL:lt gry,lt olv gry,med grnsh gry, arg,spar LMST frags,occ foss mat,v sft-sft,sli frm,sbblky-amorph.

SURVEY @ 353.0m: 0.00°

MARL:lt gry,lt olv gry,med grnsh gry, arg,spar LMST frags,occ foss mat,v sft-sft,sli frm,sbblky-amorph.

390

400

410

WOB 8-13 klbs
RPM 80-110
SPP 620-1485 psi
FLOW 360-580 gpm

420

DATA LOST
410m-466m

MW 1.09
FV 65
PV 10
YP 38
Gel 18/37/54
WL -
pH 8.5
Ck -
Sol 4
Cl 2

430

440

0 100

100 1100

NO GAS

MARL:lt gry,lt olv gry,med grnsh gry, arg,spar LMST frags,occ foss mat,v sft-sft,sli frm,sbblky-amorph.

SURVEY @ 400.0m: 0.00°

MARL:med dk gry,dk grnsh gry,occ med-gry,arg,occ shell frags,tr coral frags, v sft-sft, sbblky-sbfiss

MARL:med dk gry,dk grnsh gry,occ med-gry,arg,occ shell frags,tr coral frags, v sft-sft, sbblky-sbfiss

450

460

470

WOB 10-14 klbs
RPM 117-125
SPP 620-1520 psi
FLOW 360-585 gpm

480

490

500

0 100

100 1100

NO GAS

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
v sft-sft, sbblky-sbfiss

SURVEY @ 447.0m: 0.00°

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
v sft-sft, sbblky-sbfiss

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
v sft-sft, sbblky-sbfiss

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
tr xln LMST frags,sft-frm,mod hd,dom
sbblky,sbfiss i/p

SURVEY @ 503.0m: 0.00°

MARL:med dk gry,dk grnsh gry,occ med-

510

520

WOB 11-16 klbs
RPM 105-115
SPP 1415-1500 psi
FLOW 578-580 gpm

530

NO GAS

0 100

100 1100

540

MW 1.06
FV 43
PV 10
YP 33
Gel 10/18/33
WL -
pH 8.5
Ck -
Sol -3
Cl -2.2

550

21/09/05

24/09/05

560

gry,arg,occ shell frags,tr coral frags,
tr xln LMST frags,sft-frm,mod hd,dom
sbblky,sbfiss i/p

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
tr xln LMST frags,sft-frm,mod hd,dom
sbblky,sbfiss i/p

9 5/8" casing shoe set @ 544.5m

MARL:med dk gry,dk grnsh gry,occ med-
gry,arg,occ shell frags,tr coral frags,
tr xln LMST frags,sft-frm,mod hd,dom
sbblky,sbfiss i/p

BIT #2 HC 605S
SIZE: 8 ½" JETS:1x14,5x13
IN: 551m OUT:2545m
RUN: 1994m HRS:77.0 hrs
COND:2-2-WT-IN-X-I-NO-TD

FIT @ 551m:
MWE:14.4 ppg

MARL:med-dk gry,lt olv gry,occ med-lt
gry,arg,occ shell frags,tr coral frags,
tr xln LMST frags,sft-frm,mod hd,dom
sbblky,sbfiss i/p,tr SLTST.

570

580

590

600

610

620

630

WOB 4-12 klbs
RPM 95-132
SPP 809-1413 psi
FLOW 383-645 gpm

NO GAS

0 100

100 1100

WOB 7-13 klbs
RPM 100-132
SPP 650-986 psi
FLOW 559-648 gpm

NO GAS

SURVEY @ 575.0m: 0.00°

MARL:med-dk gry,lt olv gry,occ med-lt gry,arg,occ shell frags,tr coral frags, tr xln LMST frags,sft-frm,mod hd,dom sbblky,sbfiss i/p,tr SLTST.

SILTSTONE:pl-med gry,grysh gry,sli-med dk gry,tr aren,i/p v calc,sft-frm, sbblky-sbfiss,amorph.

LIMESTONE:orng,dk yelsh orng,grysh or off wh,micr,v calc,arg,tr foss,micrxln, frm-v hd,pred mod hd,sft i/p.

SURVEY @ 603.0m: 0.00°

SILTSTONE:lt med gry,pl olv gry,arg, calc,disp-sft,frm i/p,blky-amorph.

LIMESTONE:orng,dk yelsh orng,grysh or off wh,micr,v calc,arg,tr foss,micrxln, frm-v hd,pred mod hd,sft i/p.

MARL:pl brn,grysh brn,sli pl olv, arg,calc,disp-sft,sft-frm, i/p,blky-amorph.

640

650

660

670

680

690

MW 1.04
FV 52
PV 13
YP 16
Gel 5/7/8
WL 7.5
pH 9.7
Ck 1/
Sol 4
Cl 21

WOB 4-13 klbs
RPM 101-136
SPP 770-1010 psi
FLOW 560-630 gpm

0 100

100 1100

NO GAS

SURVEY @ 631.0m: 0.00°

SANDSTONE:trnsl,lt brn,grysh brn,frstd, rr mlky,med-crs i/p,com v crs,mnr f,mod wl srt,pred lse qtz grs.sbang-sbrnd, fr-gd por,no fluor.

SURVEY @ 687.0m: 0.00°

SANDSTONE:trnsl,opq brn,sli frstd, com crs-v crs,mnr med,sbrnd-sbang, wk calc & sil cmt,mnr brn arg mtx, lse & pred cln,v crs i/p,fr-gd por, no fluor.

SANDSTONE:trnsl,opq pl brn,crs-v crs, mnr med,sbrnd-sbang,wk calc & sil cmt, mnr brn arg mtx,lse & pred cln,fr-loc gd por, no fluor.

SANDSTONE:trnsl-trnsp,clr,pl brn,occ pl wh-off wh,med-crs grs,mnr f grs, sbang-sbrnd,mod wl srt,sil mtx,lse & pred cln,mod hd-v hd,fr-p inf por,

700

710

720

WOB 3-13 klbs
RPM 82-112
SPP 893-1058 psi
FLOW 587-640 gpm

730

740

750

0

100

100

1100

NO GAS

no fluor.

SANDSTONE:trnsl-trnsp,sli frstd,lt gry-gry,occ pl wh-off wh,clr,med-crs grs, occ f grs,sbang-sbrnd,sil cmt,wk calc mtx,lse & pred cln,mod hd-v hd,fr-pr inf por, no fluor.

SURVEY @ 715.0m: 0.00°

LIMESTONE:mlky wh-dsky wh,lut,ool tex micrxln,sft-v sft,consol w arg mtrx.

SANDSTONE:trnsl,clr,pl brn,occ pl wh-of wh,occ clr orng grs of qtz,pred med-crs grs,occ f grs,sil cmt,mod calc mtx,lse & pred cln,mod hd-v hd,fr-p inf por, no fluor.

SANDSTONE:trnsl-clr,pl brn,occ wh-off wh,occ cln orng grs of qtz,pred med-crs,occ f,sil smt,mod calc cmt, tr arg mtx,gen lse & cln,mod hd-v hd,fr inf por,no fluor.

SURVEY @ 744.0m: 0.00°

SANDSTONE:trnsl-clr,opq-mod brn, dom med-crs,occ f,mod sil cmt,loc

760

25/09/05

MW 1.04
FV 47
PV 12
YP 18
Gel 7/9/11
WL 7.0
pH 9.5
Ck 1/
Sol 6
Cl 22

770

WOB 4-15 klbs
RPM 85-114
SPP 892-1058 psi
FLOW 506-634 gpm

NO GAS

0 100

100 1100

780

790

800

810

strg calc cmt,tr arg mtx,dom sltst & lse,occ qtz grs w Fe stn,fr inf por, no fluor.

SANDSTONE:trnsl-clr,opq-mod brn, pred med-crs,occ v crs,tr f,sbrnd-rnd,rr ang,tr wk sil cmt,com loc calc cmt,tr off wh-wh arg mtx,tr calc mat,dissem pyr,fr-loc gd inf por,no fluor.

SURVEY @ 772.0m: 0.00°

SANDSTONE:trnsl-clr,opq-pl yelsh brn,occ mlky,dk brn grs,dom crs-v crs,com med,occ f,v pr srt,rnd-sbrnd, occ sbang,com sil cmt,occ loc v strg calc cmt,rr v strg pyr cmt,tr pl gry arg mtx,com dissem pyr,tr glauc,dom lse & cln,rr hd-v hd aggs,nil vis por, fr inf por,no fluor.

SILTSTONE:dk grysh brn-grysh blk, occ pl yelsh brn,dom arg,tr calc,mnr dissem pyr,tr grn & blk liths,sft-disp,sbblky-amorph.

SILTSTONE:dk grysh brn-grysh blk, occ pl yelsh brn,dom arg,tr calc,mnr dissem pyr,tr grn & blk liths,sft-disp,sbblky-amorph.

SURVEY @ 800.0m: 0.00°

SILSTONE:dk grysh brn,grysh blk i/p,occ pl gry-grn,arg,tr calc,occ nod & dissem pyr,grn liths,sft-disp, pred sbblky,amorph i/p.

SANDSTONE:trnsl-clr,opq,f-occ med, mod wl srt,sbang-sbrnd,occ rnd,wk sil cmt,dk brn arg mtx,com lse,fri-mod hd i/p,pr vis & inf por,no fluor.

SILTSTONE:dk grysh brn,dk brn i/p, arg,com nod pyr & dissem pyr,tr pyr cmt tr carb spks & flks sft-disp frm

820

WOB 6-13 klbs
RPM 90-105
SPP 931-1243 psi
FLOW 621-633 gpm

NO GAS

SANDSTONE:trnsl-clr,mlky-opq,dom med-crs,rr v crs & f,pr srt,sbang-sbrnd,wk sil cmt,tr pl brn-off wh arg mtx,dom cln & lse,fr-gd inf por,no fluor.

830

SILTSTONE:med-dk brnsh gry,dk brn i/p,arg,tr loc aren,mnr dissem pyr, tr micmic,sft-disp,sbblky-amorph.

SANDSTONE:trnsl-clr,opq-frstd,rr mlky,tr v pl brn,f-med,com crs-v crs, pr srt,sbang-sbrnd,wk sil cmt,tr brn arg mtx,gen cln & lse,tr nod pyr,mic, mnr ang frac qtz grs,fr inf por,no fluor.

840

0 100

SURVEY @ 837.0m: 0.00°

100 1100

SILTSTONE:mod grysh brn,dsky brn i/p,arg,tr micmic,dissem pyr,v sft-dom disp,dom amorph,sbblky i/p.

850

SILTSTONE:mod brn-grysh brn,arg, grd to CLYST i/p,loc calc,com dissem pyr,v sft-disp,pred amorph-sbblky.

SURVEY @ 856.0m: 0.00°

860

SANDSTONE:trnsl-clr,opq,med crs, occ f,rr v crs,mod srt,sbang-sbrnd, wk sil cmt,no vis mtx,rr nod pyr,tr orng liths,gen cln & lse,fr-gd inf por,no fluor.

870

WOB 4-15 klbs
RPM 93-104
SPP 845-1145 psi
FLOW 602-649 gpm

NO GAS

SILTSTONE:mod brn,grysh brn,dsky brn i/p,arg,grd to CLYST,tr micmic, blk lith spks,disp,v sft i/p,dom amorph,sbblky i/p.

880

890

900

910

920

930

940

0

100

100

1100

M

M

WOB 4-15 klbs
RPM 90-122
SPP 929-1212 psi
FLOW 560-649 gpm

NO GAS

SURVEY @ 884.0m: 0.00°

SILTSTONE:mod brn,grysh brn,dsky brn i/p,occ pl yelsh brn,arg,grd to CLYST,tr micmic,blk lith spks,disp, v sft i/p,dom amorph,sbblky i/p.

SANDSTONE:trnsl-clr,pl gry i/p, dom f-med,tr crs,mod srt,sbang-sbrnd,wk-mod loc calc cmt,tr sil cmt,no vis mtx,tr nod pyr,crm & blk liths,rr orng liths,dom lse & cln,rr fri aggs,pr vis & inf por, no fluor.

SILTSTONE:grysh brn-dsky brn,dk yelsh brn,com mic flks,rr dissem pyr,v sft-disp,amorph,rr sbblky.

SURVEY @ 912.0m: 0.00°

SANDSTONE:trnsl-clr,opq-frstd,rr v pl brn,dom med-crs,occ f & v crs, pr srt,sbang-sbrnd,wk sil cmt,mnr-loc v strg pyr cmt,no vis mtx,dom lse & cln,occ nod pyr,rr mic flks, tr orng & crm liths,fr-gd inf por, no fluor.

SILTSTONE:grysh brn,pl-dk yelsh, arg,com dissem pyr,sft-disp,frm i/p, sbblky-amorph.

SANDSTONE:trnsl-clr,frstd-opq,v pl yel,med-crs,occ v crs,rr f,pr srt sbang-sbrnd,wk sil cmt,loc strg pyr cmt,tr pl brn arg mtx,com nod pyr, tr orng liths,gen cln & lse,fr-gd inf por,no fluor.

950

960

970

980

990

1000

0

100

100

1100

WOB 1-10 klbs
RPM 60-115
SPP 1048-1244 psi
FLOW 491-587 gpm

NO GAS

SURVEY @ 941.0m: 0.00°

SILTSTONE:grysh brn,pl-dk yelsh, arg,com dissem pyr,sft-disp,frm i/p, sbblky-amorph.

SILTSTONE:mod brn-grydh brn,dsky brn i/p,arg,grd to CLYST i/p,com dissem pyr,micmic,disp,rr v sft-sft, pred amorph,mnr sbblky.

SANDSTONE:trnsl-clr,frstd-opq,v pl yel,med-crs,occ v crs,rr f,pr srt sbang-sbrnd,wk sil cmt,loc strg pyr cmt,tr pl brn arg mtx,com nod pyr, tr orng liths,gen cln & lse,fr-gd inf por,no fluor.

SURVEY @ 969.0m: 0.00°

SANDSTONE:trnsl-clr,mly-opq,dom med-crs,com f,rr v crs,sbang-sbrnd, tr wk sil cmt,rr loc pl yelsh brn arg mtx,com nod pyr,pred lse,rr fri aggs,pr vis por,fr inf por,no fluor.

SILTSTONE:pl-mod yelsh brn,occ dsky brn,grysh brn,arg,sli calc, com dissem pyr,rr micmic,mnr blk & dk brn liths,dom sft-disp,occ loc hd,sbblky-blky,amorph i/p.

SANDSTONE:trnsl-clr,pl brn,frstd-mlky i/p,pl yel i/p,dom cr crs-v crs, mnr med grs,pr-loc mod srt,sband-rnd, sbang,wk sil cmt,no vis mtx,nod pyr, gen lse & cln,fr-gd por,no fluor.

SURVEY @ 997.0m: 0.00°

1010

1020

WOB 5-10 klbs
RPM 77-120
SPP 1020-1410 psi
FLOW 490-630 gpm

0 NO GAS 100

100 1100

1030

MW 1.06
FV 58
PV 16
YP 22
Gel 7/10/12
WL 6.5
pH 9.0
Ck 1/
Sol 6
Cl 22

1040

1050

1060

SANDSTONE:trnsl-clr,pl brn,frstd-mlky i/p,dom v crs-crs,mnr med,mod wl srt,sbrnd-rnd,sbang,wk sil cmt, no vis mtx,nod pyr,gen lse & cln,fr-gd por,no fluor.

SILTSTONE:pl-mod yelsh brn,occ grysh brn,arg,com lith spks,tr dissem pyr,v sft-disp,frm i/p, sbblky-amorph i/p.

SANDSTONE:trnsl-clr,opq-frstd, dom med-crs,com v crs,sbang-sbrnd, rr ang,pr srt,wk sil cmt,tr nod pyr gen cln & lse,gd por,no fluor.

SURVEY @ 1025.0m: 0.00°

SILTSTONE:pl-dk yelsh brn,brnsh gry,arg,com nod & dissem pyr,tr blk micolams,pred sft-disp,loc frm-mod hd,sbblky-blk,amorph i/p.

CARBIDE LAG CHECK @ 1037m
THEOR. STKS: 3213
ACTUAL STKS: 3428
HOLE IS 6.0% O.G

TOTCO SURVEY @ 1044m: 0.00°

SILTSTONE:pl brnsh gry-med gry,grnsh arg,com dissem pyr,disp-sft,pred sbblky-sbfiss,rr blky,grd to CLYST, amorph

SURVEY @ 1053m: 0.00°

1070

1080

1090

1100

1110

1120

WOB 4-10 klbs
RPM 84-112
SPP 1020-1420 psi
FLOW 520-630 gpm

NO GAS

0 100

100 1100

WOB 5.0-8.6 klbs
RPM 81-102
SPP 1250-1530 psi

NO GAS

SILTSTONE:pl brnsh gry-lt olv gry,grnsh gry,arg,com dissem pyr,disp-sft,pred sbblky-blky,rr sbfiss,grd to CLYST, amorph

SANDSTONE:trnsl-trnsp,frstd,dom med g i/p f grs,mod wl srt,sbang-sbrnd,strg sil cmt,no vis mtx,mod hd-v hd,pred lse & cln grs,fr inf por,no fluor.

SURVEY @ 1081m: 0.00°

SANDSTONE:trnsl-trnsp,rr opq,occ pl ye lt orng,dom med grs,rr f grs,mod wl srt, pred sbrnd,stg sil cmt,no vis mtx,tr pyr, lse & cln grs,mod hd-v hd,fr inf por,no fluor.

SURVEY @ 1109m: 0.00°

SILSTONE:med gry-dk gry,lt olv gry, aren,tr pyr,dom mod hd-hd,rr sft,pred sbblky,rr sbfiss,grd to CLYST.

FLOW 560-625 gpm

1130

1140

1150

0

100

100

1100

SANDSTONE:pl yel,trnsl,yelsh brn,sli frstd,clr,med-v crs,mnr f,pred crs grs, mod wl srt,sbang-sbrnd,mnr sil cmt,tr mnr brn & wh arg mtx,lse,no fluor.

SURVEY @ 1137m: 0.00°

SANDSTONE:pl yelsh gry,grysh yel,trnsl, med-crs grs,f grs i/p,mod wl srt,mod strg sil cmt,no vis mtx,mnr pyr,pred lse grs, fr inf por,no fluor.

1160

1170

1180

WOB 5.5-9.5 klbs
RPM 100-118
SPP 1430-1470 psi
FLOW 590-615 gpm

NO GAS

SURVEY @ 1165m: 0.00°

SANDSTONE:pl yelsh gry-lt yelsh gry, trnsl,pred med-f grs,crs grs i/p,mod wl srt,wk sil cmt,no vis mtx,tr pyr, lse & cln grs,mod hd-hd,fr-gd inf por, no fluor.

1190

1200

1210

0 100

100 1100

1220

WOB 5-9.8 klbs
RPM 105-114
SPP 1221-1466 psi
FLOW 605-668 gpm

NO GAS

1230

1240

1250

SILTSTONE:med gry-dk gry,brnsh gry,rr grnsh gry,arg,tr pyr,sft-disp,sbblky, sbfiss i/p

SURVEY @ 1193m: 0.00°

SILTSTONE:med grnsh gry-dk grnsh gry, olv gry,brnsh blk,arg,mnr pyr,pred sft-disp,rr frm-mod hd,tr sbblky,amorph

SILTSONE:med grnsh gry-dk grnsh gry,o gry,brnsh blk,arg,mnr pyr,pred sft-disp, rr frm-mod hd,sbblky,amorph

SURVEY @ 1222m: 0.00°

SILTSTONE:med grnsg gry-dk grnsh gry, olv gry,brnsh blk,arg,mnr pyr,pred sft-disp,rr frm-mod hd,sbblky-blky, amorph.

SURVEY @ 1250m: 0.00°

1260

1270

1280

1290

1300

1310

WOB 6-13 klbs
RPM 84-115
SPP 1200-1250 psi
FLOW 602-634 gpm

0 100

NO GAS

100 1100

SANDSTONE:clr-trnsl,frstd,pl gry,tr yelsh gry,vf-med,mnr crs grs,dom f grs,mod wl loc wl srt,sbang-sbrnd,tr ang,v crs frac grs,tr wk calc & sil cmt,tr grysh brn arg mtx,com muscovite flks,lse & pred cln,fr por, no fluor.

SILTSTONE:lt-med gry,sli brnsh gry, arg,aren,grd to vf SST i/p,com micmic, sft-mnr frm,com disp-sft,blky-sbblky, tr sbfiss i/p,com amorph.

SANDSTONE:trnsl-trnsp,clr,mnr yelsh gry,pred med-f grs,crs grs i/p,mod wl srt,strg sil cmt,no vis mtx,tr carb spks,tr pyr nods,lse,mod hd-hd aggs,fr inf and pr vis por,no fluor.

SURVEY @ 1278m: 0.00°

SANDSTONE:trnsl,frstd,mnr clr,sli yelsh gry,vf-v crs,dom med-crs,mod wl srt, sbang-sbrnd,wk sil cmt,rr off wh mtrx, tr blk & pnksh liths, lse & cln,fr por, no fluor.

SILTSTONE:lt-occ dk gry,aren,arg i/p, sft-frm,blky-sbblky,amorph.

SANDSTONE:clr-trnsl,pl gry,pl yel, f-v crs,pred med-crs,mod wl srt,sbang-sbrnd,wk sil cmt,no vis mtx,nod pyr, lse & cln,fr-gd por,no fluor.

CARBIDE LAG CHECK @ 1300m
THEOR. STKS: 3977
ACTUAL STKS: 4200
HOLE IS 5.6% O.G

SANDSTONE:trnsl-clr,tr pl yelsh brn,dom med-f,crs i/p,mod wl srt,wk sil cmt,no vis mtx,wk sil cmt,tr pyr, rr carb spks,lse & cln grs,hd-v hd,fr inf por,no fluor.

1320

1330

1340

1350

1360

1370

WOB 5-10 klbs
RPM 90-115
SPP 1100-1672 psi
FLOW 596-628 gpm

26/09/05

MW 1.07
FV 52
PV 15
YP 28
Gel 6/8/9
WL 5.8
pH 8.7
Ck 1/
Sol 7
Cl 21

NO GAS

0 100

100 1100

SILTSTONE:dk gry,grysh blk,occ med-dk gry,arg,sli calc,occ micmic,mnr dissem pyr,tr carb spks,dom sft-v sft,occ frm-mod hd,sbblky-blky.

SANDSTONE:trnsl-clr,frstd-opq, med-crs,occ f,rr v crs,sbang-ang,occ sbrnd,wk sil cmt,tr pl-dk gry arg mtx occ carb frags,mnr nod pyr,rr mic flks, gen cln & lse,fr-gd por,no fluor.

SURVEY @ 1334m: 0.00°

SILTSTONE:med-dk gry,dk gry,mnr grysh blk,dom arg,com loc aren,occ carb spks,mnr dissem pyr,v sft-sft, sbblky-blky.

SILTSTONE:med gry,med-dk gry,arg, aren i/p,occ micmic,tr carb spks,tr glauc,v sft-disp,amorph-sbblky.

SILTSTONE:med gry,med-dk gry,arg, aren i/p,occ micmic,tr carb spks,tr glauc,v sft-disp,amorph-sbblky.

WOB 5-9 klbs
RPM 97-112
SPP 1517-1685 psi
FLOW 599-679 gpm

NO GAS

1380

SURVEY @ 1381m: 0.50°

SANDSTONE:trnsl-clr,frstd,opq-mlky,i/p,med-crs,com v crs,occ f, sbang-sbrnd,occ ang,mod srt,tr wk sil cmt,tr nod pyr,carb frags cln & lse,gd inf por,no fluor.

1390

SILTSTONE:med-dk gry,med gry,grysh brn,arg,mnr-com carb spks, occ dissem pyr,tr glauc,sft,disp i/p,sbblky-amorph

0 100

1400

100 1100

1410

SILTSTONE:med-dk gry,grysh brn, arg,mnr-com carb spks,occ dissem pyr, tr glauc,sft,disp i/p,rr frm,sbblky-blky,com amorph.

M1

1420

WOB 5-15 klbs
RPM 98-113
SPP 1600-1725 psi
FLOW 606-665 gpm

NO GAS

M1

SILTSTONE:med-dk gry,brnsh gry, arg,aren i/p,com nod & dissem pyr, occ glauc,carb spks,sft-frm,occ disp sbblky-blky,amorph.

1430

SURVEY @ 1428m: 0.50°

1440

1450

1460

0

100

100

1100

SILTSTONE:med-dk gry,brnsh gry, arg,aren i/p,com nod & dissem pyr, occ glauc,carb spks,sft-frm,occ disp sbblky-blky,amorph.

SURVEY @ 1447m: 0.00°

SANDSTONE:trnsl-clr,off wh-v pl gry,vf-crs,dom med-crs,pr srt,sbang-sbrnd,wk sil cmt,com loc pl gry-brn arg mtx,occ nod pyr,glauc,mnr carb spks & frags,dom cln & lse,loc fri-mod hd aggs,pr vis por,fr inf por, no fluor.

1470

1480

1490

WOB 7-15 klbs
RPM 97-111
SPP 1544-1741 psi
FLOW 600-621 gpm

NO GAS

SILTSTONE:med-dk gry,grysh blk, dk grnsh gry,dom arg,aren i/p,com dissem pyr,occ micmic,nod pyr,sft-frm,sbblky-blky.

SURVEY @ 1475m: 0.00°

SANDSTONE:trnsl-clr,frstd,v pl gry,f-med,occ crs-v crs,mod srt, sbang-sbrnd,loc wk-mod sil cmt,loc pl gry arg mtx,grd to aren SLTST i/p,dom cln & lse grs,mnr-com nod pyr,occ mic,carb frags,rr mod hd aggs,pr vis por,fr-gd inf por,no fluor.

SILTSTONE:med-dk gry,grysh blk, dk grnsh gry,dom arg,aren i/p,com dissem pyr,occ micmic,nod pyr,sft-frm,sbblky-blky.

1500

1510

1520

1530

1540

1550

1560

WOB 3-8 klbs
RPM 93-125
SPP 1500-1750 psi
FLOW 550-615 gpm

0 100

100 1100

SURVEY @ 1503m: 0.00°

SILTSTONE:med-dk brn,brnsh gry, occ lt gry,dom arg,com aren,sli calc grd to vf SST i/p,com dissem pyr,occ glauc,dom frm-mod hd,sbblky-blky.

SANDSTONE:trnsl-clr,frstd,f-med, occ crs,mod srt,sbang-sbrnd,tr wk calc cmt,loc wk-mod sil cmt,tr pl brn-gry arg mtx,com dissem pyr,occ carb spks & frags,tr pl yel,dom lse & cln,occ mod hd-hd aggs,pr vis por pr-fr inf & vis por,no fluor.

SILTSTONE:lt-med gry,dk gry, grysh blk,aren,com arg,com dissem pyr,occ micmic,tr calc mat,dom frm-mod hd,sft i/p,sbblky-blky.

SURVEY @ 1531m: 0.00°

SILTSTONE:med gry-dk gry,tr lt gry, grysh blk,aren,tr arg,com w/dissem pyr, pred sft-mod hd,tr frm,sbblky-blky

SANDSTONE:trnsl,clr,frstd,tr pl yel, pred med-crs grs,mnr f grs,mod wl srt, pred sbrnd,tr sbang-sbrnd,wk sil cmt, no vis mtx,com dissem pyr,tr carb spks, rr mic,lse & cln grs,hd-v hd, fr inf por,fr-gd vis por,no fluor.

SURVEY @ 1559m: 0.00°

MW 1.08
FV 52
PV 16
YP 26
Gel 7/10/12
WL 6.2
pH 8.7
Ck 1/
Sol 8
Cl 21

WOB 3-7 klbs
RPM 87-105
SPP 1575-1750 psi
FLOW 505-605 gpm

1570

1580

1590

1600

1610

1620

0 100

100 1100

SANDSTONE:trnsl-trnsp,clr,frstd,pred med-f grs,mnr crs grs,mod wl srt, sbang-sbrnd,wk sil cmt,no vis mtx,tr pyr, com w/dissem carb spks,rr mic,ls& cln g hd-v hd,fr-gd inf & vis por,no fluor.

SURVEY @ 1587m: 0.00°

SILTSTONE:med gry-dk gry,dk olv gry, grysh blk,aren,tr pyr,com carb spks,sft-fr mod hd i/p,pred sbblky,sbfiss-fiss i/p, amorph.

SANDSTONE:trnsl,clr,frstd,tr pl yel,med-crs grs,f grs i/p,moe wl srt,sbang-sbrnd, pred sbrnd,wk sil cmt,no vis mtx,tr pyr, com carb spks,lse & cln,hd-v hd,fr inf po fr-gd vis por,no fluor.

CARBIDE LAG CHECK @ 1600m
THEOR. STKS: 4846
ACTUAL STKS: 4950
HOLE IS 2.1% O.G

SILTSTONE:pred med gry-dk gry,grysh b mnr lt gry,aren,mnr arg,com carb spks, tr pyr,pred frm-mod hd,loc sft-disp, sbblky-sbfiss.

SURVEY @ 1615m: 0.00°

WOB 3-7 klbs
RPM 98-105
SPP 1655-1820 psi
FLOW 568-615 gpm

1630

1640

1650

94 / 6

0

95 / 5

100

100

1100

100% C1

1660

1670

95 / 5

WOB 4-7 klbs
RPM 75-100
SPP 1330-1790 psi
FLOW 690-300 gpm

1680

SANDSTONE:trnsl,clr,rr pl yelsh wh,pred med grs,f grs i/p,mod wl srt,sbrnd,occ sbang-sbrnd,wk sil cmt,no vis mtx,tr pyr, mnr carb spks,lse & cln grs,mod hd-v hd, fr inf por,fr-gd vis por,no fluor.

SILTSTONE:lt gry,lt brnsh gry,med gry i/p aren,occ arg,micmic,com blk carb spks & microlans,sft-frm,mnr mod hd,sbblky-sbfiss,mnr amorph.

SANDSTONE:frstd,trnsl,mnr clr,mlky i/p,v crs-crs,tr med,incr v f grs,mod wl srt,sbang-sbrnd,com ang frac v crs grs, occ grd to aren SLTST i/p,tr-loc med calc cmt,mnr sil cmt,wh-off wh arg mtx, incr nod & dissem pyr,carb spks, lse crs & v crs grs,frm-mod hd vf-f aggs,fr-gd inf & vis por,no fluor.

SURVEY @ 1643m: 0.5°

SILTSTONE:1)wh-v lt gry,v arg,calc, mnr carb spks,disp-v sft,amorph 2)med-lt gry,dk gry i/p,mnr arg,dom aren,grd to vf SST i/p,fritocc mod hd, sbblky-sbfiss,occ fiss i/p.

SILTSTONE:dom wh-v pl gry,med-med dk gry i/p,arg,aren i/p,tr micro carb spks,disptfrm i/p,amorph-blk,mnr sbblky-sbfiss.

SILTSTONE:med gry-lt brnsh gry,decr wh-v pl gry,grnsh gry,tr dk gry,arg,tr aren, micro carb spks, dom disp, v sft-sft,loc frm-mod hd i/p,amorph,sbblky-sbfiss i/p.

SURVEY @ 1671m: 0.5°

SILTSTONE:gen lt gry-lt grnsh gry,yelsh gry,wh,lt gry-med gry i/p,arg,occ aren, abdt carb spks,disp-sft,rr sft-frm, sbblky-blky,amorph.

1690

1700

1710

1720

1730

1740

95 / 5

96 / 4

0 100

100 1100

94 / 6

95 / 5

WOB 5-16 klbs
RPM 96-104
SPP 1644-1827 psi
FLOW 609-644 gpm

MW 1.08
FV 61
PV 23
YP 31
Gel 9/13/15
WL 5.5
pH 8.7
Ck 1/
Sol 8
Cl 22

27/09/05

SANDSTONE:clr,trnsl,rr pl yel-pl orng, gen med-f grs,crs grs i/p,mod wl srt, sbang-sbrnd,tr v wl rnd,wk sil cmt, no vis mtx,tr arg mtx,com carb spks,lse & unconsol,mod hd-v hd,fr-gd in por,fr vis por,no fluor.

SURVEY @ 1690m: 0.0°

SANDSTONE:frstd,trnsl-clr,col,occ mlky, v pl gry,med-v crs grs,mod srt,pred sban com ang,v crs frac grs,sbrnd i/p,wk calc & sil cmt,tr off wh-pl gry arg mtx,mic flks,lse & pred cln,pr-loc fr por,no fluor.

SILTSTONE:lt gry-grysh blk,lt grnsh gry, col,arg,com carb spks,gen v sft-disp, rr frm,sbblky-sbfiss,amorph.

SANDSTONE:clr,trnsl,lt gry-col,pred med f grs,rr crs grs,pred sbang,mnr sbang-sbrnd,wk sil cmt,no vis mtx,tr pyr,com carb spks,lse grs,hd-v hd,fr inf por, pr-fr vis por,no fluor.

SURVEY @ 1728m: 0.50°

SILTSTONE:med-dk gry,lt gry,aren, arg i/p,occ carb spks & flks,mnr dissem pyr,sft-disp,blky-amorph.

SANDSTONE:trnsl-clr,wh-lt gry, vf-f,wl srt,mnr wk calc cmt,abdt kaol mtx,rr lt brn liths,tr carb

1750

1760

1770

WOB 5-12 klbs
RPM 97-105
SPP 1770-1850 psi
FLOW 590-660 gpm

1780

1790

1800

94 / 6

0 100

100 1100

95 / 5

POWER SURGE
DATA LOST

mat,pyr cmt,fri,occ mod hd,pr vis por,no fluor.

SURVEY @ 1756m: 0.50°

SILTSTONE:med-dk gry,grysh brn,lt gry,arg,mnr aren,rr glauc,micmic, tr carb spks,v sft-disp,dom amorph, blky i/p.

SANDSTONE:trnsl-clr,wh-off wh,v lt gry,vf-f,tr med,mod wl srt,sbang-sbrnd, loc abdt pl gry-brn arg mtx,tr kaol mtx, grd to aren SLTST i/p,tr glauc,carb spks,dom fri,rr mod hd,pr vis por,no fluor.

SILTSTONE:med-dk gry,grysh brn,lt gry,arg,mnr aren,rr glauc,micmic, tr carb spks,v sft-disp,dom amorph, blky i/p.

SURVEY @ 1784m: 0.50°

SANDSTONE:trnsl-clr,off wh-v pl gry, v f-f,wl srt,sbang-sbrnd,tr wk cal cmt, com-loc abdt pl gry off wh arg mtx, rr loc kaol mtx,occ carb spks,rr nod pyr,tr glauc,dom fri,uncons i/p, pr vis por,no fluor.

SURVEY @ 1803m: 0.50°

SANDSTONE:trnsl-clr,pl gry-off wh,vf-f,wl srt,tr wk calc cmt,abdt off wh-pl gry,arg mtx,rr carb spks, tr nod pyr,fri,pr vis por,no fluor.

1810

1820

1830

1840

1850

1860

1870

WOB 5-15 klbs
RPM 85-103
SPP 1490-2050 psi
FLOW 590-735 gpm

100 / Tr

0 100

100 99 / 1 1100

98 / 2

97 / 3

SILTSTONE:lt-med gry,brnsh gry, lt gry i/p,arg,com loc aren,occ carb spks,sft-disp,sbblky-amorph.

SANDSTONE:trnsl-clr,pl gry-brn, off wh,vf-f,wl srt,tr sil cmt,abdt wh-off wh arg mtx,grd to aren SLTST i/p,mnr-com carb spks & micrlams,tr dk grn liths,fri,pr vis por,no fluor.

SILTSTONE:lt-med brnsh gry,med gry,arg,occ aren,grd to vf SST i/p, com carb spks,occ micmic,tr dk grn liths,v sft-disp,blky-amorph.

SURVEY @ 1840m: 1°

SANDSTONE:trnsl-clr,pl gry-brn, off wh,vf-f,wl srt,tr calc cmt,abdt wh-off wh arg mtx,grd to aren SLTST i/p,mnr-com carb spks & miclrams,tr micmic,tr dk grn liths,fri,pr vis por,no fluor.

SILTSTONE:lt-med brnsh gry,med gry,arg,occ aren,grd to vf SST i/p, com carb spks,occ micmic,tr dk grn liths,v sft-disp,blky-amorph.

SILTSTONE:med-dk gry,lt-med grysh brn,arg,com aren,com carb spks,tr micmic,dom v sft,occ frm-mod hd, sbblky-blky,amorph i/p.

SURVEY @ 1868m: 0.50°

WOB 8-13 klbs
RPM 85-112
SPP 1730-2100 psi
FLOW 580-685 gpm

1880

1890

1900

1910

1920

1930

WOB 10-15 klbs
RPM 85-105
SPP 1990-2190 psi
FLOW 575-620 gpm

99 / 1

0 100

100 96 / 4 1100

98 / 2

97 / 3

SILTSTONE:dom med-dk gry,occ lt-med gry,arg,tr aren,occ carb spks, dissem pyr,tr calc mat,sft-frm,rr mod hd,sbblky-sbfiss.

SILTSTONE:med-dk gry,brnsh gry, arg,tr aren,occ carb spks,dissem pyr,tr calc mat,sft-frm,rr mod hd sbblky-blky,sbfiss i/p.

SILTSTONE:dom lt gry-med gry, med dk gry,dom aren,mnr arg, grd to SST i/p, comm dissem w/pyr,sft-rm,disp i/p, sbblky-sbfiss.

SILTSTONE:dom lt gry-med gry,tr med dk gry,pred aren,mnr arg,grd to SST i/p, comm dissem w/carb spks,dom sft-frm, tr disp,sbblky-sbfiss.

SILTSTONE:brnsh gry,med gry,mnr lt gry,arg,com aren,occ carb spks & mnr lams,sft-mod hd i/p,disp i/p, sbblky-sbfiss.

TOTCO SURVEY @ 1924.m: 0.50°

SANDSTONE:clr,trnsl,pl grn,pl gry,f-med, mod wl srt,sbang,wk calc & sil cmt,lt grnsh gry-lt blush gry arg mtx,lse & cln, fr-pr inf por,no fluor.

1940

1950

1960

1970

1980

1990

MW 1.09
FV 77
PV 25
YP 34
Gel 7/10/12
WL 5.5
pH 8.7
Ck 1/
Sol 10
Cl 22000

G

97 / 3

97 / 3

0 100

100 1100

97 / 3

WOB 5-14 klbs
RPM 90-115
SPP 1865-2200 psi
FLOW 550-645 gpm

SILTSTONE:gen lt grnsh gry-med grnsh g lt gry,tr med dk gry,dom arg,mnr aren,tr carb spks,com sft-disp,rr mod sft-frm, sbblky-sbfiss,amorph.

SANDSTONE:pl orng,med dk orngsh yel, frstd,med-crs grs,sbrnd,wk sil cmt, no vis mtx,fr inf por,no fluor.

SILTSTONE:med gry-med dk gry,dk grnsh gry,tr lt gry-lt grnsh gry,dom aren, mnr arg,com carb spks,tr glauc,sft-frm, sbblky-sbfiss,amorph.

SURVEY @ 1943m: 1.50°

SILTSTONE:dom lt gry-med gry,tr med gr -med dk gry,occ dk grnsh gry,pred aren, arg i/p,mnr carb spks,sft-frm, sbblky-sbfiss,amorph.

SILTSTONE:gen lt gry-med gry,med dk g off wh-drty wh,dom arg,loc aren,mnr carb spks,tr glauc,sft-disp,mod frm, sbblky-sbfiss,amorph.

SURVEY @ 1971m: 1.0°

SILTSTONE:lt gry,lt grnsh gry,lt yelsh gry,tr med-dk gry,dom aren,mnr arg, grd to f SST,tr carb spks,gen sft-disp, occ sft-frm,sbblky-sbfiss,amorph.

SILTSTONE:gen lt gry-med gry,lt

2000

2010

2020

2030

2040

2050

WOB 5-12 klbs
RPM 85-105
SPP 2010-2140 psi
FLOW 510-575 gpm

96 / 4

0

100

100

1100

96 / 4

96 / 4

grnsh gry,tr med-dk gry,tr off wh-drty wh,dom aren,mnr arg,gd to f SST, com dissem carb spks,v sft-sft & disp, rr sft-frm,sbblky-sbfiss,amorph.

SURVEY @ 1999m: 1.0°

SILTSTONE:lt brnsh gry,sli olv gry, med lt gry,aren,mnr arg,calc i/p,mnr micro-carb spks,tr orng liths,sft-frm, occ mod hd,disp,sbblky,sbfiss i/p, amorph.

SANDSTONE:clr,trnsl,col,opq,orng, vf-f,mod wl srt,tr sil cmt,no vis mtx, lse,gd por,no fluor.

SILTSTONE:lt olv gry,grnsh gry,lt brnsh gry,arg,glauc,mnr carb spks & mat,rr pyr nods,disp,sft-frm,rr mod hd,sbblky-blky,amorph.

SILTSTONE:lt olv gry,lt brnsh gry, arg,glauc,mnr carb mat & spks,rr pyr nods,disp,sft-rr frm,blky-sbblky,amorph.

SURVEY @ 2027m: 1.0°

SILTSTONE:1)90% brnsh gy-olv gry, tr dk grysh blk,arg,sft-frm,glauc, v sft-sft,tr frm-mod hd,bkly-sbblky, tr-rr sbfiss,dom amorph
2)10% wh-v pl gry,grnsh gry-mod grn, com glauc,disp,amorph.

LIMESTONE(RR):crm-v lt bnsh crm, arg/foss,sft-brit.

SANDSTONE:clr,trnsl,vf-occ f,gen v wl srt,sbang-sbrnd,gen sil,v wk calc i/p,abdt arg mtx dom,gen uncons, v pr-ti vis & inf por,no fluor.

SURVEY @ 2056m: 1.0°

MW 1.09
FV 65
PV 25
YP 35
Gel 7/10/13
WL 5.1
pH 8.8
Ck 1/
Sol 10
Cl 22000

2060

2070

WOB 10-14 klbs
RPM 95
SPP 2100 psi
FLOW 555 gpm

2080

2090

2100

2110

96 / 4

0 100

100 1100

96 / 4

96 / 4 / Tr

SILTSTONE:pred gry-bnsh gry,gen v arg grd to CLYST,occ vf aren,loc com glauc i/p,tr carb mat i/p,gen sft-frm i/p,sli-mod calc i/p,sbfiss-sbblky.

SILTSTONE:pred gry-bnsh gry,gen v arg grd to CLYST,occ vf aren,loc com glauc i/p,tr carb mat i/p,gen sft-frm i/p,mod calc incr w/ depth,sbfiss-sbblky.

SURVEY @ 2084m: 1.0°

SANDSTONE(TR):clr/trnsl grs,lt gry, vf,v wl srt,sbang-sbrnd,gen sil w/ v wk calc cmt i/p,abdt arg mtx dom,gen lse/uncons,rr mod hd & calc,v pr-ti vis por,no fluor.

SURVEY @ 2112m: 1.0°

SILTSTONE:pred bnsh gry-lt brn,gen v arg grd to CLYST,occ vf aren,loc com glauc i/p,tr-com carb mat i/p,gen sft-frm,mod hd & calc i/p,gen sil, sbfiss-pred sbblky.

2120

2130

2140

2150

2160

2170

2180

WOB 10-15 klbs
RPM 102
SPP 2100 psi
FLOW 549 gpm

97 / 3

0

100

100

1100

96 / 3 / 1

WOB 10-15 klbs
RPM 100
SPP 2170 psi
FLOW 547 gpm

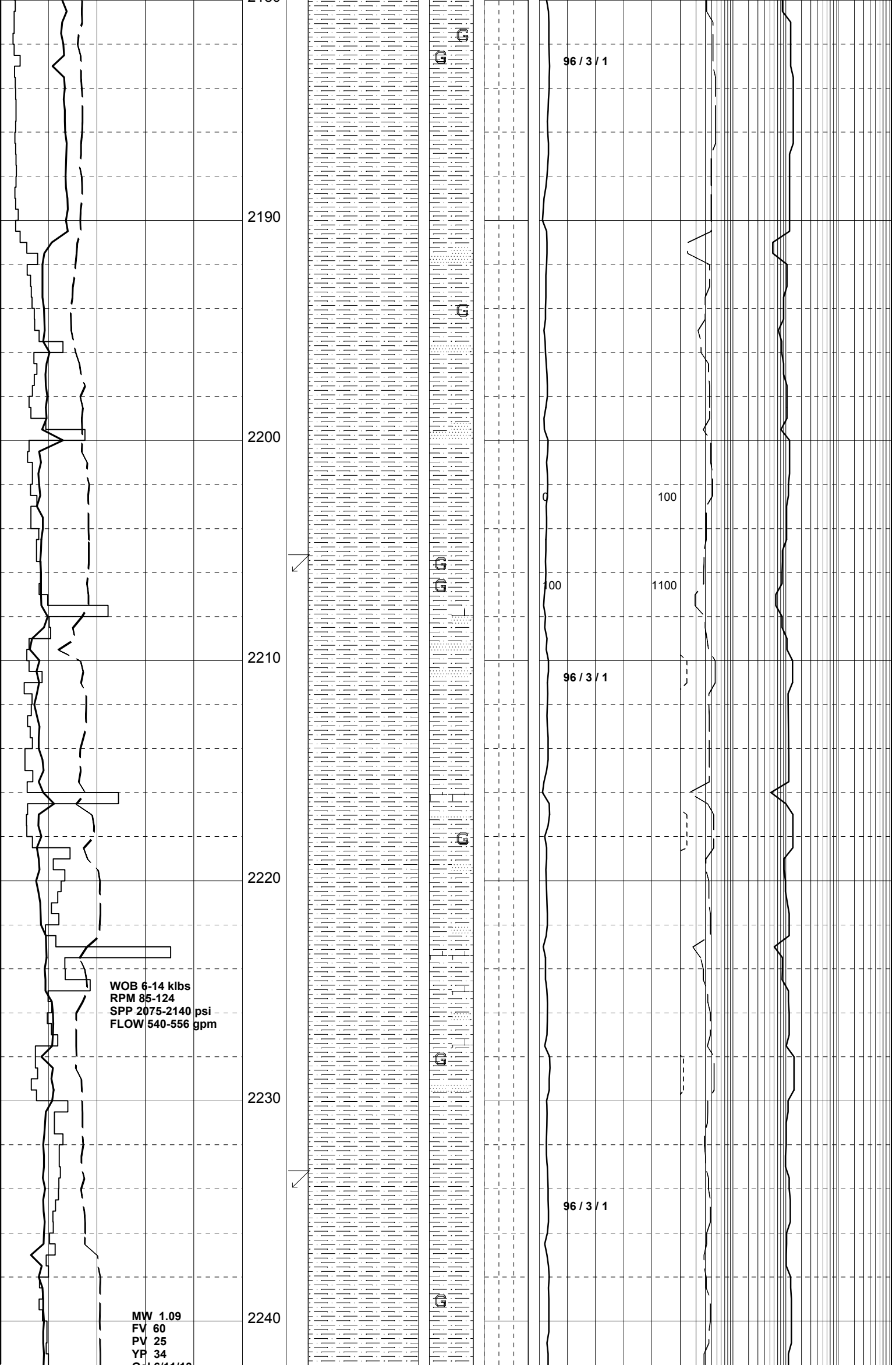
LIMESTONE(TR):1)gen tan crm-lt tan, arg,foss,gen sft,occ hd w/ micro glauc veins,amorph-occ blky.
2)lt brnsh org,brn,micr,arg,v hd, sbblky-pred blky.

SURVEY @ 2140m: 1.0°

SILTSTONE:pred bnsh gry-lt brn,com mo grn,arg grd to CLYST,occ vf aren,loc com glauc i/p,rr carb mat i/p,gen frm-mod hd,sli calc i/p,gen sil,sbfiss-sbblky.

SURVEY @ 2168m: 3.0°

SURVEY @ 2177m: 2.5°



SILTSTONE:pred bnsh gry-lt brn,com mo grn,arg,occ vf aren,loc com glauc i/p, gen frm,gen sil w/ hd & sil i/p,mnr tr calc i/p,pred sbfiss-sbblky,occ blky.

SANDSTONE(TR):off wh-v lt gry,vf, wl srt,sbang-sbrnd,off wh arg mtx,wk sil cmt,fri,v pr-ti vis por,no fluor.

SURVEY @ 2206m: 3.5°

SILTSTONE:pred bnsh gry-lt brn, com mott grn,aren,occ arg,loc com glauc i/p,gen frm,gen sil w/ hd & sil i/p,mnr-tr calc i/p,pred sbfiss-sbblky,occ blky.

SILTSTONE:med gry-dk gry,med grnsh gry-dk grnsh gry,dom arg,mnr aren,tr carbspks,tr glauc,sft-frm,mod hd i/p, sbblky-sbfiss,amorph.

SURVEY @ 2234m: 3.5°

Gel 6/11/13
WL 4.8
pH 8.7
Ck 1/
Sol 11
Cl 22000

2250

WOB 10-12 klbs
RPM 102
SPP 1760 psi
FLOW 494 gpm

2260

WOB 15-20 klbs
RPM 78
SPP 1670 psi
FLOW 533 gpm

2270

WOB 10-12 klbs
RPM 106
SPP 1860 psi
FLOW 524 gpm

2280

MW 1.13
FV 54
PV 22
YP 23
Gel 6/9/11
WL 5.3
pH 9.5
Ck 1/
Sol 8
Cl 24000

2290

2300

Trip Gas 18 Units

98 / 2

0 100

100 97 / 3 1100

98 / 2

Wiper Trip @ 2246m

SILTSTONE:med-med dk gry,pred arg, occ aren,micmic,com carb spks,mnr-tr glauc,frm-mod hd i/p,tr pyr nods, sbblky-sbfiss,tr fiss.

CARBIDE LAG CHECK @ 2257m
THEOR. STKS: 6754
ACTUAL STKS: 7200
HOLE IS 8.0% O.G

SILTSTONE:med-dk gry,arg,decr carb spks,com grd to CLYST i/p,tr LMST mat, frm-mod hd,sbblky-sbfiss.

SURVEY @ 2271m: 3.0°

SILTSTONE:med-dk gry,arg,decr carb spks,com grd to CLYST i/p,tr LMST mat, frm-mod hd,sbblky-sbfiss.

SILTSTONE:med-med-dk gry,brnsh gry, olv gry i/p,rr grnsh gry,arg,loc com carb spks,glauc,tr wh-off wh v arg liths,fri-mod hd,hd-v hd i/p,sbblky-sbfiss.

SURVEY @ 2299m: xxx°

SILTSTONE:med-med-dk gry,brnsh gry, olv gry i/p,rr grnsh gry,arg,loc com carb spks,glauc,tr wh-off wh v arg liths,tr LMST,fri-mod hd,hd-v hd i/p, sbblky-sbfiss.

SILTSTONE:med dk gry-dk gry,med grns

2310

2320

2330

2340

2350

2360

WOB 5-16 klbs
RPM 90-120
SPP 1775-1980 psi
FLOW 505-565 gpm

98 / 2

99 / 1

0 100

100 1100

99 / 1

99 / 1

99 / 1

gry-dk grnsh gry,tr lt gry-off wh,dty wh,arg,com carb spks,fm-mod hd,hd i/p, sbblky-sbfiss.

SILTSTONE:med dk-dk gry,dk brnsh gry,dk grnsh gry,arg,com carb spks, com glauc,frm-mod hd,loc hd i/p, sbblky-sbfiss.

SURVEY @ 2318m: 3.0°

SILTSTONE:med dk-dk gry,dk brnsh gry,dk grnsh gry,arg,com carb spks, com glauc,tr micmic,frm-mod hd,loc hd i/p,sbblky-sbfiss.

SILTSTONE:med dk-dk gry,dk brnsh gry,dk grnsh gry,arg,mnr-tr carb spks, mnr glauc,tr micmic,frm-mod hd,loc hd i/p,sbblky-sbfiss.

SANDSTONE:clr-trnsl,v pl gry,v pl brn,vf-med,mod srt,sbang-sbrnd,mod-mnr sil cmt,tr off wh-pl brn arg mtx, carb spks,glauc,lse,pr por,no fluor.

SILTSTONE:grysh grn,dk grysh grn, med dk gry,brnsh gry i/p,arg,aren i/p, occ grd to vf SST i/p,carb & glauc, com disp,sft-frm,amorpf,sbblky-sbfiss.

SANDSTONE:clr-trnsl,v pl gry,pl brn, vf-med,mod srt,sbang-sbrnd,mod-mnr sil cmt,tr off wh-pl brn arg mtx,carb spks, glauc,lse,pr por,no fluor.

SURVEY @ 2346m: 3.0°

SILTSTONE:med-dk gry,grysh brn,olv gry,dk grnsh gry,arg,aren i/p,carb spks,sft-frm,mod hd-hd,sbblky,abdt sbfiss-fiss i/p.

SANDSTONE:trnsl,pl yel,sli pl gry,clr,vf-med,rr v crs grs,mod-wl srt,sbang-sbrnd,tr strg sil cmt,wh-pl gry arg mtx,rr ang v crs frac grs, lse,mod hd aggs,pr inf and v pr vis por,no fluor.

SILTSTONE:dk grnsh gy,dsky grn, med-dk gry,arg,mnr aren,sft-frm, sbblky-sbfiss,fiss i/p.

SANDSTONE:trnsl,dsky yelsh grn, grysh grn,clr,f-rr crs grs,pred med, mod srt,sbrnd-sbang,wk sil cmt,tr dk

2370

2380

2390

2400

2410

2420

WOB 10-15 klbs
RPM 83-115
SPP 1650-1840 psi
FLOW 485-540 gpm

MW 1.13
FV 66
PV 27
YP 34
Gel 6/10/11
WL 5.6
pH 9.5
Ck 1/
Sol 8
Cl 26000

WOB 10-15 klbs
RPM 111
SPP 1845 psi
FLOW 501 gpm

WOB 15 klbs
RPM 75-84
SPP 1850 psi
FLOW 495 gpm

100 / Tr

100 / Tr

0 100

100 1100

99 / 1

98 / 2

100 / Tr

99 / 1

grnsh gry arg mtx,abdt glauc,chlor, lse,pr-fr por,no fluor.

SANDSTONE:clr-trnsl,pl gry,frstd,f-med,mod wl srt,sbang-sbrnd,wk sil cmt, pl grnsh gry arg mtx,lse,pr-loc fr vis & inf por,no fluor.

SURVEY @ 2374m: 3.0°

SILTSTONE:pl rdsh brn-grysh rd, mnr olv gry,dk gry,arg grd to CLYST i/p,v sft-sli frm i/p,gen blky-amorph.

SILTSTONE:1)pl rdsh brn,gen arg w/ com sndy incl,com disp w/ mnr frm, sil w/ mnr tr calc i/p,pred amorph occ sbblky-blky
2)med-dk olv gry,aren,rr chlor i/p, gen frm-occ mod hd,sil,pred sbblky-blky.

SILTSTONE:pl rdsh brn-grysh rd,mnr-rr olv gry,dk gry,arg grd to CLYST i/p,v sft-sli frm i/p,pred amorph w/ occ blky aggs.

SURVEY @ 2402m: 3.0°

SILTSTONE:lt-med gry,grysh brn,com rdsh brn,mnr mott gry & grn i/p,v arg grd to CLYST,mnr aren i/p,mod calc i/p, com stky,gen v sft,grysh brn mod frm, fiss-amorph,com disp.

SANDSTONE:med-dk grysh brn,mnr v lt brnsh crm,com mott w/ grn & dk liths, vf,v wl srt,sbang-sbrnd,mod stng calc cmt,dom arg-slty mtx,com liths & mnr chlor,com fri-mod frm i/p,occ frm-mod hd,v pr-ti vis por,no fluor.

SURVEY @ 2421m: 2.5°

SANDSTONE:dk gry,com mott dk gry brn,vf-occ f,mod wl srt,sbang-sbrnd,mod calc cmt,dk slty-arg mtx, rr-tr glauc i/p,v fri-frm i/p,v pr

WOB 10-15 klbs
RPM 111
SPP 1845 psi
FLOW 501 gpm

2430

2440

2450

2460

2470

WOB 10 klbs
RPM 100
SPP 1875 psi
FLOW 492 gpm

2480

2490

G

98 / 2

CG 3-4 Units

98 / 2

0

100

100

1100

97 / 3

97 / 3

100% C1

vis por,no fluor.

SURVEY @ 2430m: 3.0°

SANDSTONE:v dk gry,com mott dk gry-dk brn,vf-occ f,mod wl srt,sbang-sbrnd,mod calc cmt,v com dk slty mtx,rr cln & lse,tr glauc i/p, fri-mod frm i/p,pr-ti vis por,no fluor.

SILTSTONE:med-dk grysh brn,mnr tr rdsh brn,arg & stky i/p,com v aren grd to vf SST,mod calc,fiss-amorph, com disp.

SANDSTONE:med brnsh gry,mott off wh i/p,occ grn spks,vf-occ f,wl srt,rnd-sbang,mod calc cmt,brnsh arg mtx,occ cln & lse,mnr tr glauc i/p,gen fri, occ lse,pr-ti vis por,no fluor.

SURVEY @ 2458m: 2.5°

SILTSTONE:med-dk grysh brn,sli dk olv gry,tr rdsh brn,arg,mnr aren, mnr carb spks,tr crm liths,frm-mod hd, hd i/p,fiss-sbblky.

SILTSTONE:lt-med gry,brnsh gry,mod brn i/p,arg,mnr micmic,dk gry liths, frm-mod hd,hd i/p,fiss-sbfiss, sbblky i/p.

SANDSTONE:opq yel,trnsl,mnr clr,med-v crs,pr-loc mod srt,sbrnd-ang,wk sil & loc mod calc cmt,off wh-lt gy arg mtx,vang frac vcrs grs,lse,uncons, fri-modhd i/p,pr-loc fr inf & v pr-ti vis por,no fluor.

SANDSTONE:trnsl,pl yel,frstd,mnr clr, f-v crs,pred med-crs,v pr srt,wk-mod sil & calc cmt,off wh & med gry arg mtx,com ang frac crs-v crs grs,lse, uncons,fri-mod hd aggs,pr-loc fr inf & ti-por vis por,no fluor.

SILTSTONE:pl grn,mnr brnsh orng,dk gry,pred arg,mnr aren,v sft-sft,frm-mod hd,sbblky-sbfiss,amorph i/p.

SANDSTONE:trnsl-clr,frstd,pl yel,pl gry,mnr pl grn,med-v crs,pr-loc mod srt,ang-sbrnd,wk-loc mod calc & wk sil cmt,tr wh-pl grysh grn arg mtx, occ ang frac crs-v crs grs,tr whsh orng liths,lse,uncons,tr mod hd aggs, fr inf & ti-v pr vis por,no fluor.

SILTSTONE:lt brnsh gry,grnsh gry, lt-med gry,mnr med rdsh brn,dk gry, arg,mnr aren,frm-pred mod hd-hd,v hd i/p,blky-sbfiss.

SURVEY @ 2486m: 3.5°

SILTSTONE:lt gry-med dk gry,lt orngsh yel-lt orng brn,aren,gd to v f SST,tr carb mat frm-mod hd hd i/p sbblky occ

2500

2510

2520

WOB 7-15 klbs
RPM 76-112
SPP 1810-1875 psi
FLOW 486-510 gpm

2530

2540

2550

95 / 5

94 / 6 / 1

91 / 7 / 2

95 / 4 / 1

0 100

94 / 5 / 1

100 1100

95 / 4 / 1

95 / 4 / 1

95 / 4 / 1

82 / 8 / 5 / 3 / 2

82 / 8 / 5 / 3 / 2

81 / 9 / 5 / 3 / 2

sbfiss.

SANDSTONE:clr,trnsl,frstd,f-med grs, mod wl srt,stg sil cmt,no vis mtx, tr sh frags,lse & cln,fr inf por, no fluor.

SILTSTONE:lt gry,grnsh gry,med gry i/p,mnr lt brn,pred aren,srg i/p,tr wk carb,glauc,chlor,tr-rr pyr nods, mnr micmic i/p,frm-mod hd,loc v hd i/p,tr-mnr disp,sbfiss-sbblky,mnr fiss i/p,sli amorph.

SILTSTONE:v lt gry,dk gry,tr lt brn, mnr pl grn,v arg,tr-loc mnr aren,disp, tr-mnr frm-mod hd,blky i/p,amorph.

SANDSTONE:pred clr,trnsl,frstd,mnr pl yel-pl yelsh brn,f-med grs,occ crs grs, mod wl srt,sbrnd,tr sbang-sbrnd,mod wk sil cmt,no vis mtx,lse & cln,fr inf por, no fluor.

SURVEY @ 2514m: 3.0°

SANDSTONE:lt yelsh grn-pl yel,clr-trnsl i dom med-crs grs,mnr f grs,sbang,wk sil no vis mtx,lse & cln,occ consol w/sil cmt,fr inf por,pr-fr vis por,no fluor.

SANDSTONE:dom lt yel-lt yelsh grn,lt yelsh orng,dsky yel,off wh,opq,pred f-me grs,mnr crs grs,mod wl srt,sbrnd,occ sbang,tr mod calc cmt,gen wk sil cmt, no vis mtx,tr carb mat,lse & cln,fr inf por,no fluor.

SILTSTONE:lt grt-med gry,lt grnsh gry,tr lt brnsh yel-med brn,dom aren, mnr arg,com dissem carb spks,com frm-mod hd,moc sft-disp,sbblky-sbfiss, amorph.

SANDSTONE:clr-frstd,dsky wh,pl yel-pl yelsh brn,opq,pred med-crs grs,loc f grs,mod wl srt,sbang-sbrnd,wk sil cmt,no vis mtx,tr pyr nods,lse & cln,pr inf,no fluor.

SANDSTONE:trnsl,frstd,mlky,pl yel, pl grnsh grn,mnr clr,v pr srt,crs-v crs,mnr-tr med grs,ang-sbrnd,dom ang, v crs frac grs,mod-loc strg calc cmt, tr-rr wh arg mtx,mnr pyr nods,mnr pl grn & dk grnsh blk liths,lse,pr-loc gd por,tr min fluor,no cut.

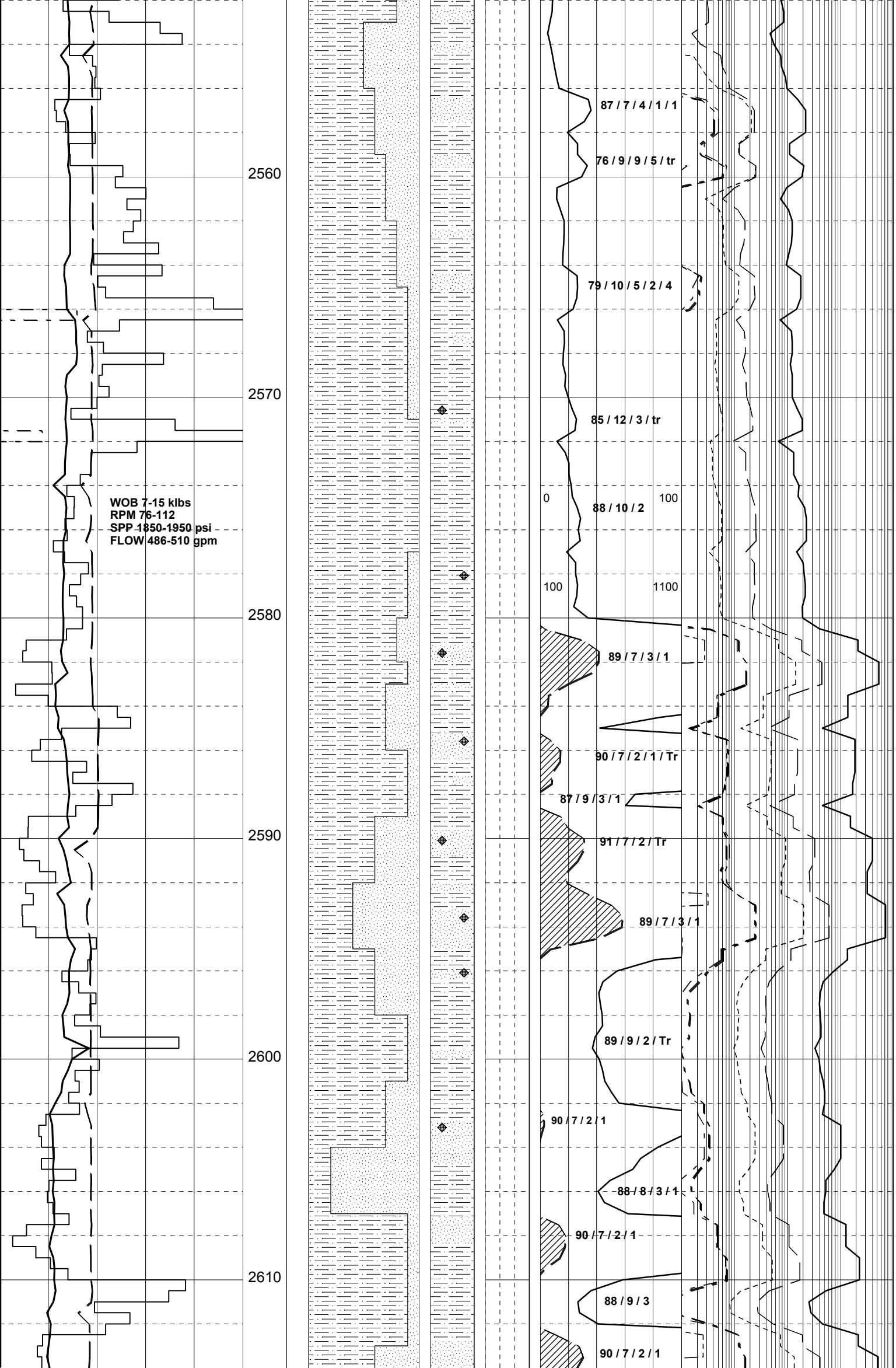
CHILDERS COVE #1 PELIMARY TD REACHED @ 19:00Hrs, 30/09/2005

DRILLER'S DEPTH: 2545m
LOGGER'S DEPTH: 2525m

LOGGING RUNS
1) MMR-MLE-MUG-MSS-MPD-MCG-MBE

BIT #3RR2 HC 605S
SIZE: 8 ½" JETS:1x14,5x13
IN: 2545m OUT:2658m
RUN: 113m HRS:15.1
COND: 3-2-WT-IN-X-I-NO-TD

SANDSTONE:2553m,trnsl,pl gry,frstd,tr clr,f-v crs grs,pred med grs,pr-mod srt, dom sbang-sbrnd,tr ang frac crs grs, mod-loc strg sil cmt,wh arg mtx,mnr yelsh orng liths,lse & uncon,frm-mod hd aggs,pr-fr inf & pr-v pr vis por,no fluor.



SILTSTONE:2553m,1)90% brnsh gry,olv gry,lt med-dk gry,sli lt brn,occ dk grnsh blk, aren, arg i/p, carb mat & spks,tr micmic,rr pyr w/ glauc incls,frm-hd

SANDSTONE:2556m,trnsl,v ply gry,frstd, tr,clr,f-v crs,pred med grs,pr-mod srt, dom sbang-sbrnd,tr ang frac crs grs, mod-loc strg sil cmt,wh arg mtx,mnr yelsh orng liths,lse,uncons,fri-mod hd aggs,pr-fr inf & pr-v pr vis por,no fluor.

SILTSTONE:2556m,1)60% wh-off wh,v arg,disp,amorph
2)40% dk gry,dk grysh brn,sli dk grysh grn,brnsh gry i/p,arg,sli aren,mnr micmic,carb spks & mat,sft-frm,mod hd-hd i/p,blky-sbfiss,amorph i/p.

SILTSTONE:2562m,lt gry,lt grysh bn, wh,rr dk gry & grysh brn,arg,disp,off-sft,mnrfrm,blky,amorph.

SILTSTONE:2565m,lt gry,med lt-med dk gry,incr brnsh gry i/p,sli grnsh-gry, lt olv gry i/p,arg,mnr micmic,mnr pyr, sft-frm,sbblky-sbfiss,amorph i/p.

SILTSTONE:2568m,lt gry-off wh,med-dk g mnr olv gry,brnsh gry,arg,com aren,occ gd to v f SST,mnr calc,inc dissem & nod pyr,carb spks & lams,mnr-loc com chlor, sft-frm,mod hd-hd,sbblky-sbfiss,amorph.

SILTSTONE:2574m,lt gry,lt grysh brn,lt olv gry,mnr med dk gry,pred arg,aren i/p, mnr carb spks & microlams,chlor,rr LMS mat,dissem & mod pyr,frm-mod hd,hd i/p sbfiss-sbblky,fiss i/p.

SANDSTONE:clr-trnsl,frstd,vf-f,occ mrd, mod-wl srt,sbang-sbrnd,strg calc cmt,wh kaol mtx,mnr pyr nods,lse,uncons,mod h hd aggs,pr-fr inf & ti-v pr vis por,no fluor.

SILTSTONE:1)90% wh-off wh,v arg,sli calc,disp,amorph
2)10% lt-med gry,grysh brn,olv gry,arg, aren,frm-mod hd,sbblky-sbfiss.

SANDSTONE:clr-trnsl,frstd,mlky,v pl yel i/p,vf-med,pred f,wl srt,sbang-sbrnd, strg-v strg calc cmt,wh kaol mtx,dissem & nod pyr,lse,uncons,mod hd-v hd i/p, fr inf & pr-ti vis por,no fluor.

SANDSTONE:2586m,trnsl-clr,frstd,mlky, f-crs grs,pred med,mod wl srt,sbrnd-sbar strg calc cmt,off-pl gry arg mtx, mnr pyr nods,lse,uncons,v hd aggs, pr-mnr fr inf & nil-ti vis por, no fluor.

SANDSTONE:2589-2595m,trnsl,mlky,frstd mnr clr,vf-med,pred f,mod wl srt,sbang-sbrnd,strg calc & rr pyr cmt,wh arg/kaol mtx,mod & dissem pyr,lse,uncons,mod v aggs,pr-fr inf & v pr-ti vis por,rr fluor

FLUOR:2589m-2596m,(Tr),dim-mod bri, whsh blu,ppt,v slw whsh blmng c/c,v thn dll whsh r/r.

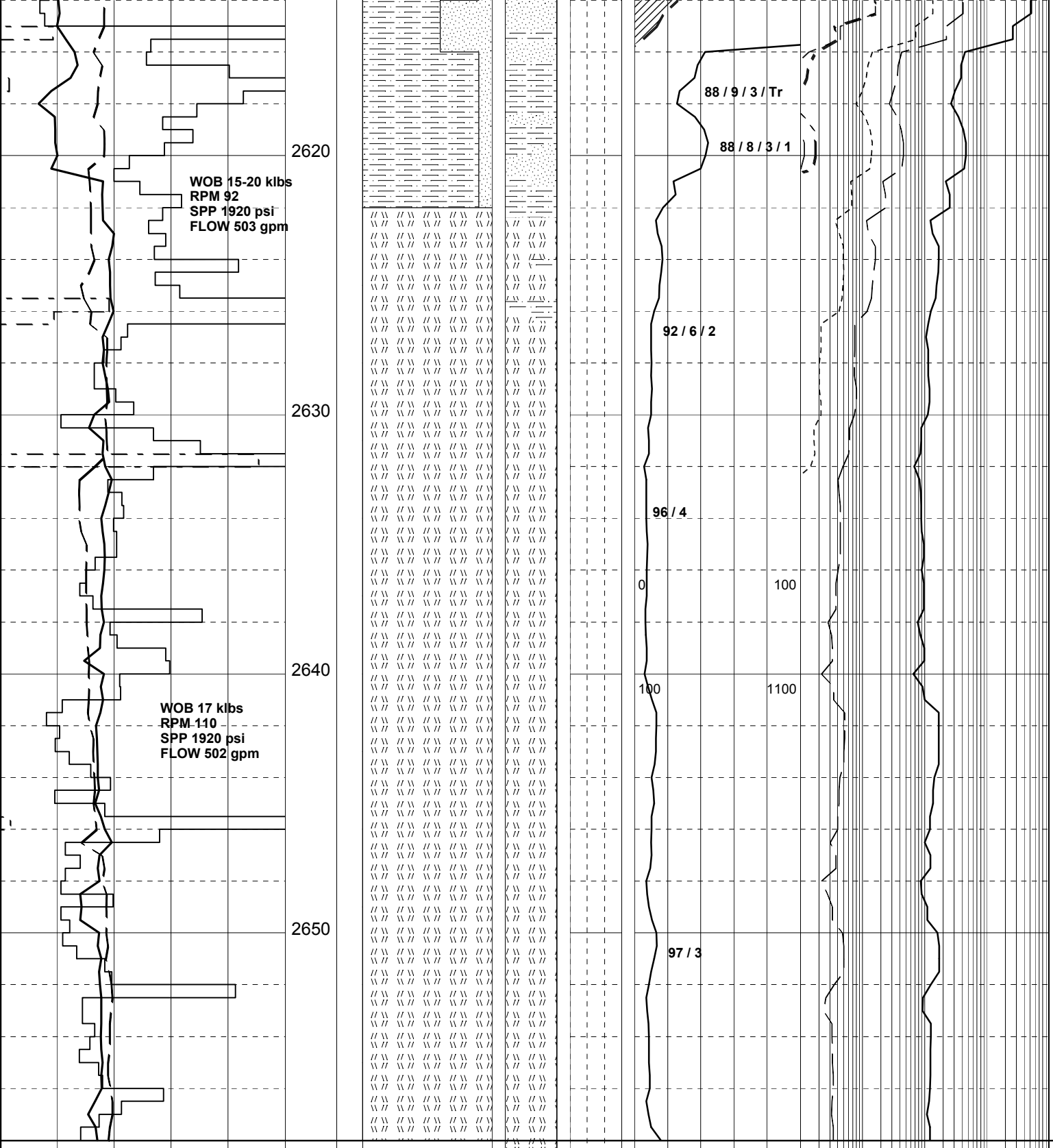
SILTSTONE:2598m,lt-med gry,olv gry, med-med dk gry,mnr grysh brn,dk gry i/p whsh pl gry,arg,sli calc i/p,chlor,v sft-disp,frm-mod hd,sbblky-sbfiss,amorph.

SANDSTONE:2598m,trnsl,mlky,frstd,mnr clr,vf-med,pred f,mod wl srt,sbang-sbrnd strg calc & rr pyr cmt,wh arg/kaol mtx, mod & dissem pyr,chlor,lse,uncons,mod v hd aggs,pr-fr inf & v pr-ti vis por,no fluor

SANDSTONE:trnsl-clr,mlky,frstd,f-v crs,v pr srt,ang-sbrnd,com ang frac crs grs,mod strg calc cmt,wh kaol mtx,mnr pyr nods,lse,uncons,frm-mod hd,pr inf & v pr-ti vis por,no fluor.

SILTSTONE:1)80% brnsh gry,olv gry,arg, mnr micmic,grd to CLYST i/p,carb spks & mat,v sft-frm,mod hd i/p,sbblky-sbfiss, amorph i/p
2)20% wh-v pl gry,v arg,disp,amorph.

SANDSTONE:gen trnsl-off wh,vf-med,pre f,occ crs,pr srt,sbang-ang,occ sbrnd,



pyr nods,occ lam w/ SLTST,gen lse w/ fri aggs i/p,v pr-ti vis por,v pr inf por,no fluor.

SILTSTONE:med olv brn,brnsh gry,occ med dk brn,aren,sli-mod calc i/p, gen sft-mod frm i/p,fiss-sbblky,gen sbfiss.

TUFF:off wh-v lt grnsh gry,tr pnksh rd i/p,mnr tr yelsh org,com clys,rr-tr qtz,abdt calc,mod chlor,com disp, v sft-occ sli frm,com amorph w/ occ sbblky-blky aggs,mnr altd.

TUFF:off wh-v lt grn,tr pnksh rd i/p, mnr tr yelsh org,com clys,tr-com qtz, abdt calc,mnr chlor,com disp- v sft, occ sli frm-fri,com amorph w/ occ sbblky-blky aggs,sli incr in alt.

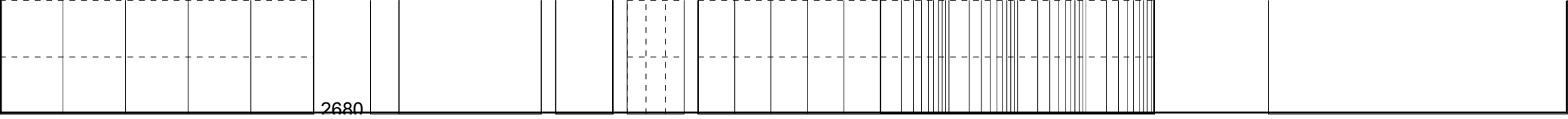
TUFF:off wh-v lt grn,tr pnksh rd i/p, mnr tr yelsh org,com mott,abdt qtz,mnr clys,abdt calc,com chlor,gen lse qtz & mott aggs,lse-fri,com amorph clys.

TUFF:lt gry-lt grnsh gry,occ off wh, mnr clrd qtz grs,com stky clys,com qtz,abdt calc,com chlor,gen lse qtz w/ mott stky cly aggs,gen amorph.

CHILDERS COVE-1 TD REACHED @ 08:00 Hrs, 3/10/2005

DRILLER'S DEPTH: 2658m
LOGGER'S DEPTH: 2657m

LOGGING RUNS
1) MMR-MLE-MUG-MSS-MPD-MCG-MBE
2) MCG-MFT


2680

APPENDIX 5

WIRELINE LOGS

PRECISION ENERGY SERVICES

Compact

CEMENT LOG

1:200

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FINAL PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80	metres	2528.15	metres
Last Reading	2400.00	metres	0.00	metres
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	FILTER	PRESS	FILTER	PRESS
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:17
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Borehole Corrected Gamma
API
0 100 200
200 300 400

Depth in Metres

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:200

Density Caliper
inches
16 11 6

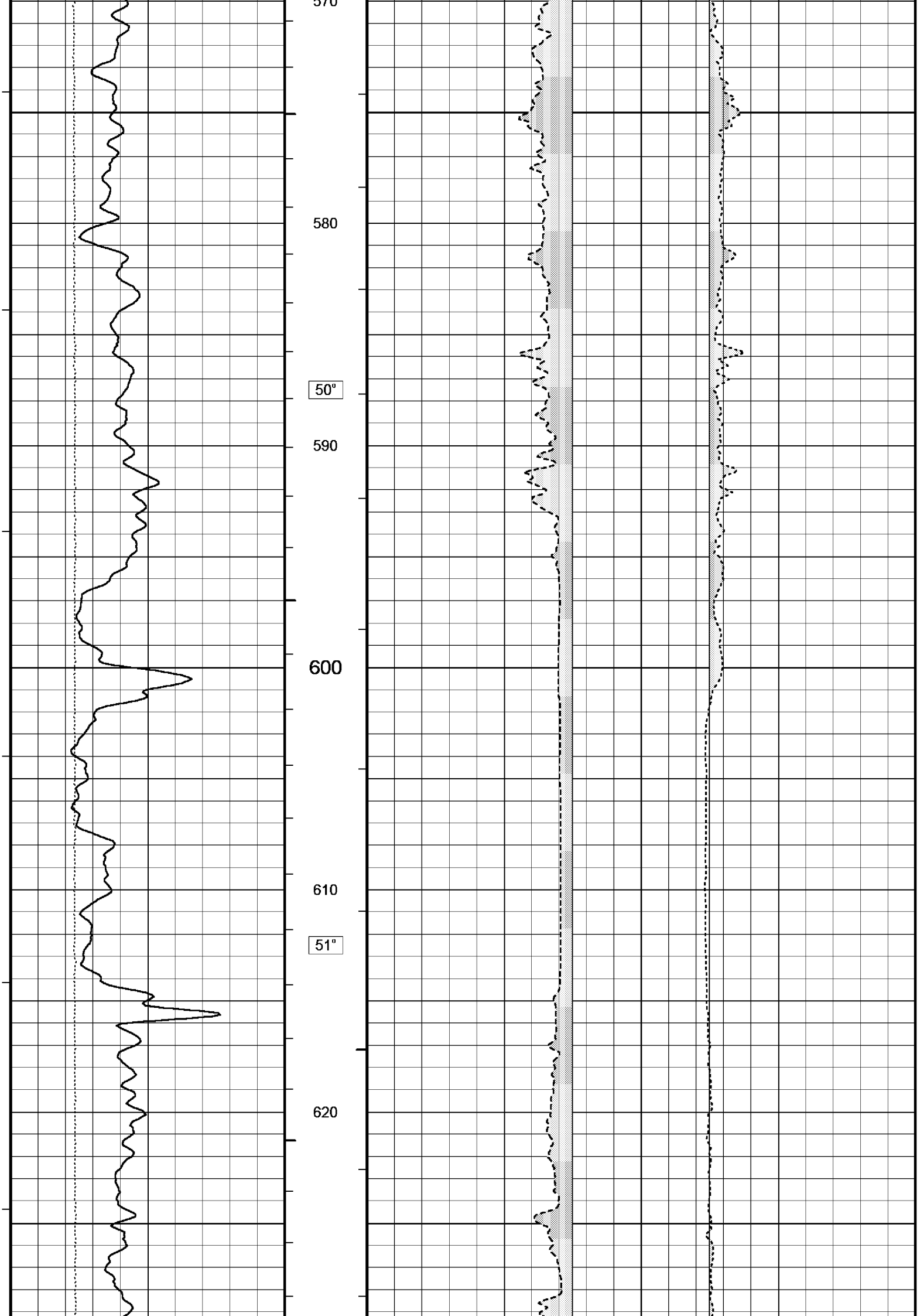
MMR Caliper
inches
6 11 16

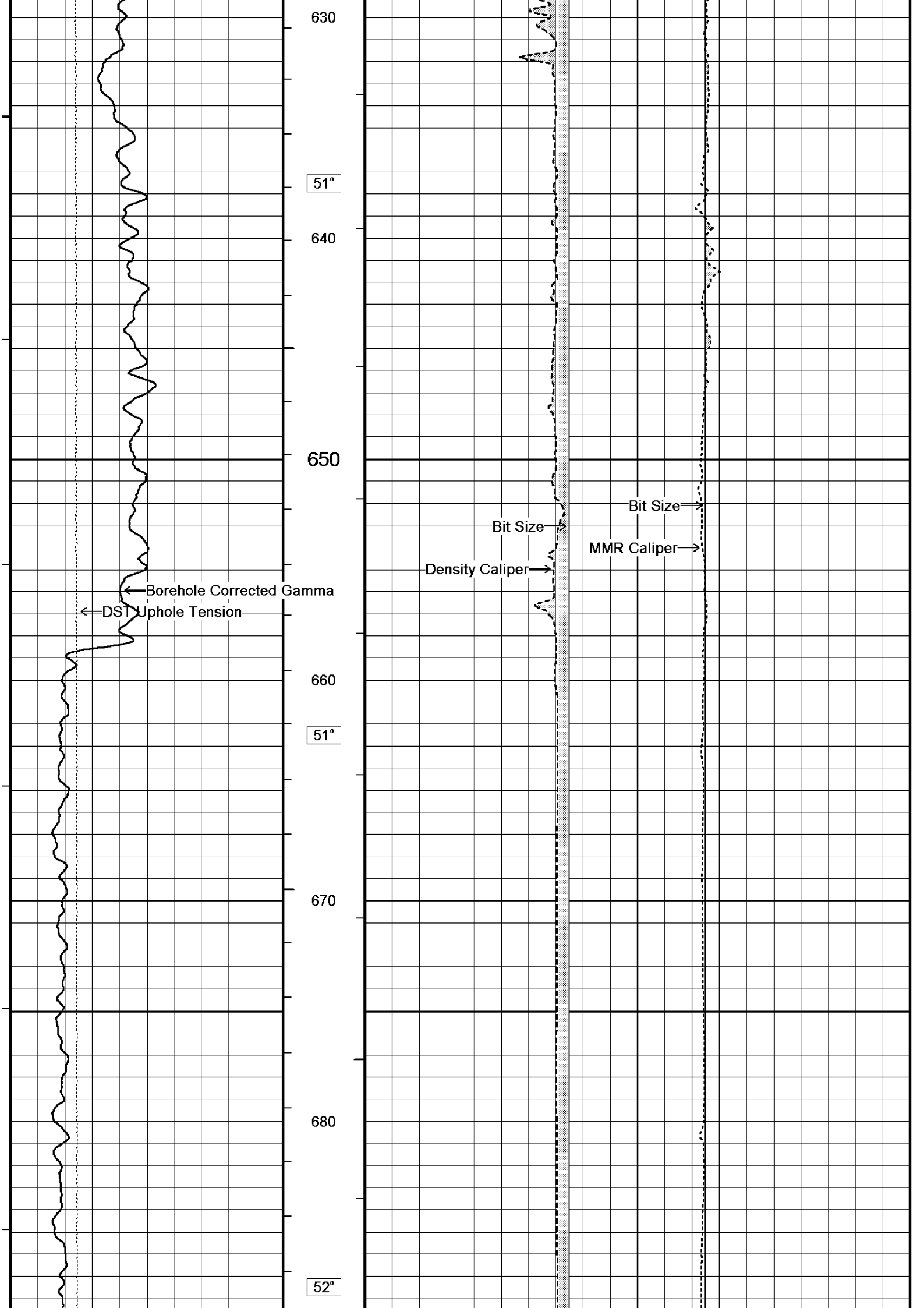
Bit Size
inches
16 11 6

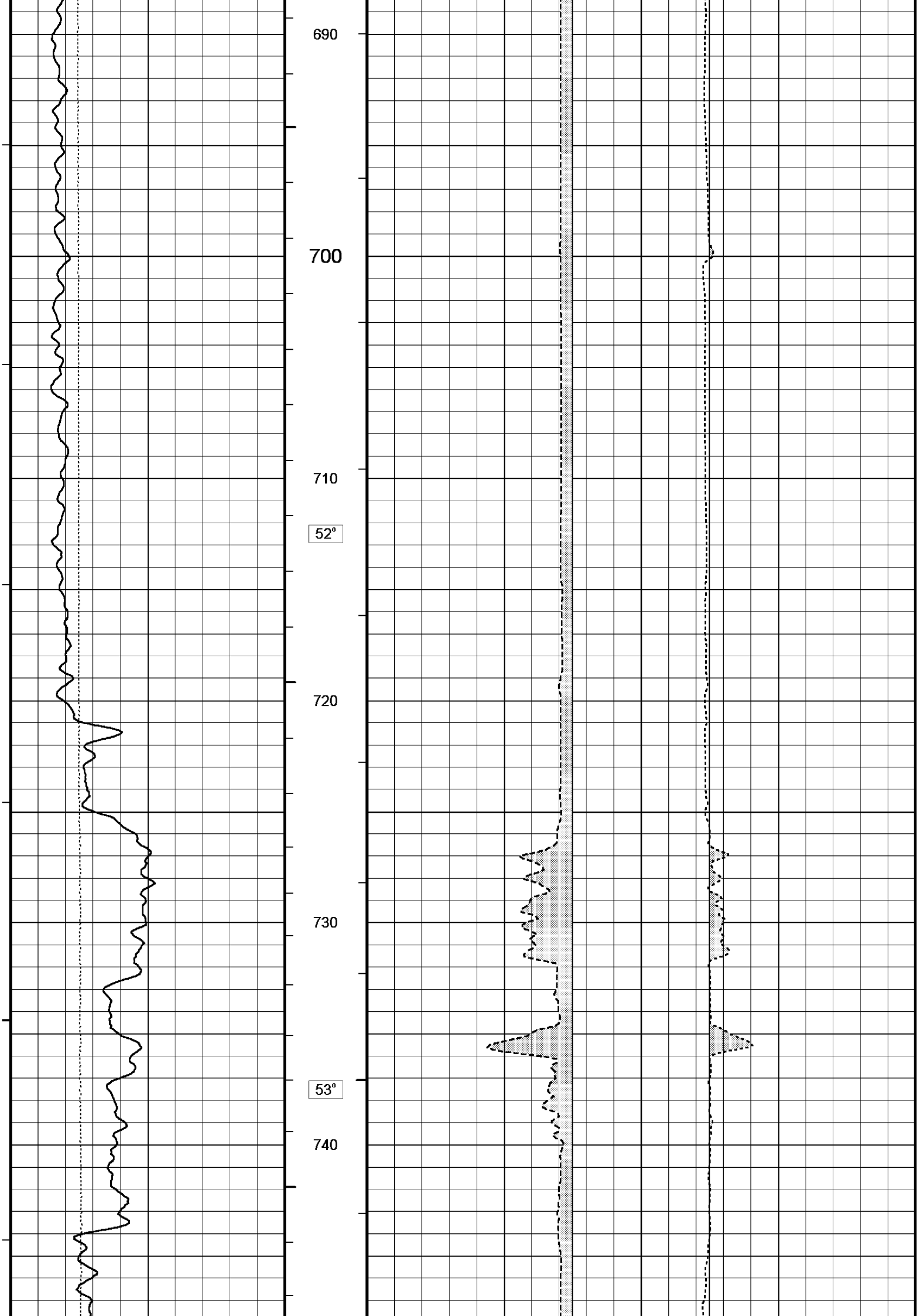
Bit Size
inches
6 11 16

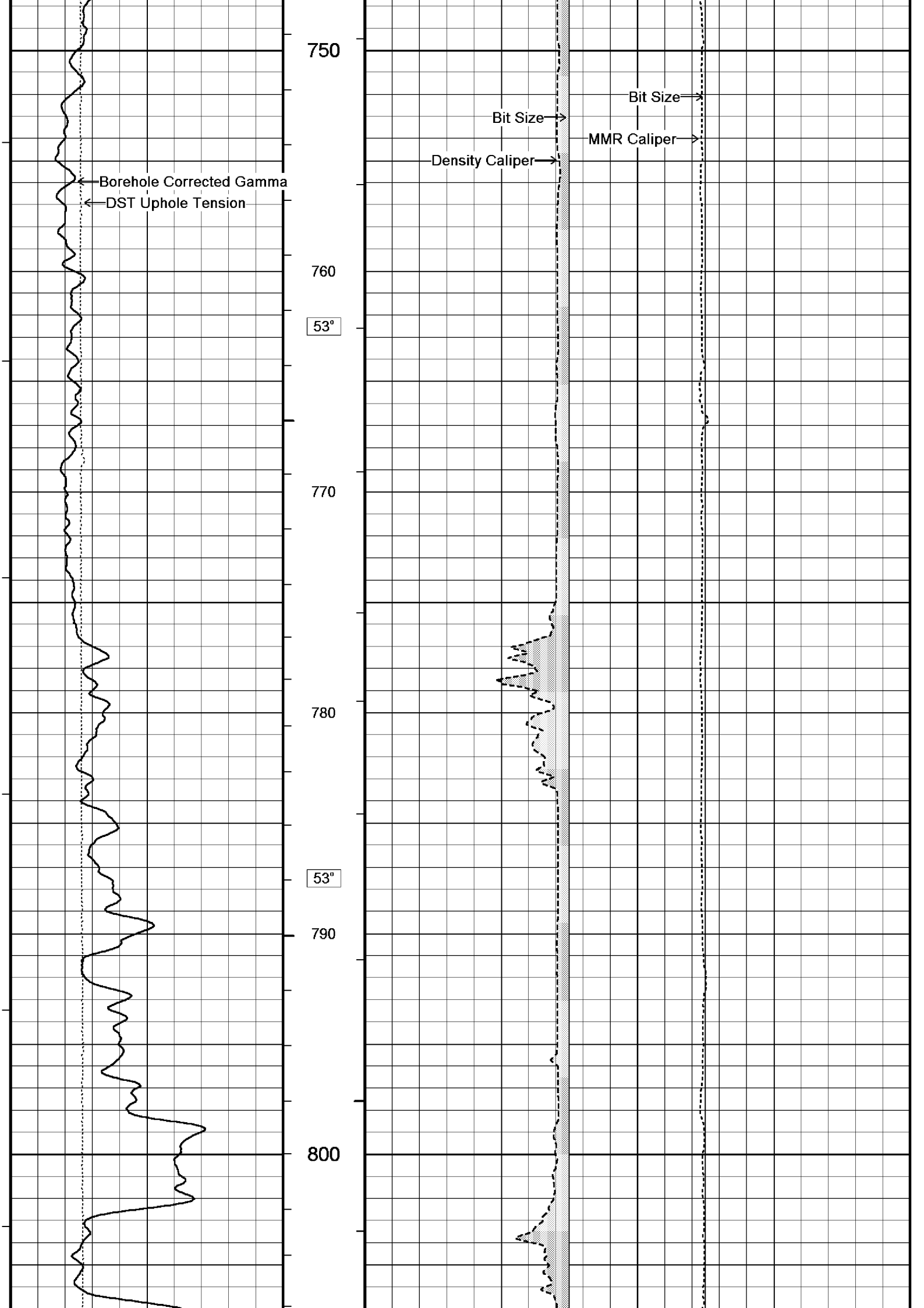
535
50°
540
Casing Shoe
550
560
50°

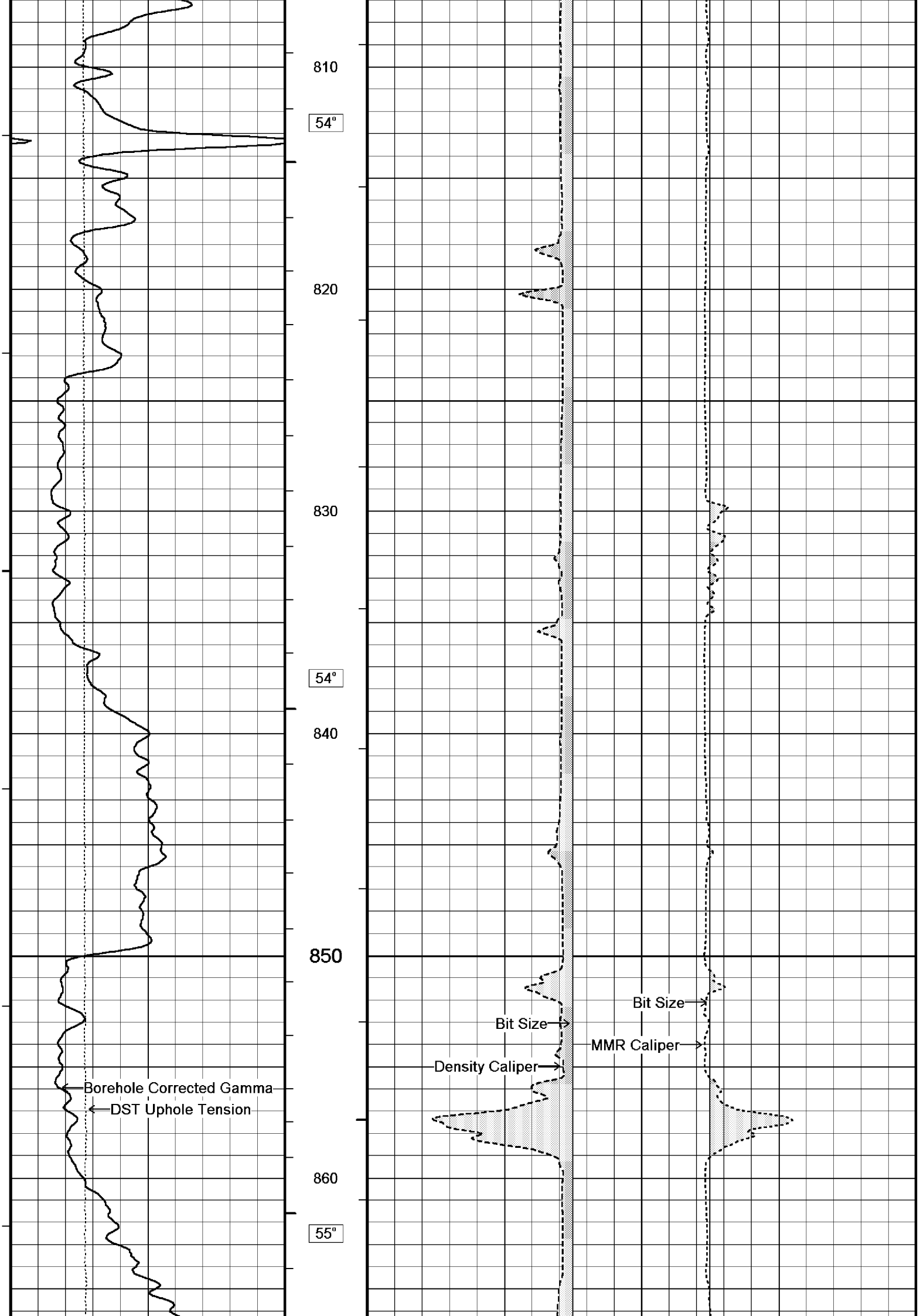
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

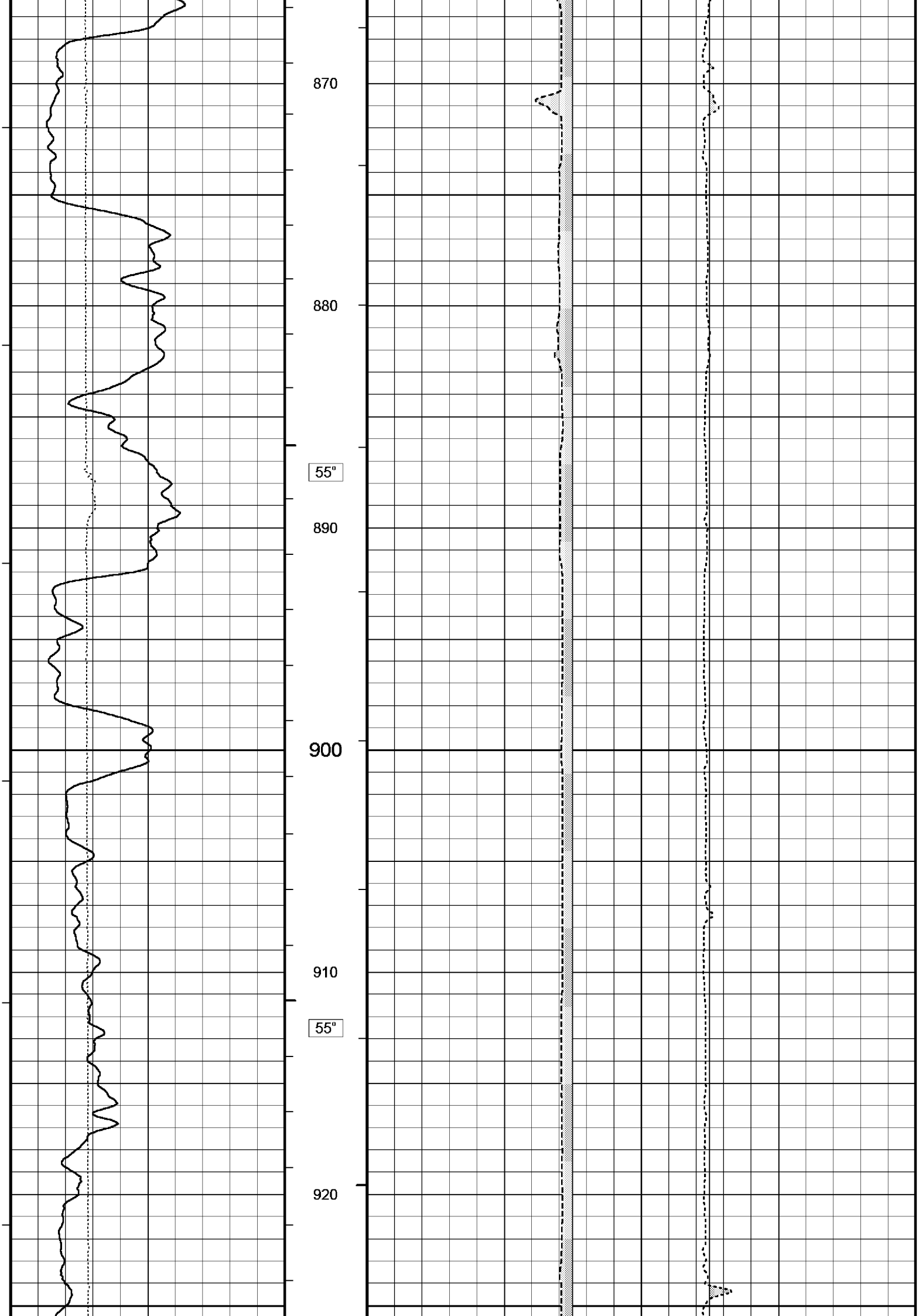

570
580
50°
590
600
610
51°
620

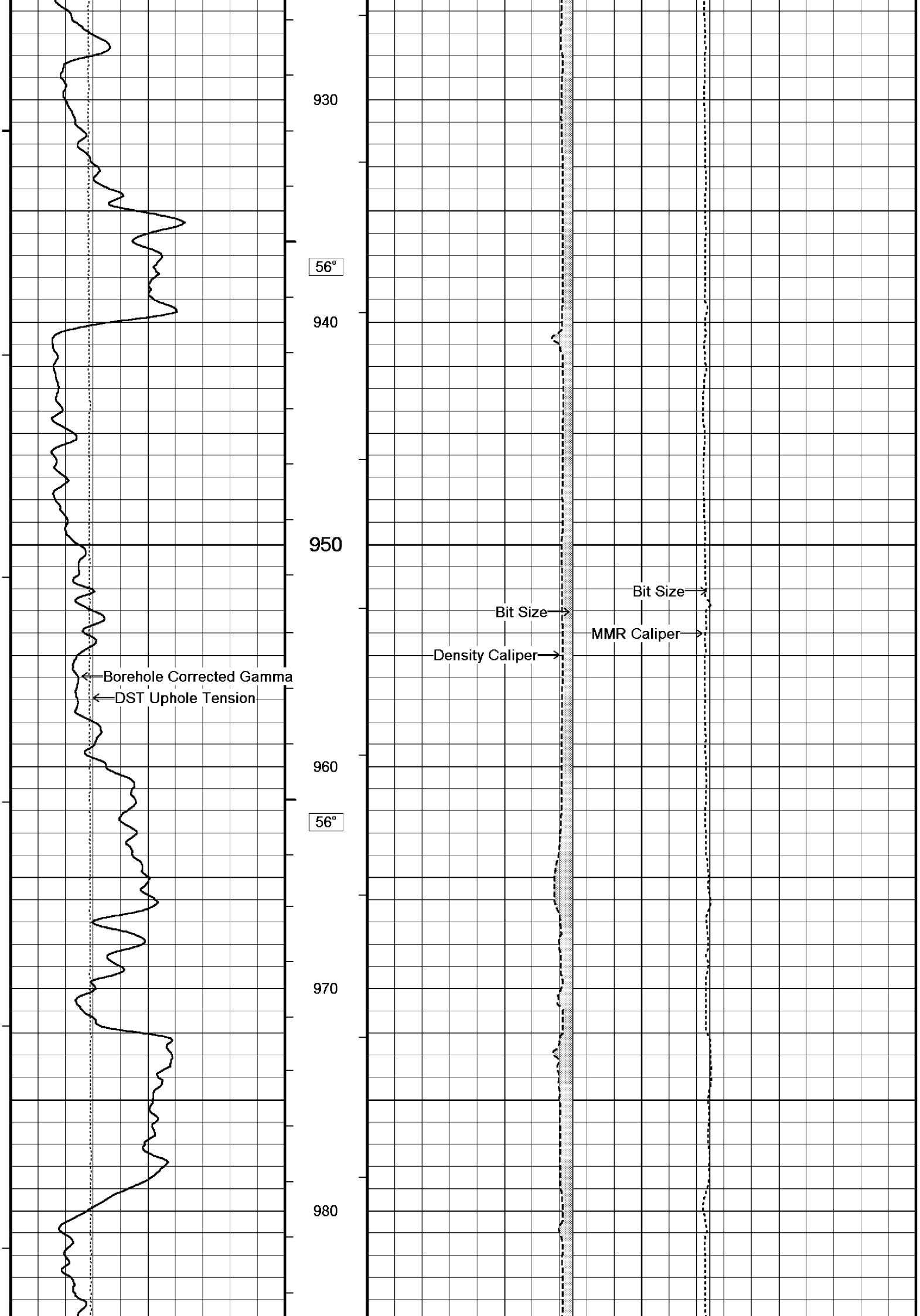

630
51"
640
650
660
51°
670
680
52"
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

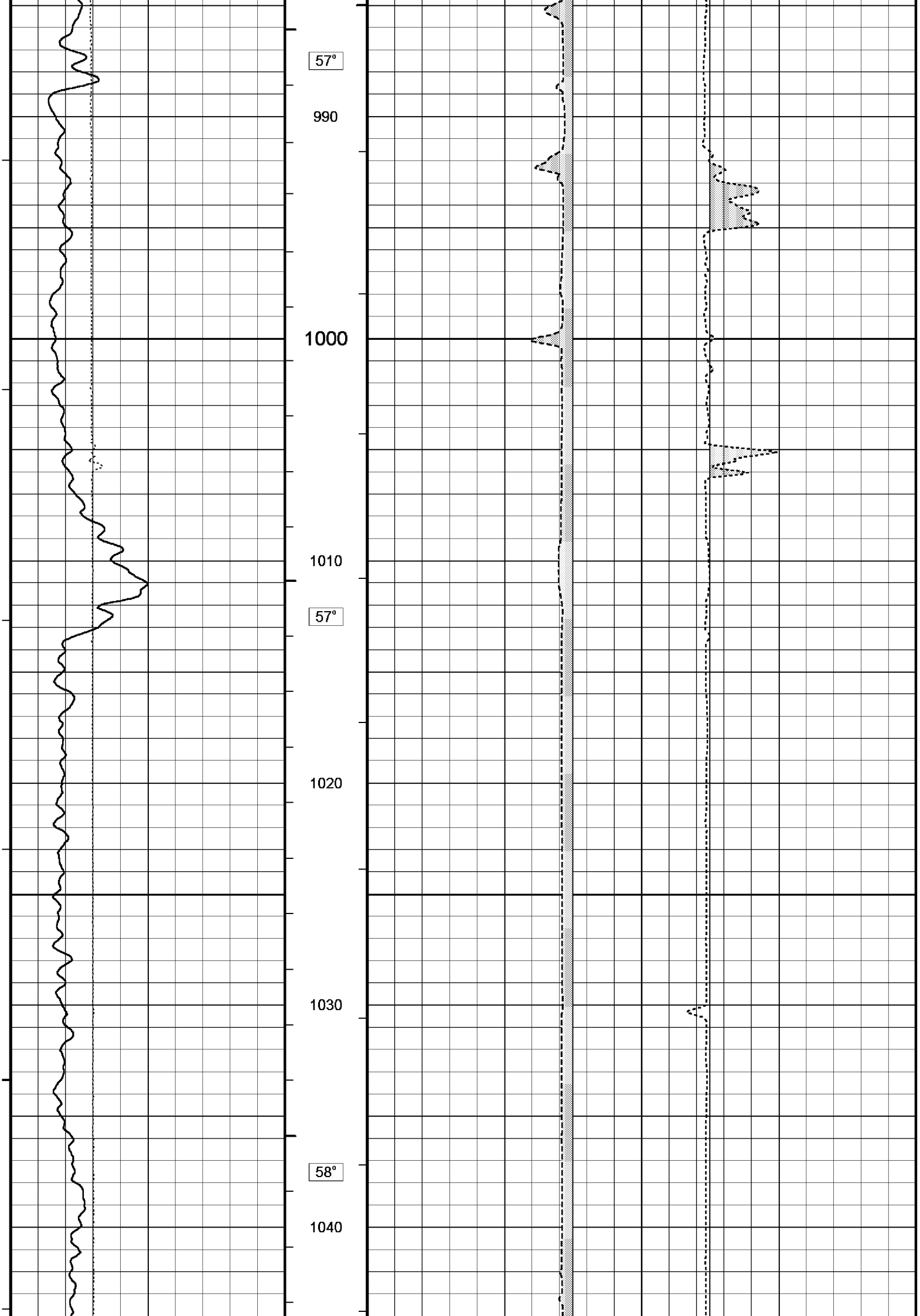

690
700
710
52°
720
730
53°
740

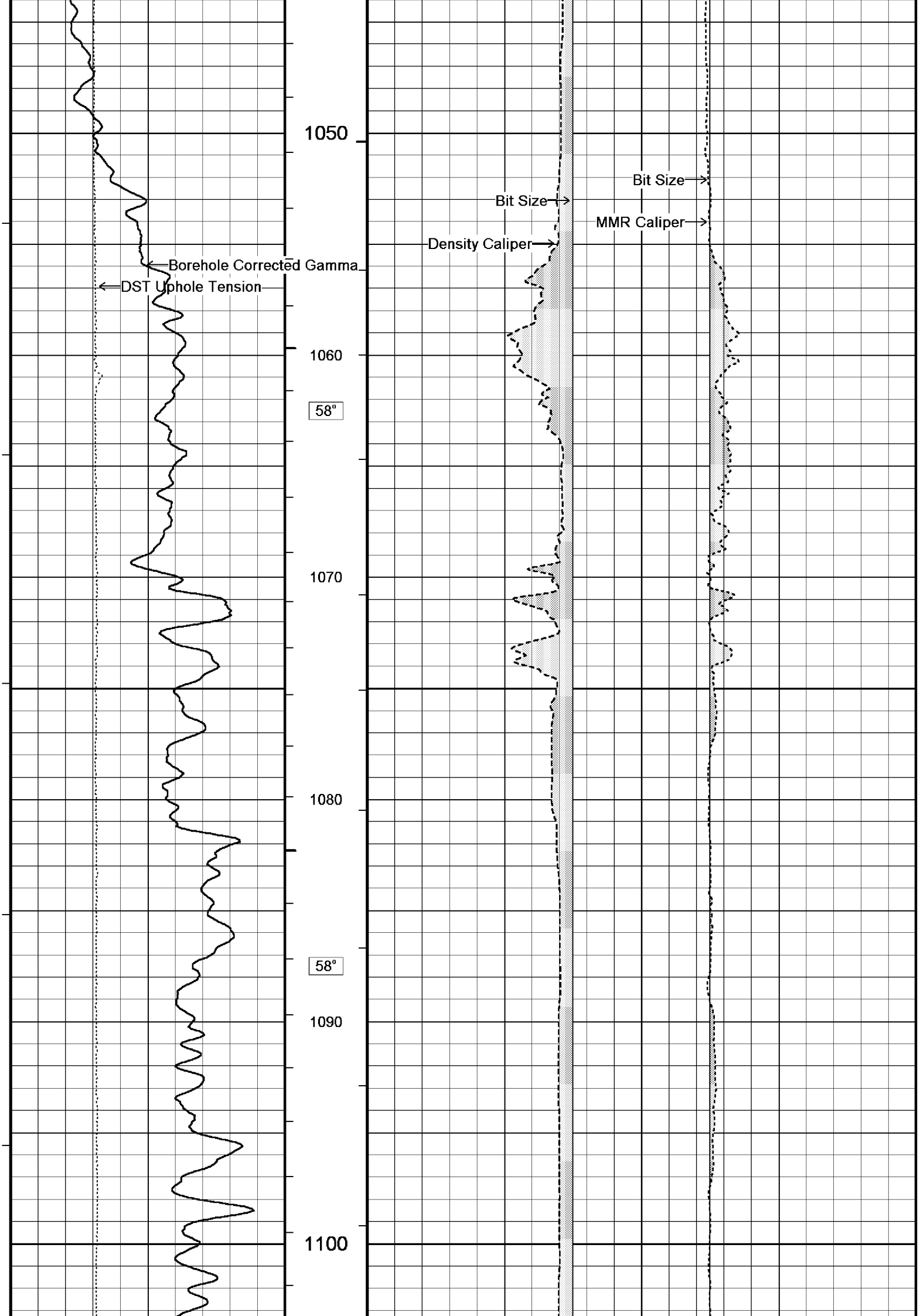

750
760
770
780
790
800
53°
53"
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

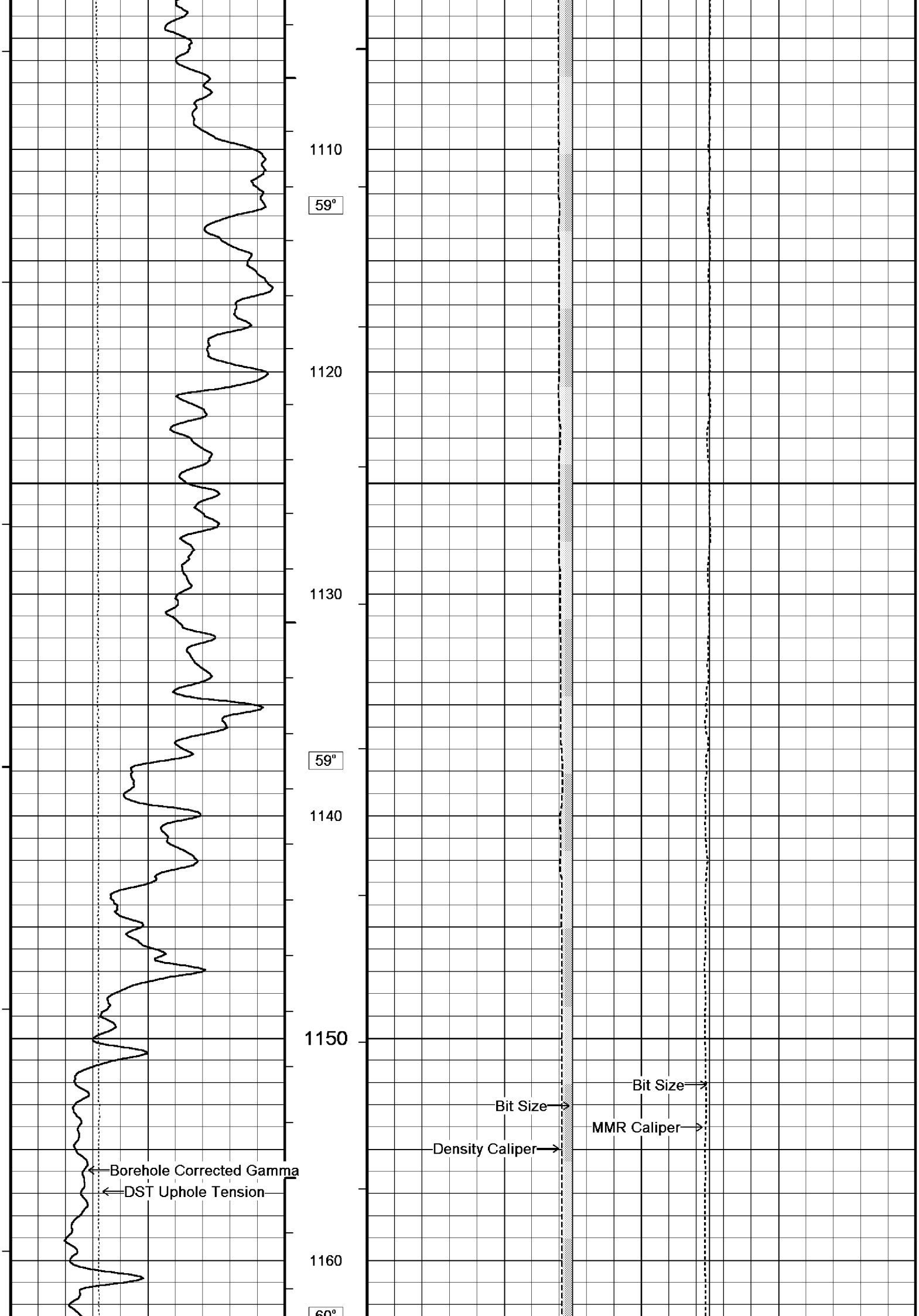

810
54°
820
830
54°
840
850
860
55°
Borehole Corrected Gamma
DST Uphole Tension
Density Caliper
Bit Size
Bit Size
MMR Caliper

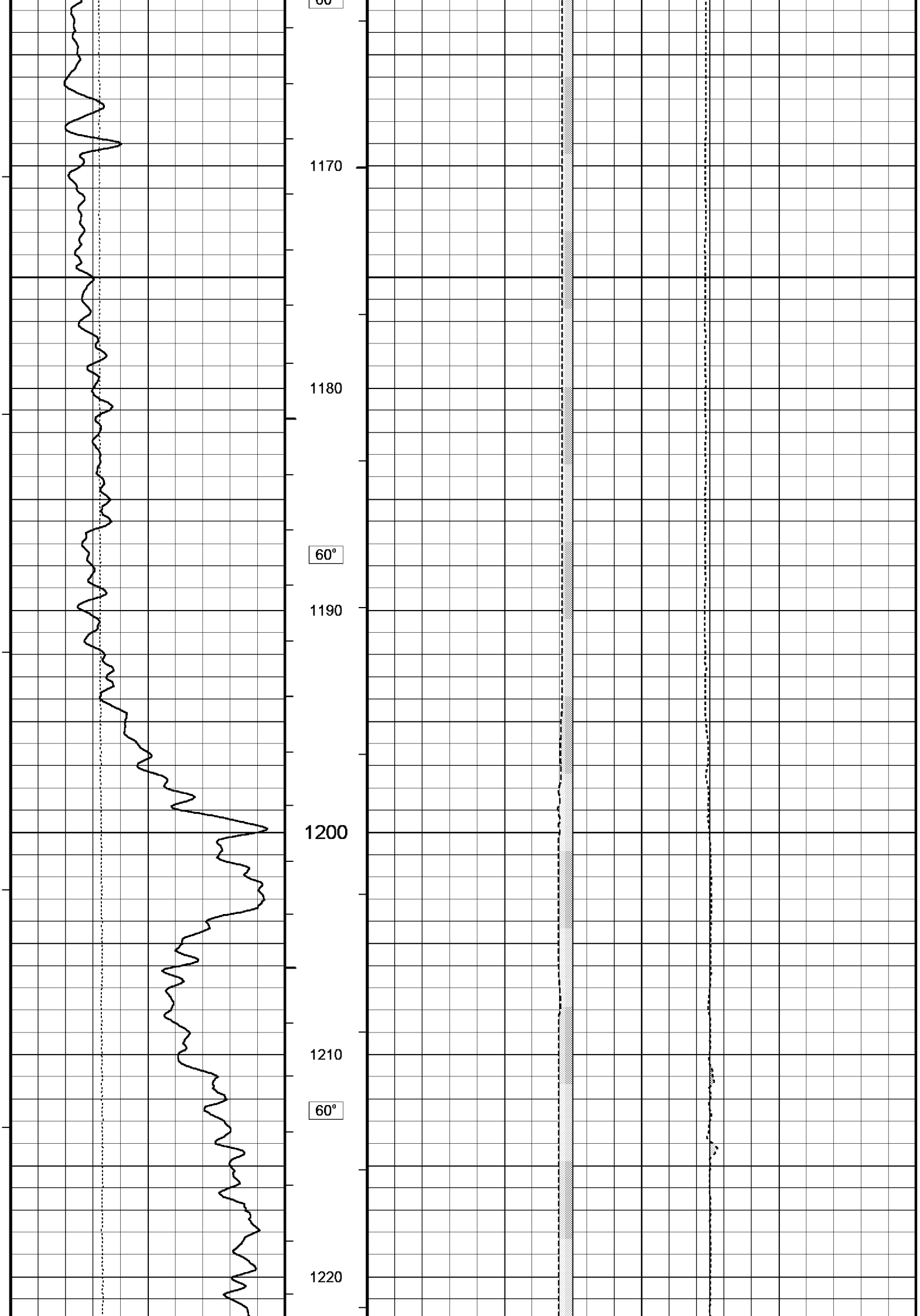

870
880
55"
890
900
910
55"
920

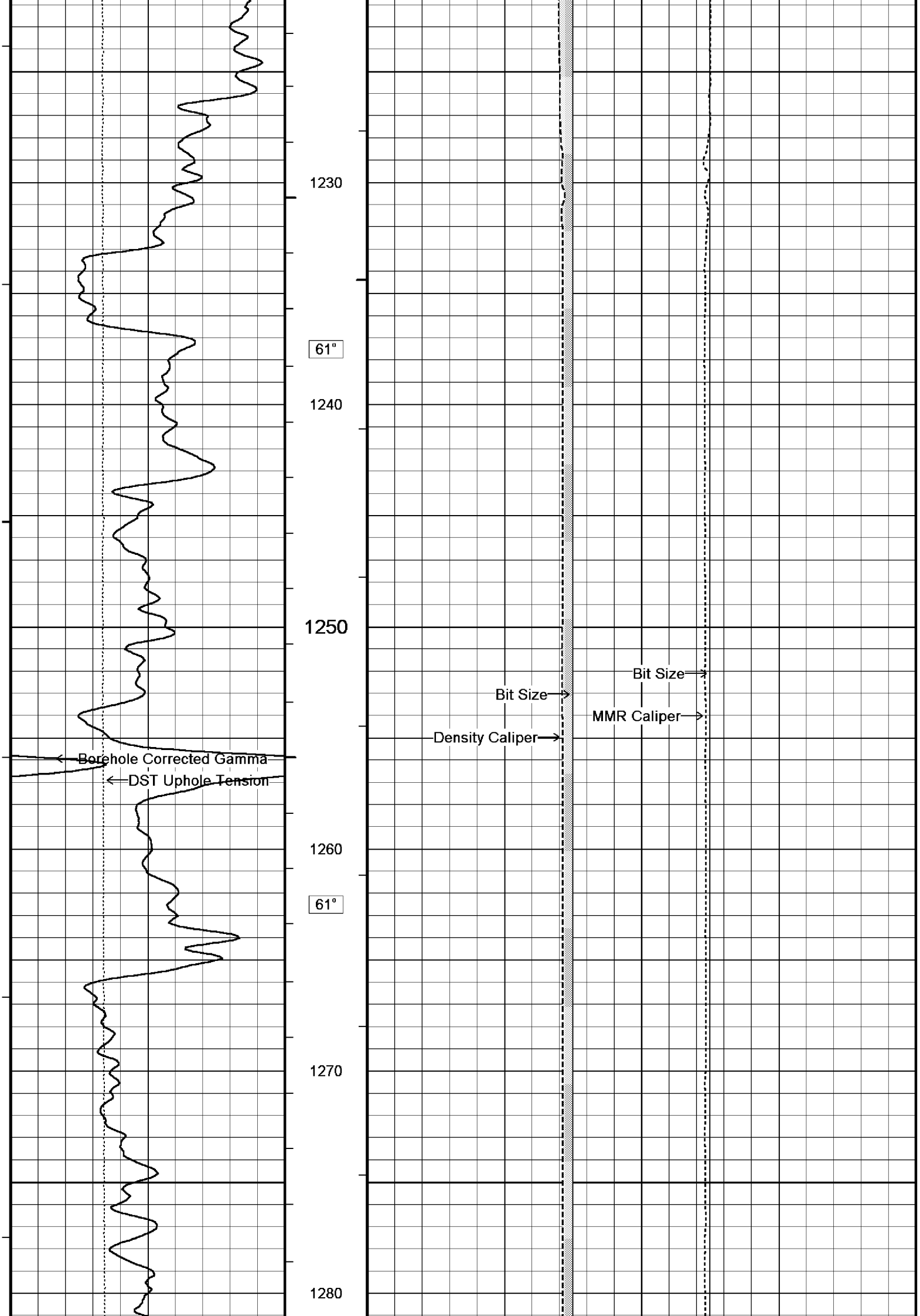

930
56°
940
950
960
56°
970
980
Borehole Corrected Gamma
DST Uphole Tension
Bit Size
Density Caliper
Bit Size
MMR Caliper

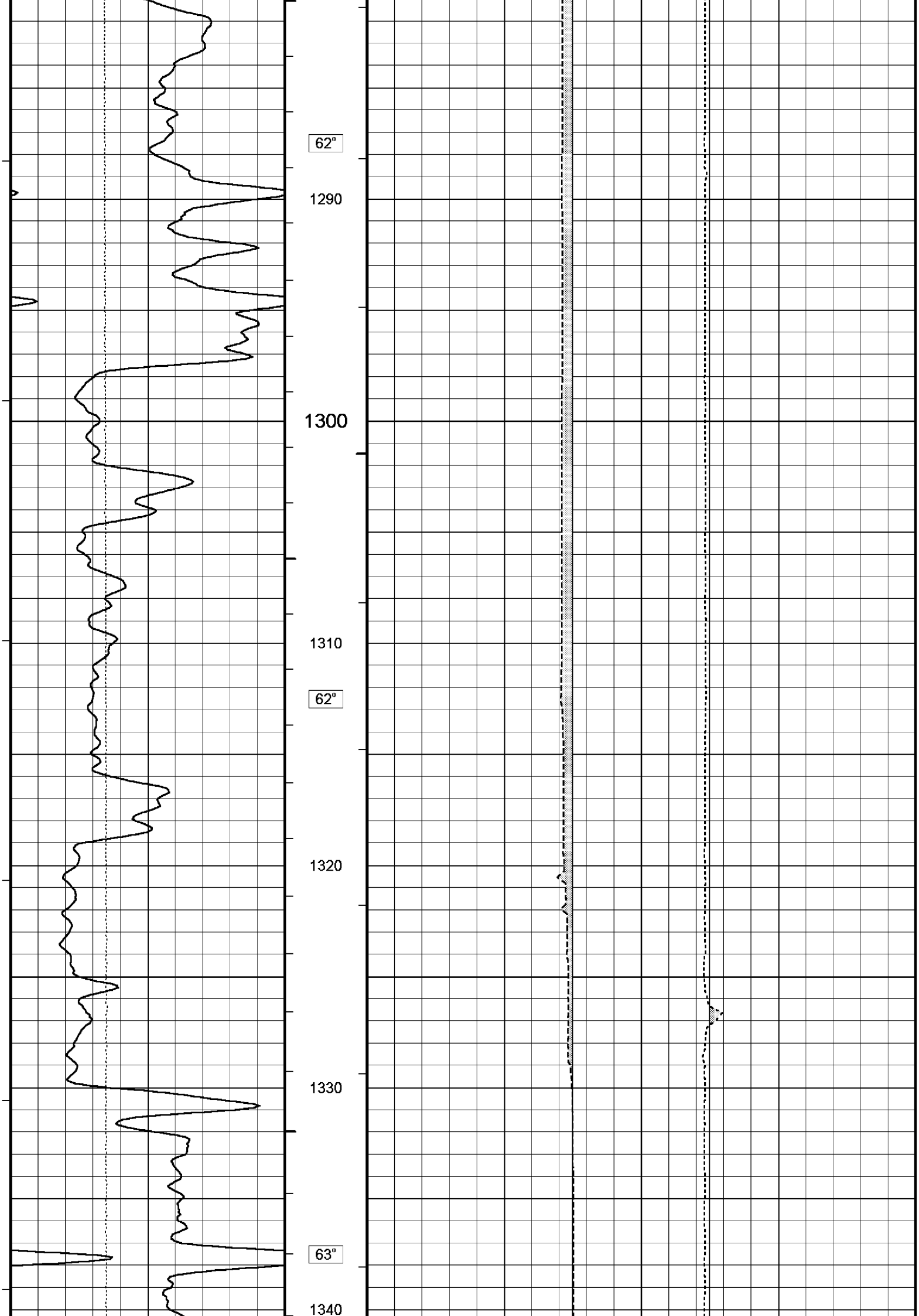

57°
990
1000
1010
57°
1020
1030
58°
1040

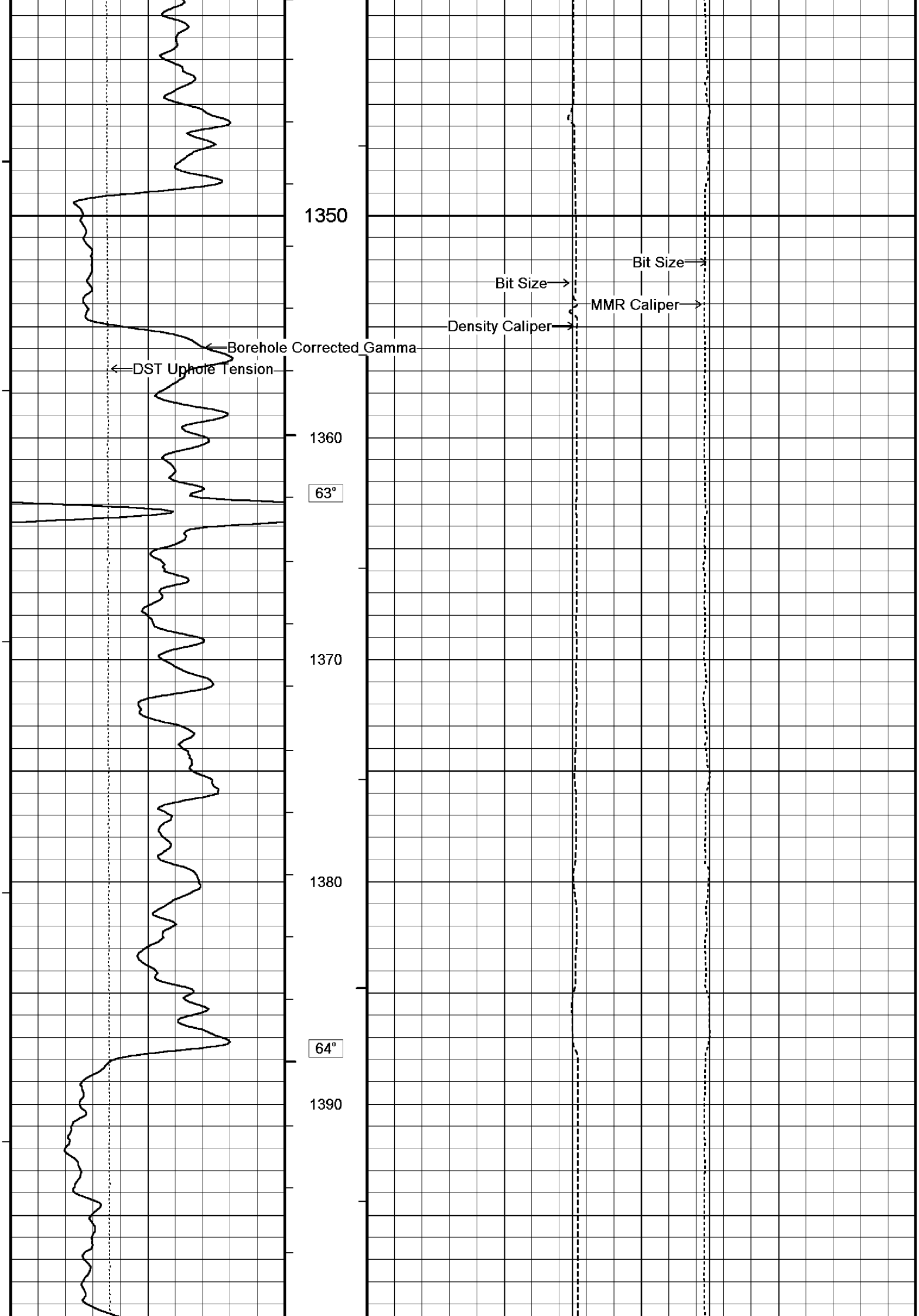

1050
1060
1070
1080
1090
1100
58°
58°
Borehole Corrected Gamma
DST Uphole Tension
Bit Size
Density Caliper
Bit Size
MMR Caliper

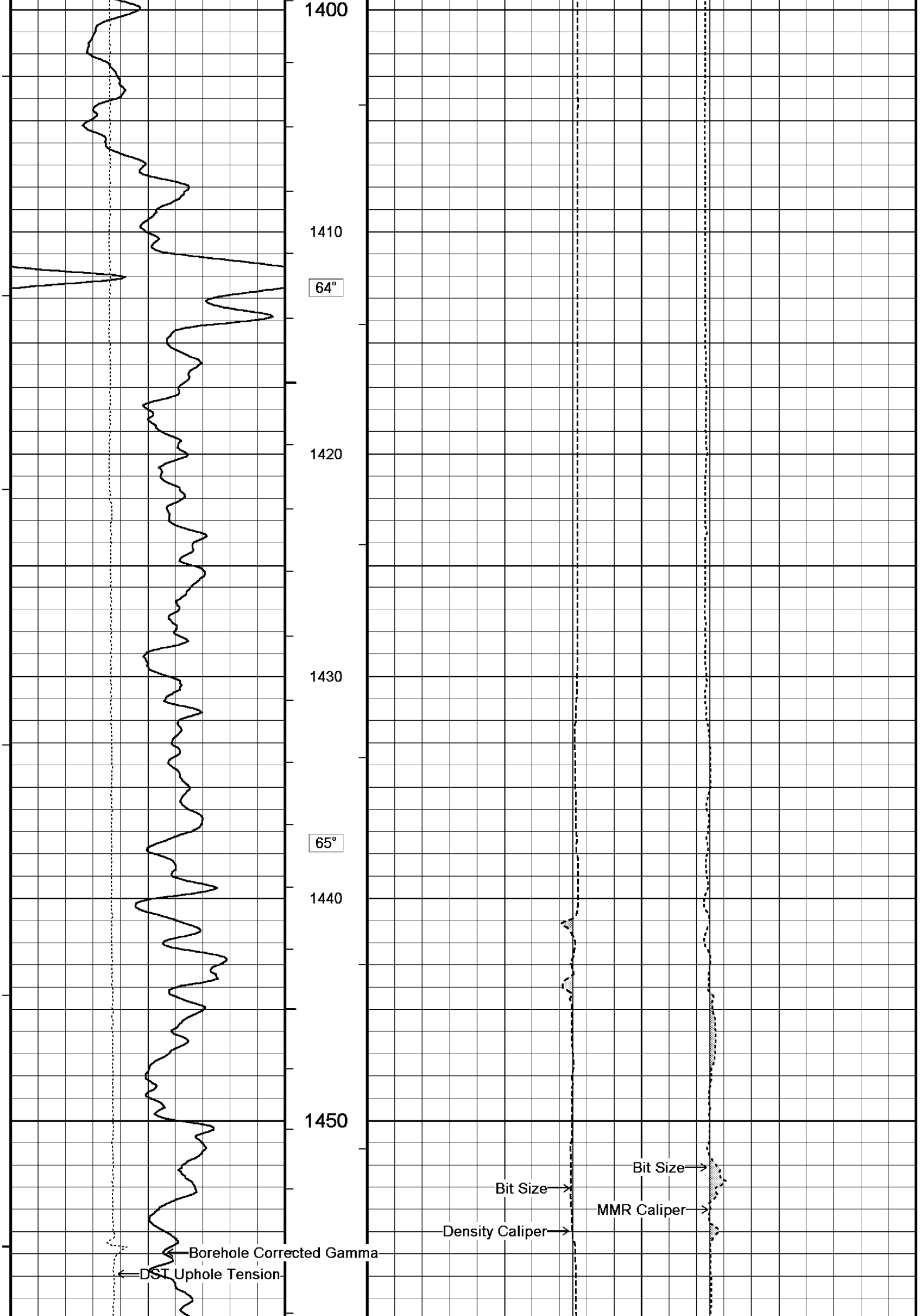

1110
59°
1120
1130
59°
1140
1150
1160
60°
Borehole Corrected Gamma
DST Uphole Tension
Bit Size
Density Caliper
Bit Size
MMR Caliper

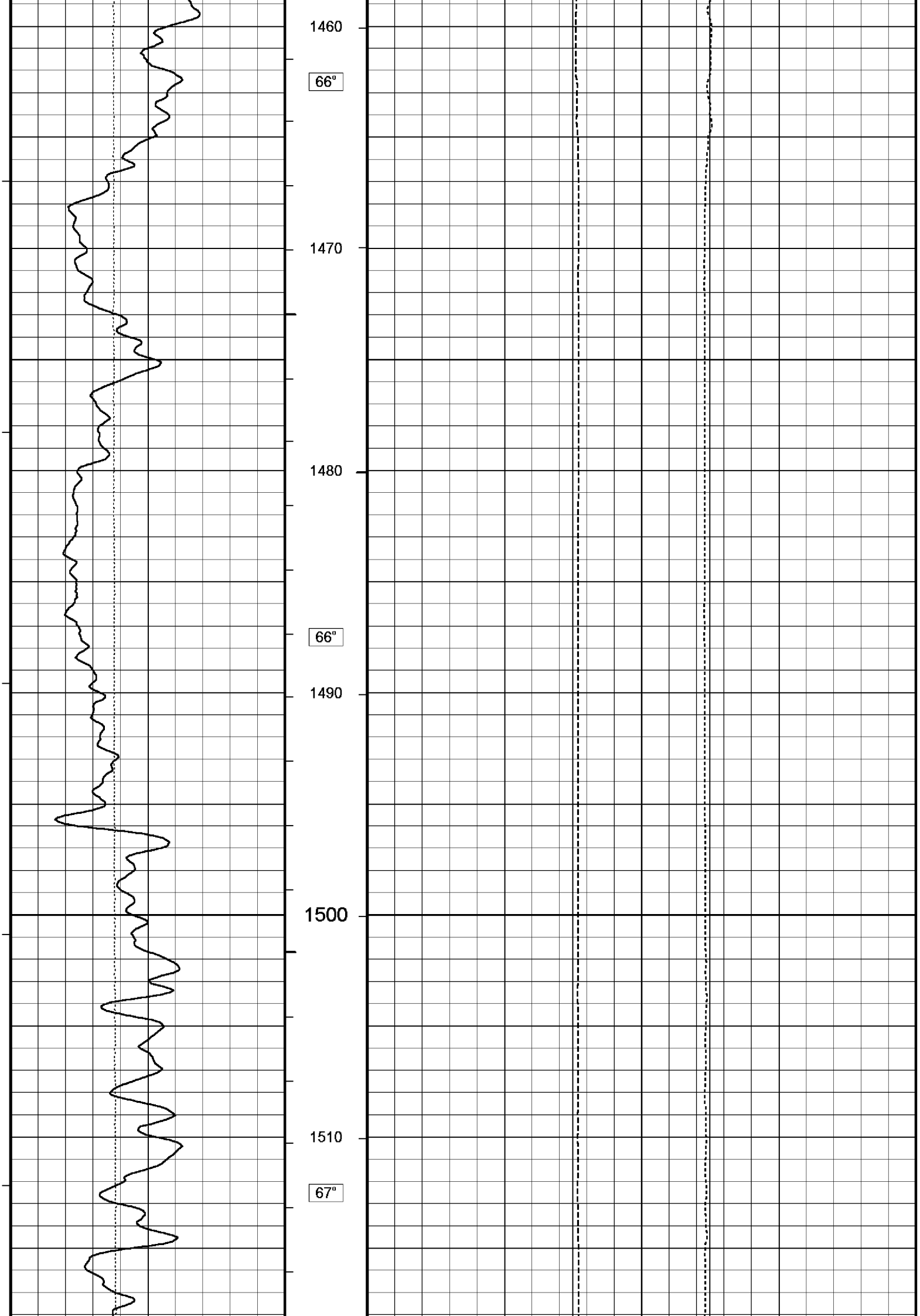

60°
1170
1180
60°
1190
1200
1210
60°
1220

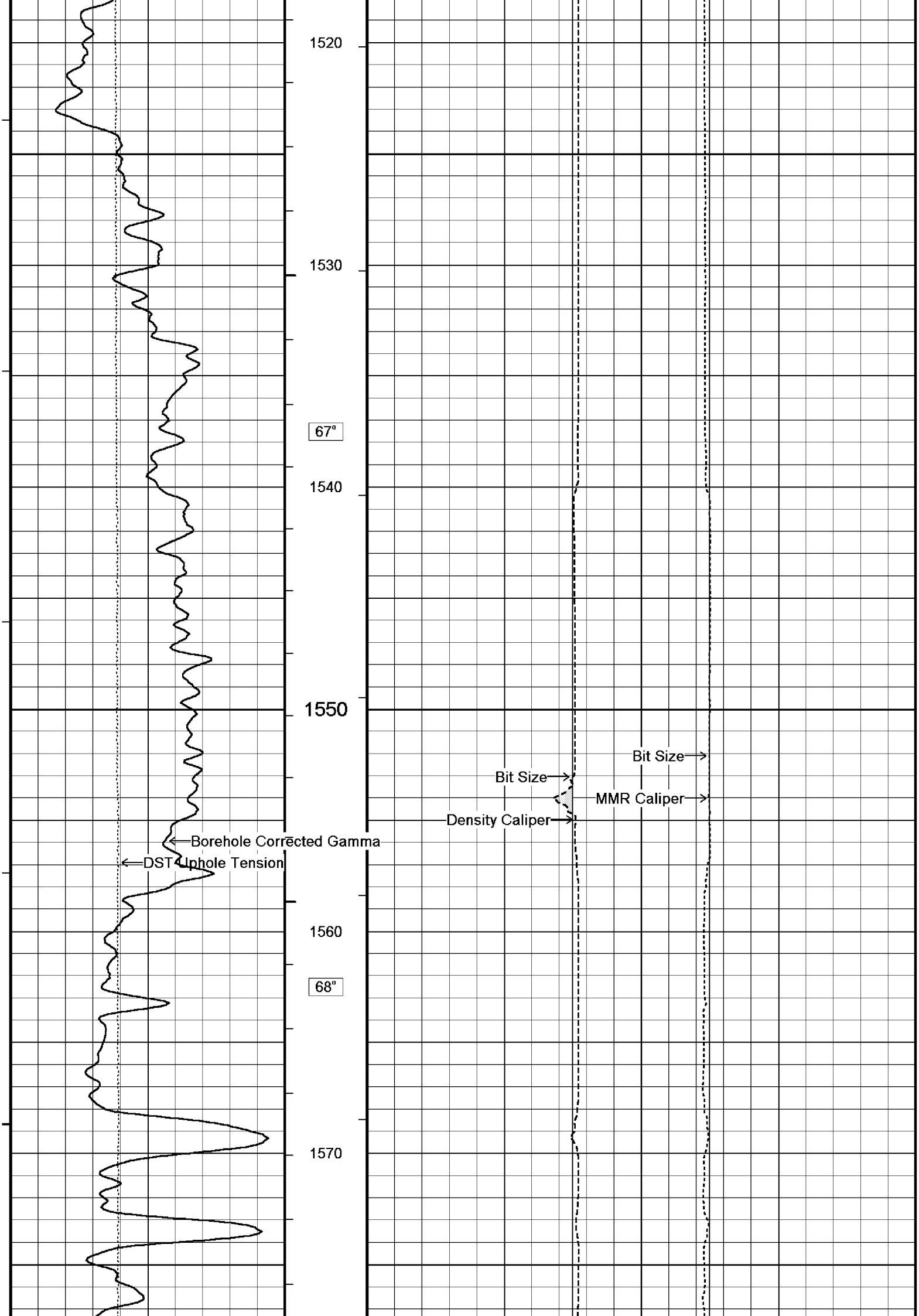

1230
61°
1240
1250
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
1260
61°
1270
1280

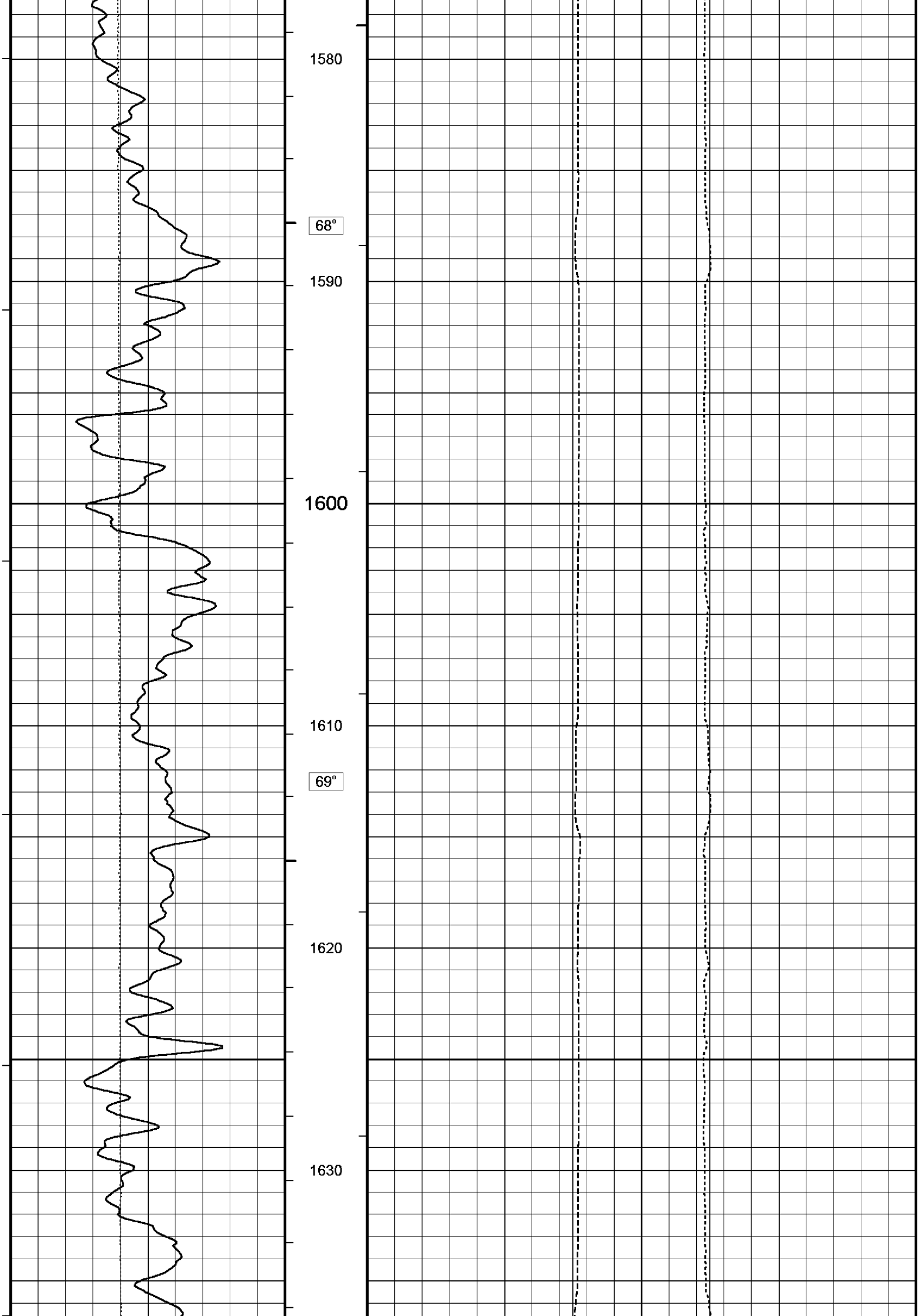

62°
1290
1300
1310
62°
1320
1330
63°
1340

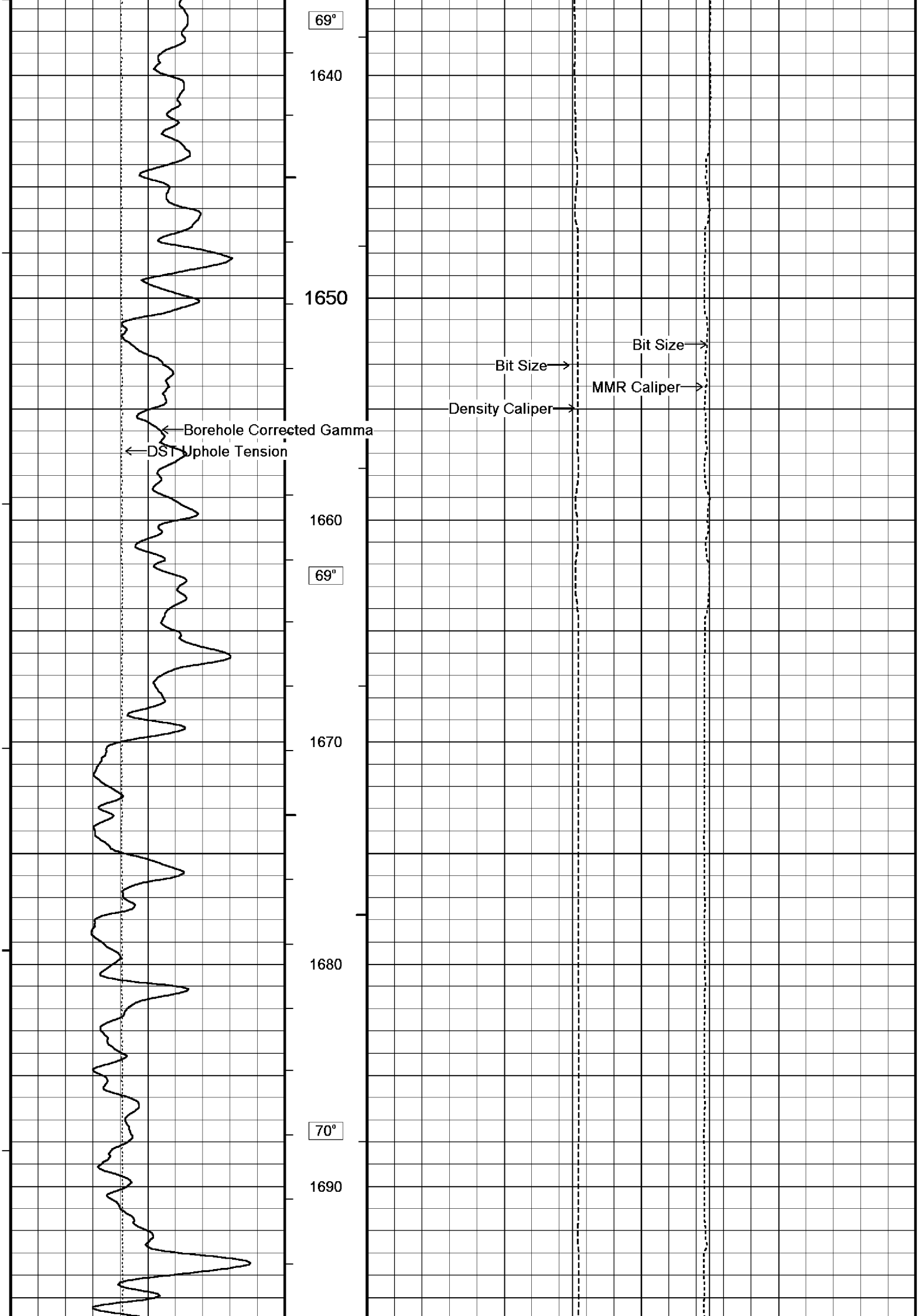

1350
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
1360
63°
1370
1380
64°
1390

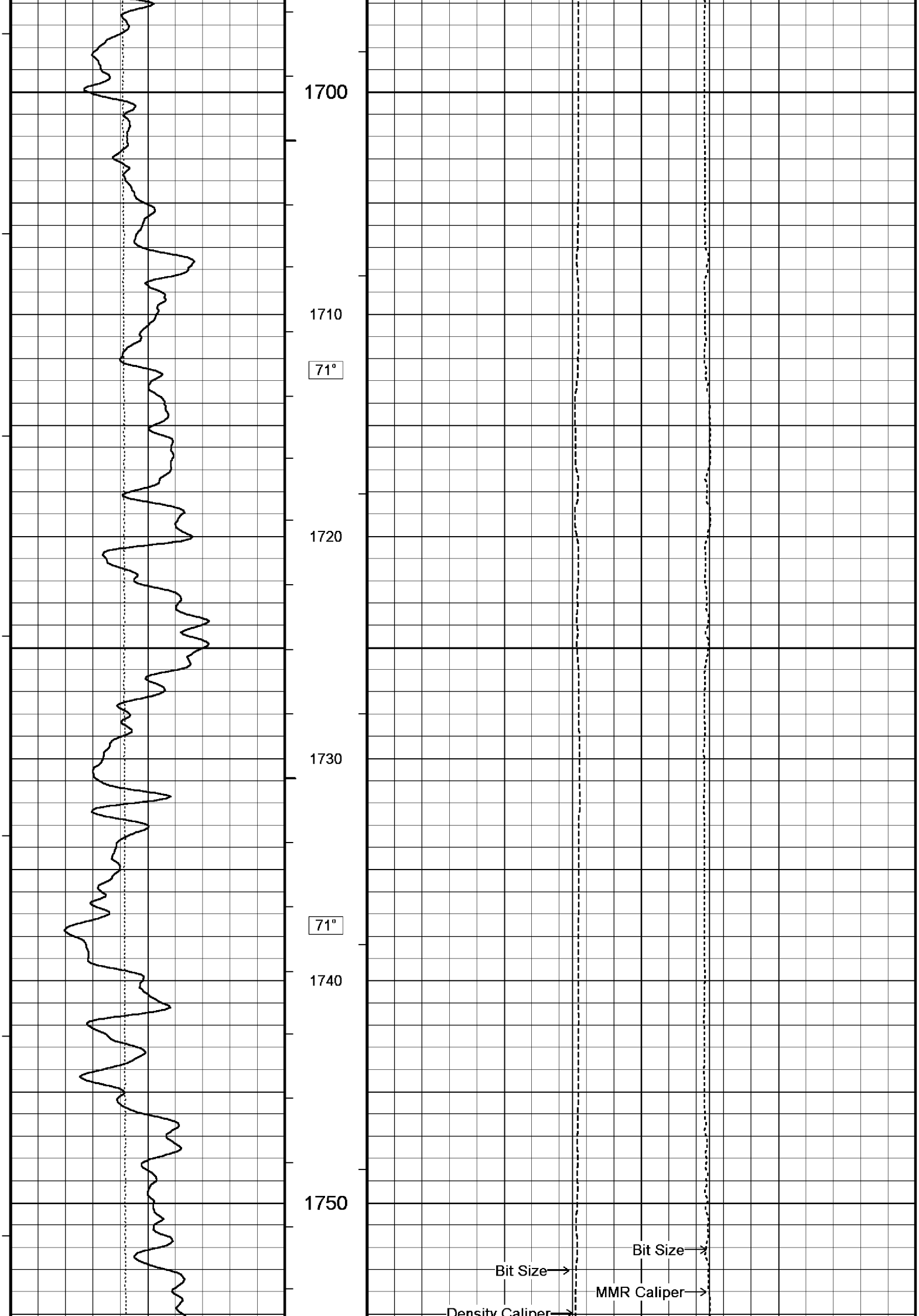

1400
1410
64°
1420
1430
65°
1440
1450
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

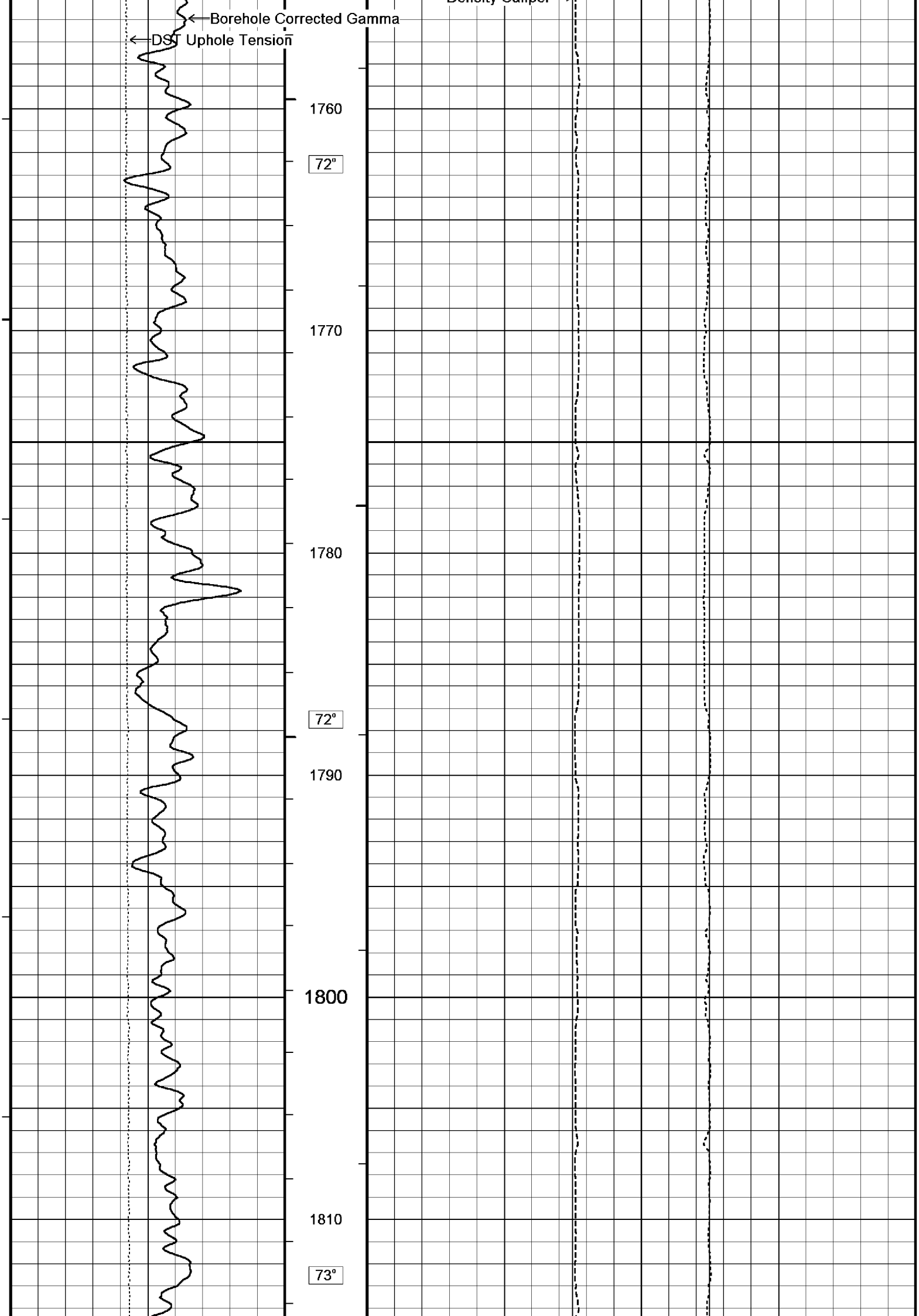

1460
66°
1470
1480
66"
1490
1500
1510
67"

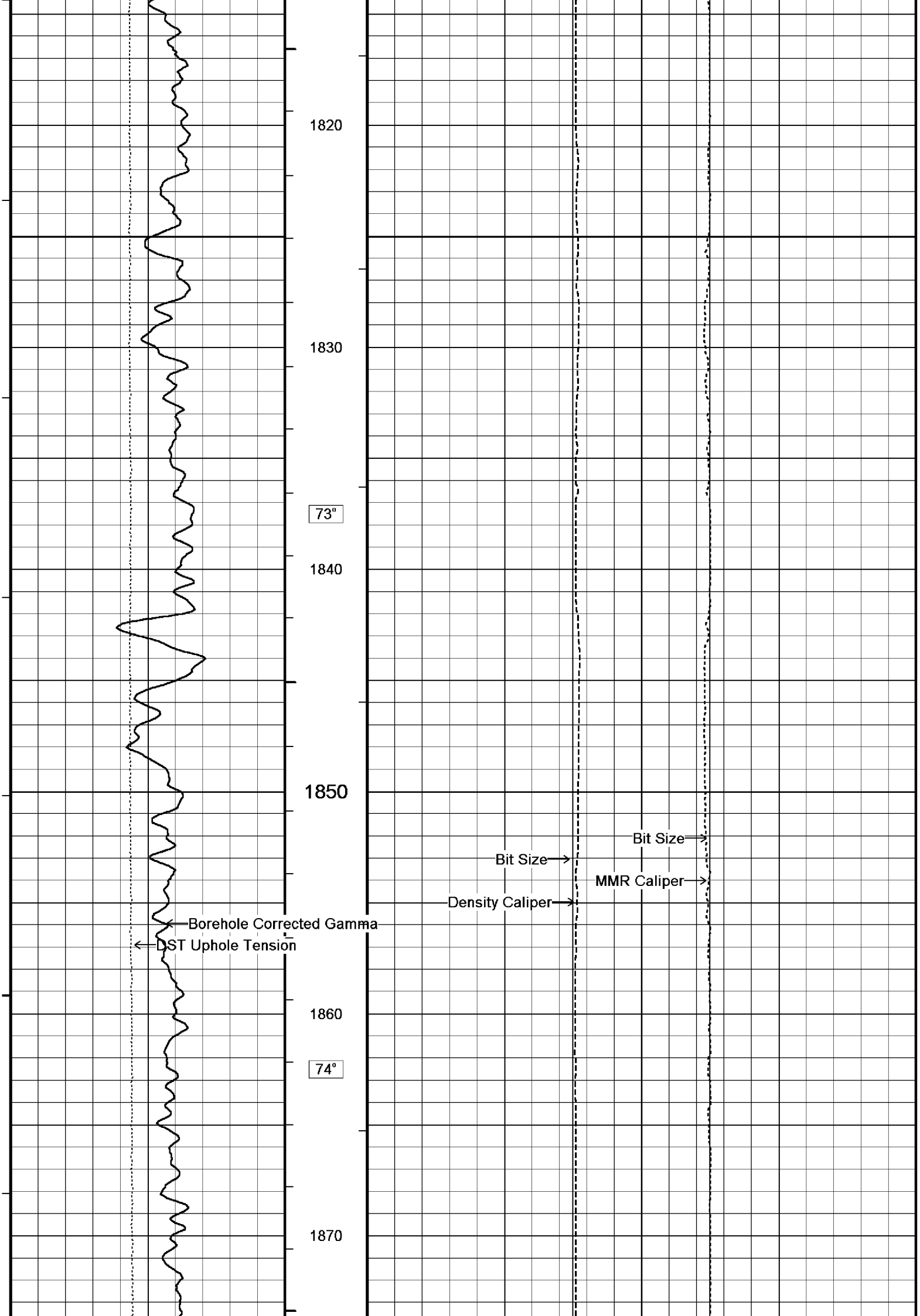

1520
1530
67°
1540
1550
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
1560
68°
1570

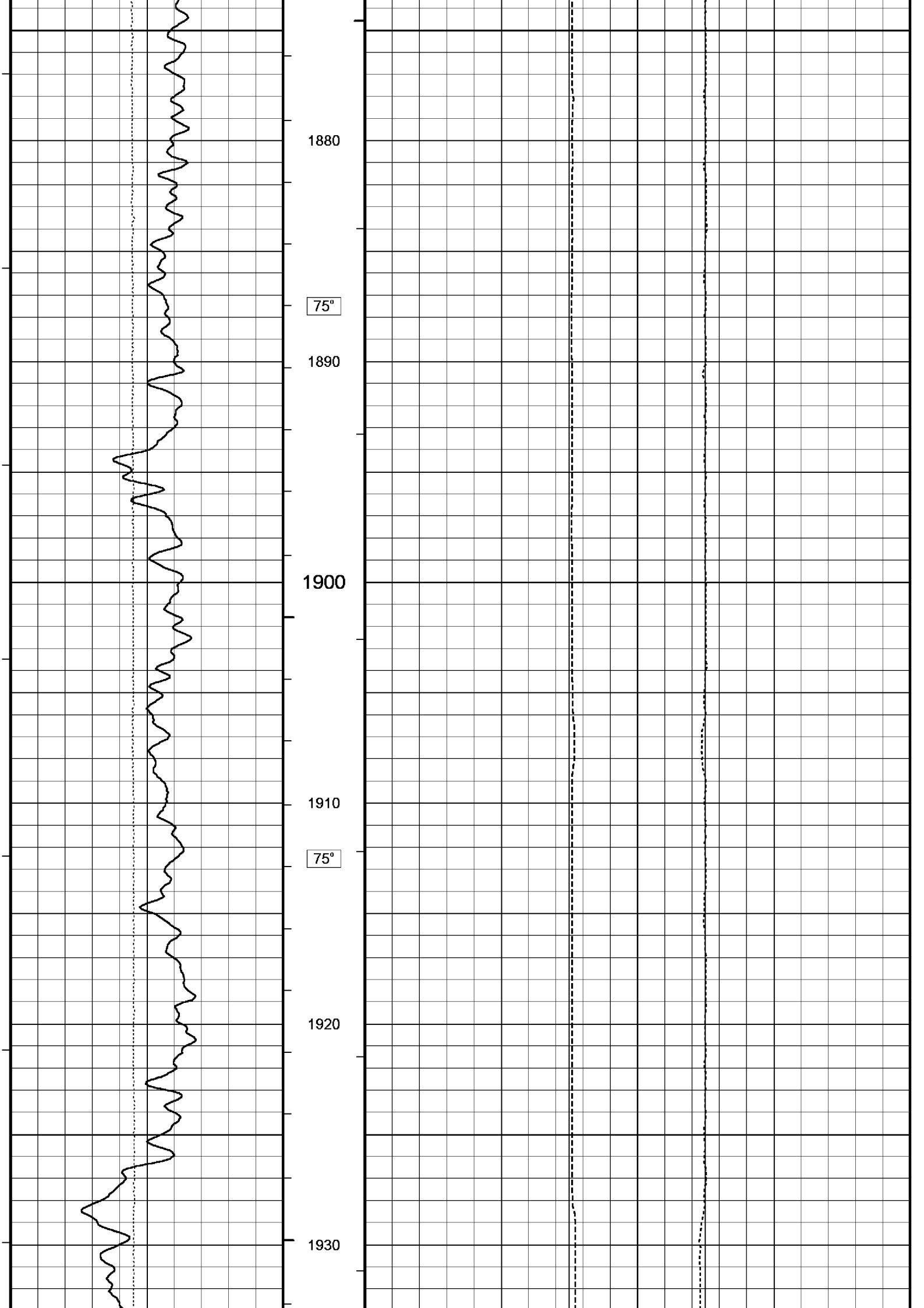

1580
68°
1590
1600
1610
69°
1620
1630

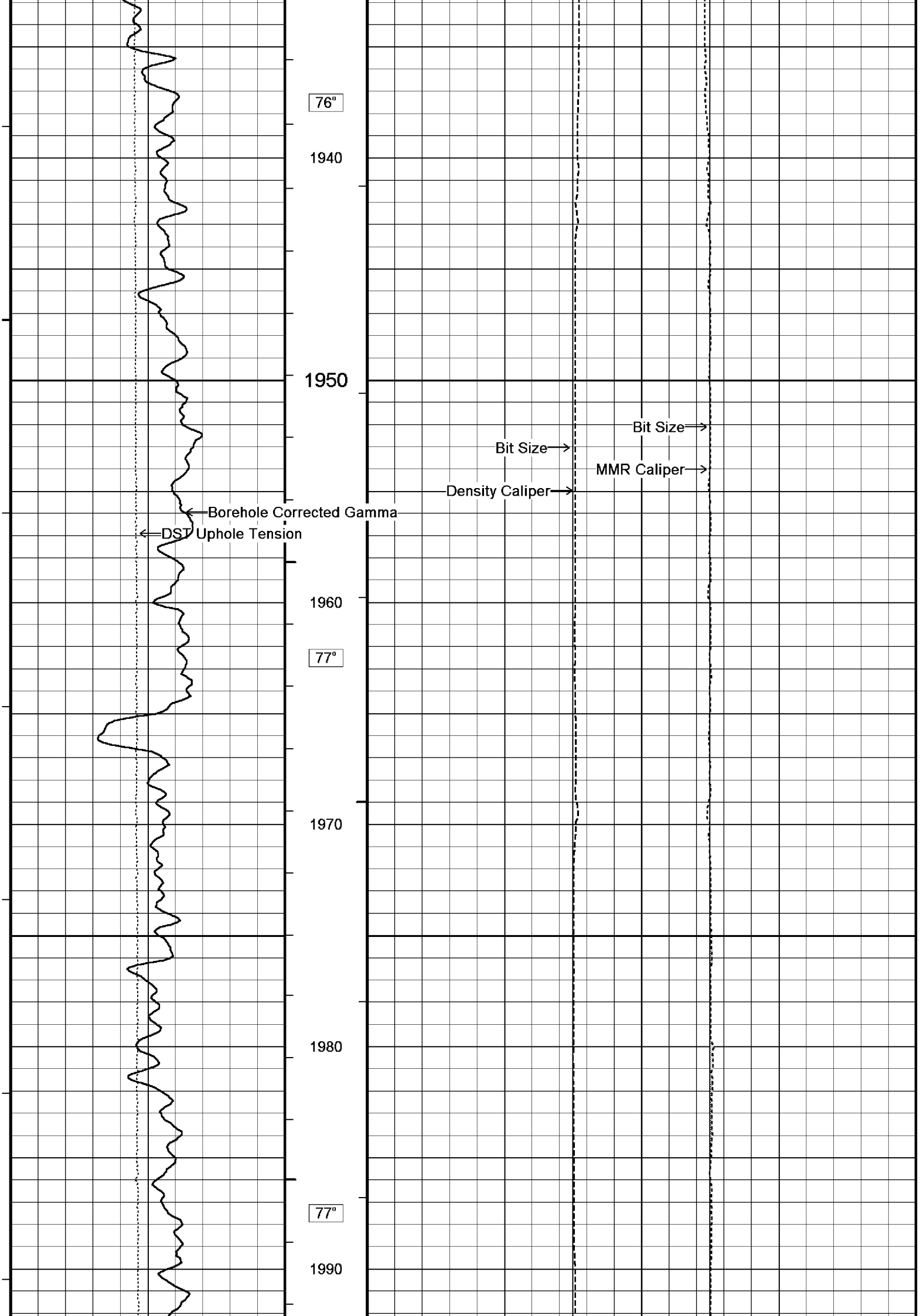

69°
1640
1650
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
1660
69°
1670
1680
70°
1690

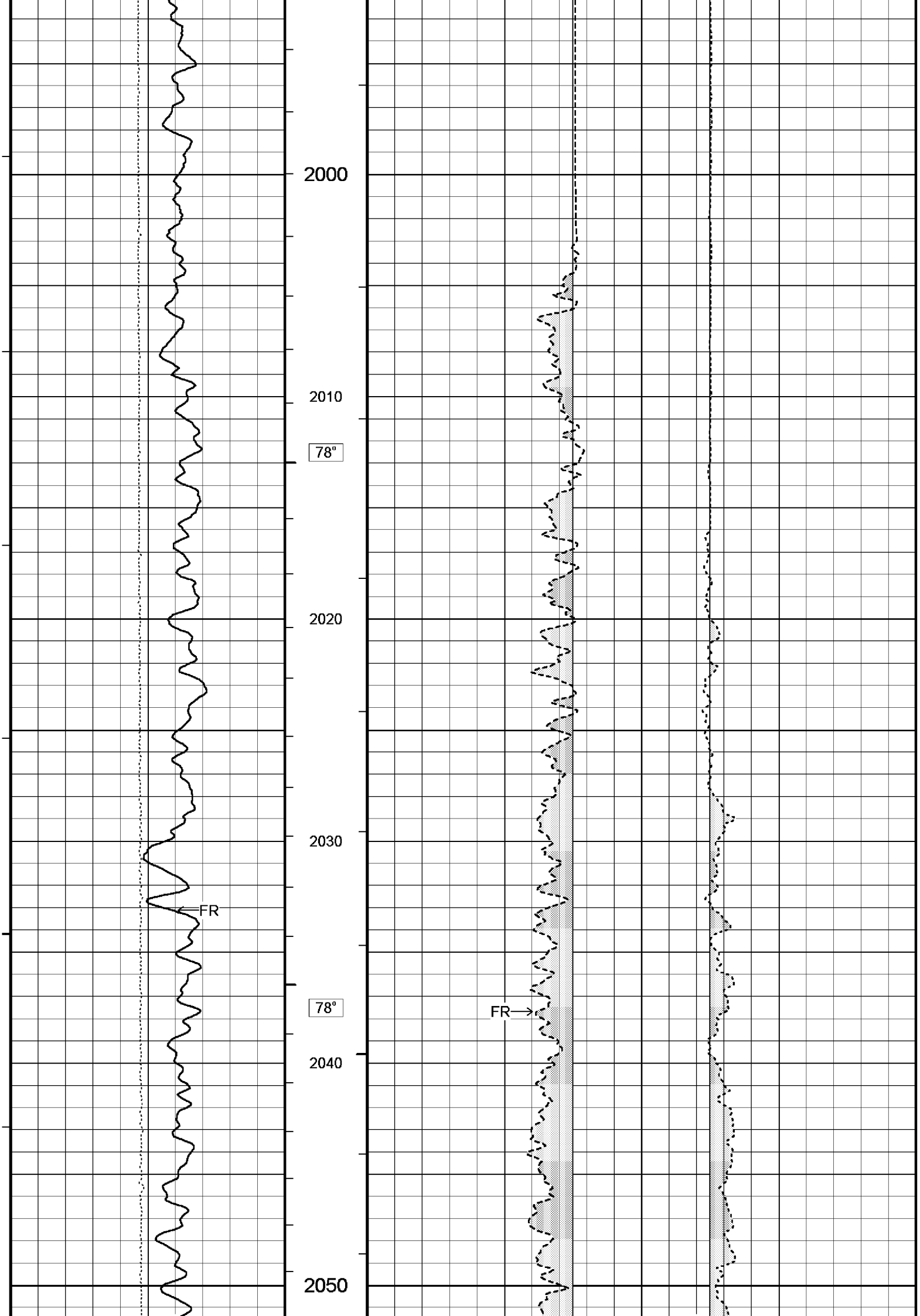

1700
1710
71°
1720
1730
71°
1740
1750
Bit Size
Bit Size
MMR Caliper
Density Caliper

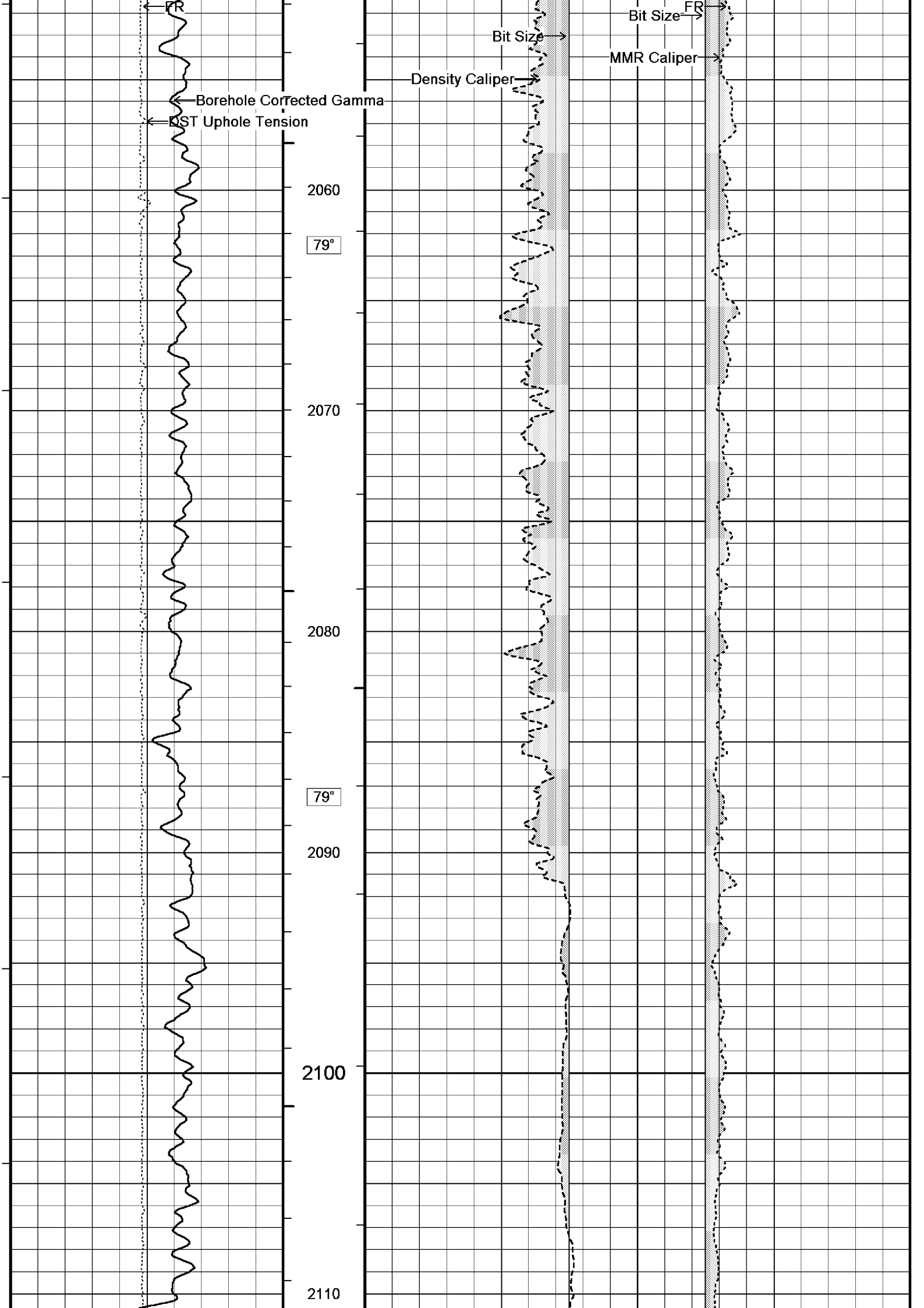

Borehole Corrected Gamma
DST Uphole Tension
Density Caliper
1760
72°
1770
1780
72°
1790
1800
1810
73°

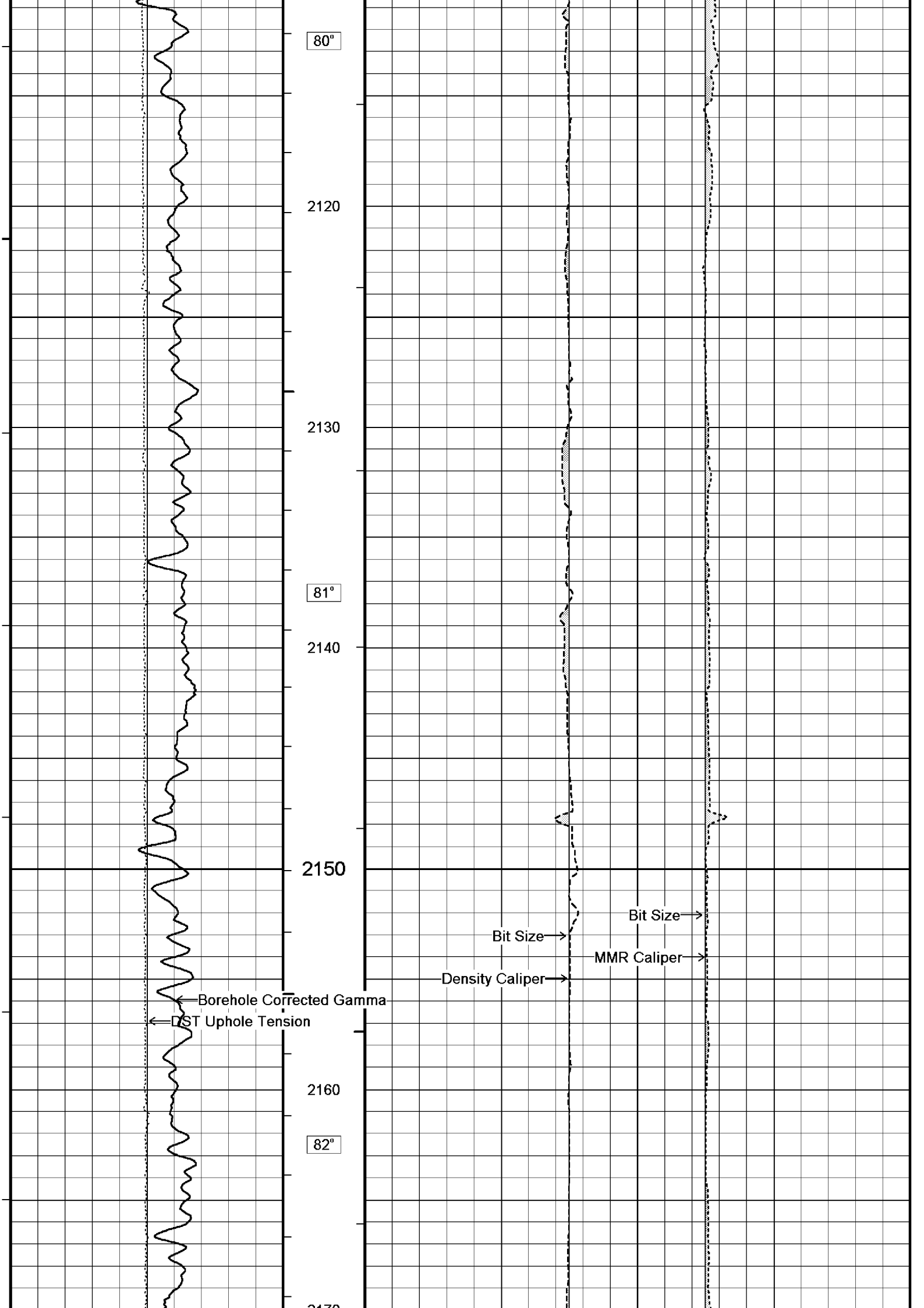

1820
1830
73°
1840
1850
1860
74°
1870
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

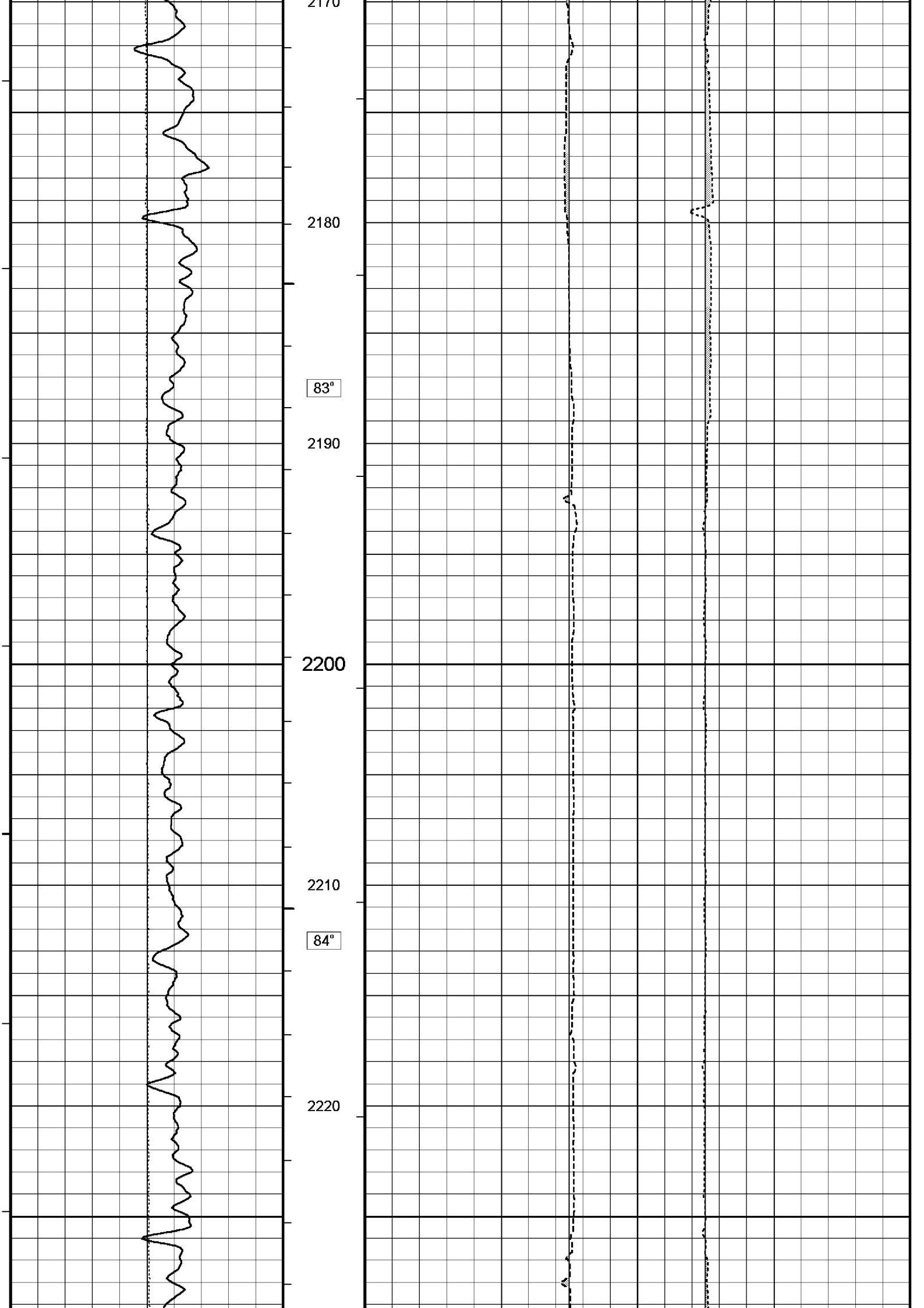

1880
75°
1890
1900
1910
75°
1920
1930

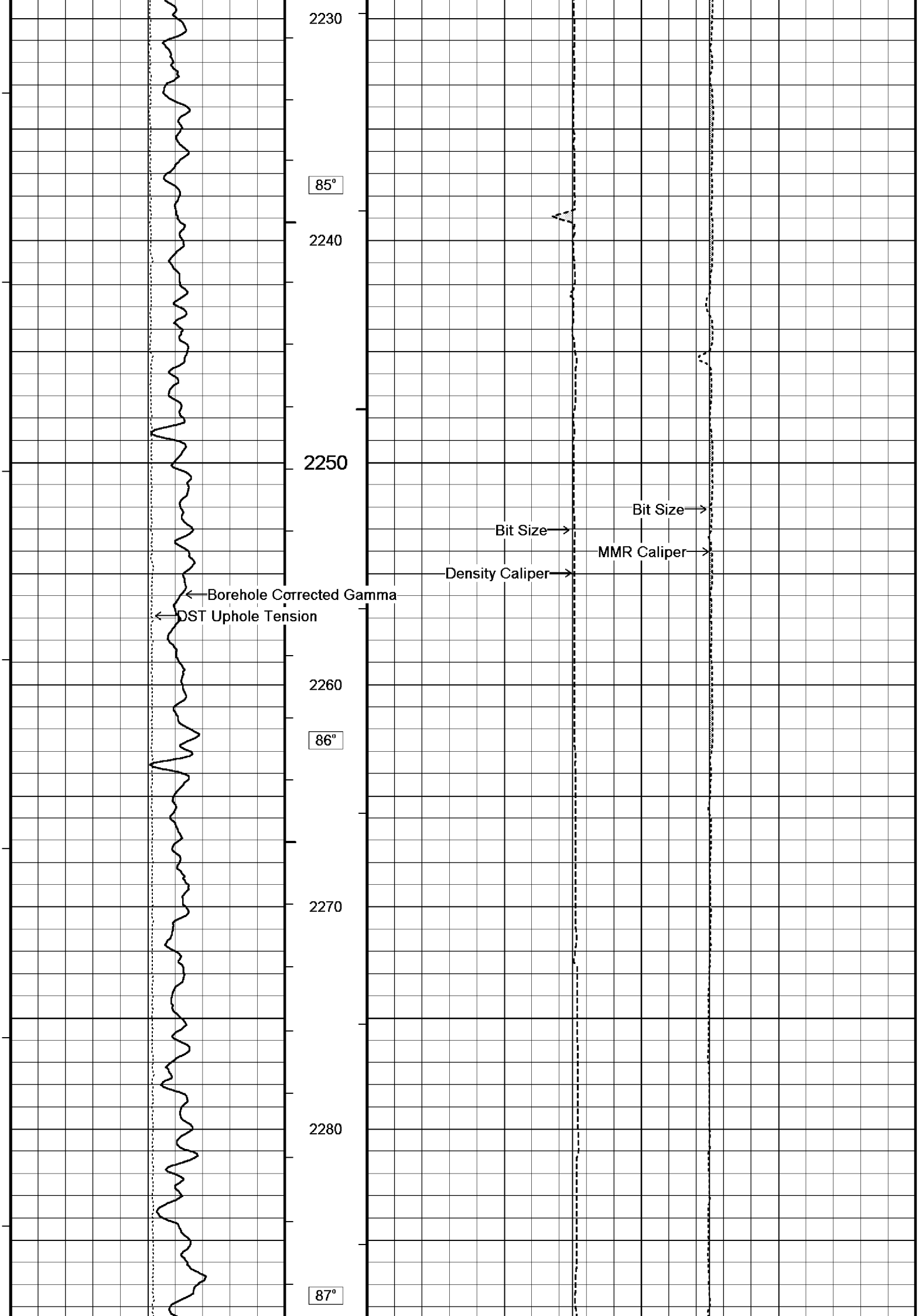

76"
1940
1950
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
1960
77°
1970
1980
77°
1990

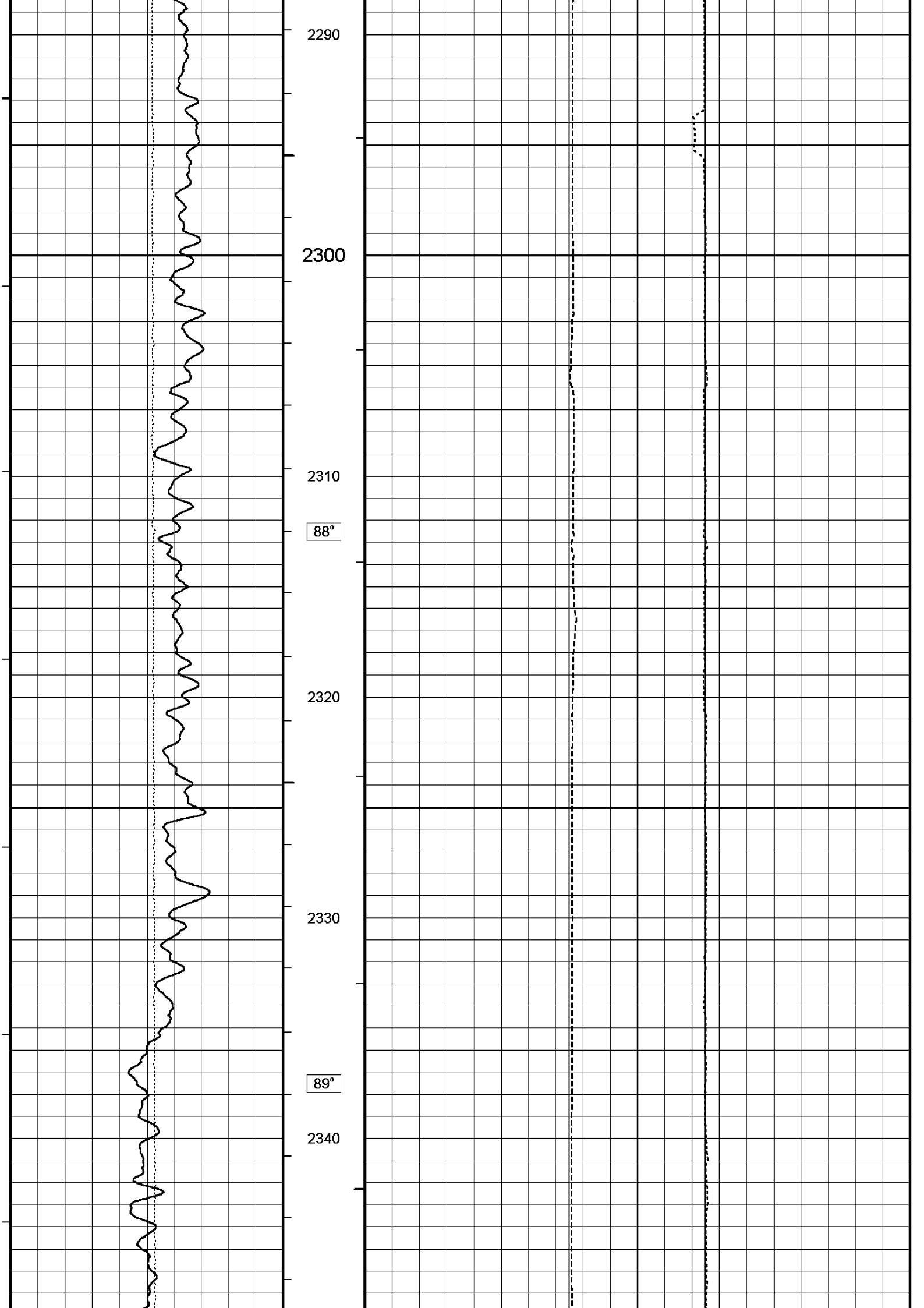

2000
2010
78°
2020
2030
FR
78°
FR
2040
2050

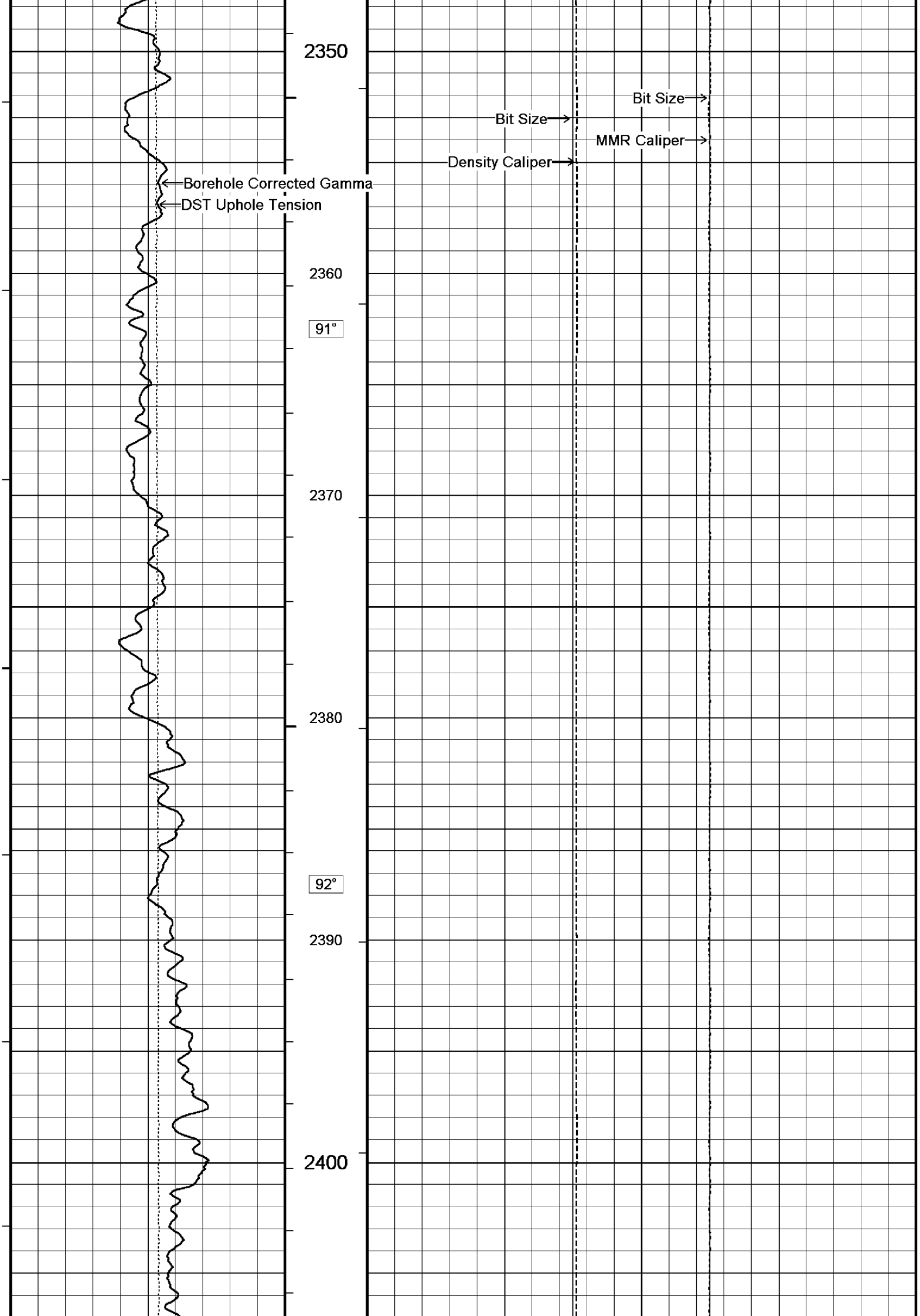

FR
Borehole Corrected Gamma
DST Uphole Tension
2060
79°
2070
2080
79°
2090
2100
2110
Bit Size
Density Caliper
Bit Size
FR
MMR Caliper

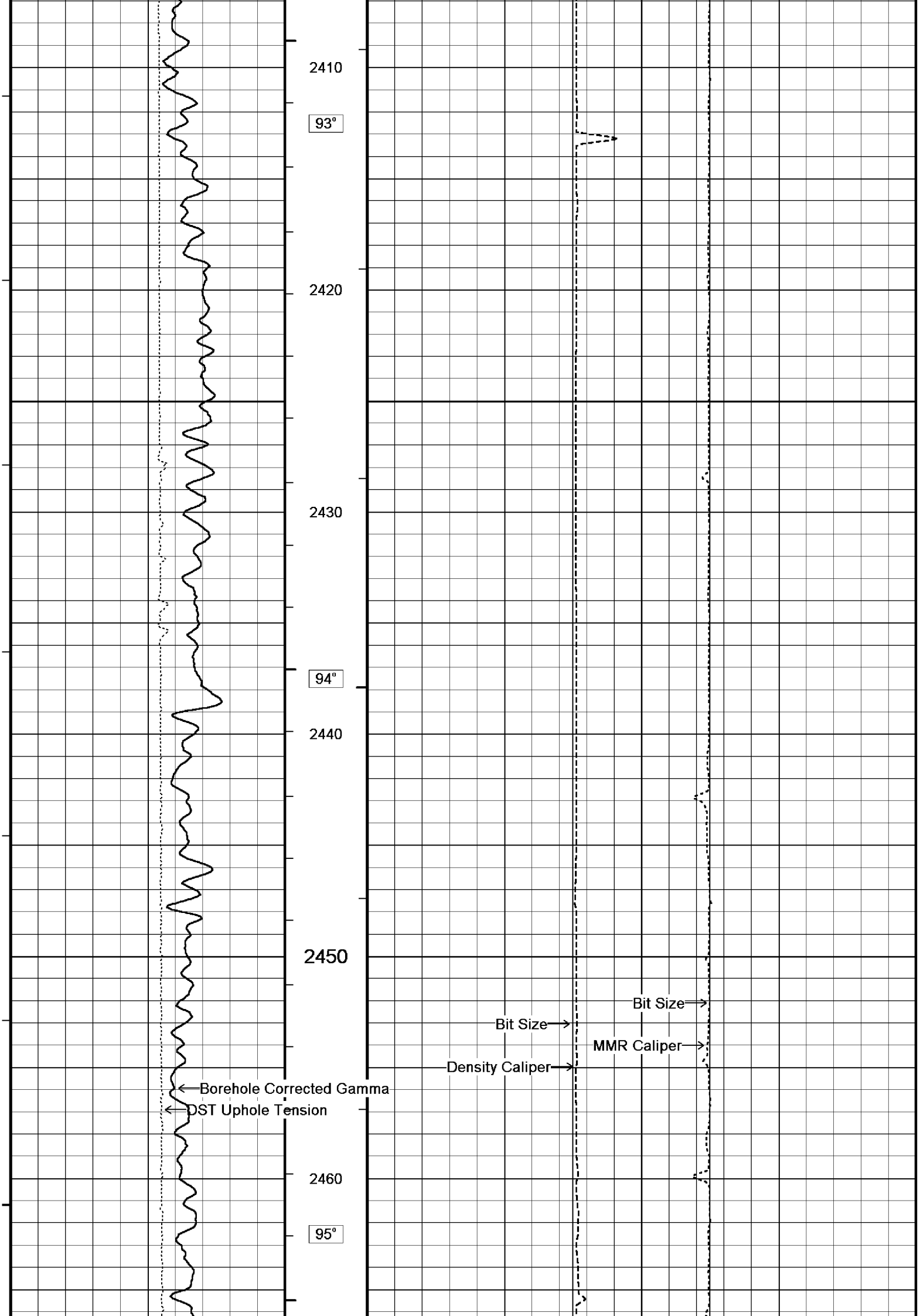

80°
2120
2130
81°
2140
2150
2160
82°
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension

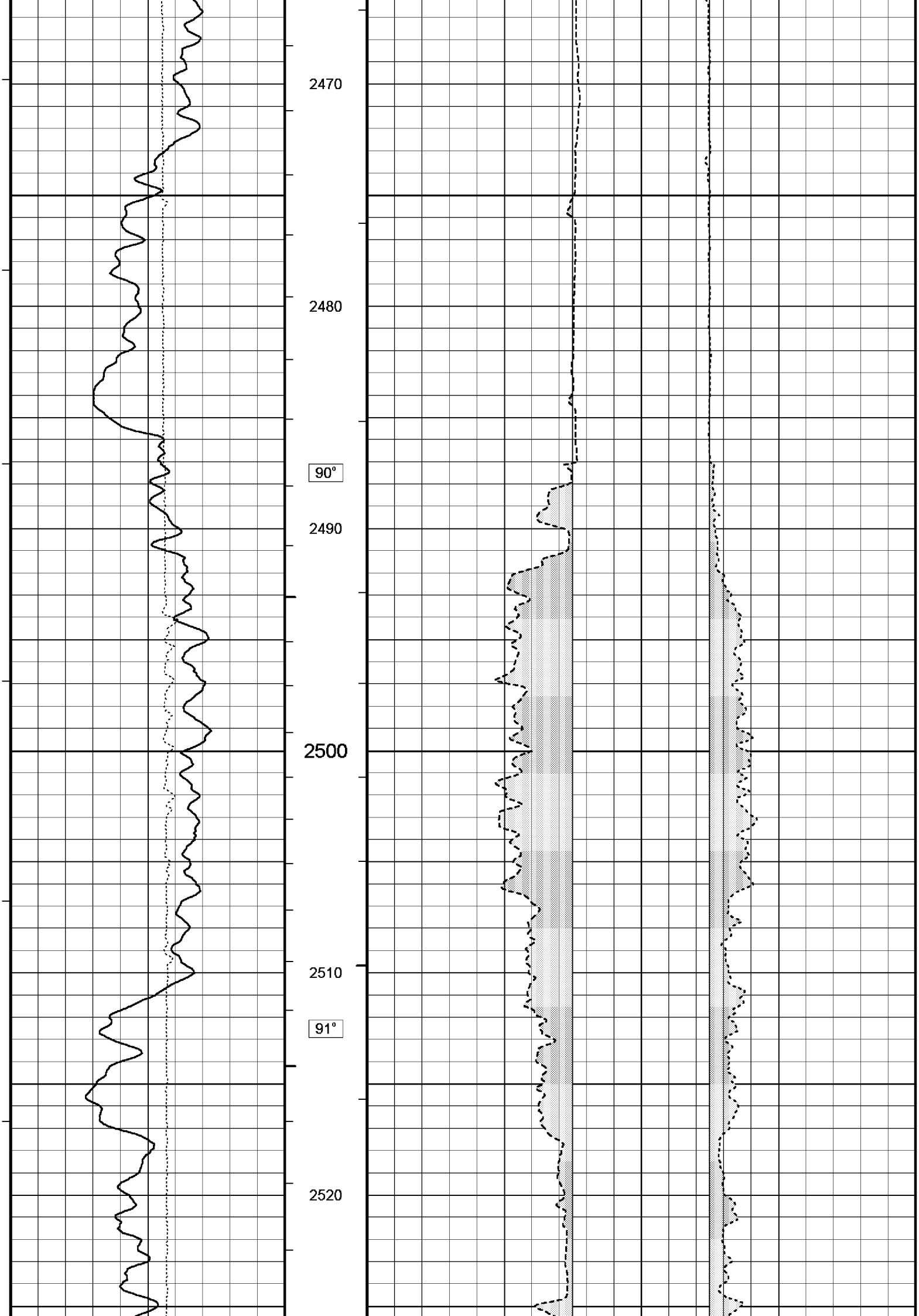

2170
2180
83°
2190
2200
2210
84°
2220

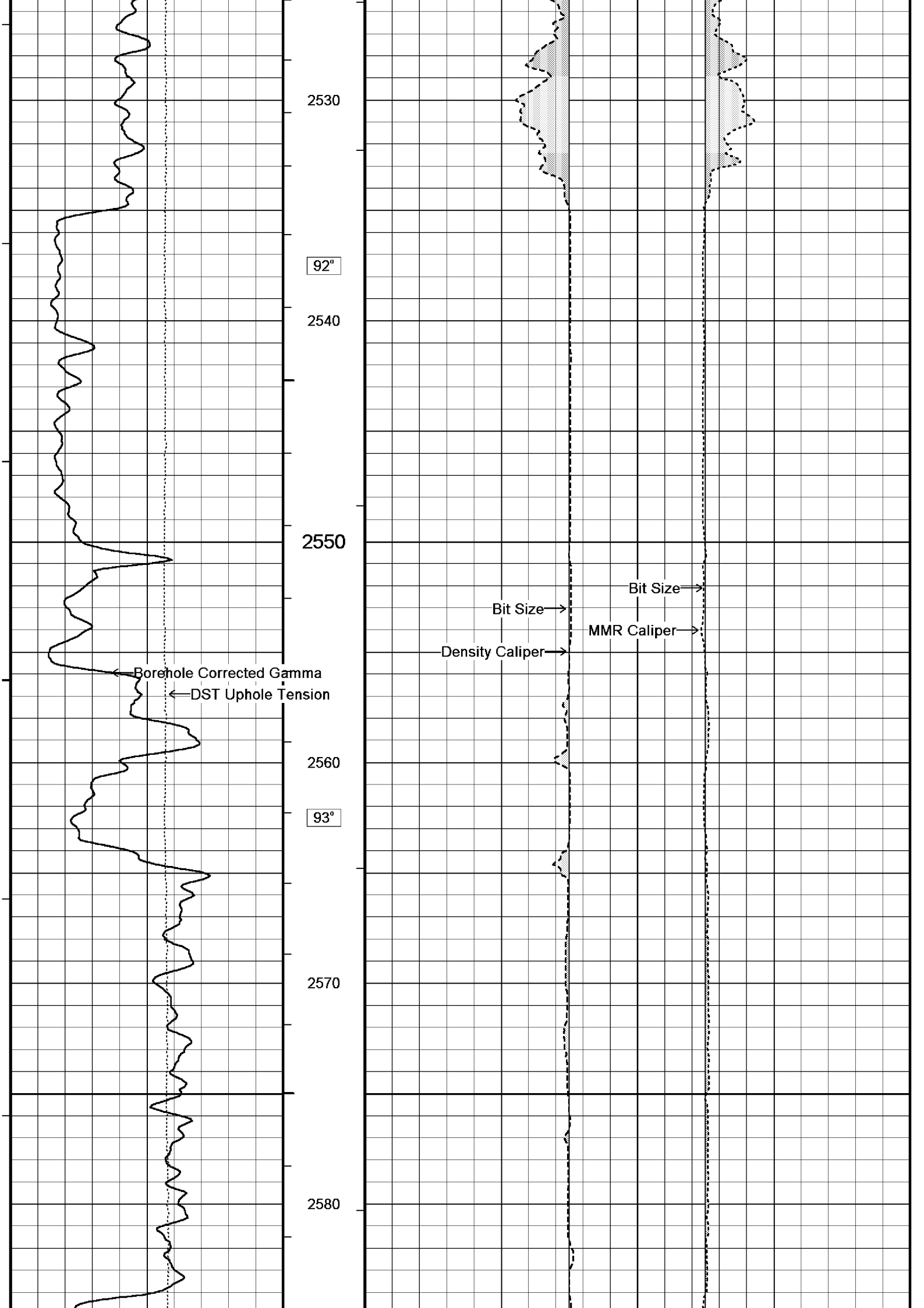

2230
85°
2240
2250
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
2260
86°
2270
2280
87°

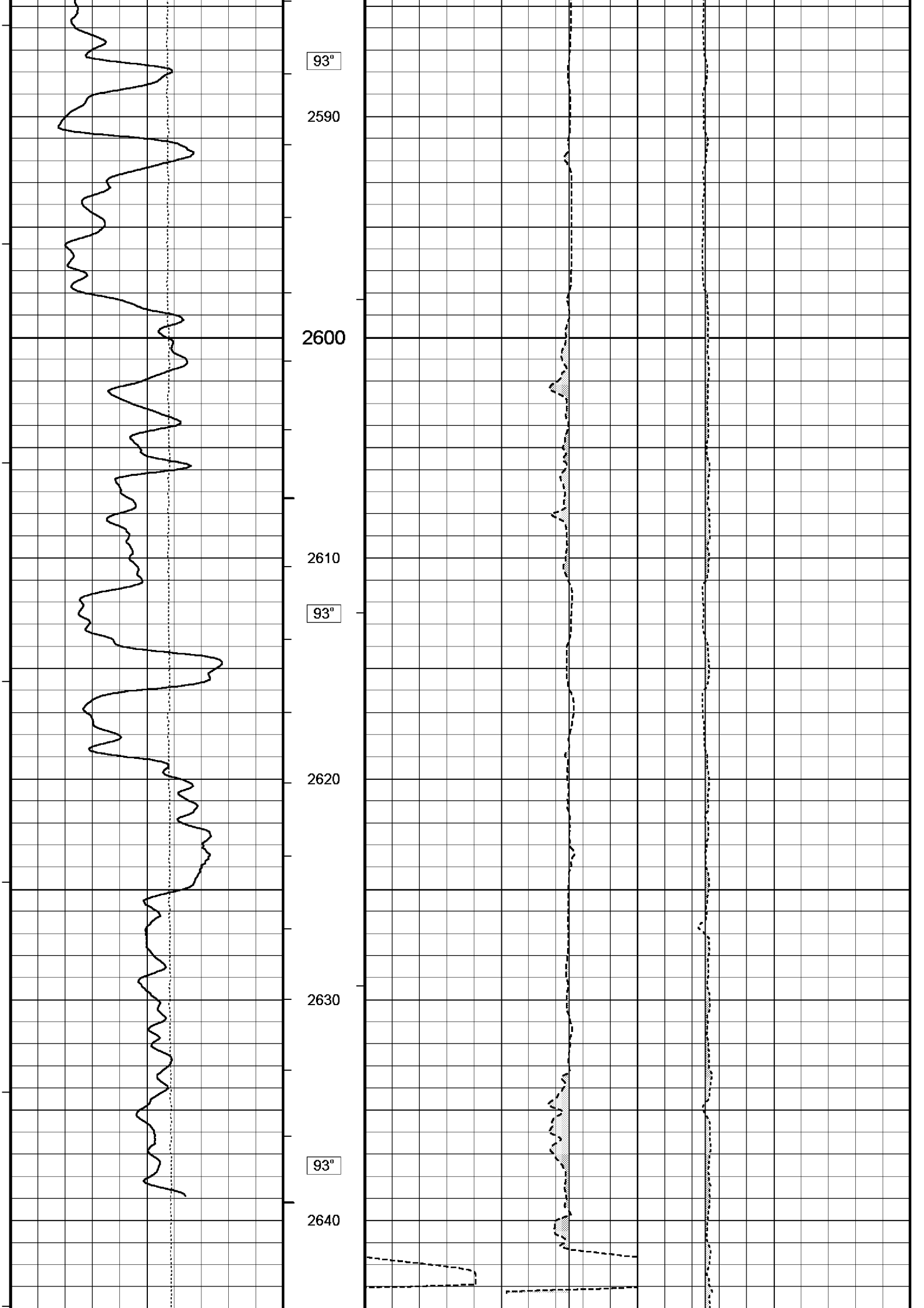

2290
2300
2310
88°
2320
2330
89°
2340

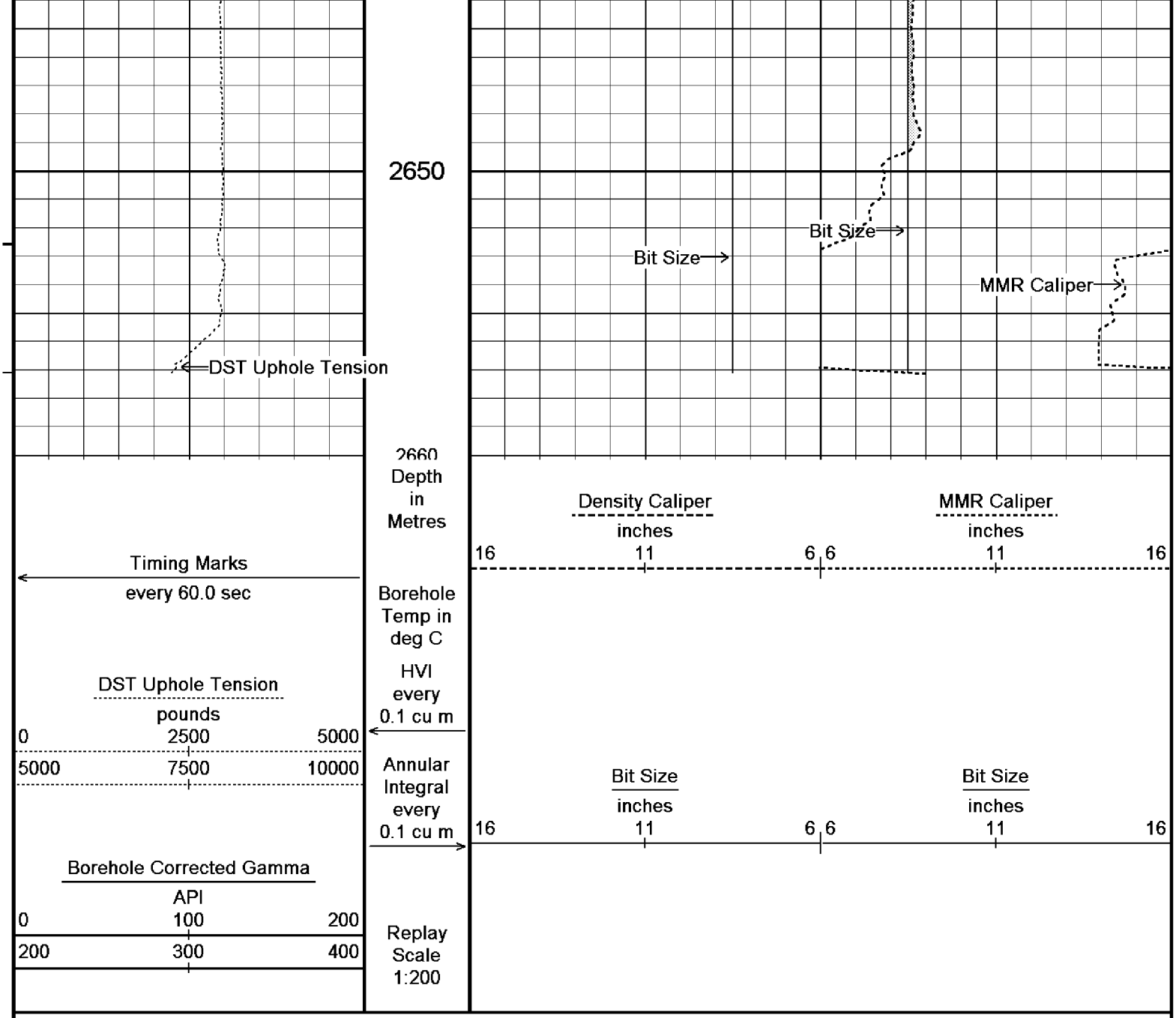

2350
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
2360
91°
2370
2380
92°
2390
2400


2410
93°
2420
2430
94°
2440
2450
2460
95°
Bit Size
Bit Size
MMR Caliper
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension


2470
2480
90°
2490
2500
2510
91°
2520


2530
92°
2540
2550
2560
93°
2570
2580
Borehole Corrected Gamma
DST Uphole Tension
Bit Size
Density Caliper
Bit Size
MMR Caliper


93°
2590
2600
2610
93°
2620
2630
93°
2640



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 06-OCT-2005 16:17

Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta — Recorded on 04-OCT-2005 00:45

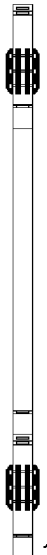
System Configuration Dates: Logged : Plotted 17-JUN-2004:

MAIN LOG 1:200

DOWNHOLE EQUIPMENT

C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta

Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb



Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

14.01 m AVOL - Annular Volume
14.01 m HVOL - Hole Volume
14.01 m CLDC - Density Caliper
13.80 m DEN - Compensated Density

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

13.80 m DCOR - Density Correction
13.78 m PDPE - PE

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

9.24 m TR21 - 3' Transit Time
9.24 m TR22 - 5' Transit Time
9.24 m TR11 - 4' Transit Time
9.24 m DT35 - 3-5' Compensated Sonic

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

9.24 m TR12 - 6' Transit Time

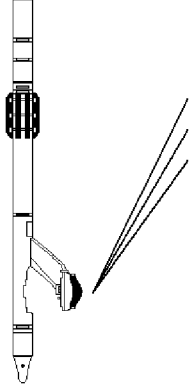
Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

3.93 m DSLL - Shallow Laterolog
3.93 m DDLL - Deep Laterolog

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb



0.00 m MRRS - MicroRes Resistance (S)
0.00 m MATC - MMR Caliper
Tool Zero (0.85m from bottom)

All measurements relative to tool zero.

BEFORE SURVEY CALIBRATION

C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000

General Parameters		
Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

	Measured	Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

Compact

CEMENT LOG

1:200

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:200

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FINAL PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005		
Run Number	TWO		ONE		
Depth Driller	2658.00	metres	2545.00	metres	
Depth Logger	2656.80	metres	2529.00	metres	
First Reading	2656.80	metres	2528.15	metres	
Last Reading	2400.00	metres	0.00	metres	
Casing Driller	544.50	metres	544.50	metres	
Casing Logger	544.20	metres	544.20	metres	
Bit Size	8.50	inches	8.50	inches	
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL		
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP	
PH / Fluid Loss	8.00	5.00	8.60	4.00	
Sample Source	FLOWLINE		FLOWLINE		
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m	
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m	
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m	
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER	
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m	
Time Since Circulation	11.8 HOURS		18 HOURS		
Max Recorded Temp	93.50	deg C	95.50	deg C	
Equipment Name	COMPACT		COMPACT		
Equipment / Base	8	SALE	8	SALE	
Recorded By	BEN MOSS				
Witnessed By	JOHN HOBDAY				
CIRC. STOP	13:00 3/10		00:00 1/10		

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:18
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
− → | 20 | ← +

MMR Caliper
inches
6 11 16

Borehole Corrected Gamma
API
0 100 200
200 300 400

Bit Size
inches
6 11 16

Depth in Metres

Borehole Temp in deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:200

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Compensated Density
grams/cc
1.95 2.45 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

PE
barns/electron
0 5 10

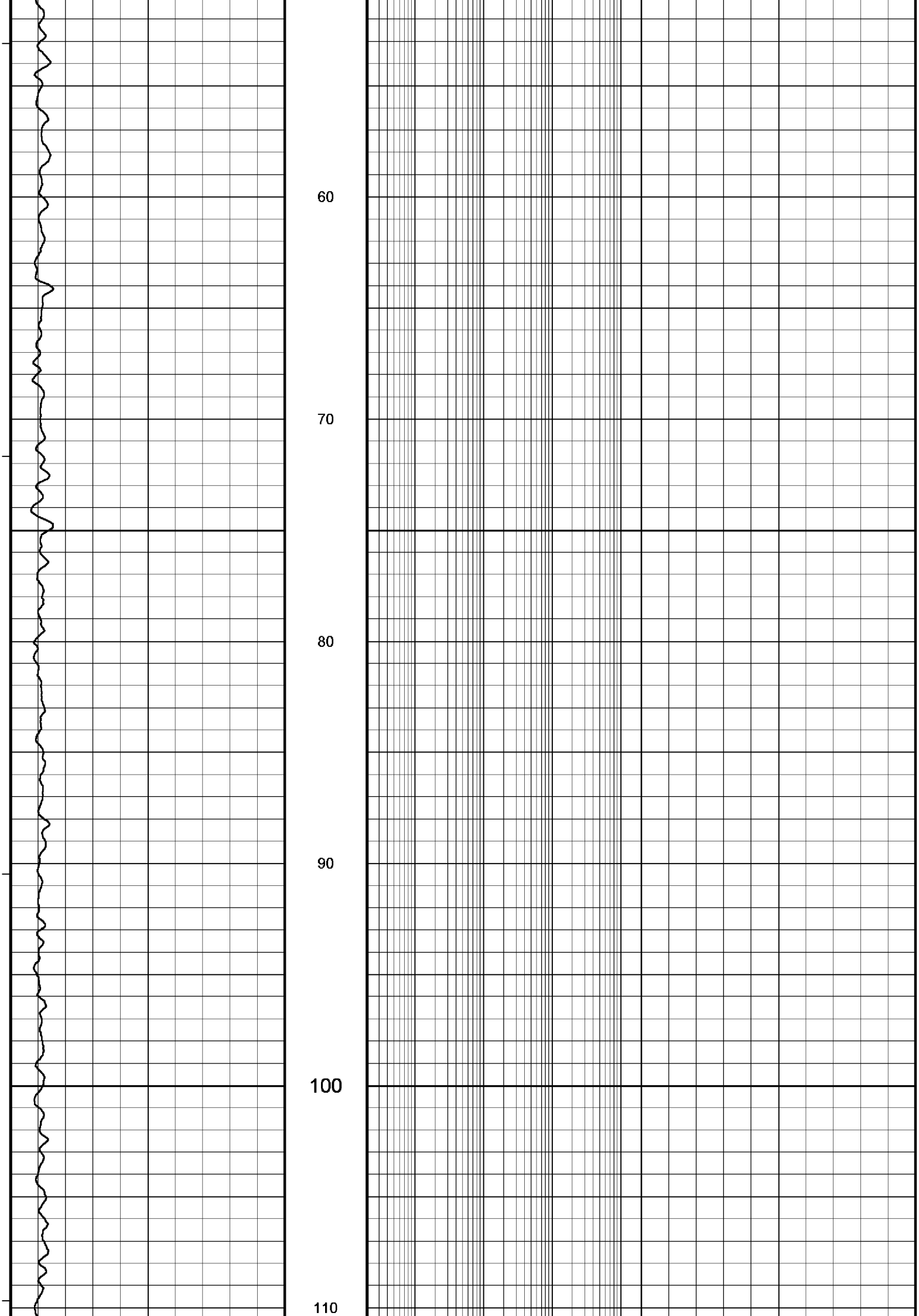
3-5' Compensated Sonic
microsec/foot
140 90 40

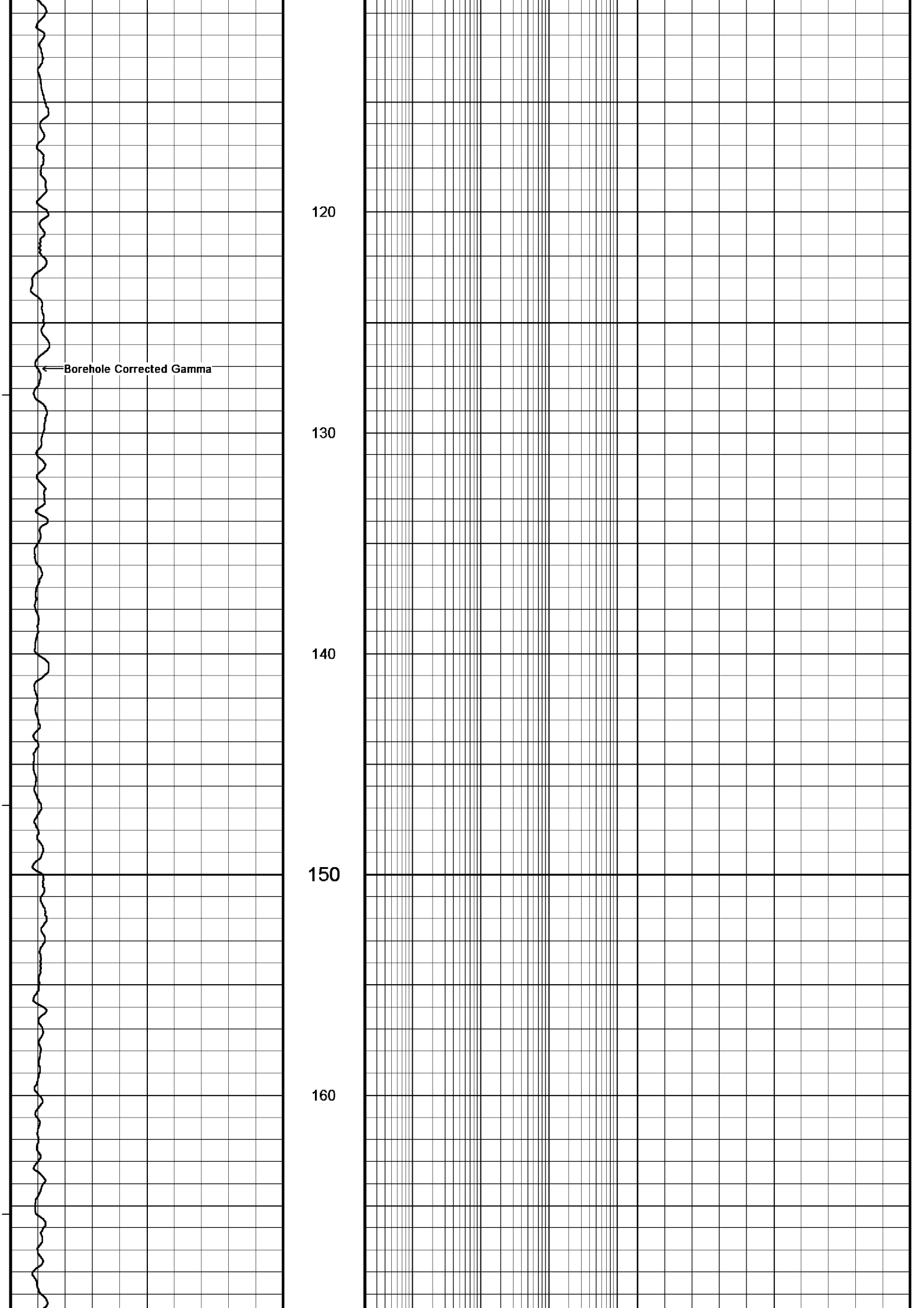
Density Correction
grams/cc
-0.25 0.25

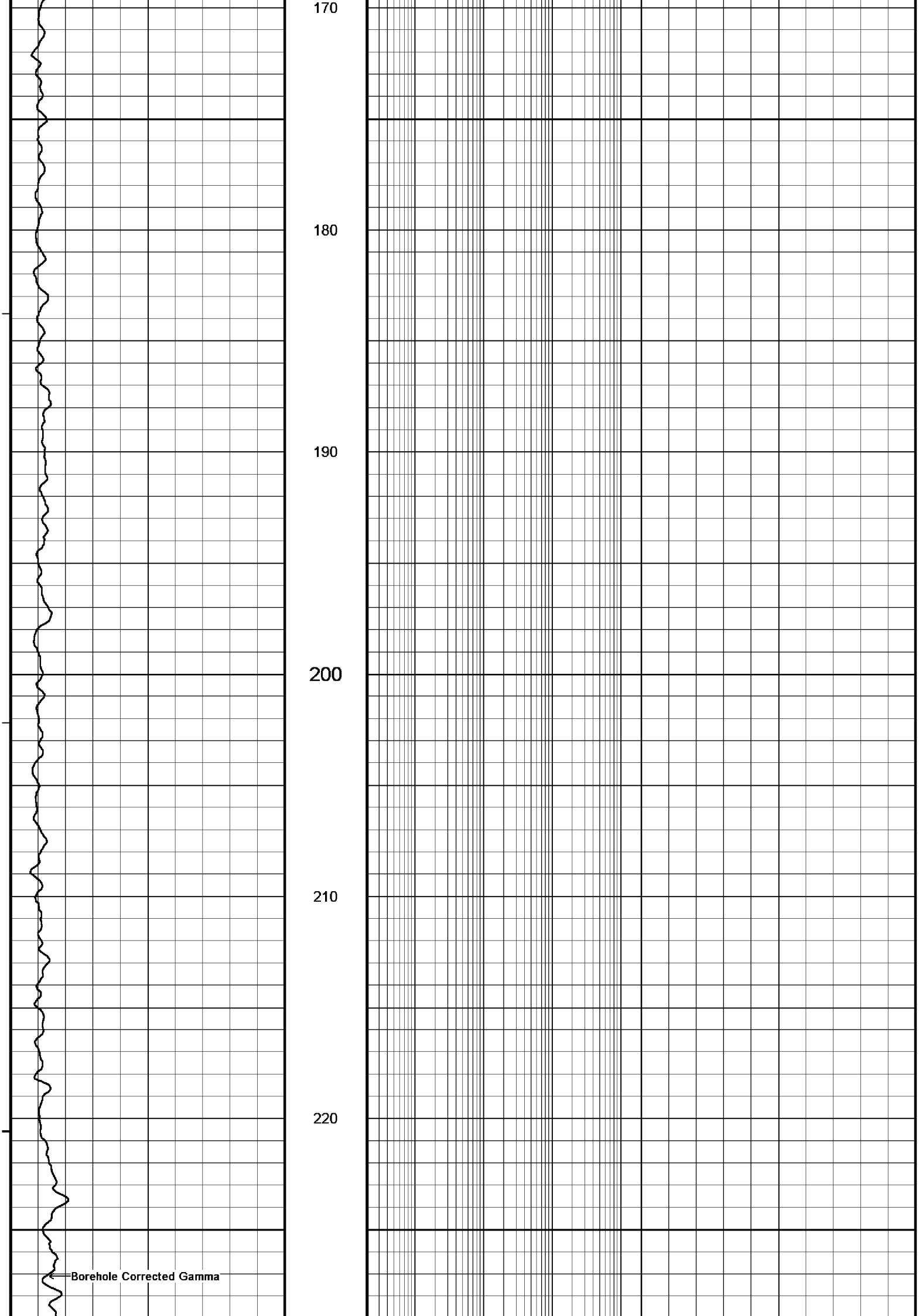
33

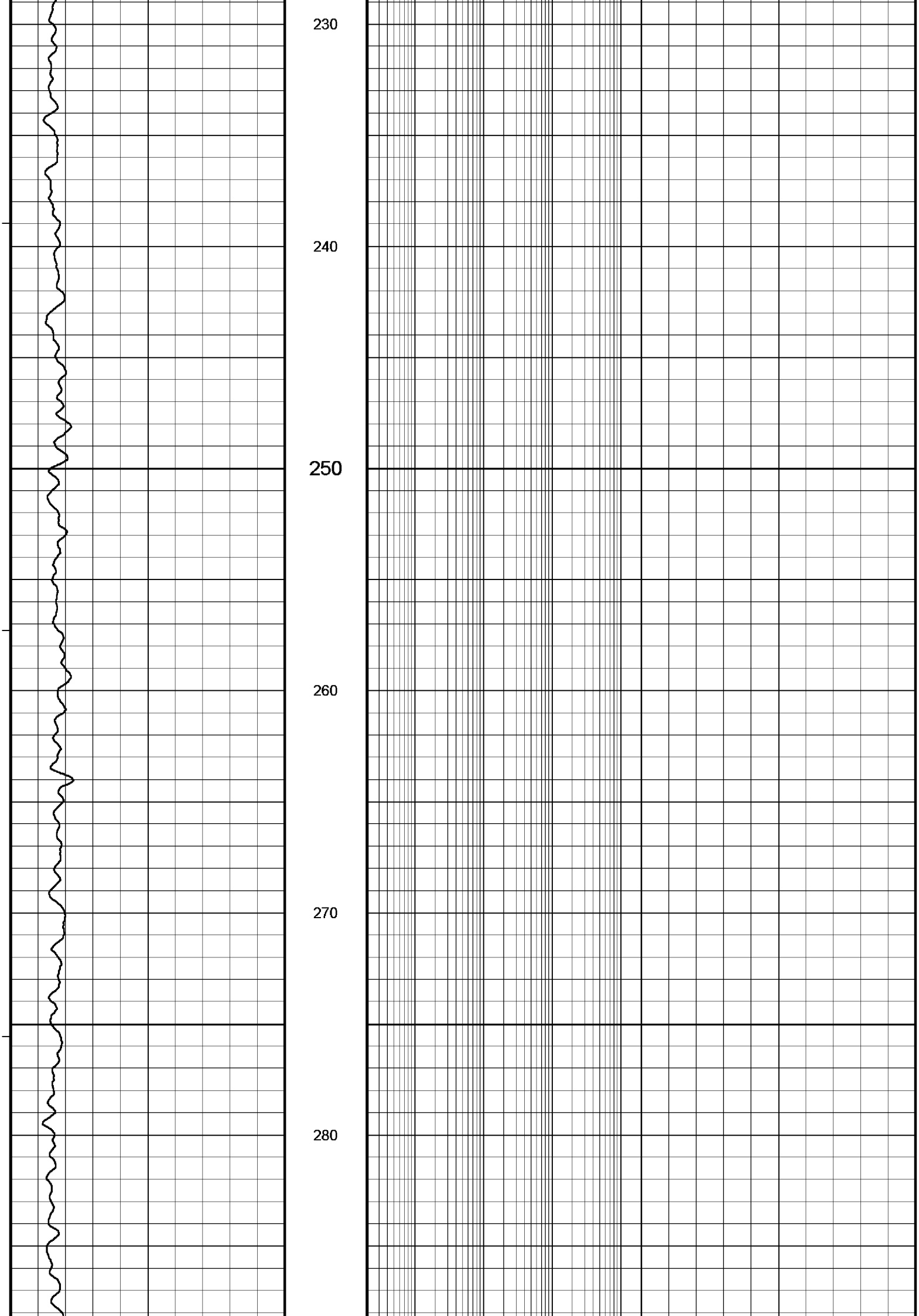
40

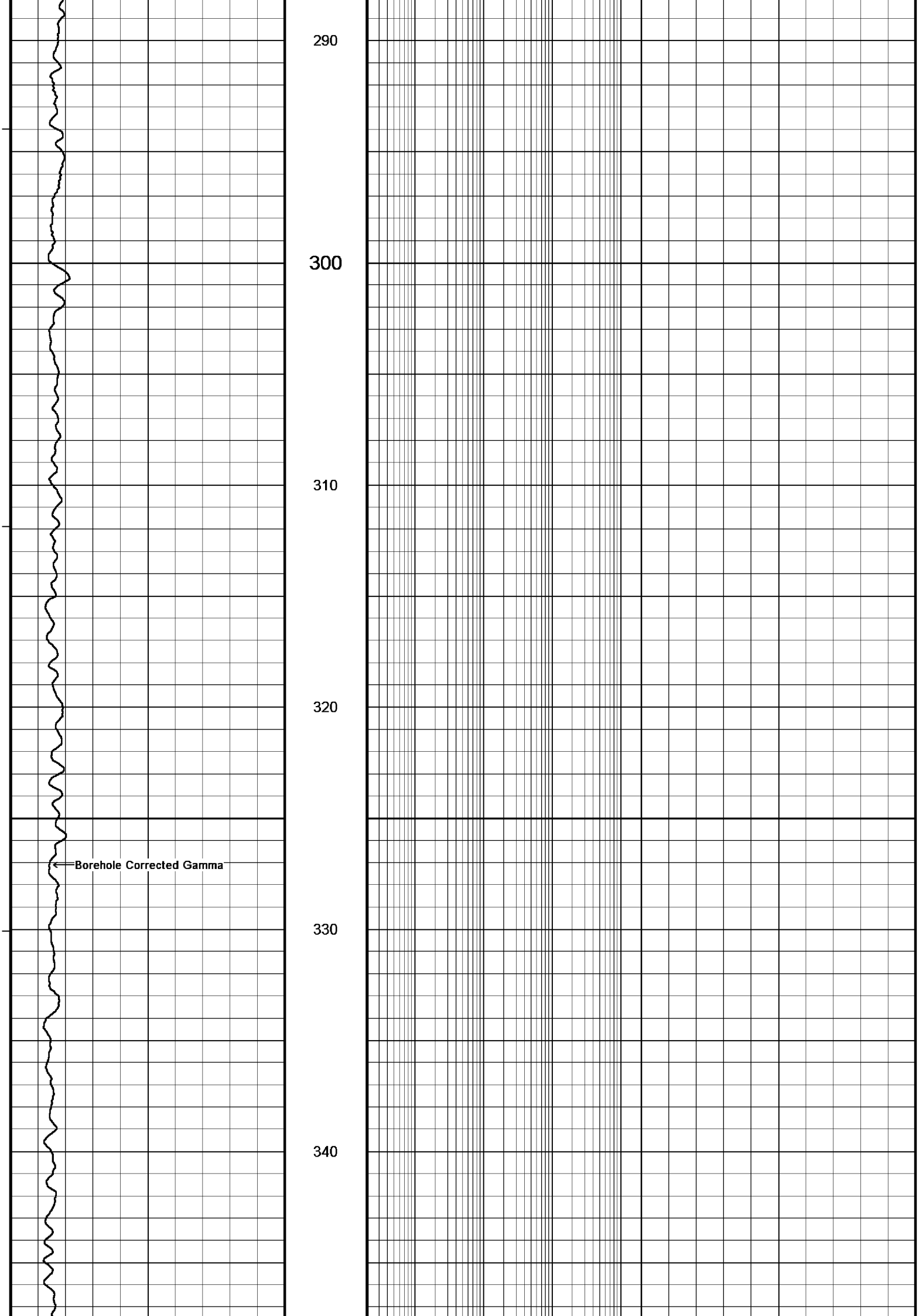
50

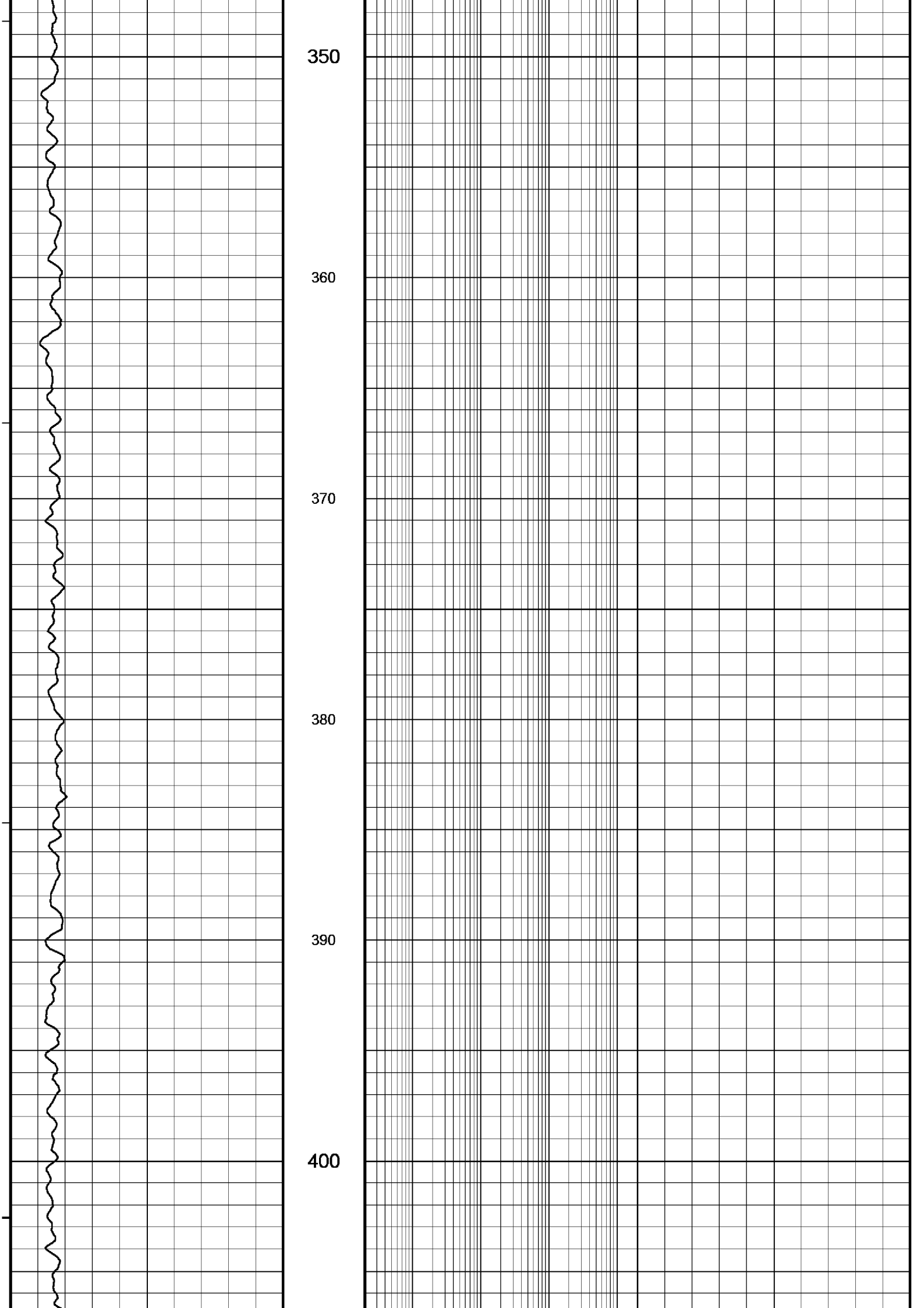

60
70
80
90
100
110

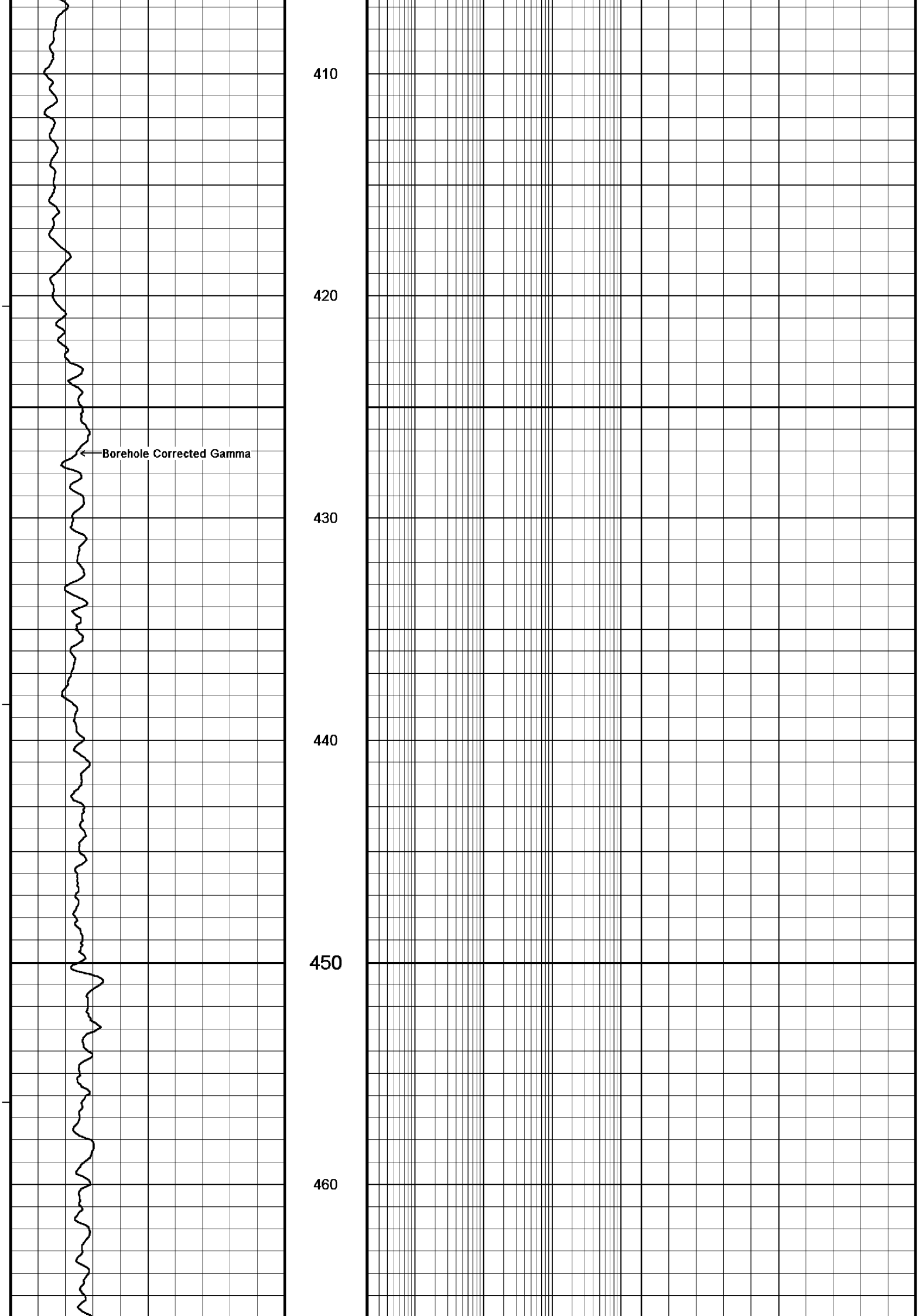

120
Borehole Corrected Gamma
130
140
150
160

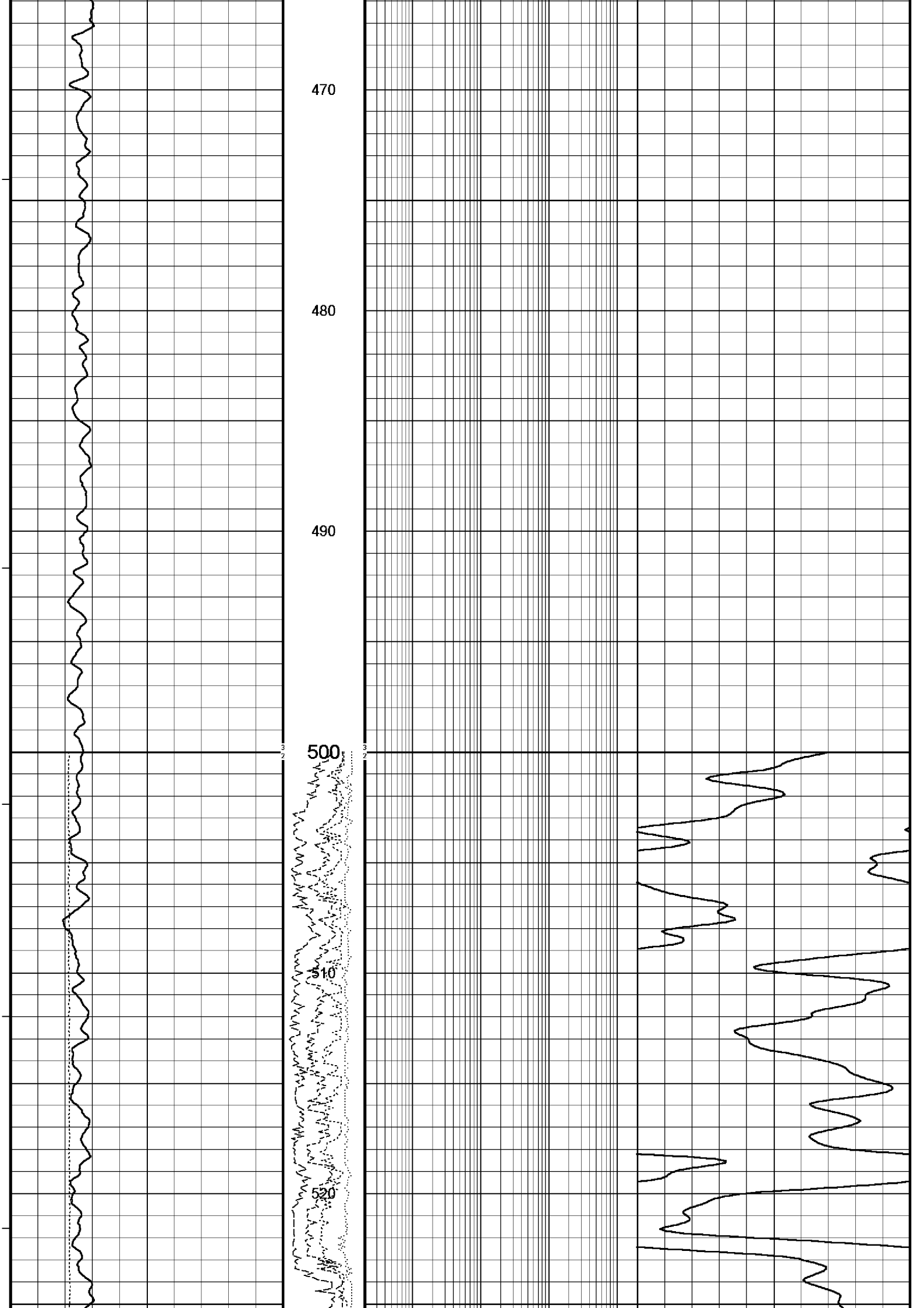

170
180
190
200
210
220
Borehole Corrected Gamma

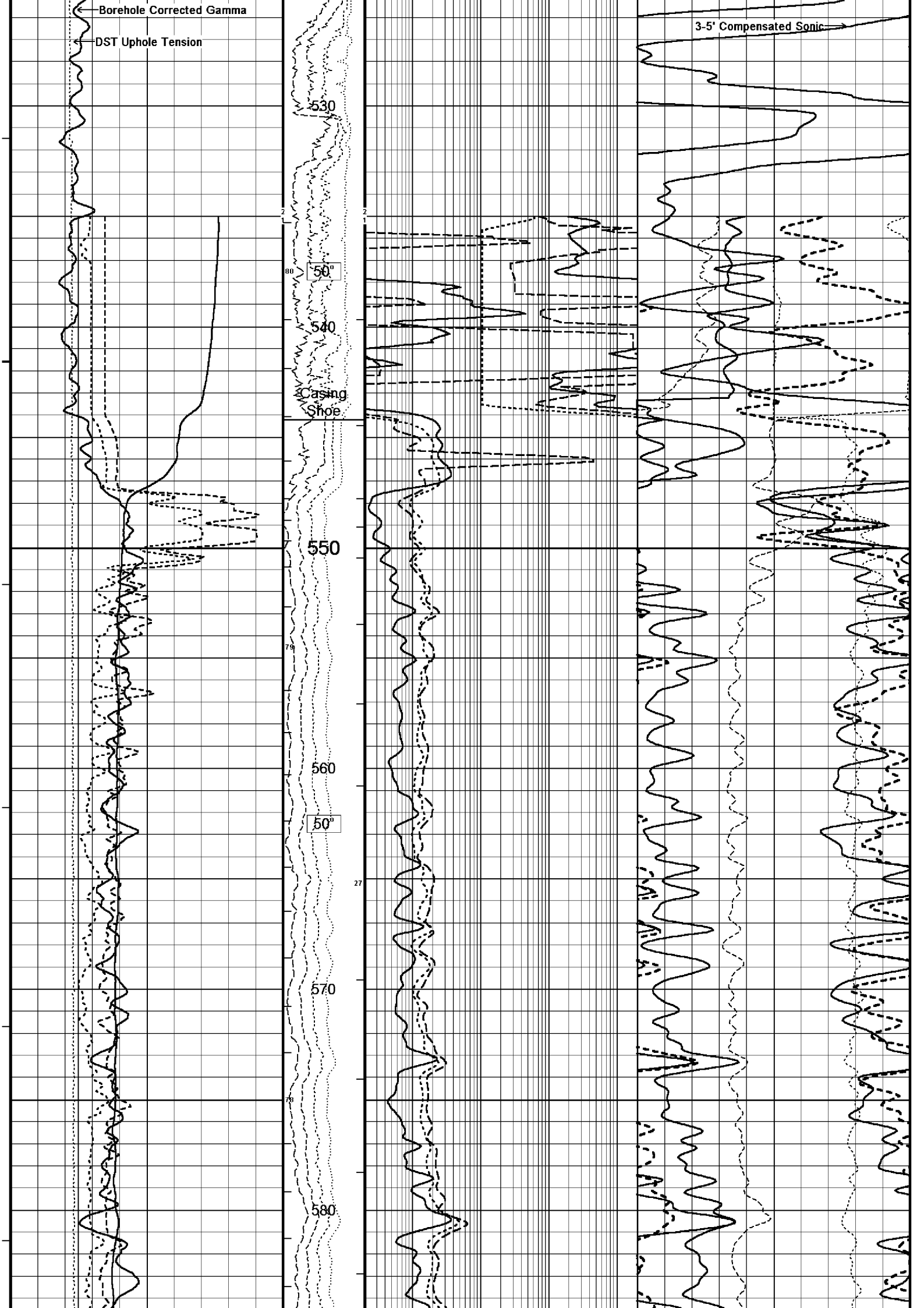

230
240
250
260
270
280

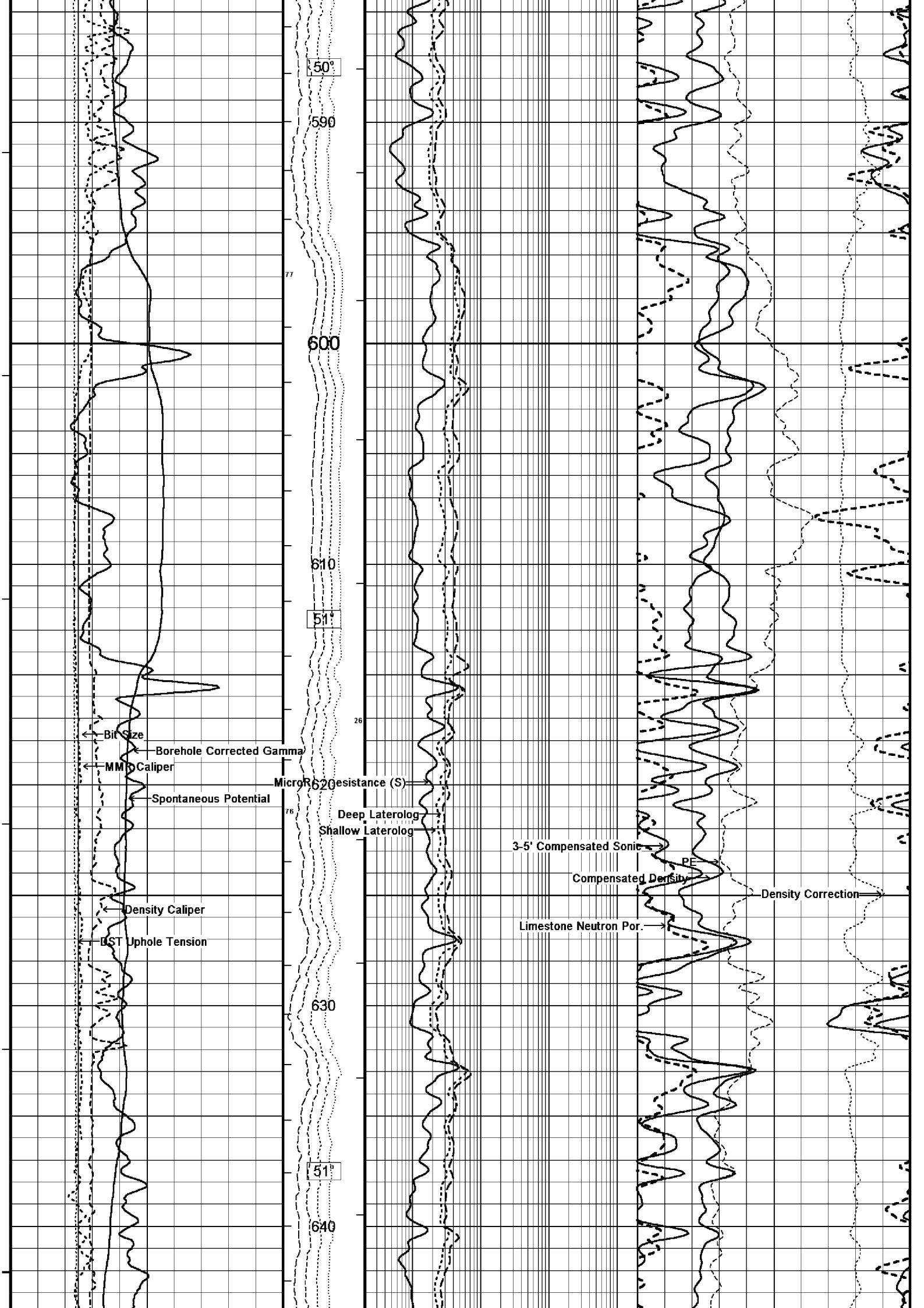

290
300
310
320
330
340
Borehole Corrected Gamma

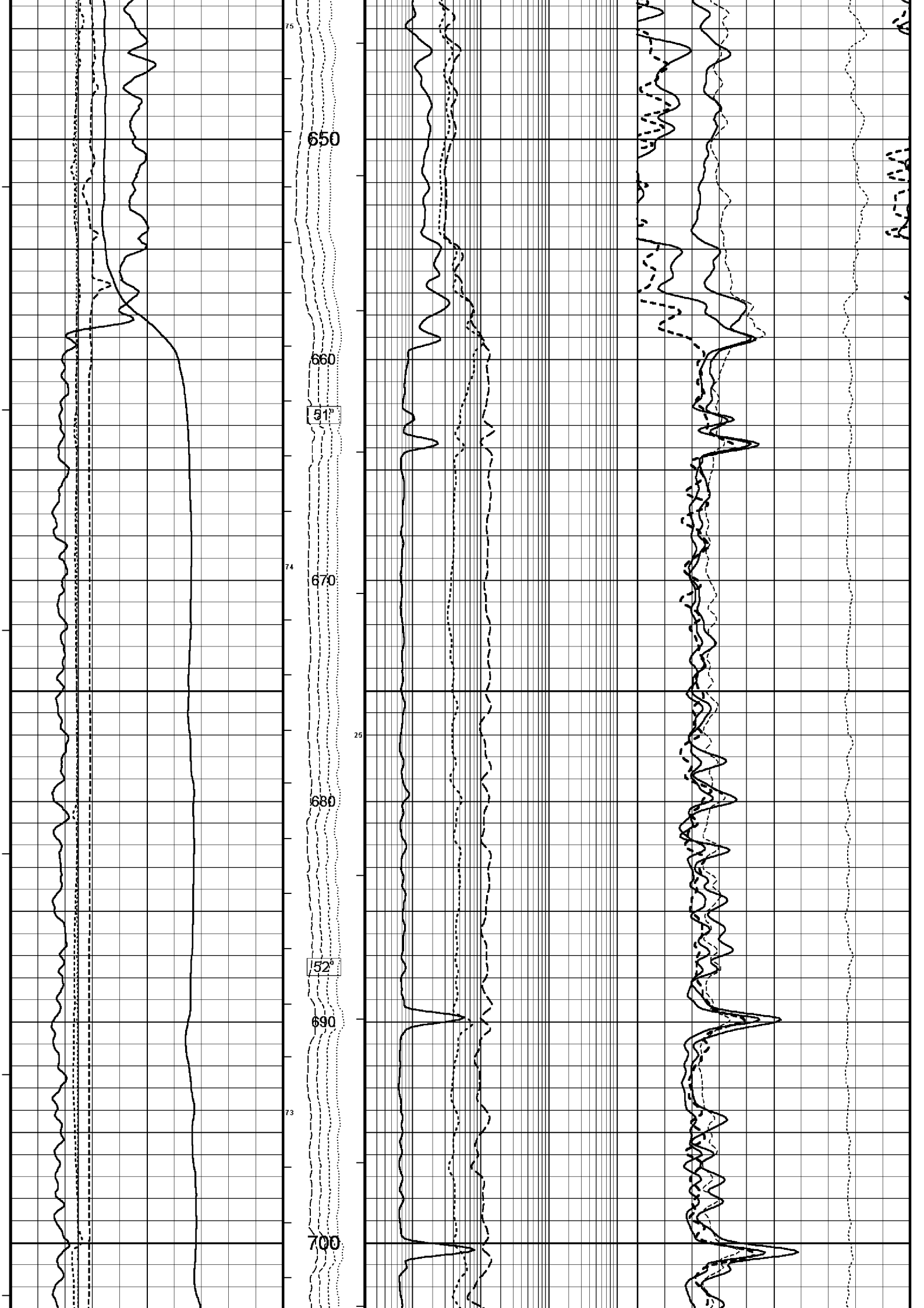

350
360
370
380
390
400

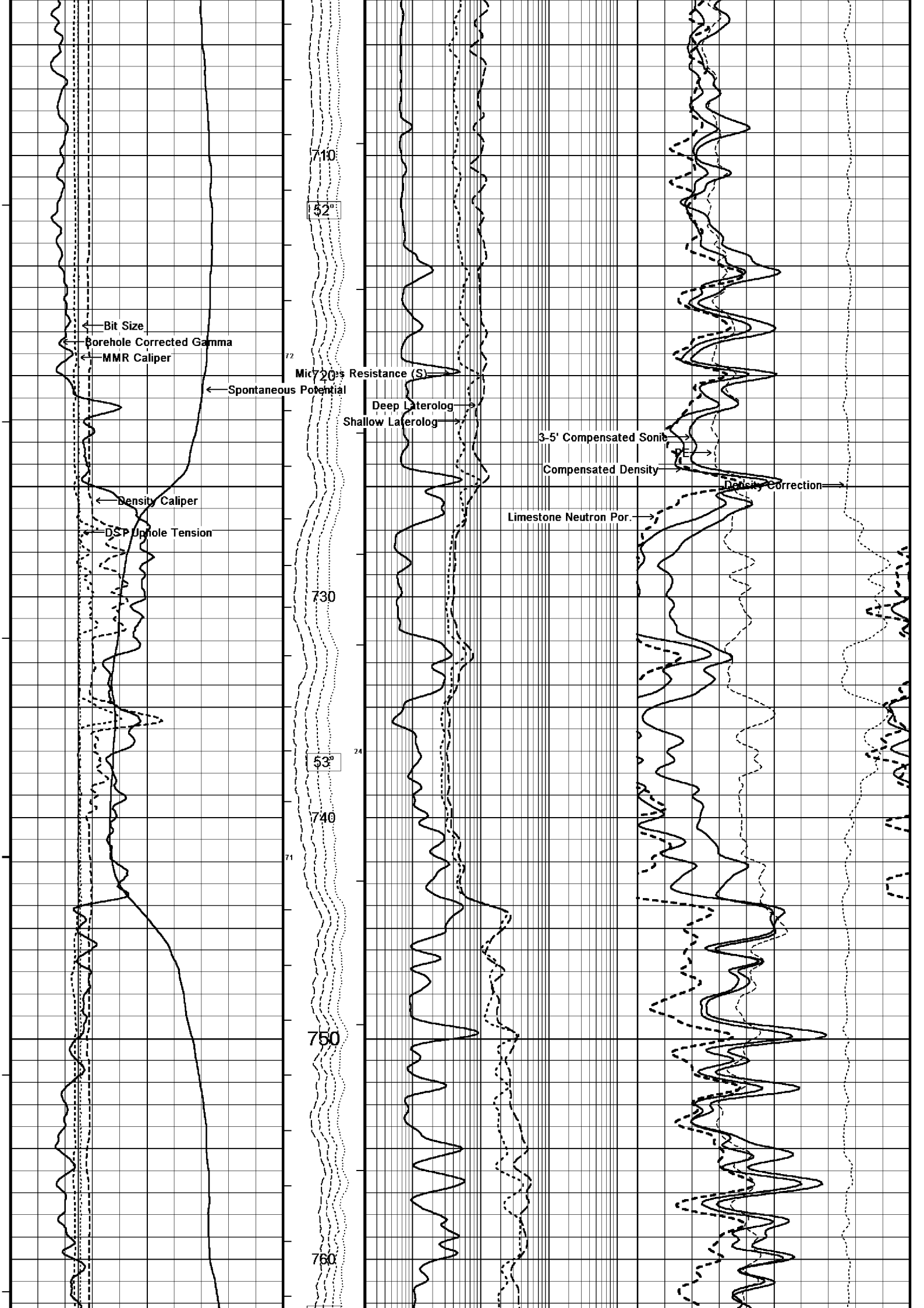

410
420
Borehole Corrected Gamma
430
440
450
460

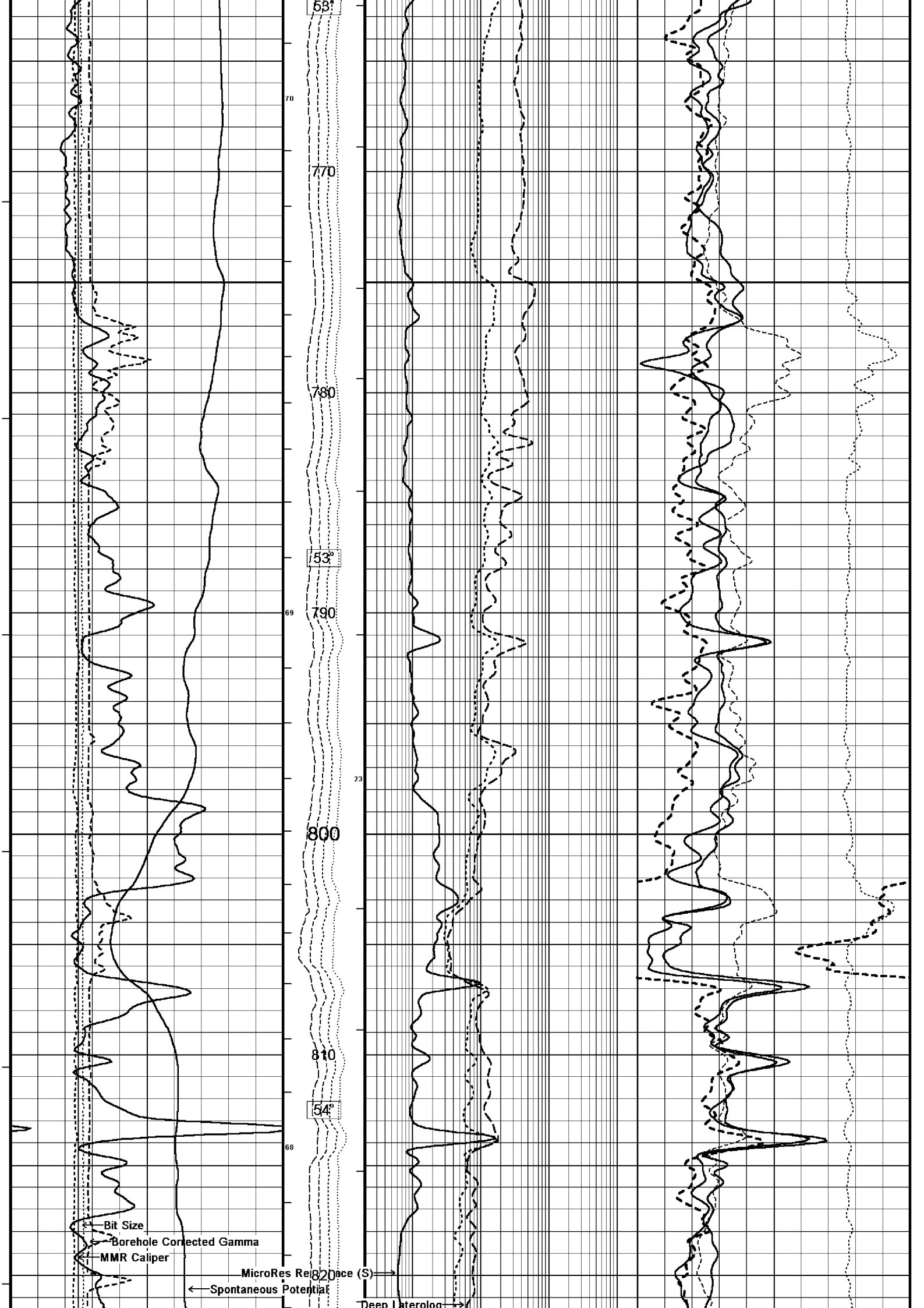

470
480
490
500
510
520

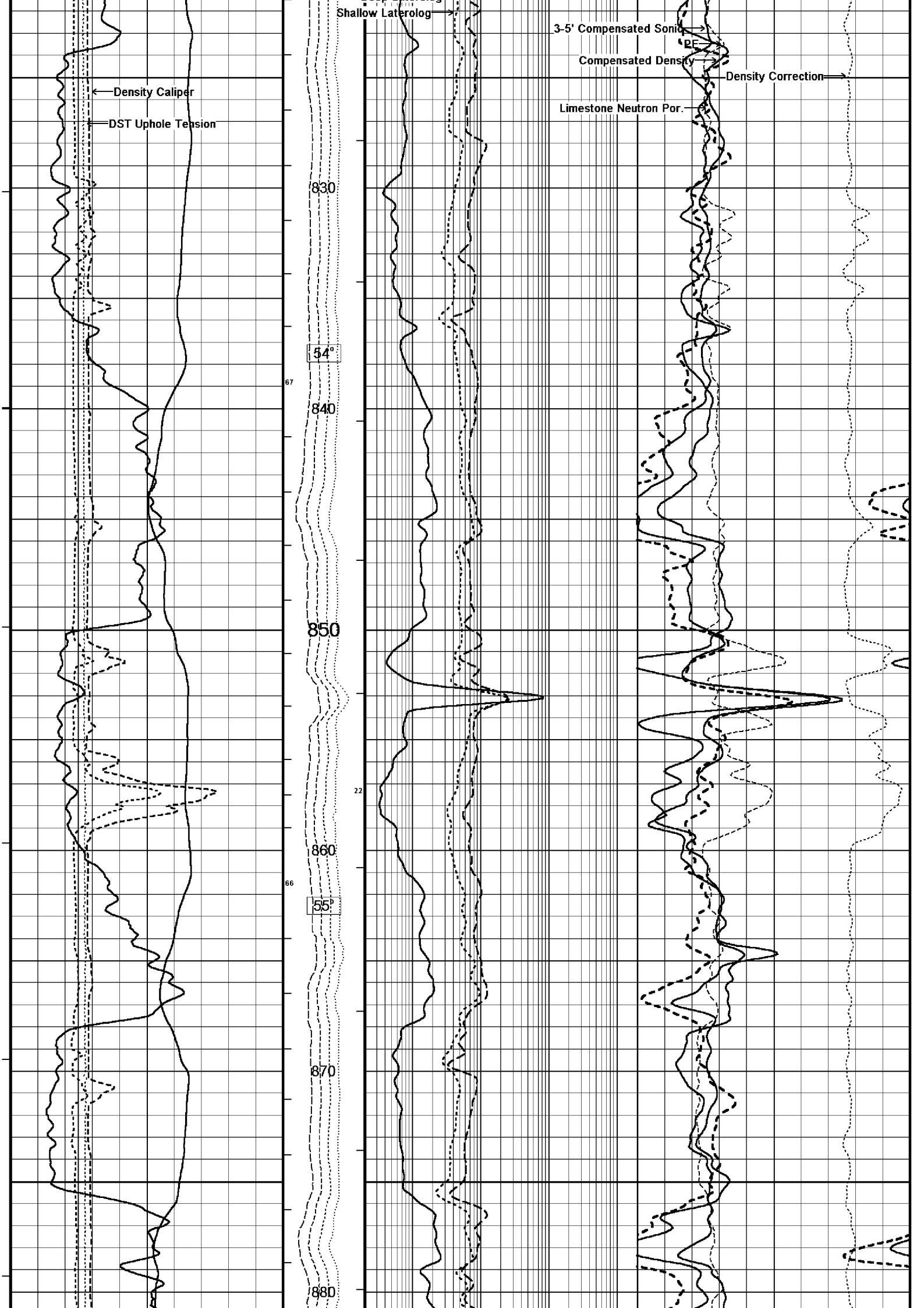

Borehole Corrected Gamma
DST Uphole Tension
3-5' Compensated Sonic
530
540
Casing Shoe
550
560
570
580
50°
50°

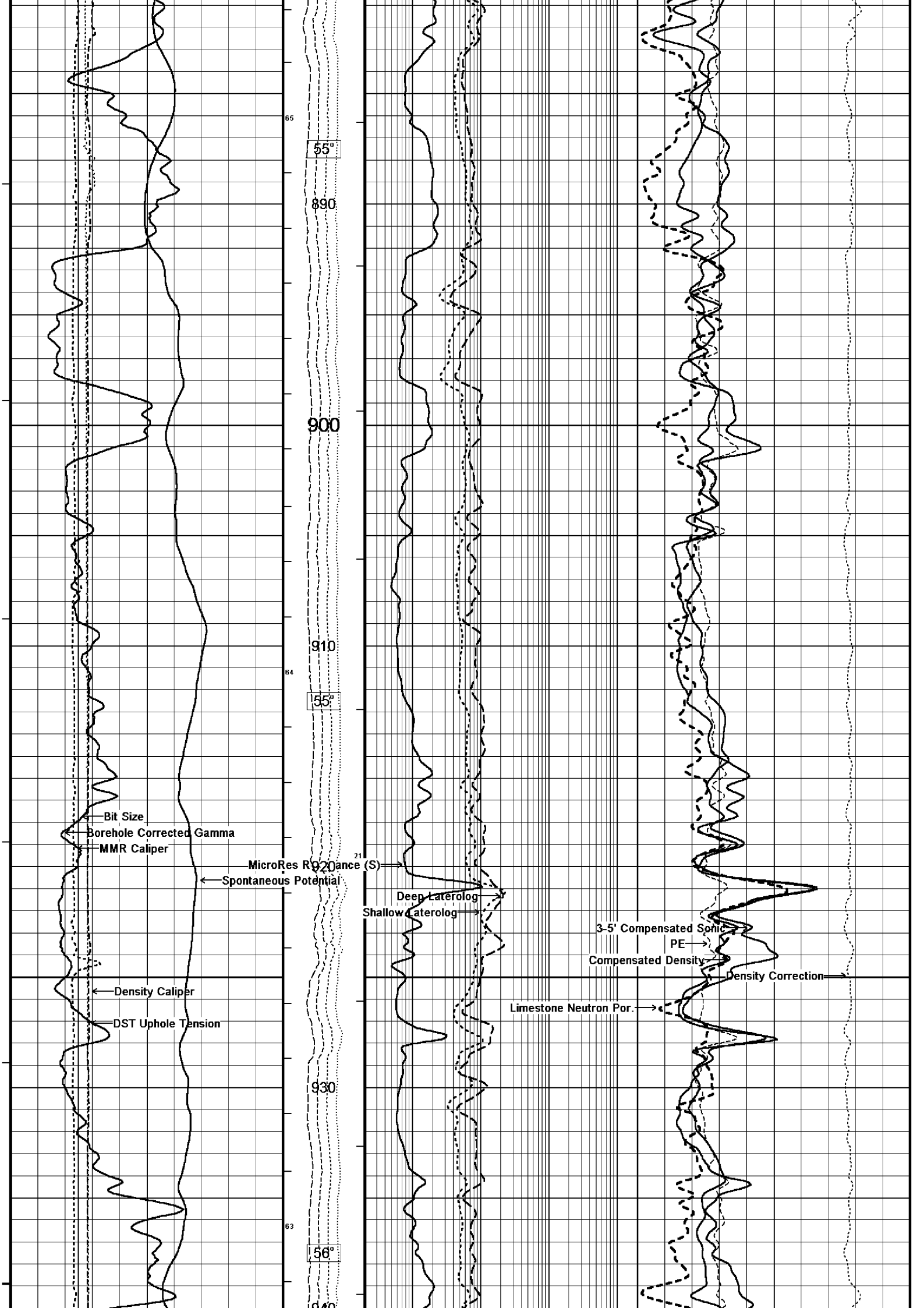

50°
590
600
610
51°
620
630
51°
640
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroResistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension

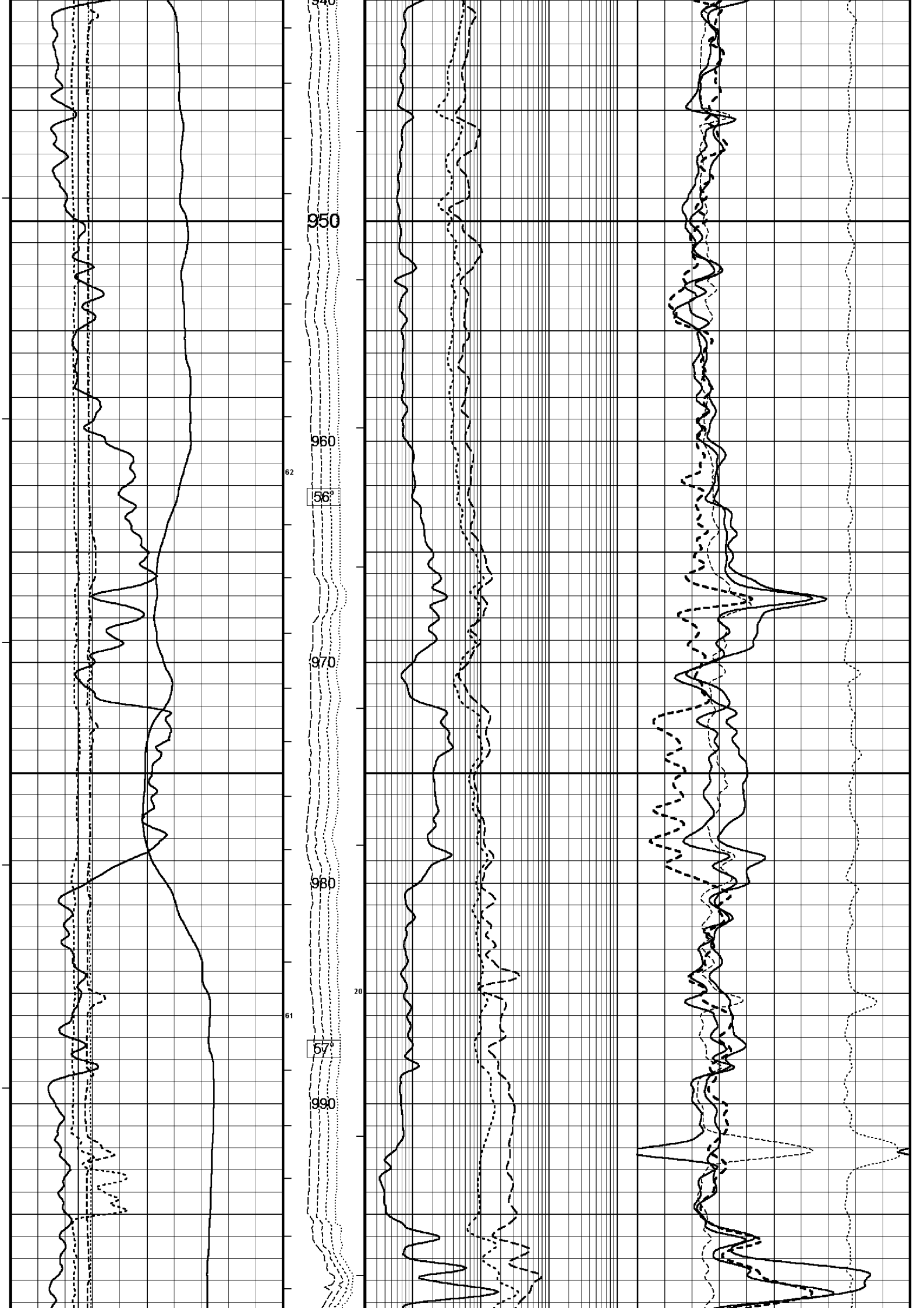

650
660
51°
670
680
52°
690
700

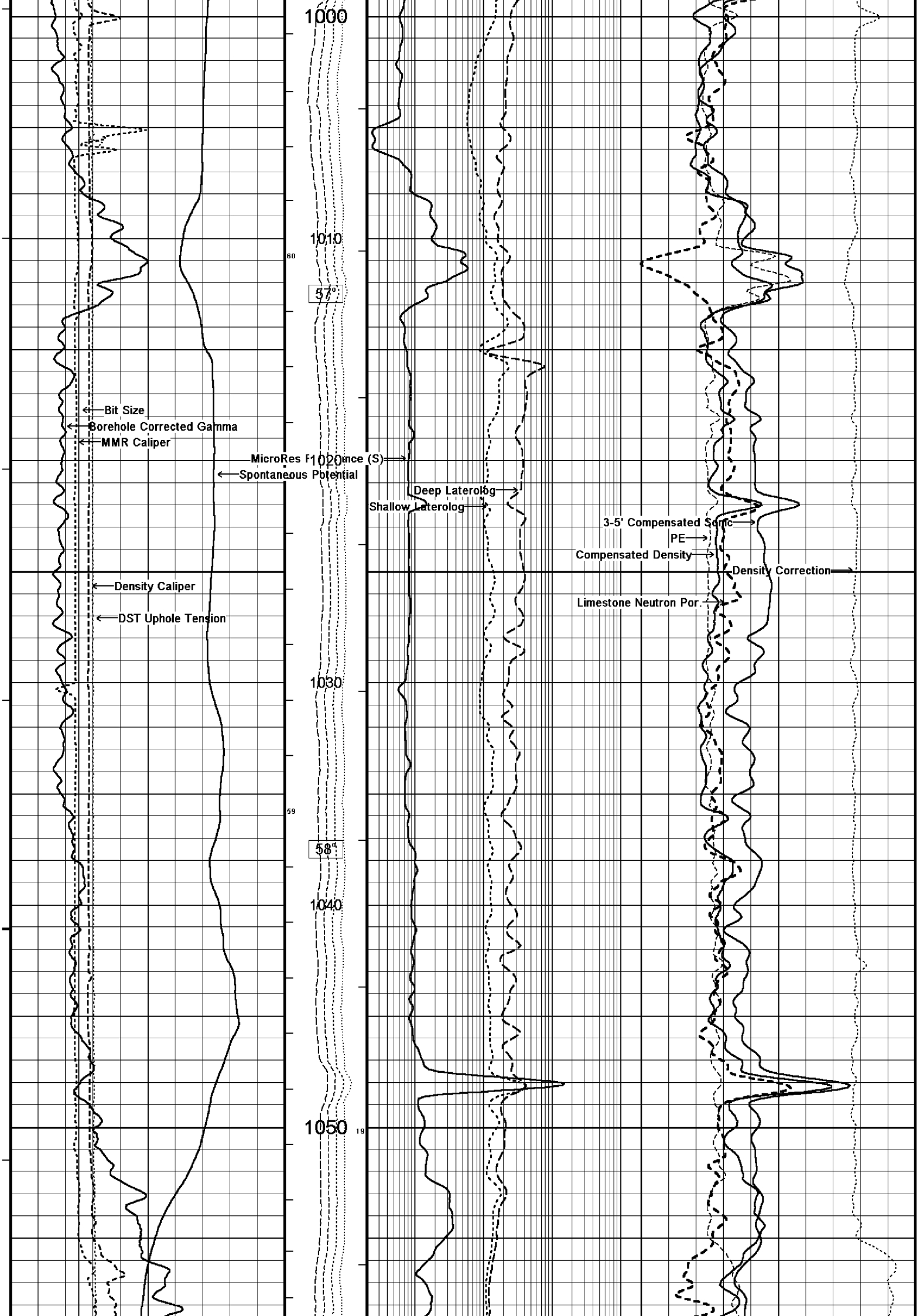

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DSP Uphole Tension
Micro Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
710
720
730
740
750
760
52"
53"

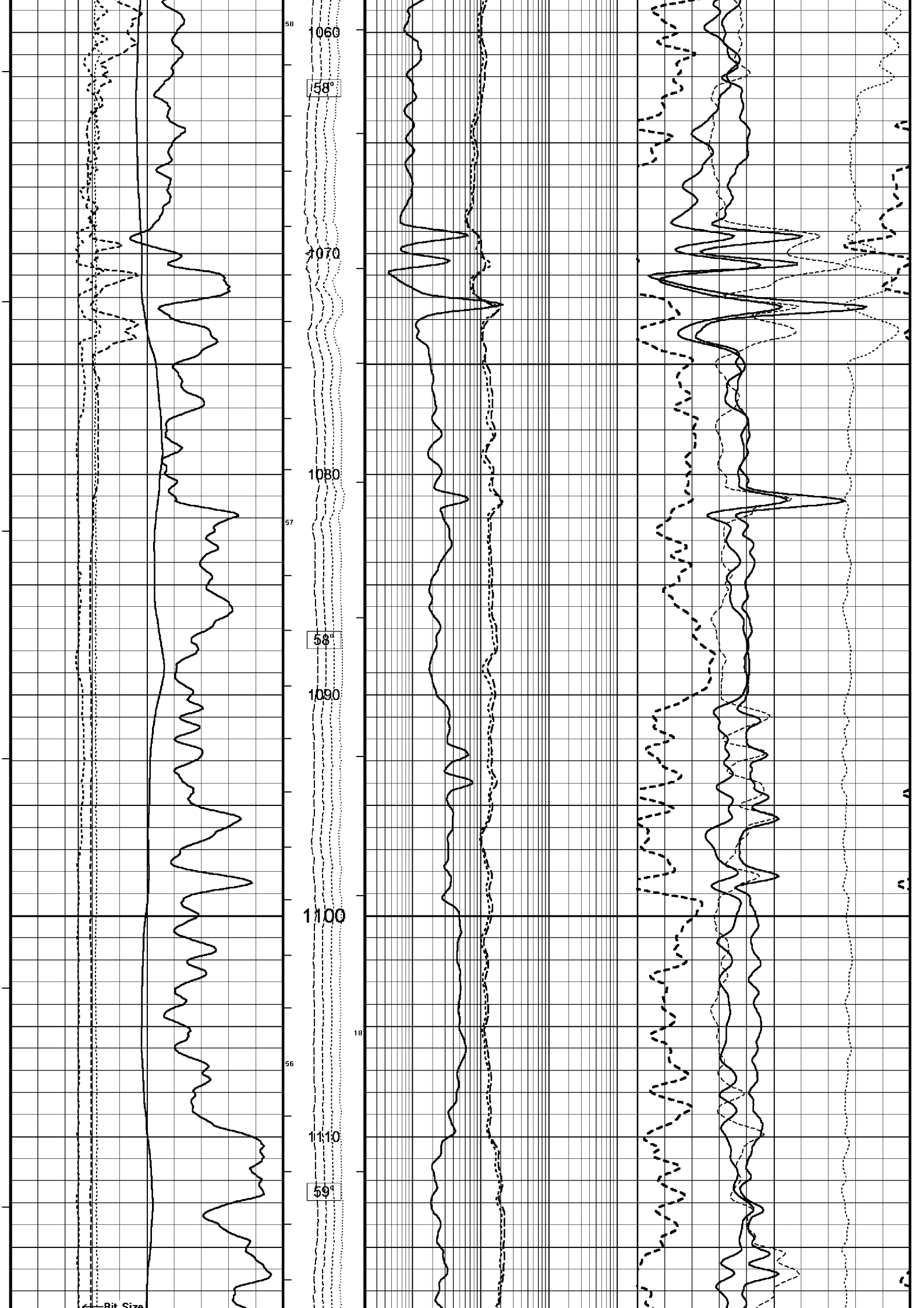

53"
770
780
53"
790
800
810
54"
820
←Bit Size
←Borehole Corrected Gamma
←MMR Caliper
←Spontaneous Potential
MicroRes Resistance (S)→
Deep Laterolog→

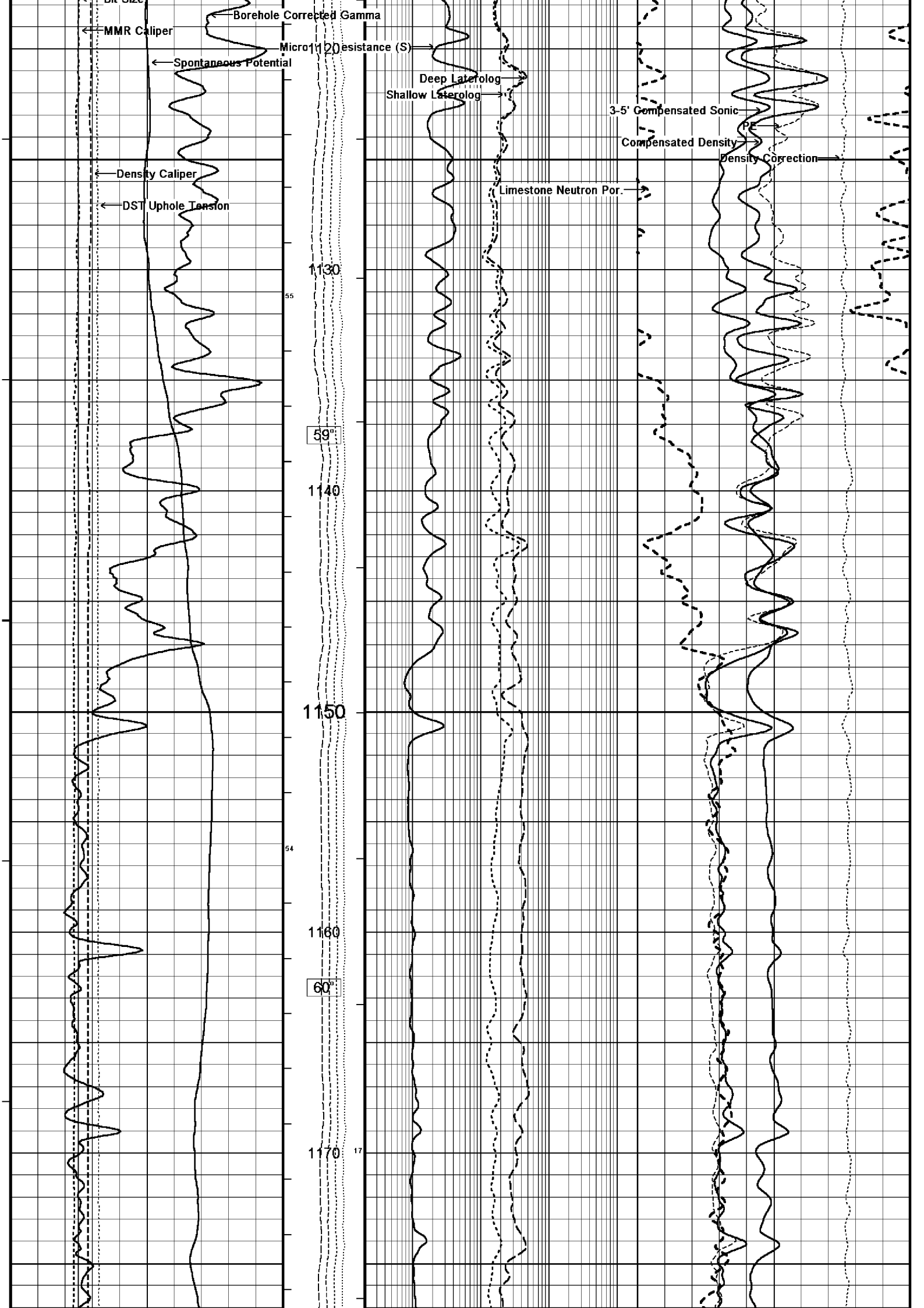

Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
Density Caliper
DST Uphole Tension
830
54°
840
850
860
55°
870
880

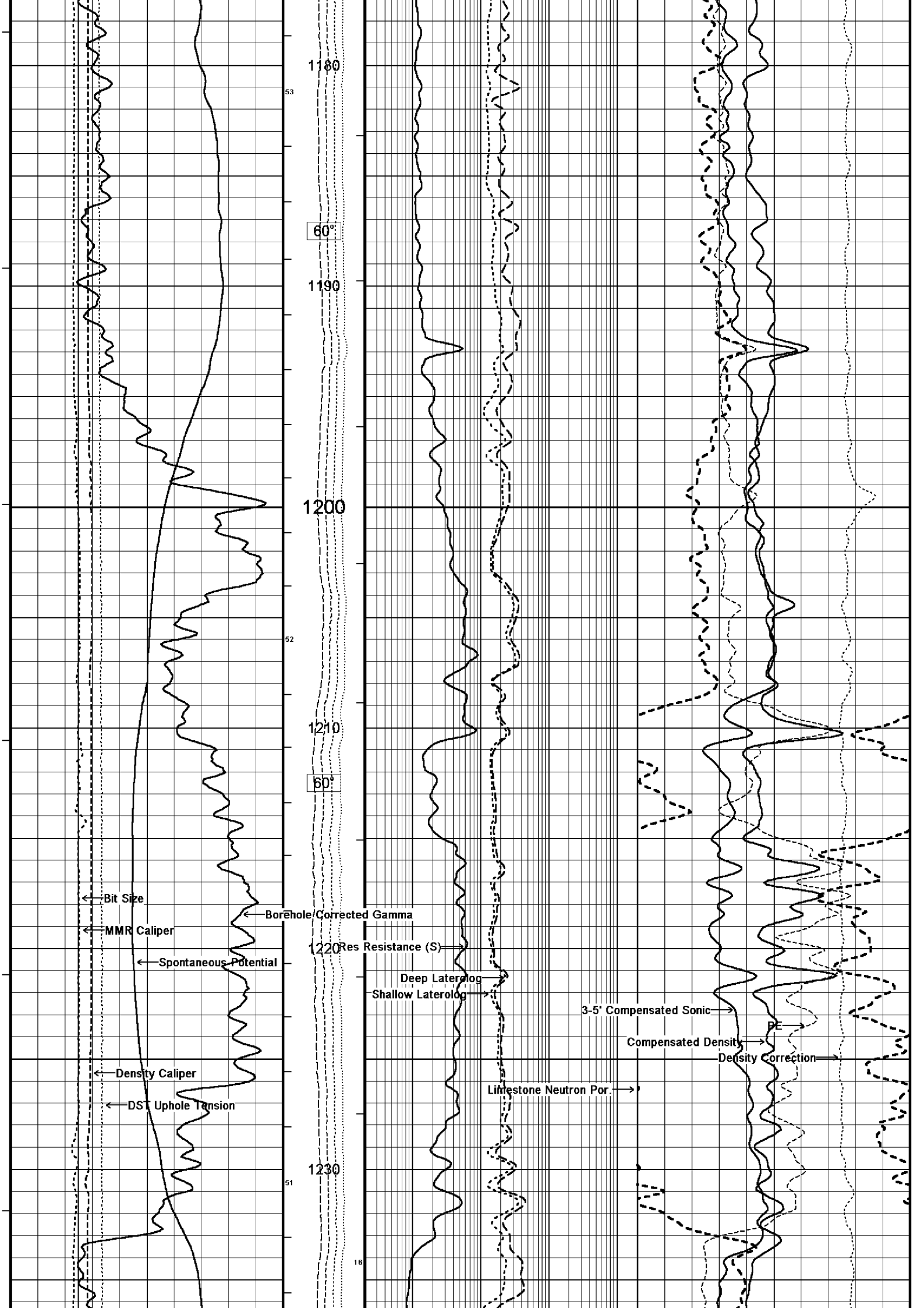

65
55°
890
900
910
64
55°
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
930
63
56°

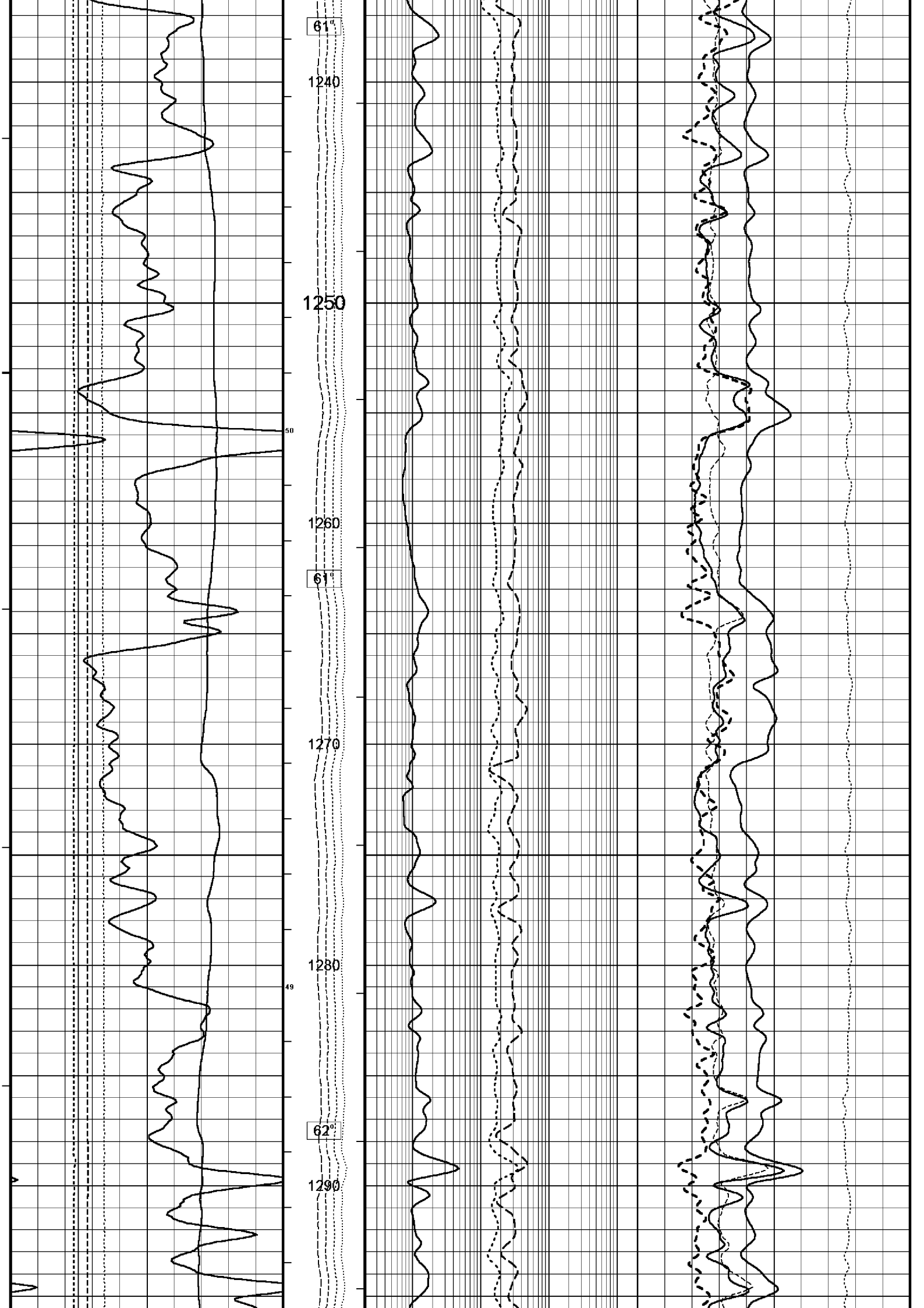

940
950
960
970
980
990
62
61
56°
57°
20

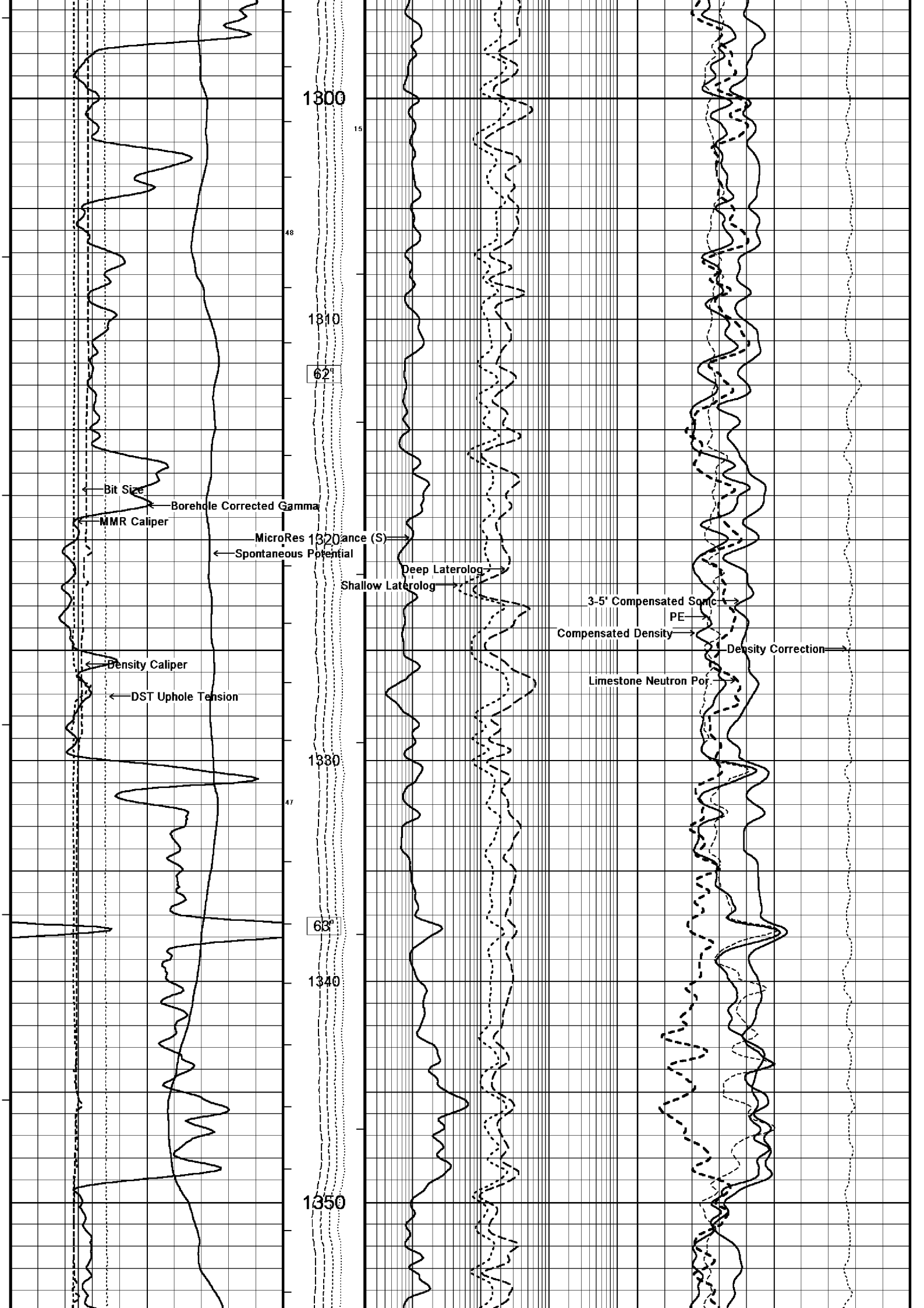

1000
1010
1020
1030
1040
1050
60
59
58
19
57°
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension

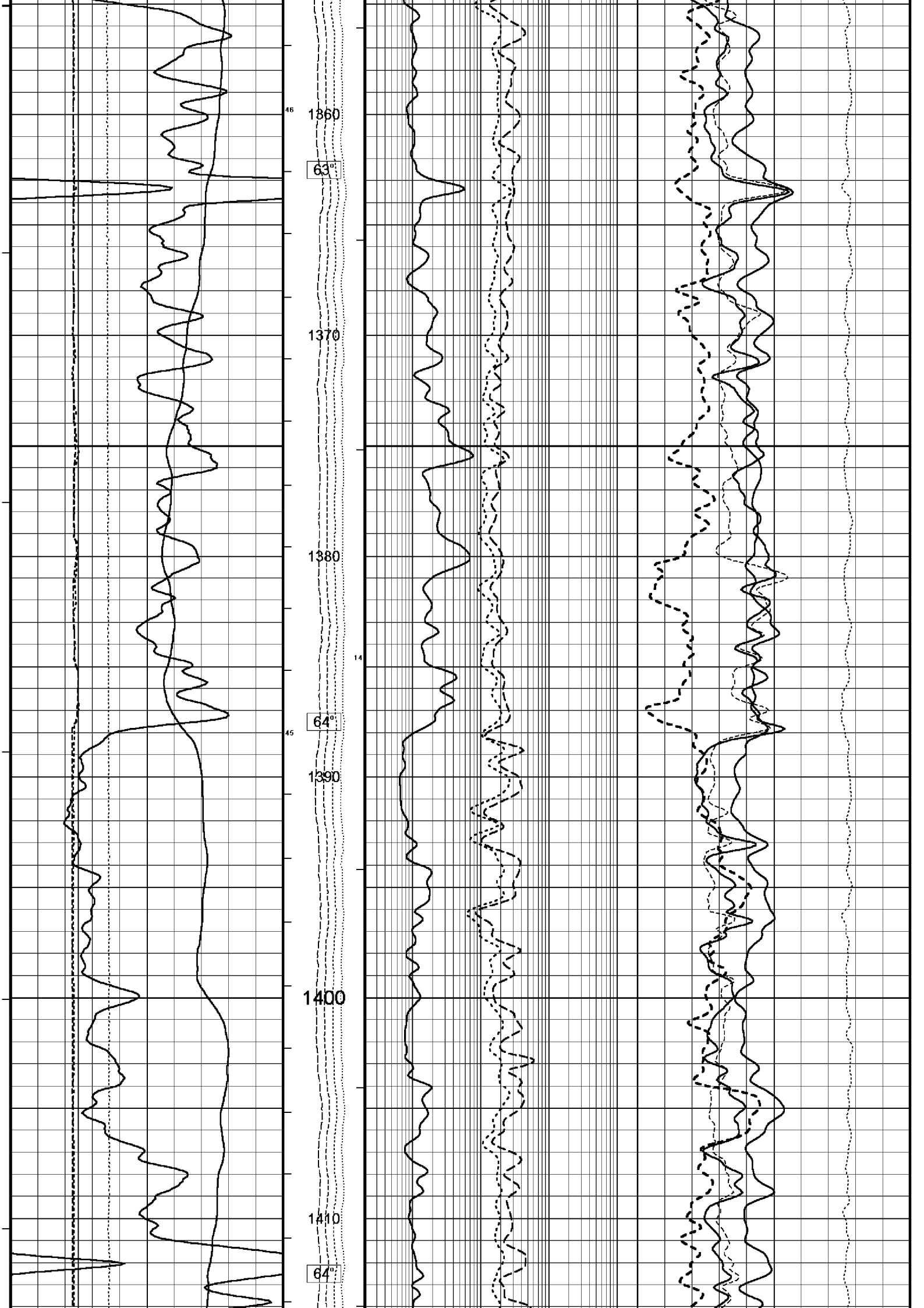

1060
58°
1070
1080
58°
1090
1100
1110
59°
Bit Size

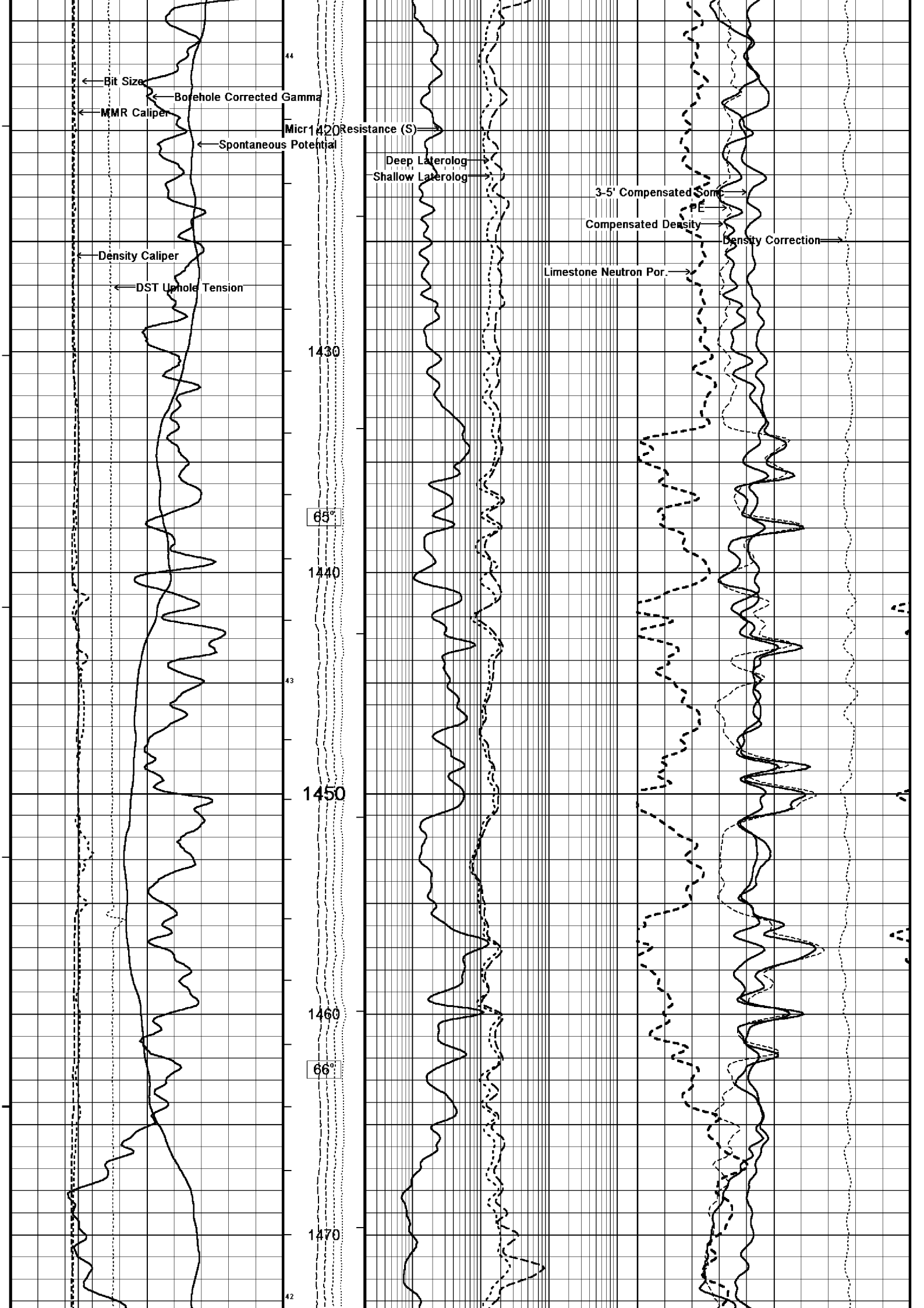

Bit Size
Borehole Corrected Gamma
MMR Caliper
Micro Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1120
1130
1140
1150
1160
1170
55
59°
54
60°
17

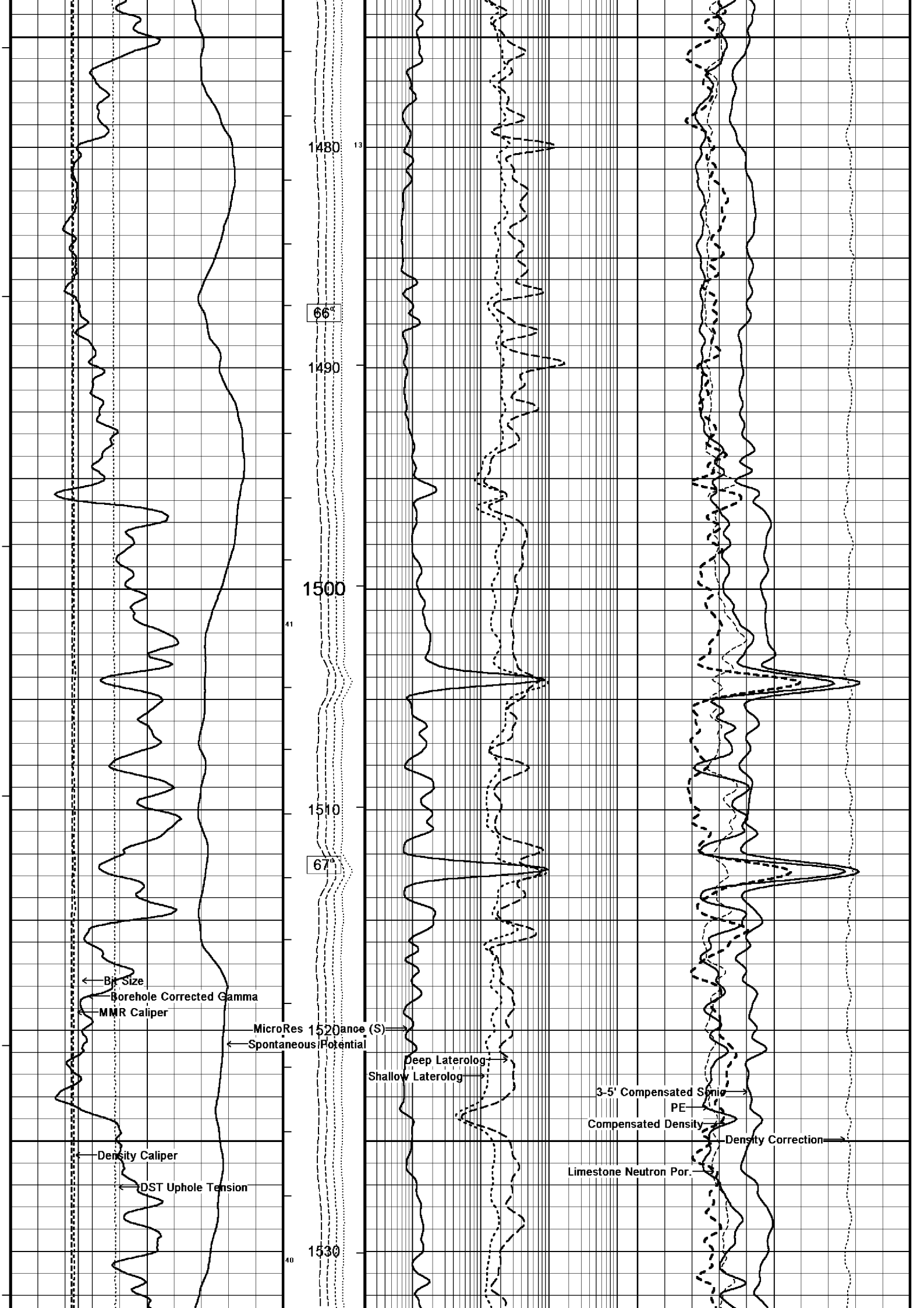

1180
60°
1190
1200
1210
60°
1220
1230
Bit Size
Borehole Corrected Gamma
MMR Caliper
Res Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por
DST Uphole Tension

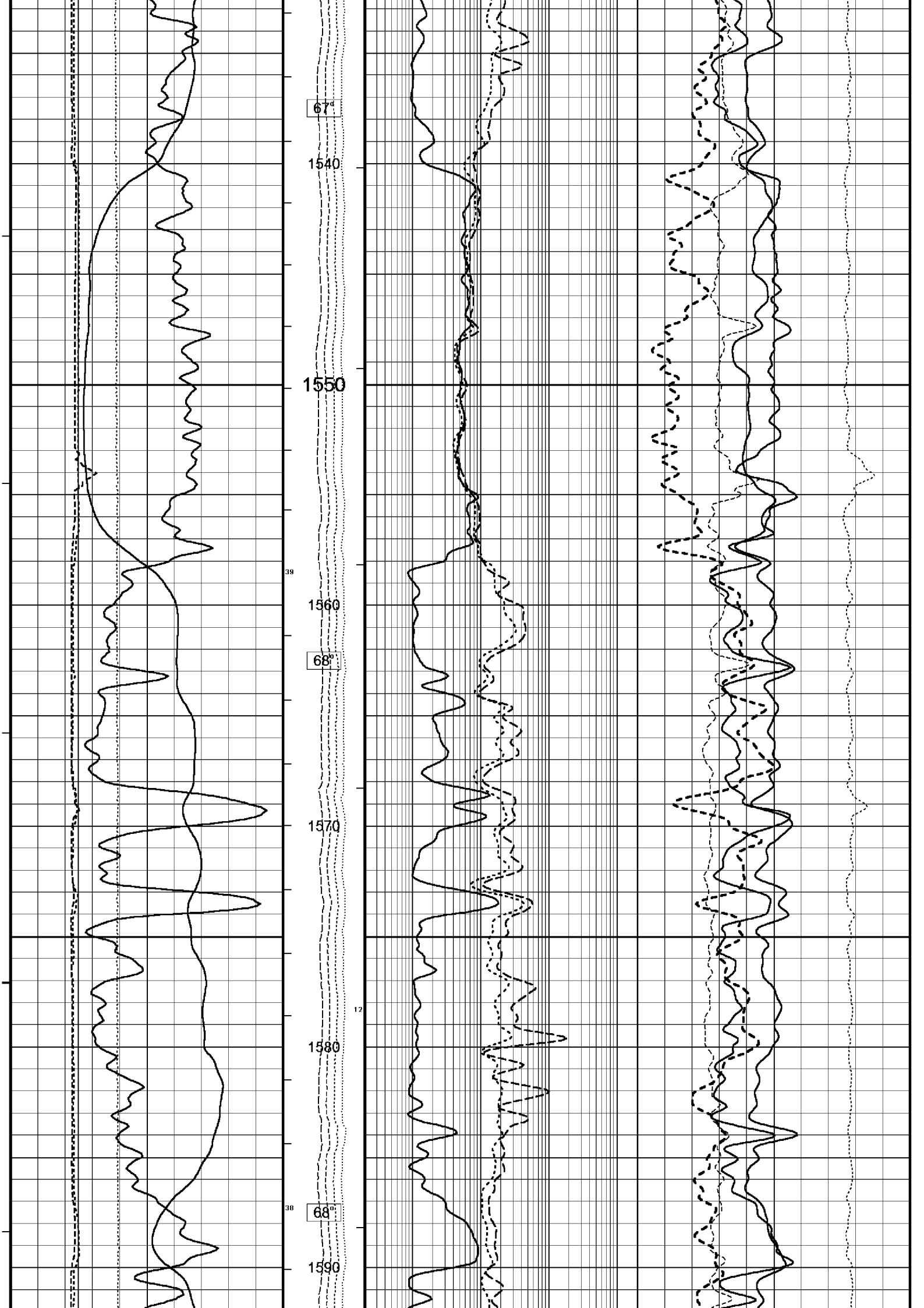

61°
1240
1250
50
1260
61°
1270
49
1280
62°
1290

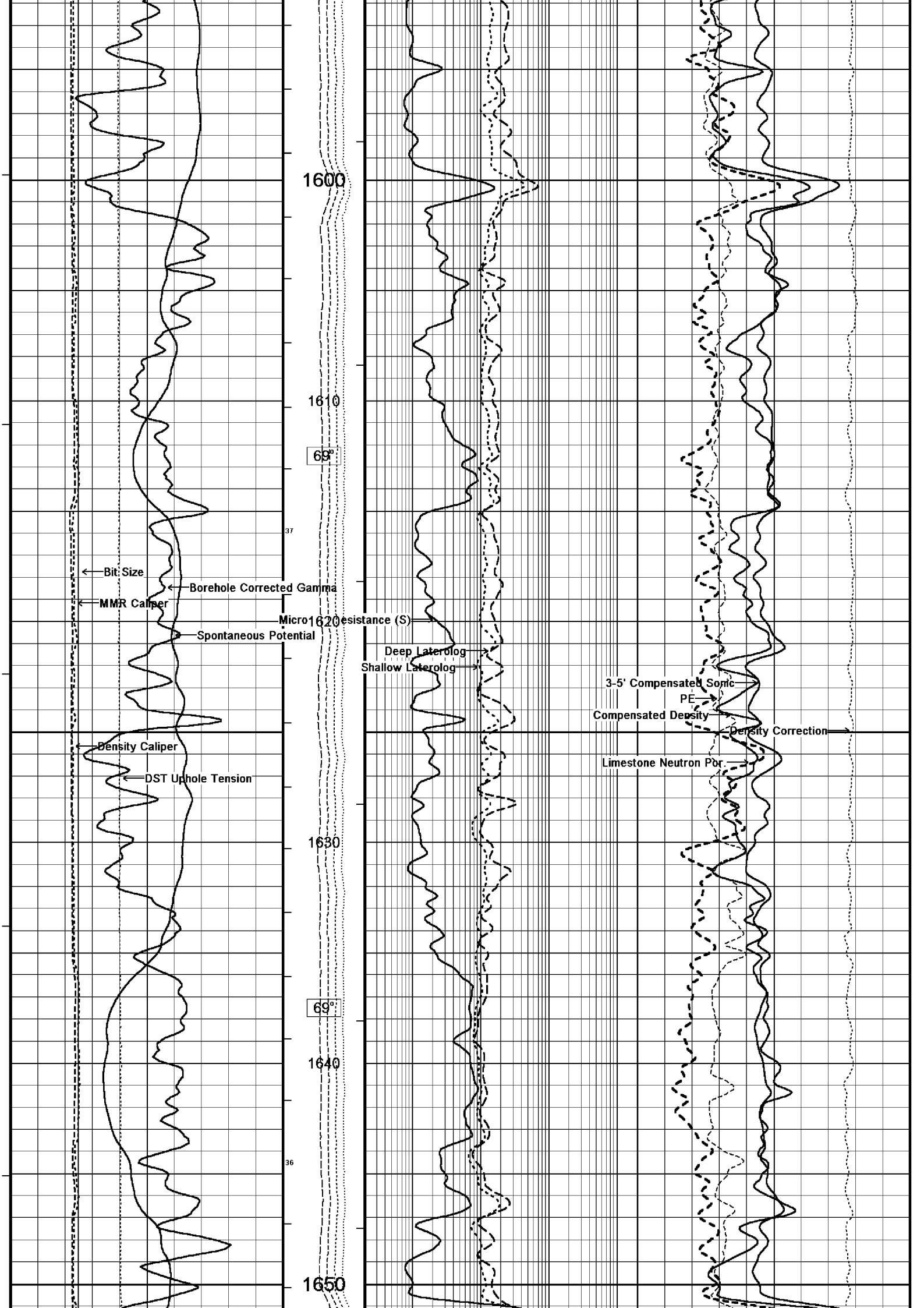

1300
1310
1320
1330
1340
1350
62"
63"
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes 1320ance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por
DST Uphole Tension

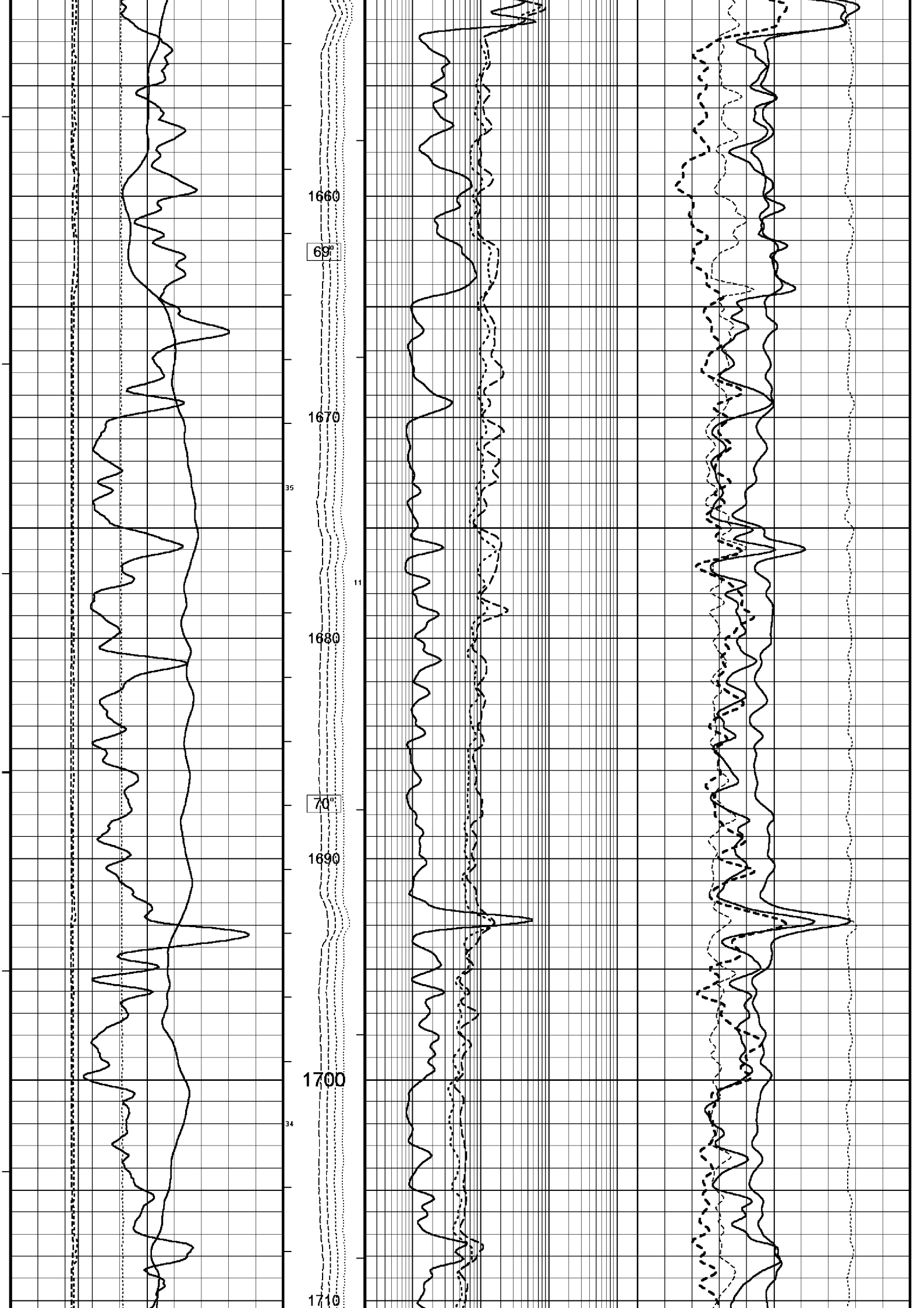

1360
63°
1370
1380
64°
1390
1400
1410
64°

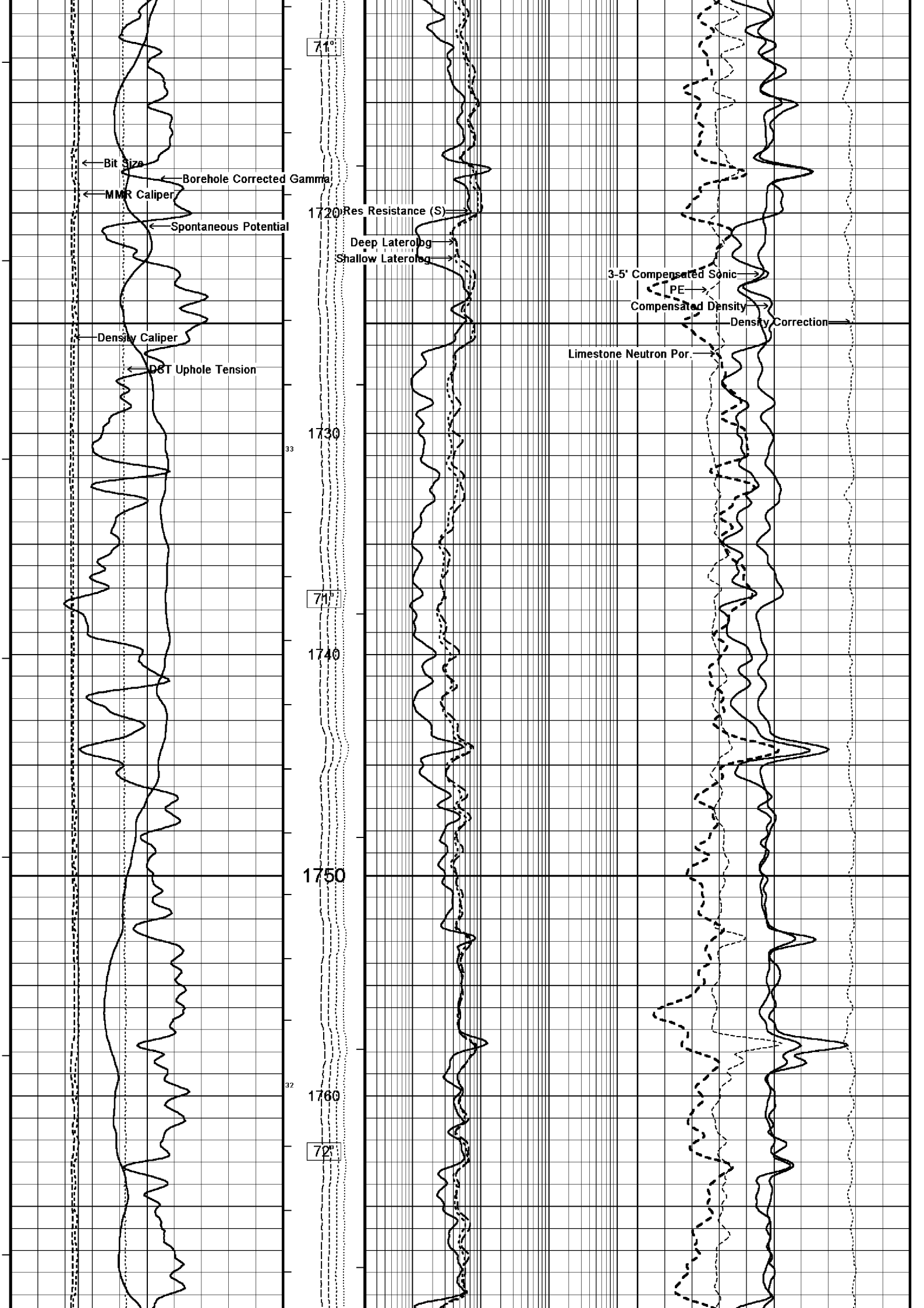

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Micr
Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
1420
1430
1440
1450
1460
1470
65°
66°
44
43
42

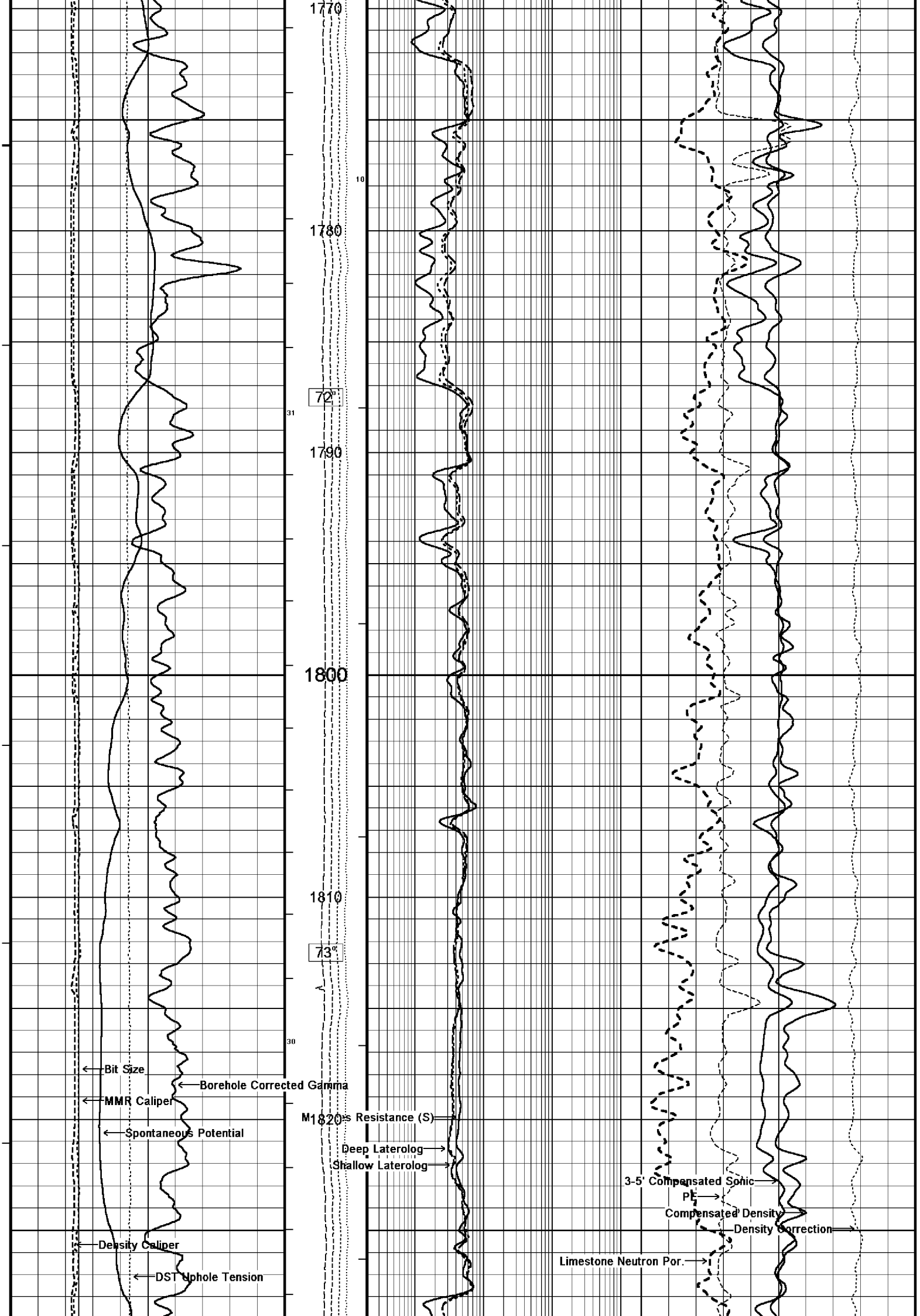

1480
1490
1500
1510
1520
1530
66"
67"
13
41
40
Bit Size
Borehole Corrected Gamma
MMR Caliper
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

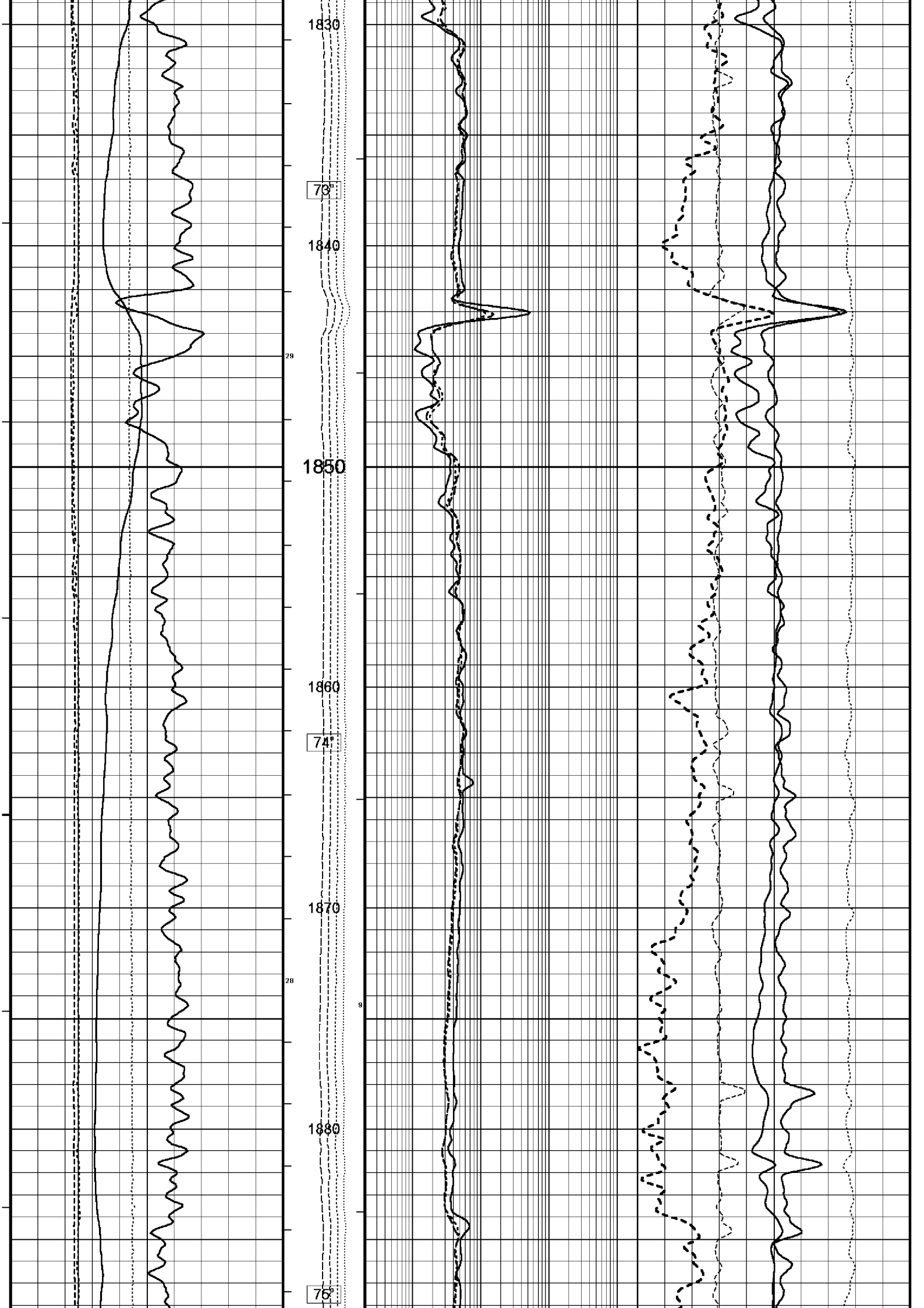

67°
1540
1550
39
1560
68°
1570
12
1580
38
68°
1590

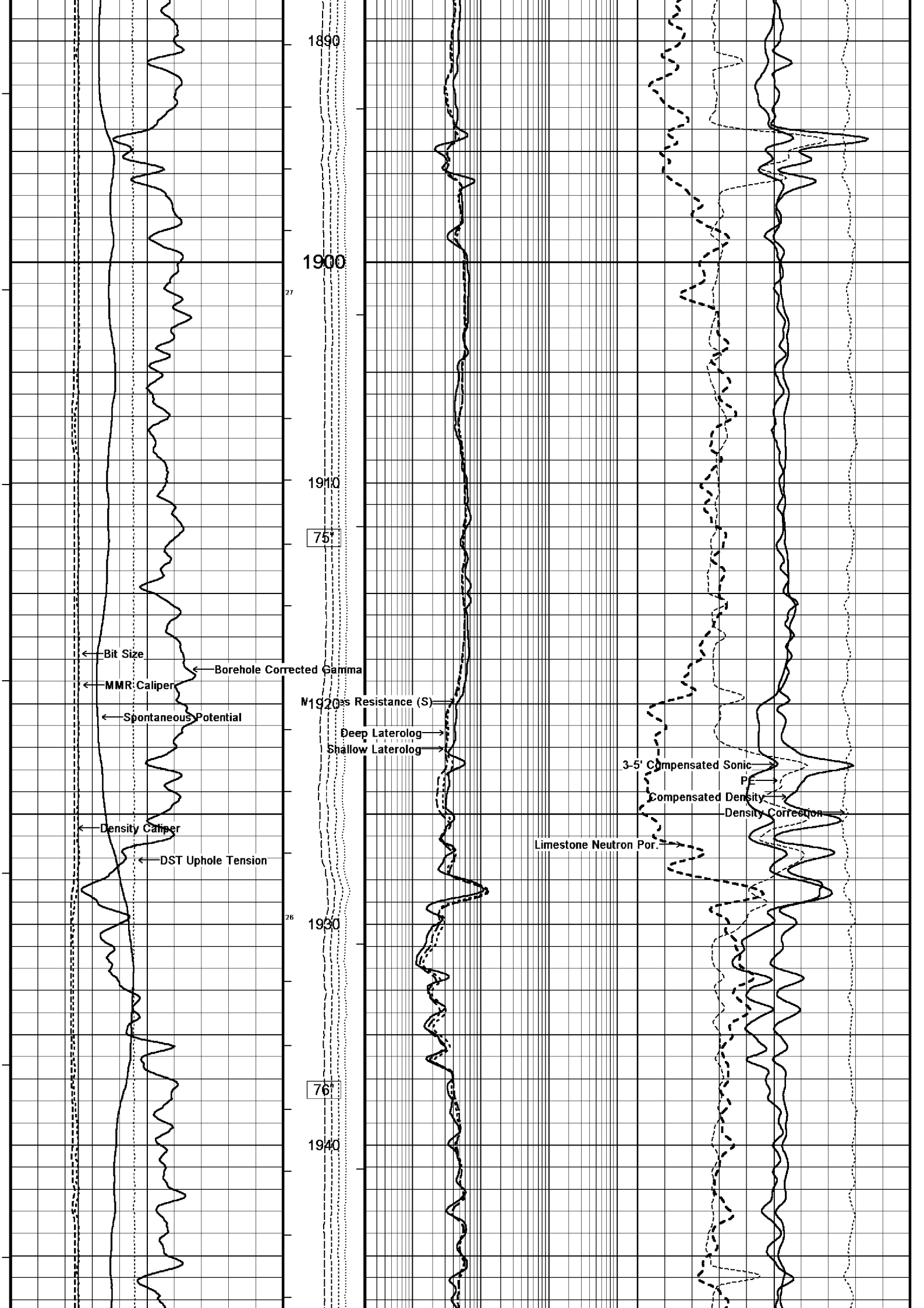

1600
1610
69°
37
Bit Size
Borehole Corrected Gamma
MMR Caliper
Micro
esistance (S)
1620
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por
DST Uphole Tension
1630
69°
1640
36
1650

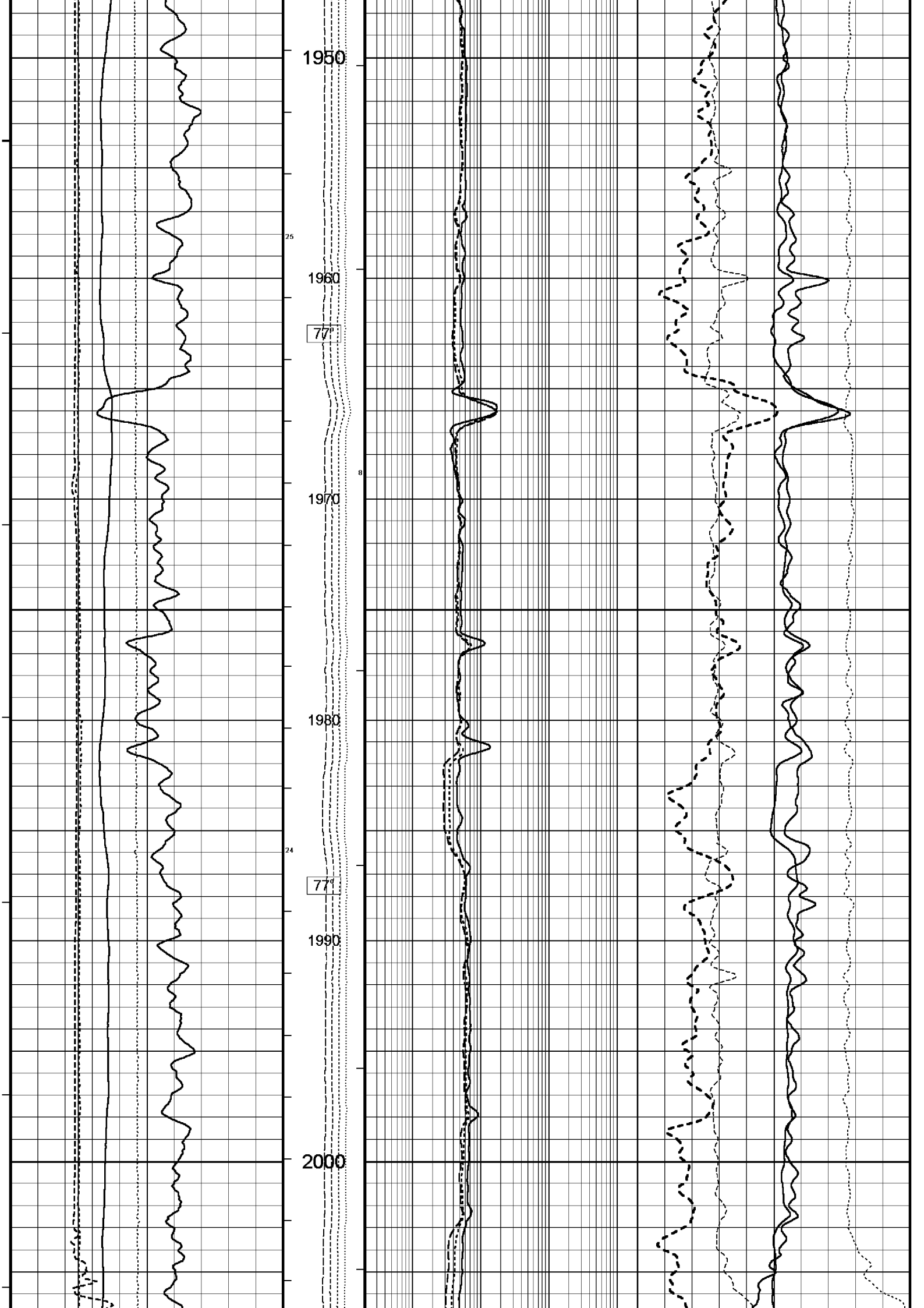

1660
69°
1670
35
11
1680
70°
1690
1700
34
1710

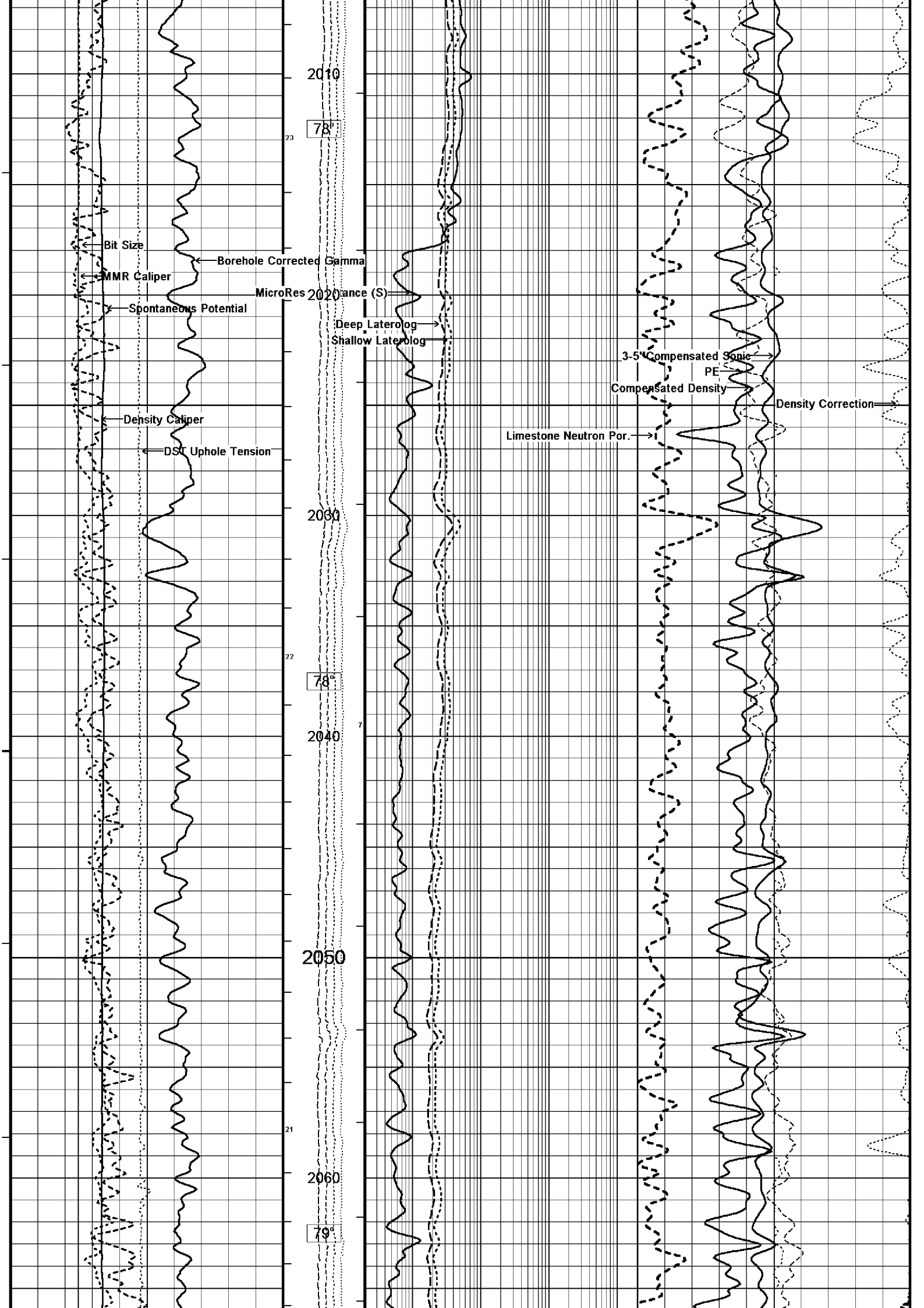

71°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
1720
Res Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1730
33
71°
1740
1750
32
1760
72°

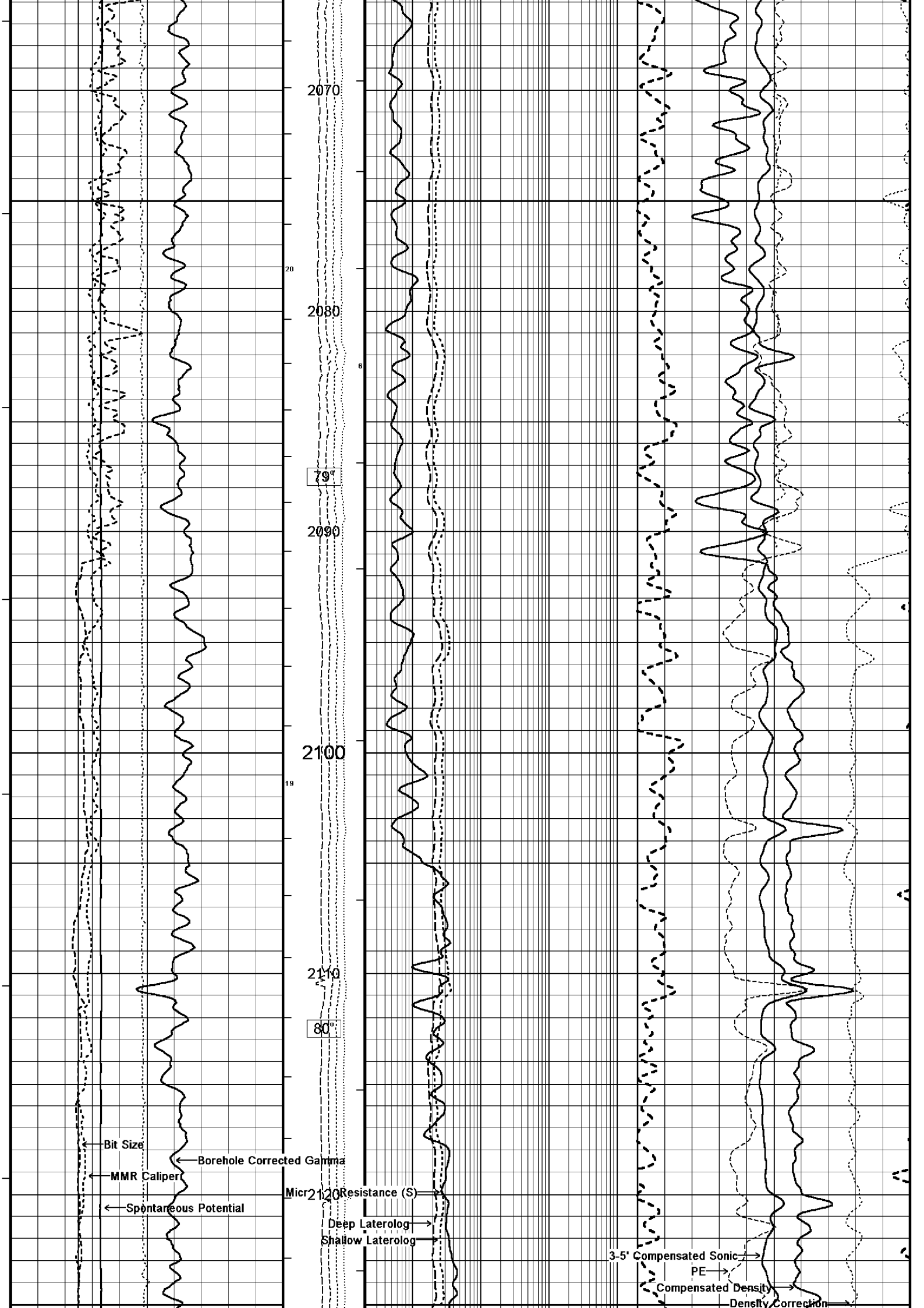

1770
1780
1790
1800
1810
72°
73°
10
31
30
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
M1820ss Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

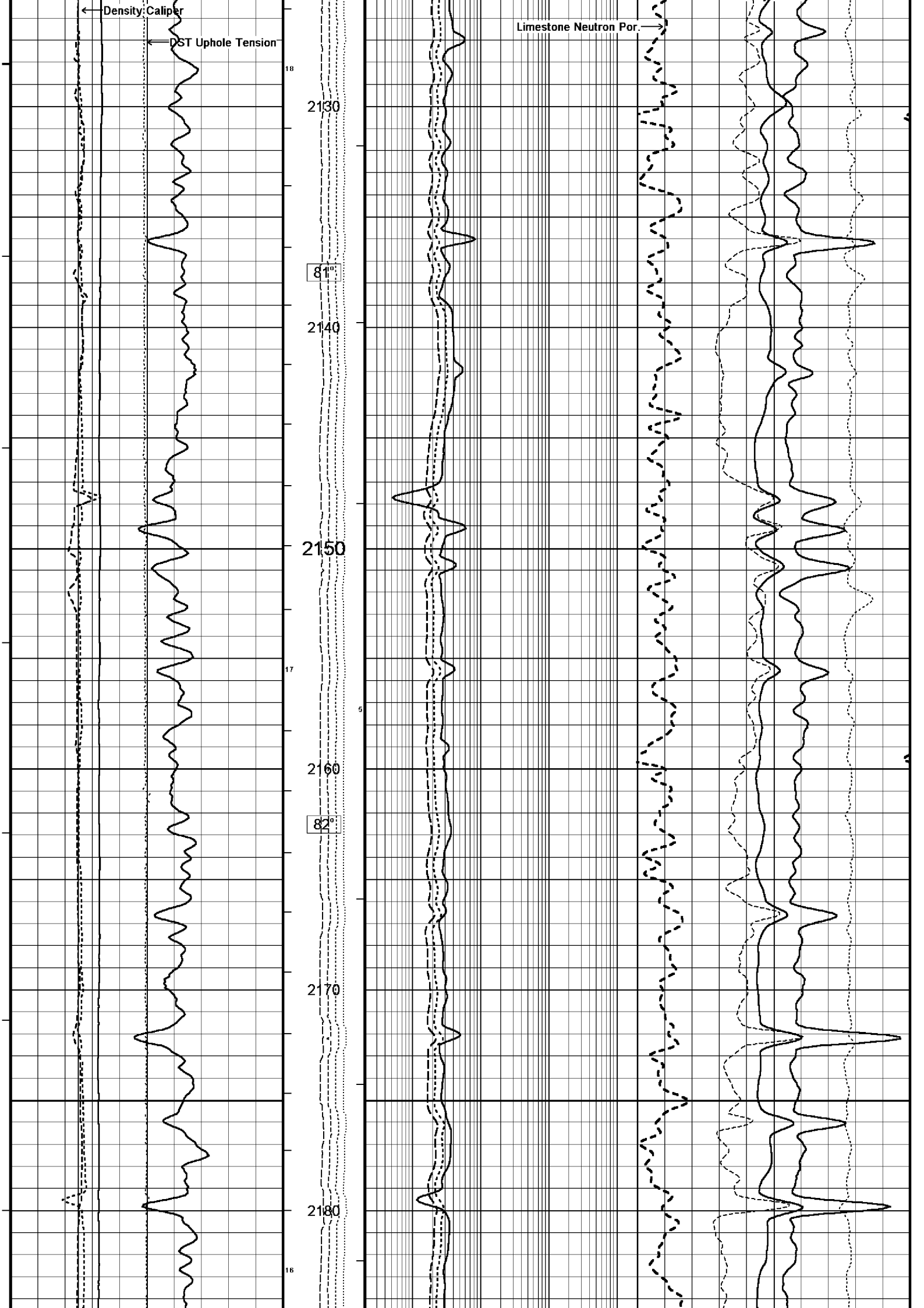

1830
73°
1840
1850
1860
74°
1870
1880
75°

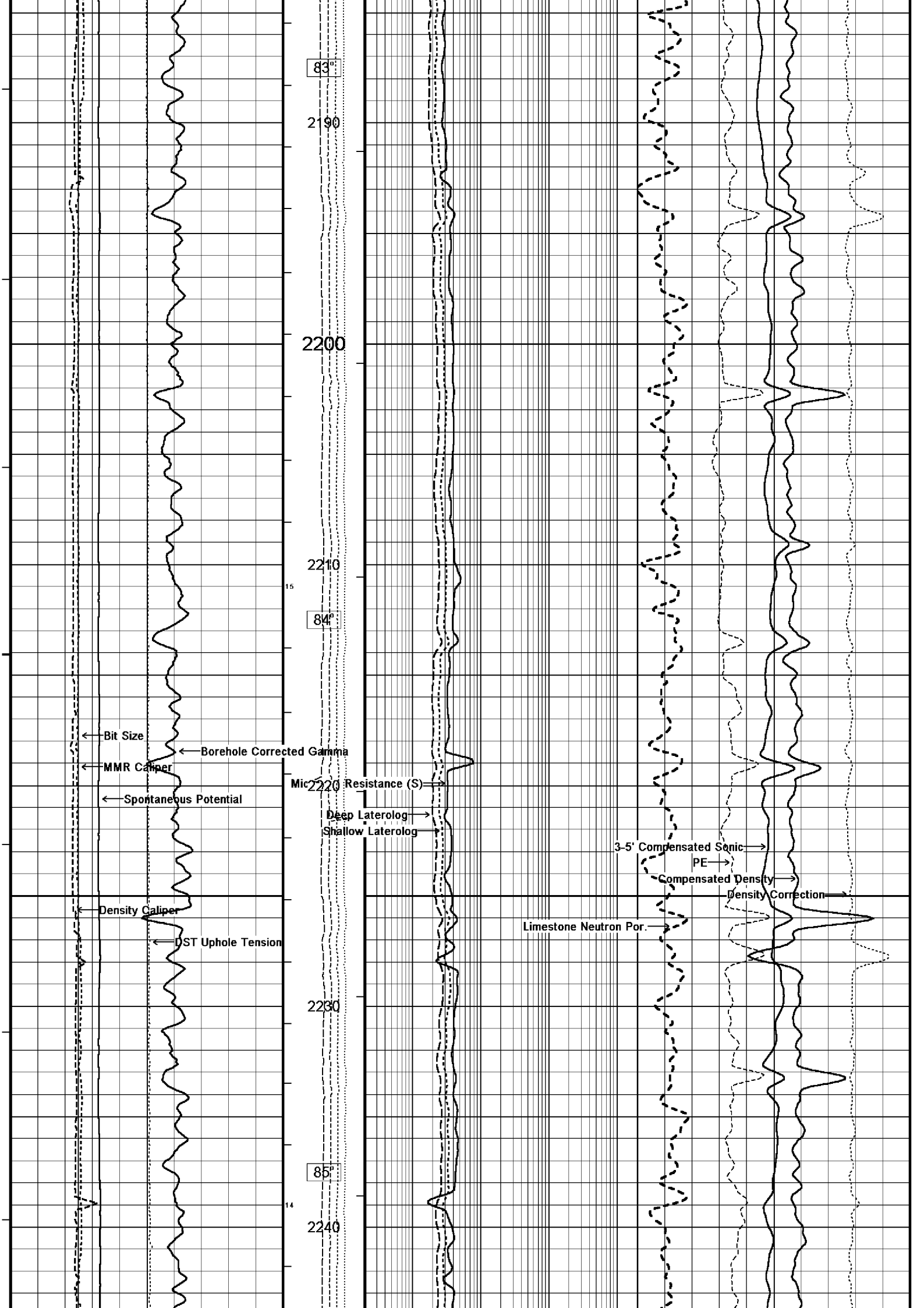

1890
1900
1910
1920
1930
1940
75'
76'
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
s Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

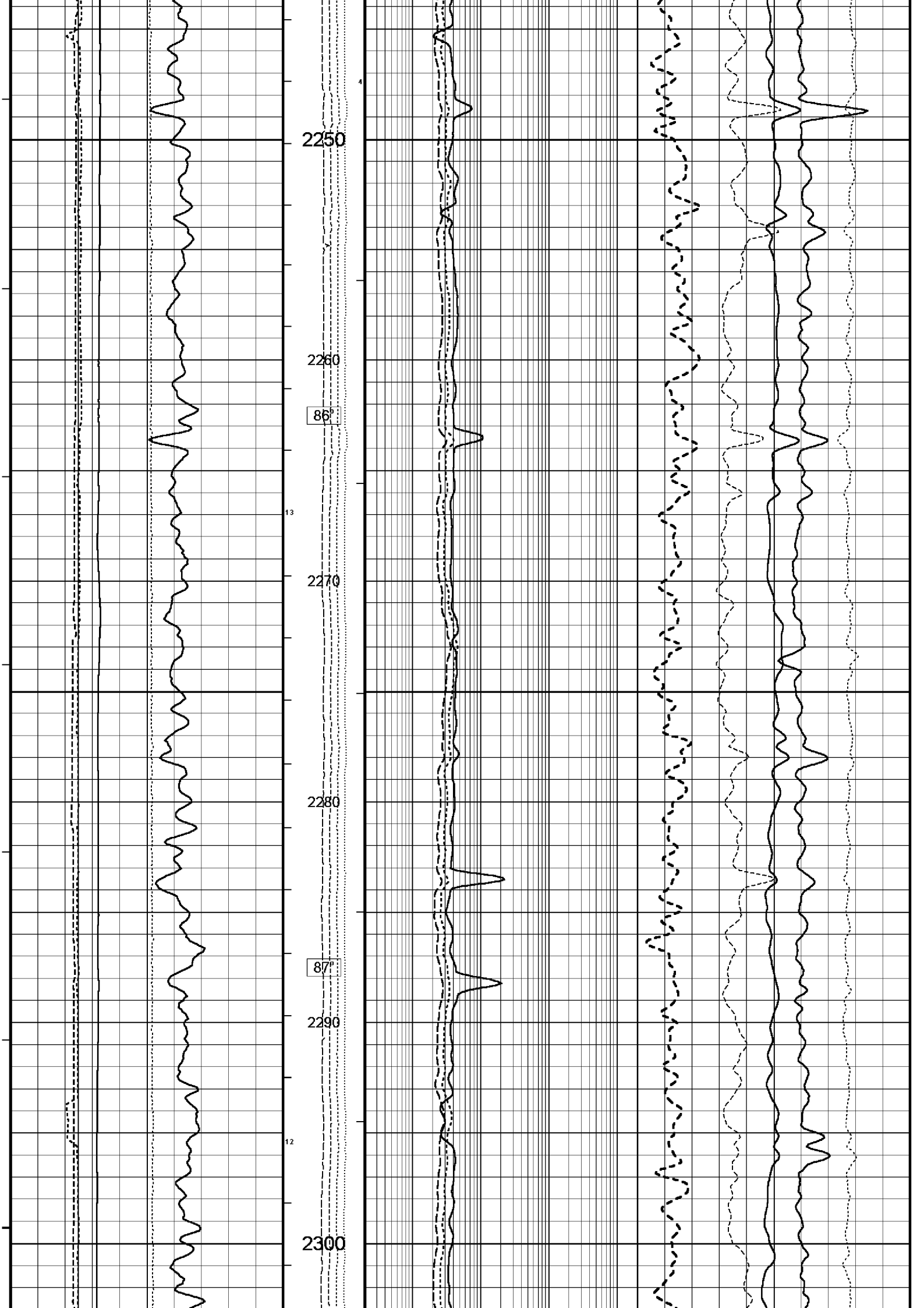

1950
1960
77°
1970
1980
24
77°
1990
2000

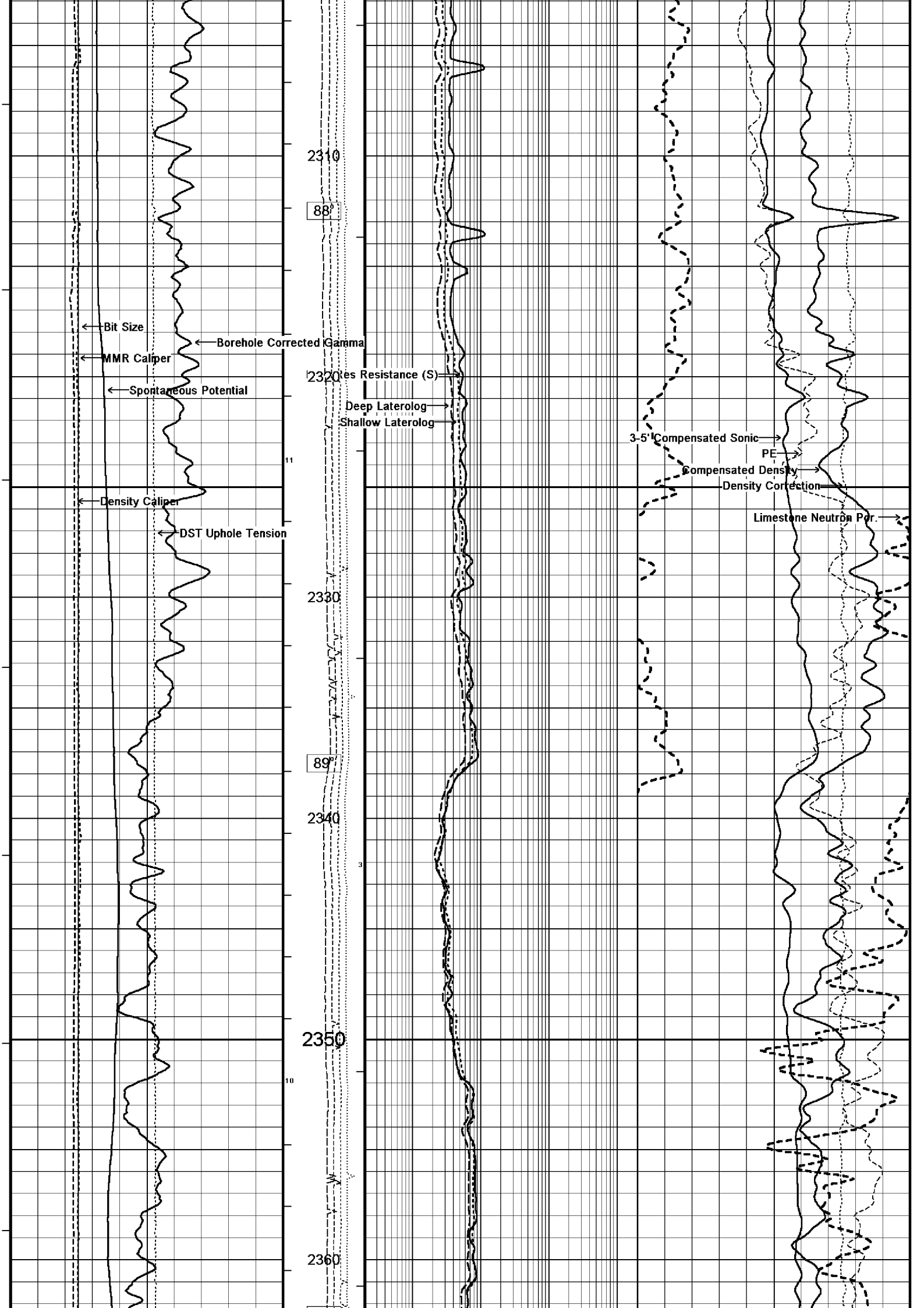

2010
78°
23
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes
ance (S)
2020
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5" Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
2030
22
78°
7
2040
2050
21
2060
79°

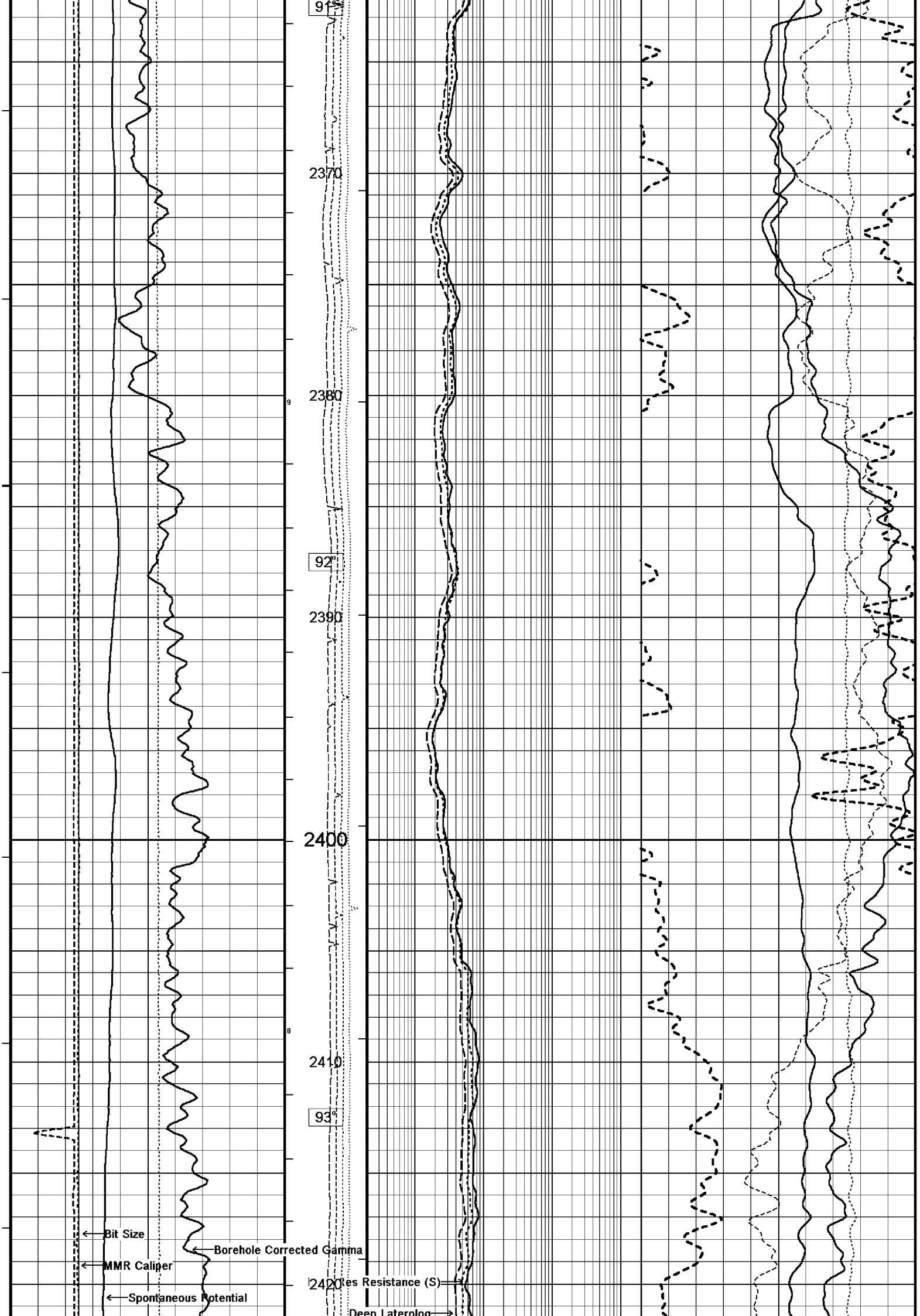

2070
2080
2090
2100
2110
2120
79°
80°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Micr
Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction

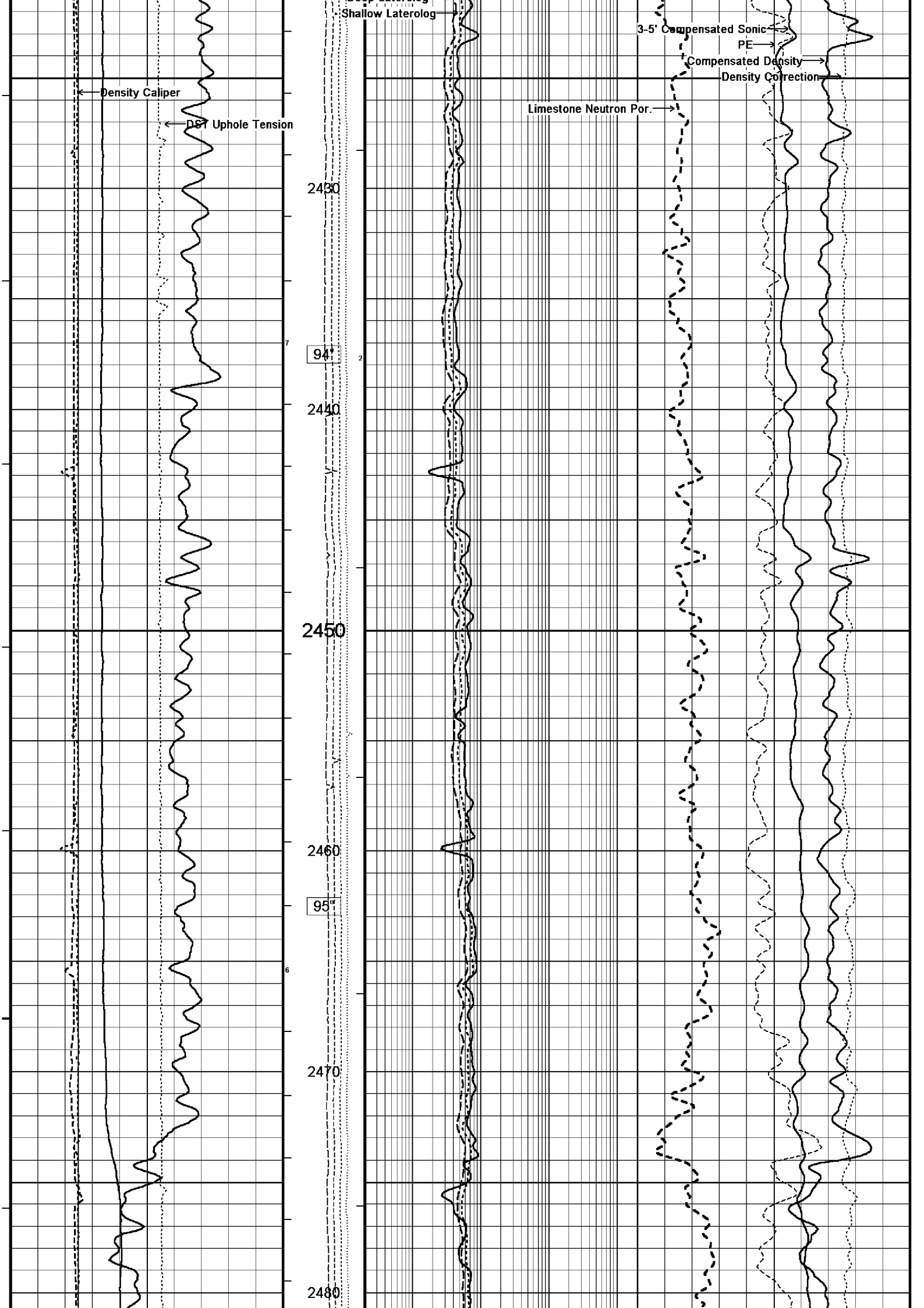

Density Caliper
DST Uphole Tension
Limestone Neutron Por.
2130
81°
2140
2150
2160
82°
2170
2180

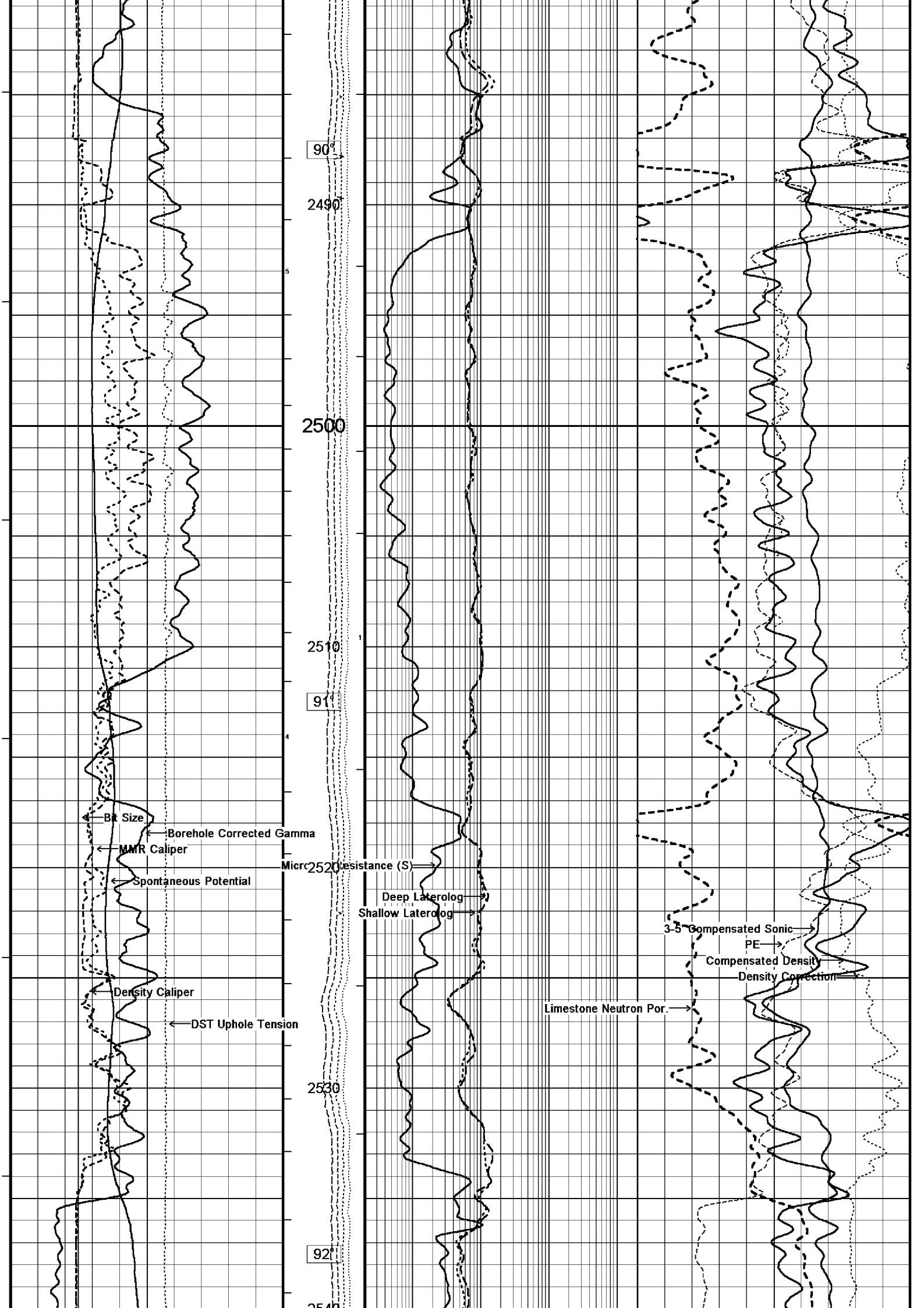

83°
2190
2200
2210
84°
2220
85°
2230
2240
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Micro Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

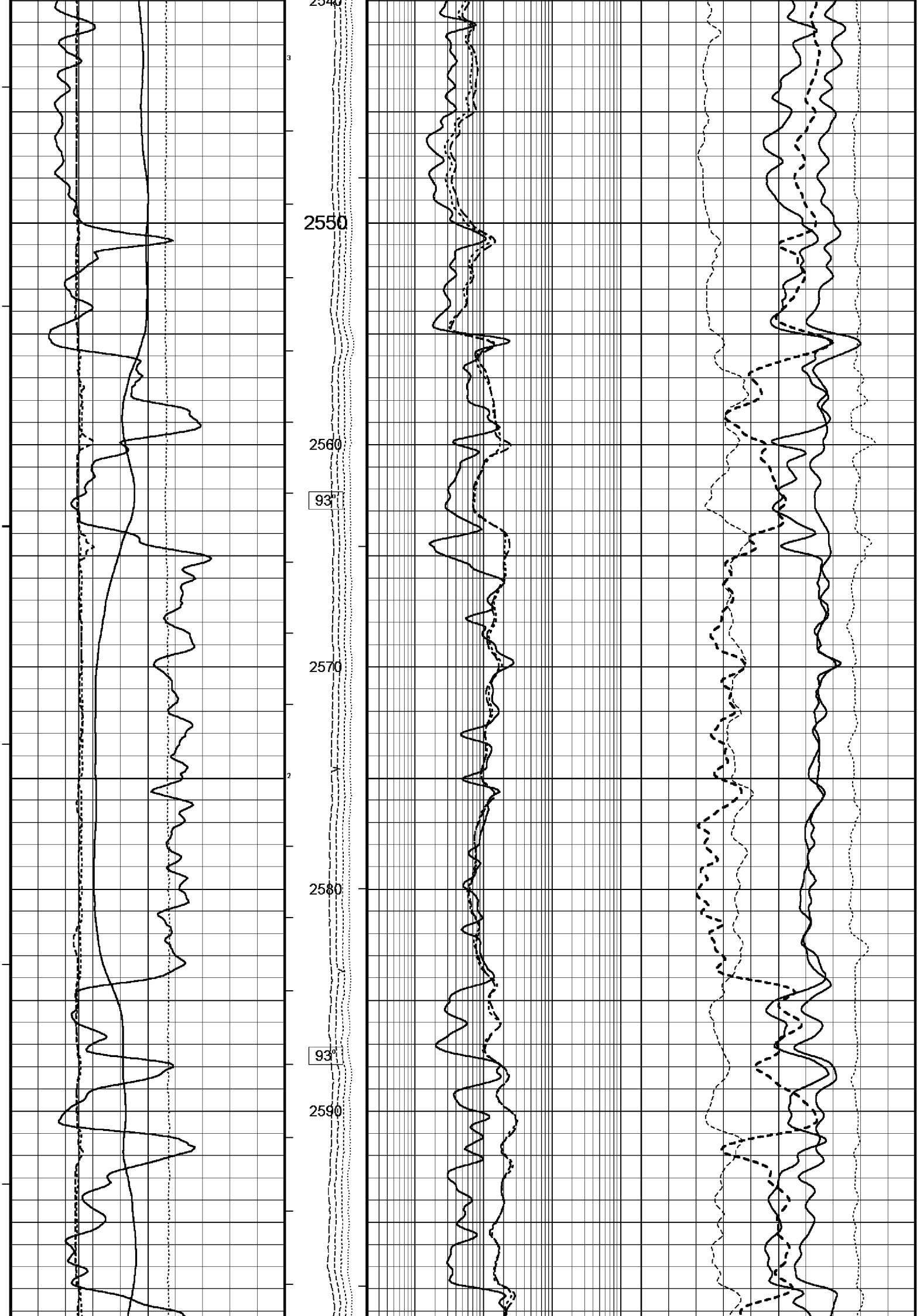

2250
2260
86°
2270
2280
87°
2290
2300

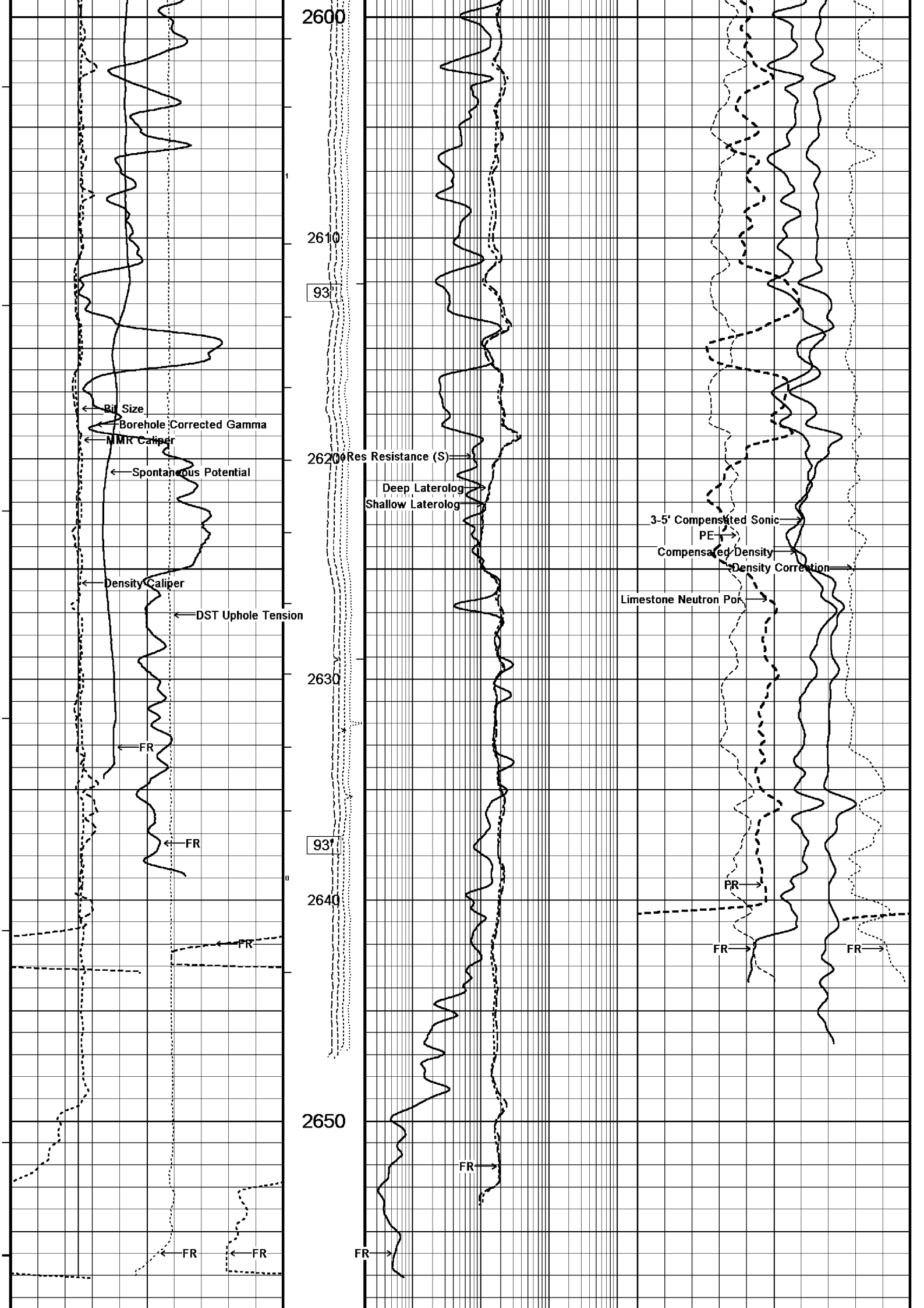

2310
88°
Bit Size
Borehole Corrected Gamma
MMR Caliper
2320
es Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
2330
89°
2340
2350
2360

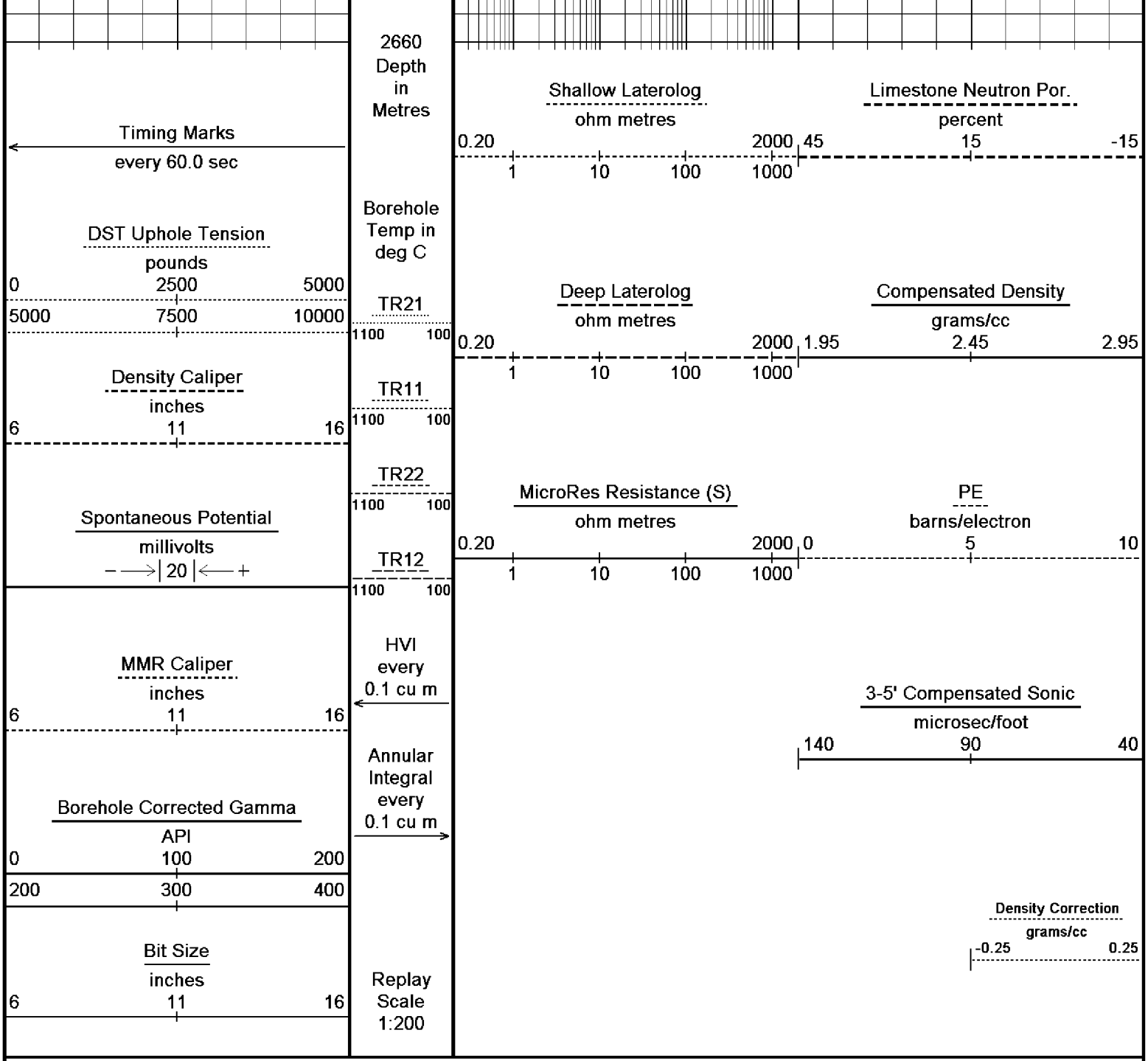

2370
2380
2390
2400
2410
2420
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Deep Laterolog


Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
Density Caliper
DST Uphole Tension
2430
2440
2450
2460
2470
2480


90
2490
2500
2510
91
2520
2530
92
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Micro Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5 Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.


2550
2560
93°
2570
2580
93°
2590


2600
2610
93
2620
2630
93
2640
2650
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
FR
FR
FR
FR
FR
FR
FR
Res Resistance (S)
Deep Laterolog
Shallow Laterolog
FR
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por
FR
FR
FR

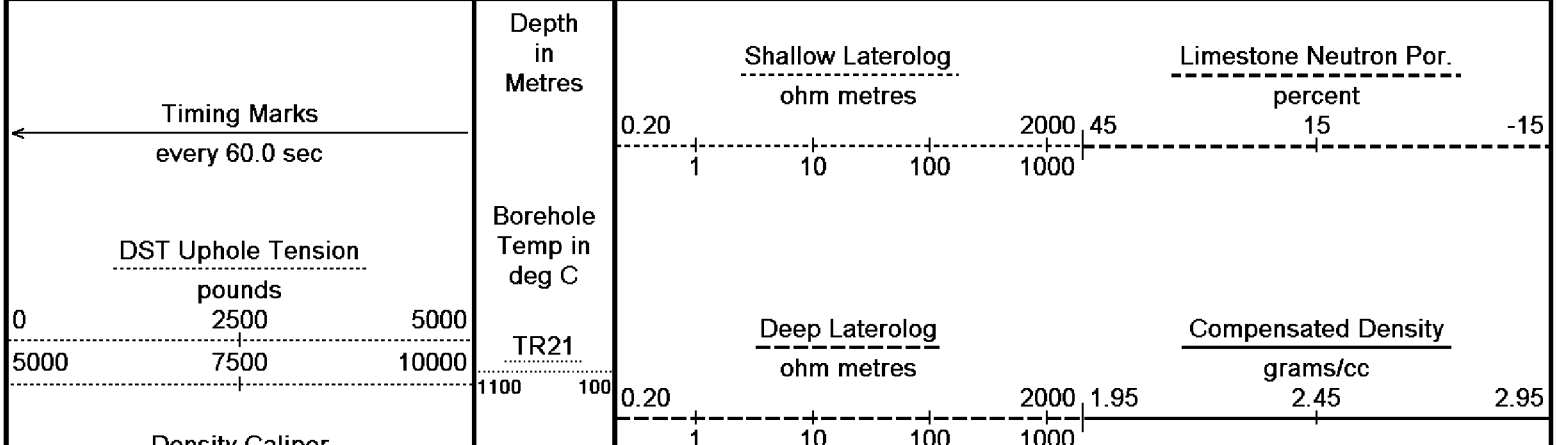


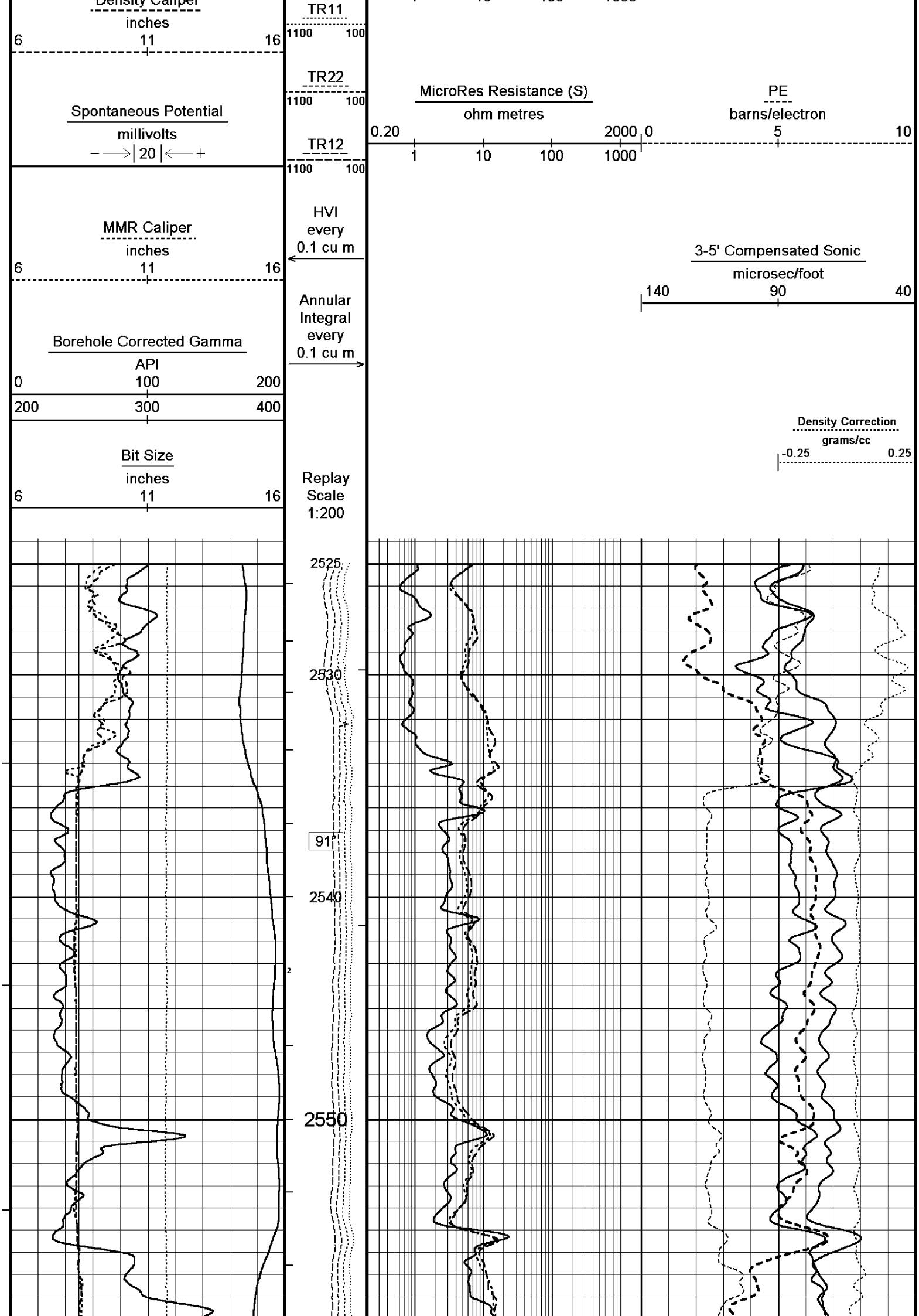
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:18
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

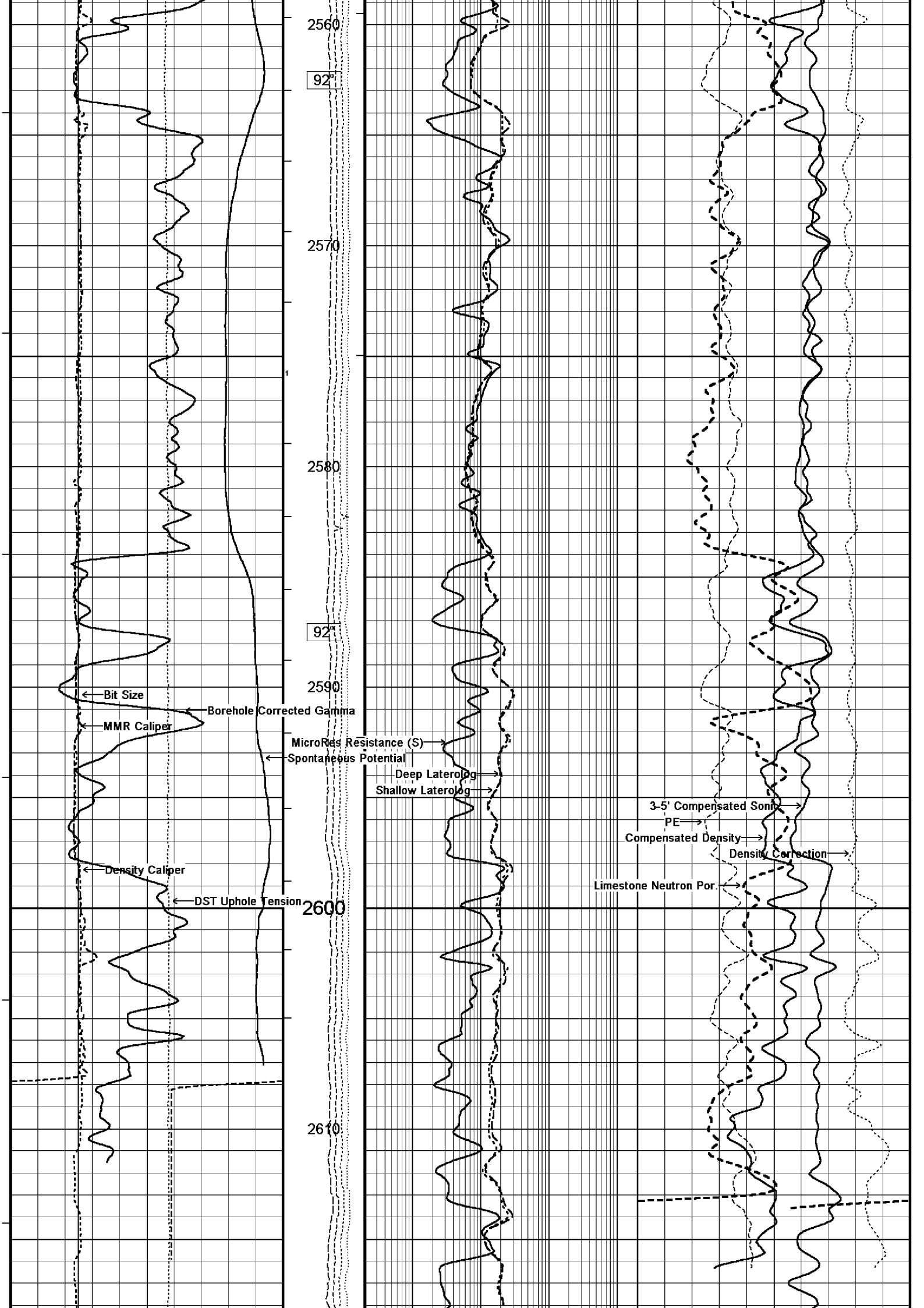
MAIN LOG 1:200

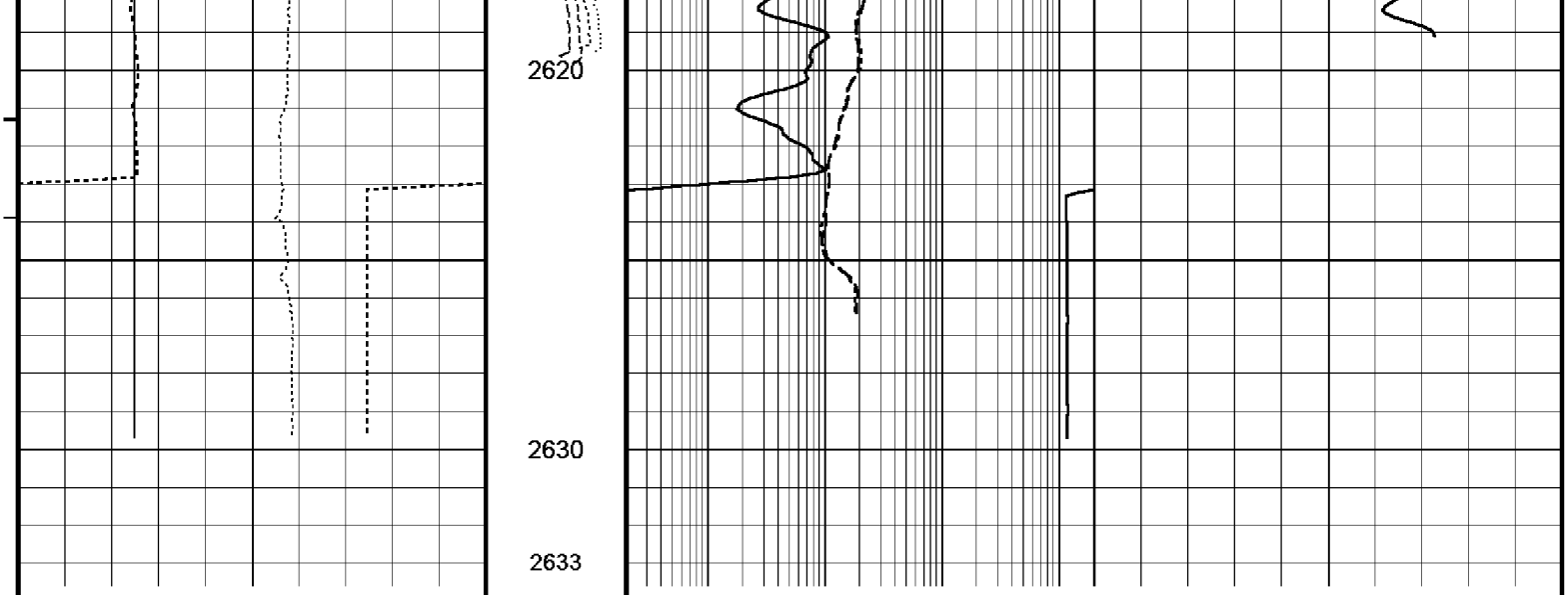
REPEAT SECTION 1:200 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:18
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:




Density Caliper
inches
6
11
16
TR11
1100
100
TR22
1100
100
TR12
1100
100
MicroRes Resistance (S)
ohm metres
0.20
2000
1
10
100
1000
PE
barns/electron
0
5
10
Spontaneous Potential
millivolts
20
HVI
every
0.1 cu m
3-5' Compensated Sonic
microsec/foot
140
90
40
MMR Caliper
inches
6
11
16
Annular
Integral
every
0.1 cu m
Borehole Corrected Gamma
API
0
100
200
200
300
400
Density Correction
grams/cc
-0.25
0.25
Bit Size
inches
6
11
16
Replay
Scale
1:200
2525
2530
91
2540
2550


2560
92°
2570
2580
92°
2590
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
2600
2610



Depth in Metres

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
– → | 20 | ← +

MMR Caliper
inches
6 11 16

Borehole Corrected Gamma
API
0 100 200
200 300 400

Bit Size
inches
6 11 16

Borehole Temp in deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:200

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Compensated Density
grams/cc
1.95 2.45 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

PE
barns/electron
0 5 10

3-5' Compensated Sonic
microsec/foot
140 90 40

Density Correction
grams/cc
-0.25 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:18
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

REPEAT SECTION 1:200 RUN 2

REPEAT SECTION 1:200 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:18

Filename: C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
– → | 20 | ← +

MMR Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth in Metres

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

Replay Scale 1:200

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Compensated Density
grams/cc
1.95 2.45 2.95

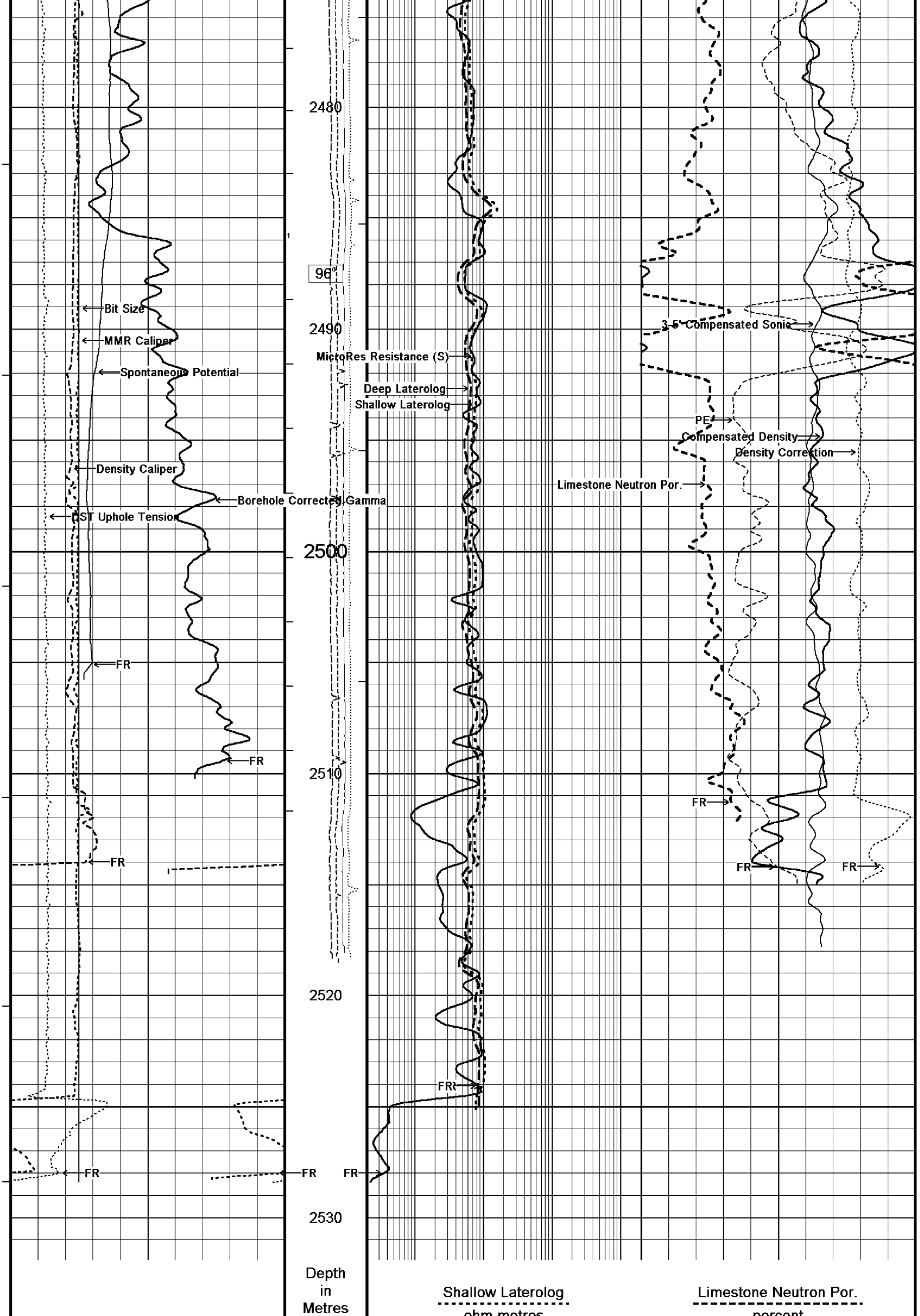
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

PE
barns/electron
0 5 10

3-5' Compensated Sonic
microsec/foot
140 90 40

Density Correction
grams/cc
-0.25 0.25

2455
2460
95
2470


2480
96°
2490
2500
2510
2520
2530
Bit Size
MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
FR
FR
FR
FR
FR
FR
FR
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
FR
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
FR
FR
FR
Depth
in
Metres
Shallow Laterolog
ohm metres
Limestone Neutron Por.
percent

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
− → | 20 | ← +

MMR Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

Replay Scale 1:200

ohm metres
0.20 2000
1 10 100 1000

percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Compensated Density
grams/cc
1.95 2.45 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

PE
barns/electron
0 5 10

3-5' Compensated Sonic
microsec/foot
140 90 40

Density Correction
grams/cc
-0.25 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

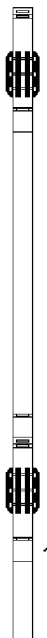
Plotted on 06-OCT-2005 16:18
Recorded on 01-OCT-2005 18:14

REPEAT SECTION 1:200 RUN 1

DOWNHOLE EQUIPMENT

C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta

Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb



Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

14.01 m AVOL - Annular Volume
14.01 m HVOL - Hole Volume
14.01 m CLDC - Density Caliper
13.80 m DEN - Compensated Density

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

13.80 m DCOR - Density Correction
13.78 m PDPE - PE

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

9.24 m TR21 - 3' Transit Time
9.24 m TR22 - 5' Transit Time
9.24 m TR11 - 4' Transit Time
9.24 m DT35 - 3-5' Compensated Sonic

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

9.24 m TR12 - 6' Transit Time

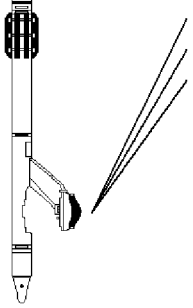
Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

3.93 m DSLL - Shallow Laterolog
3.93 m DDLL - Deep Laterolog

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb



0.00 m MRRS - MicroRes Resistance (S)
0.00 m MATC - MMR Caliper
Tool Zero (0.85m from bottom)

All measurements relative to tool zero.

BEFORE SURVEY CALIBRATION

C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000

General Parameters		
Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Ratio 0.718

Neutron Constants MDN 043

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13
Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

	918.0	1089.7

Field Check

	919.8	1086.8

PE Calibration

Base Calibration	WS	Measured WH	Measured Ratio	Calibrated Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2	

Field Check

173.6	795.1	

Density Constants MPD 066

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	

Groningen Laterolog K Factor	0.8527
Interference Rejection	50 Hz
SP Connection	SP Bridle Electrode
Groningen Connection	None

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

Measured		Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:200

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:200

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FINAL PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005		
Run Number	TWO		ONE		
Depth Driller	2658.00	metres	2545.00	metres	
Depth Logger	2656.80	metres	2529.00	metres	
First Reading	2656.80	metres	2528.15	metres	
Last Reading	2400.00	metres	0.00	metres	
Casing Driller	544.50	metres	544.50	metres	
Casing Logger	544.20	metres	544.20	metres	
Bit Size	8.50	inches	8.50	inches	
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL		
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP	
PH / Fluid Loss	8.00	5.00	8.60	4.00	
Sample Source	FLOWLINE		FLOWLINE		
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m	
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m	
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m	
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER	
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m	
Time Since Circulation	11.8 HOURS		18 HOURS		
Max Recorded Temp	93.50	deg C	95.50	deg C	
Equipment Name	COMPACT		COMPACT		
Equipment / Base	8	SALE	8	SALE	
Recorded By	BEN MOSS				
Witnessed By	JOHN HOBDAY				
CIRC. STOP	13:00 3/10		00:00 1/10		

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:49
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– → | 40 | ← +

MMR Caliper
inches
6 16

orehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Depth
in
Metres

Borehole
Temp in
deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI
every
0.1 cu m

Annular
Integral
every
0.1 cu m

Replay
Scale
1:200

33

40

50

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

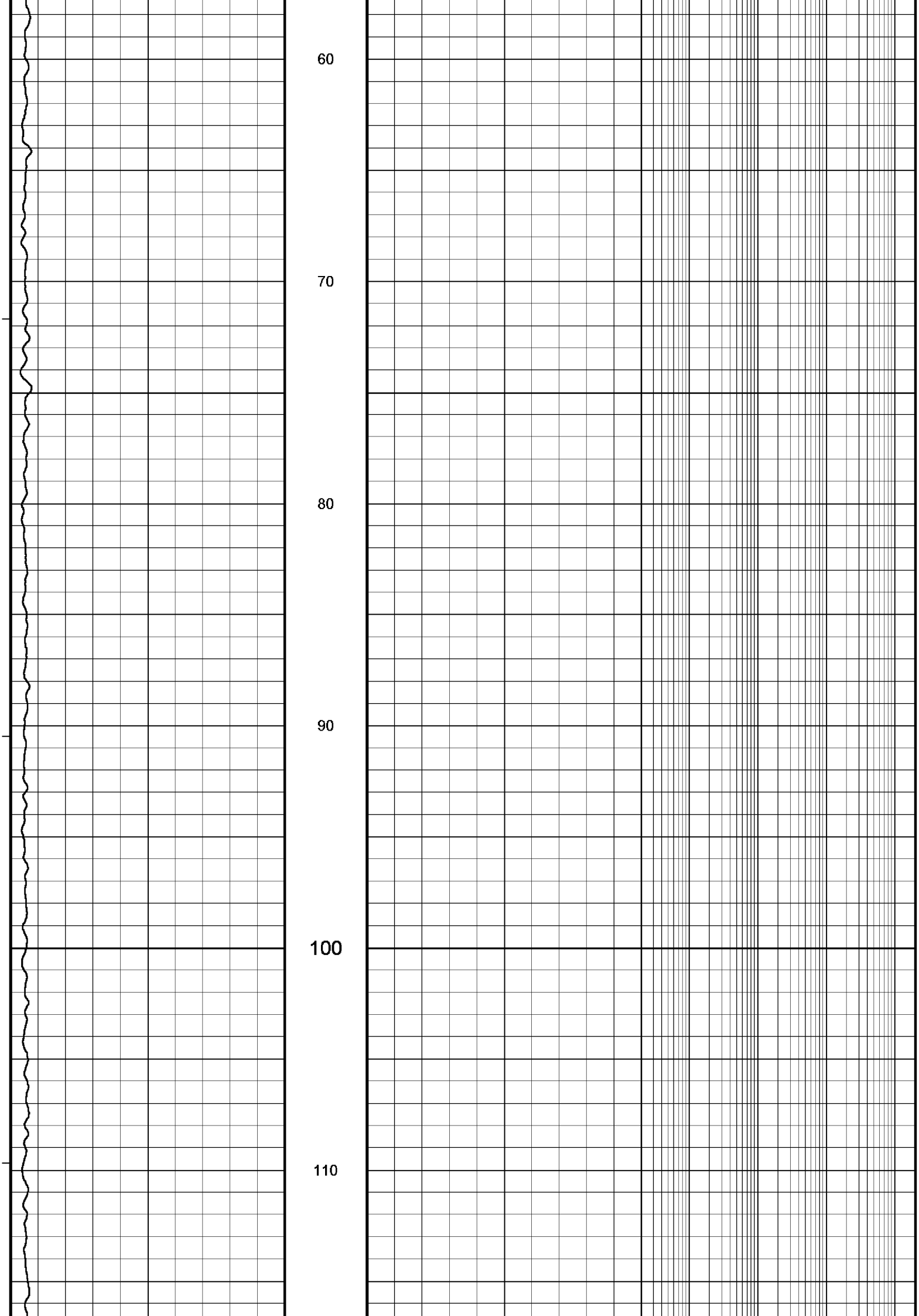
Density Correction
grams/cc
-1.50 0.50

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

3-5' Compensated Sonic
microsec/foot
140 40

Compensated Density
grams/cc
1.95 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000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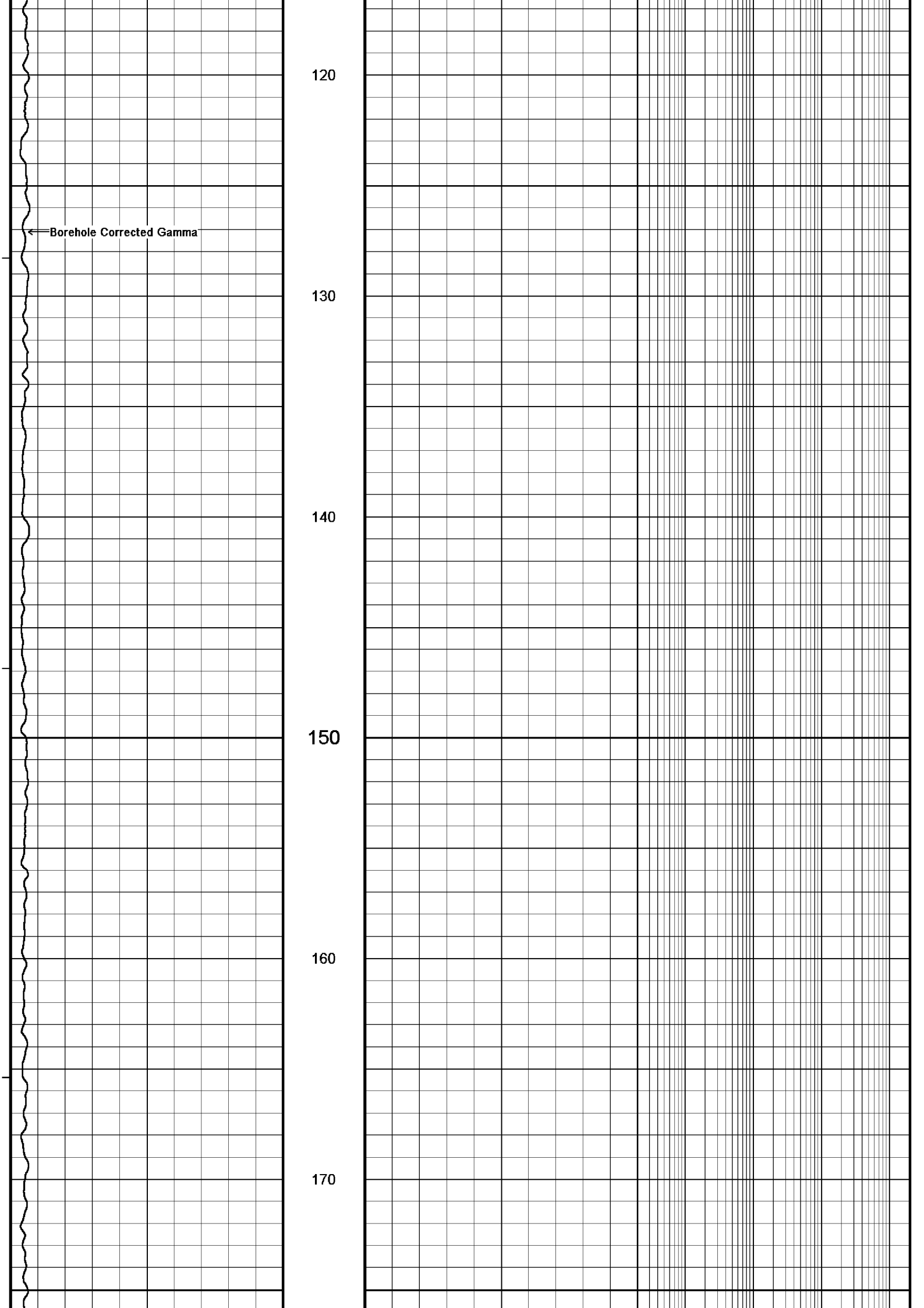
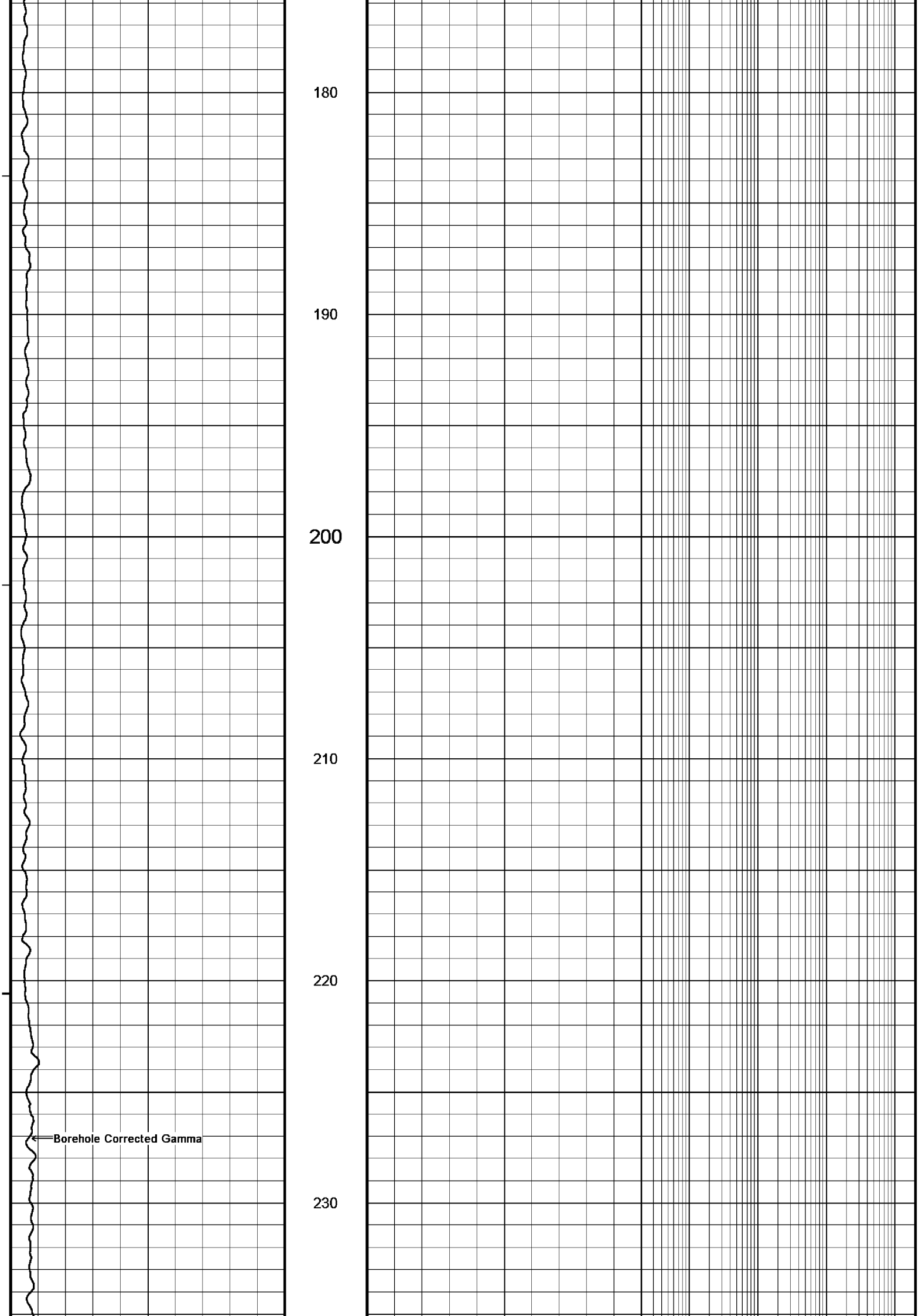
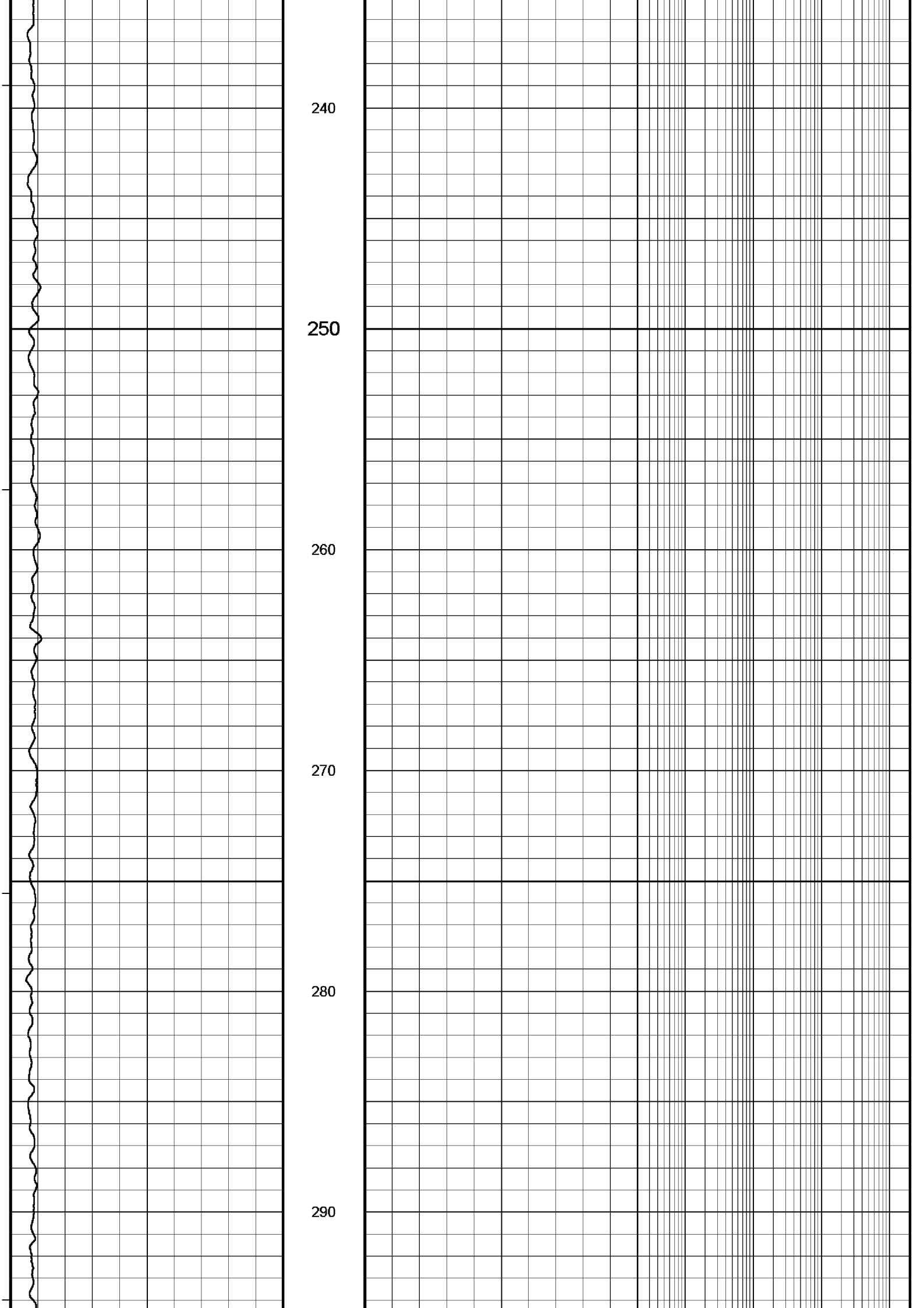
80
90
100
110


120
Borehole Corrected Gamma
130
140
150
160
170


180
190
200
210
220
230
Borehole Corrected Gamma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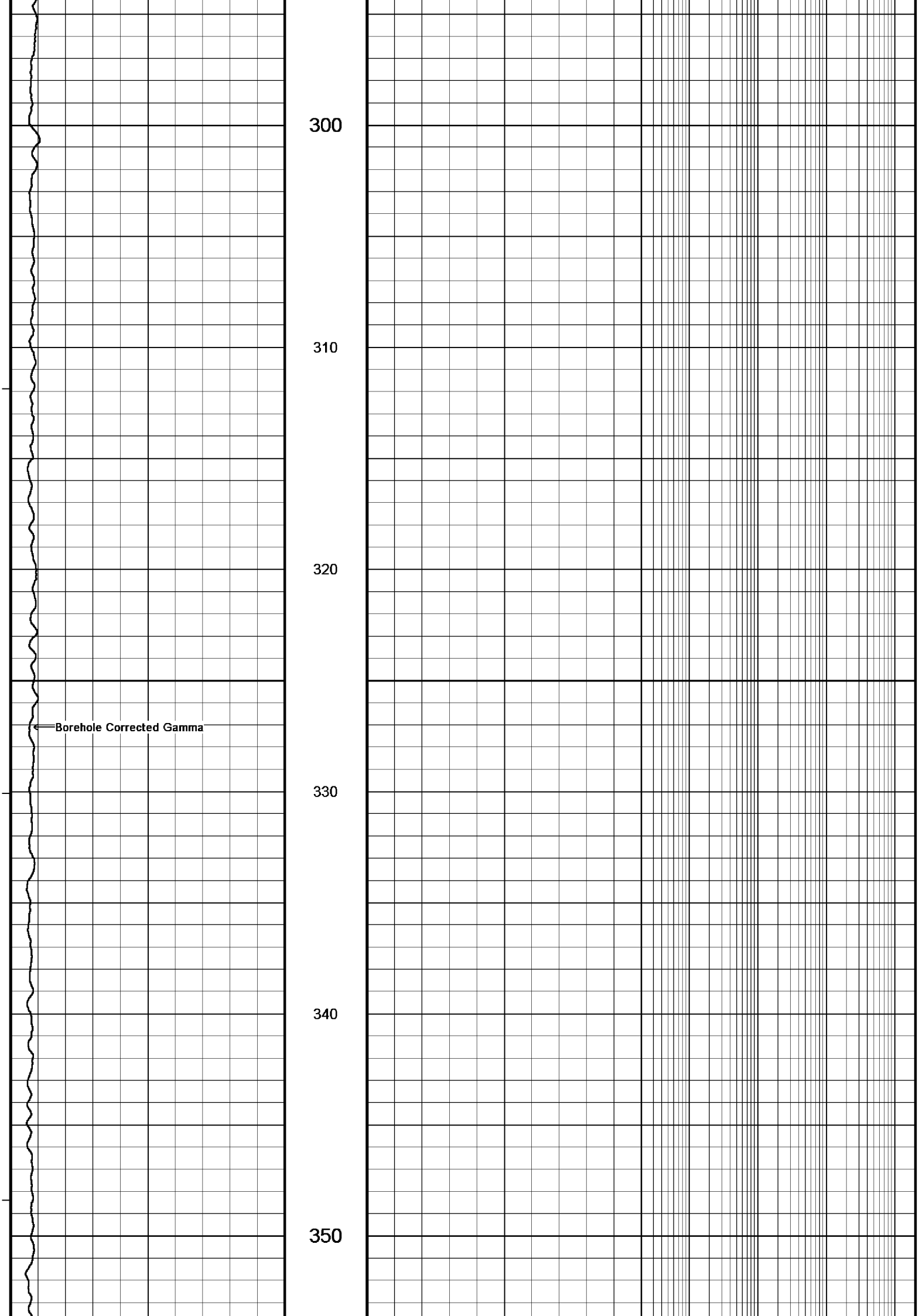
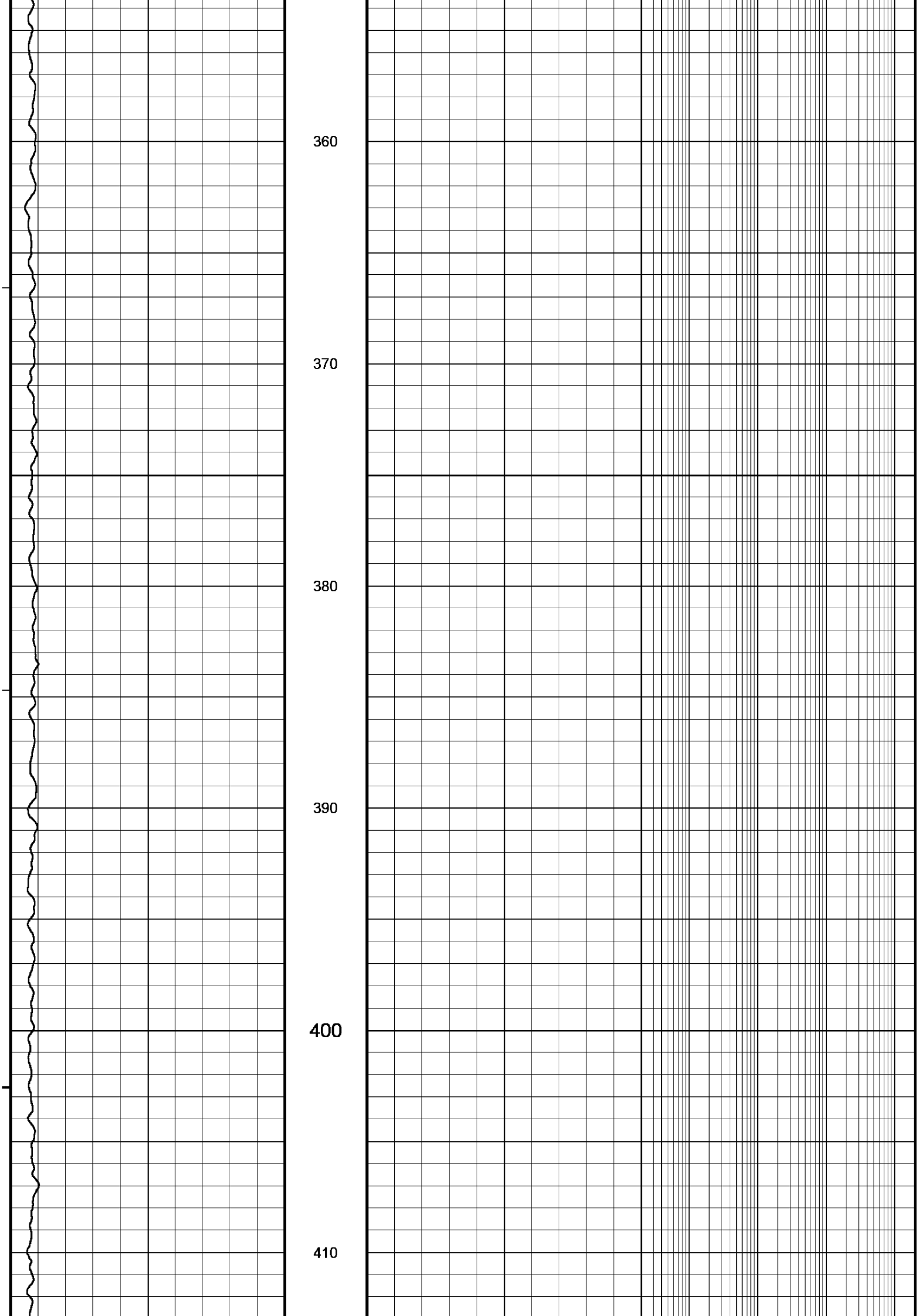
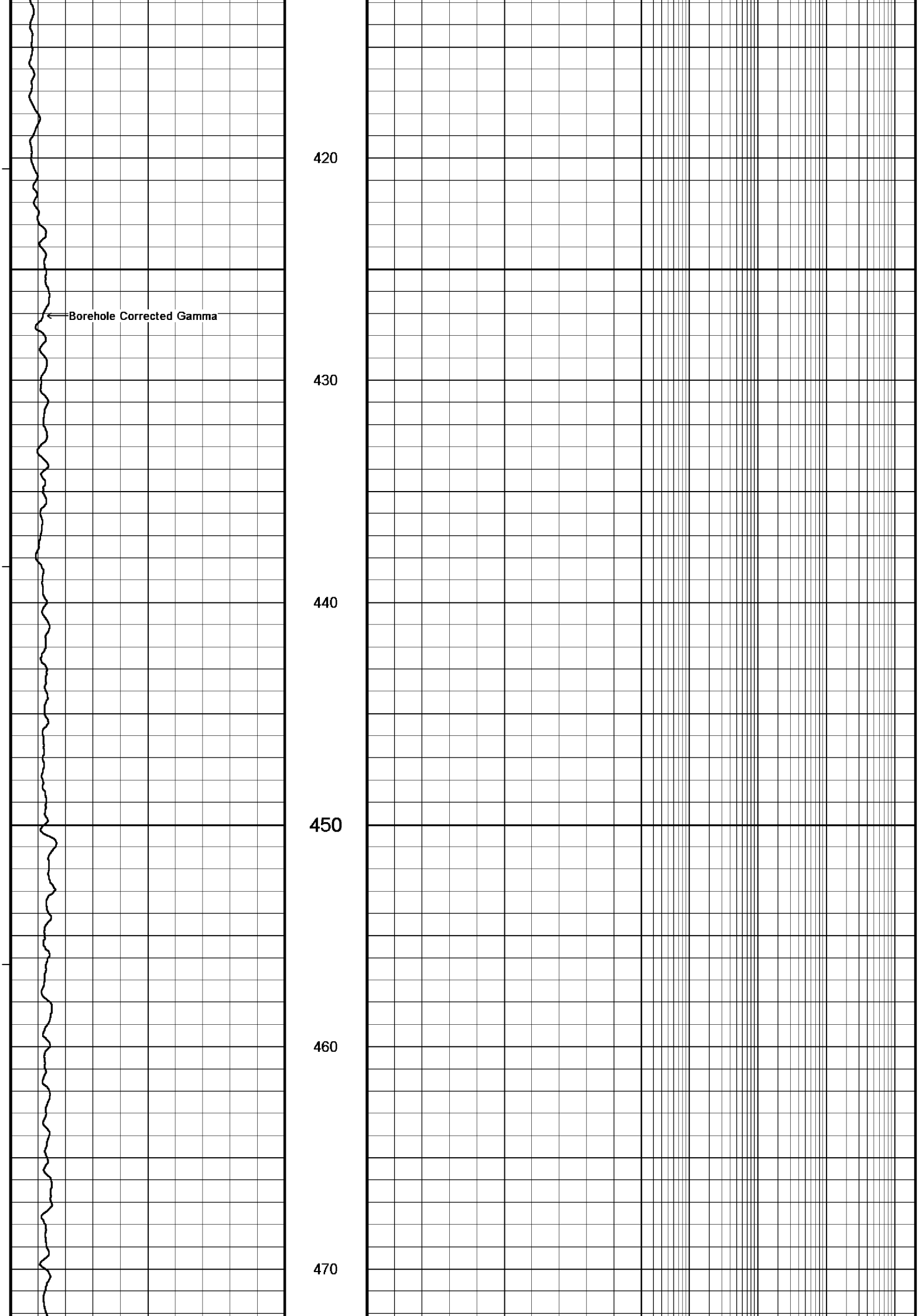
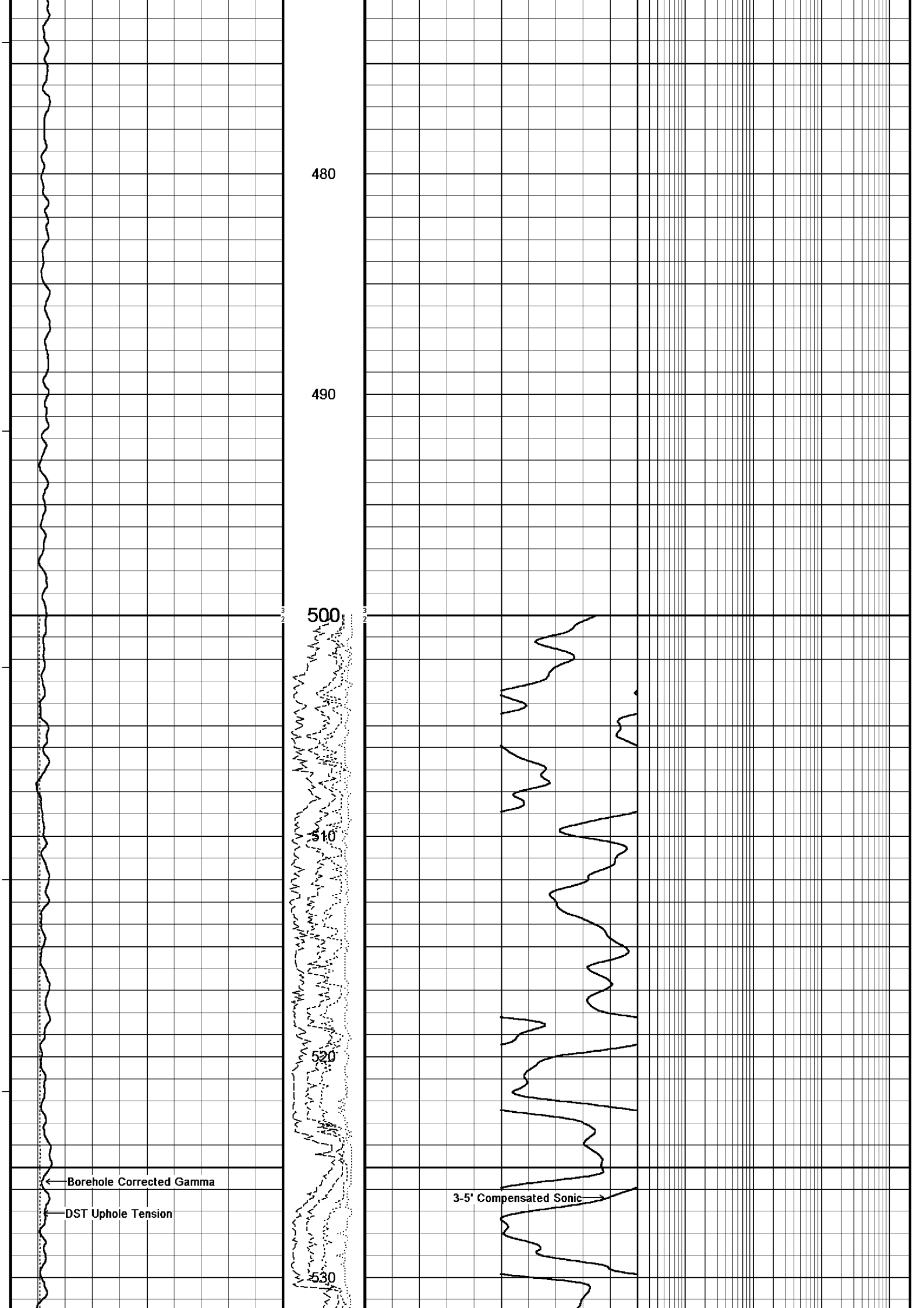
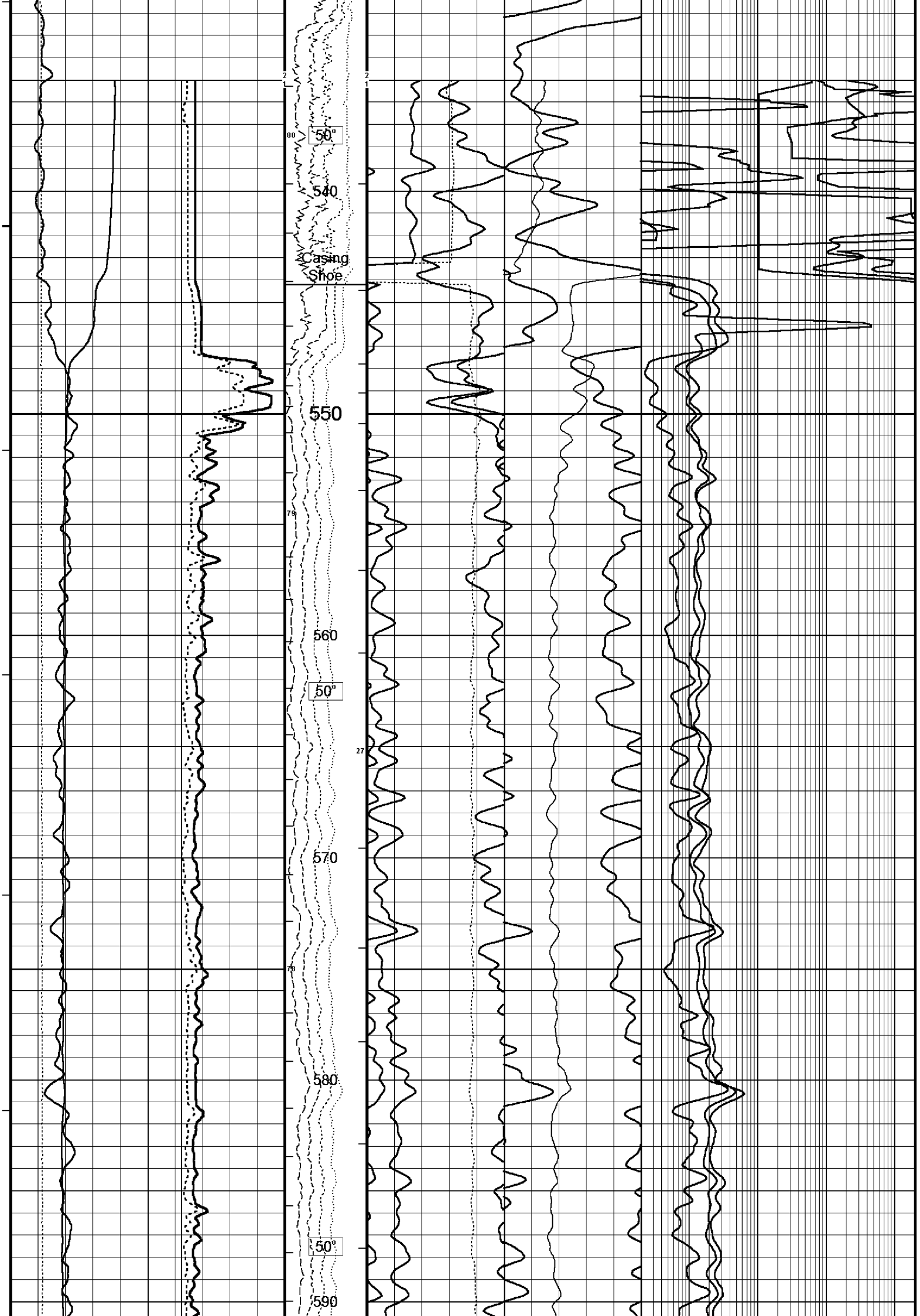
250
260
270
280
290

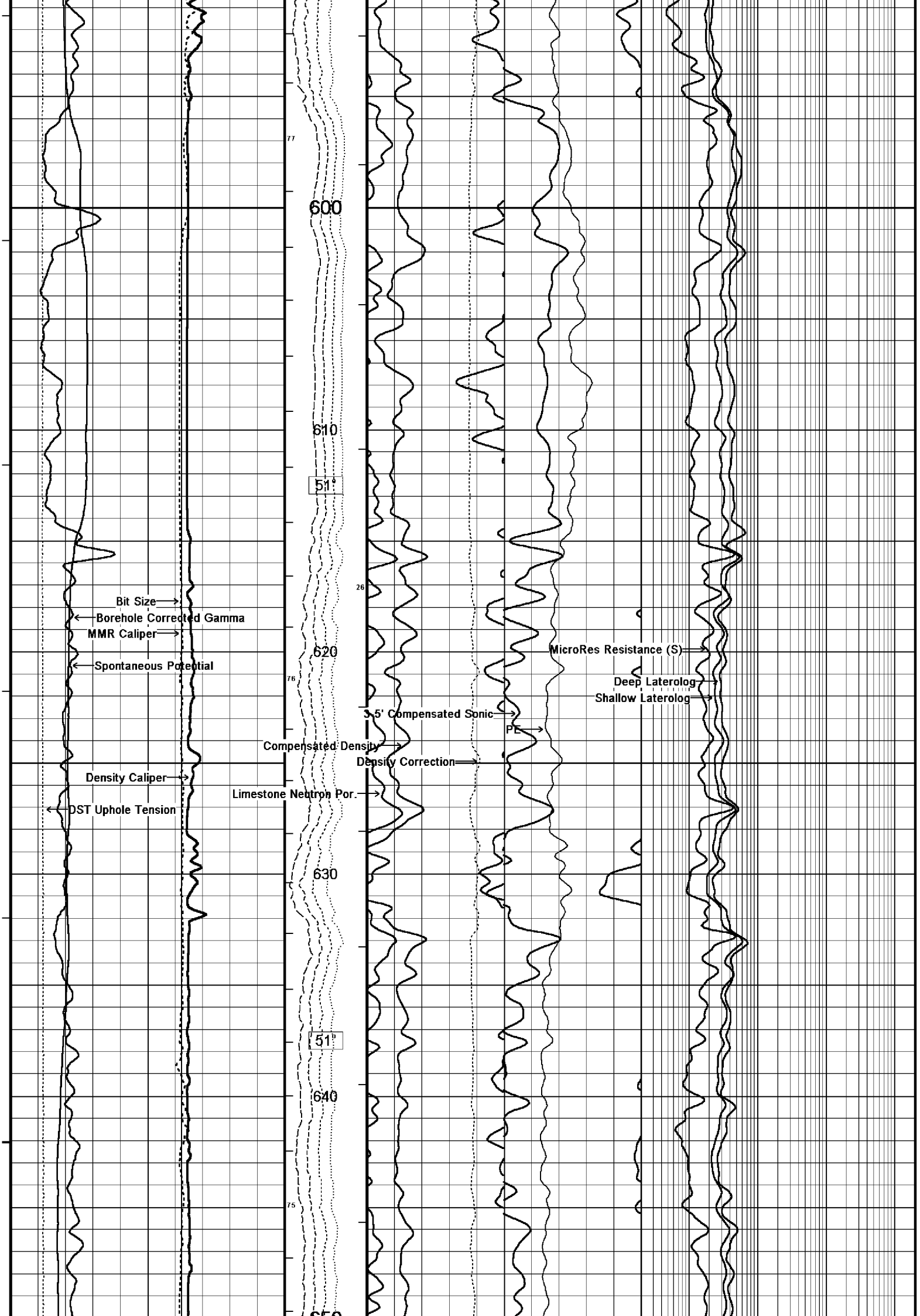

300
310
320
330
340
350
Borehole Corrected Gamma

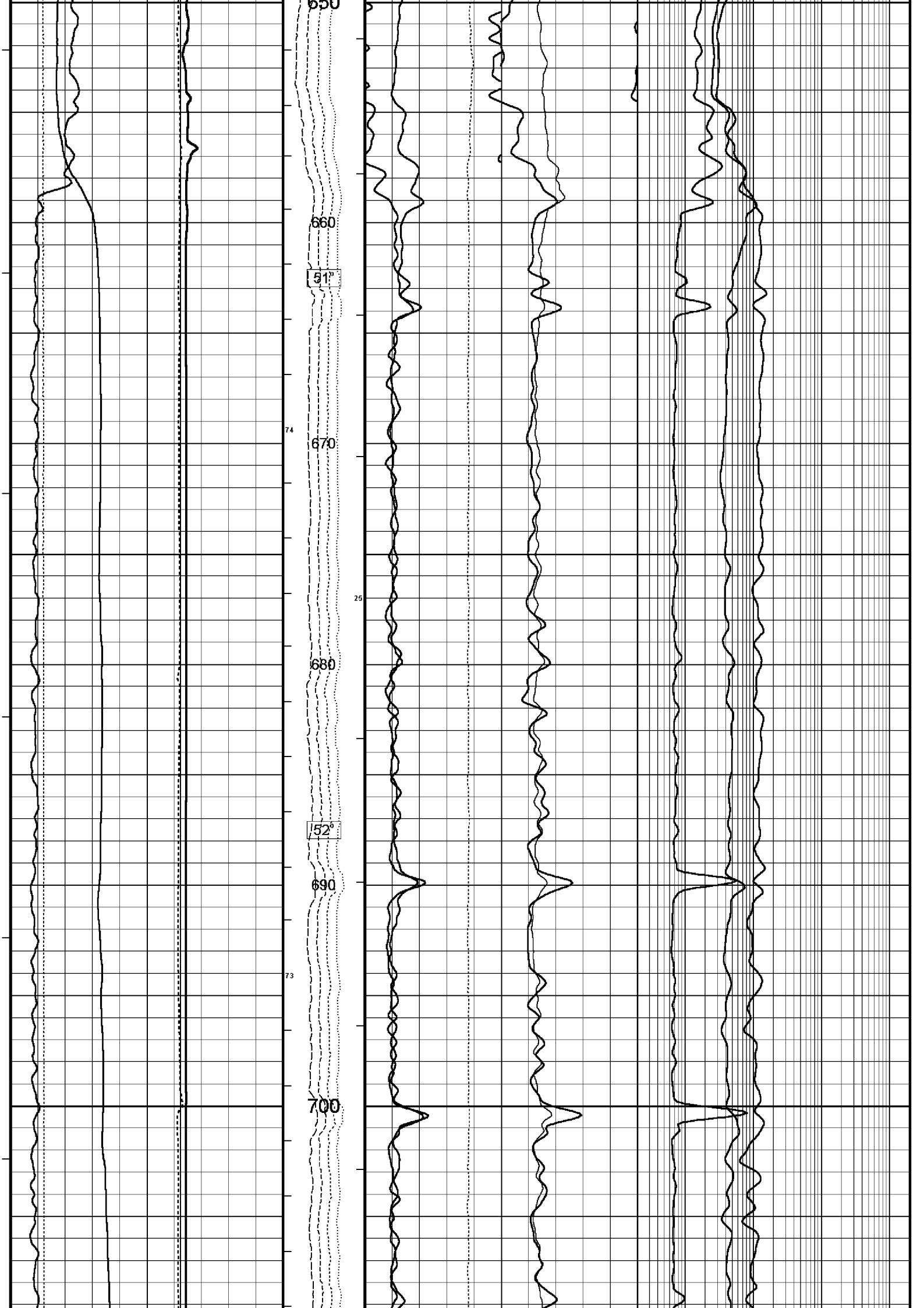

360
370
380
390
400
410

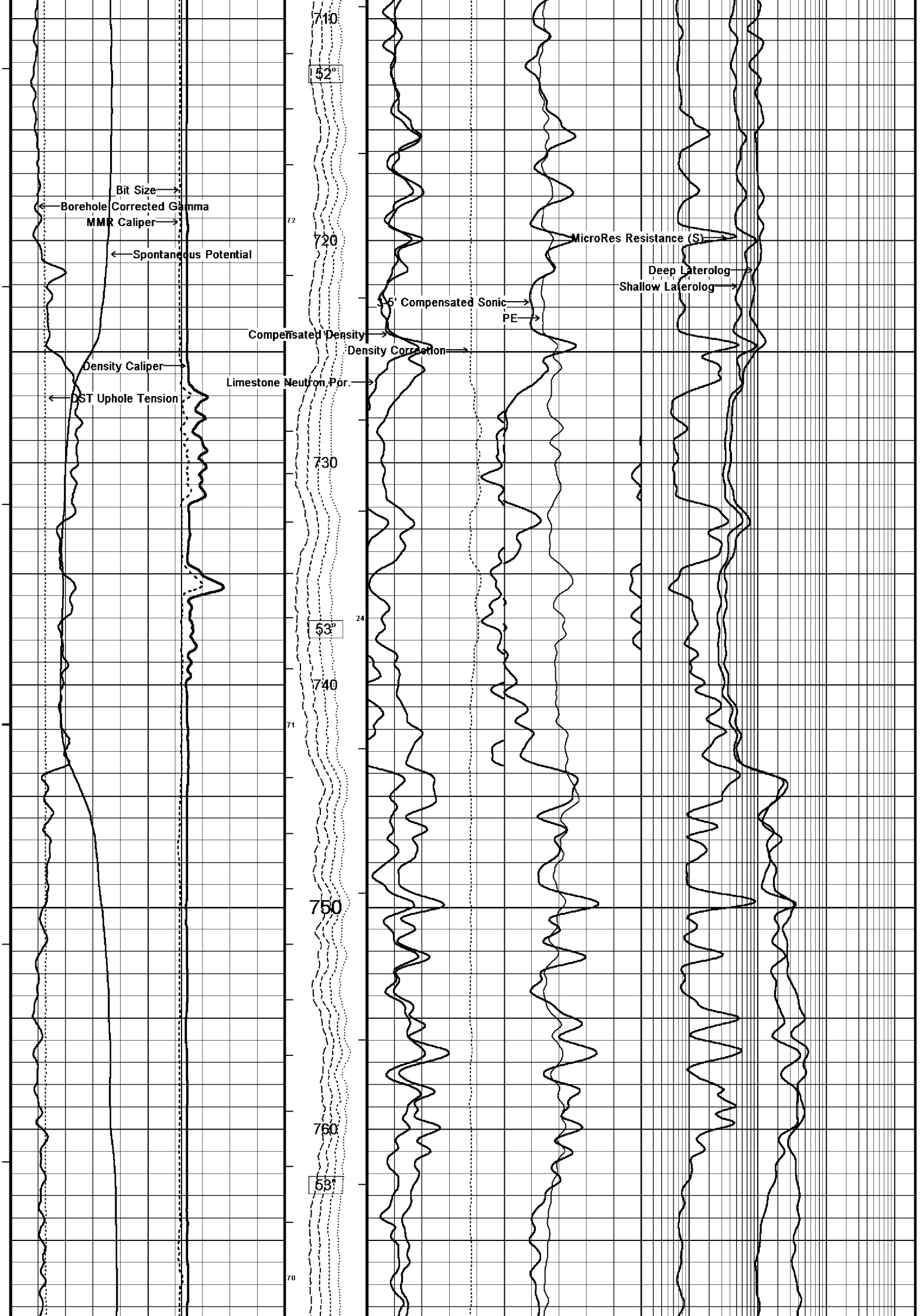

420
Borehole Corrected Gamma
430
440
450
460
470

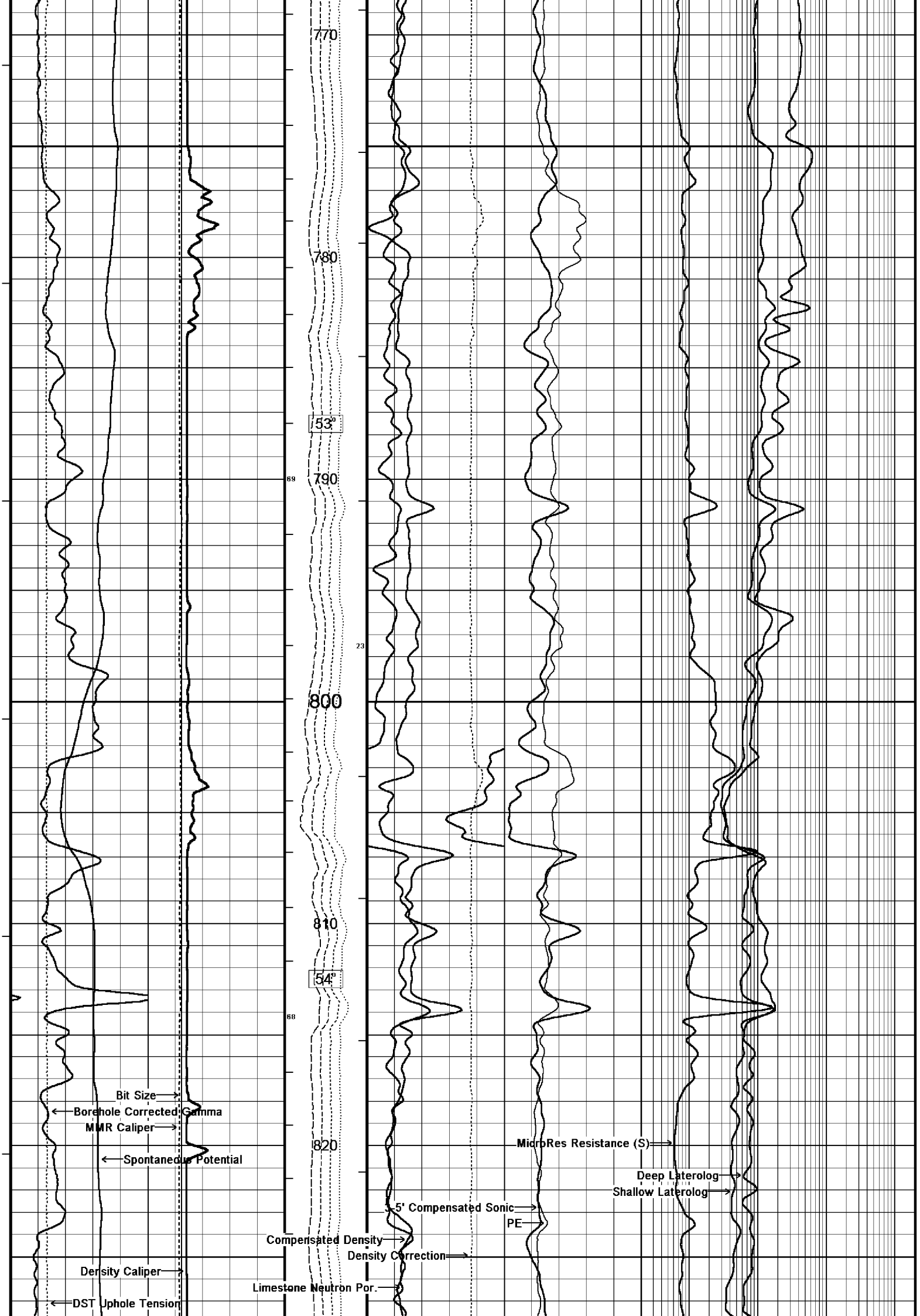

480
490
500
510
520
530
Borehole Corrected Gamma
DST Uphole Tension
3-5' Compensated Sonic

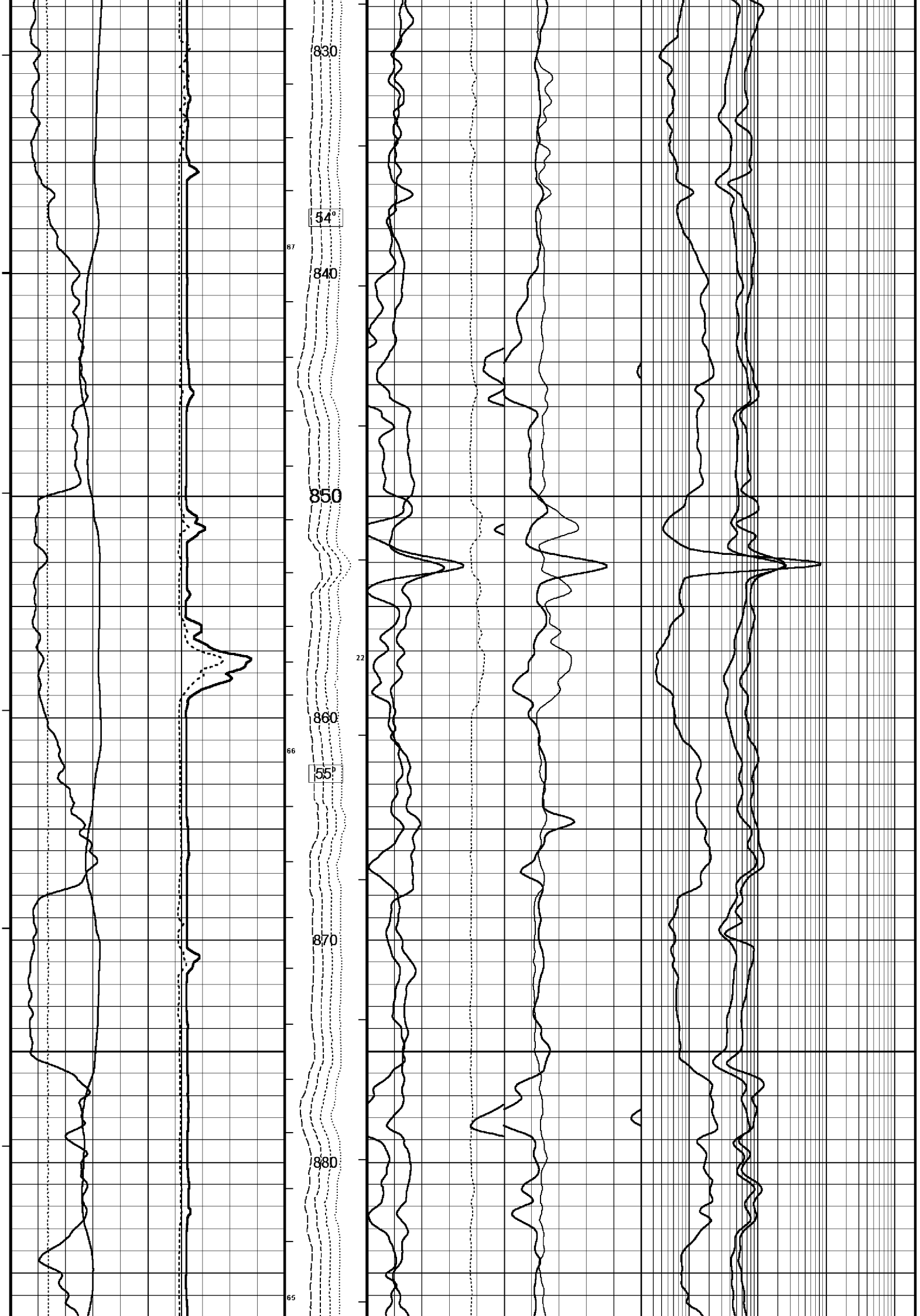

50°
540
Casing
Shoe
550
560
50°
570
580
50°
590

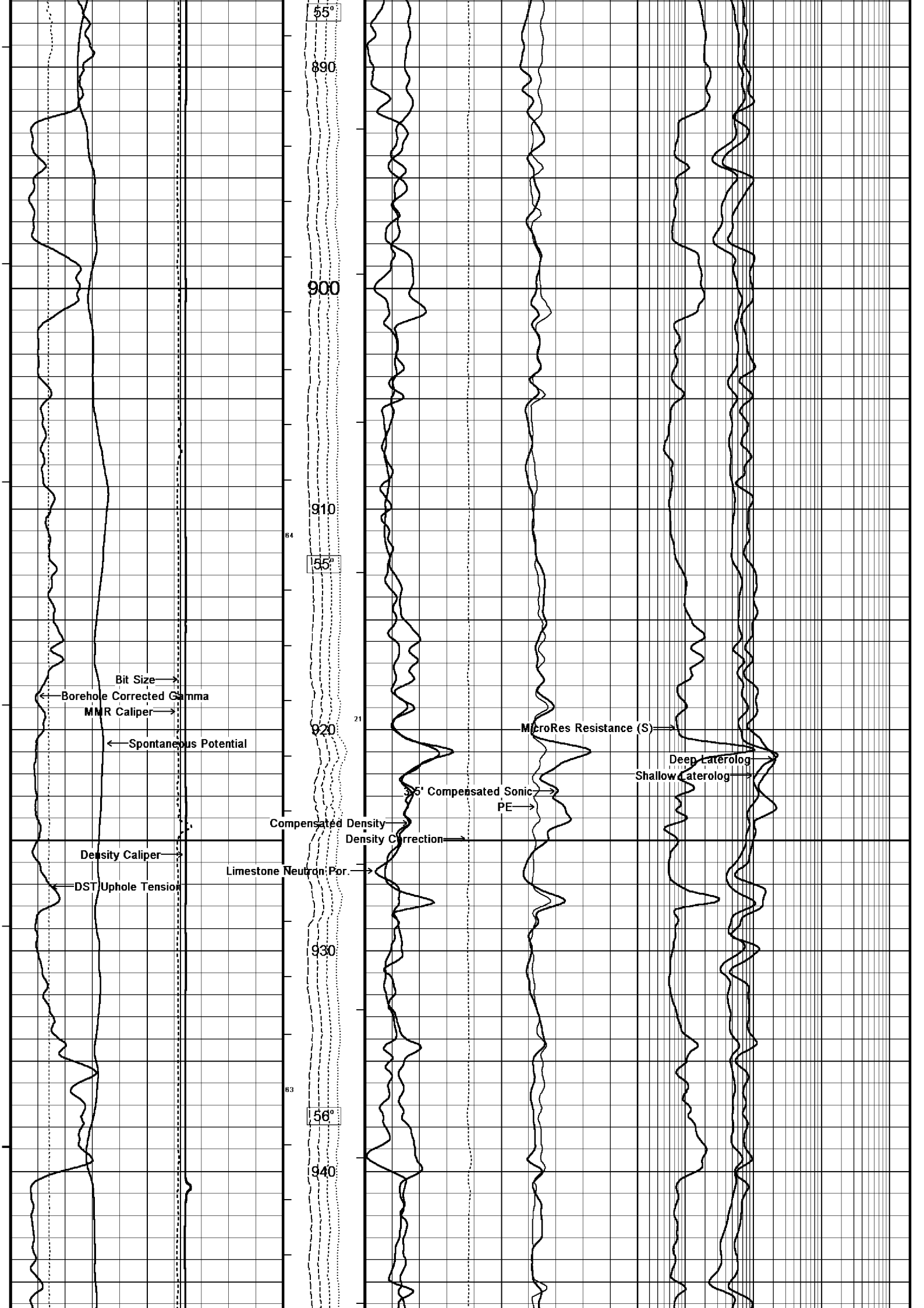

600
610
620
630
640
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
3.5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

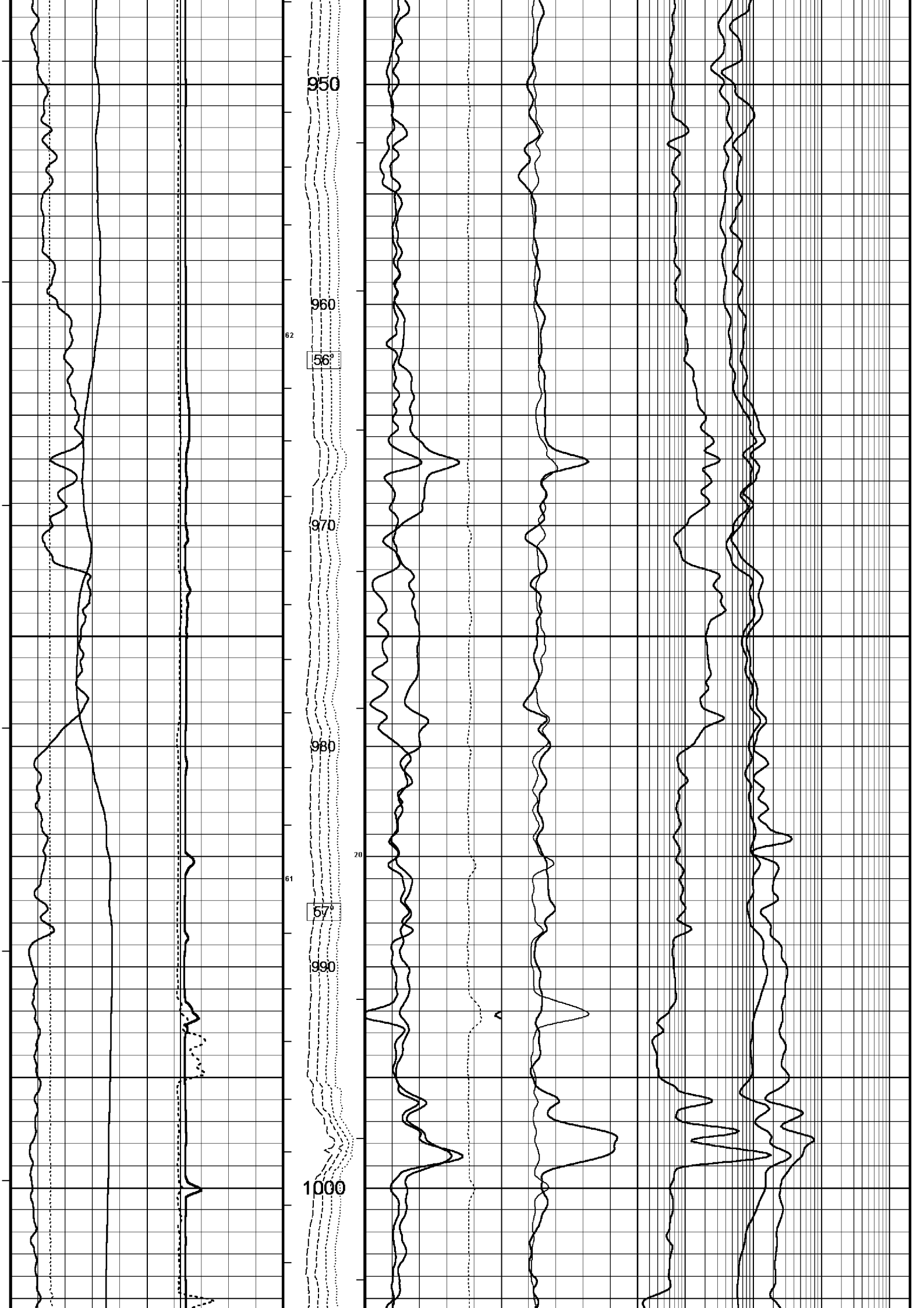

650
660
51°
74
670
25
680
52°
690
73
700

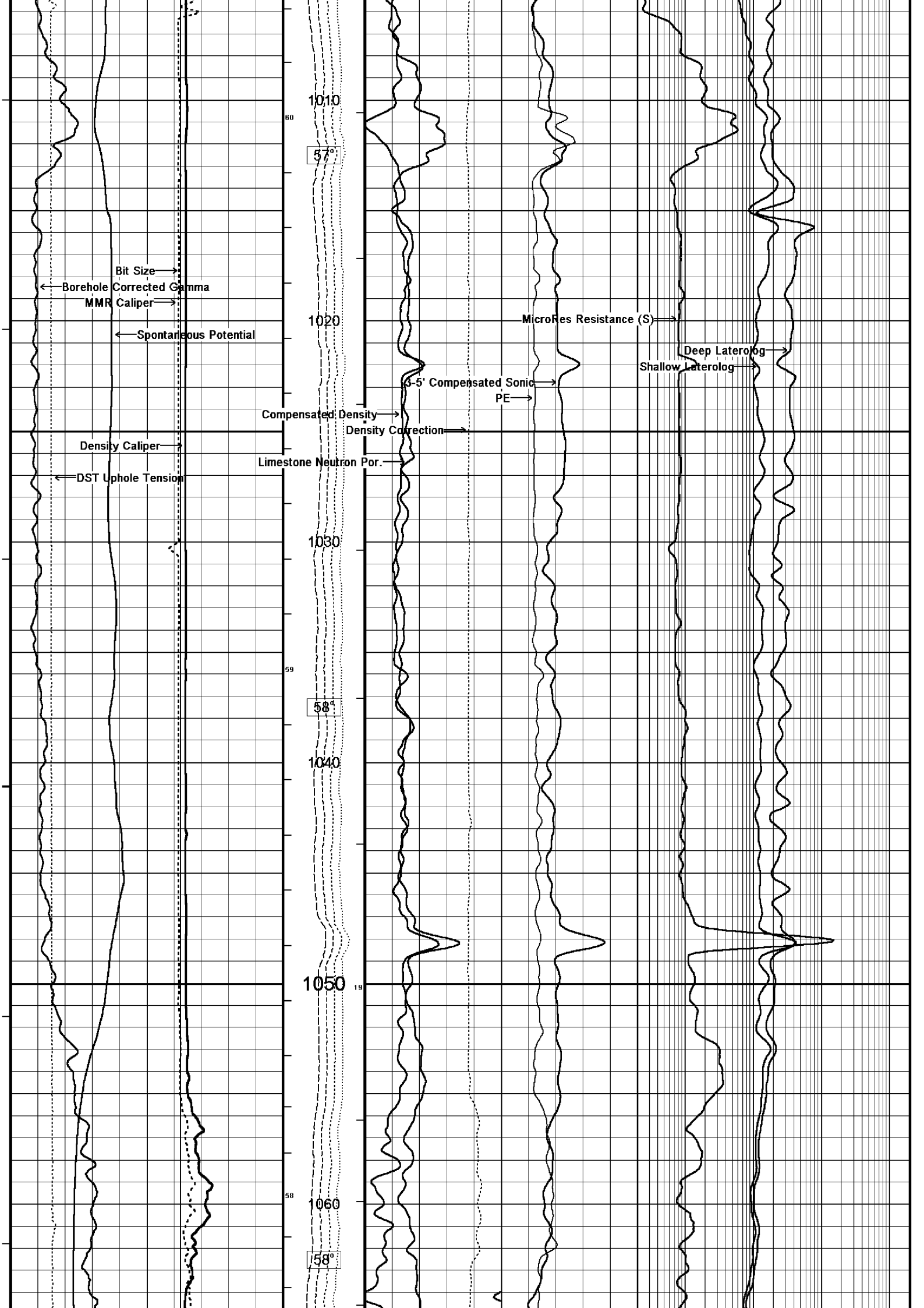

710
52"
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
72
720
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
730
53"
24
740
71
750
760
53"
70

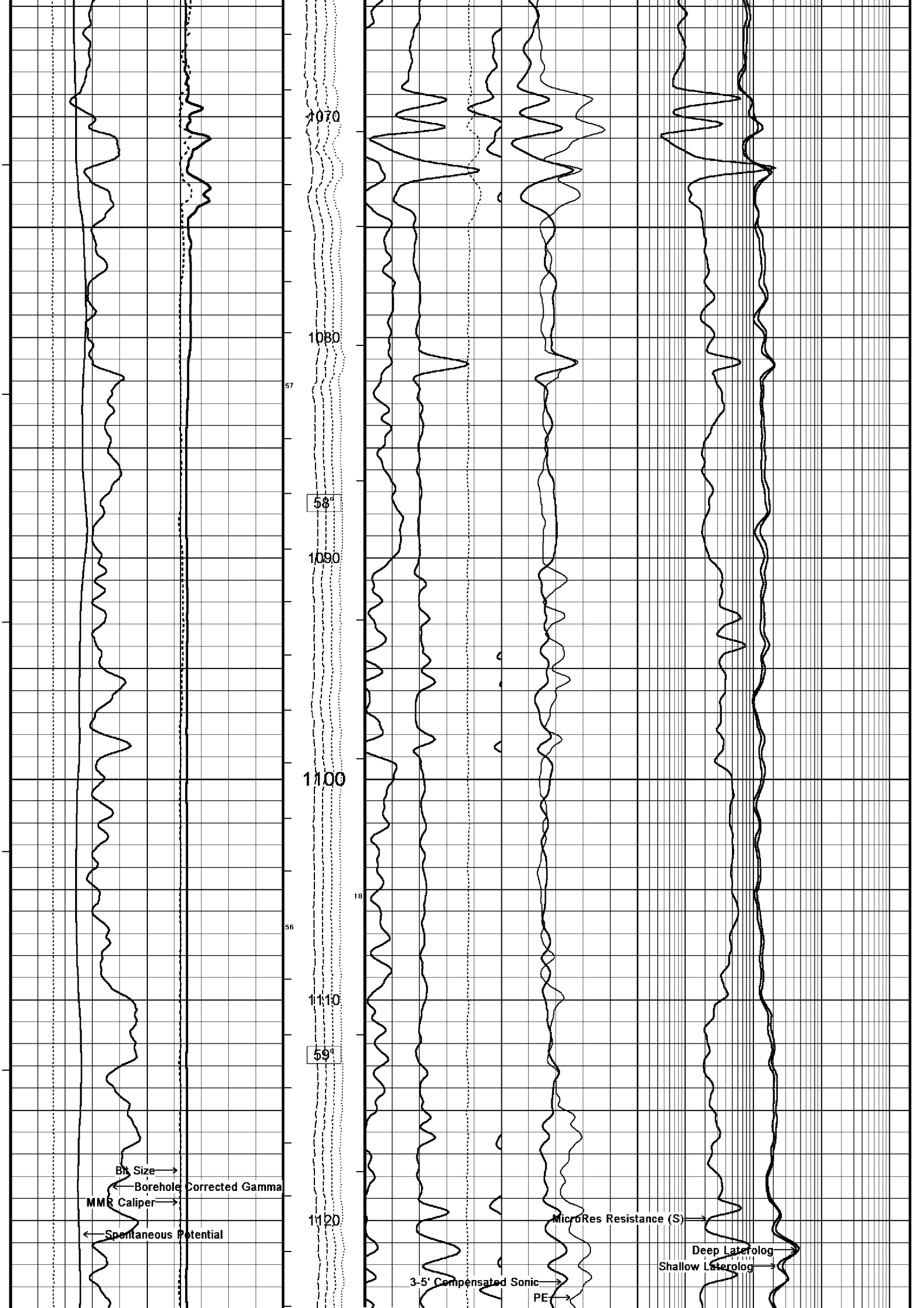

770
780
53°
790
800
810
54"
820
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

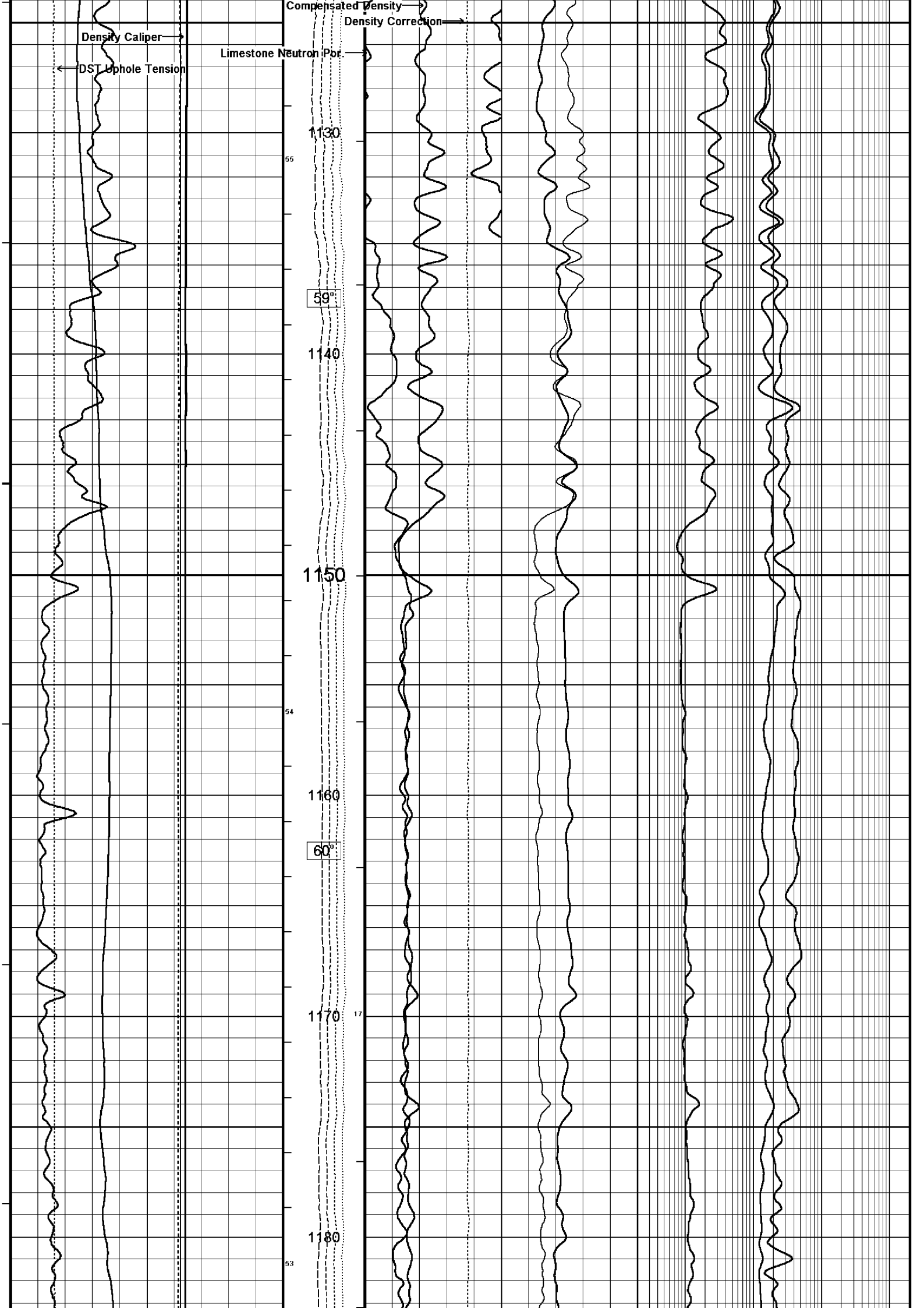

830
54°
840
850
860
55°
870
880

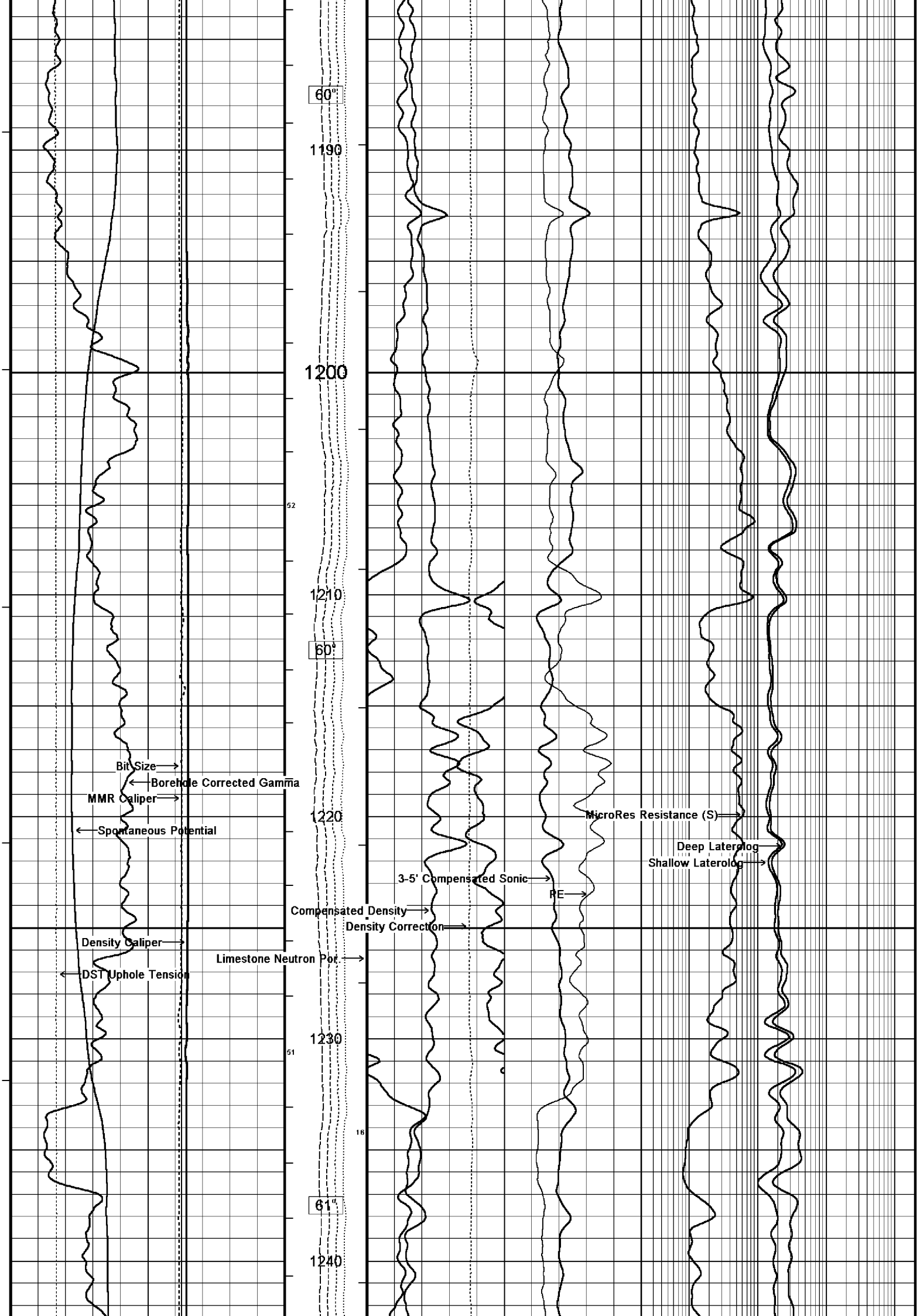

55°
890
900
910
64
55°
920
21
930
63
56°
940
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

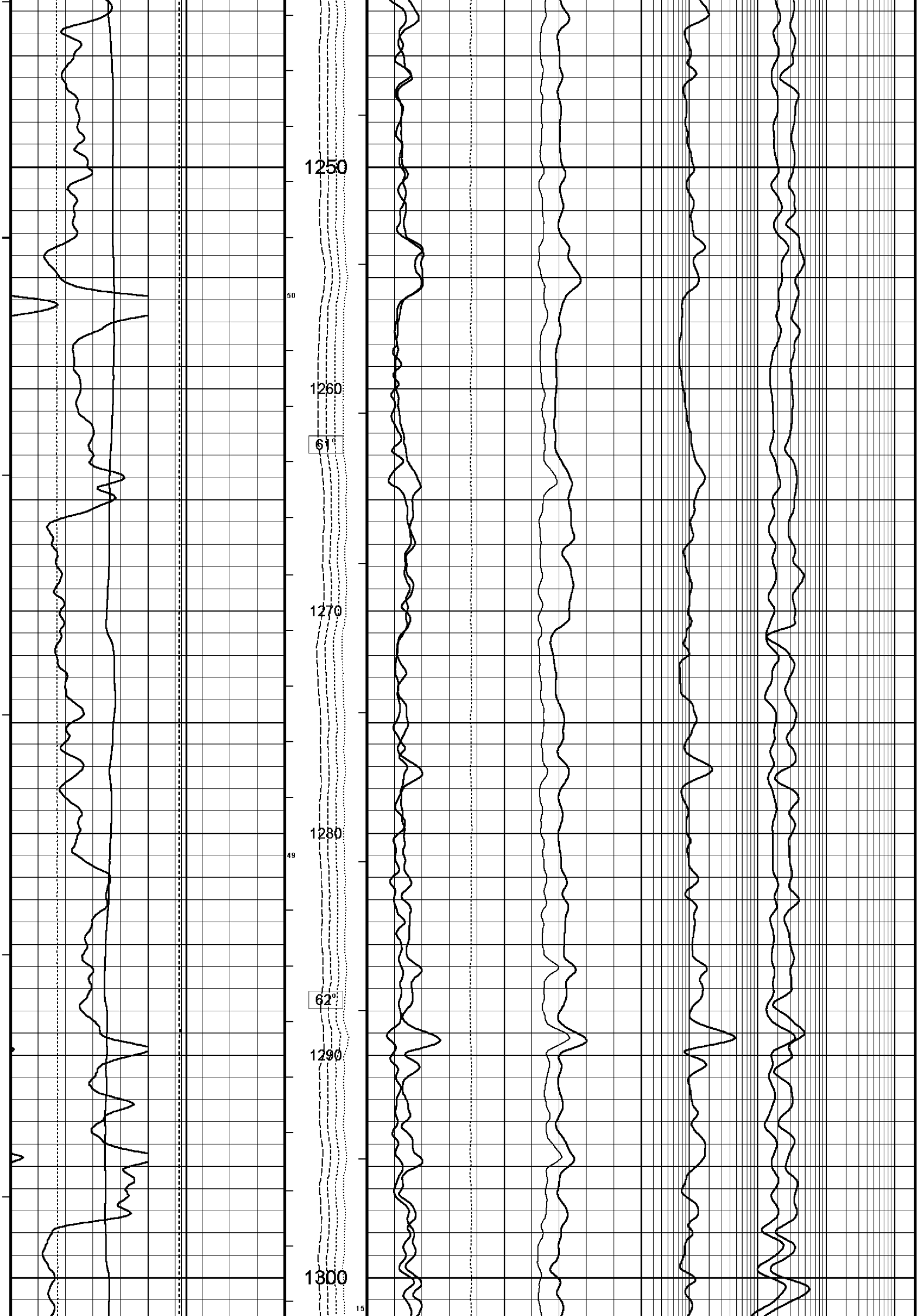

950
960
62
56°
970
980
61
57°
990
1000
20

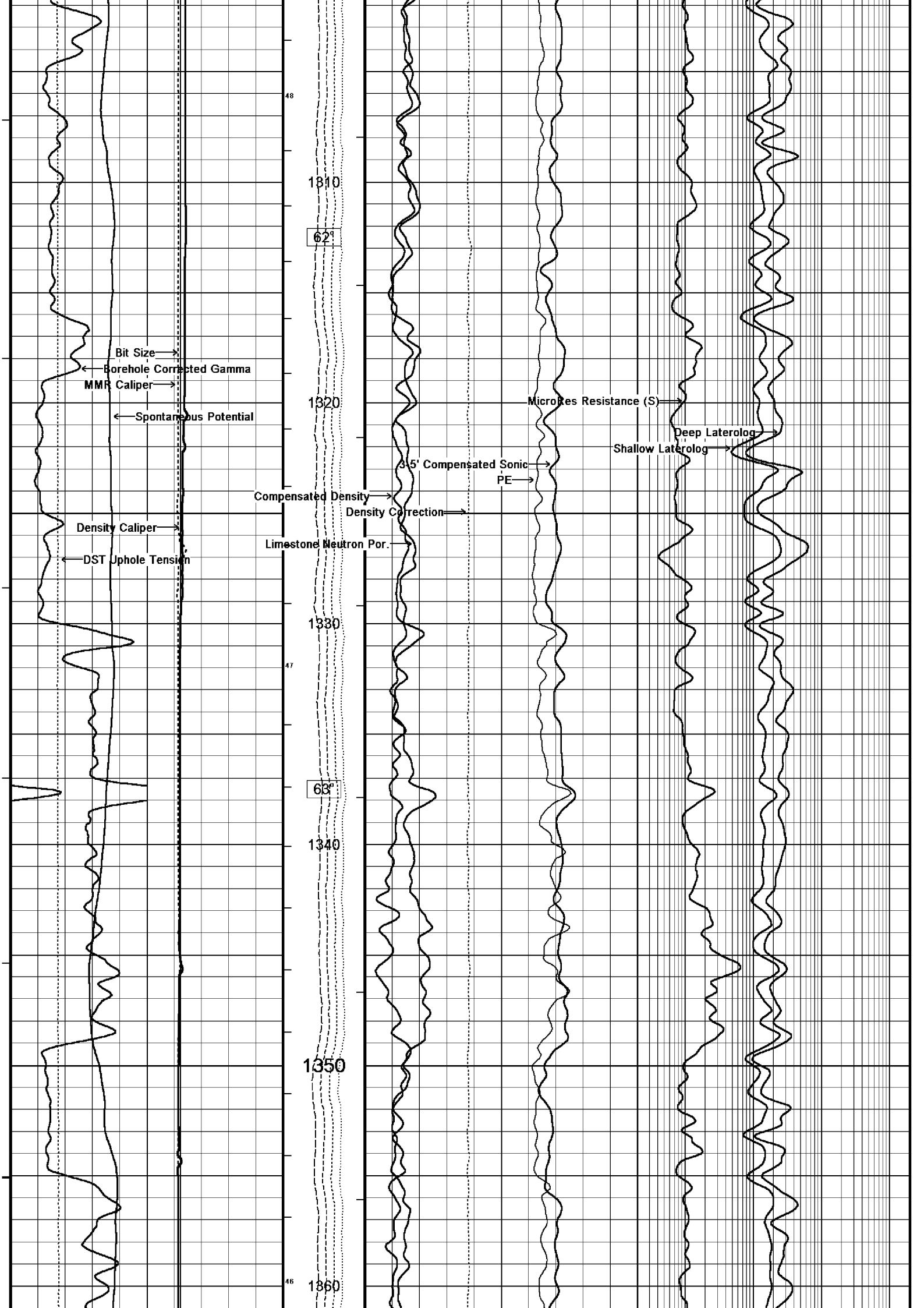

1010
57°
1020
1030
58°
1040
1050
1060
58°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

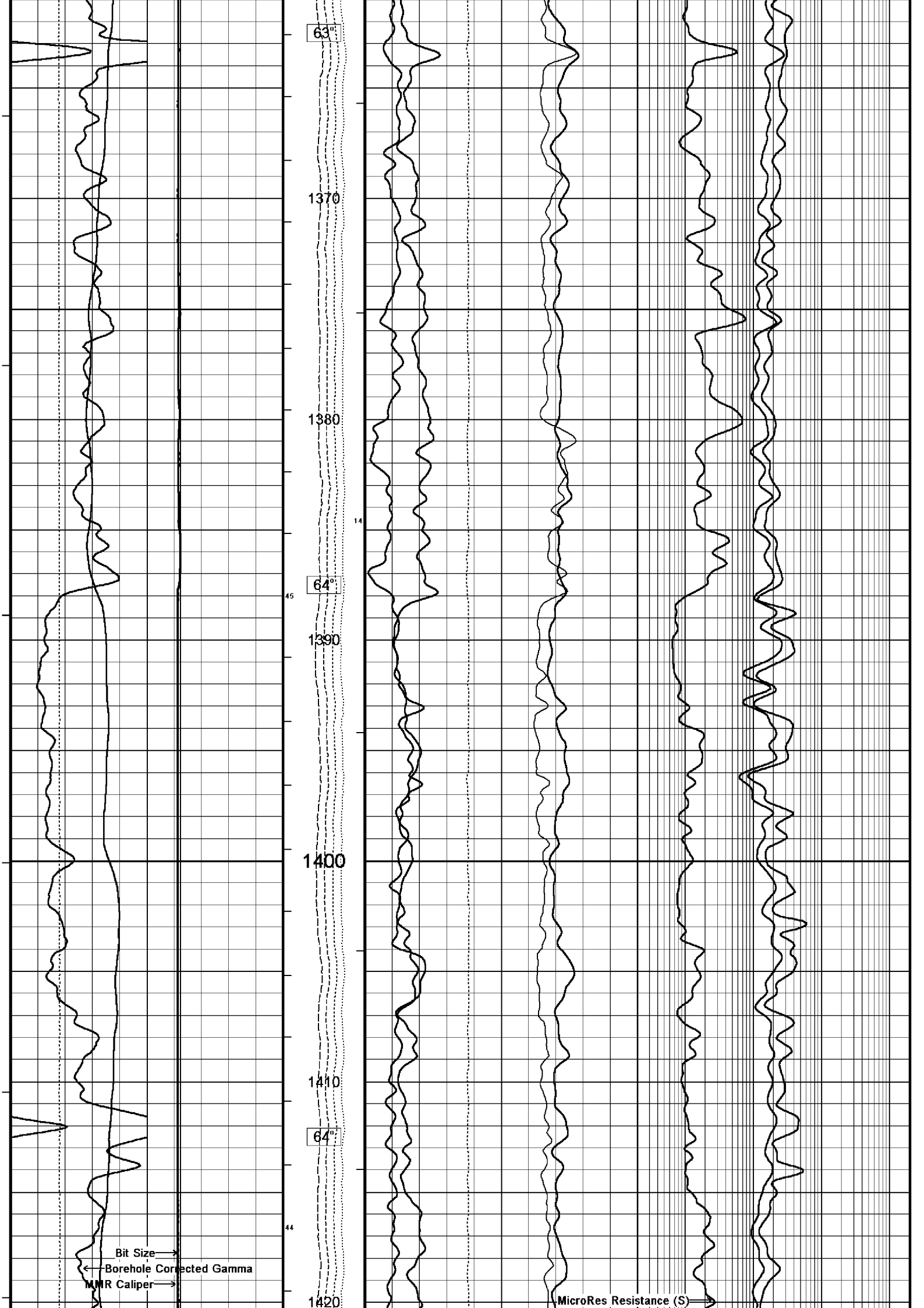

1070
1080
57
58
1090
1100
18
56
1110
59
1120
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

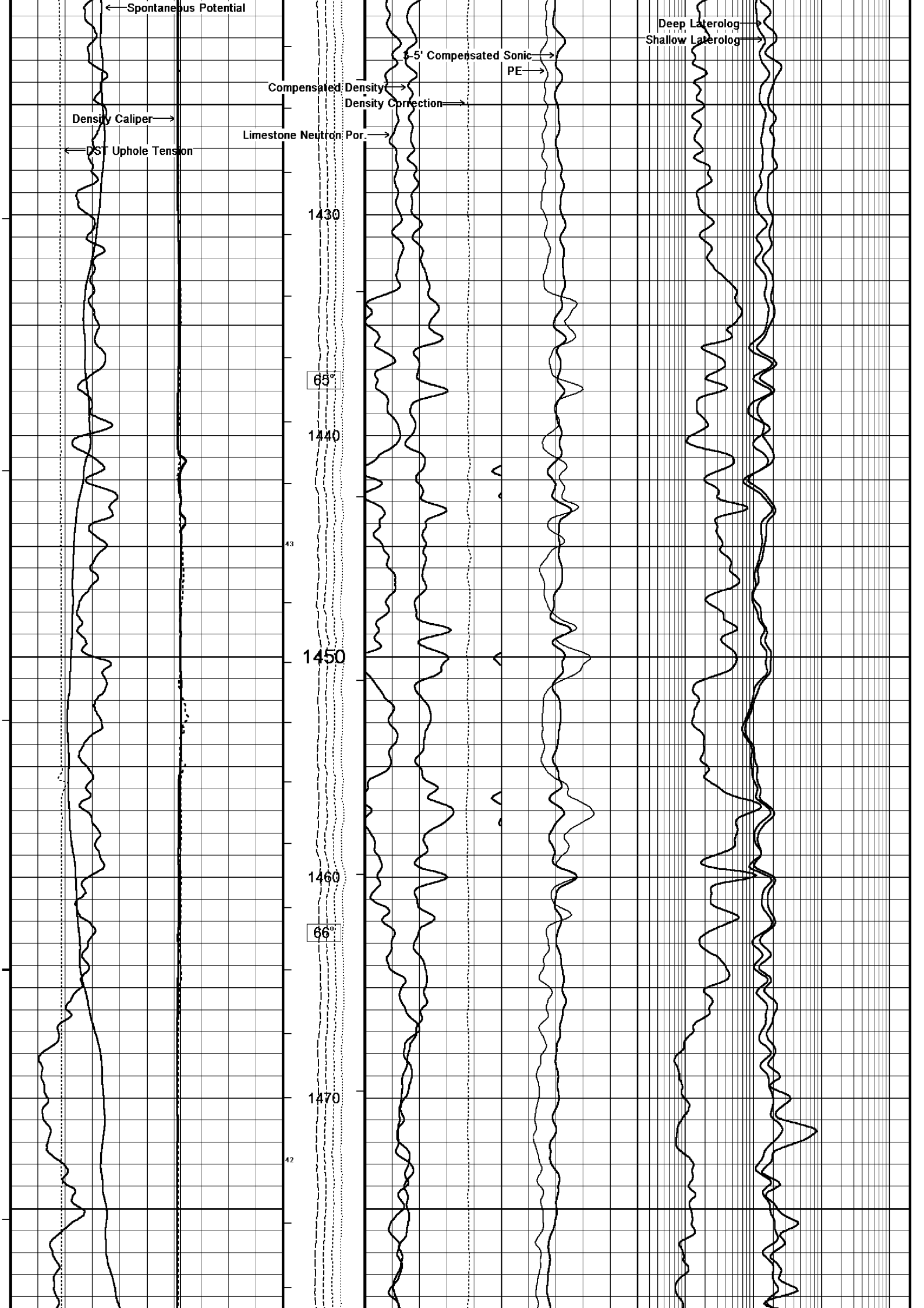

Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1130
59"
1140
1150
1160
60"
1170
1180
55
54
53
17

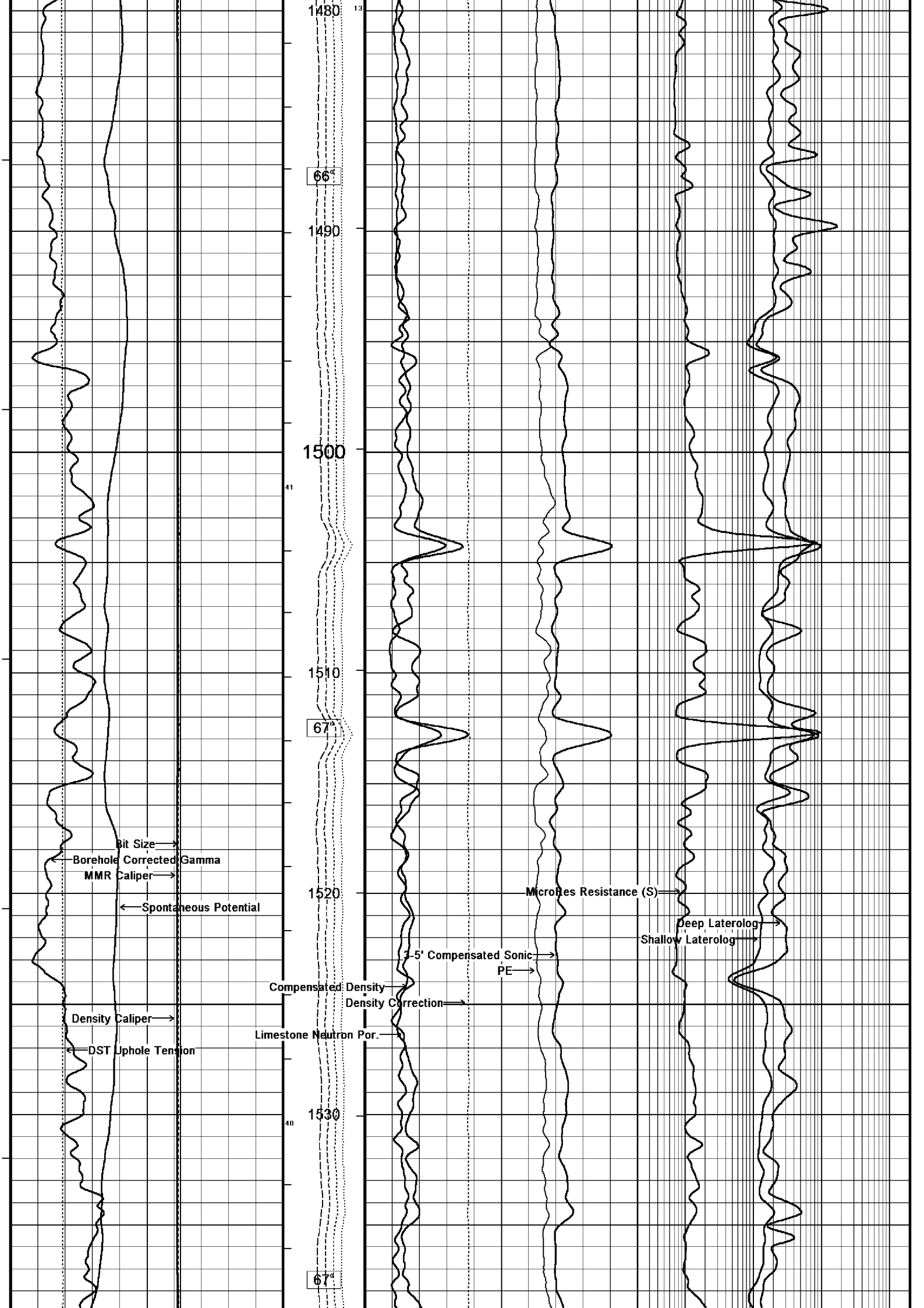

60°
1190
1200
52
1210
60°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
1220
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por
DST Uphole Tension
1230
51
16
61°
1240

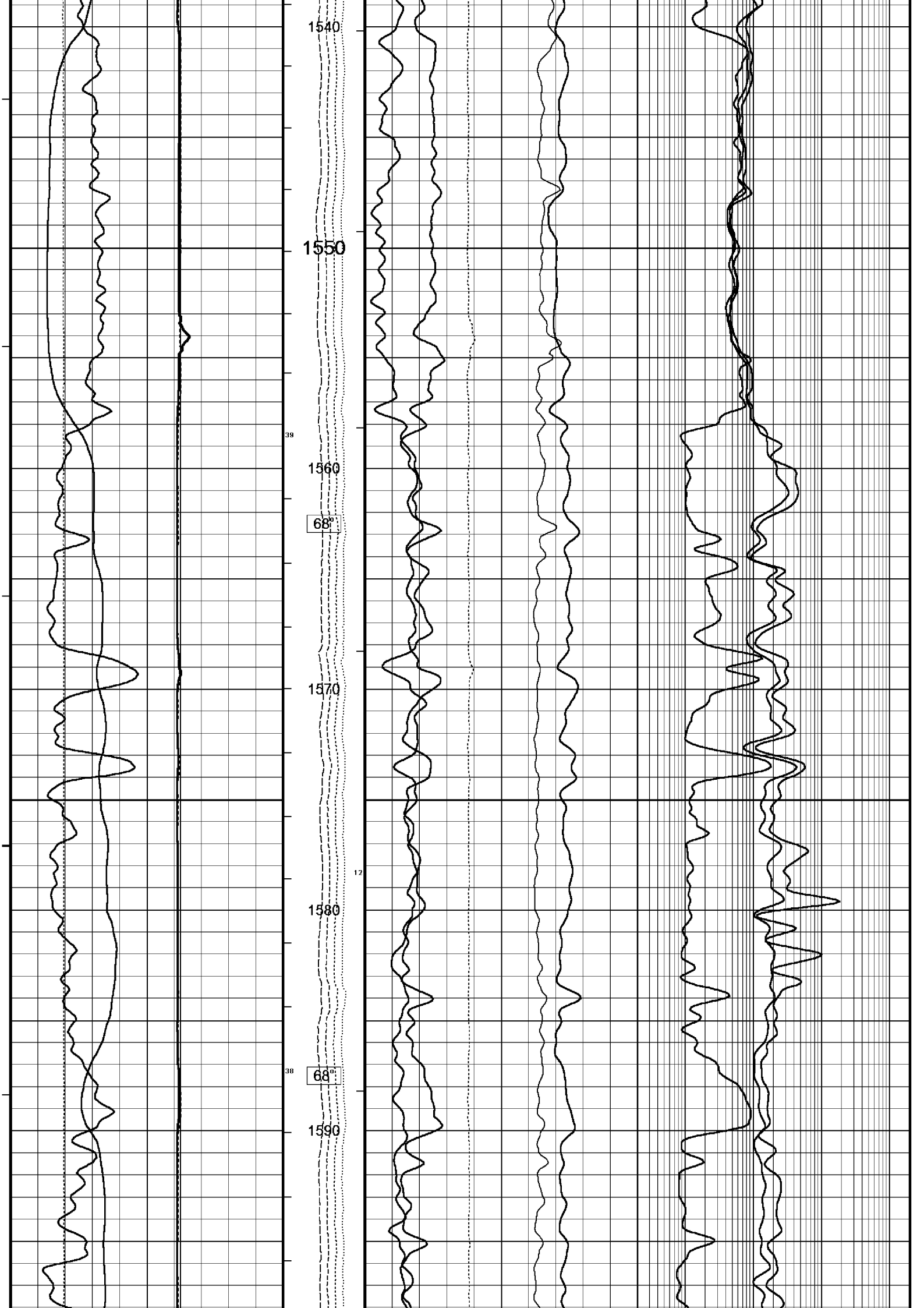

1250
50
1260
61°
1270
1280
49
62°
1290
1300
15

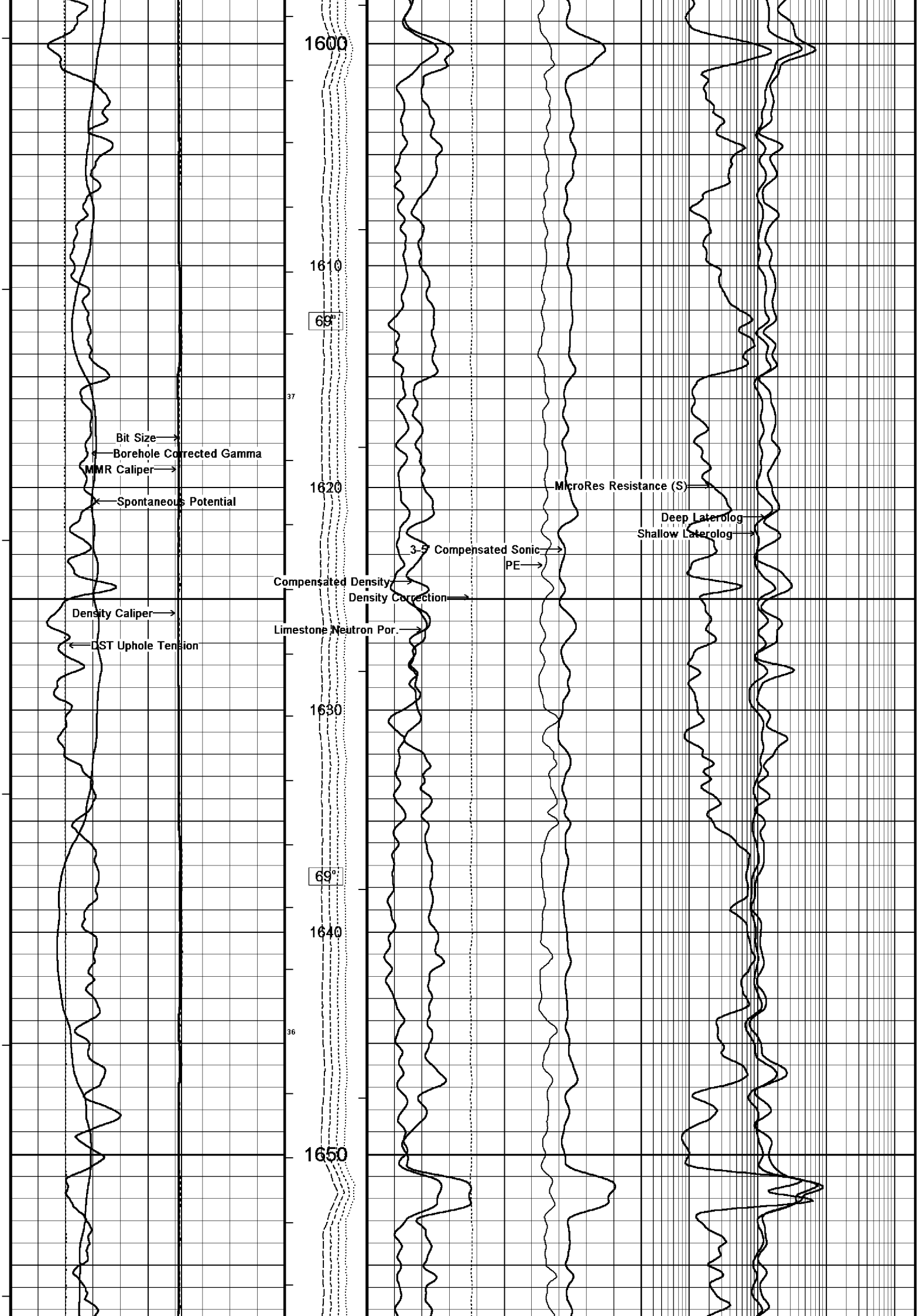

48
1310
62°
Bit Size
Borehole Corrected Gamma
MMR Caliper
1320
Spontaneous Potential
Micro Res Resistance (S)
Deep Laterolog
Shallow Laterolog
3.5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1330
47
63°
1340
1350
46
1360

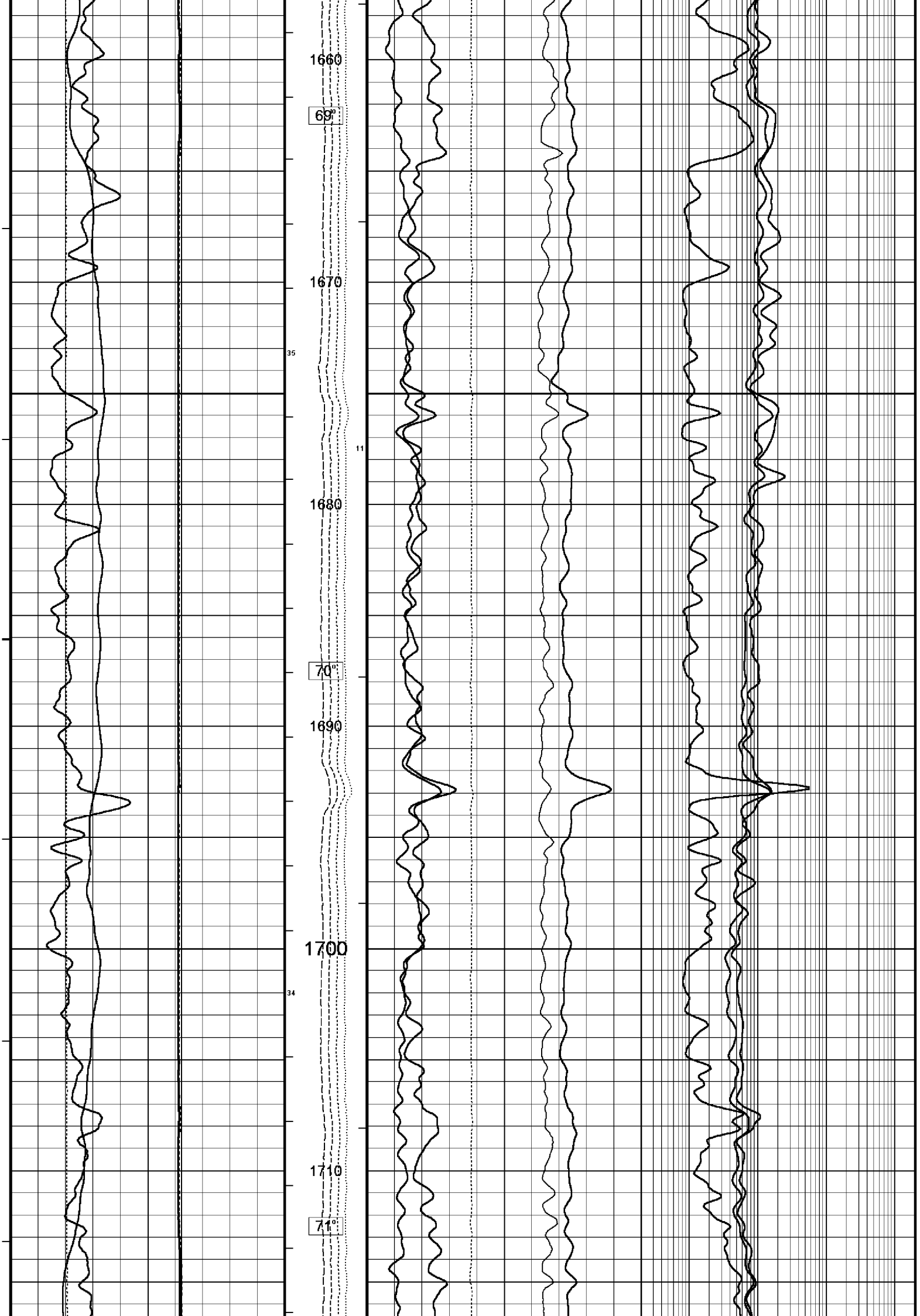

63°
1370
1380
64°
1390
1400
1410
64°
1420
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes Resistance (S)

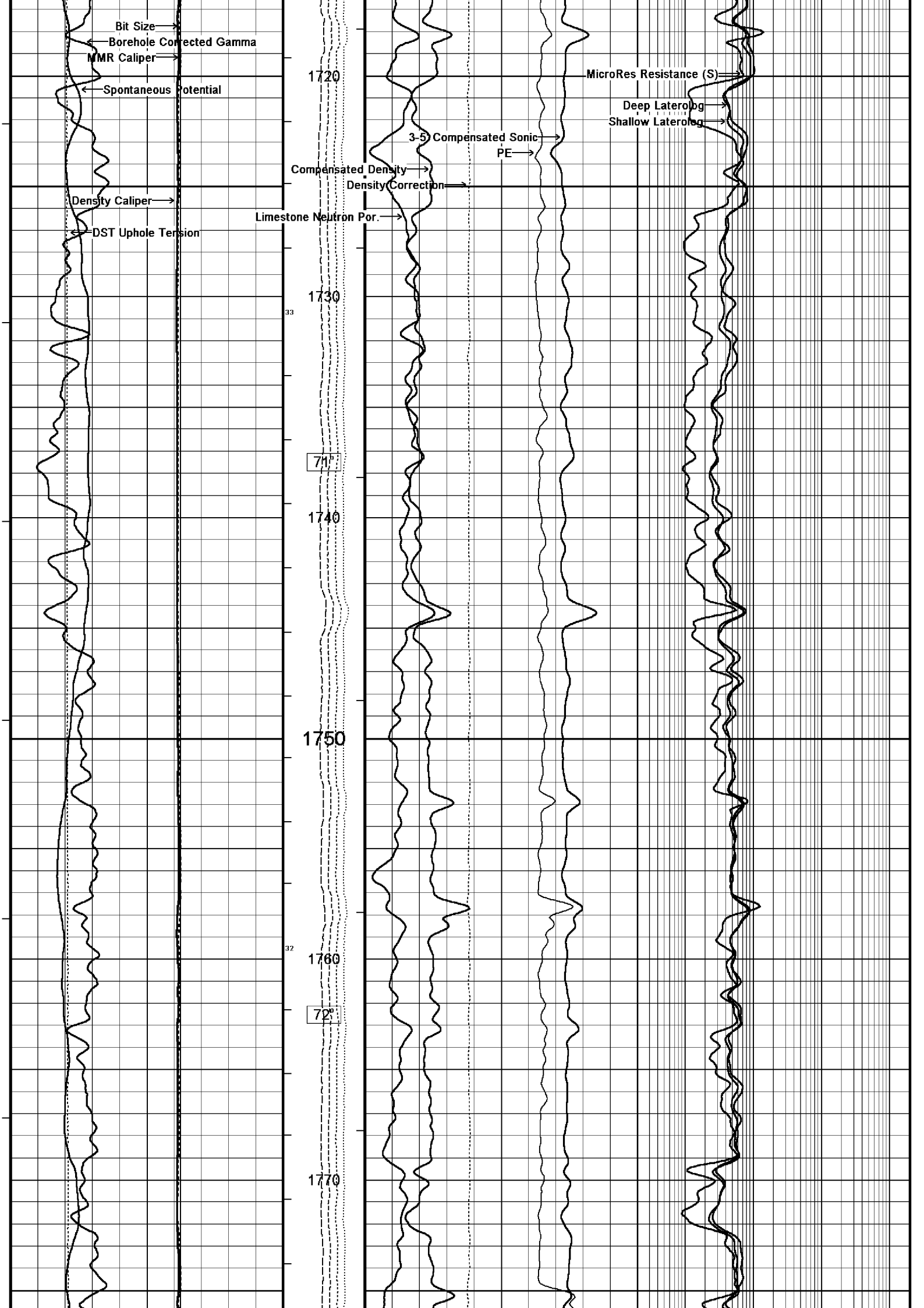

Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
Deep Laterolog
Shallow Laterolog
1430
65°
1440
1450
1460
66°
1470

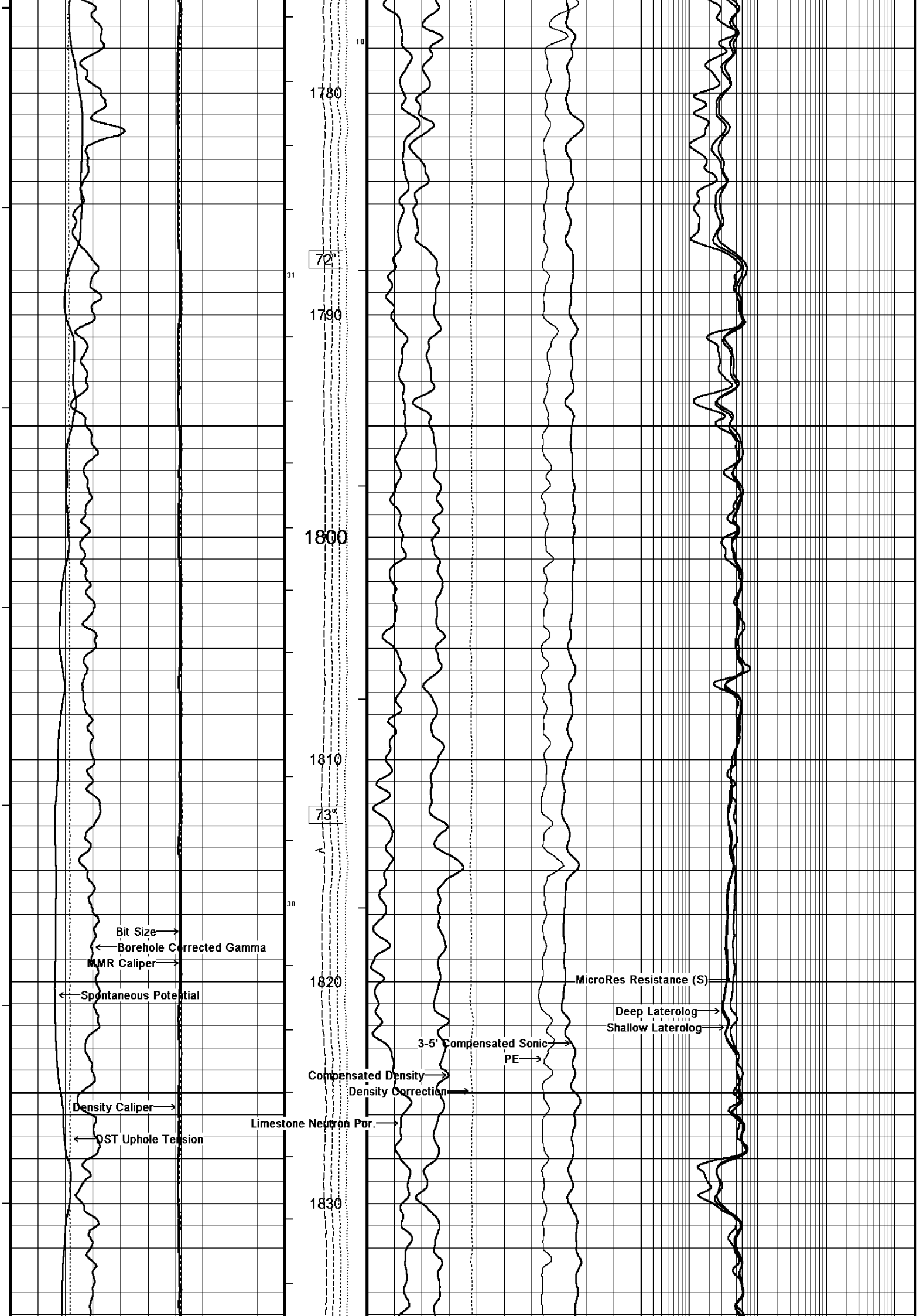

1480
66°
1490
1500
1510
67°
1520
1530
67°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3-5' Compensated Sonic
PE
Microres Resistance (S)
Deep Laterolog
Shallow Laterolog

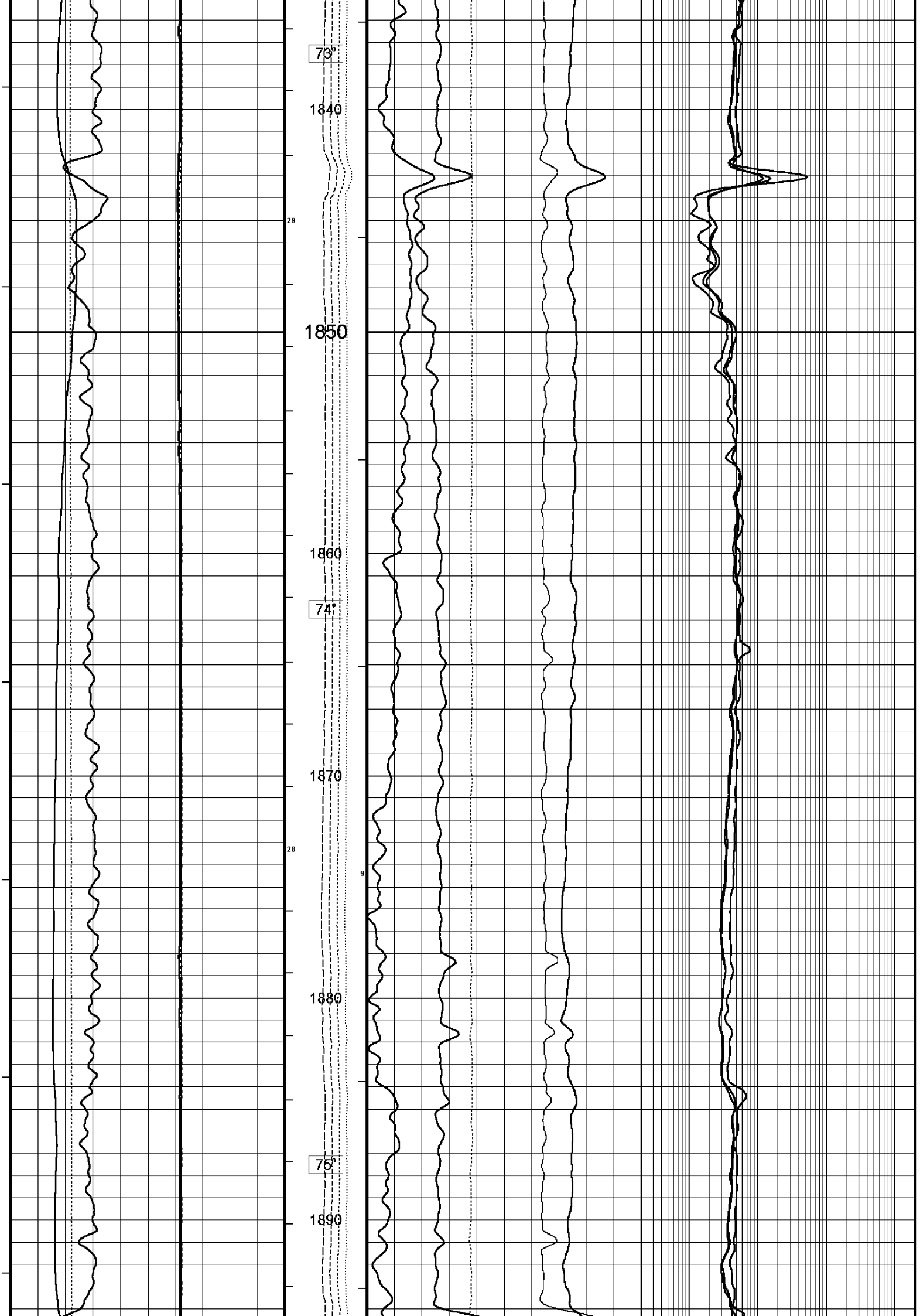

1540
1550
1560
68°
1570
1580
68°
1590

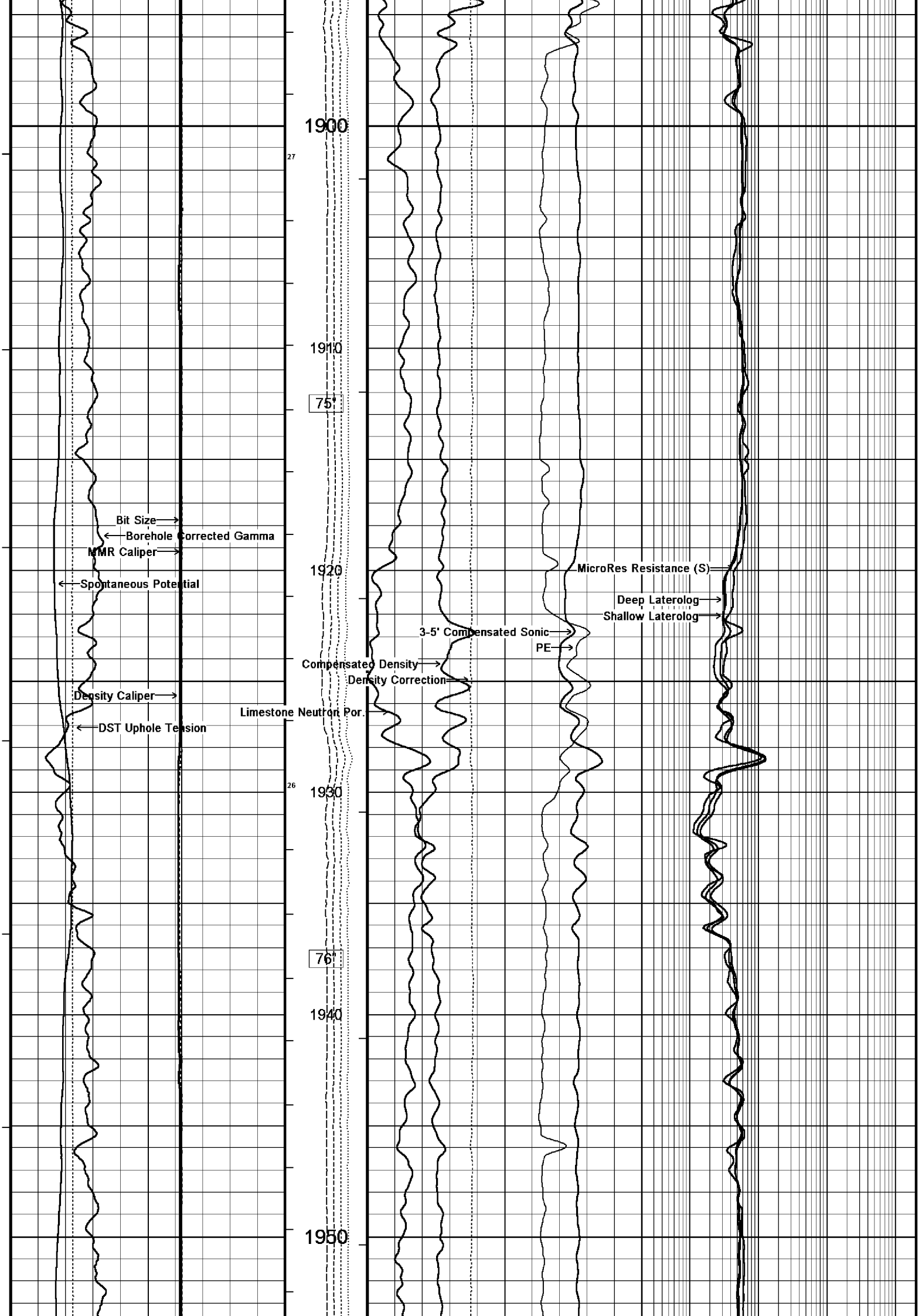

1600
1610
69°
37
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
1620
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1630
69°
1640
36
1650


1660
69°
1670
35
11
1680
70°
1690
1700
34
1710
71°

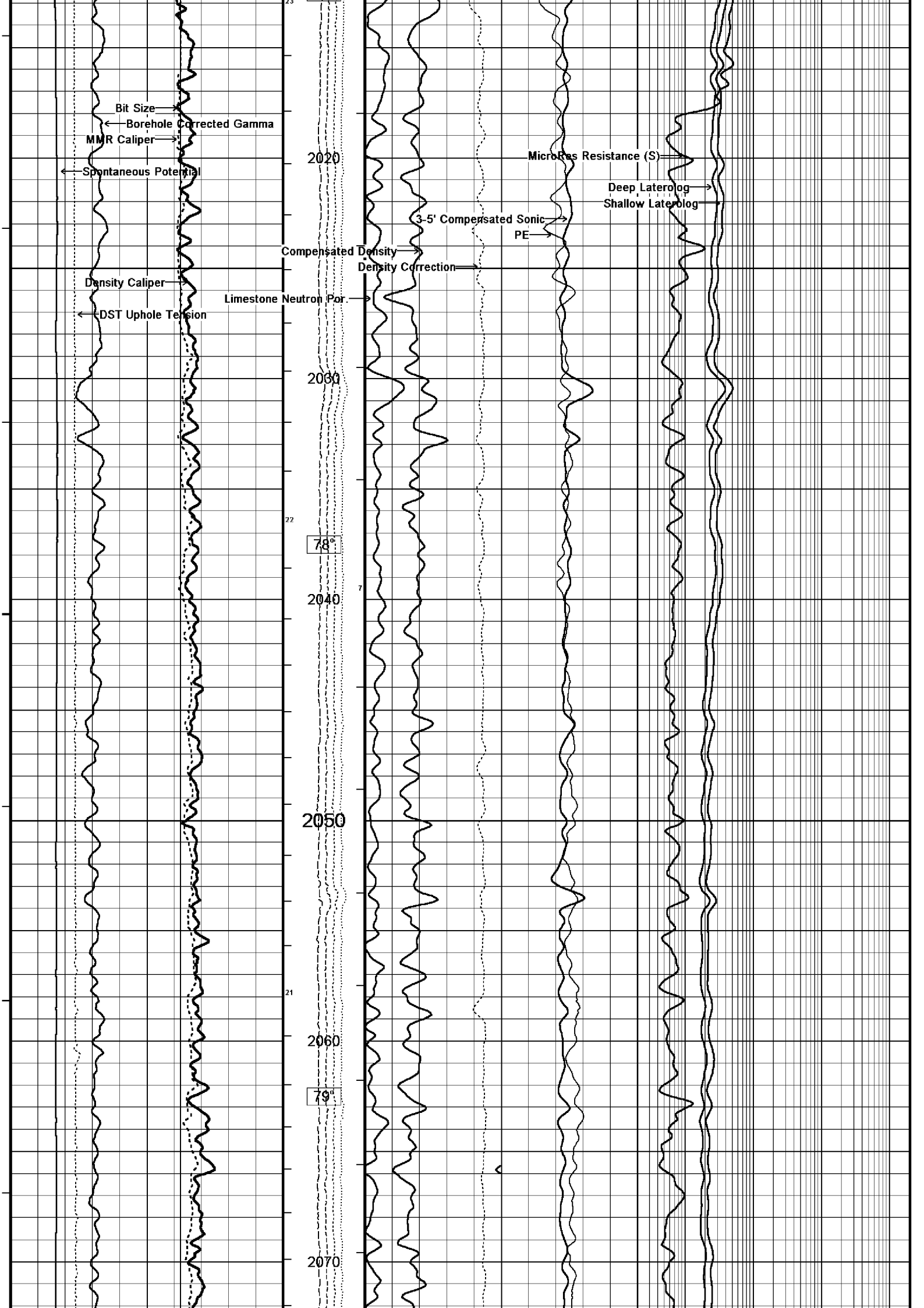

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
1720
1730
1740
1750
1760
1770
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
33
32
71°
72°

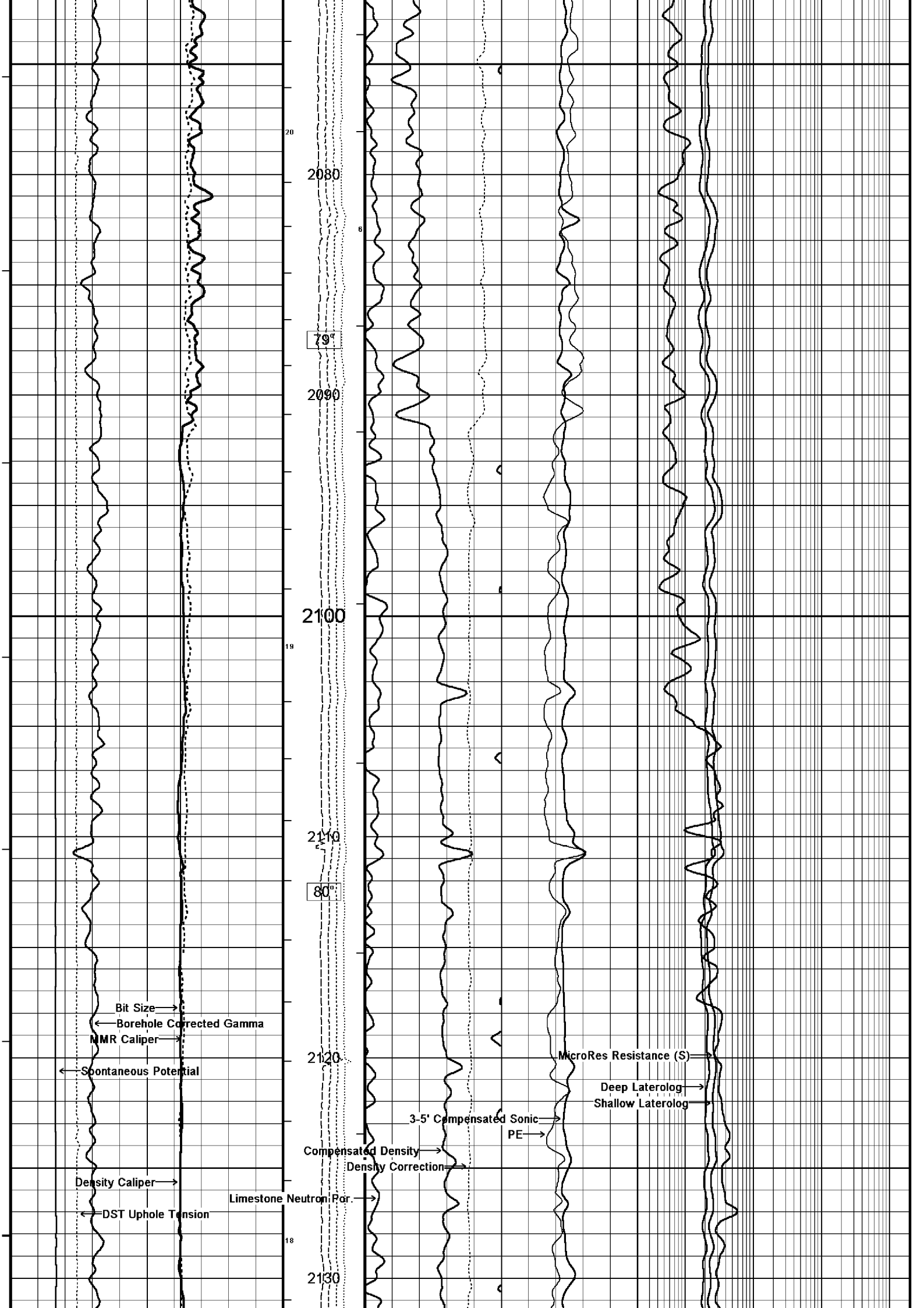

1780
72°
1790
1800
1810
73°
1820
1830
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog


73"
1840
29
1850
1860
74"
1870
28
9
1880
75"
1890


1900
27
1910
75'
Bit Size
Borehole Corrected Gamma
NMR Caliper
Spontaneous Potential
1920
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
26
1930
76'
1940
1950

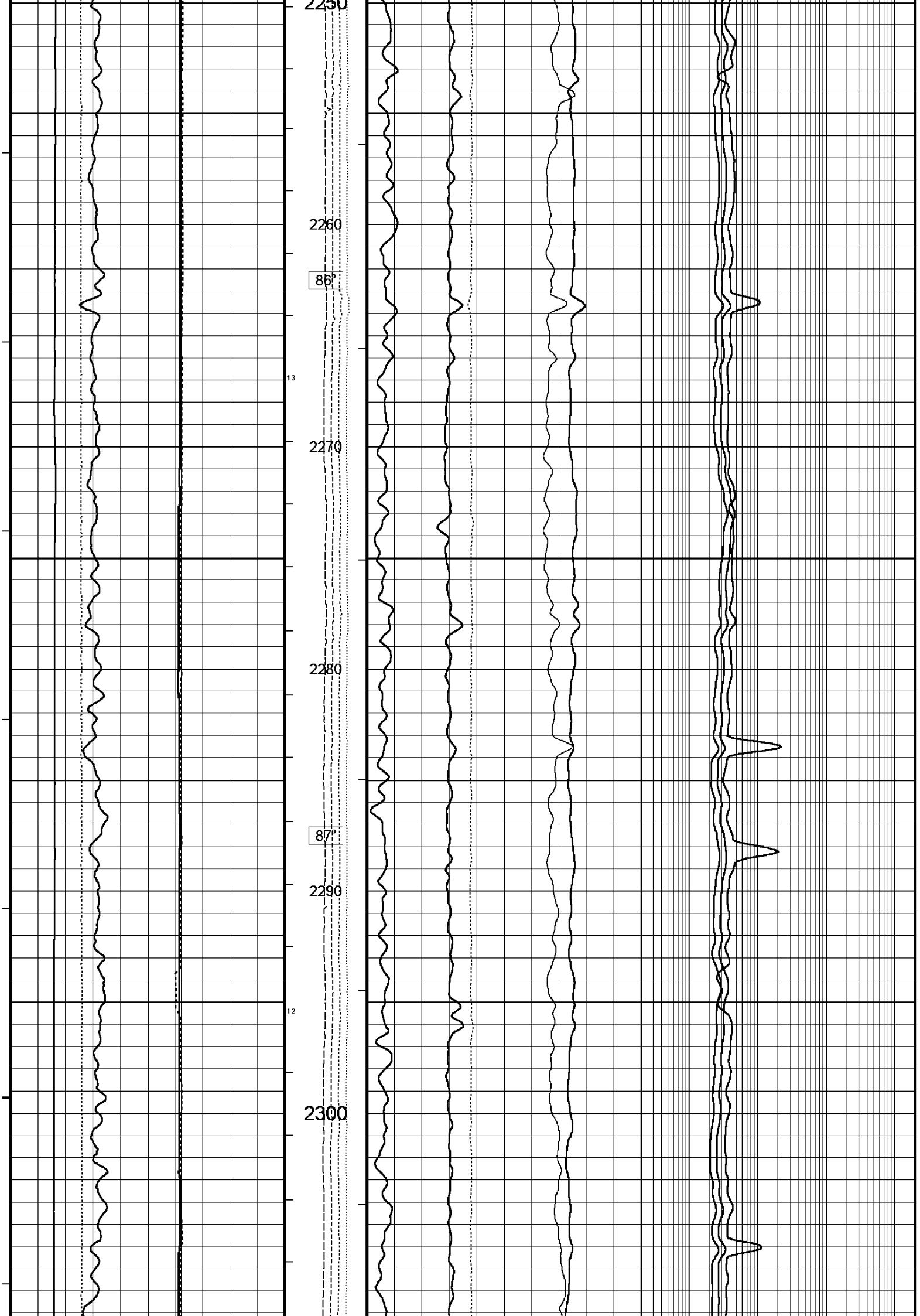
25
1960
77°
1970
8
1980
24
77°
1990
2000
2010
78°

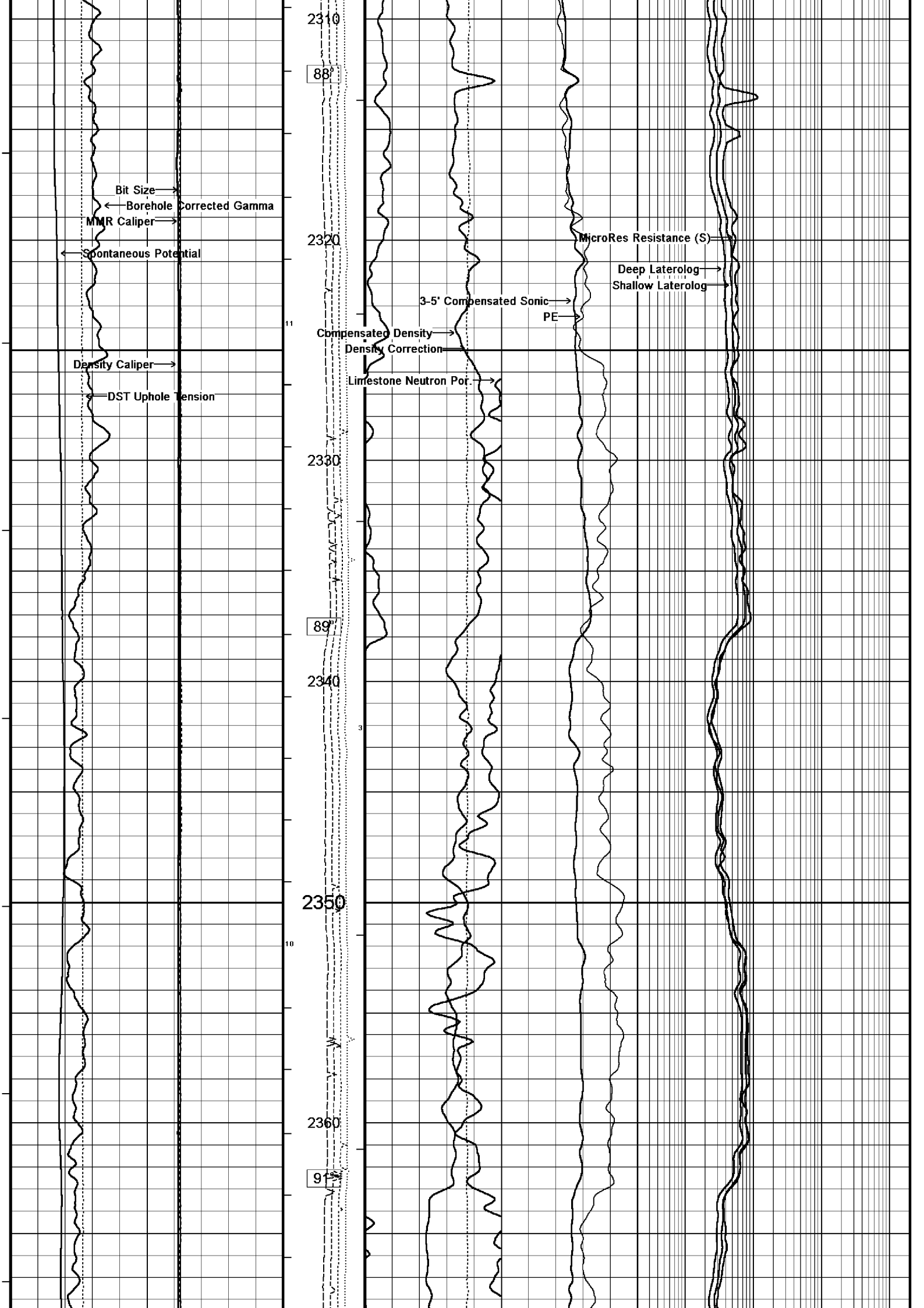

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
2020
2030
2040
2050
2060
2070
78°
79°
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por

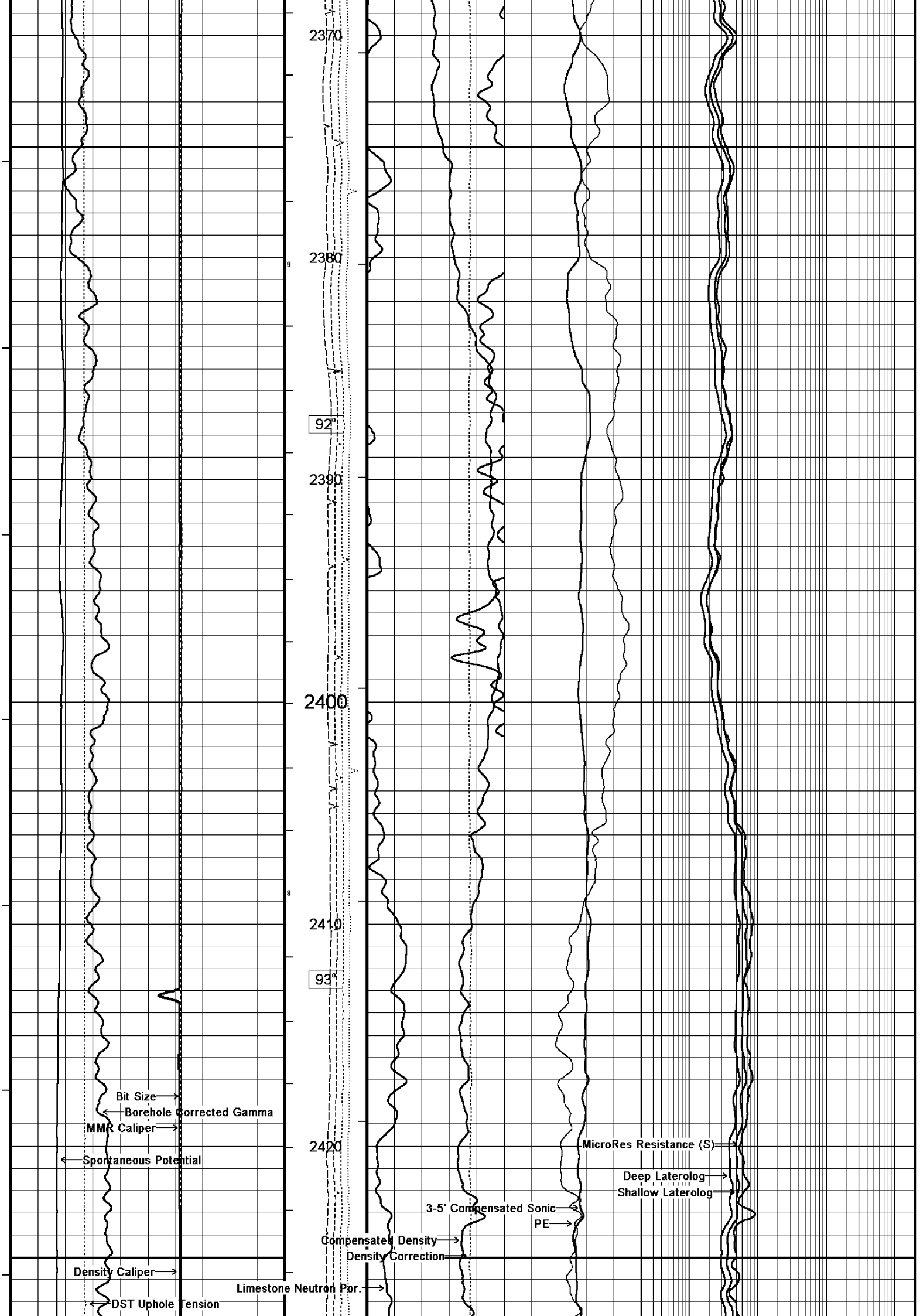

2080
79°
2090
2100
2110
80°
2120
2130
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

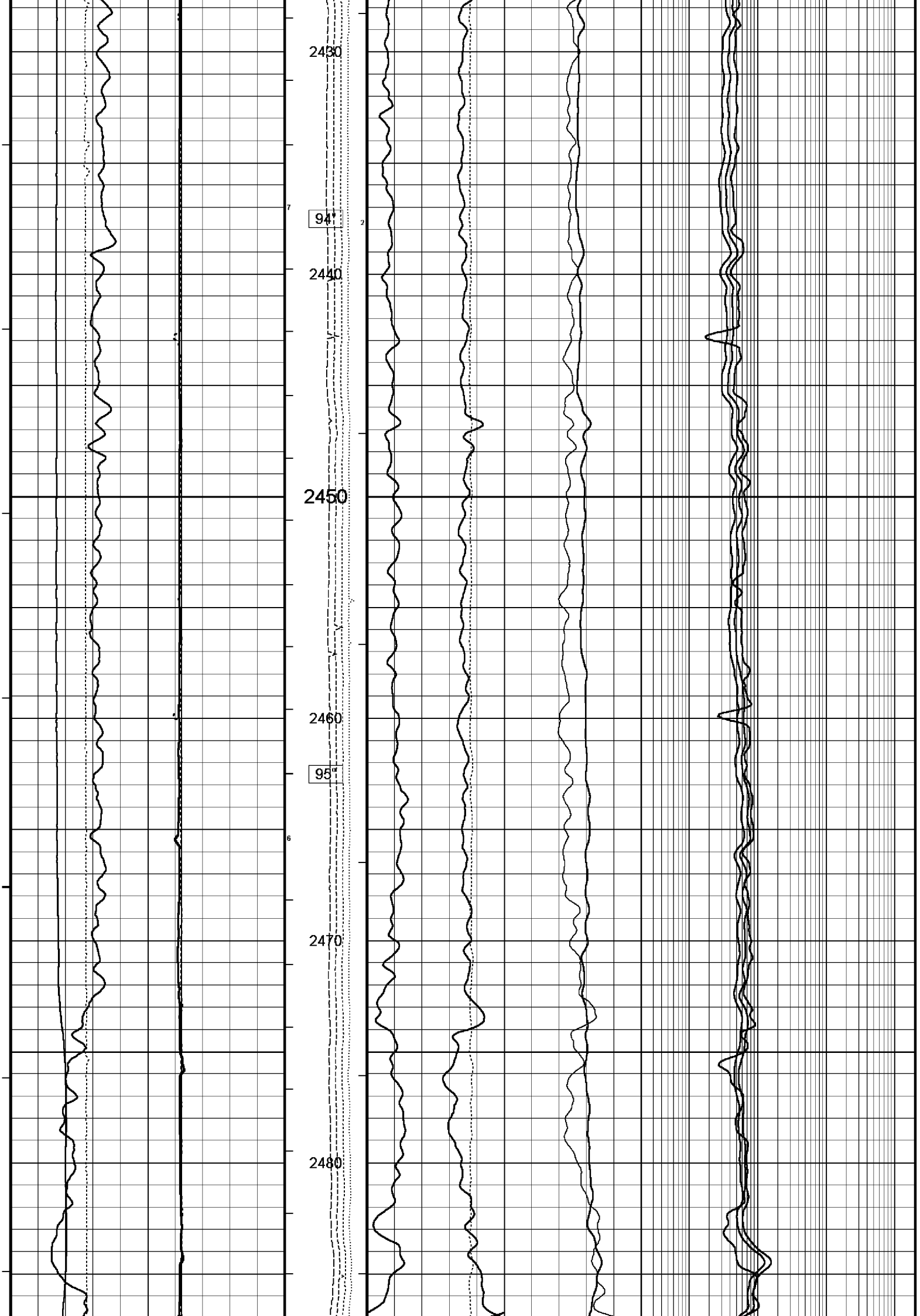
81°
2140
2150
17
5
2160
82°
2170
2180
16
83°
2190

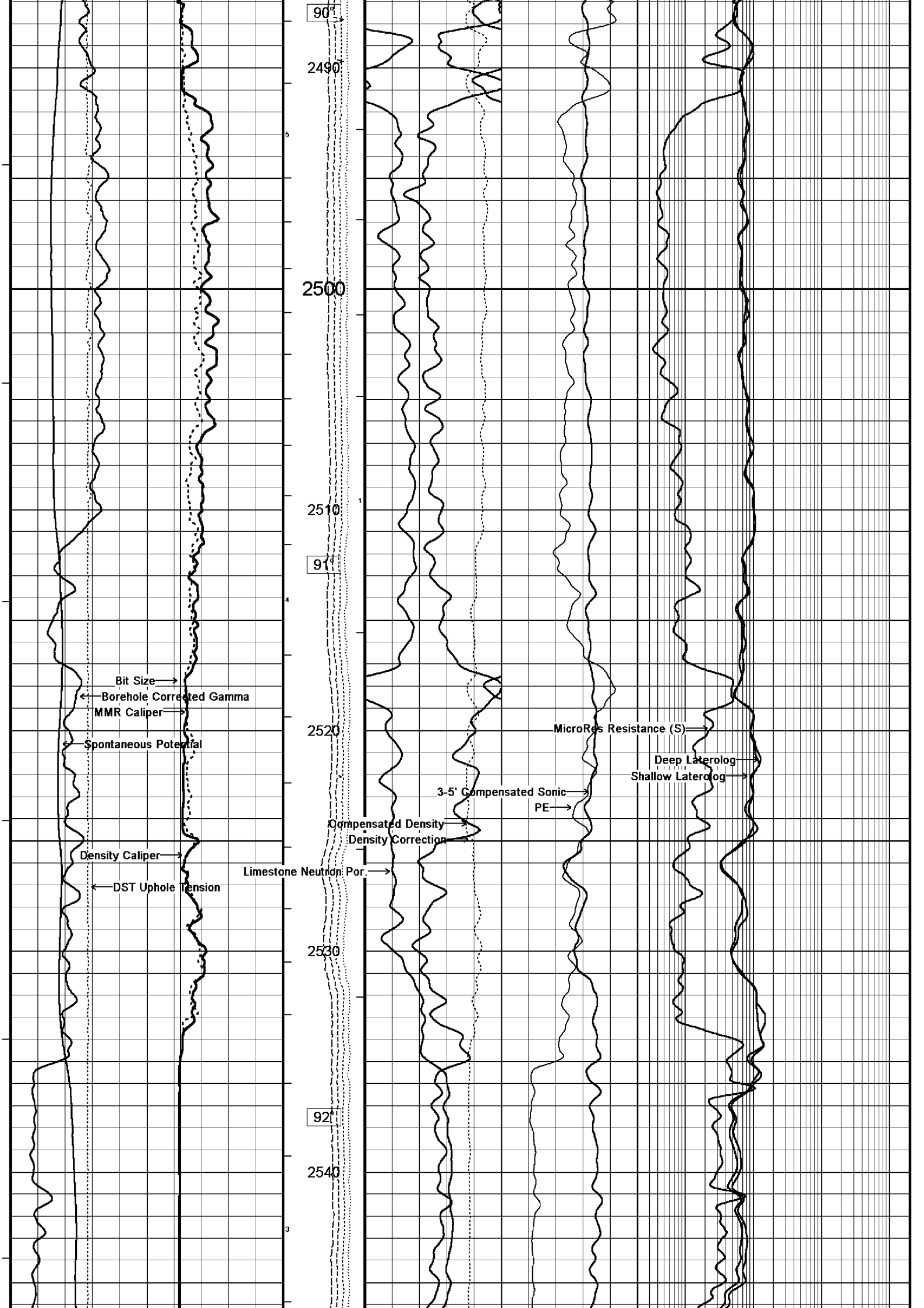
2200
2210
84"
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
2220
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
2230
85"
2240

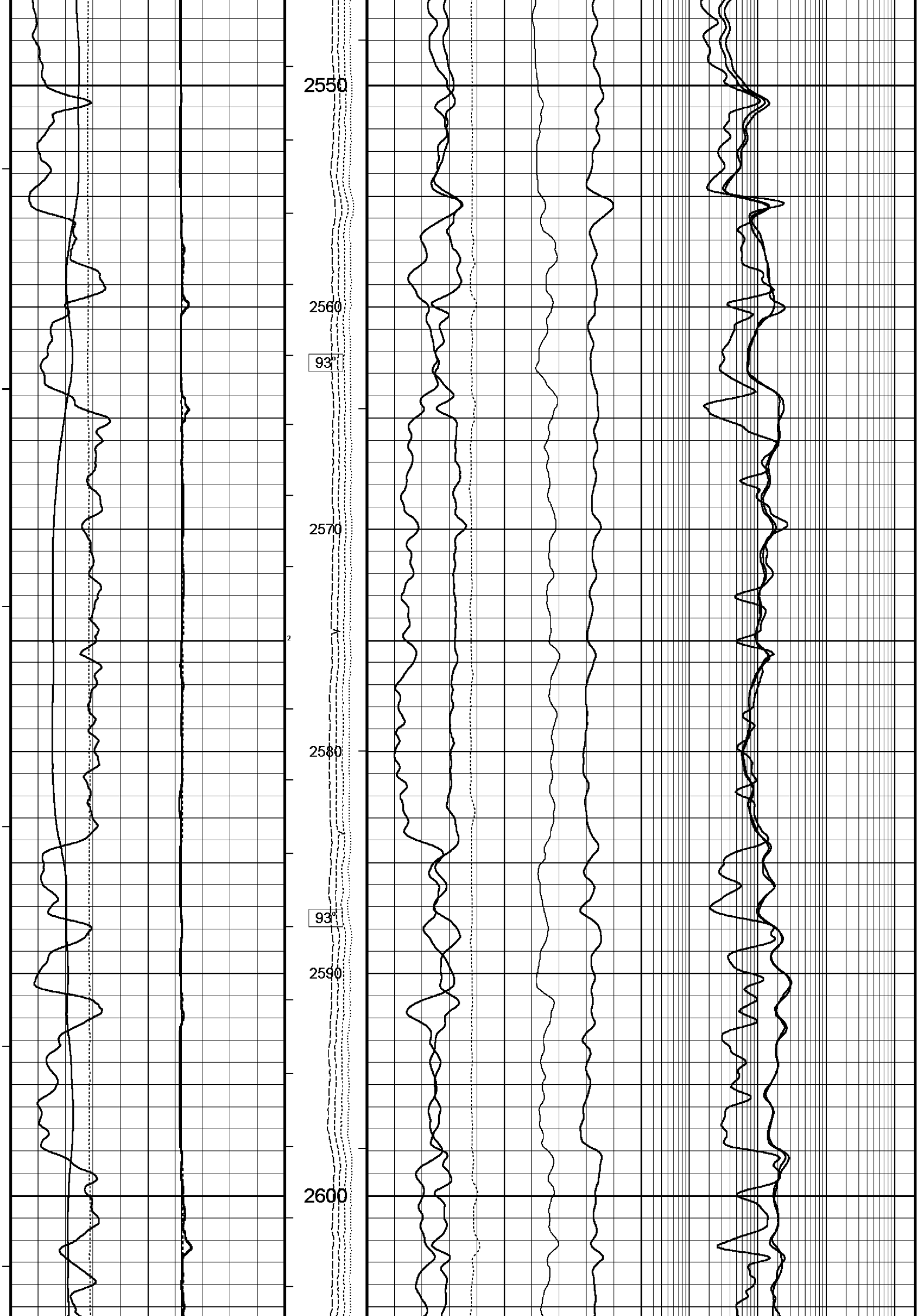

2250
2260
86°
2270
2280
87°
2290
2300

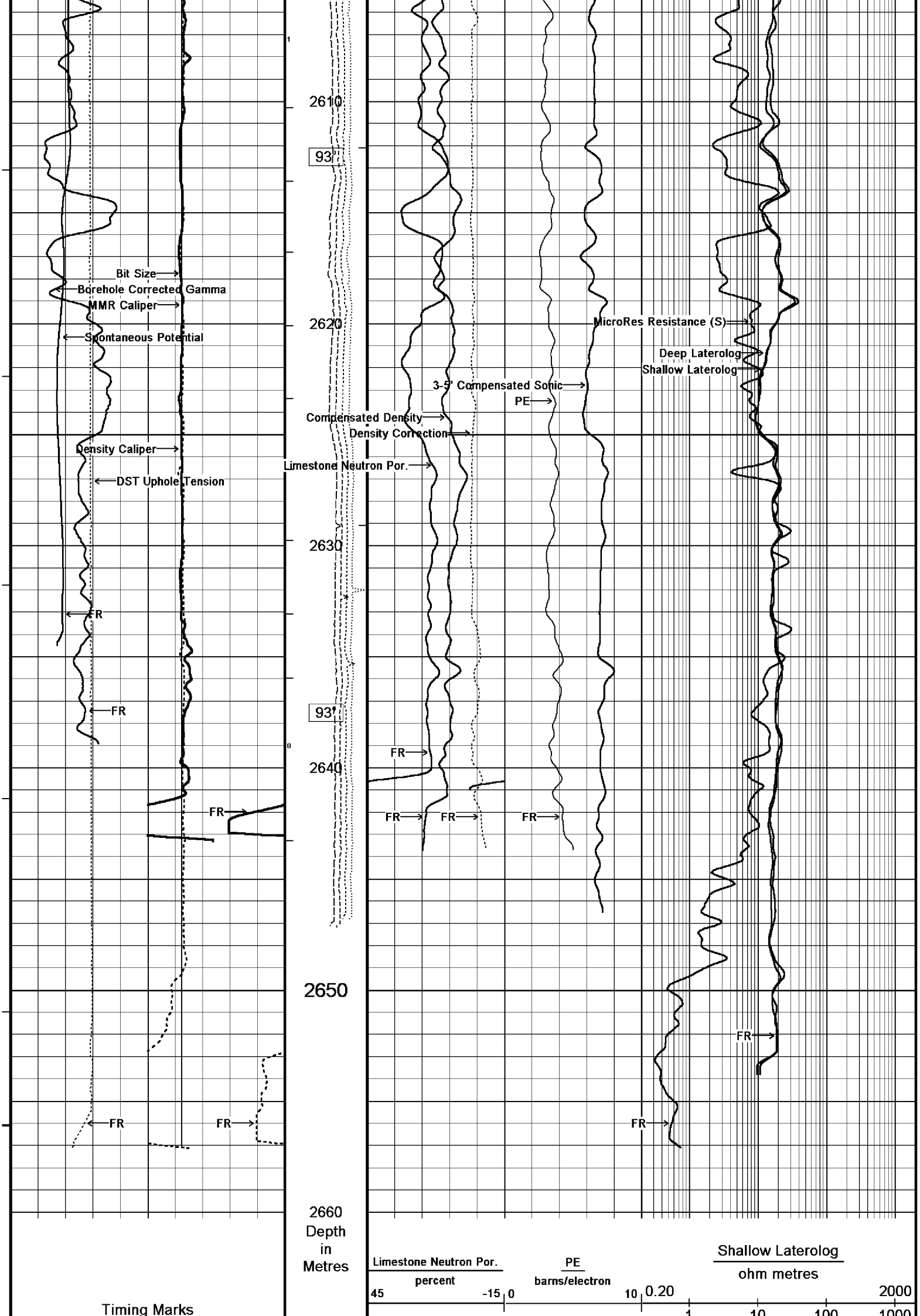

2310
88
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
2320
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por
DST Uphole Tension
2330
89
2340
2350
2360
91

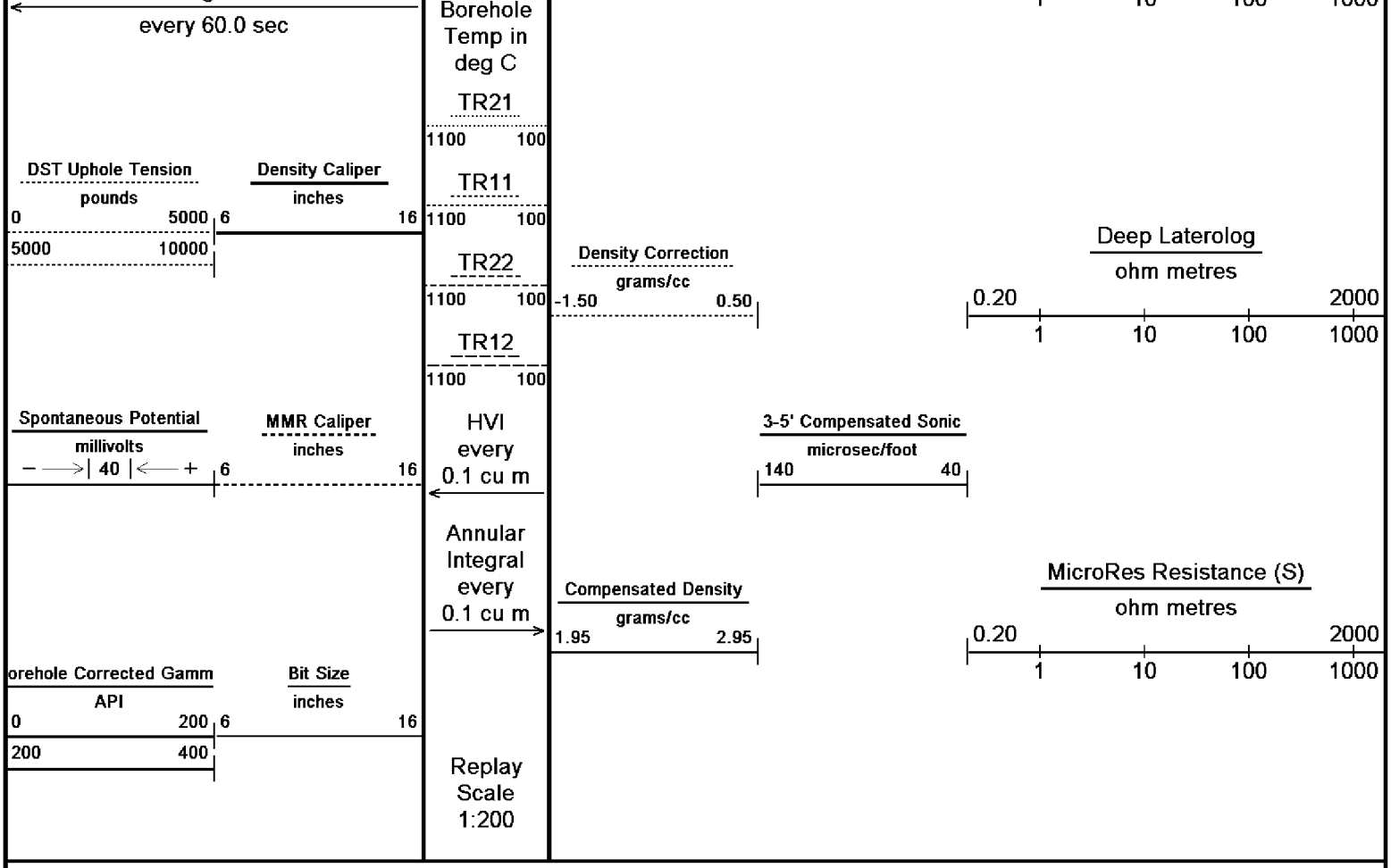

2370
2380
92°
2390
2400
2410
93°
2420
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog


2430
94
2440
2450
2460
95
2470
2480


90
2490
2500
2510
91
2520
2530
92
2540
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog


2550
2560
93°
2570
2580
93°
2590
2600


Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
FR
FR
FR
FR
FR
FR
FR
FR
FR
FR
FR
FR
2610
93
2620
2630
93
2640
2650
2660
Depth
in
Metres
Compensated Density
Density Correction
Limestone Neutron Por.
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
Timing Marks
Limestone Neutron Por.
percent
45
-15
0
PE
barns/electron
10
0.20
Shallow Laterolog
ohm metres
2000
1
10
100
1000

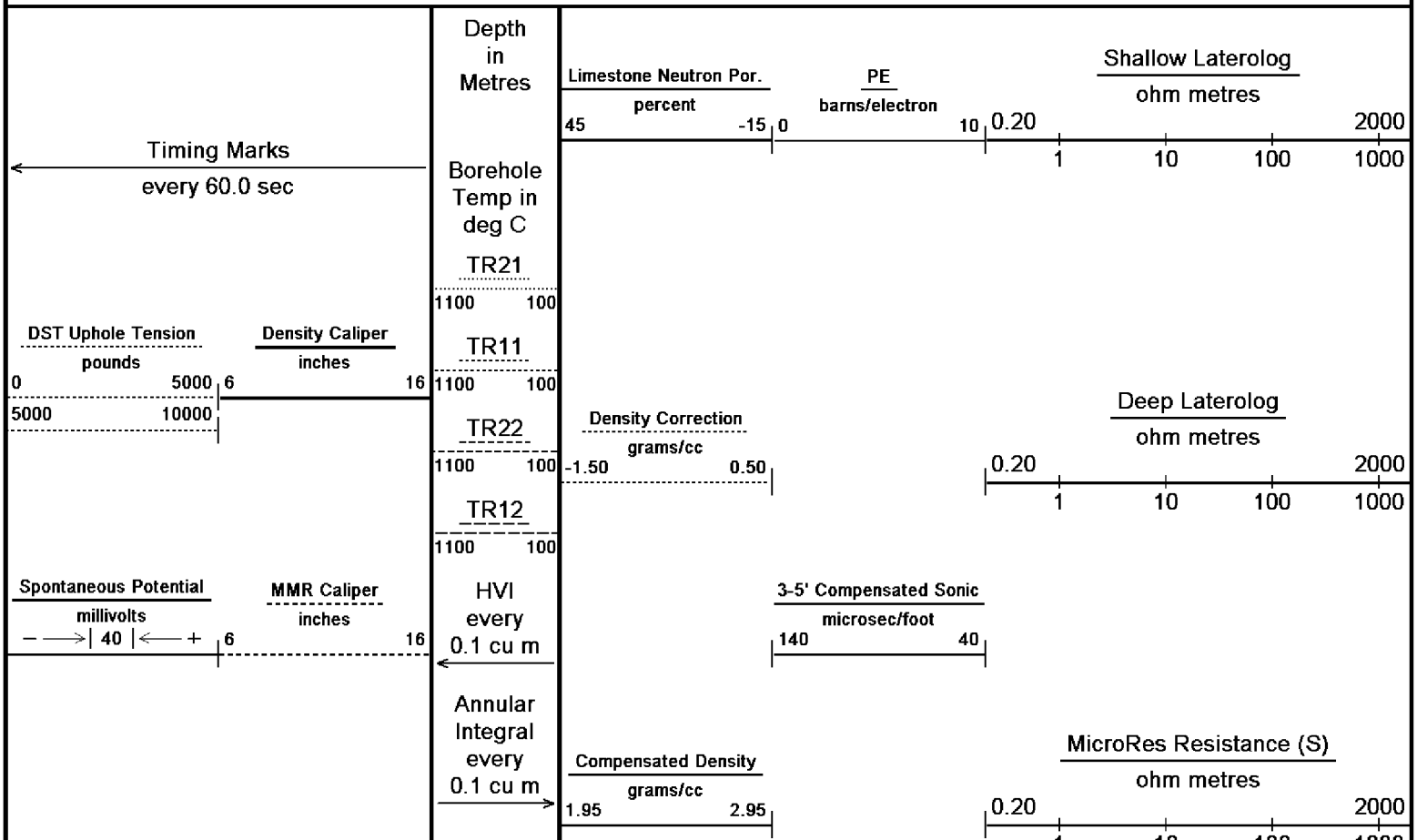


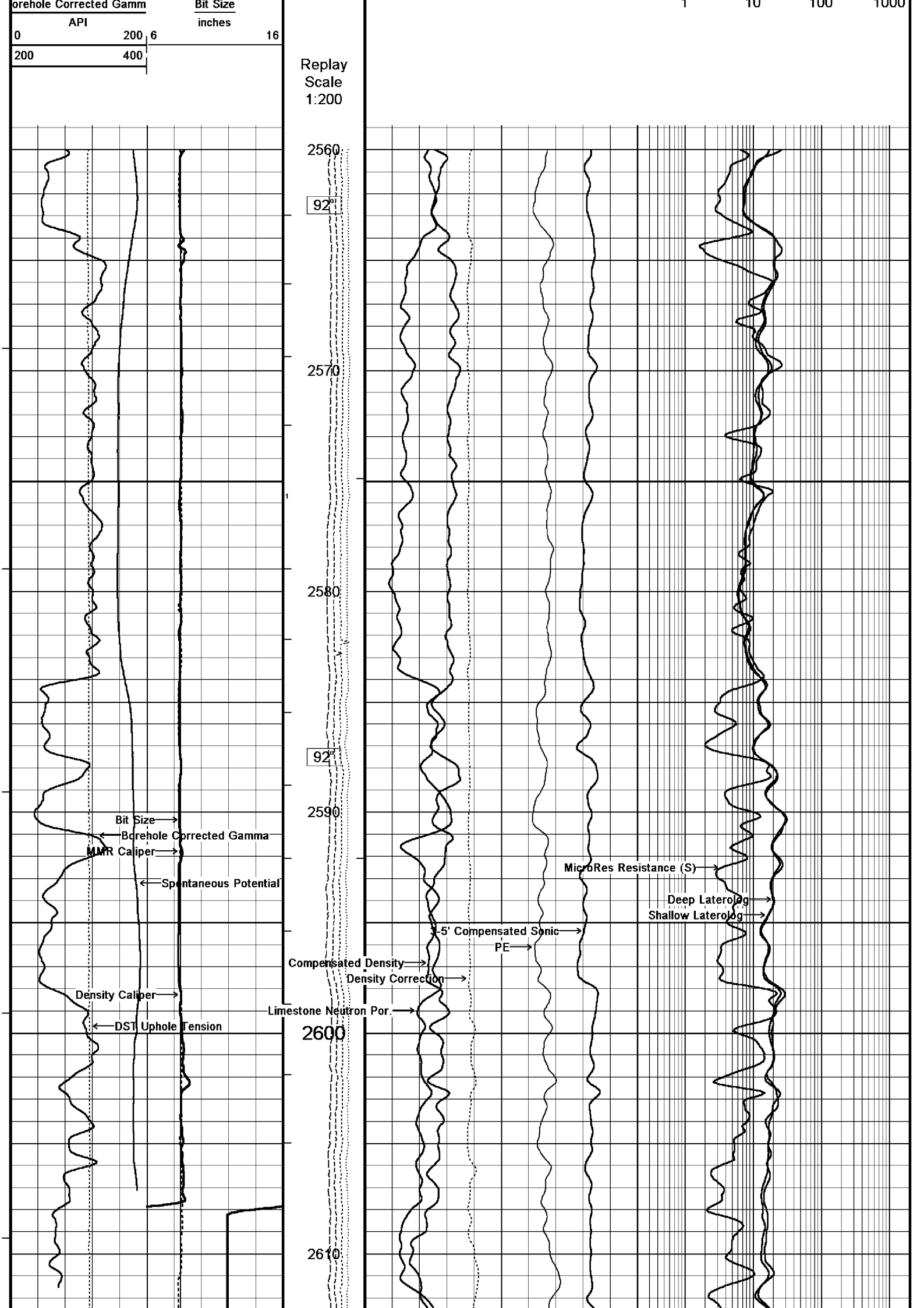
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:50
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

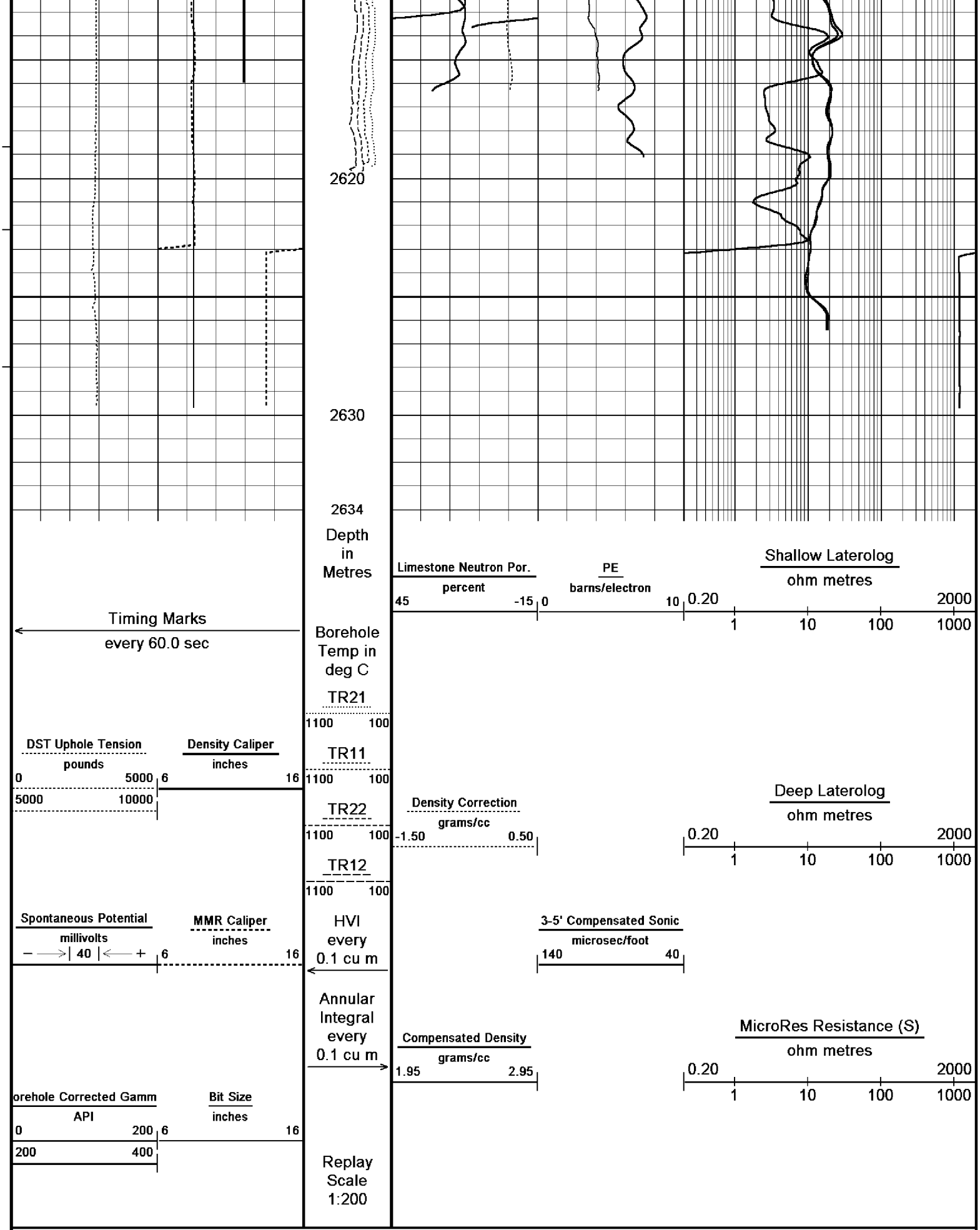
MAIN LOG 1:200

REPEAT SECTION 1:200 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:50
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:




orehole Corrected Gamm
API
0
200
200
400
Bit Size
inches
6
16
1
10
100
1000
Replay
Scale
1:200
2560
92
2570
2580
92
2590
2600
2610
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:50
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

REPEAT SECTION 1:200 RUN 2

REPEAT SECTION 1:200 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:50

Depth Based Data - Maximum Sampling Increment 10.00m — Plotted on 30-NOV-2005 10:00

Filename: C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta — Recorded on 01-OCT-2005 18:14

System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Depth in Metres

Timing Marks
every 60.0 sec

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

orehole Corrected Gamm
API
0 200
200 400

MMR Caliper
inches
6 16

Spontaneous Potential
millivolts
– 40 +

Bit Size
inches
6 16

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-0.25 0.25

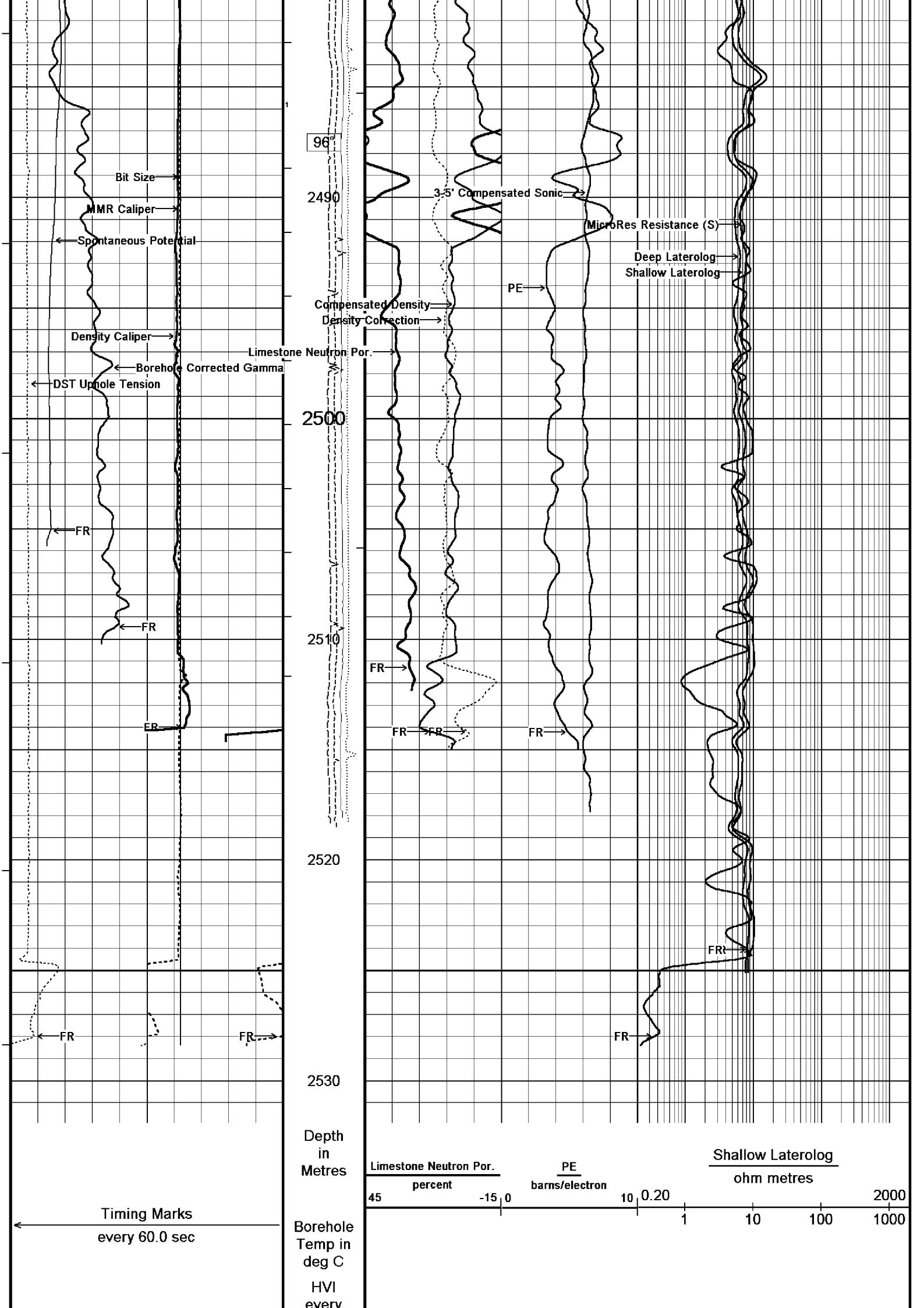
3-5' Compensated Sonic
microsec/foot
140 40

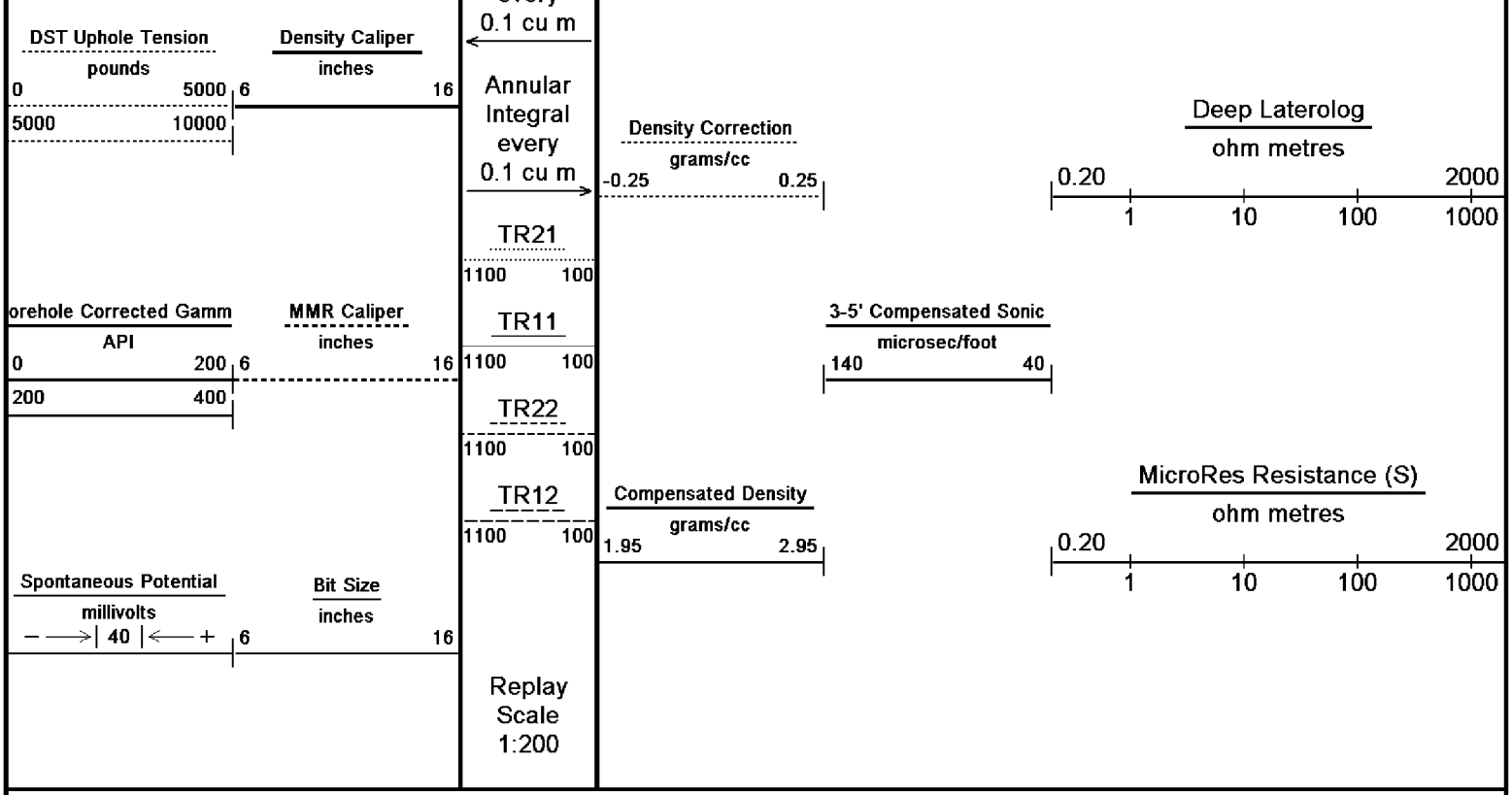
Compensated Density
grams/cc
1.95 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

Replay Scale 1:200

2455
2460
95°
2470
2480


96"
Bit Size
MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Upnole Tension
3-5' Compensated Sonic
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
PE
Compensated Density
Density Correction
Limestone Neutron Por.
FR
2490
2500
2510
2520
2530
Depth in Metres
Timing Marks
every 60.0 sec
Borehole Temp in deg C
HVI
every
Limestone Neutron Por.
percent
45
-15
0
PE
barns/electron
10
0.20
Shallow Laterolog
ohm metres
2000
1
10
100
1000



Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 03-NOV-2005 15:50
Recorded on 01-OCT-2005 18:14

REPEAT SECTION 1:200 RUN 1

DOWNHOLE EQUIPMENT

C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta

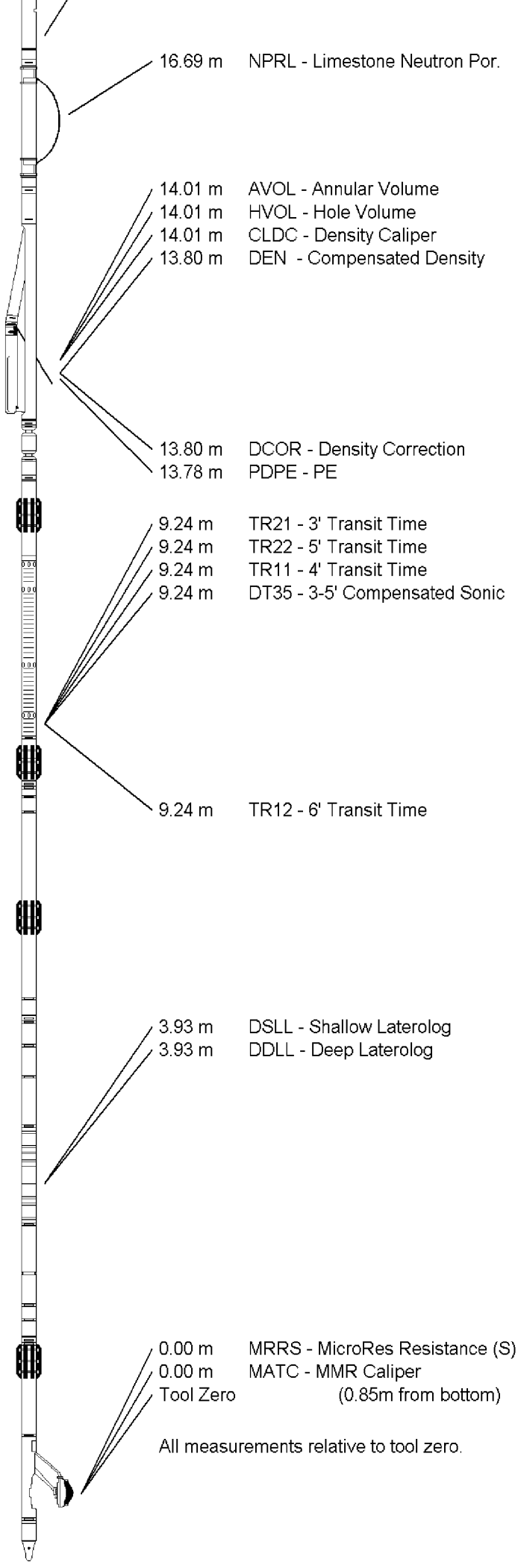
Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature



Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

General Constants All 000

General Parameters		
Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	

Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13
Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

918.0	1089.7

Field Check

919.8	1086.8

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2

Field Check

173.6	795.1

Density Constants MPD 066

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft

Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2
	0.0	9744.7	0.0	196.0

0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC

DENSITY - NEUTRON

1:200

PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:200

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E

COMPACT

FINAL PRINT

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METREabove Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80		2528.15	
Last Reading	2400.00		0.00	
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Last Edited: 3-OCT-2005 20:29

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:200

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
System Versions: Plotted with 7.01.0179

Plotted on 04-NOV-2005 16:01
Recorded on 04-OCT-2005 00:45

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– → | 40 | ← +

MMR Caliper
inches
6 16

orehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Depth
in
Metres

Borehole
Temp in
deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI
every
0.1 cu m

Annular
Integral
every
0.1 cu m

Replay
Scale
1:200

33

40

50

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

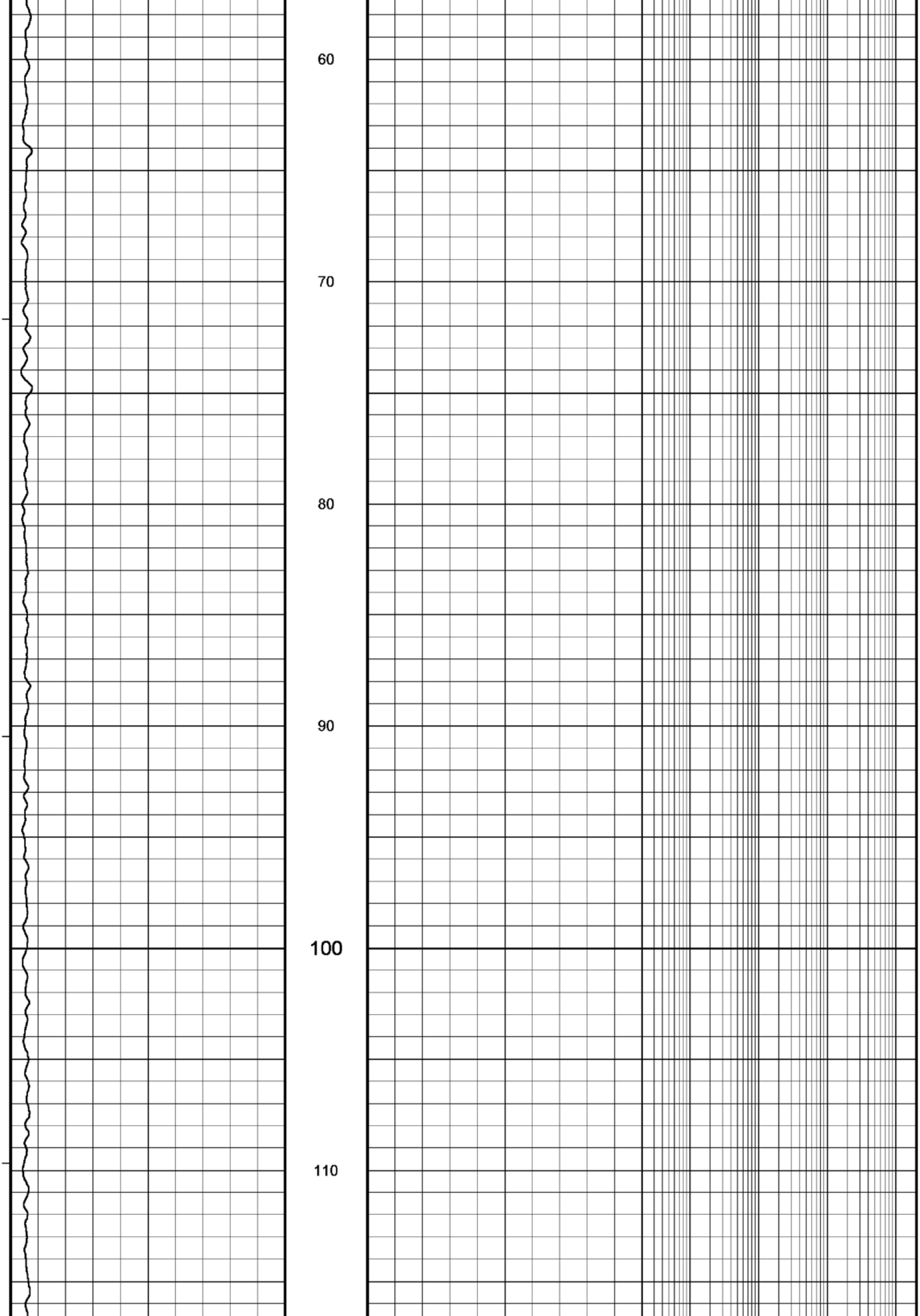
Density Correction
grams/cc
-1.50 0.50

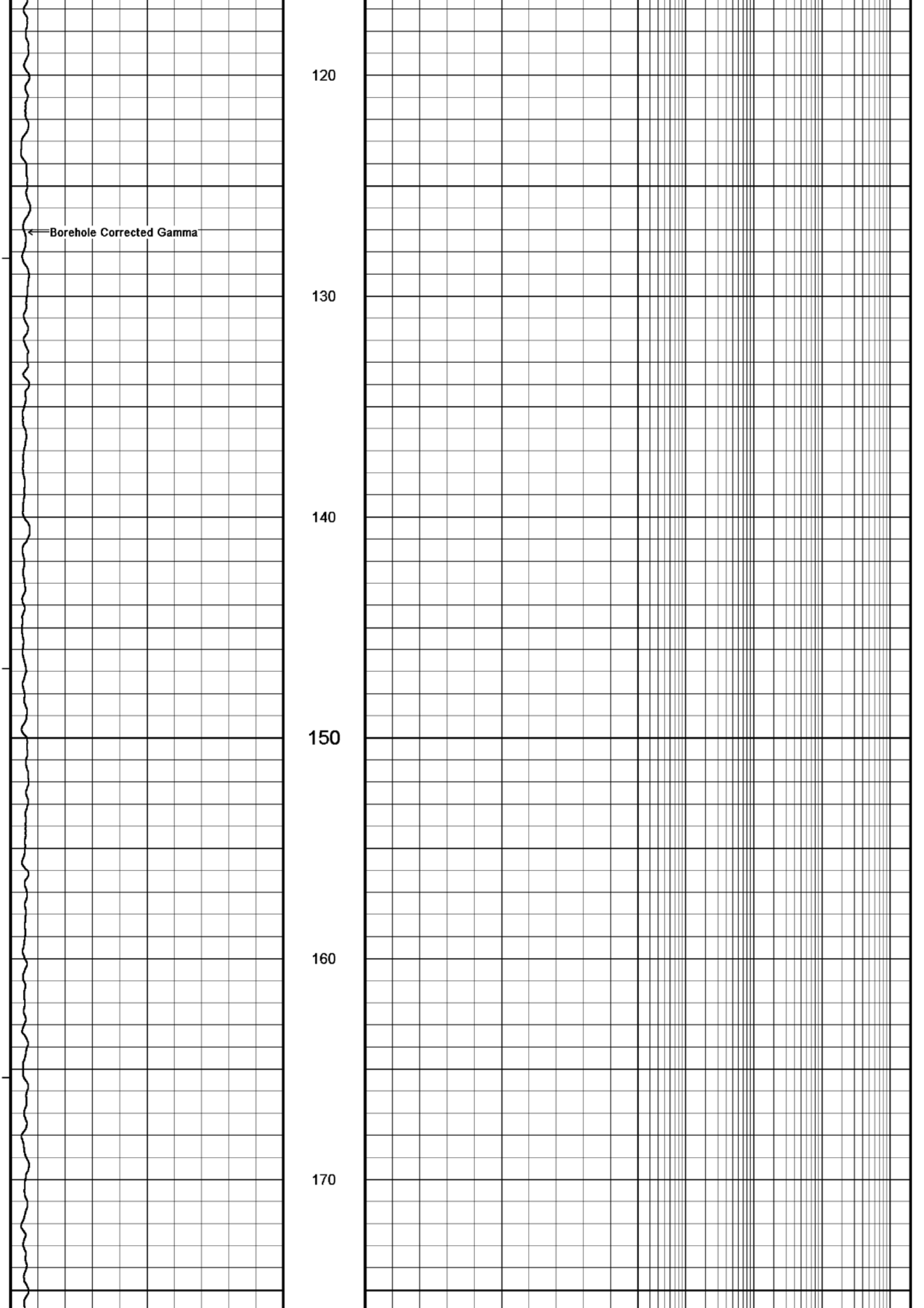
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

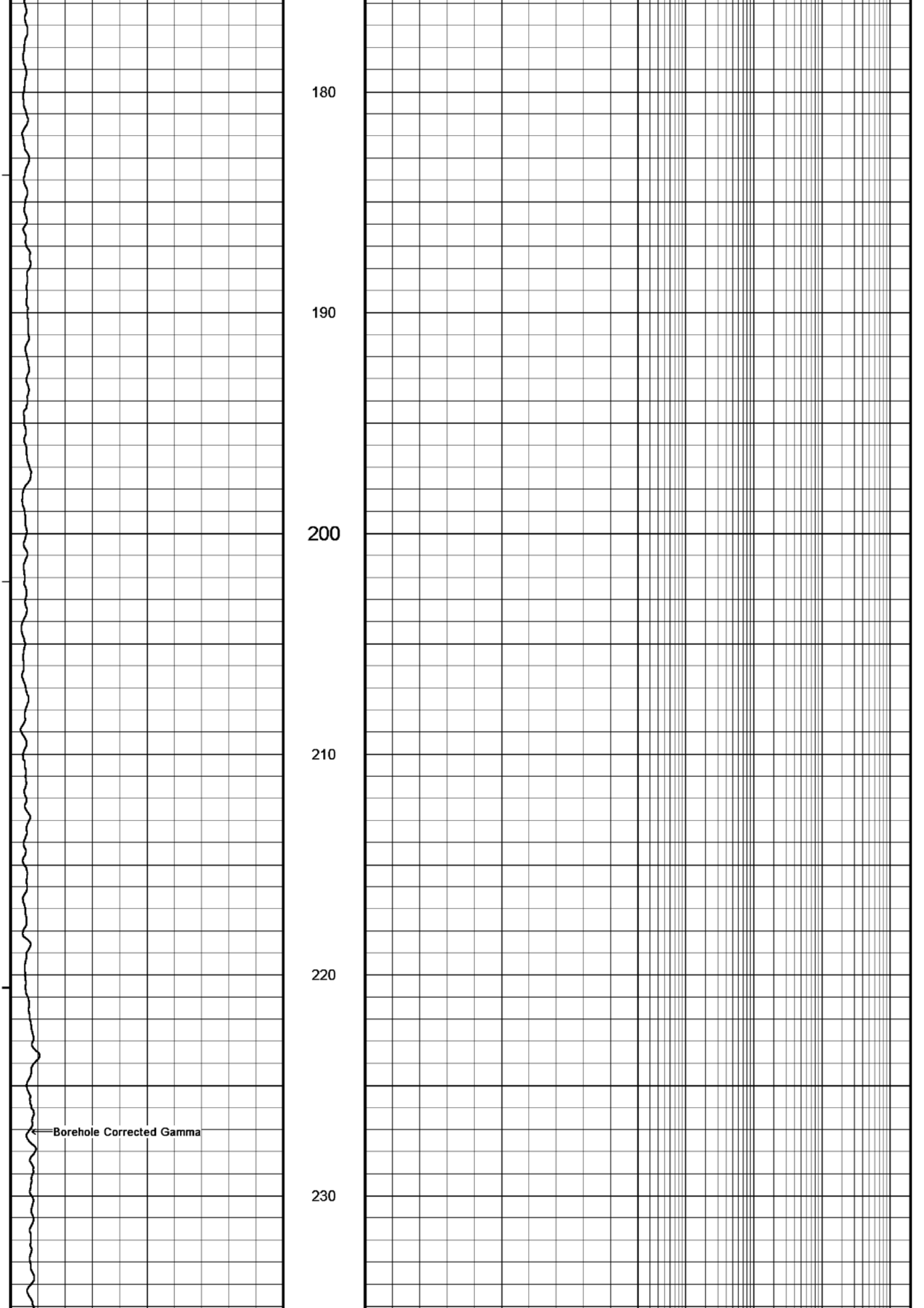
3-5' Compensated Sonic
microsec/foot
140 40

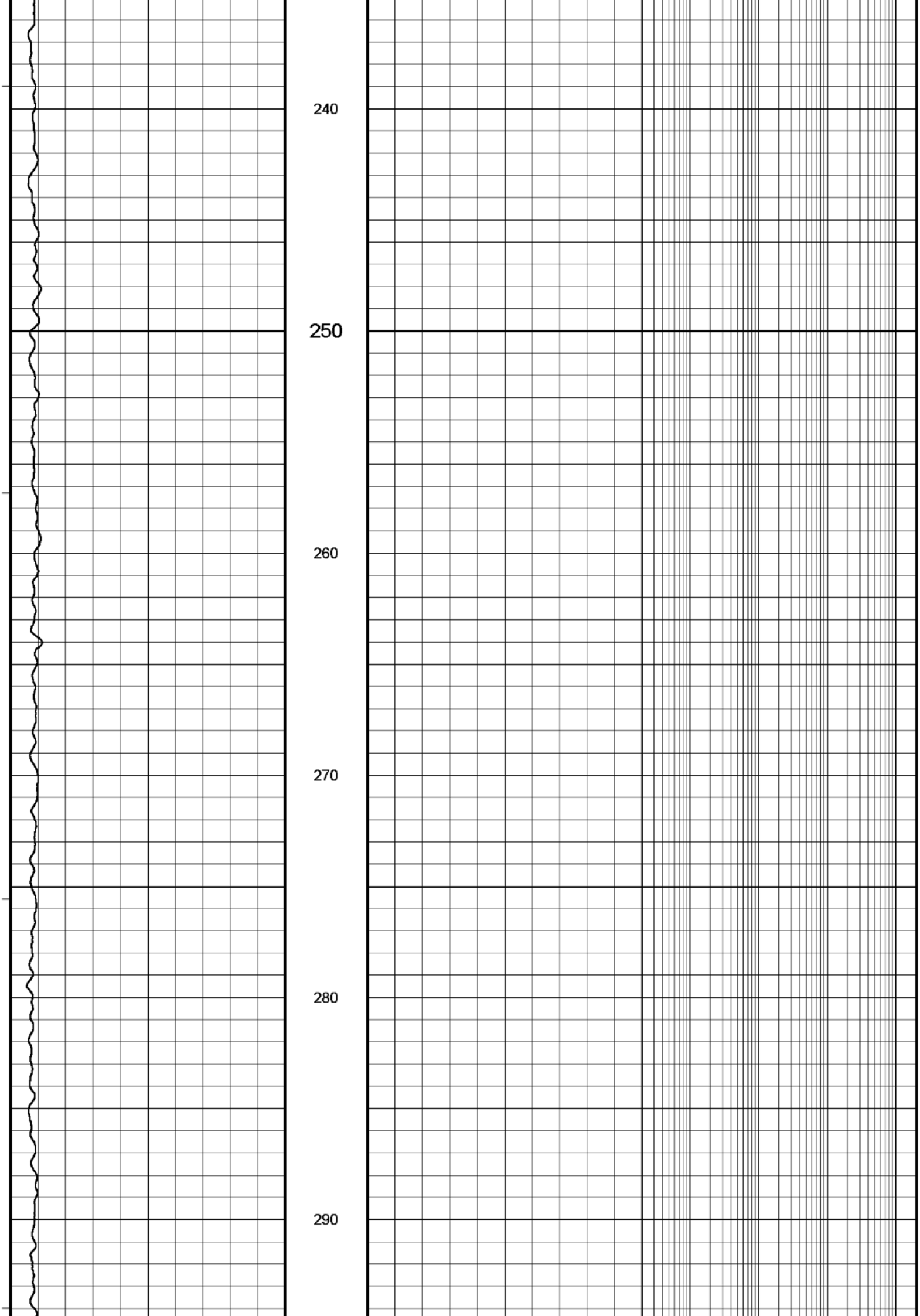
Compensated Density
grams/cc
1.95 2.95

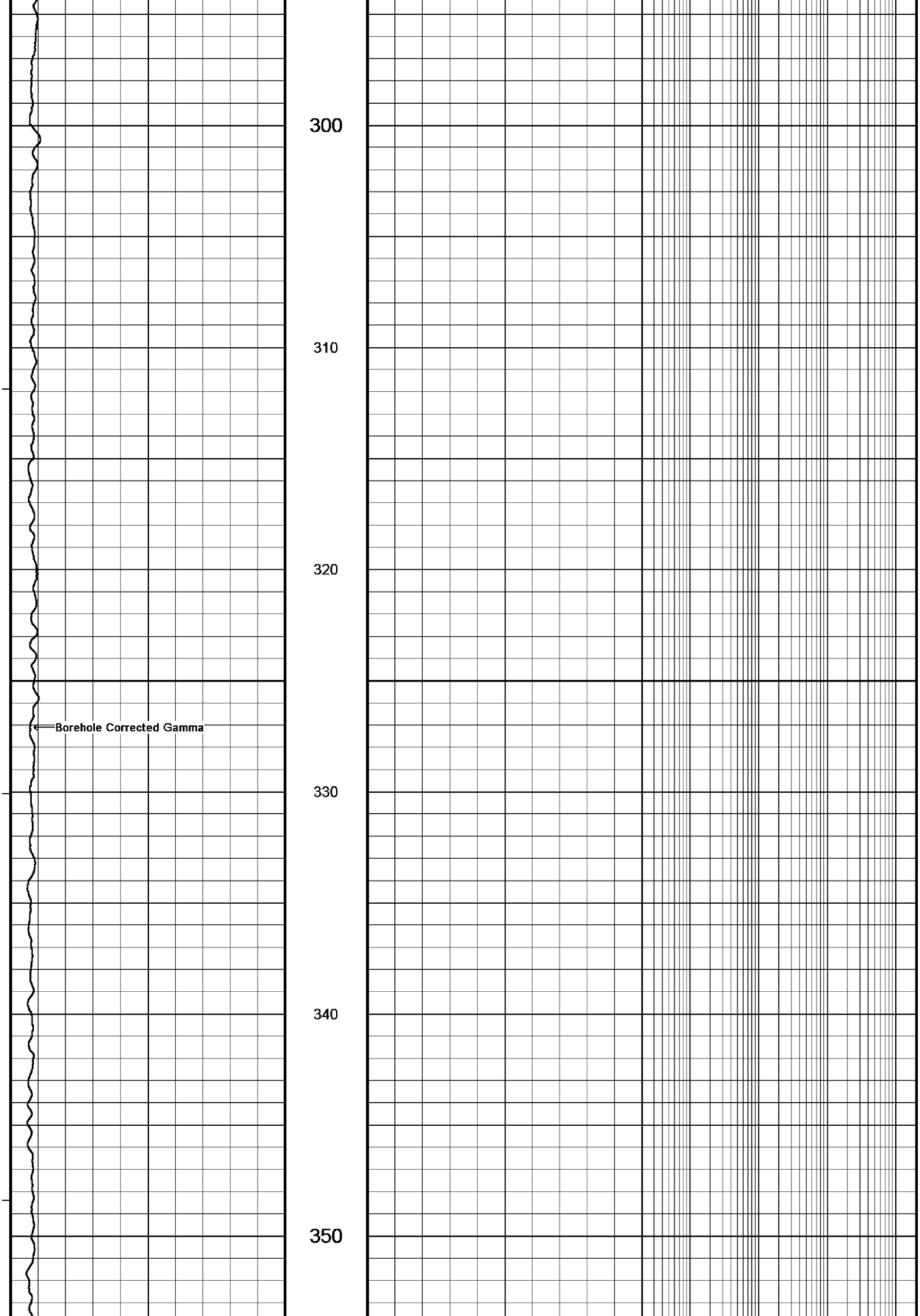
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

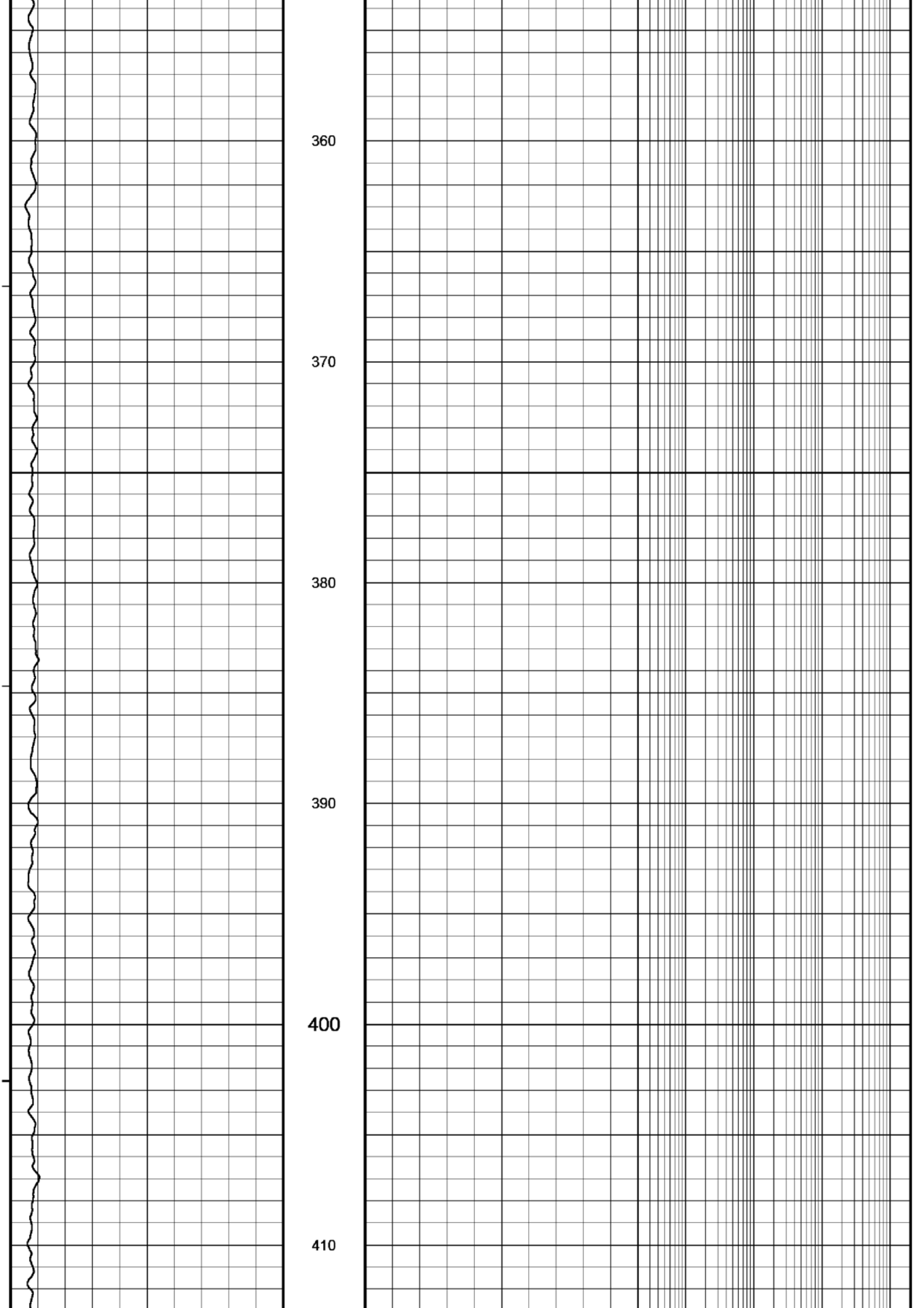

60
70
80
90
100
110

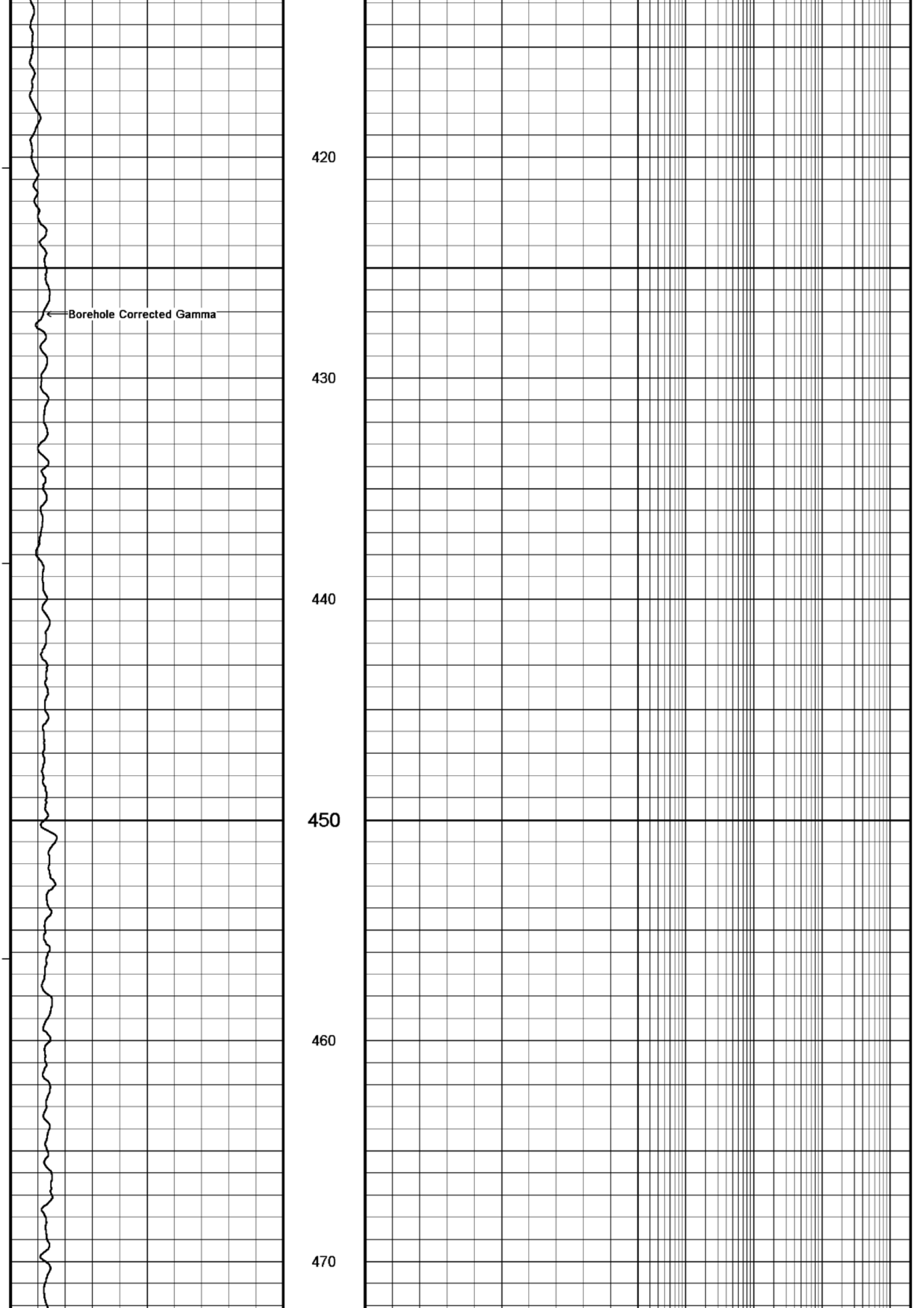

Borehole Corrected Gamma
120
130
140
150
160
170

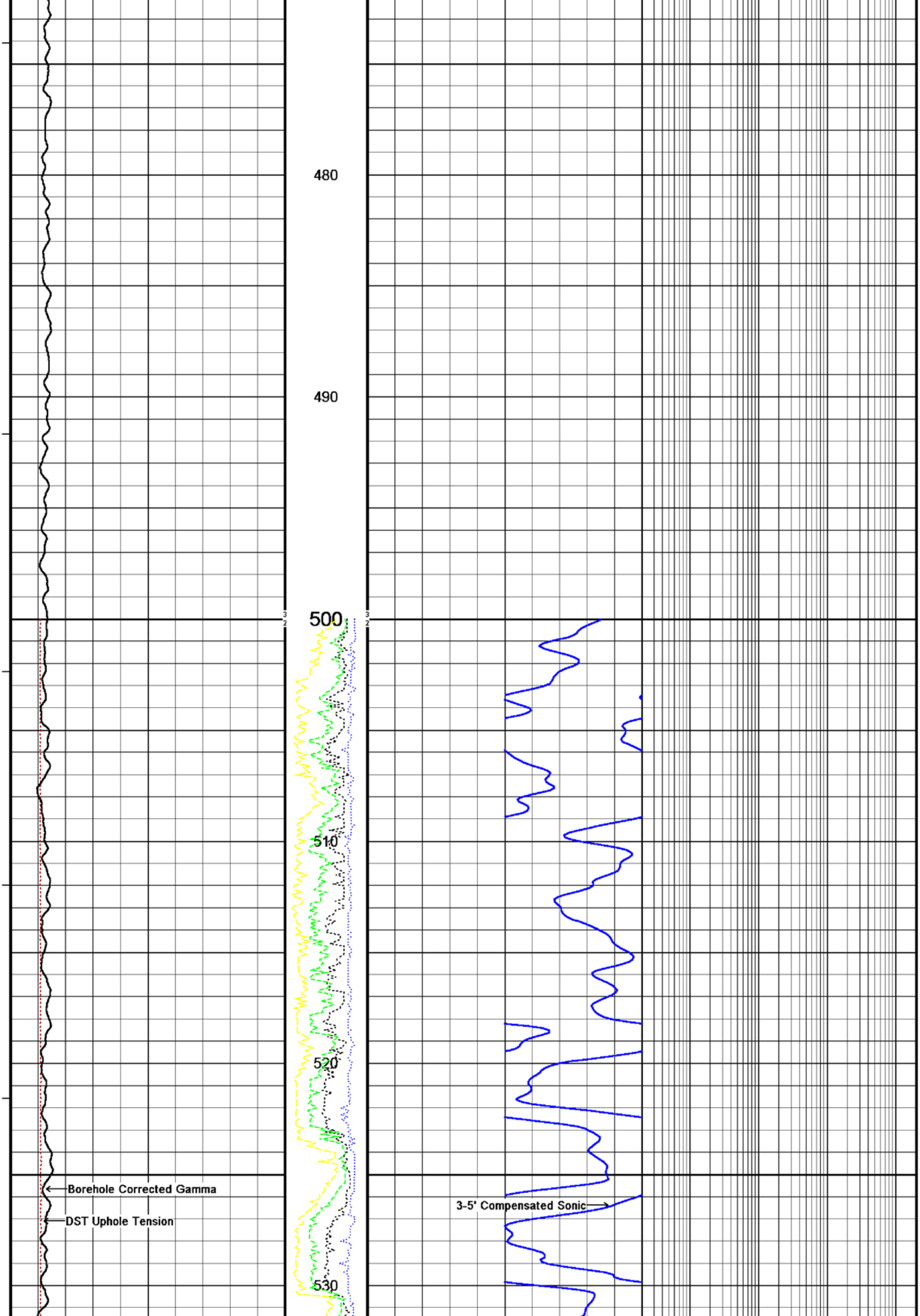

180
190
200
210
220
230
Borehole Corrected Gamma

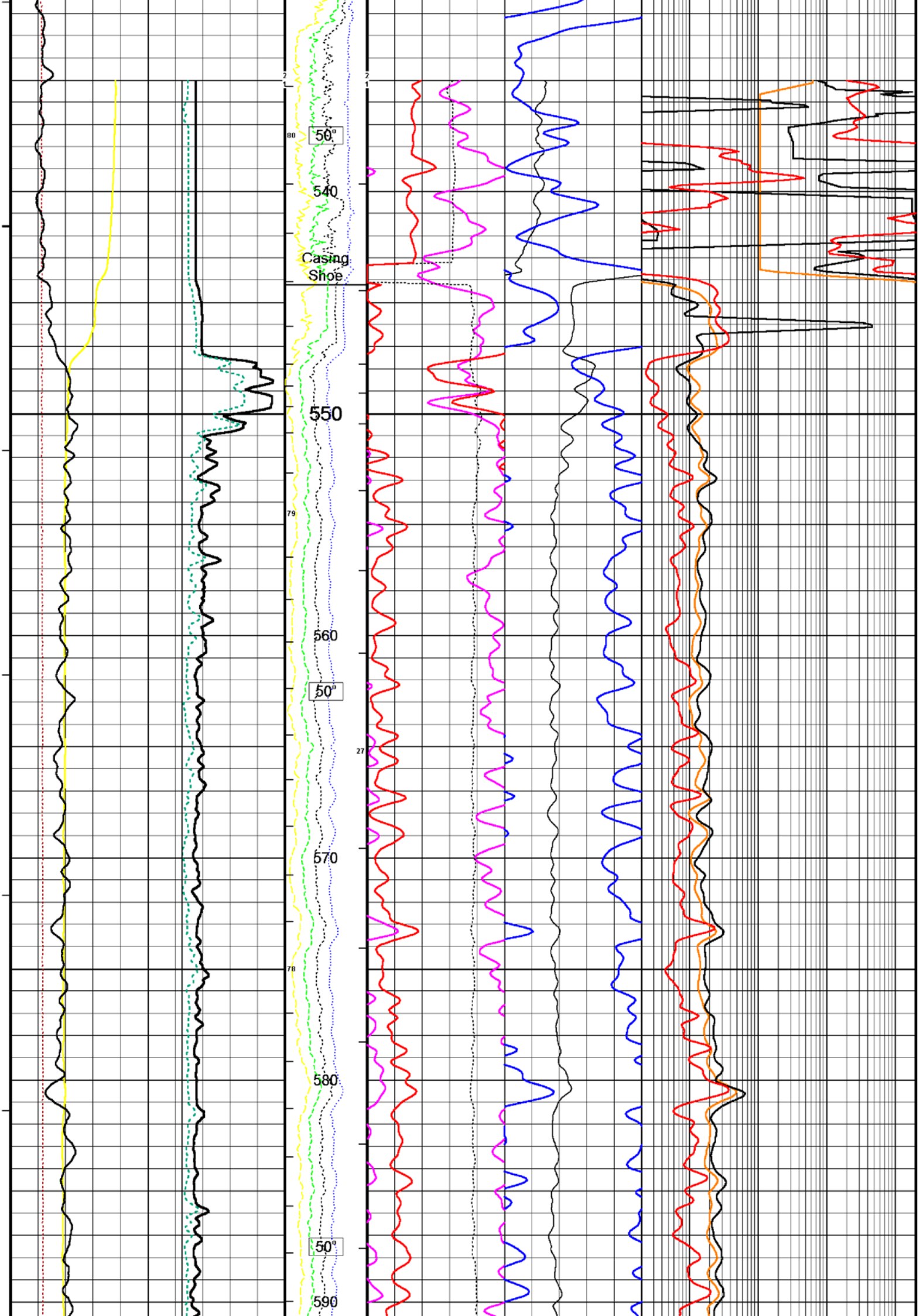

240
250
260
270
280
290

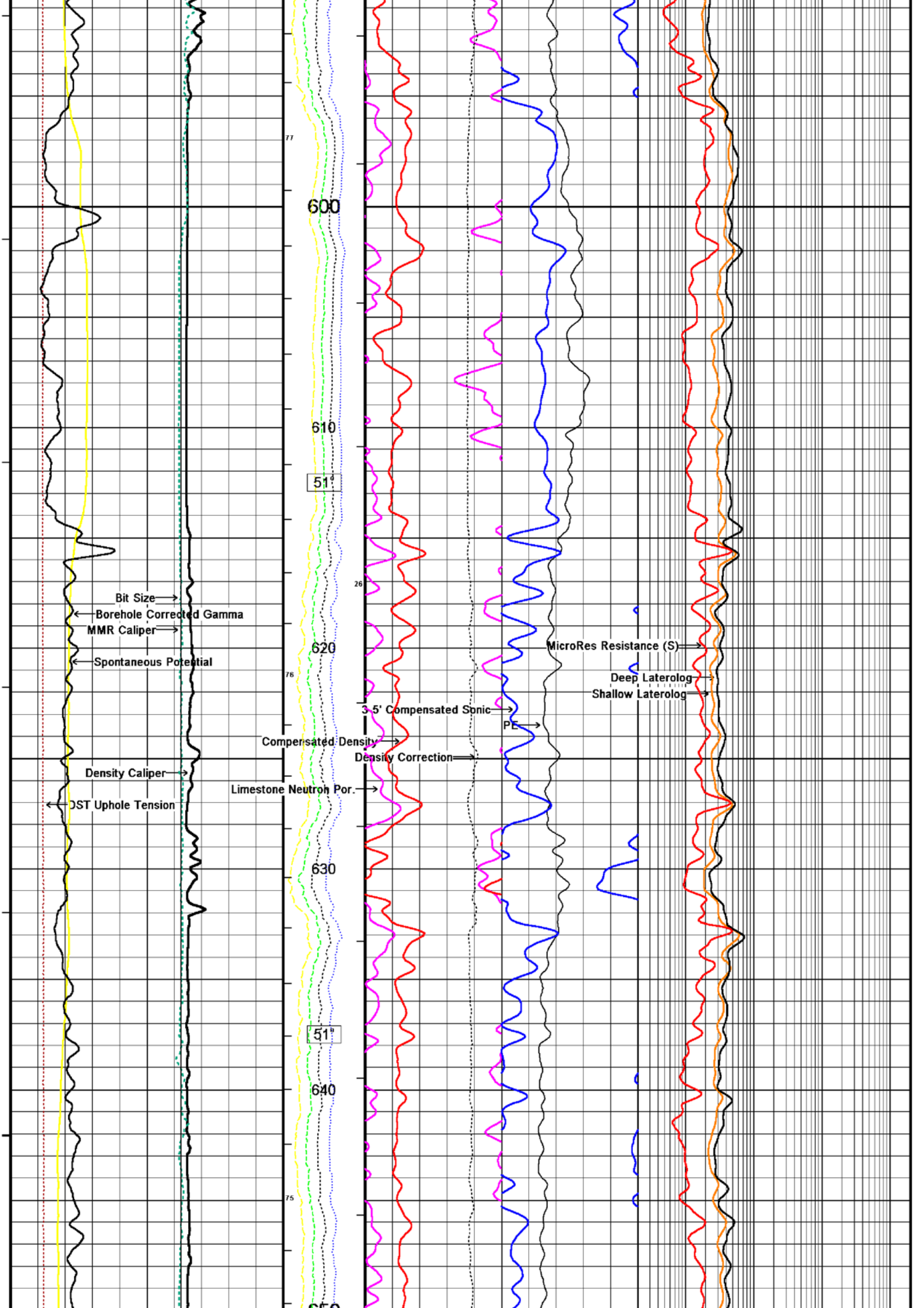

300
310
320
Borehole Corrected Gamma
330
340
350

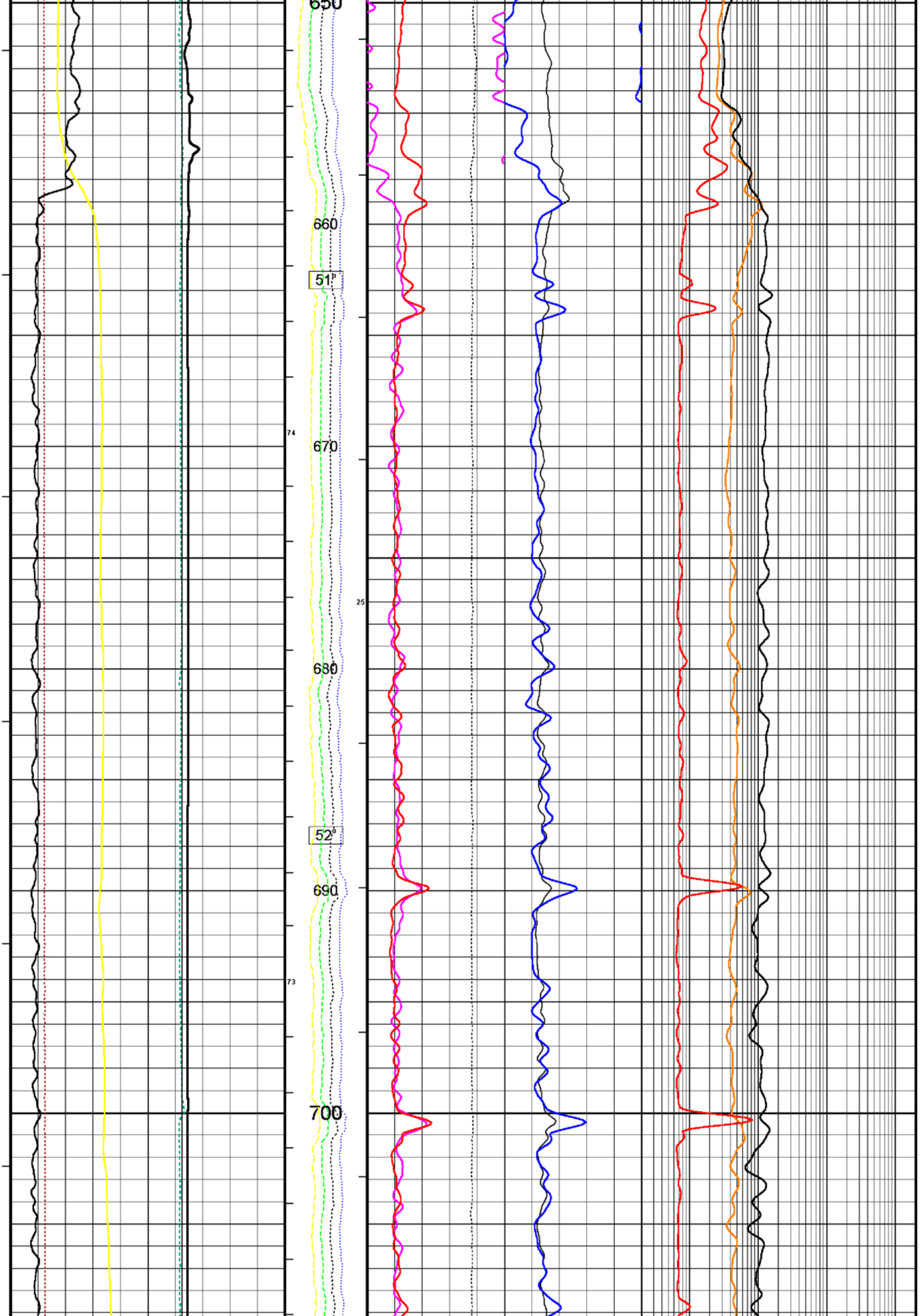

360
370
380
390
400
410

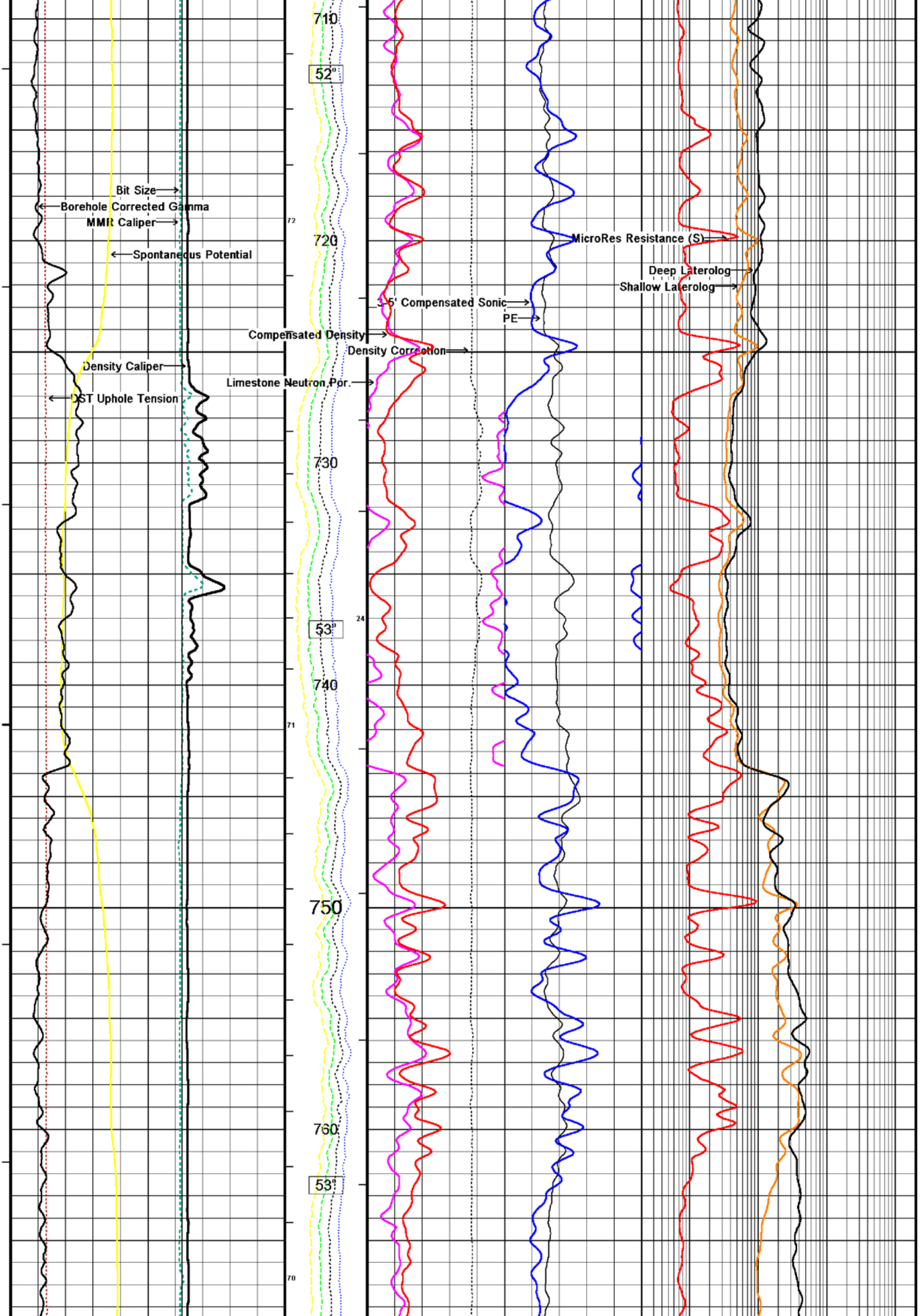

Borehole Corrected Gamma
420
430
440
450
460
470

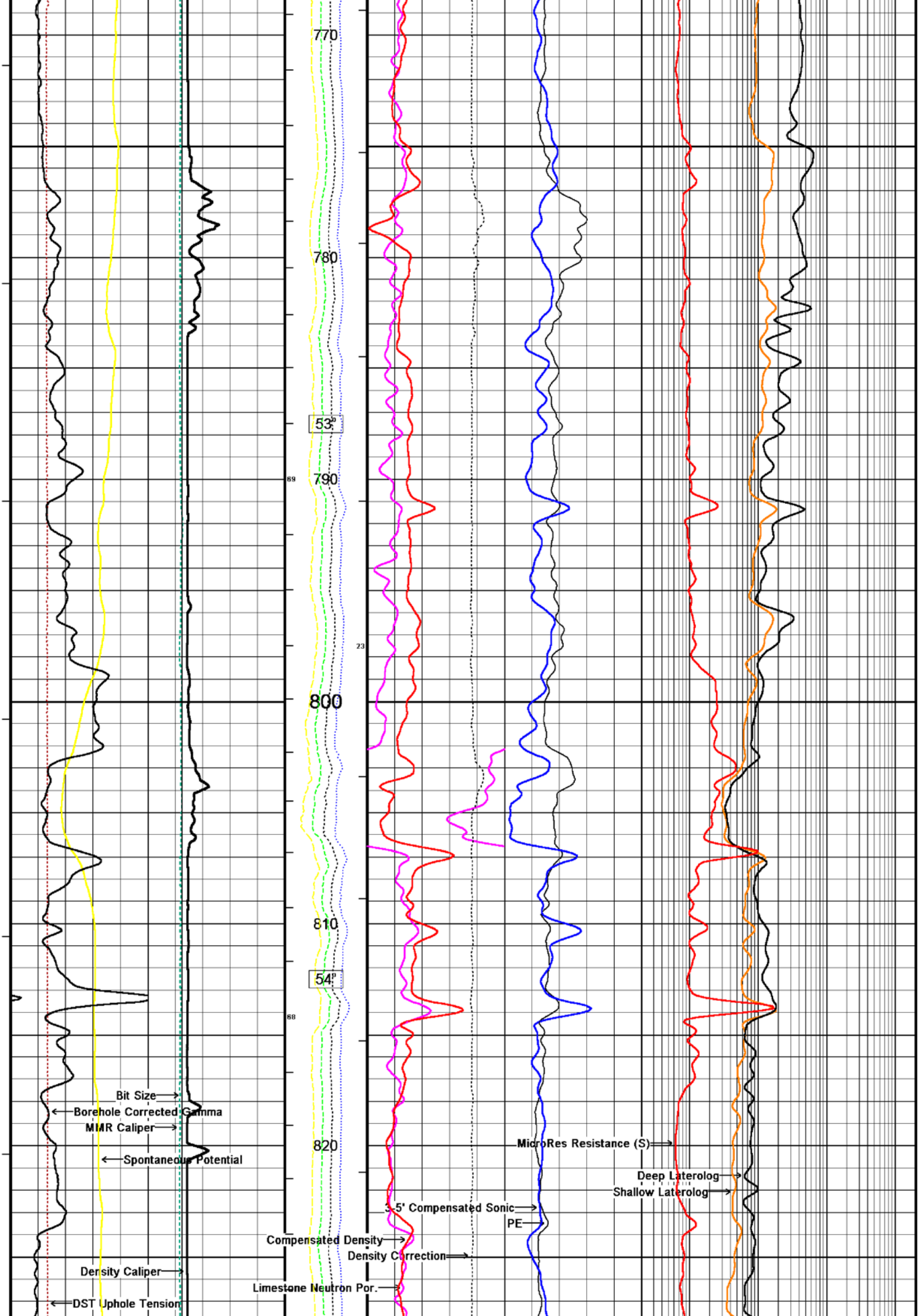

480
490
500
510
520
530
Borehole Corrected Gamma
DST Uphole Tension
3-5' Compensated Sonic

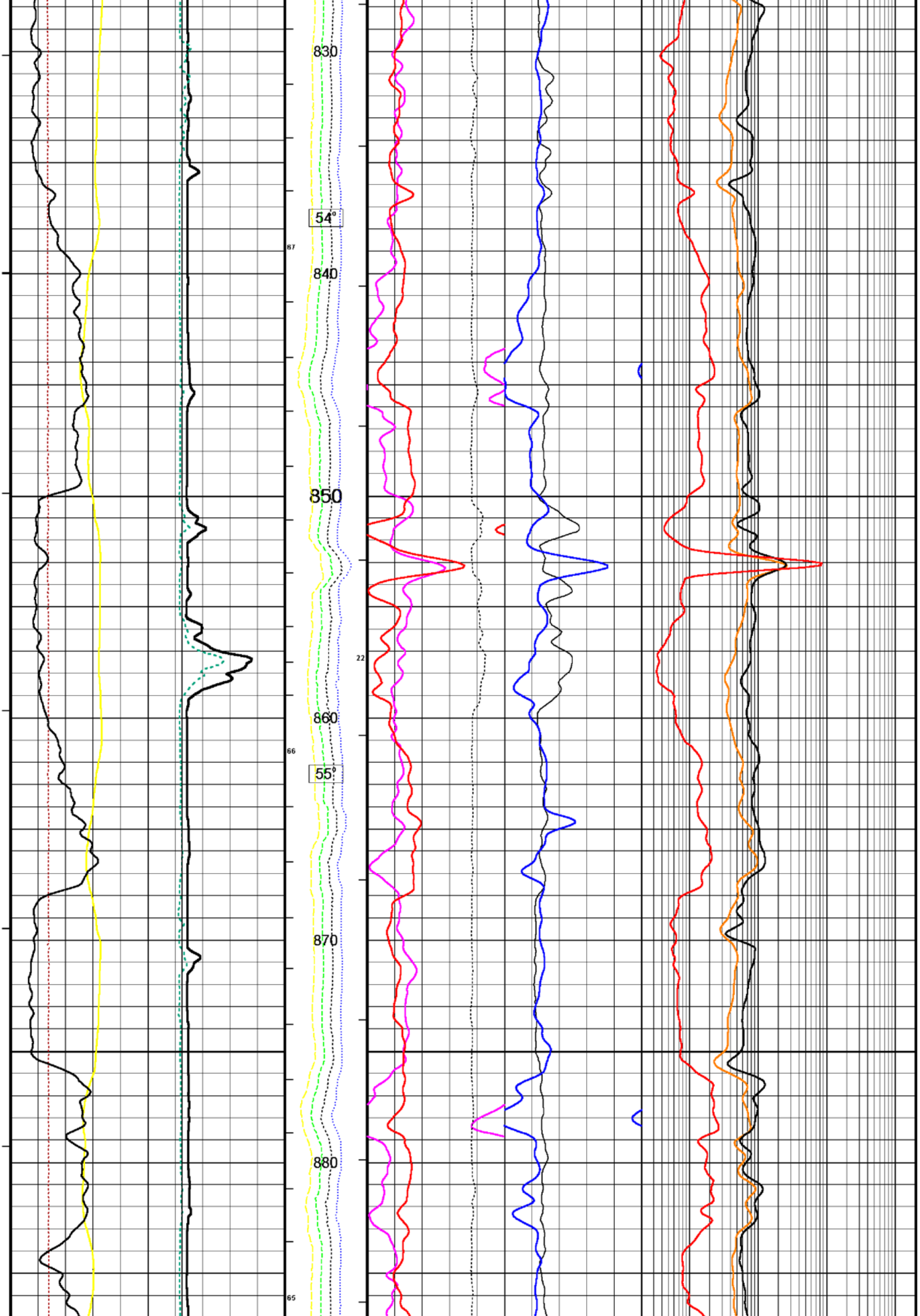

50"
540
Casing
Shoe
550
50"
560
570
580
50"
590

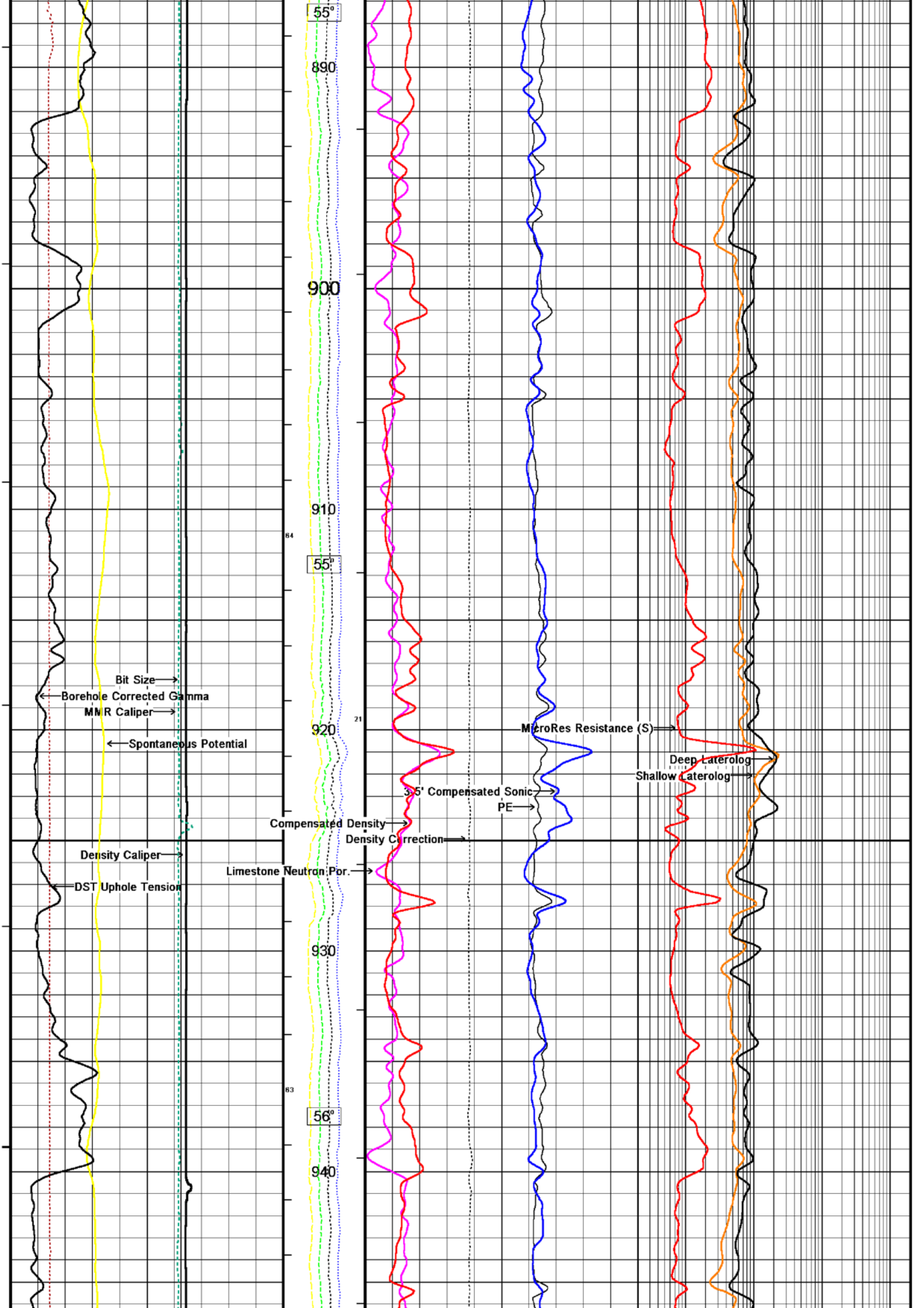

600
610
620
630
640
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

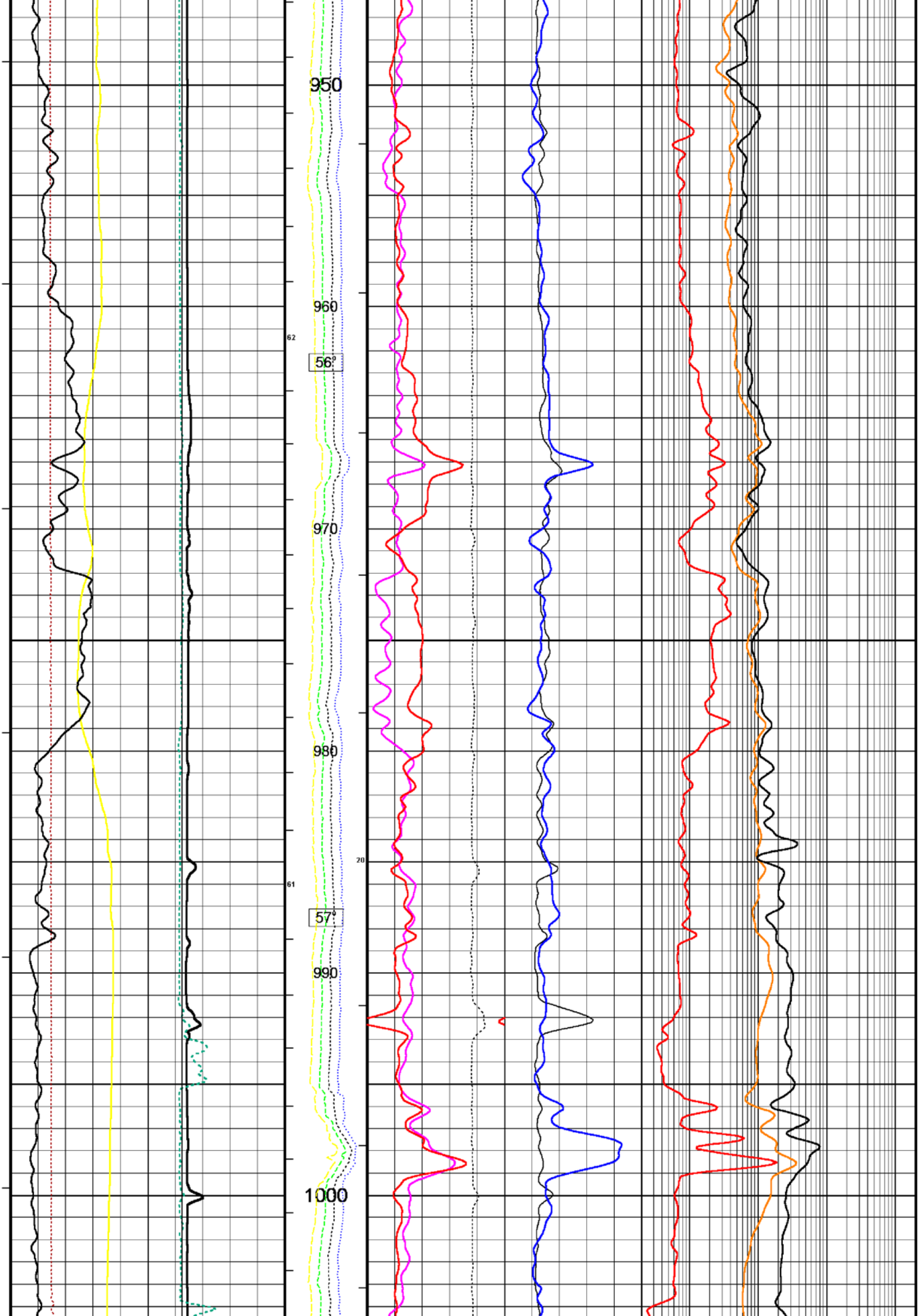

650
660
51
670
680
52
690
700
74
73
25

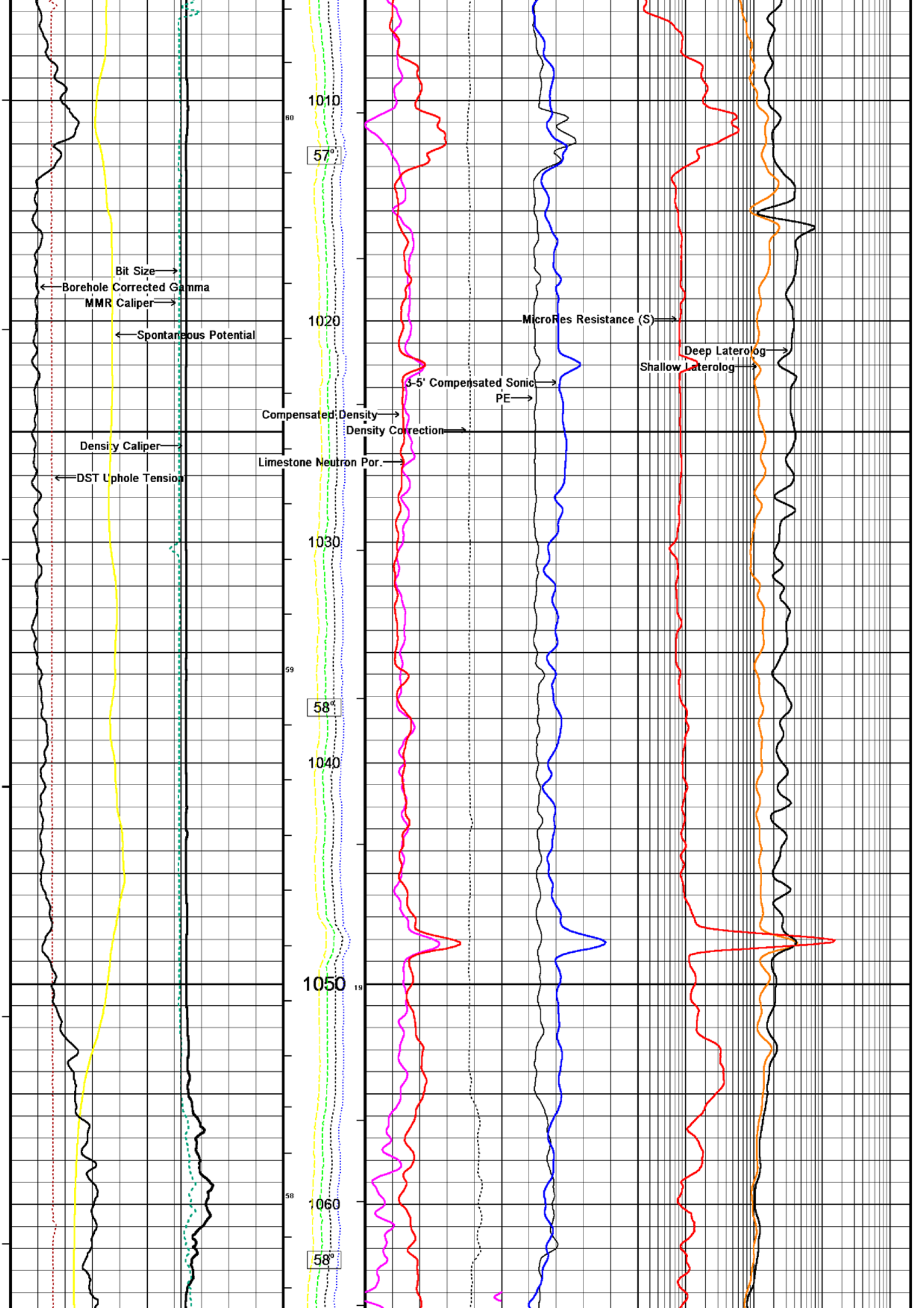

710
52"
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
72
720
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3.5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
CST Uphole Tension
730
24
53"
740
71
750
760
53"
70

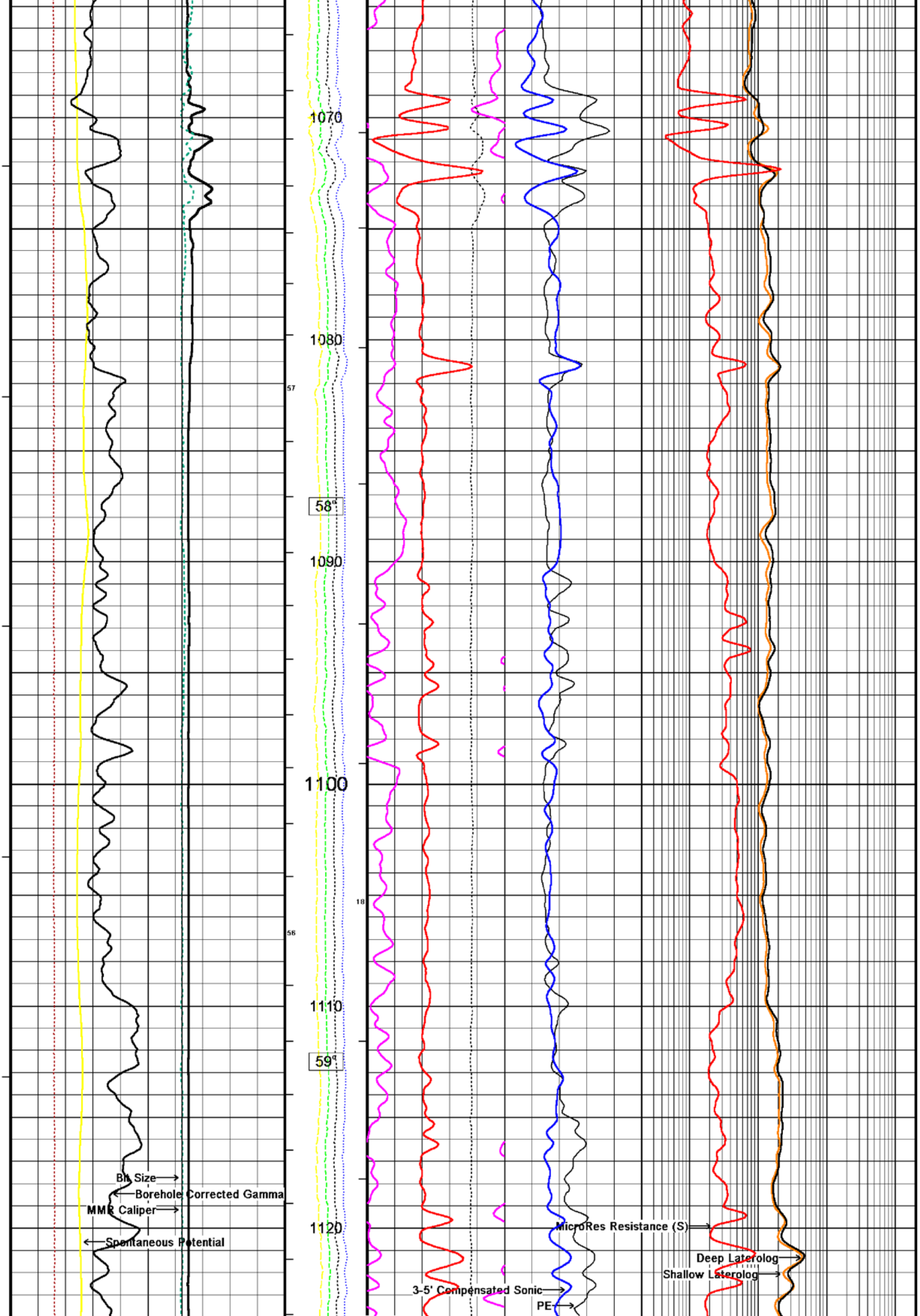

770
780
53"
790
800
810
54"
820
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Limestone Neutron Por.
3-5' Compensated Sonic
PE
Density Correction
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

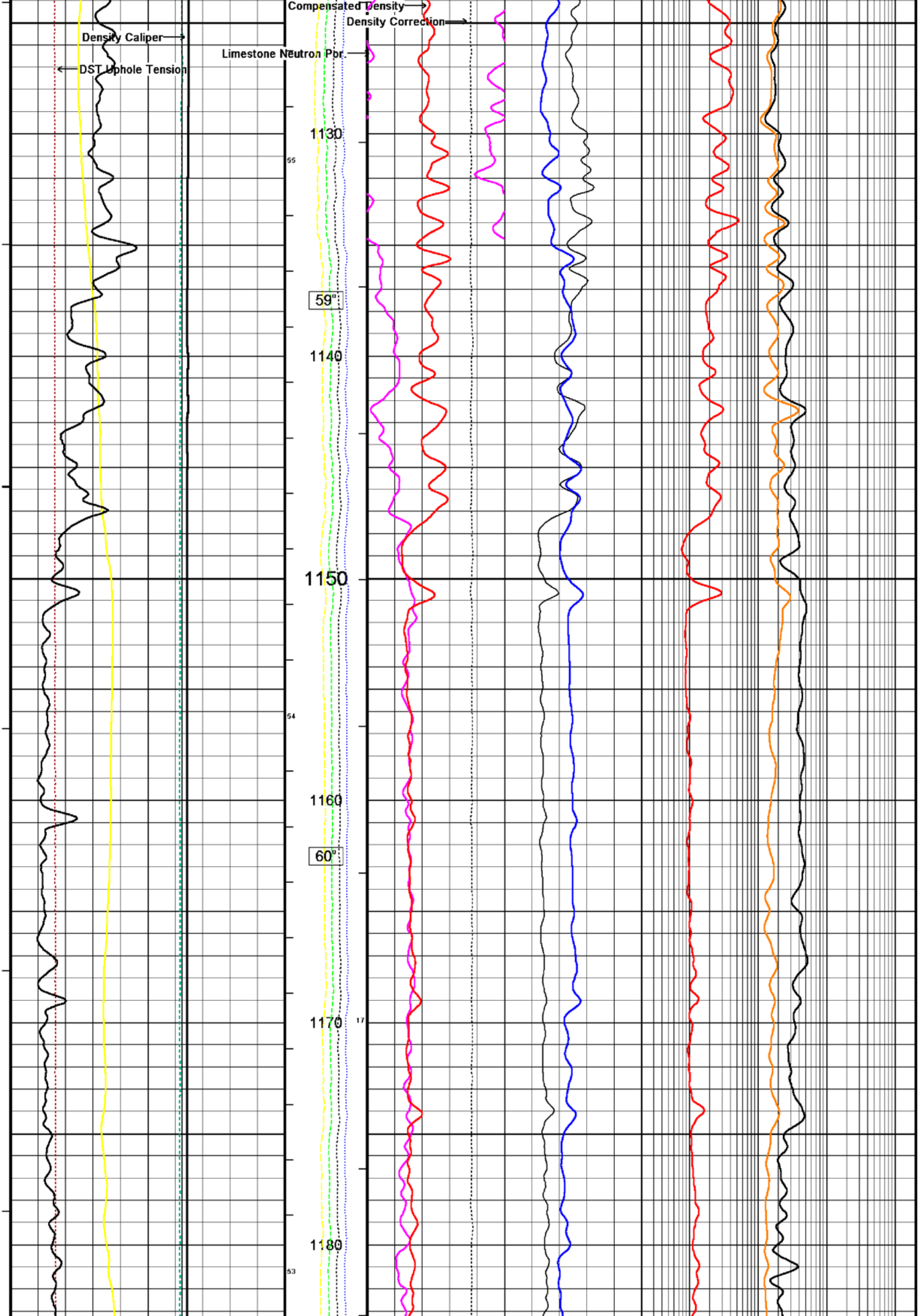

830
54°
840
850
860
55°
870
880

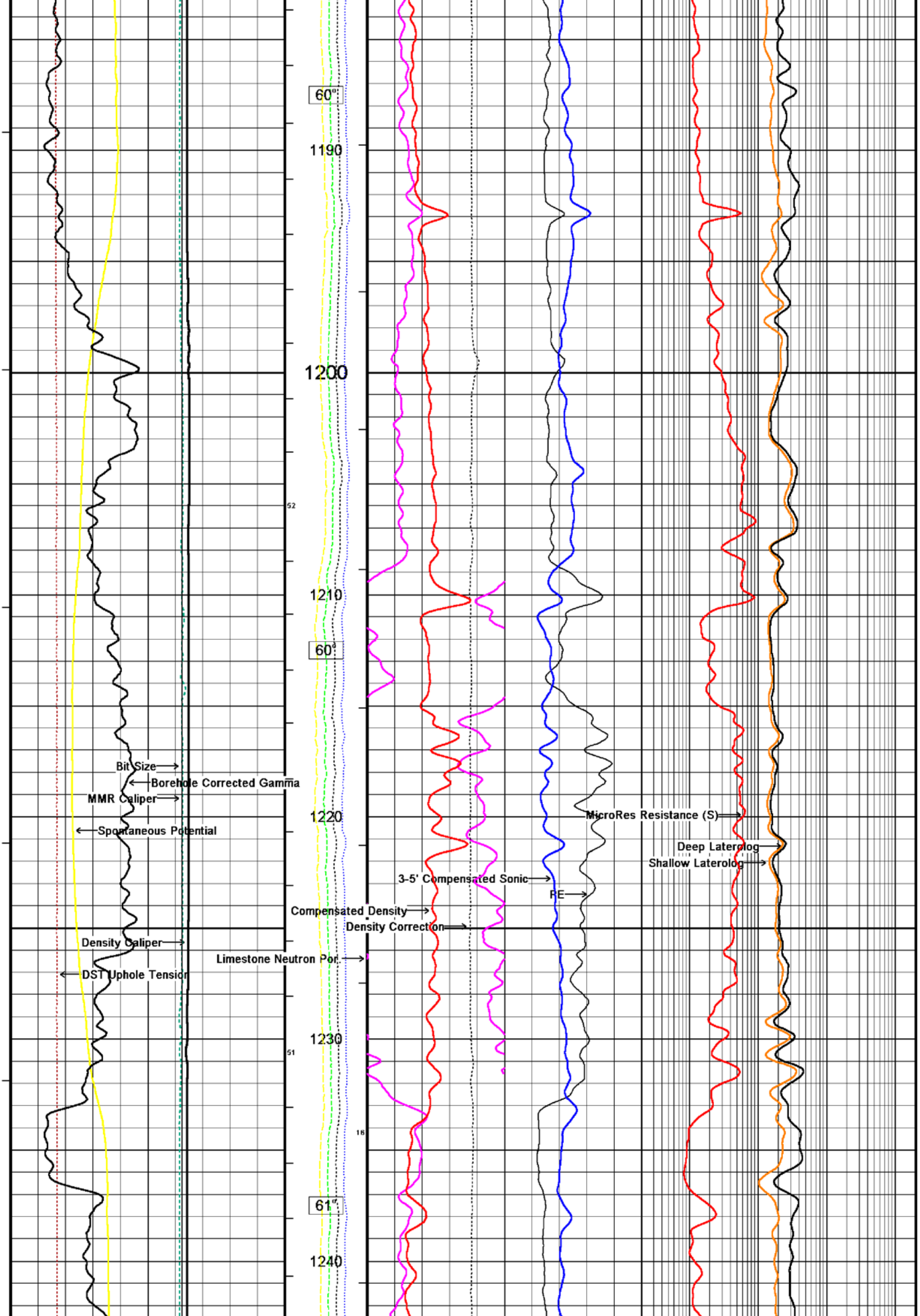

55°
890
900
910
64
55°
920
21
930
63
56°
940
Bit Size
Borehole Corrected Gamma
MNR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

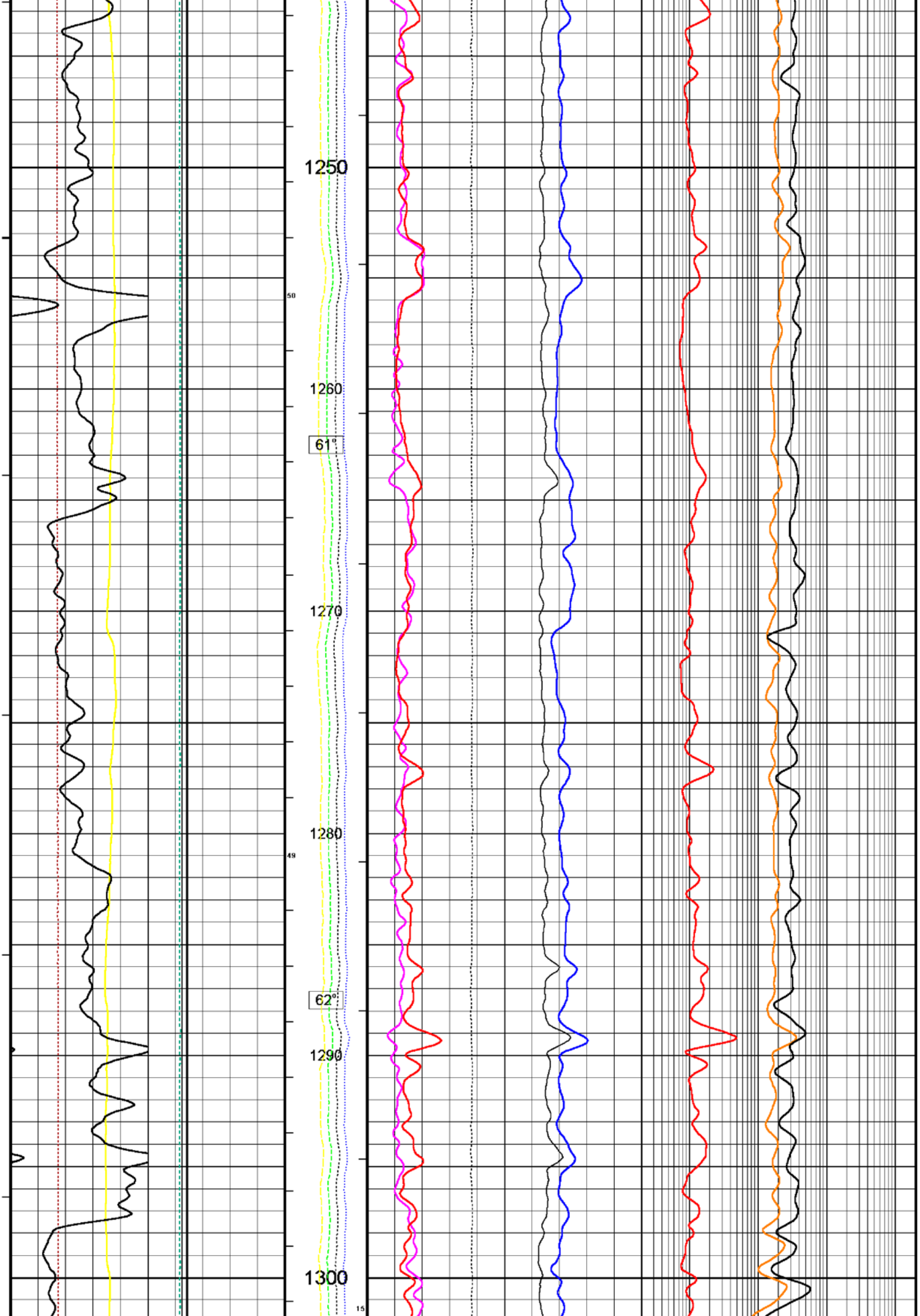

950
960
62
56°
970
980
61
20
57°
990
1000

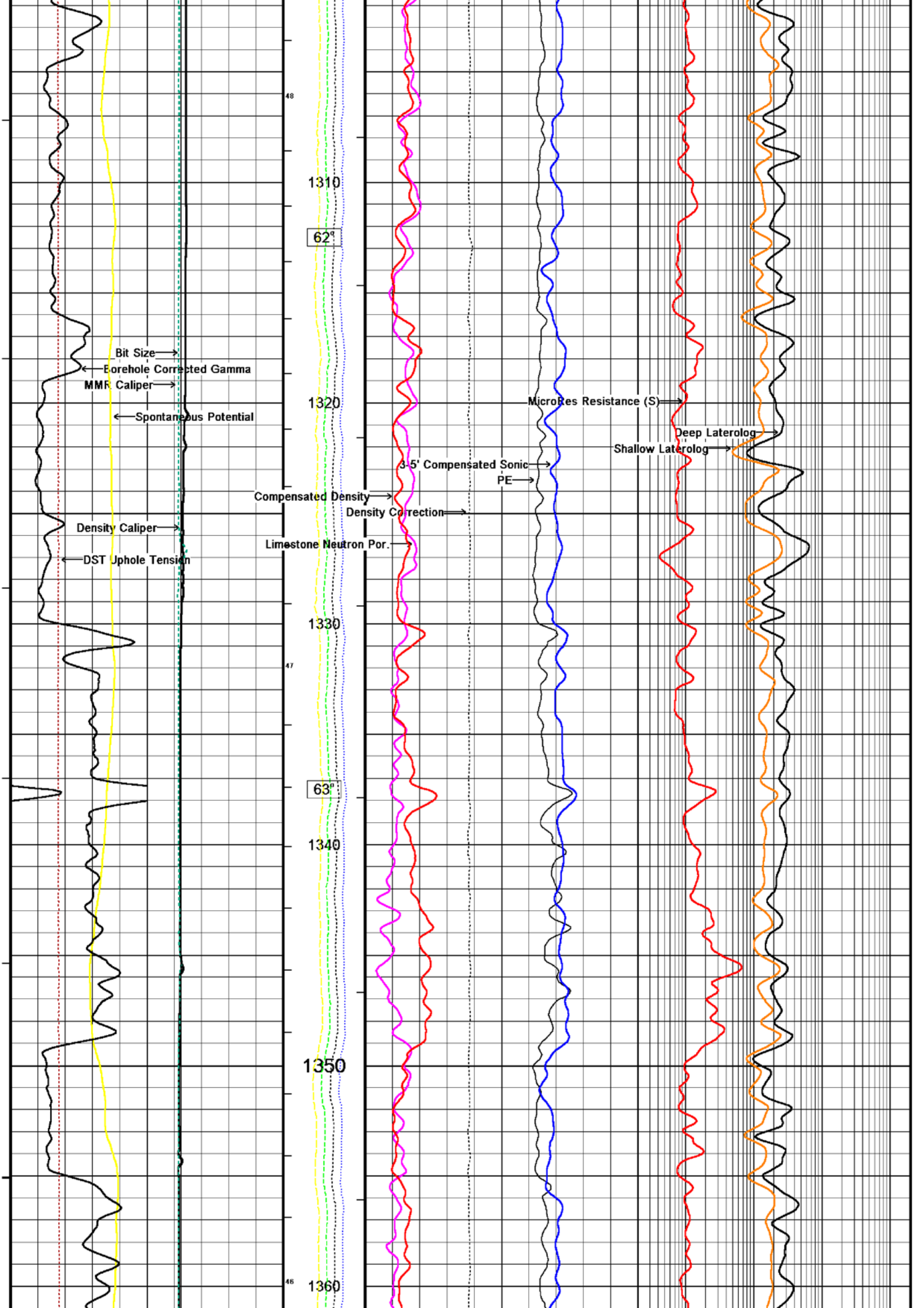

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
1010
57°
1020
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
1030
58°
1040
1050
1060
58°

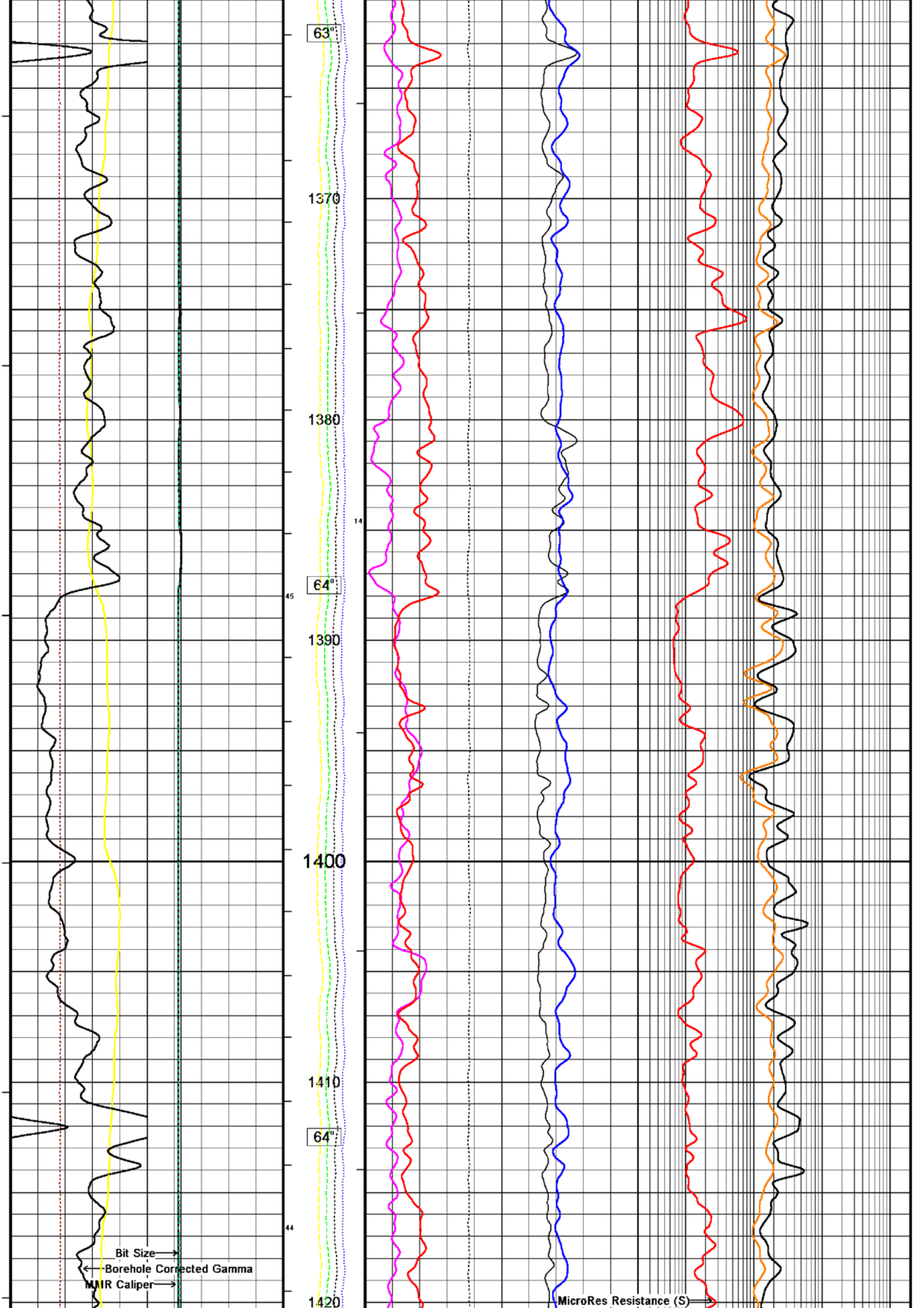

1070
1080
57
58°
1090
1100
56
1110
59°
1120
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

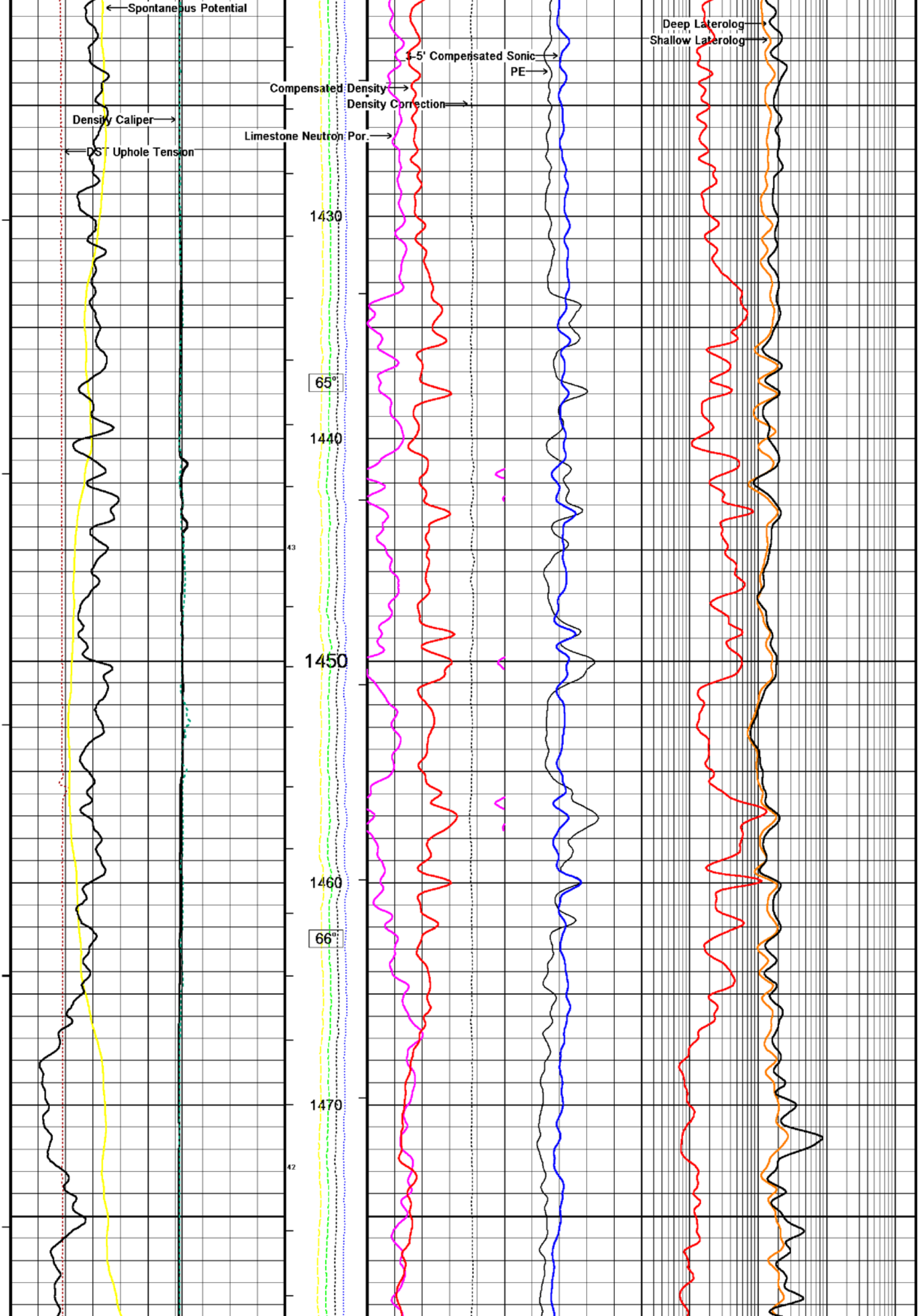

Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1130
59°
1140
1150
1160
60°
1170
1180

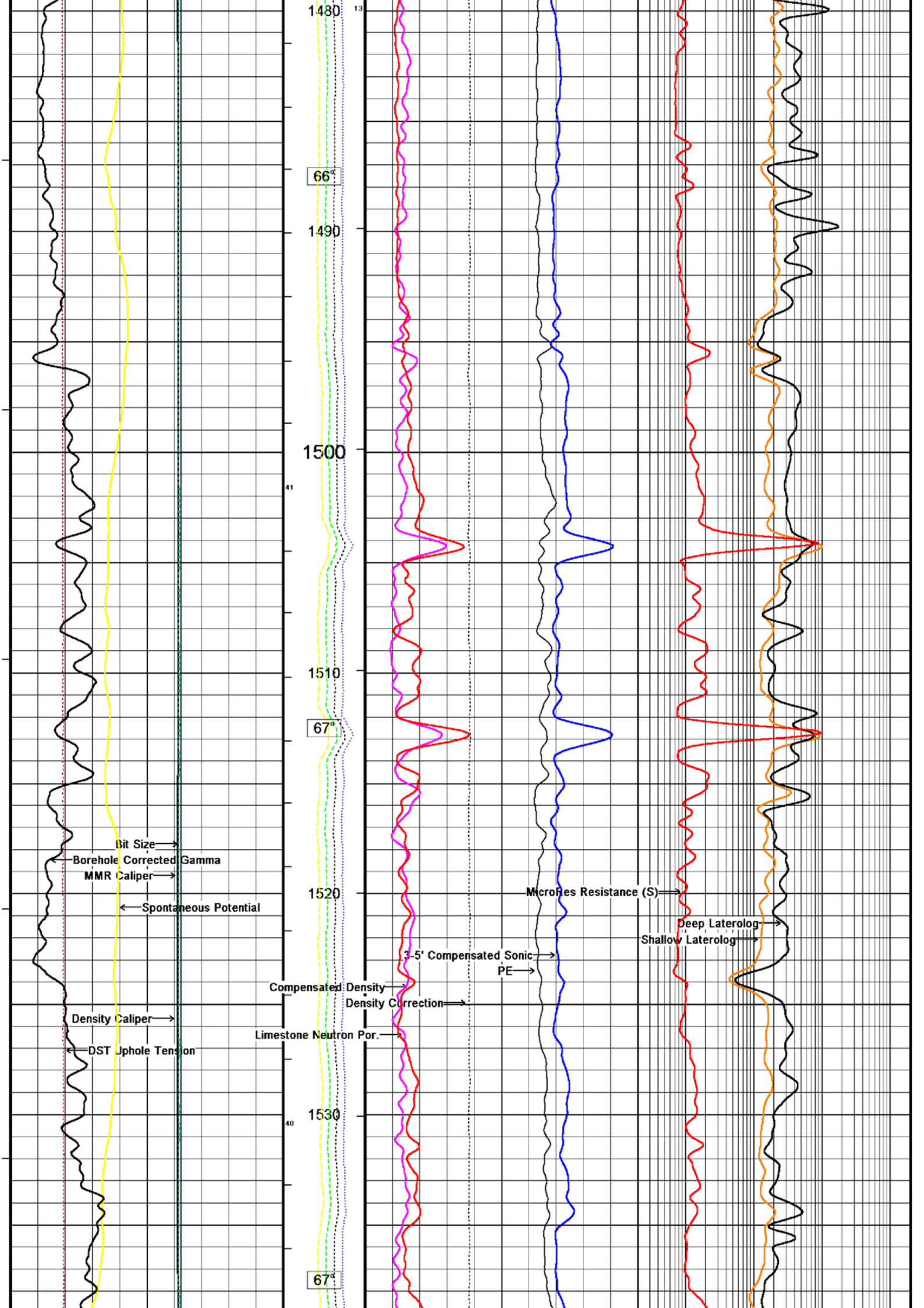

60°
1190
1200
52
1210
60°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
1220
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1230
51
16
61°
1240

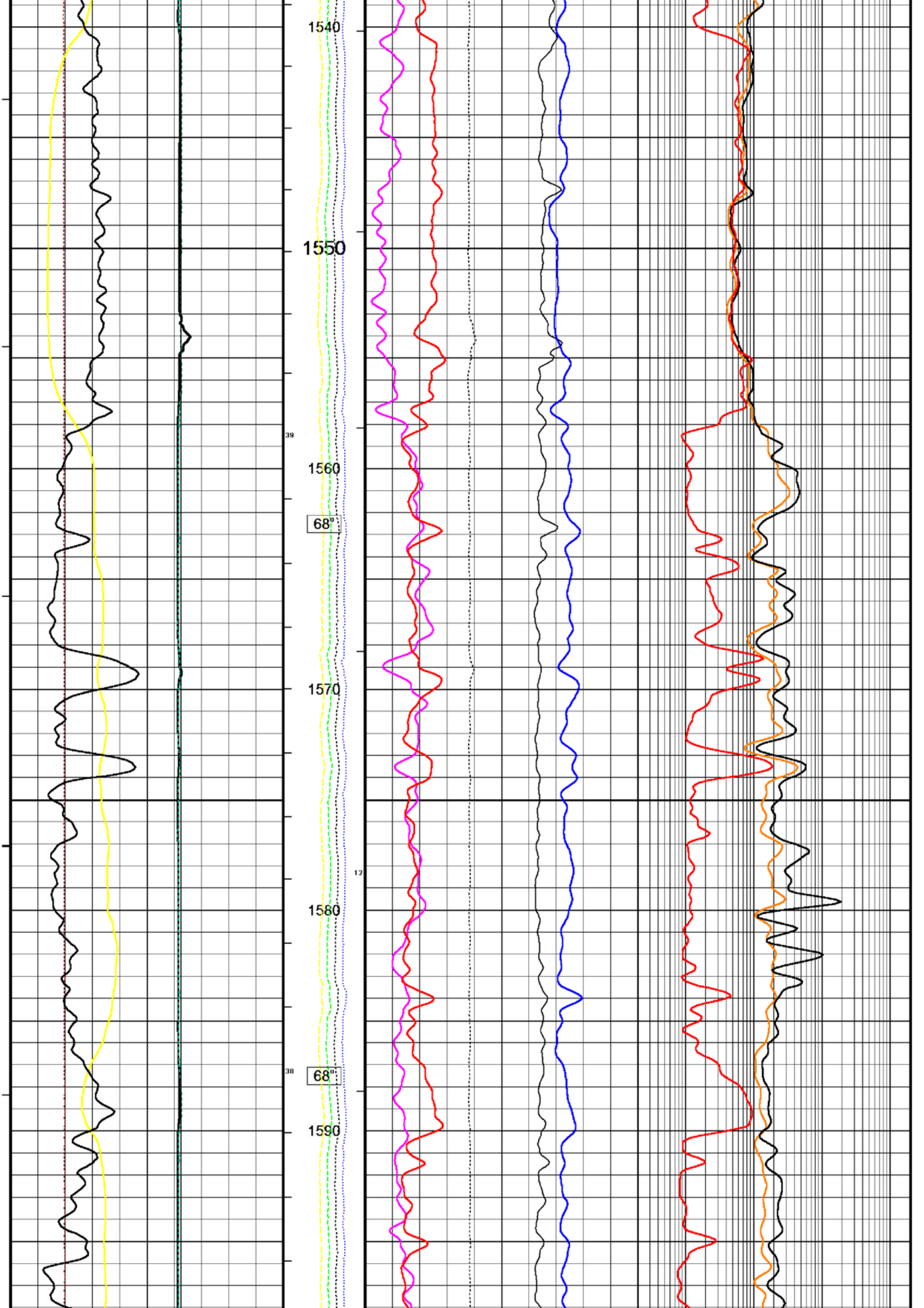

1250
1260
61°
1270
1280
62°
1290
1300

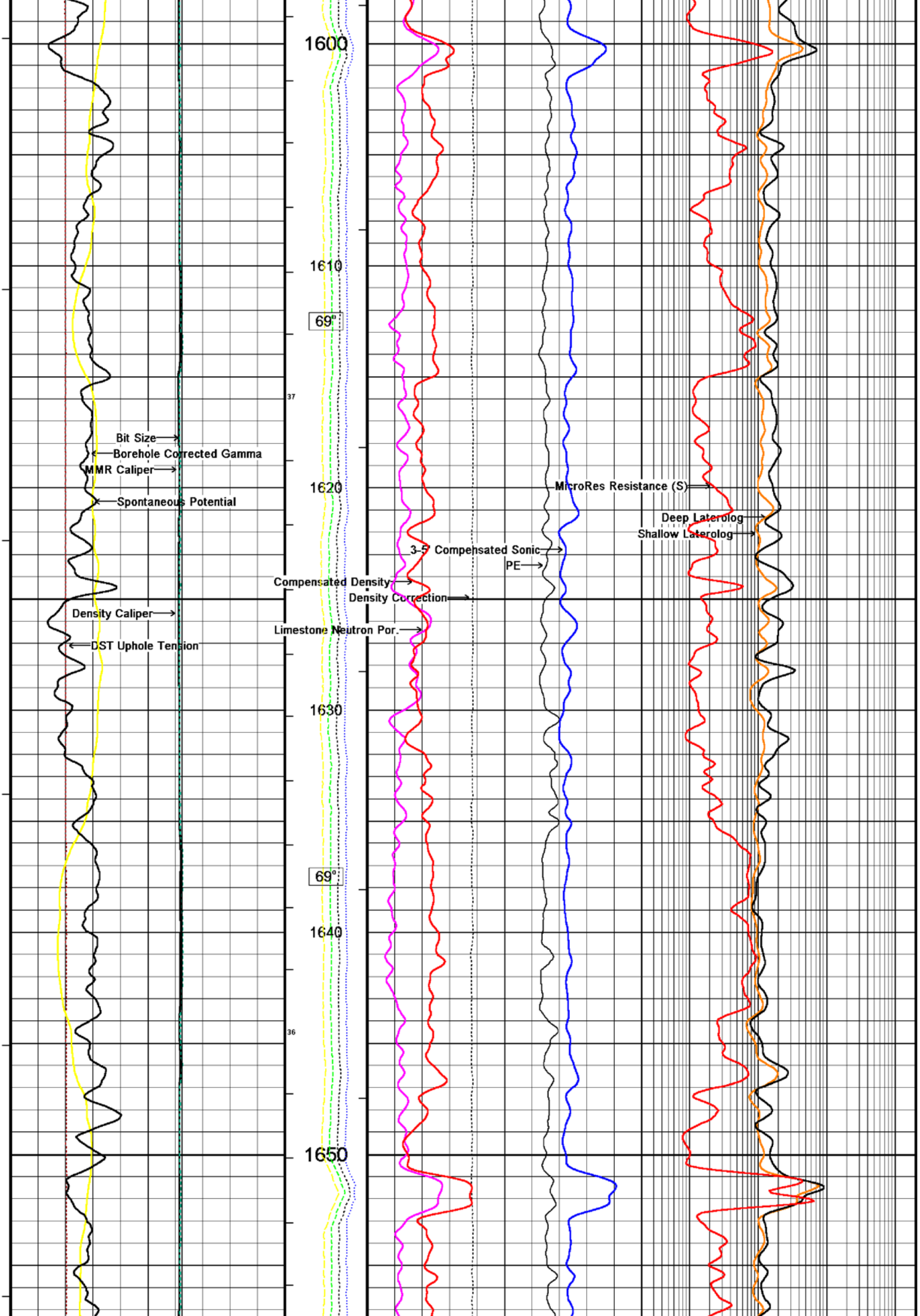

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
1310
1320
1330
1340
1350
1360
62"
63"
48
47
46

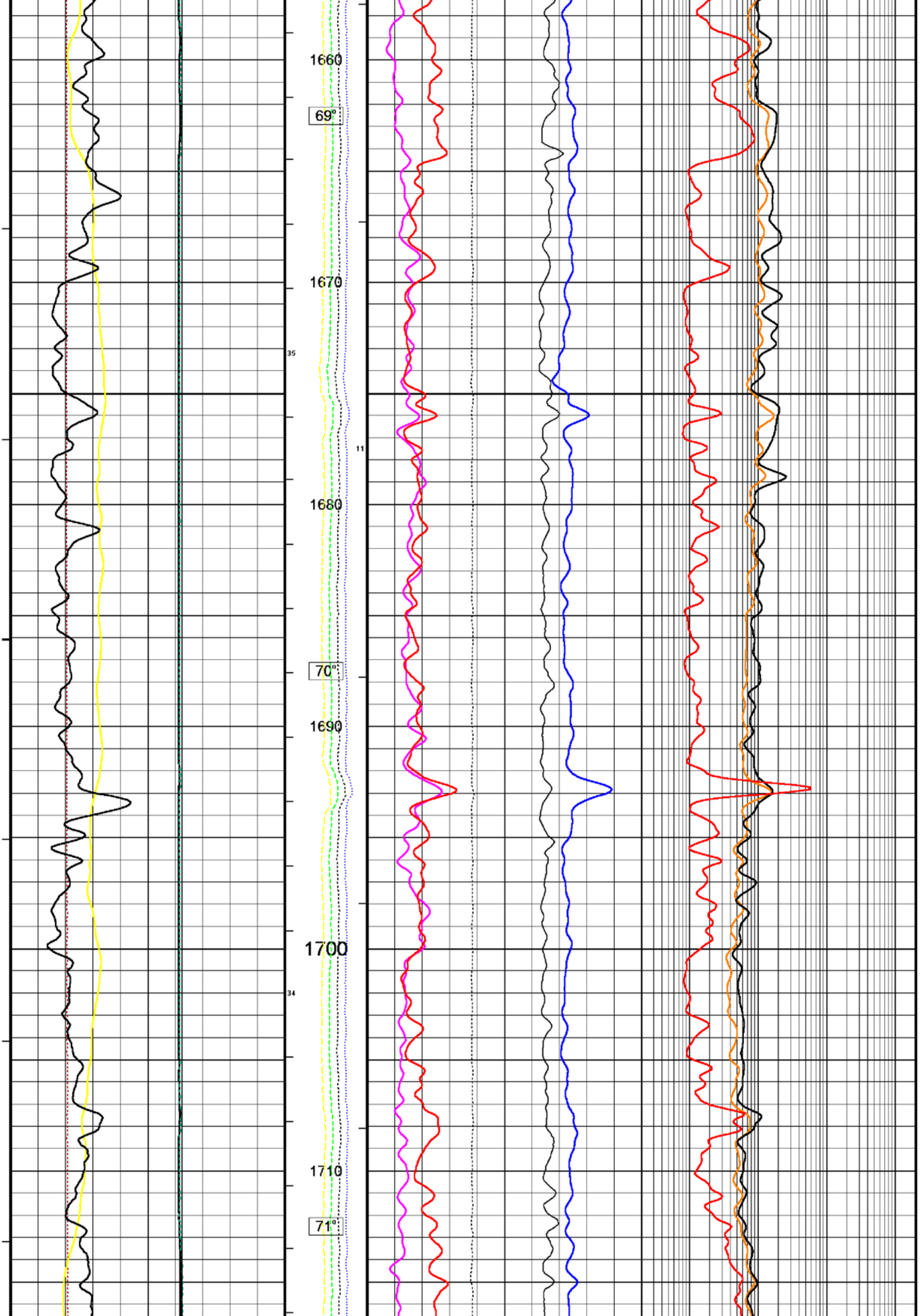

63°
1370
1380
64°
1390
1400
1410
64°
1420
Bit Size
Borehole Corrected Gamma
MMR Caliper
MicroRes Resistance (S)

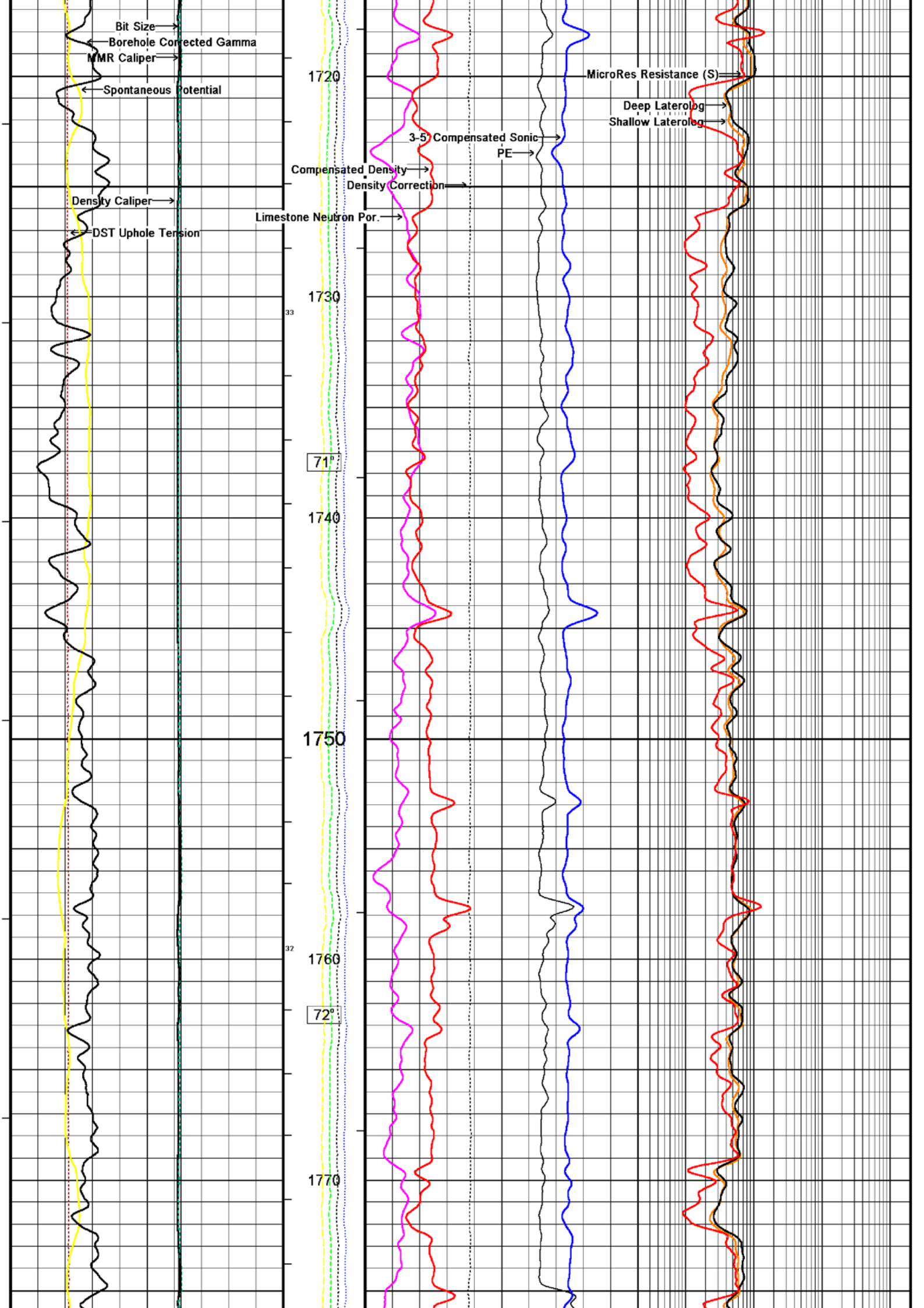

Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
1-5' Compensated Sonic
PE
Deep Laterolog
Shallow Laterolog
1430
65°
1440
43
1450
1460
66°
1470
42

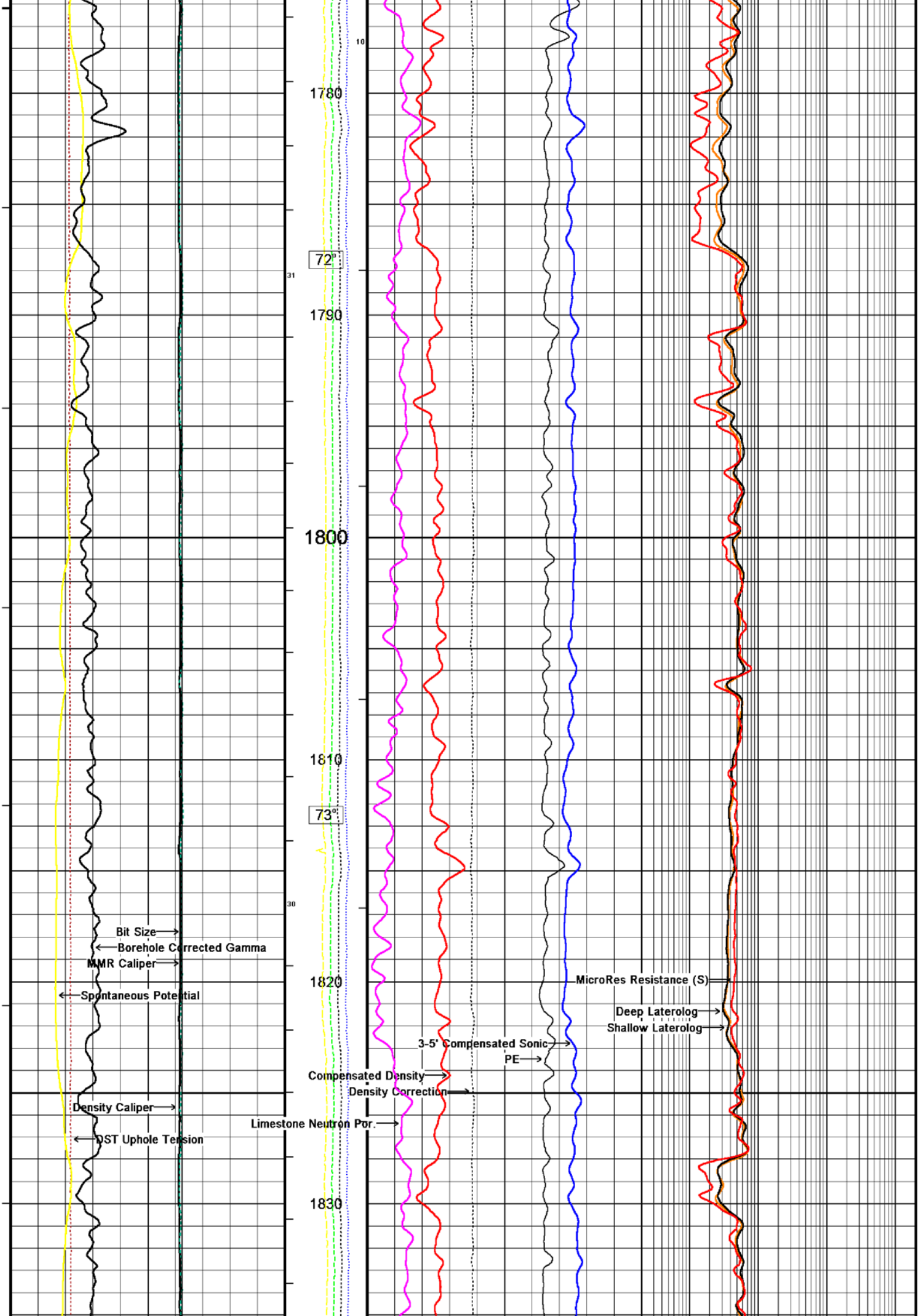

1480
66°
1490
1500
1510
67°
1520
1530
67°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

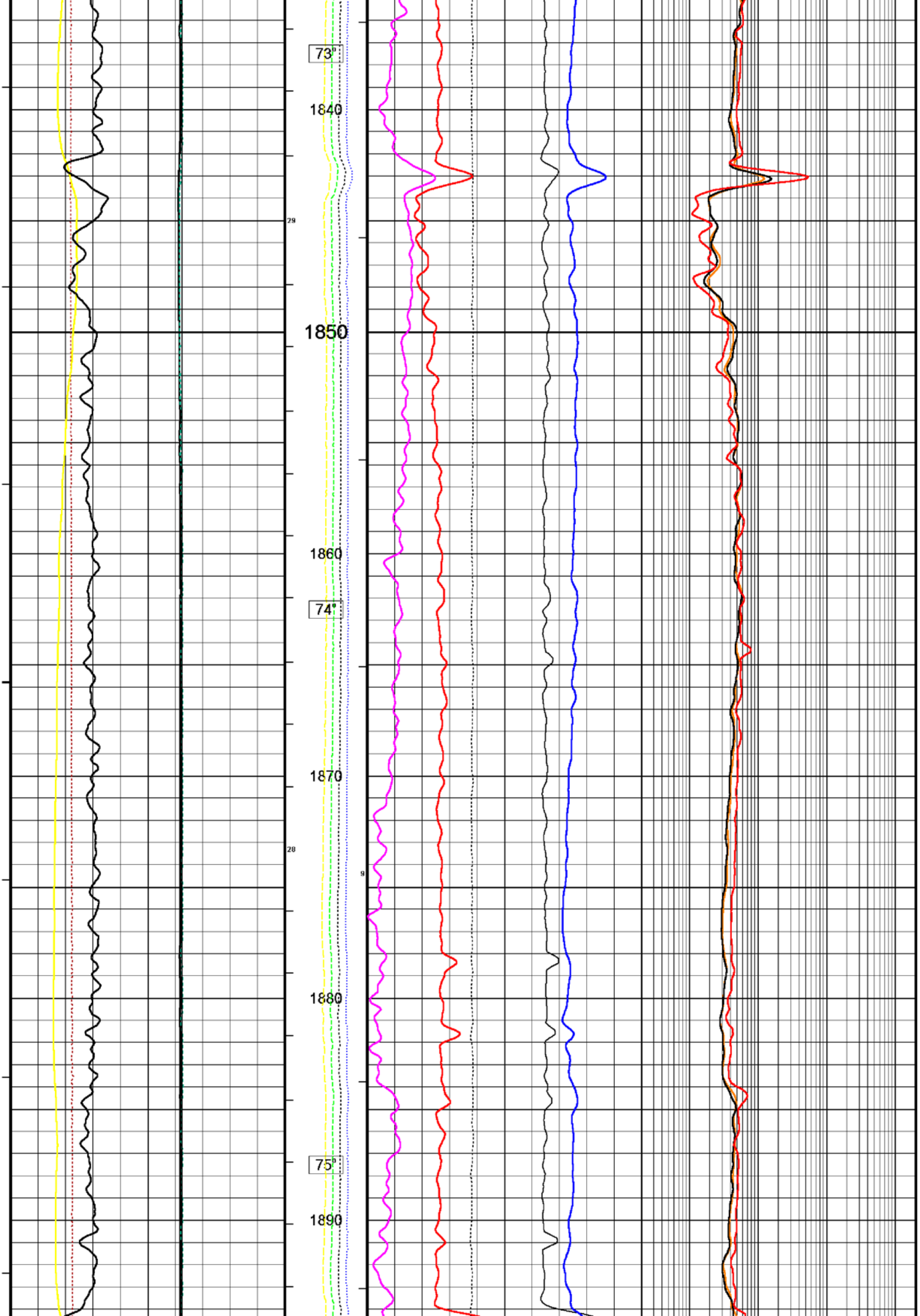

1540
1550
1560
68°
1570
1580
1590
68°

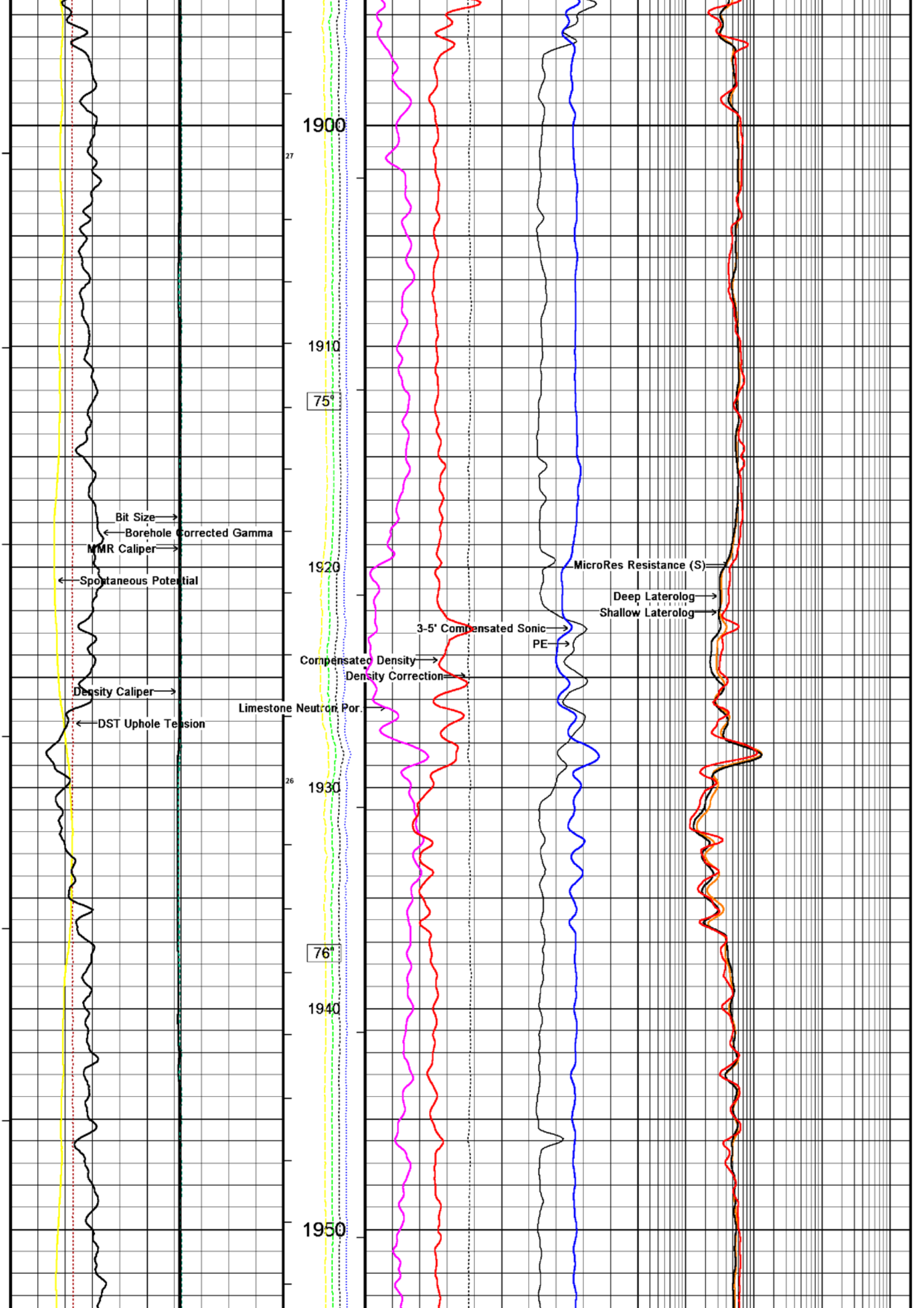

1600
1610
69°
37
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
1620
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
1630
69°
1640
36
1650

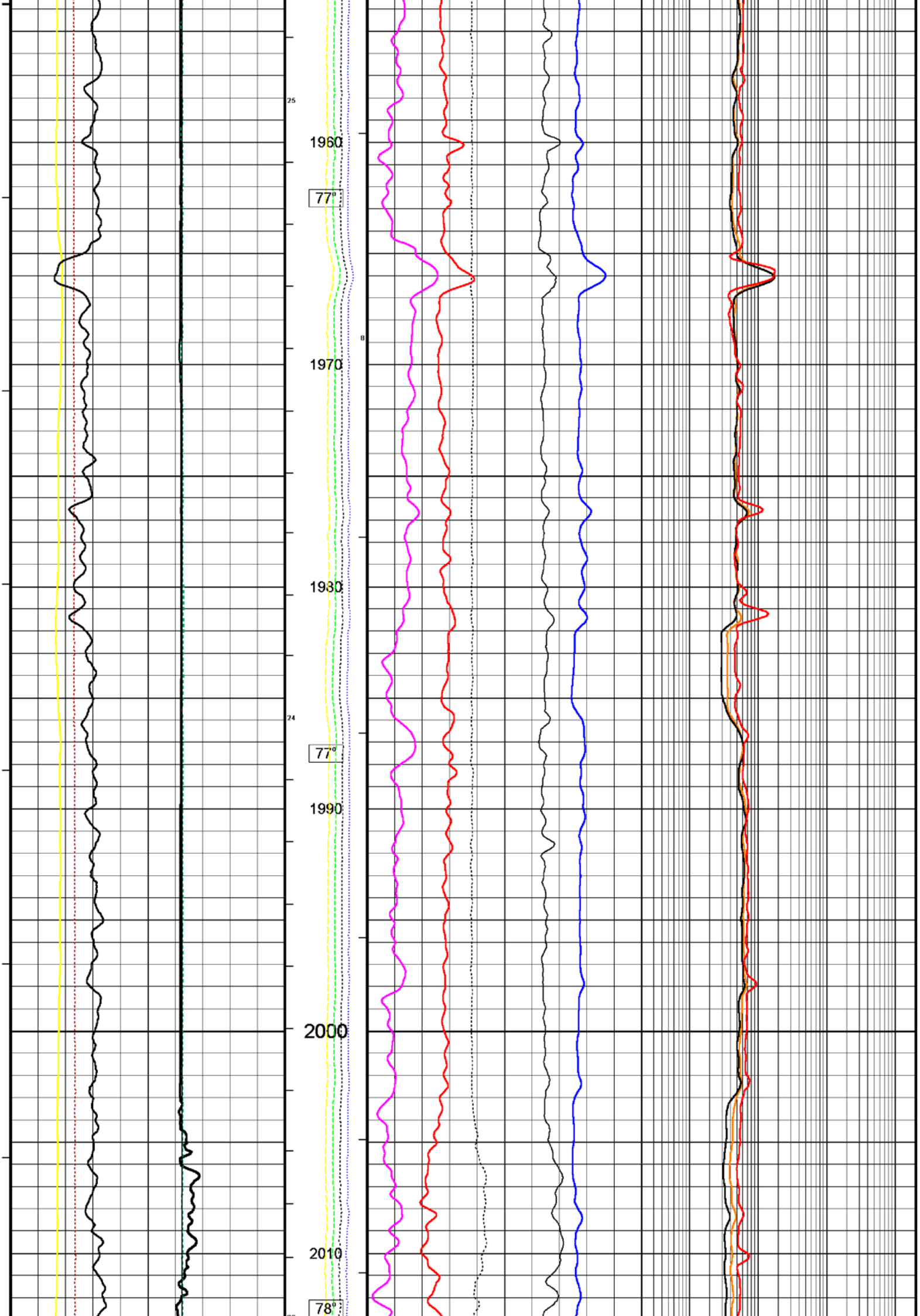

1660
69°
1670
35
11
1680
70°
1690
1700
34
1710
71°

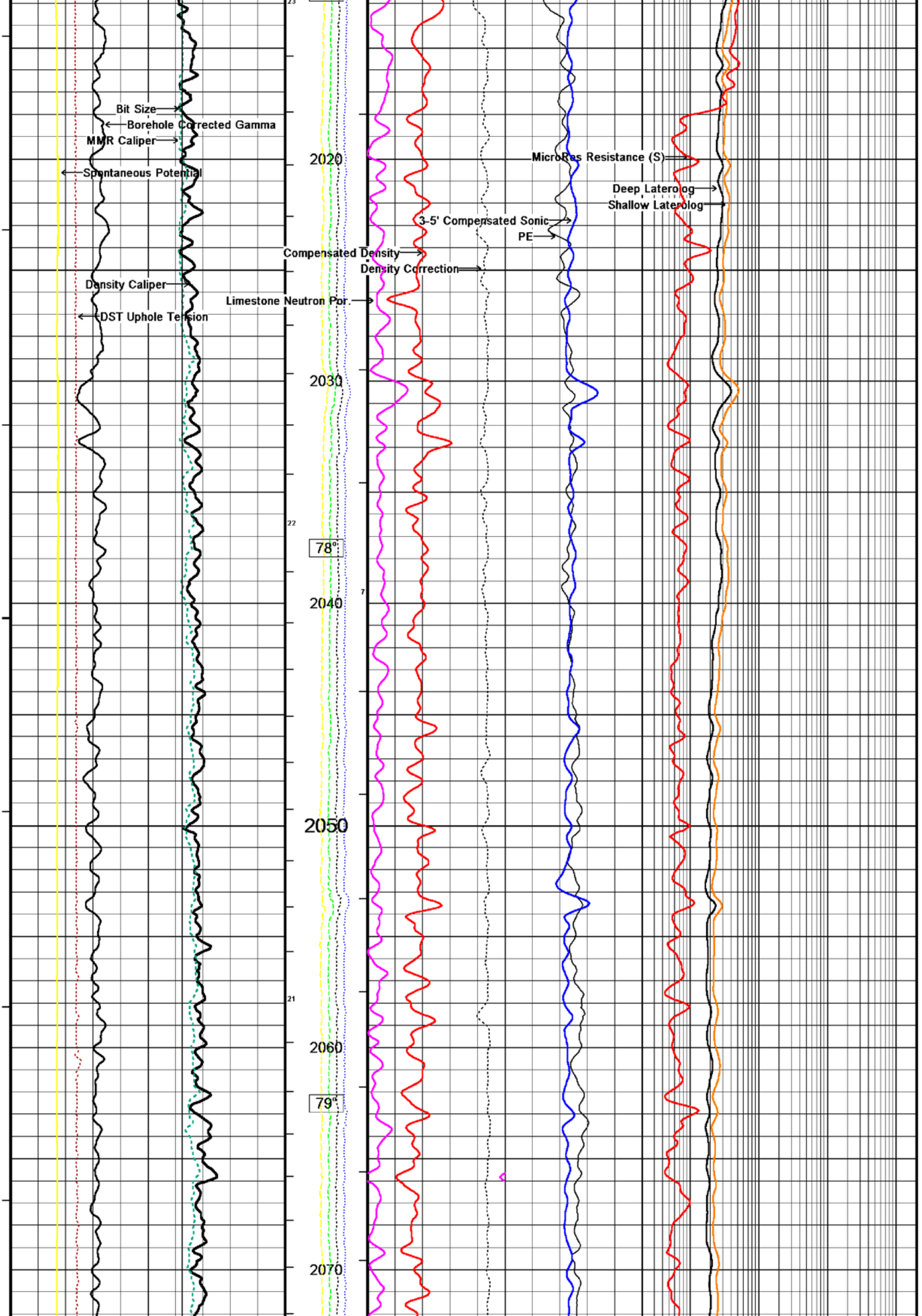

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
1720
1730
1740
1750
1760
1770
71°
72°
33
32
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

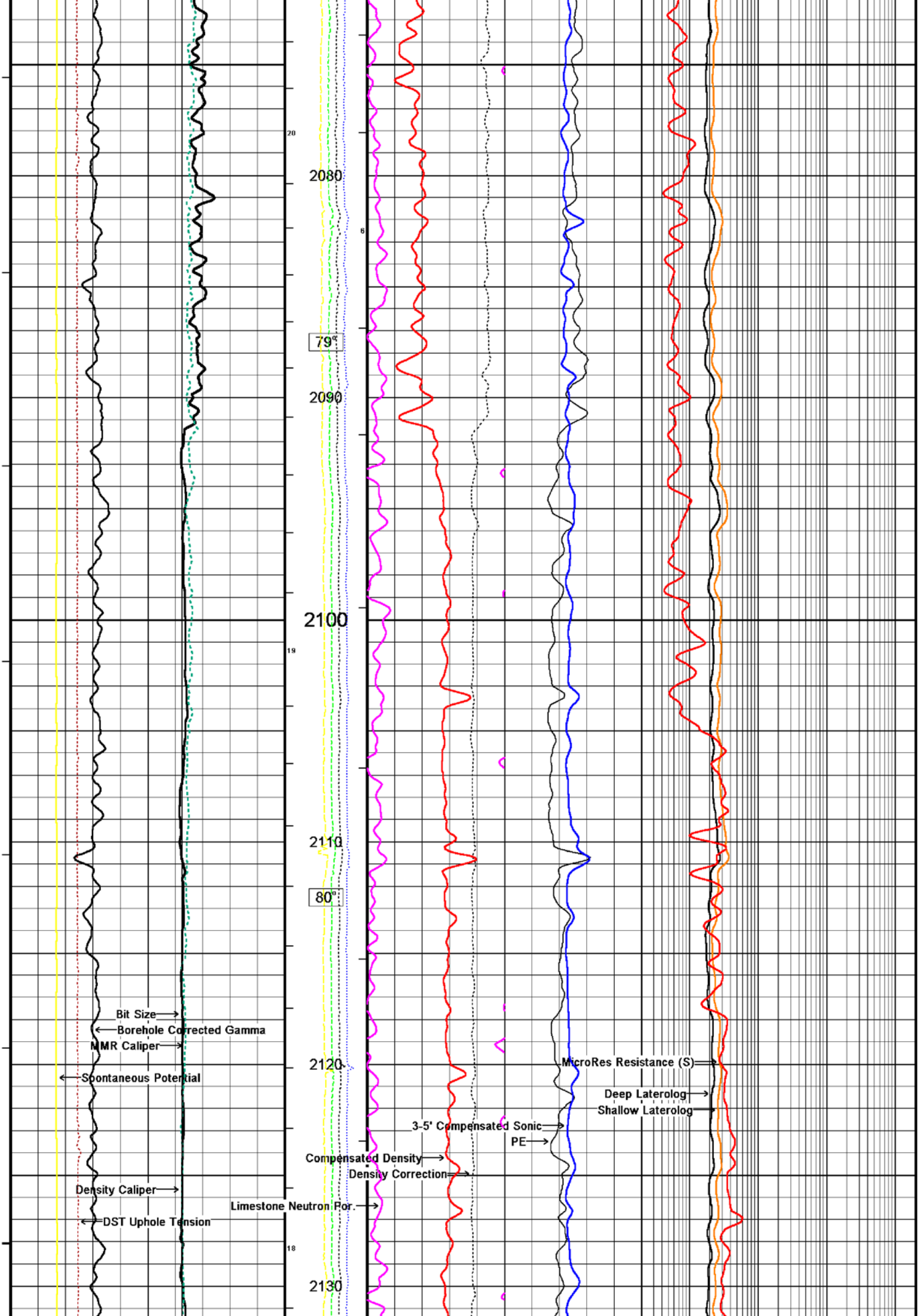

1780
72°
1790
1800
1810
73°
1820
1830
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
CST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

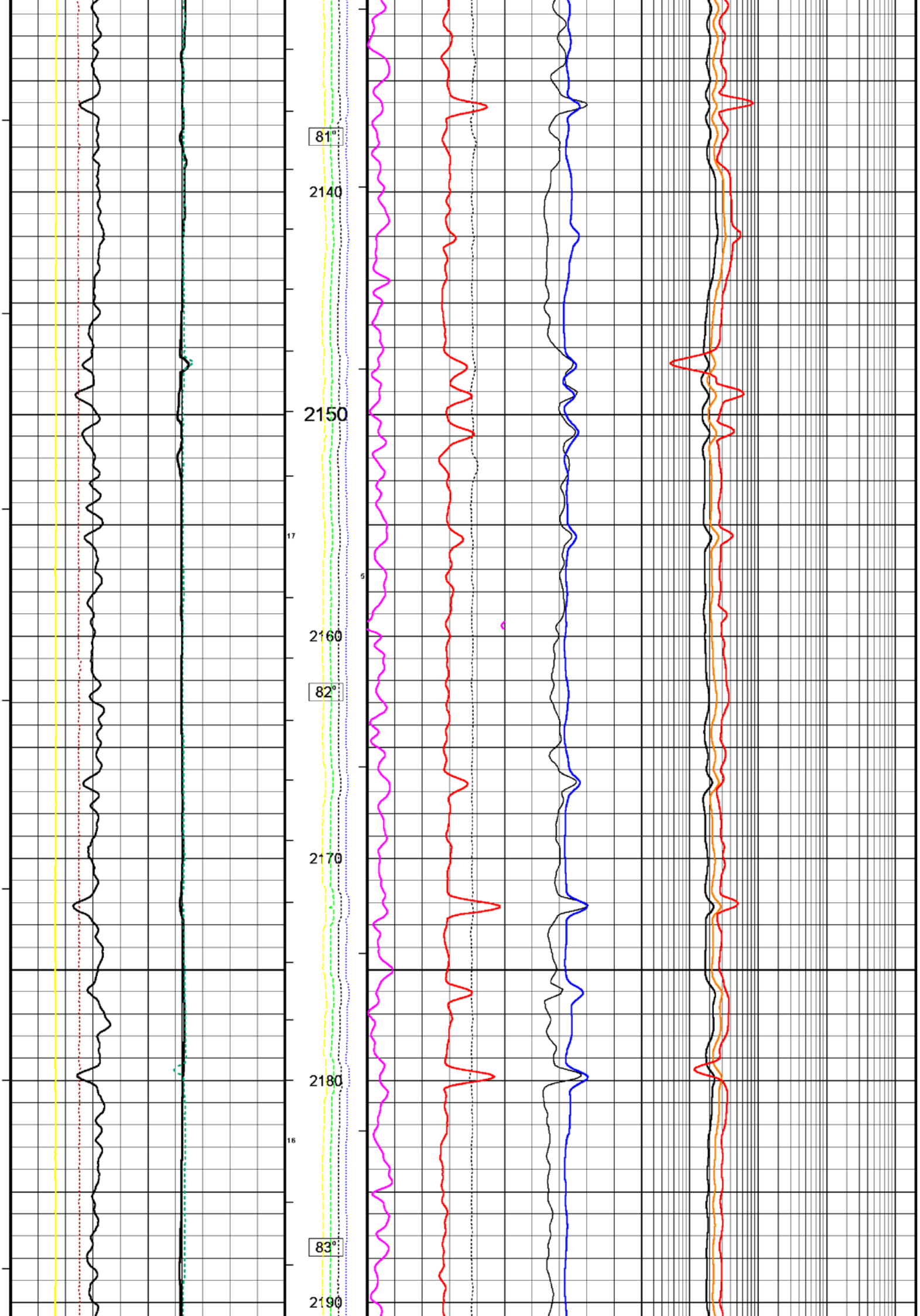

73°
1840
1850
1860
74°
1870
1880
75°
1890

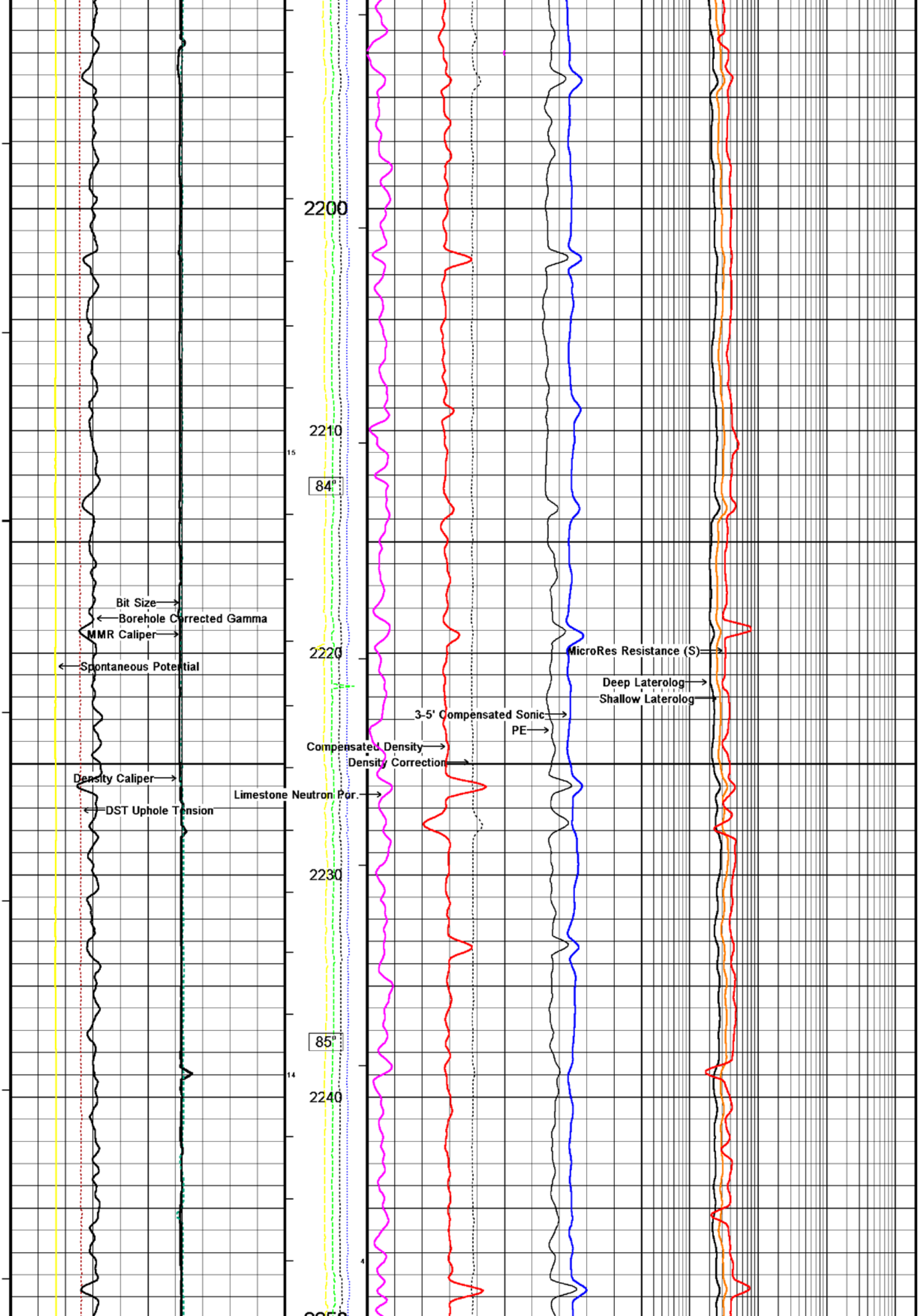

1900
1910
1920
1930
1940
1950
75°
76°
Bit Size
Borehole Corrected Gamma
NMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

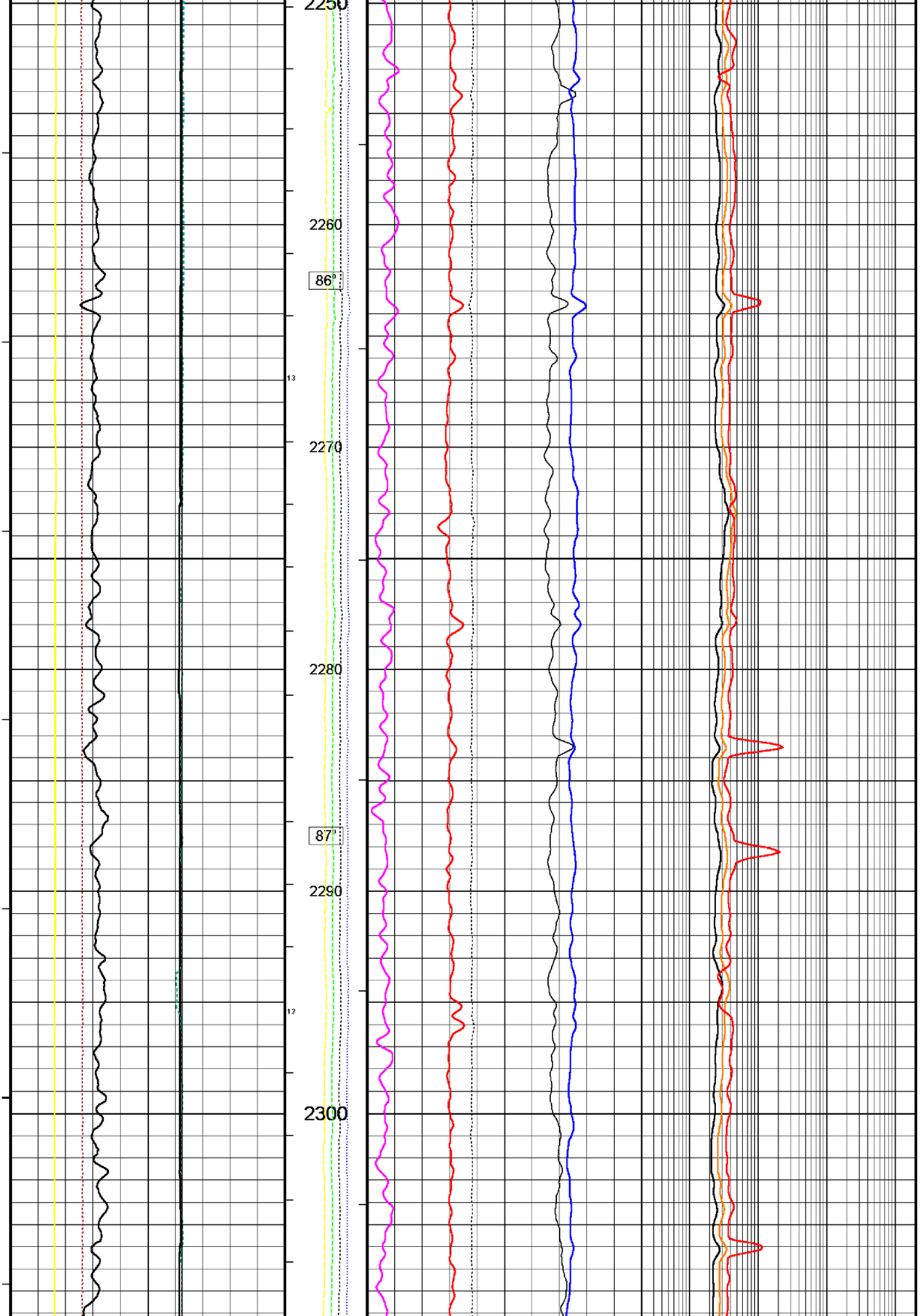

25
1960
77°
1970
1930
24
77°
1990
2000
2010
78°

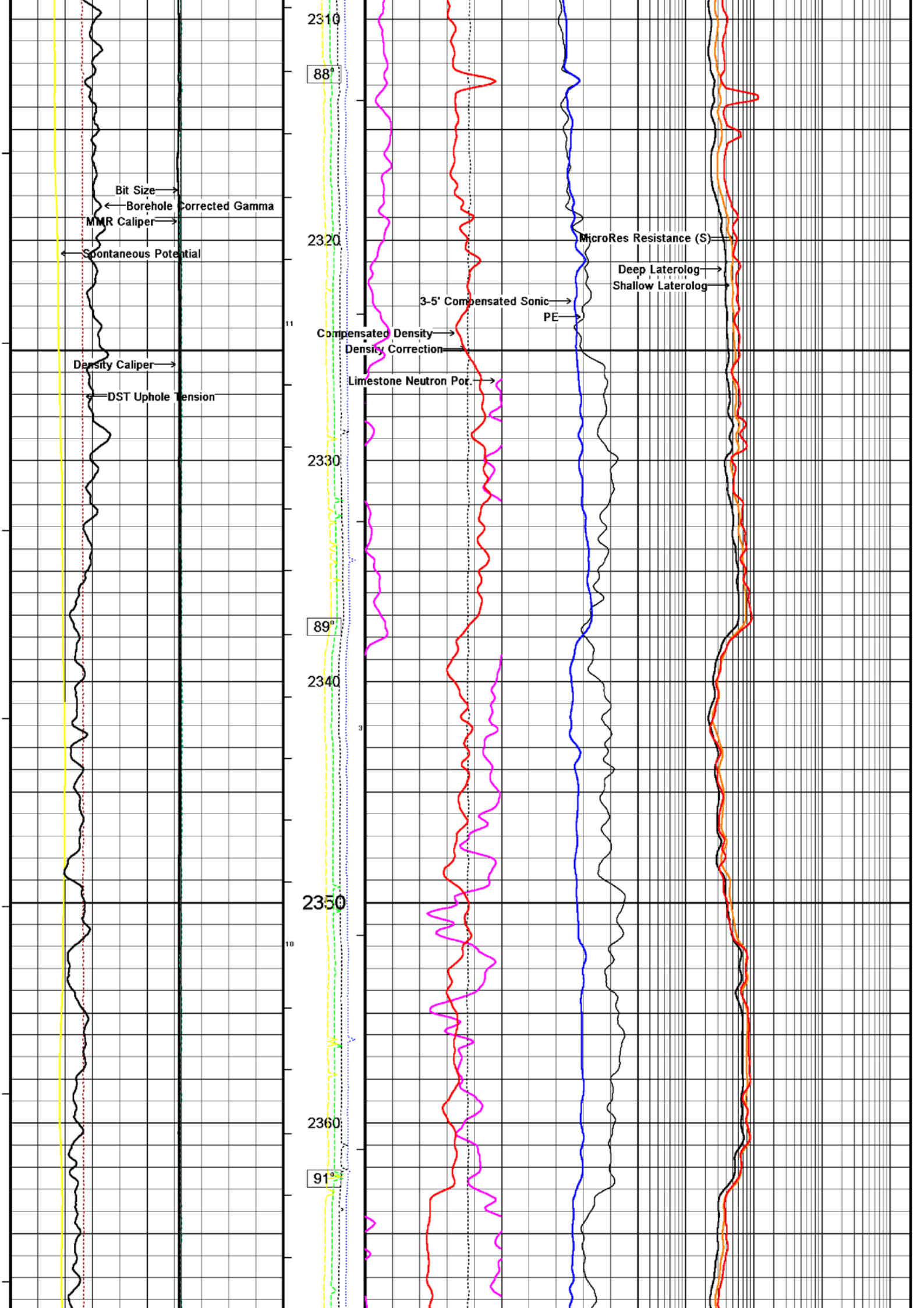

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
2020
Compensated Density
Density Correction
Limestone Neutron Por.
2030
78°
2040
2050
2060
79°
2070
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE

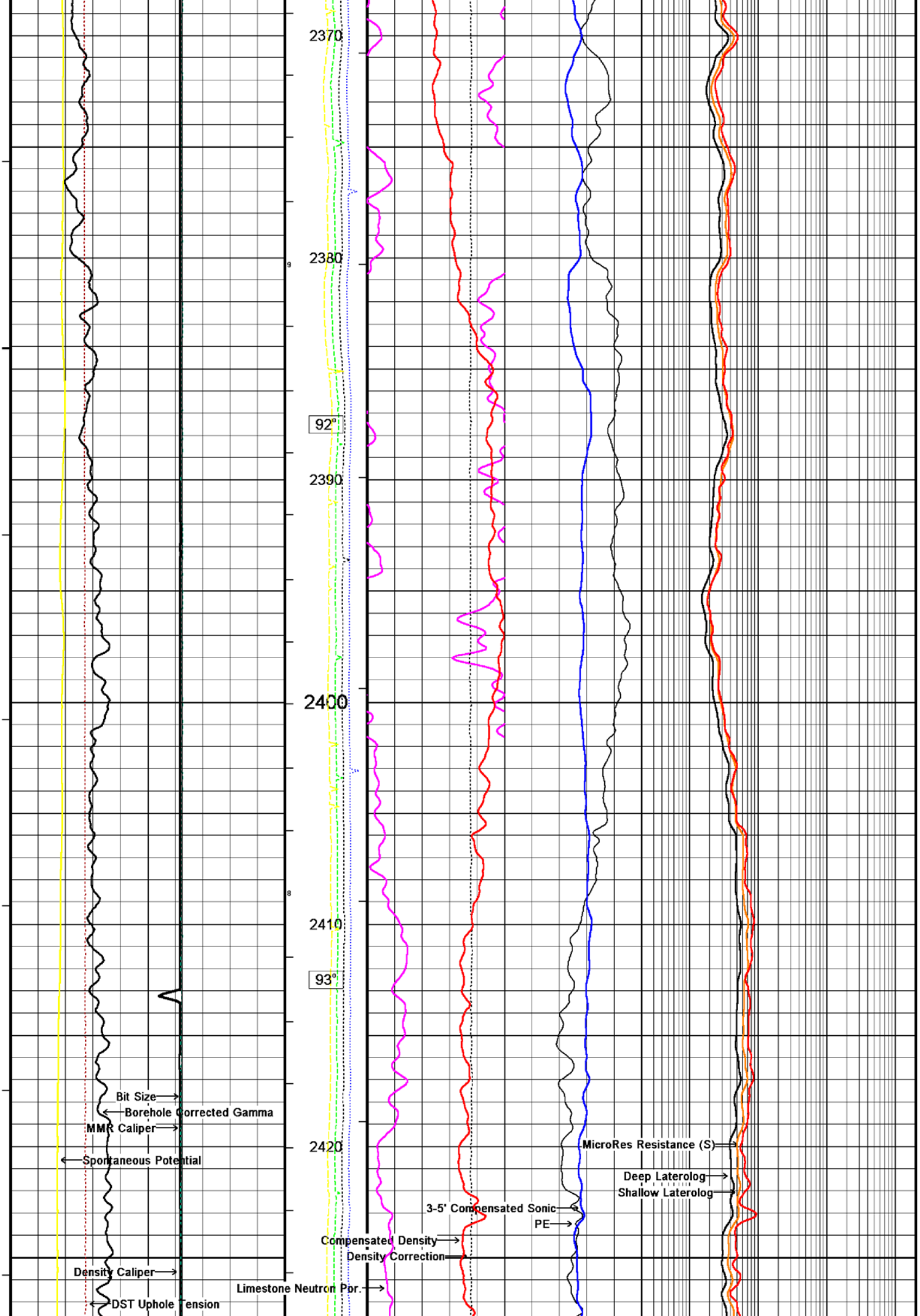

2080
79°
2090
2100
2110
80°
2120
2130
Bit Size
Borehole Corrected Gamma
NMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

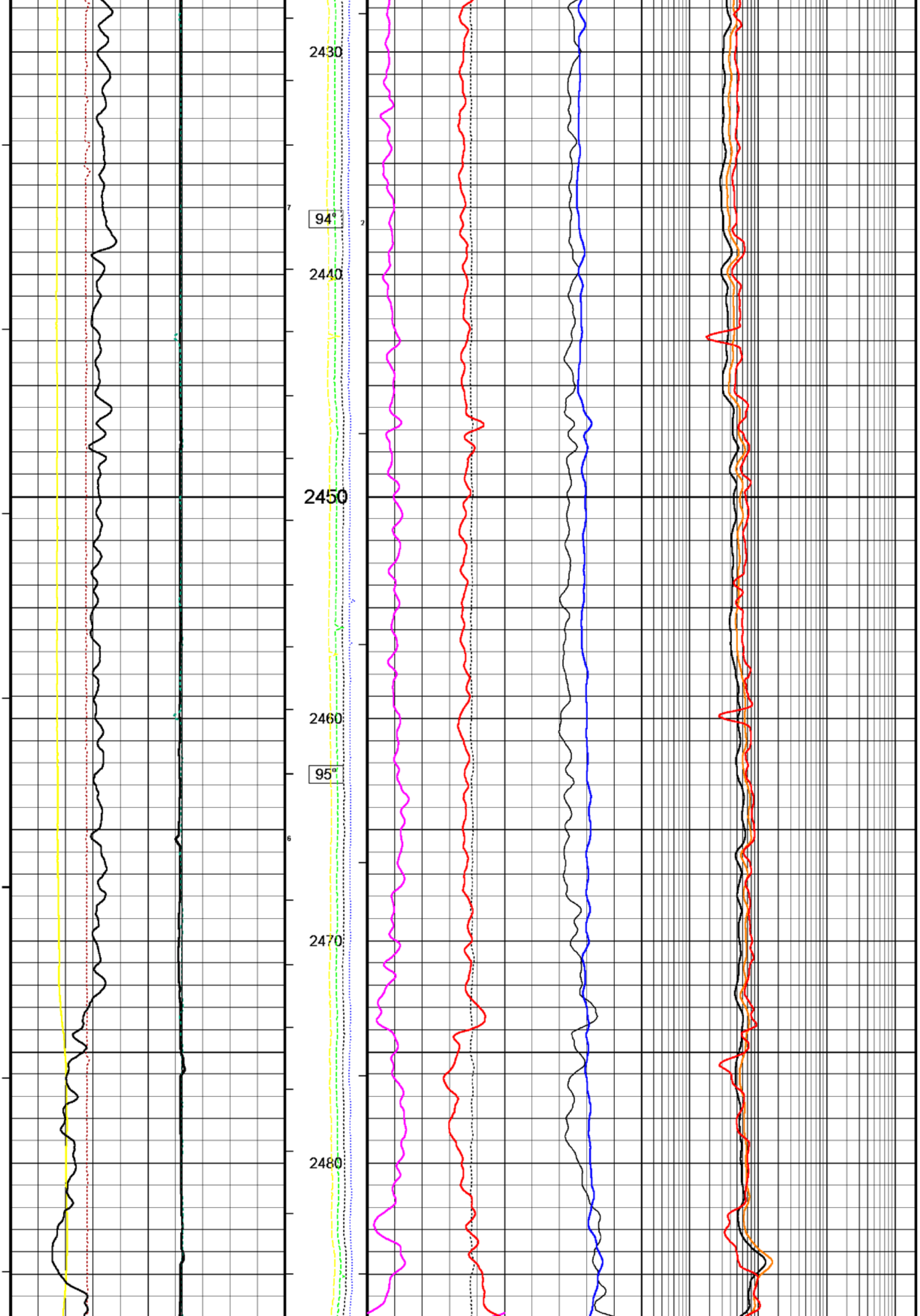

81°
2140
2150
2160
82°
2170
2180
83°
2190

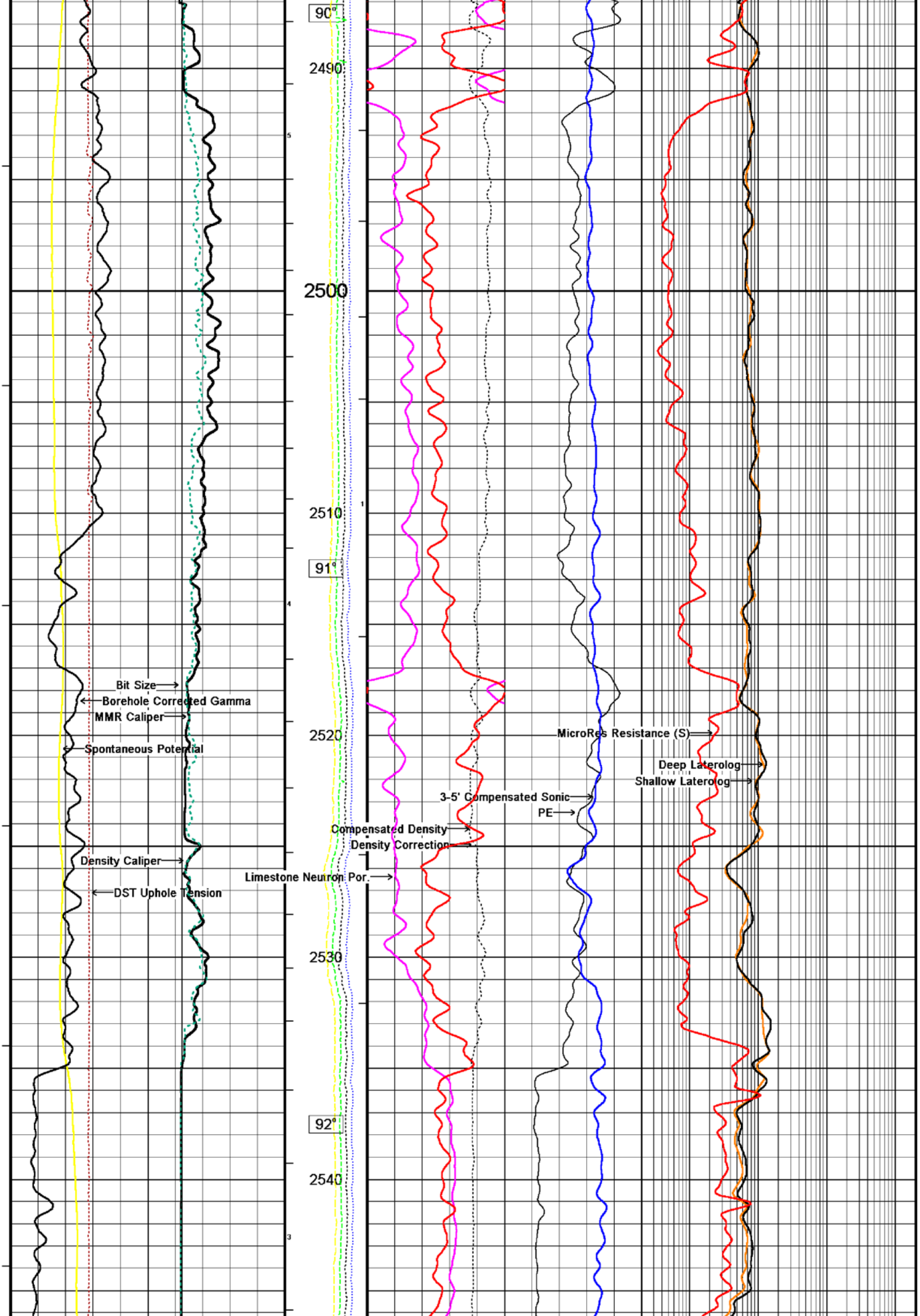

2200
2210
2220
2230
2240
84"
85"
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

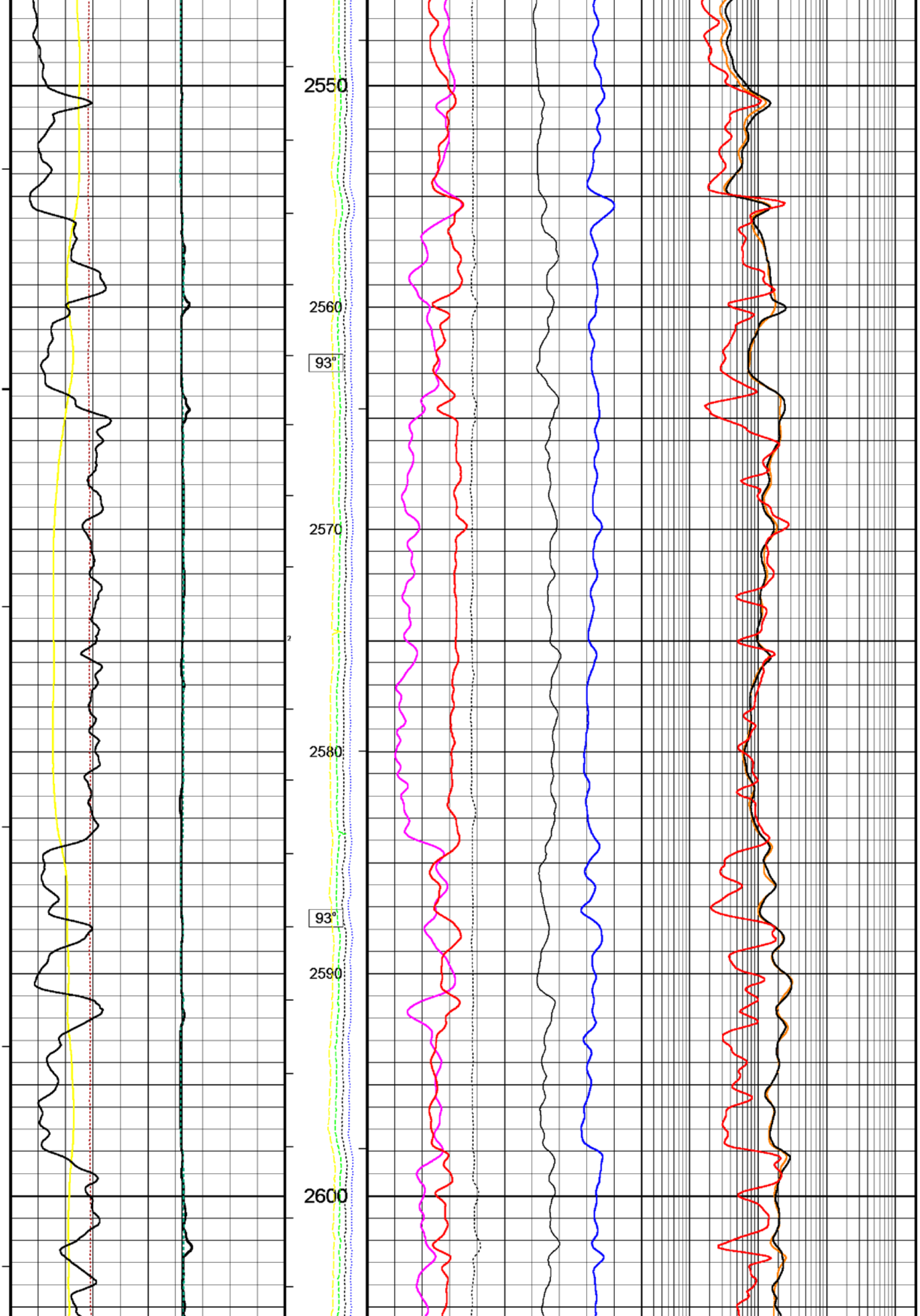

2250
2260
86°
2270
2280
87°
2290
2300

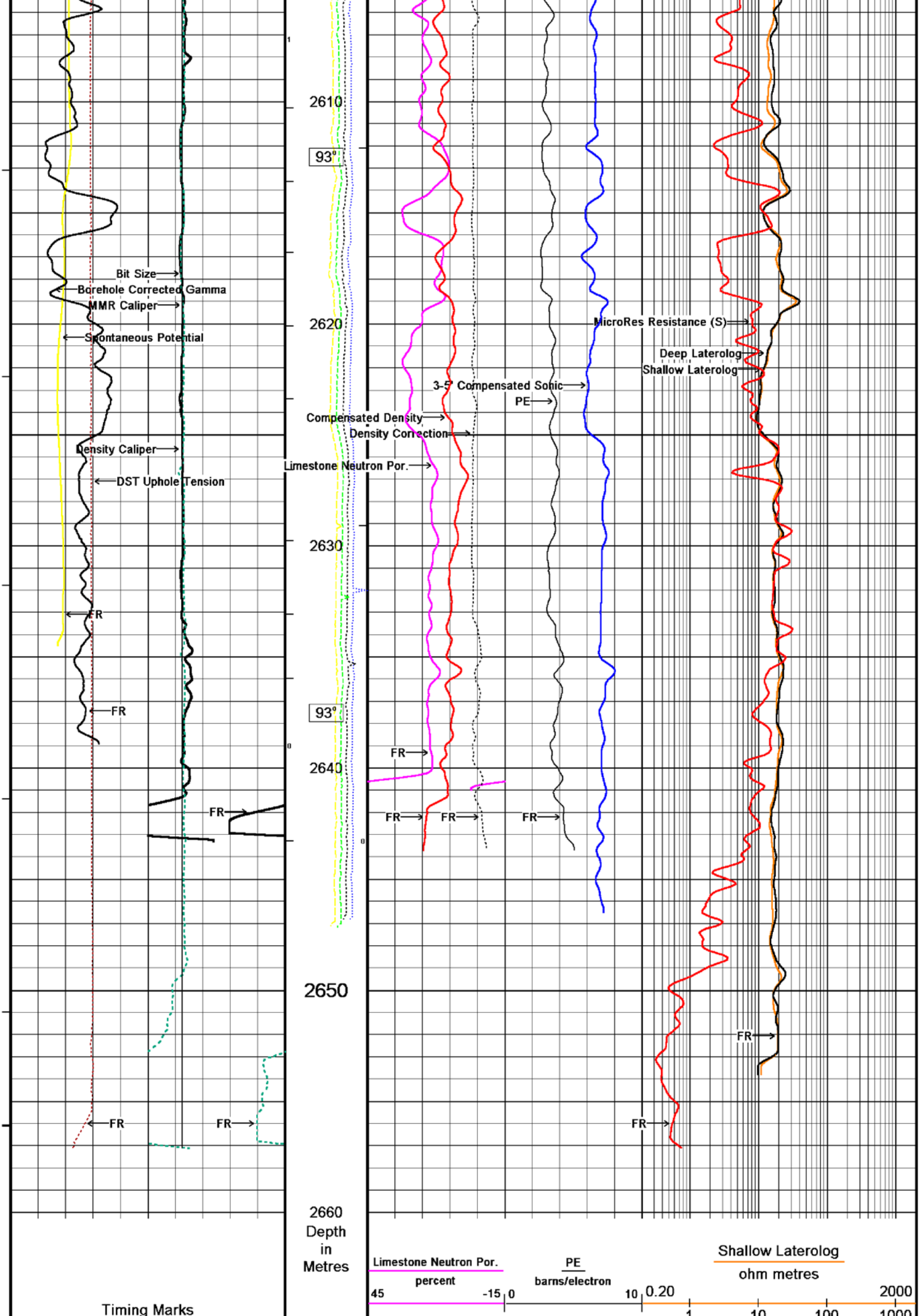

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
2310
88°
2320
2330
89°
2340
2350
2360
91°
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

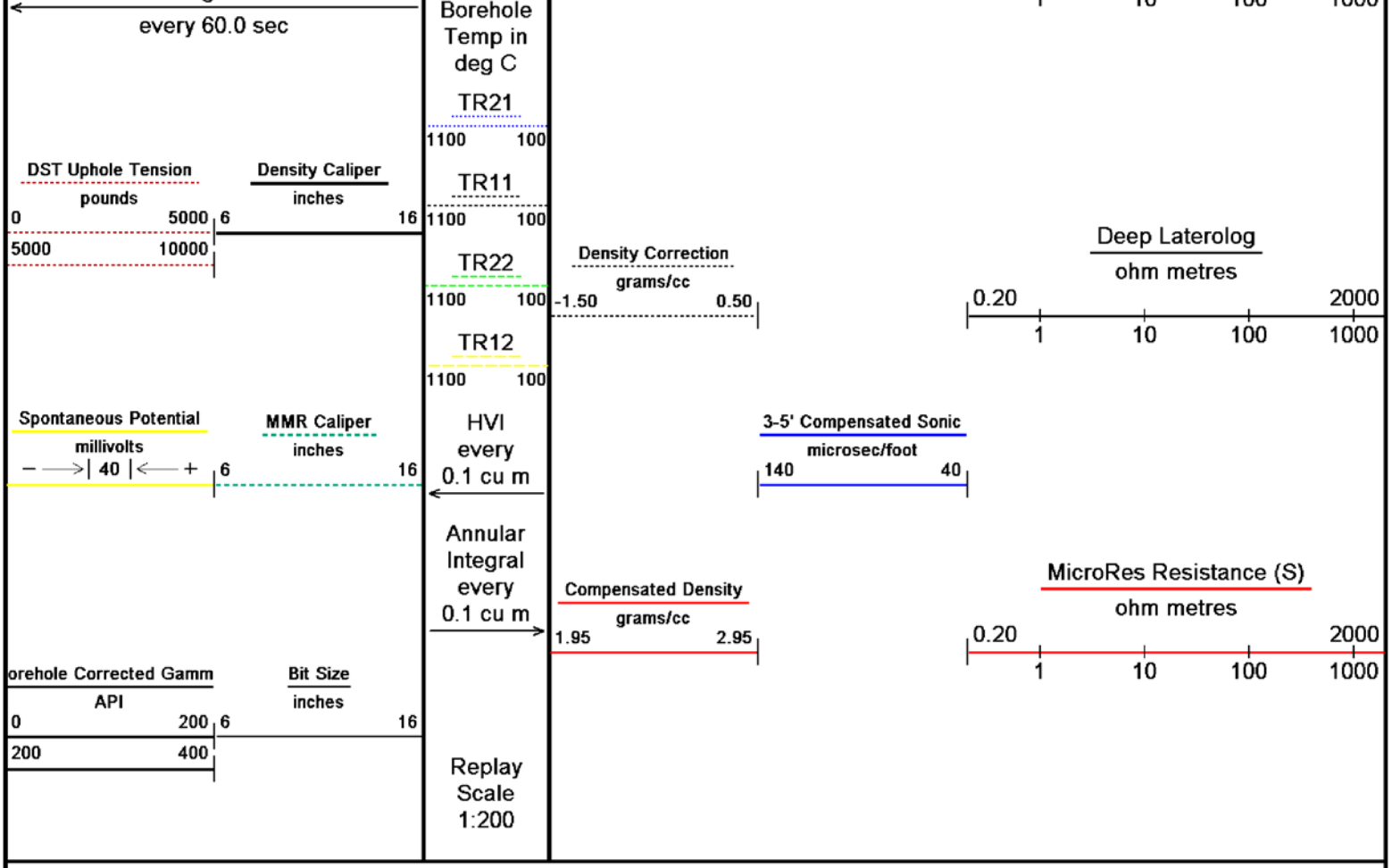

2370
2380
92°
2390
2400
2410
93°
2420
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog


2430
94°
2440
2450
2460
95°
2470
2480


90°
2490
2500
2510
91°
2520
2530
92°
2540
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog


2550
2560
93°
2570
2580
93°
2590
2600


Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
FR
FR
FR
FR
FR
FR
2610
93°
2620
2630
93°
2640
2650
2660
Depth
in
Metres
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
FR
FR
FR
FR
FR
FR
Timing Marks
Limestone Neutron Por.
percent
45
-15
0
PE
barns/electron
10
0.20
Shallow Laterolog
ohm metres
2000
1
10
100
1000

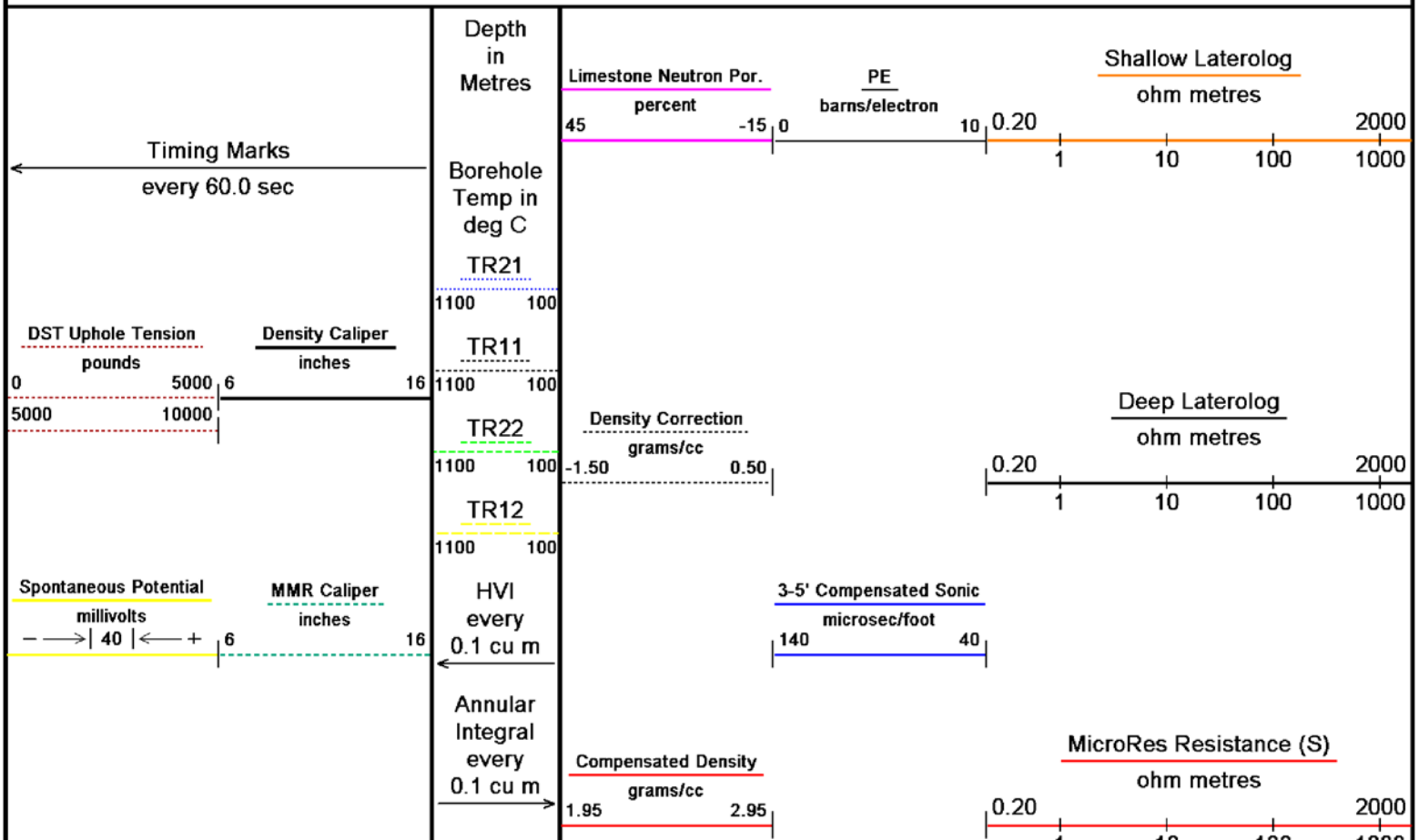


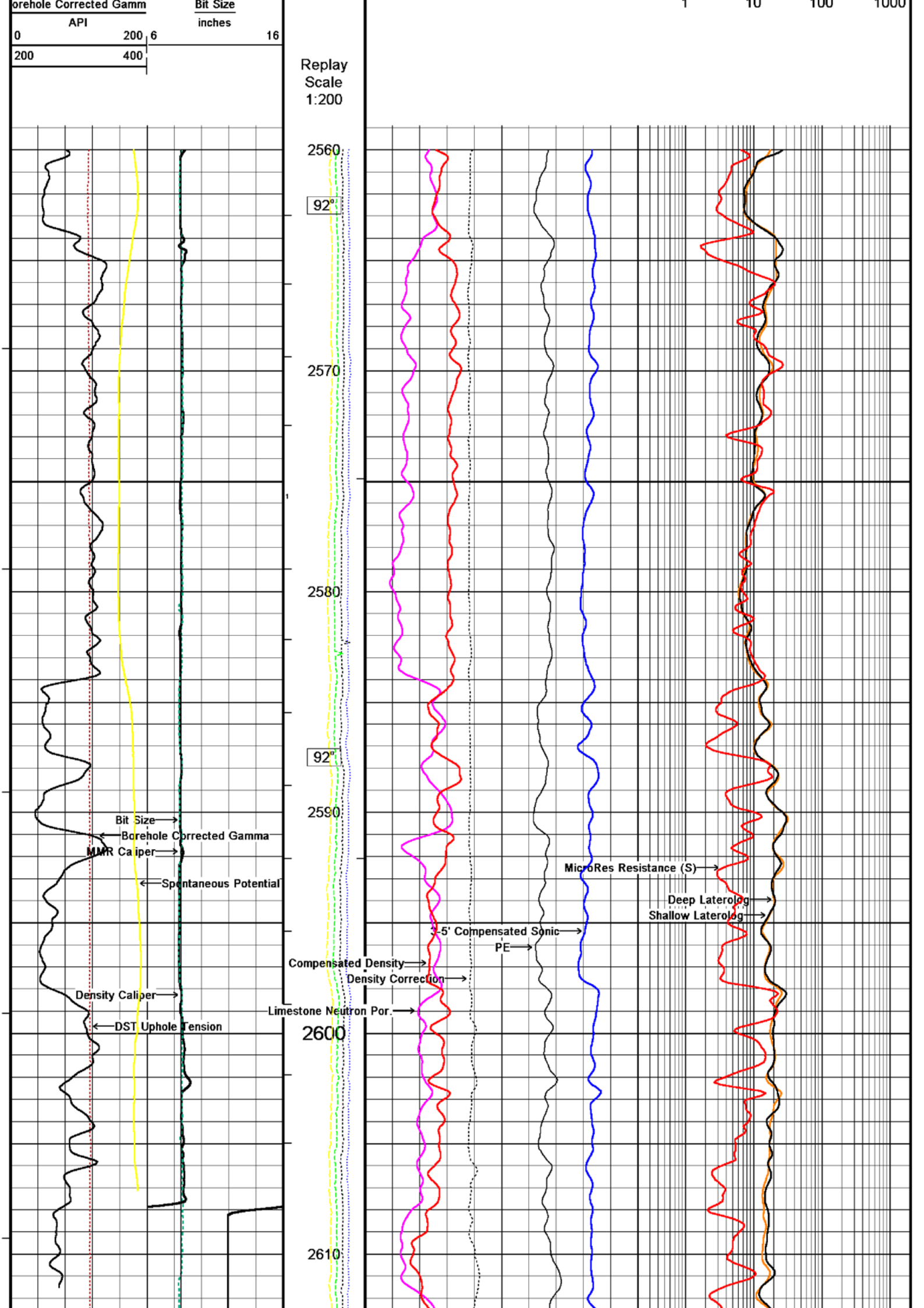
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:01
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Versions: Plotted with 7.01.0179

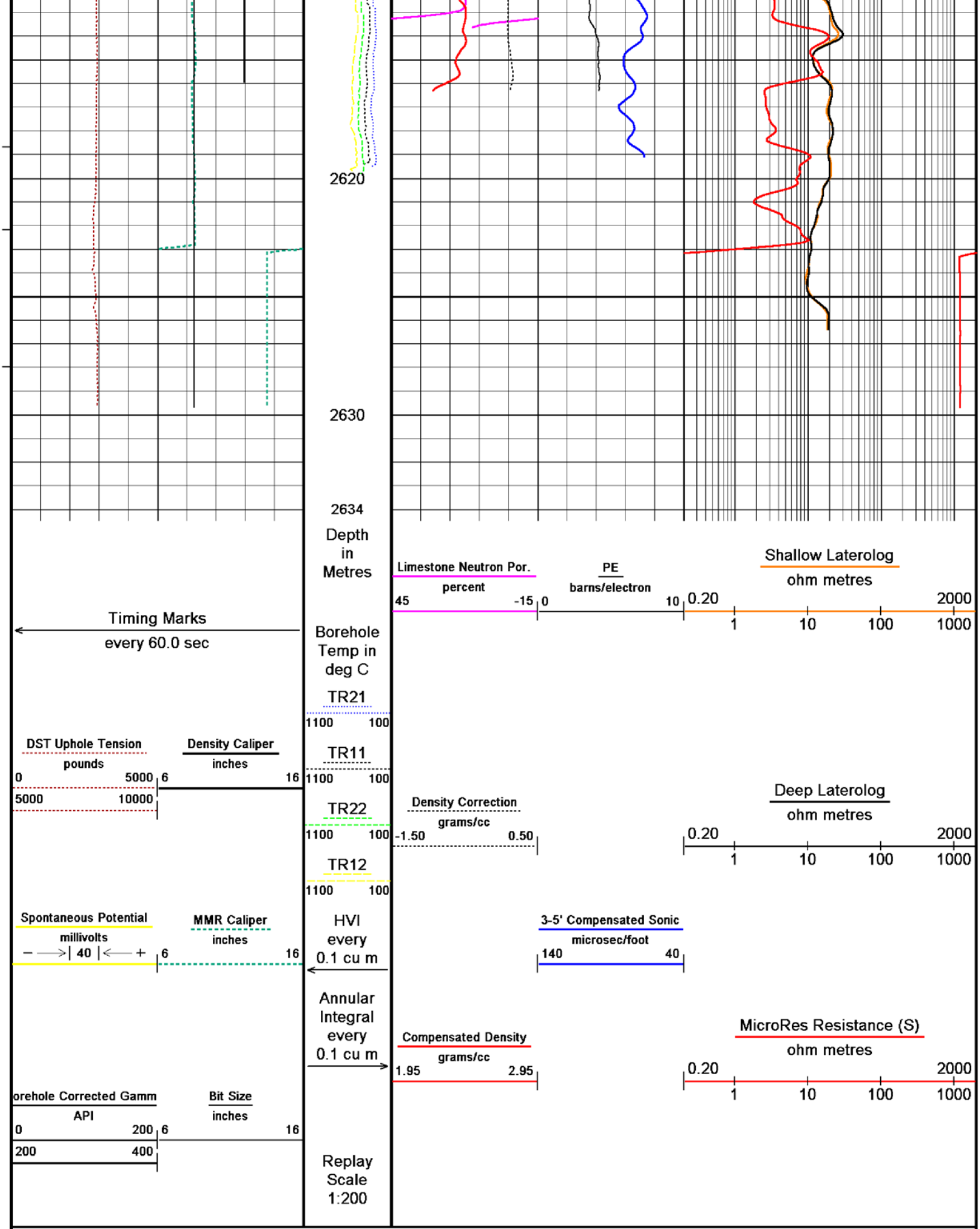
MAIN LOG 1:200

REPEAT SECTION 1:200 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:01
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179




orehole Corrected Gamm
API
0
200
200
400
Bit Size
inches
6
16
1
10
100
1000
Replay
Scale
1:200
2560
92°
2570
2580
92°
2590
2600
2610
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:01
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

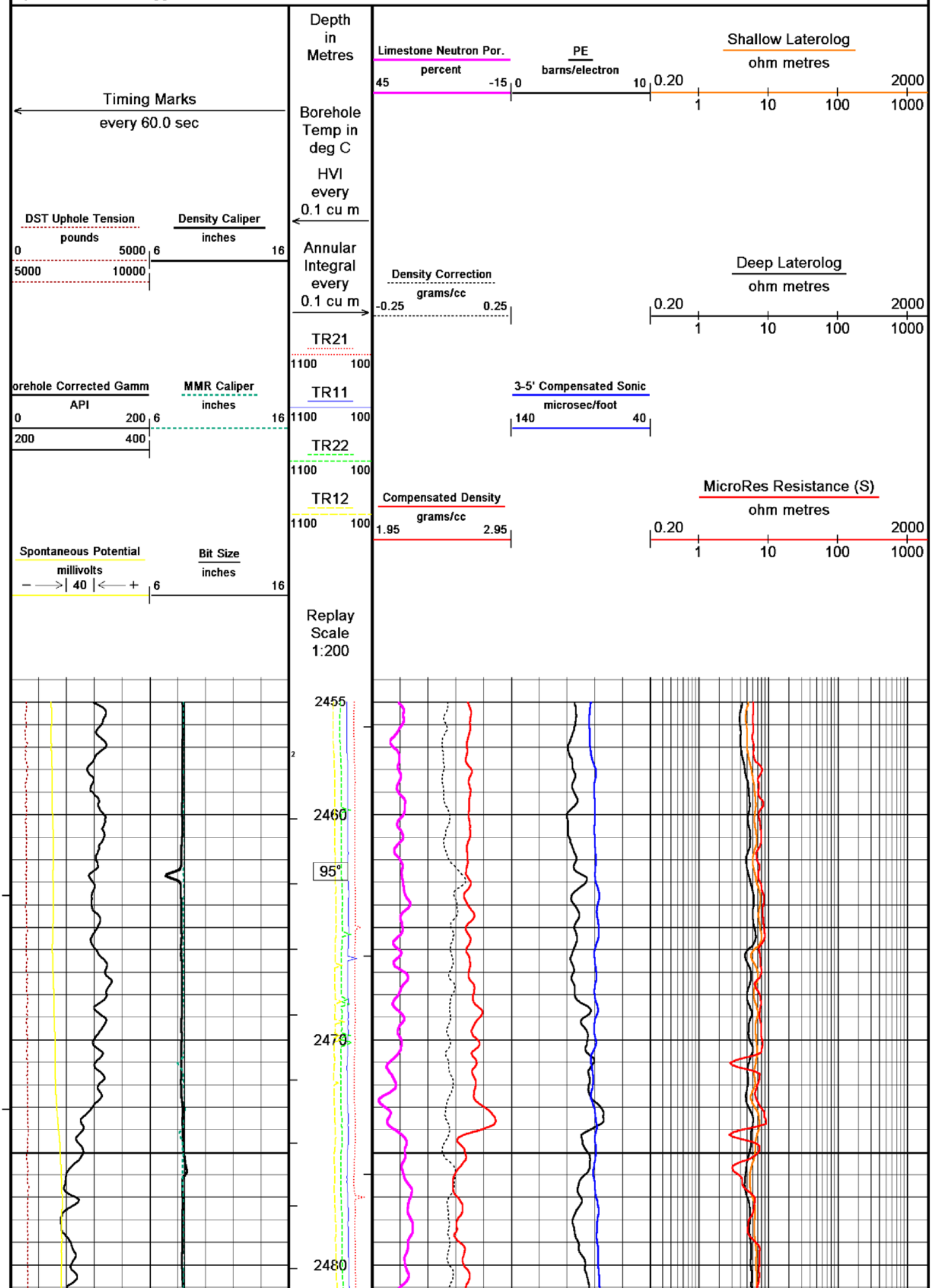
REPEAT SECTION 1:200 RUN 2

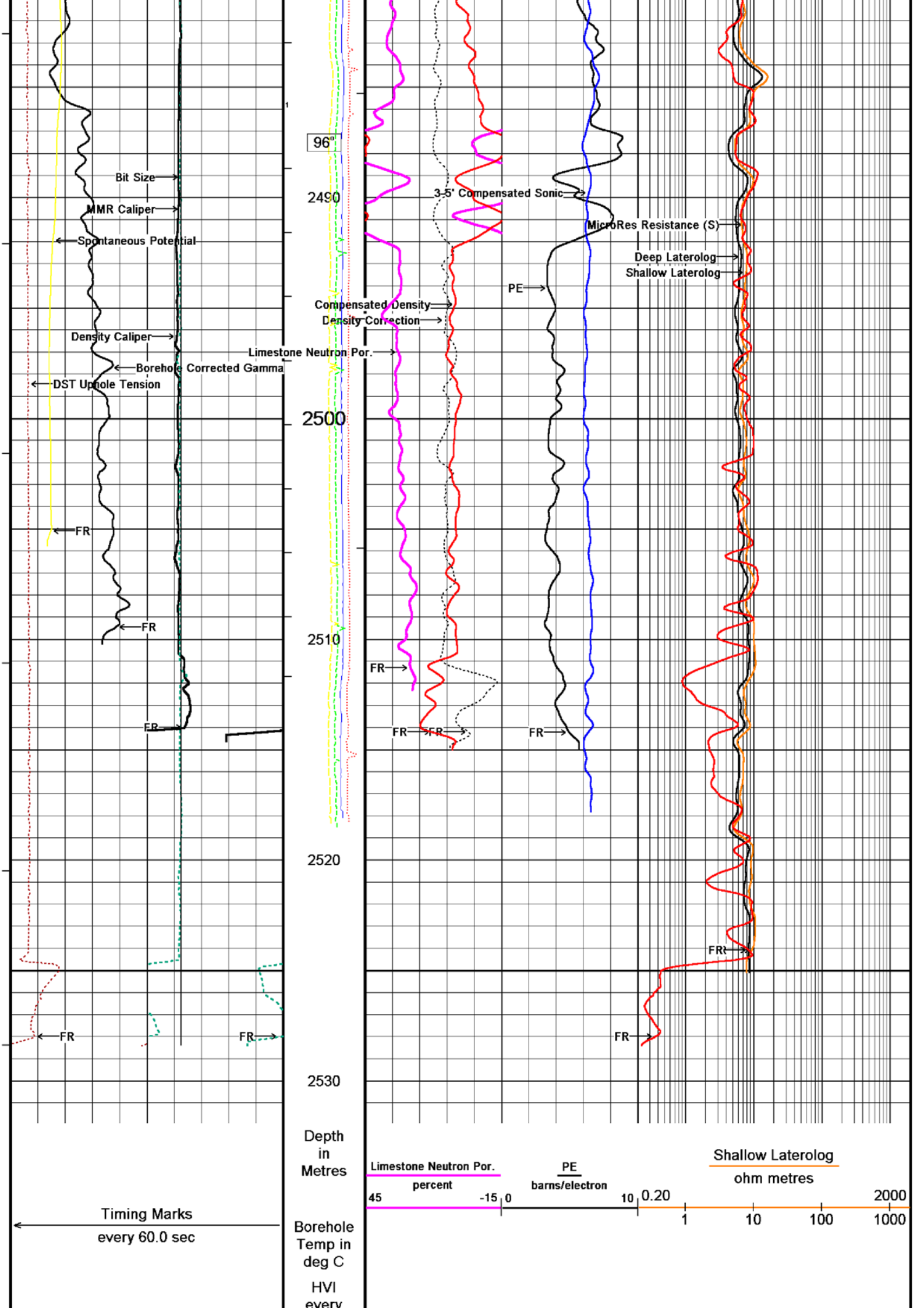
REPEAT SECTION 1:200 RUN 1

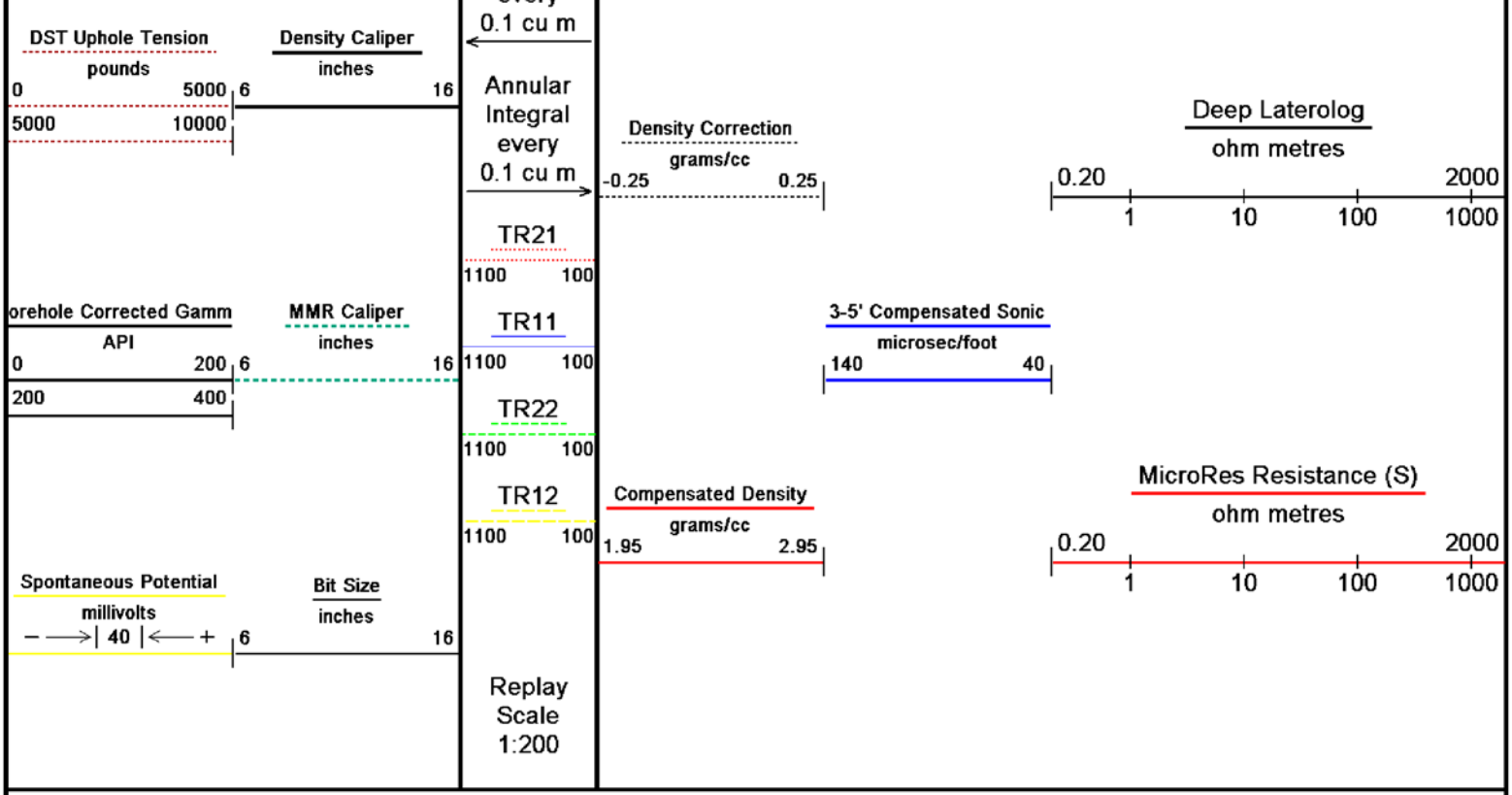
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:01

Depth Based Data - Maximum Sampling Increment 10.00m
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

Plotted on 04-NOV-2005 18:01
Recorded on 01-OCT-2005 18:14




96"
Bit Size
MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
FR
2490
2500
2510
2520
2530
3-5' Compensated Sonic
Compensated Density
Density Correction
Limestone Neutron Por.
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
Depth in Metres
Timing Marks
every 60.0 sec
Borehole Temp in deg C
HVI
every
Limestone Neutron Por.
percent
45
-15
0
PE
barns/electron
10
0.20
Shallow Laterolog
ohm metres
2000
1
10
100
1000



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:02
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

REPEAT SECTION 1:200 RUN 1

DOWNHOLE EQUIPMENT

C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta

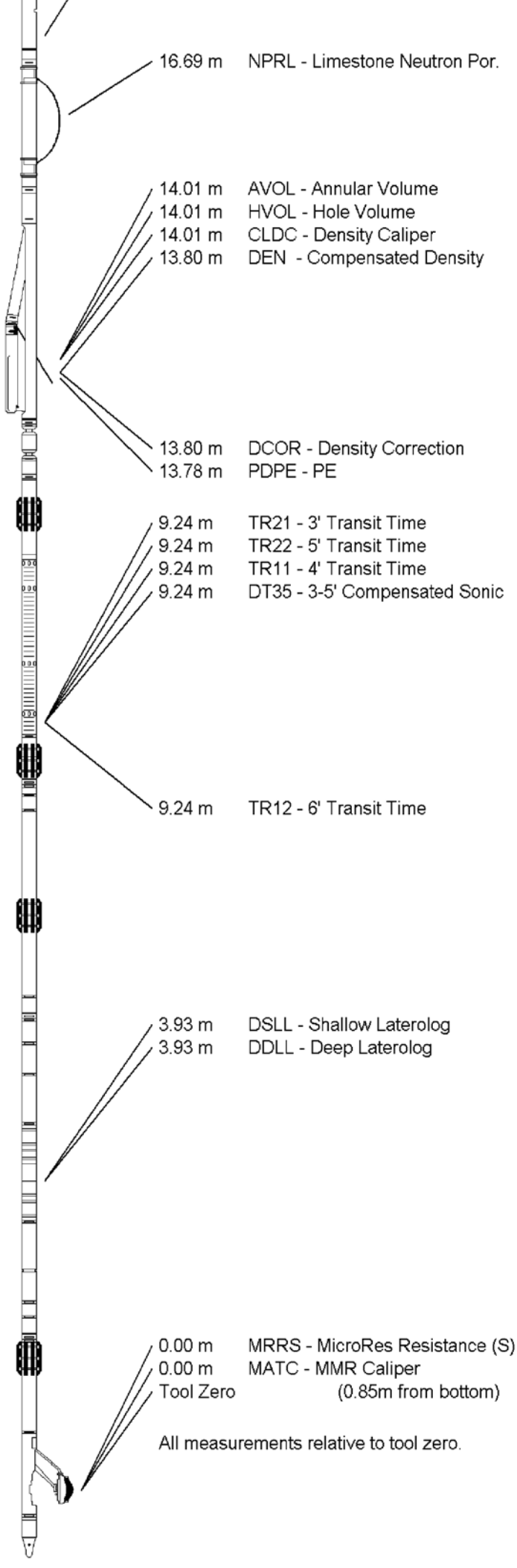
Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature



Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

14.01 m AVOL - Annular Volume
14.01 m HVOL - Hole Volume
14.01 m CLDC - Density Caliper
13.80 m DEN - Compensated Density

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

13.80 m DCOR - Density Correction
13.78 m PDPE - PE

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

9.24 m TR21 - 3' Transit Time
9.24 m TR22 - 5' Transit Time
9.24 m TR11 - 4' Transit Time
9.24 m DT35 - 3-5' Compensated Sonic

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

9.24 m TR12 - 6' Transit Time

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

3.93 m DSLL - Shallow Laterolog
3.93 m DDLL - Deep Laterolog

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

0.00 m MRRS - MicroRes Resistance (S)
0.00 m MATC - MMR Caliper
Tool Zero (0.85m from bottom)

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

All measurements relative to tool zero.

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

General Constants All 000

Last Edited on 1-OCT-2005,07:46

General Parameters		
Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Last Edited on 3-OCT-2005,20:14

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Last Edited on 3-OCT-2005,20:15

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	

Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13
Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

918.0	1089.7

Field Check

919.8	1086.8

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2

Field Check

173.6	795.1

Density Constants MPD 066

Last Edited on 3-OCT-2005,20:15

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft

Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Last Edited on 31-AUG-2005,09:24

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

Borehole Correction Constants

Stand-off	0	
Caliper Source	0	
Hole Size	0.000	0
Mud Resistivity Source	0	
Temp. for Rm Corr.	0	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0

Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

Measured		Calibrated (ohm-m)	
Ref 1	Ref 2	Ref 1	Ref 2
0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Last Edited on 4-SEP-2005,19:44

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches
Borehole Correction Constants		
Mud Cake Source	0	
Mud Cake Thickness	0.0000	0
Mud Cake Thickness Caliper	0	
Mud Cake Resistivity	0.0000	ohm-m

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:200

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:500

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FINAL PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80	metres	2528.15	metres
Last Reading	2400.00	metres	0.00	metres
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 16:19
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
− → | 20 | ← +

MMR Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth in Metres

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

Replay Scale 1:500

32

50

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

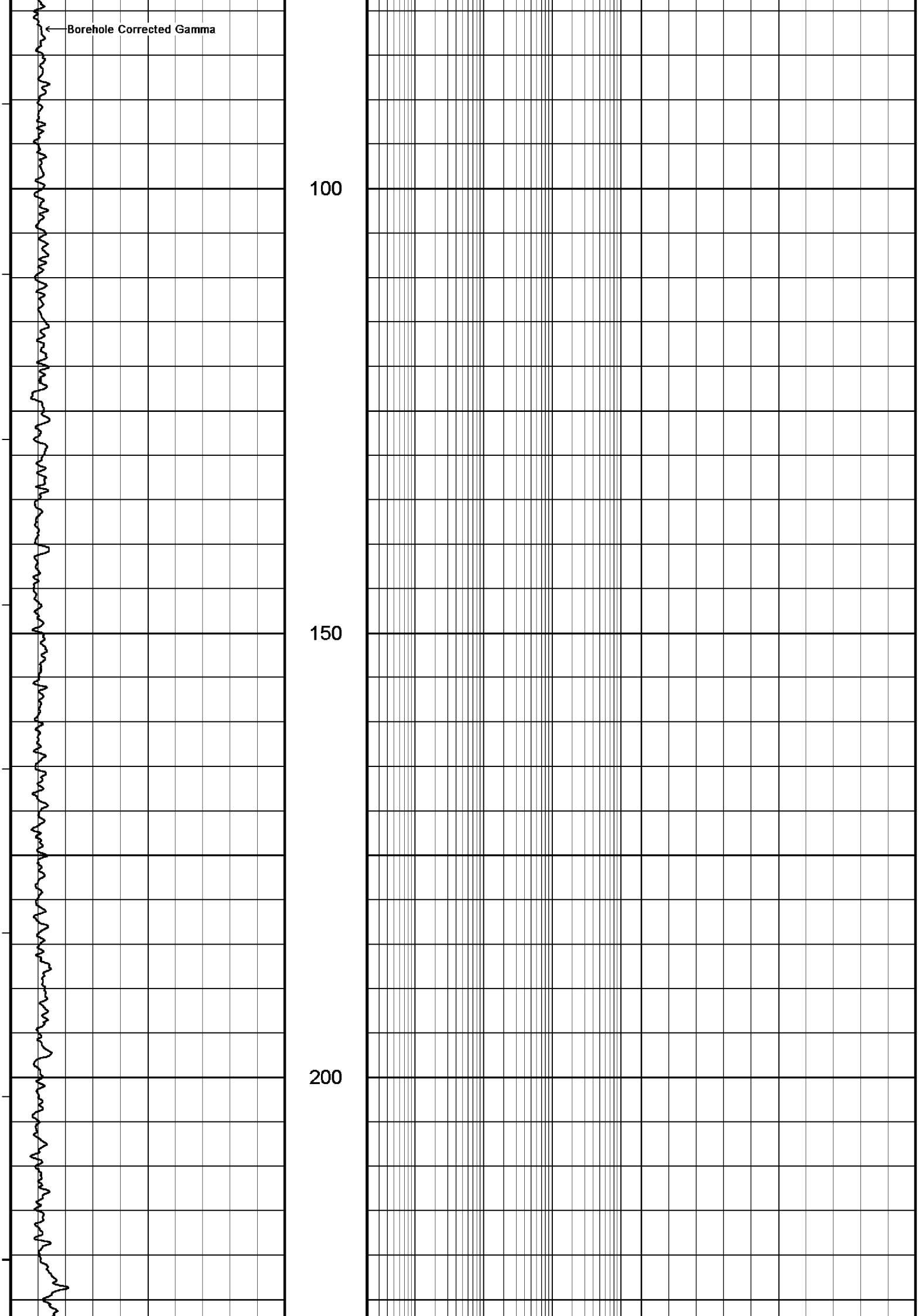
Compensated Density
grams/cc
1.95 2.45 2.95

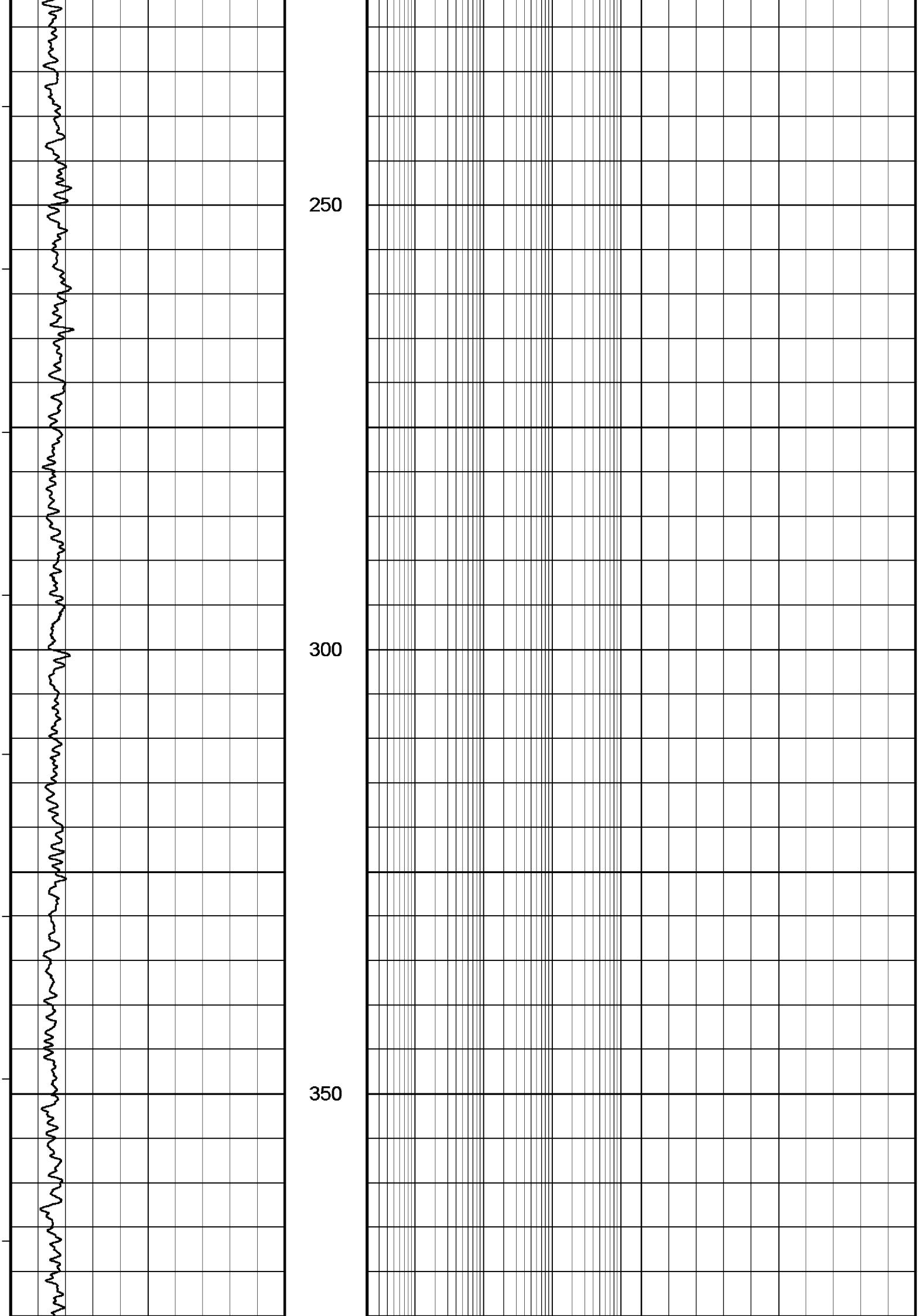
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

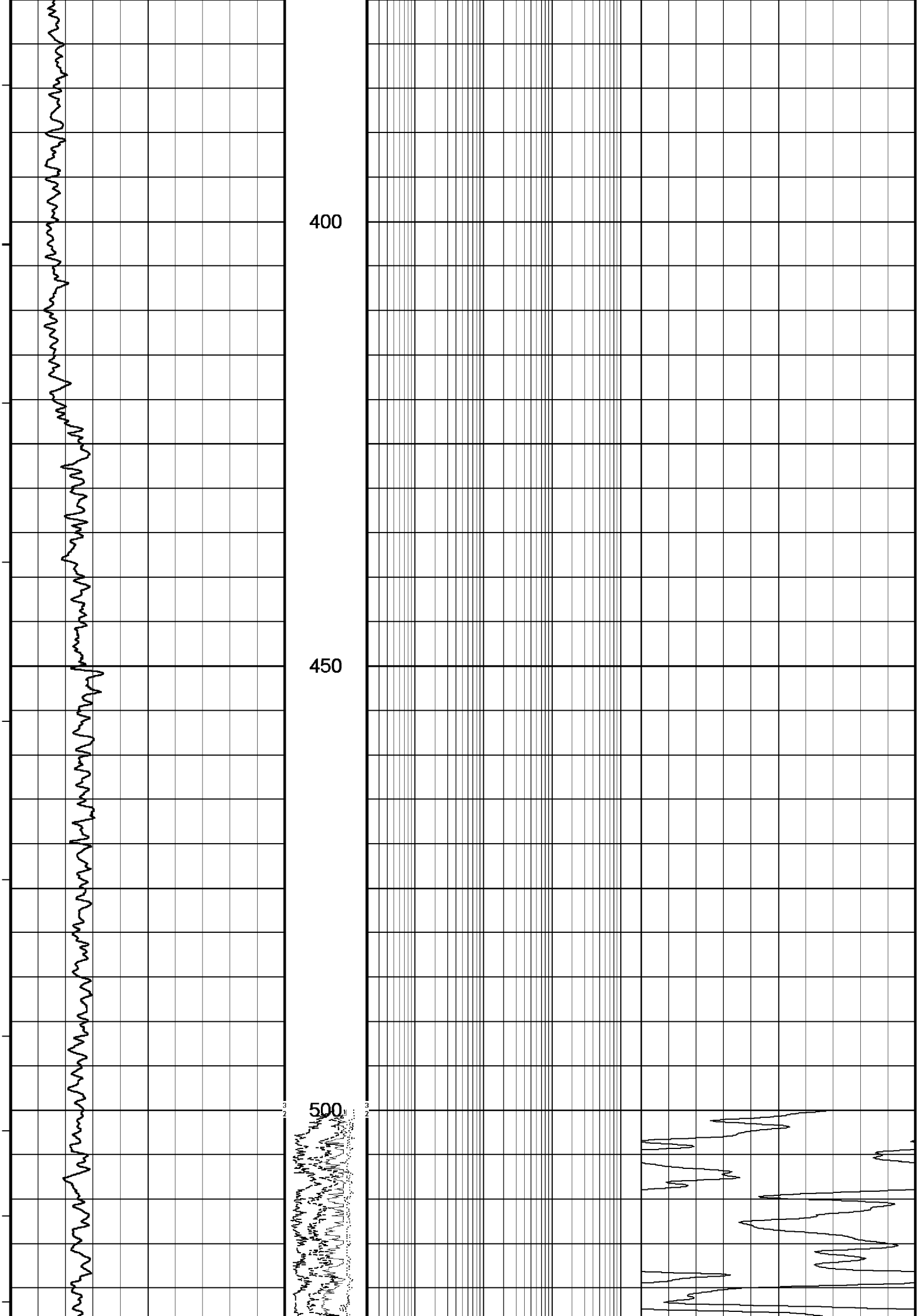
PE
barns/electron
0 5 10

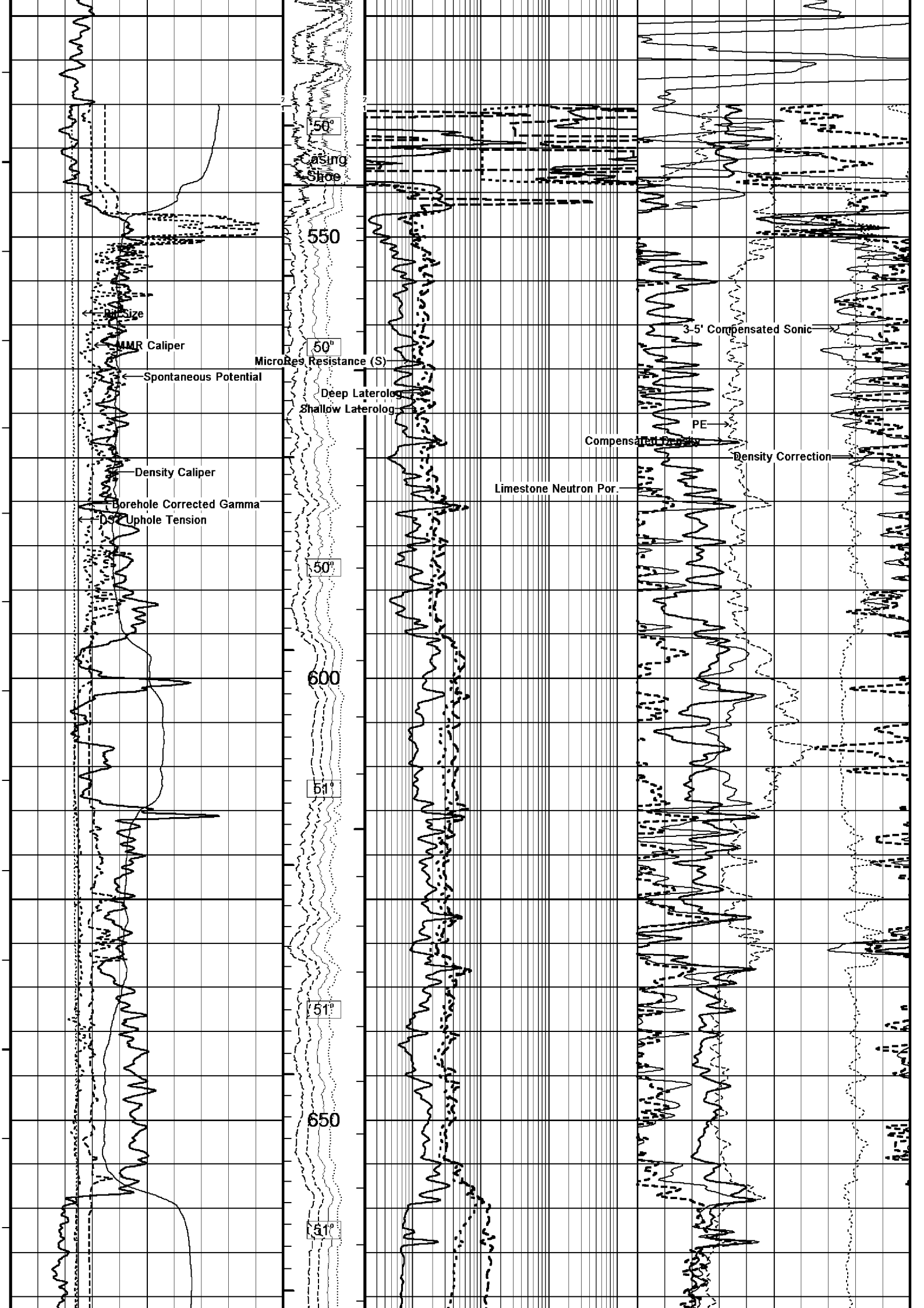
3-5' Compensated Sonic
microsec/foot
140 90 40

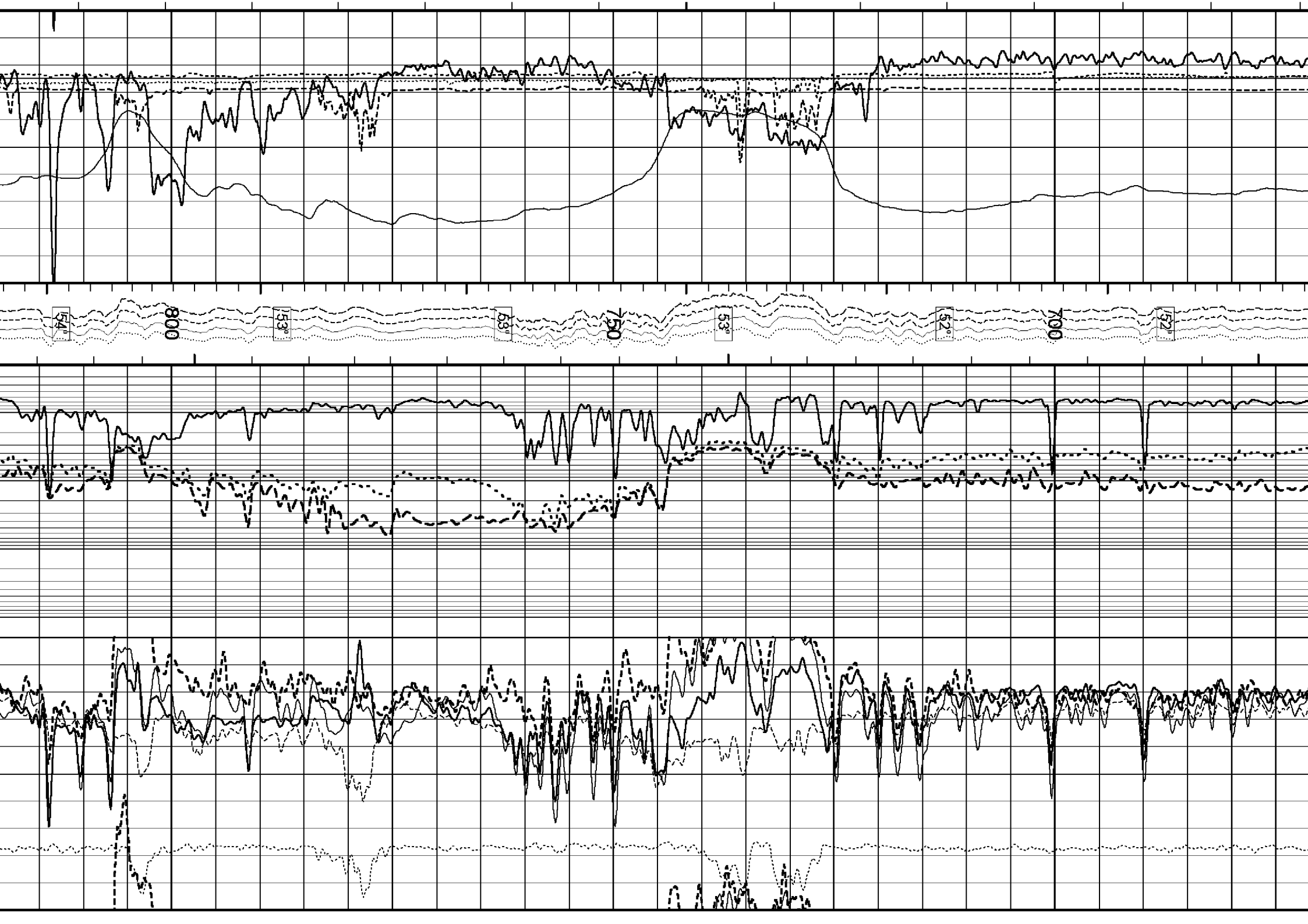
Density Correction
grams/cc
-0.25 0.25

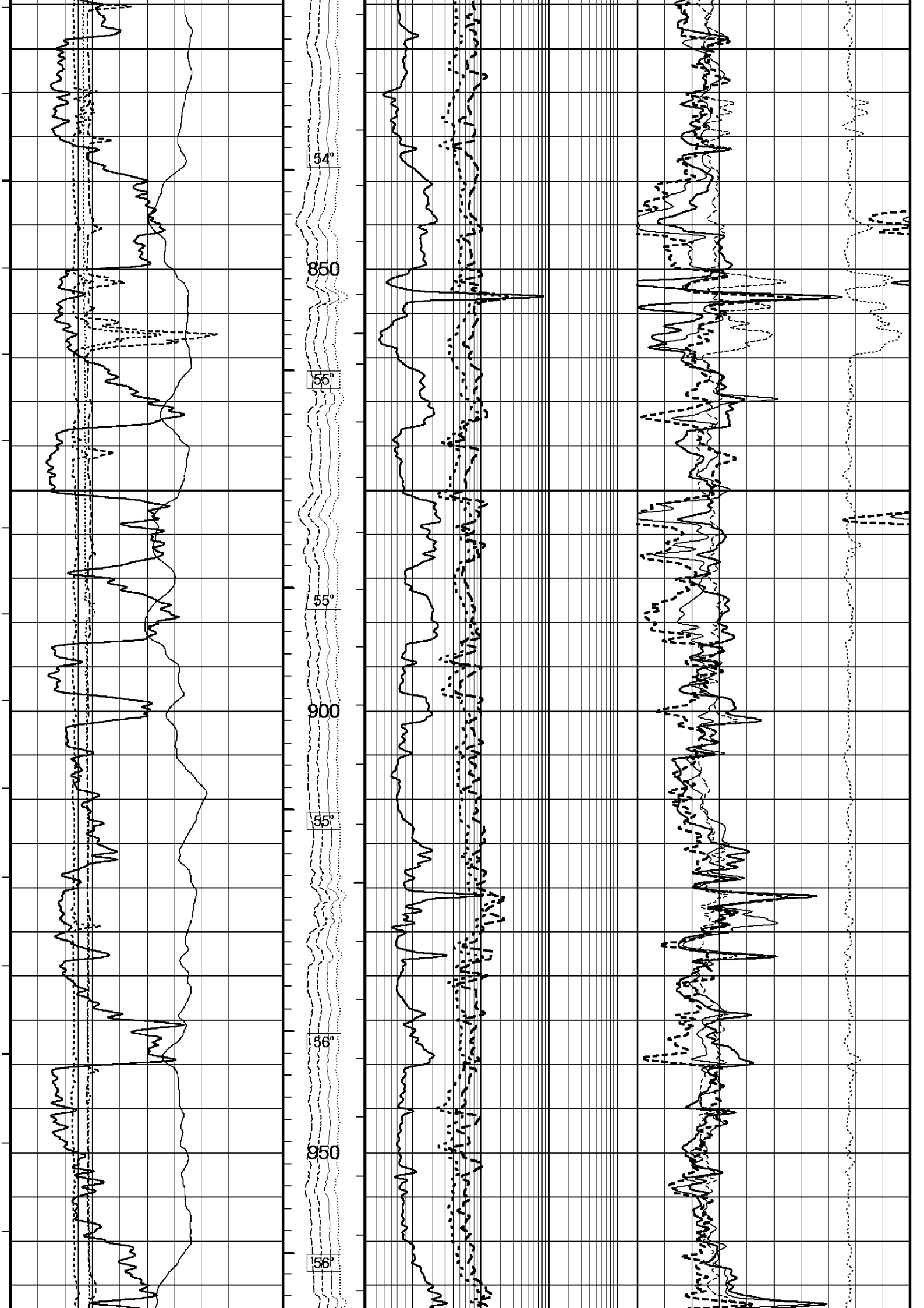

Borehole Corrected Gamma
100
150
200

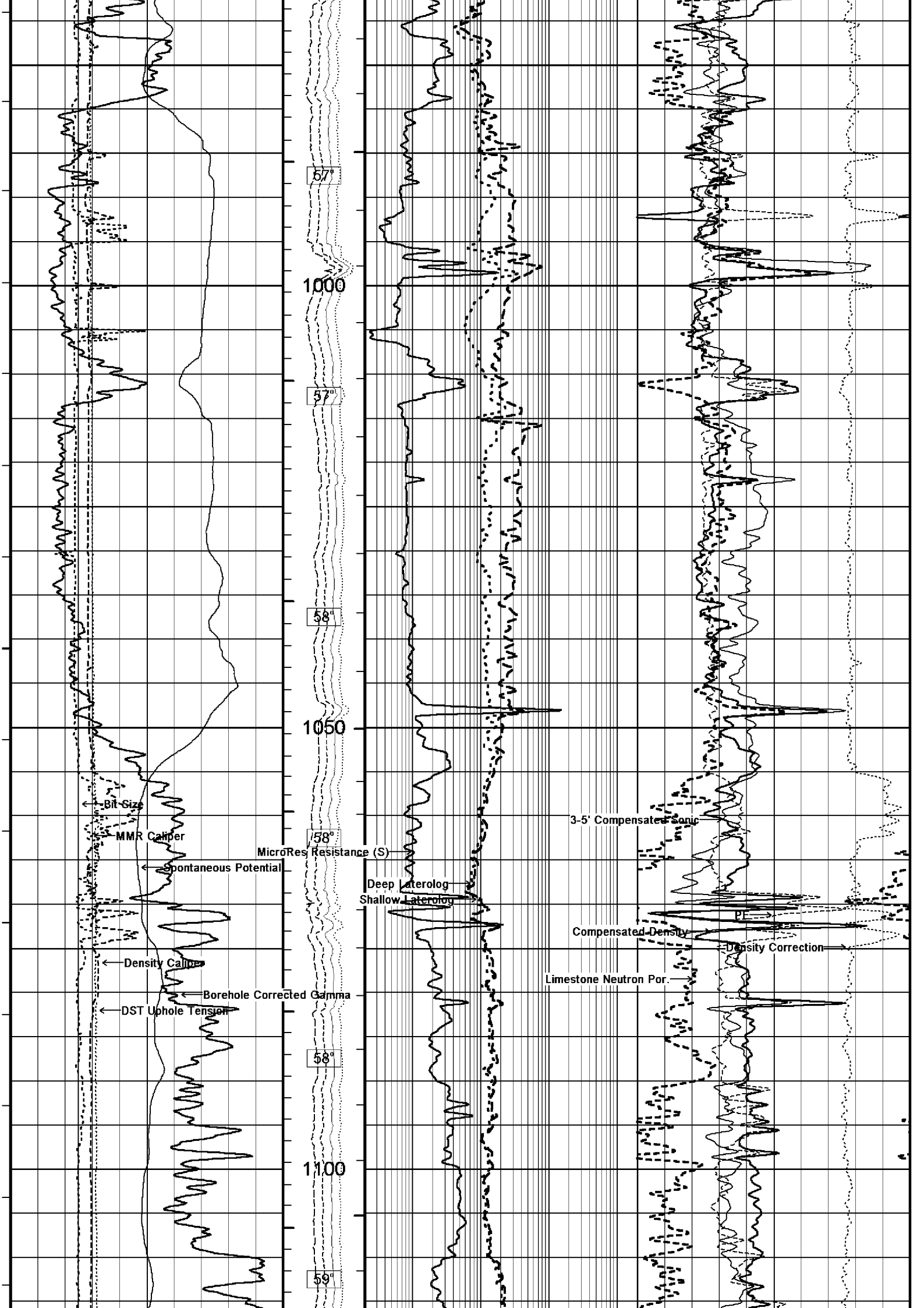

250
300
350

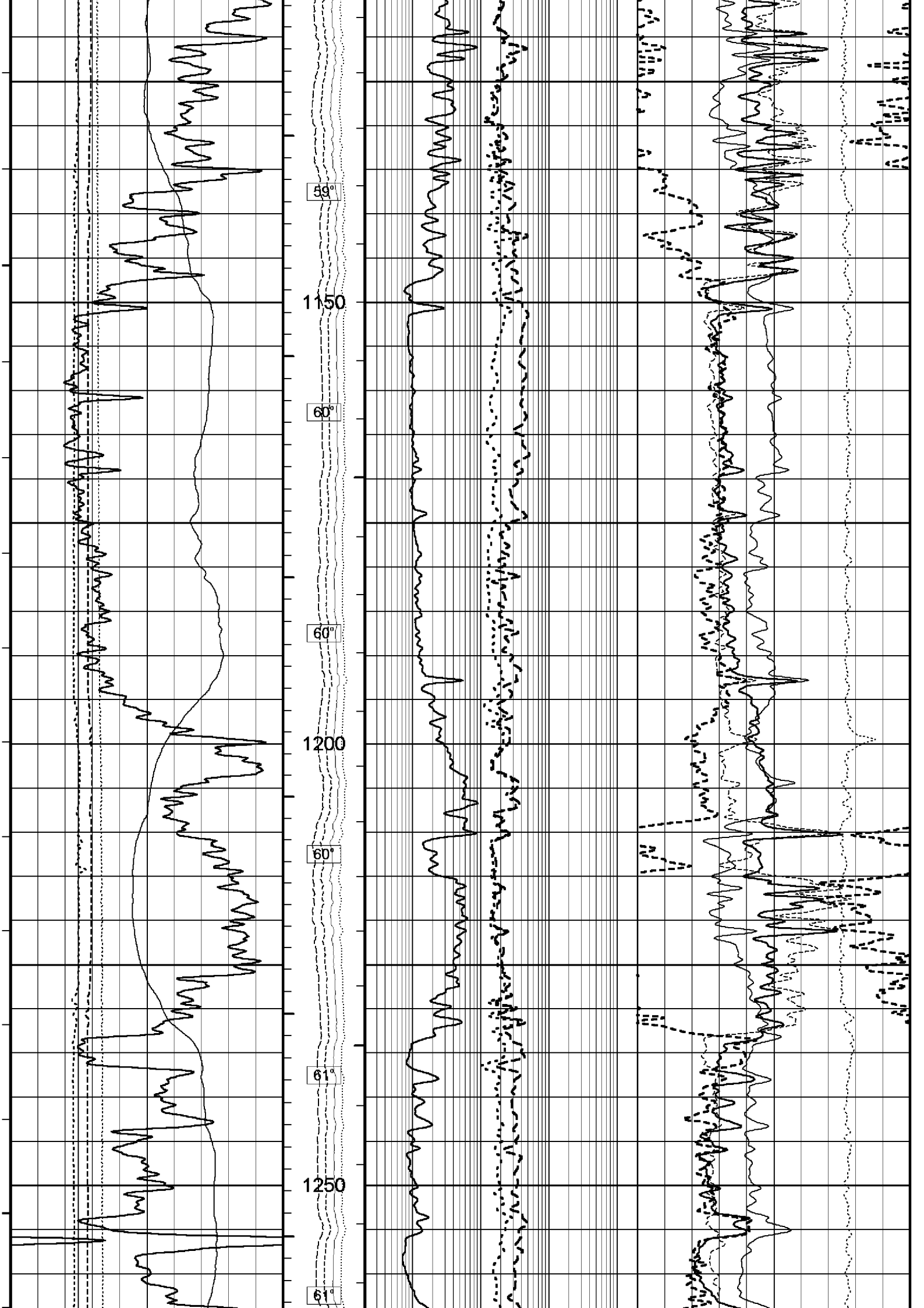

400
450
500

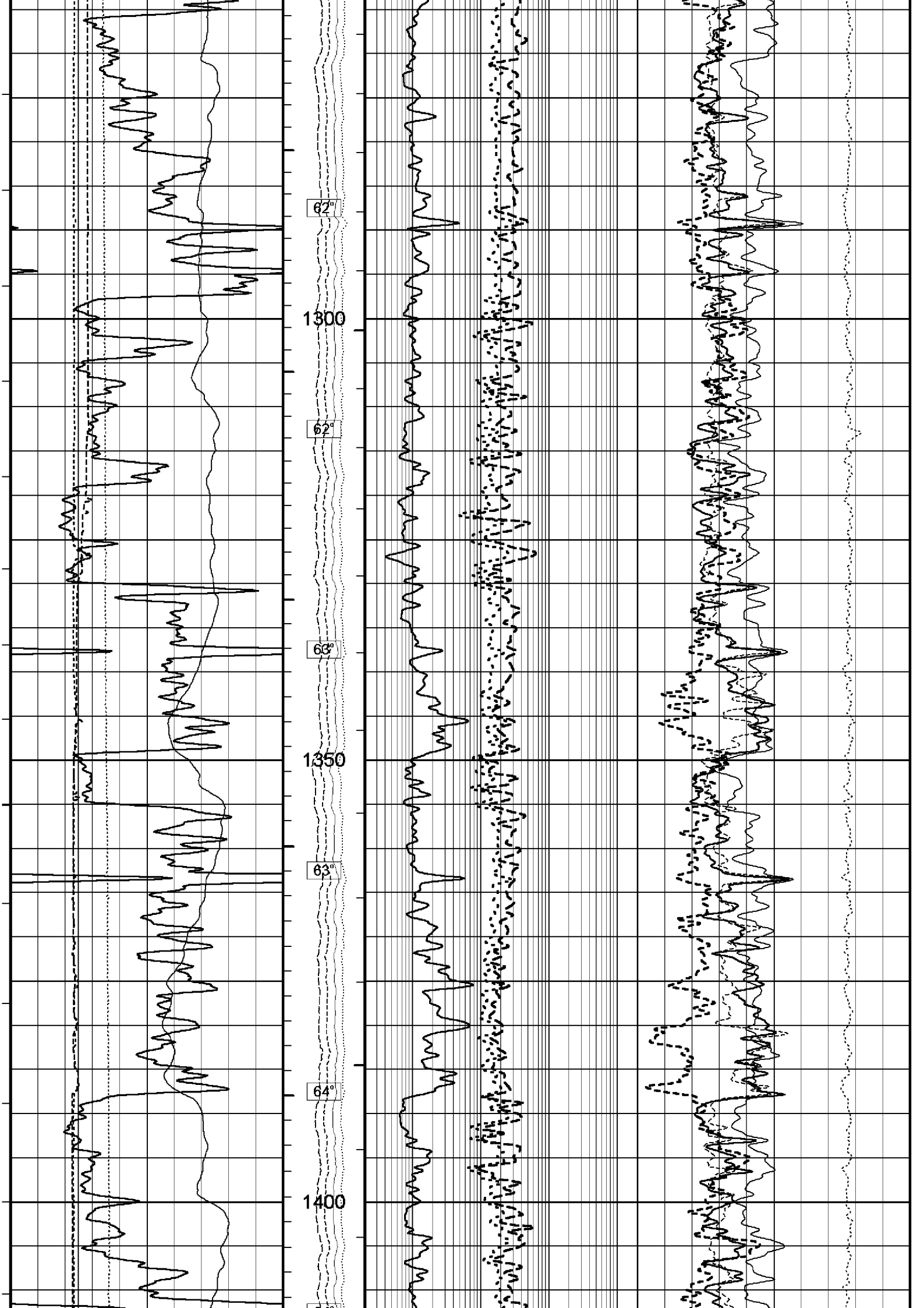

50°
Casing Shoe
550
50°
Bit Size
MMR Caliper
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
Borehole Corrected Gamma
Uphole Tension
50°
600
51°
51°
650
51°

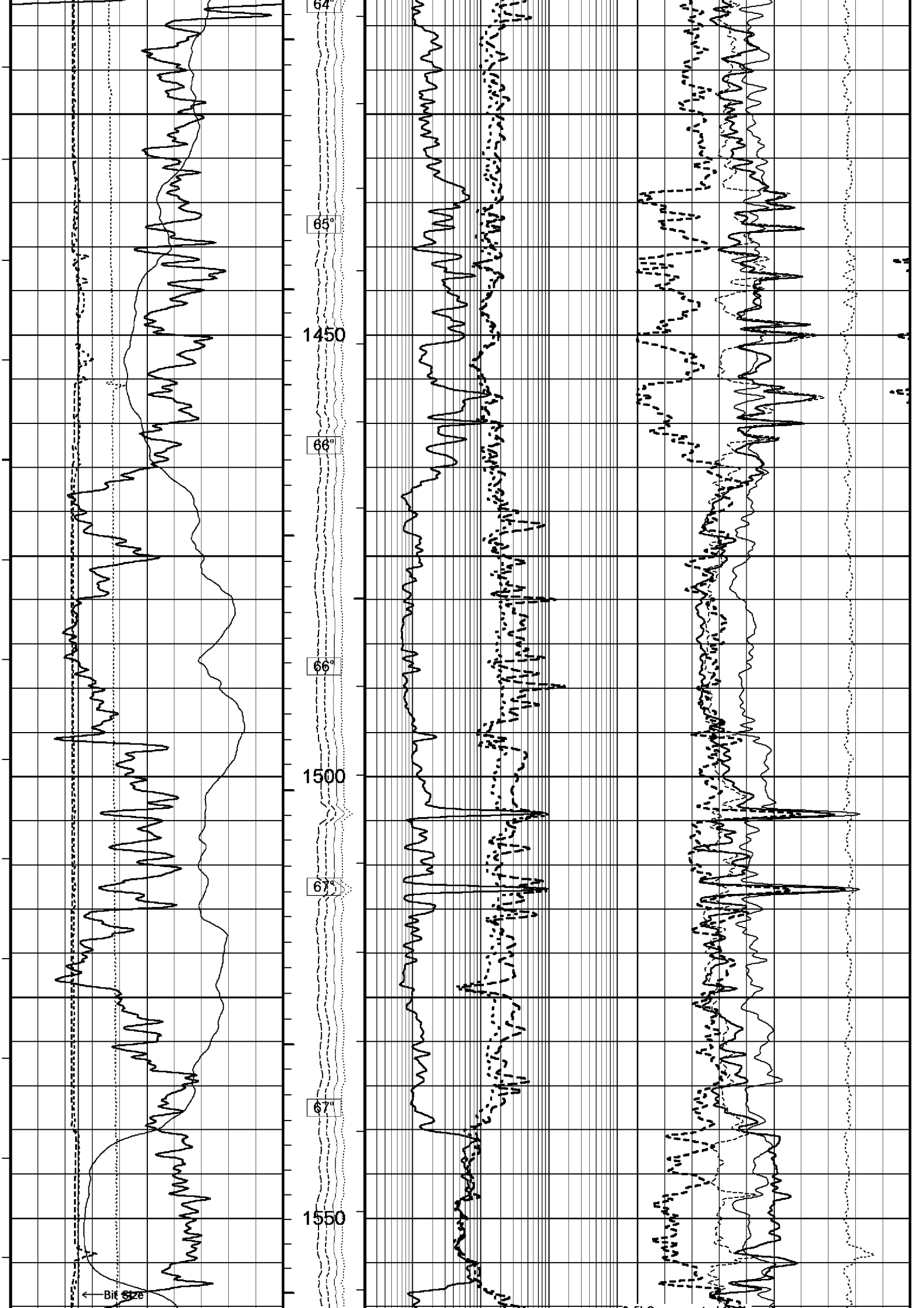

54"
800
53"
53"
750
53"
52"
700
52"

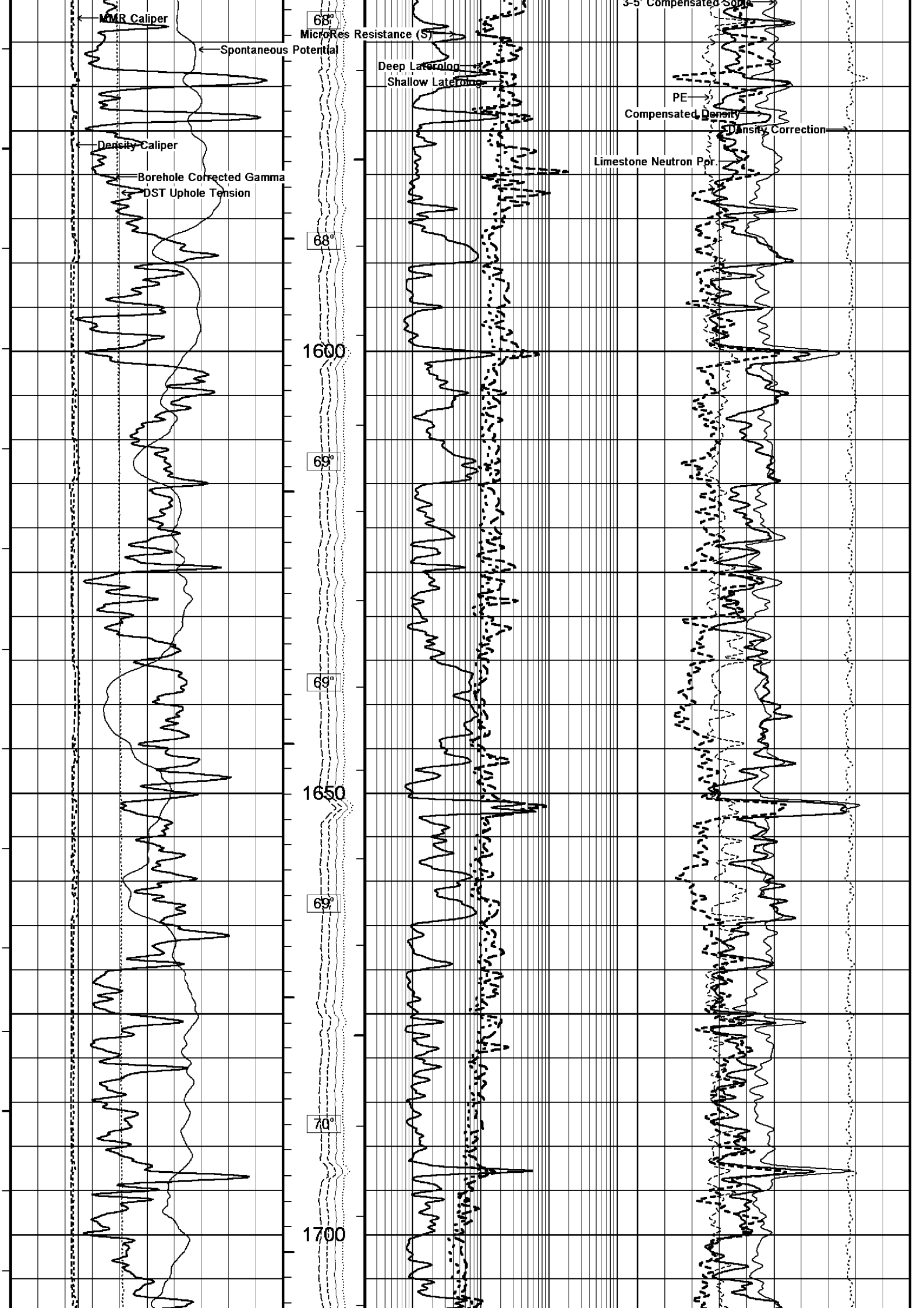

54°
850
55°
55°
900
55°
56°
950
56°

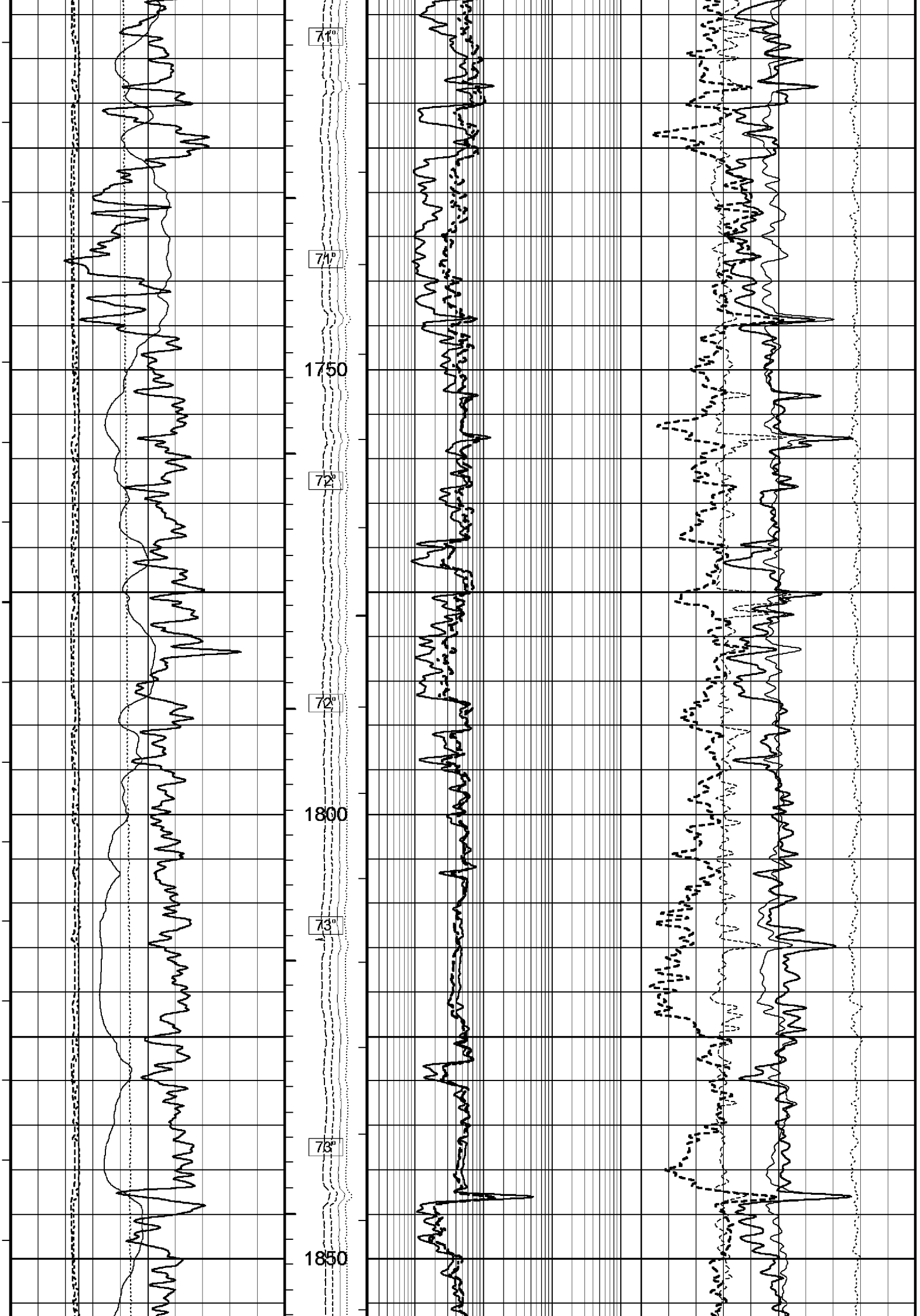

57"
1000
57"
58"
1050
58°
58°
1100
59"
Bit Size
MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

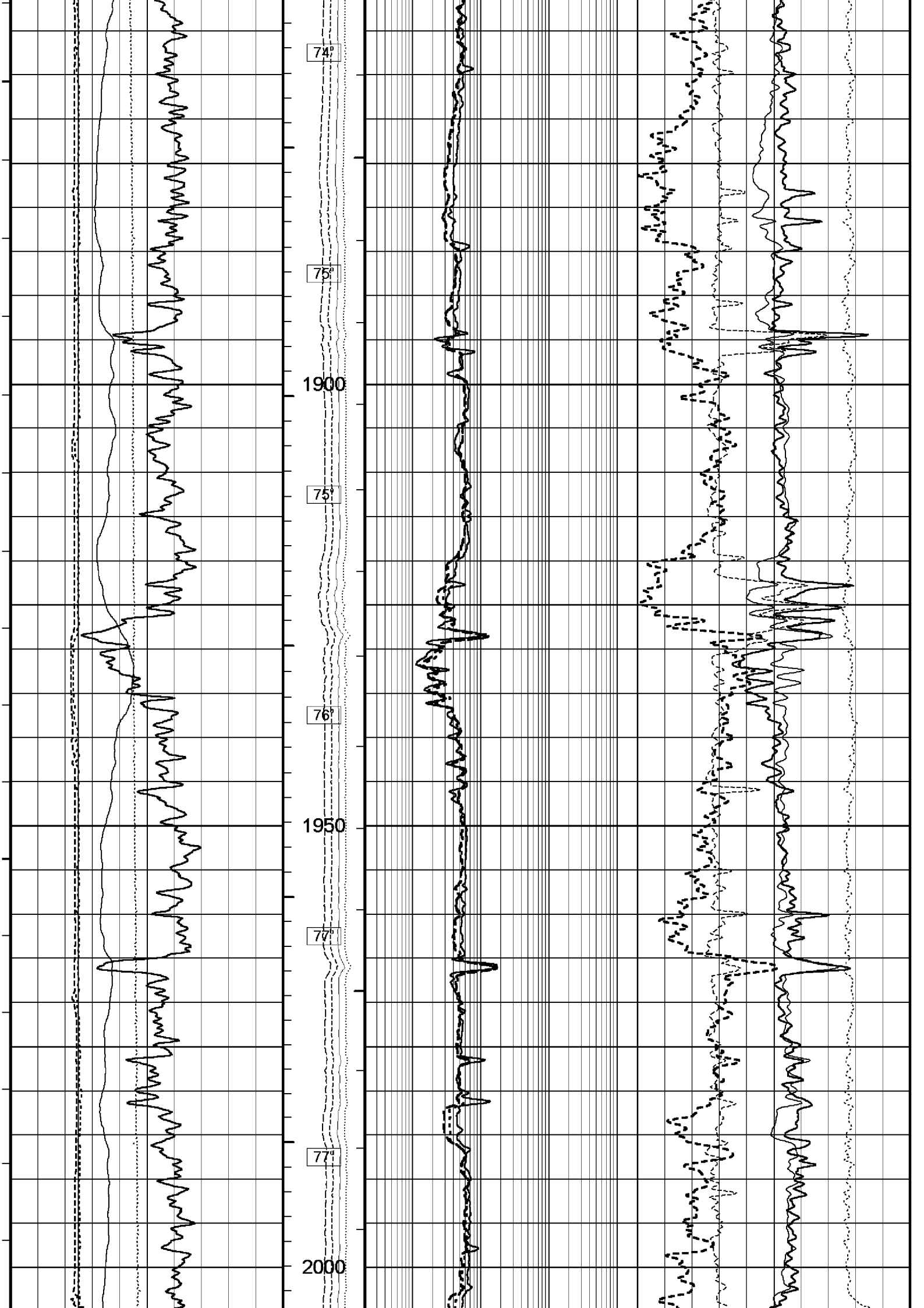

59°
1150
60°
60°
1200
60°
61°
1250
61°

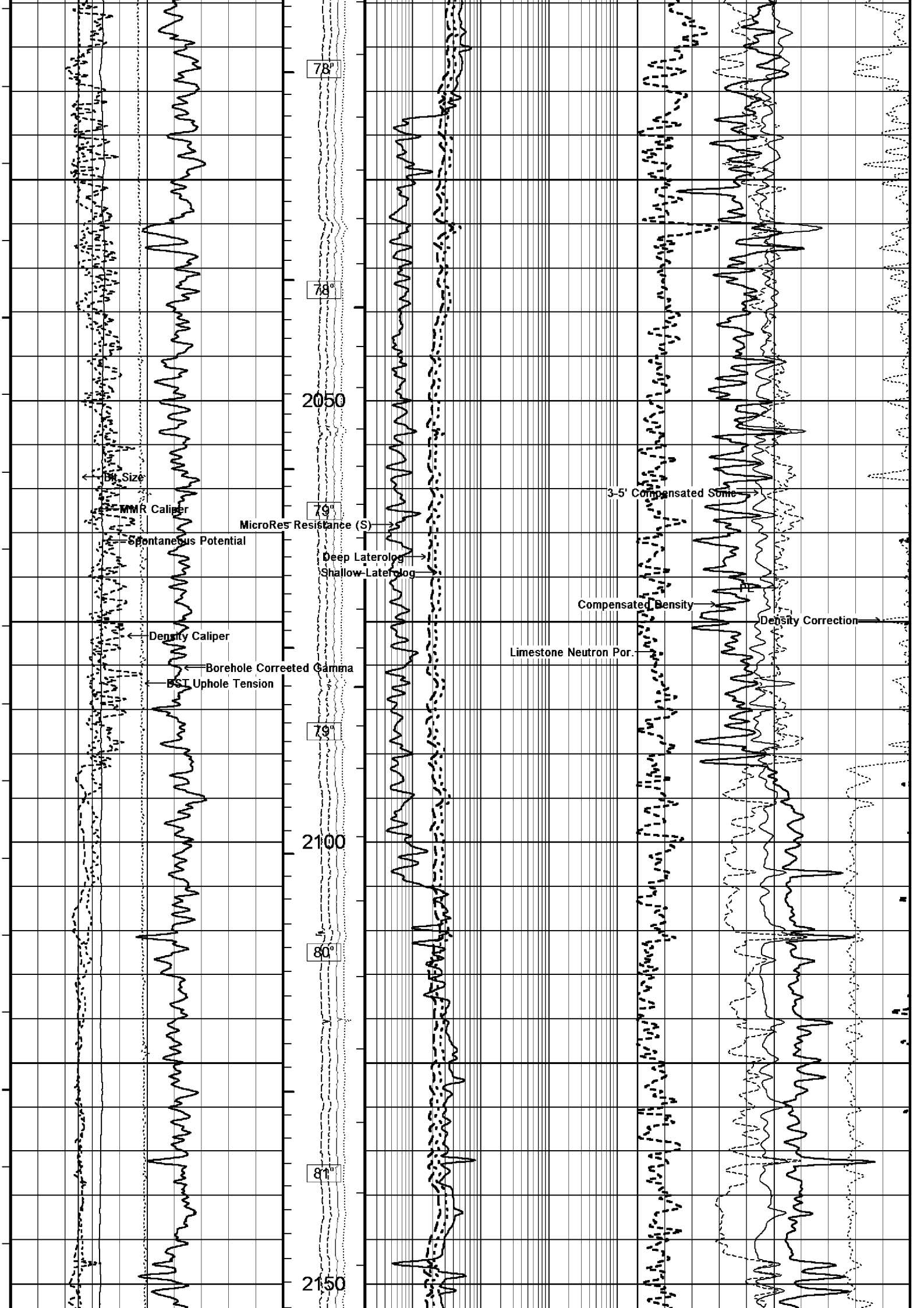

62°
1300
62°
63°
1350
63°
64°
1400

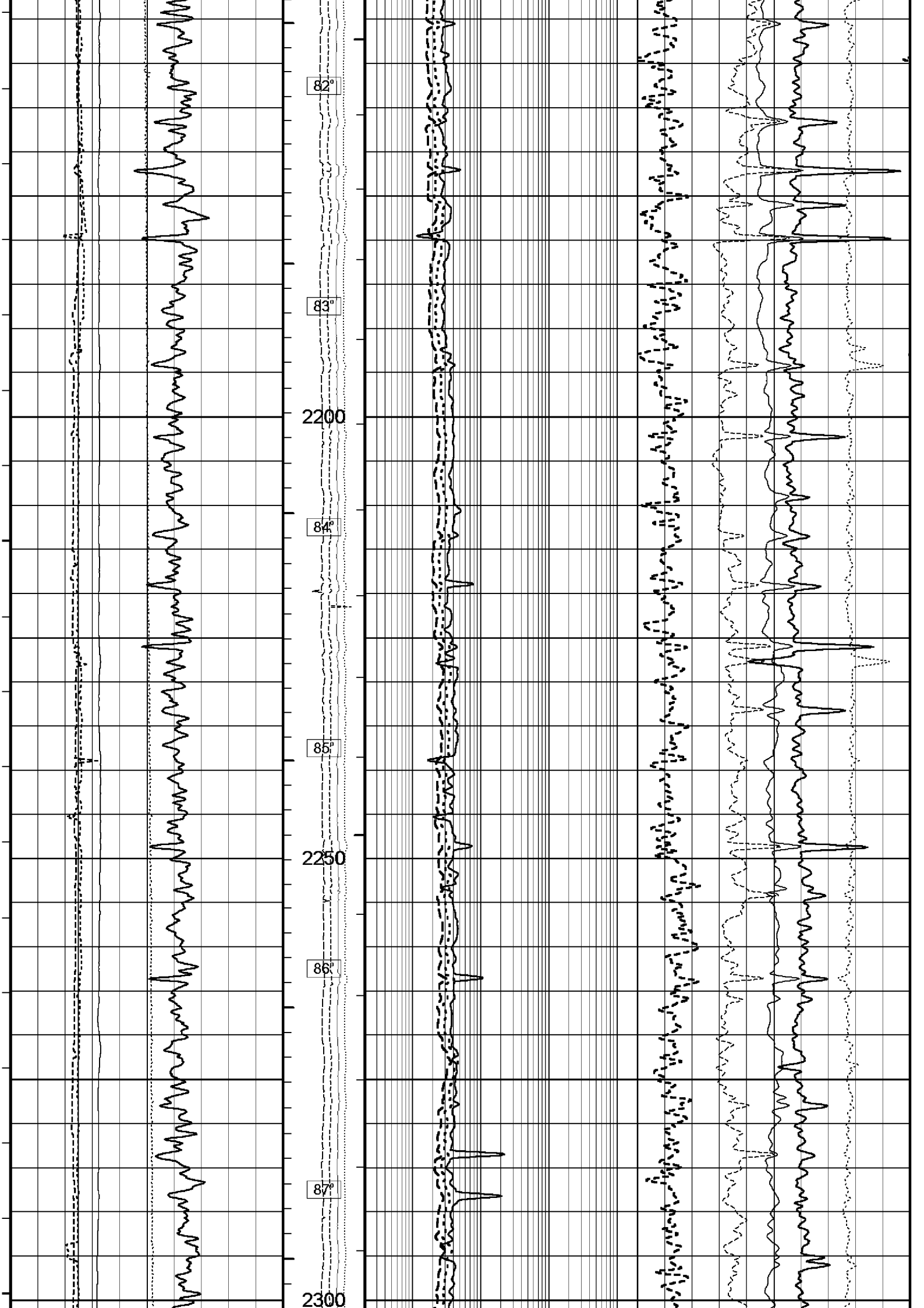

64°
65°
1450
66°
66°
1500
67°
67°
1550
Bit Size

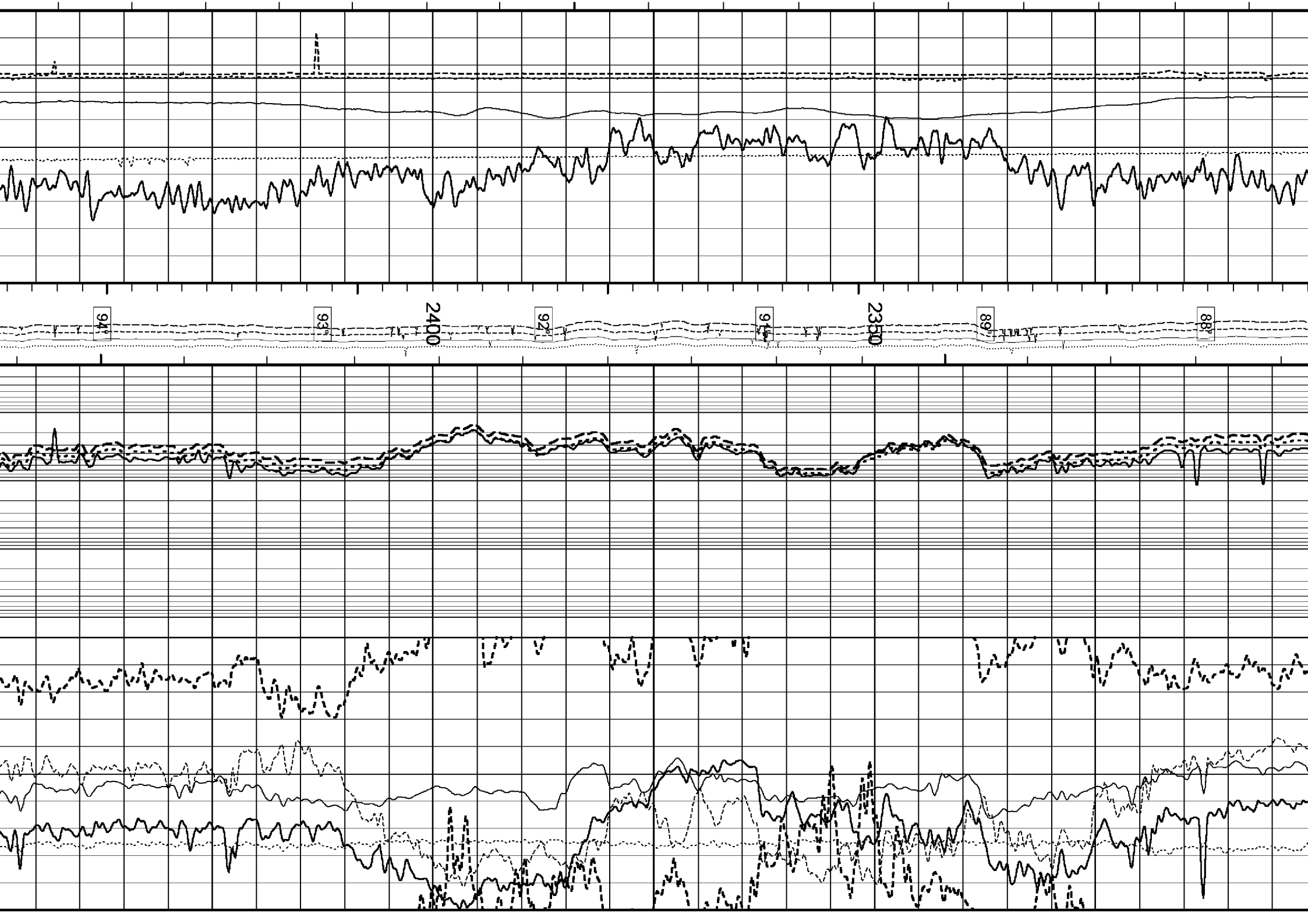

MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
68°
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
68°
1600
69°
69°
1650
69°
70°
1700
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

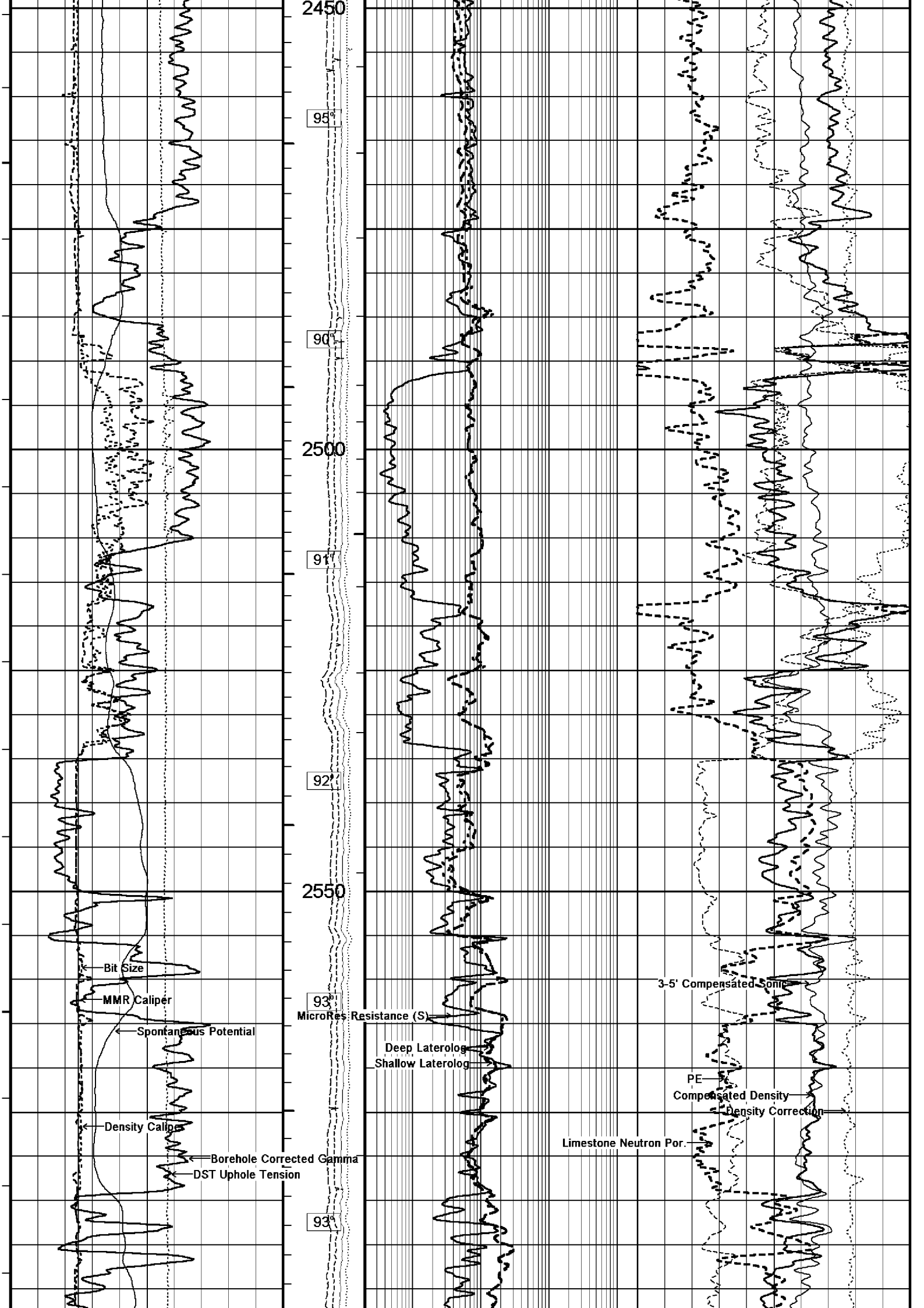

71°
71°
1750
72°
72°
1800
73°
73°
1850

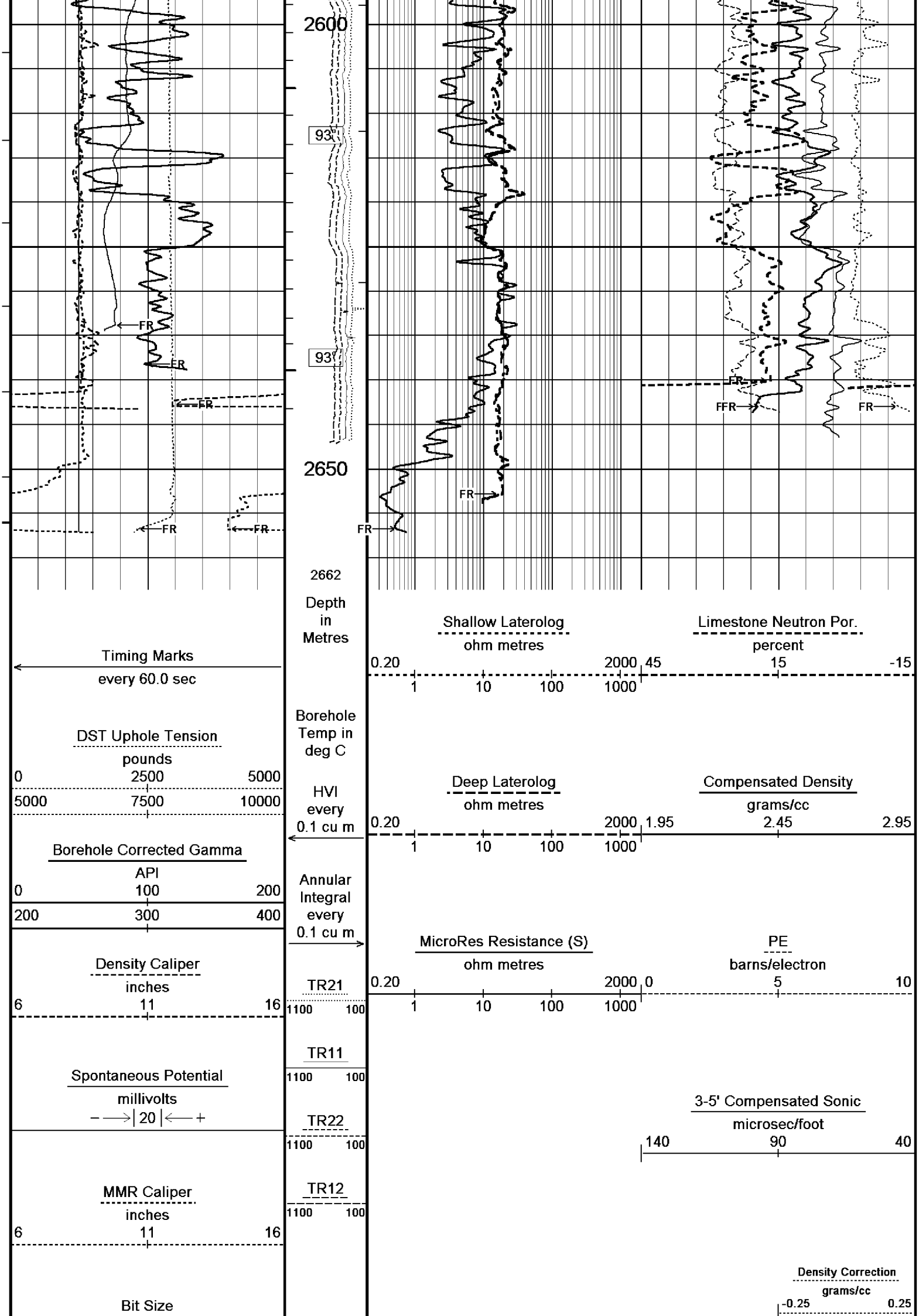

74°
75°
1900
75°
76°
1950
77°
77°
2000


78"
78°
2050
Bit Size
MMR Caliper
79°
MicroRes Resistance (S)
Spontaneous Potential
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
Borehole Correeted Gamma
BST Uphole Tension
79°
2100
80°
81°
2150


82°
83°
2200
84°
85°
2250
86°
87°
2300


94°
93°
2400
92°
91°
2350
89°
88°


2450
95°
90°
2500
91°
92°
2550
93°
93°
Bit Size
MMR Caliper
Spontaneous Potential
Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.


2600
2650
93
93
FR
FR
FR
FR
FR
FR
FR
FFR
FR
2662
Depth in Metres
Timing Marks
every 60.0 sec
DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000
Borehole Corrected Gamma
API
0 100 200
200 300 400
Density Caliper
inches
6 11 16
Spontaneous Potential
millivolts
20
MMR Caliper
inches
6 11 16
Bit Size
Borehole Temp in deg C
HVI every 0.1 cu m
Annular Integral every 0.1 cu m
TR21
1100 100
TR11
1100 100
TR22
1100 100
TR12
1100 100
Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000
Limestone Neutron Por.
percent
45 15 -15
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000
Compensated Density
grams/cc
1.95 2.45 2.95
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000
PE
barns/electron
0 5 10
3-5' Compensated Sonic
microsec/foot
140 90 40
Density Correction
grams/cc
-0.25 0.25

inches
6 11 16

Replay Scale 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Plotted on 06-OCT-2005 16:19
Recorded on 04-OCT-2005 00:45

MAIN LOG 1:500

REPEAT SECTION 1:500 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_4_002.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 06-OCT-2005 16:19
Recorded on 04-OCT-2005 00:11

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000

Borehole Corrected Gamma
API
0 100 200
200 300 400

Density Caliper
inches
6 11 16

Spontaneous Potential
millivolts
– → | 20 | ← +

MMR Caliper
inches
6 11 16

Bit Size
inches
6 11 16

Depth in Metres

Borehole Temp in deg C

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Limestone Neutron Por.
percent
45 15 -15

Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

Compensated Density
grams/cc
1.95 2.45 2.95

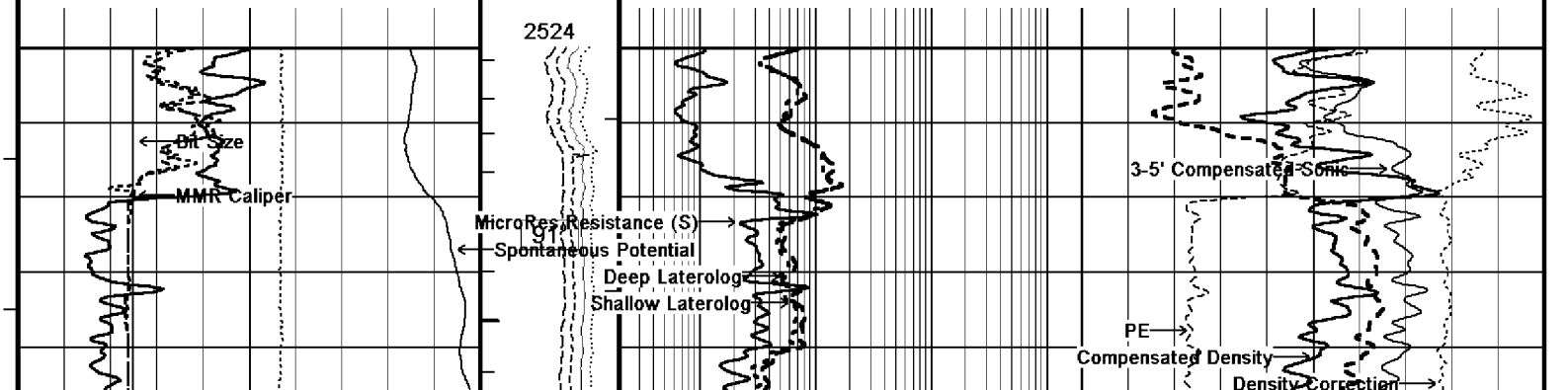
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

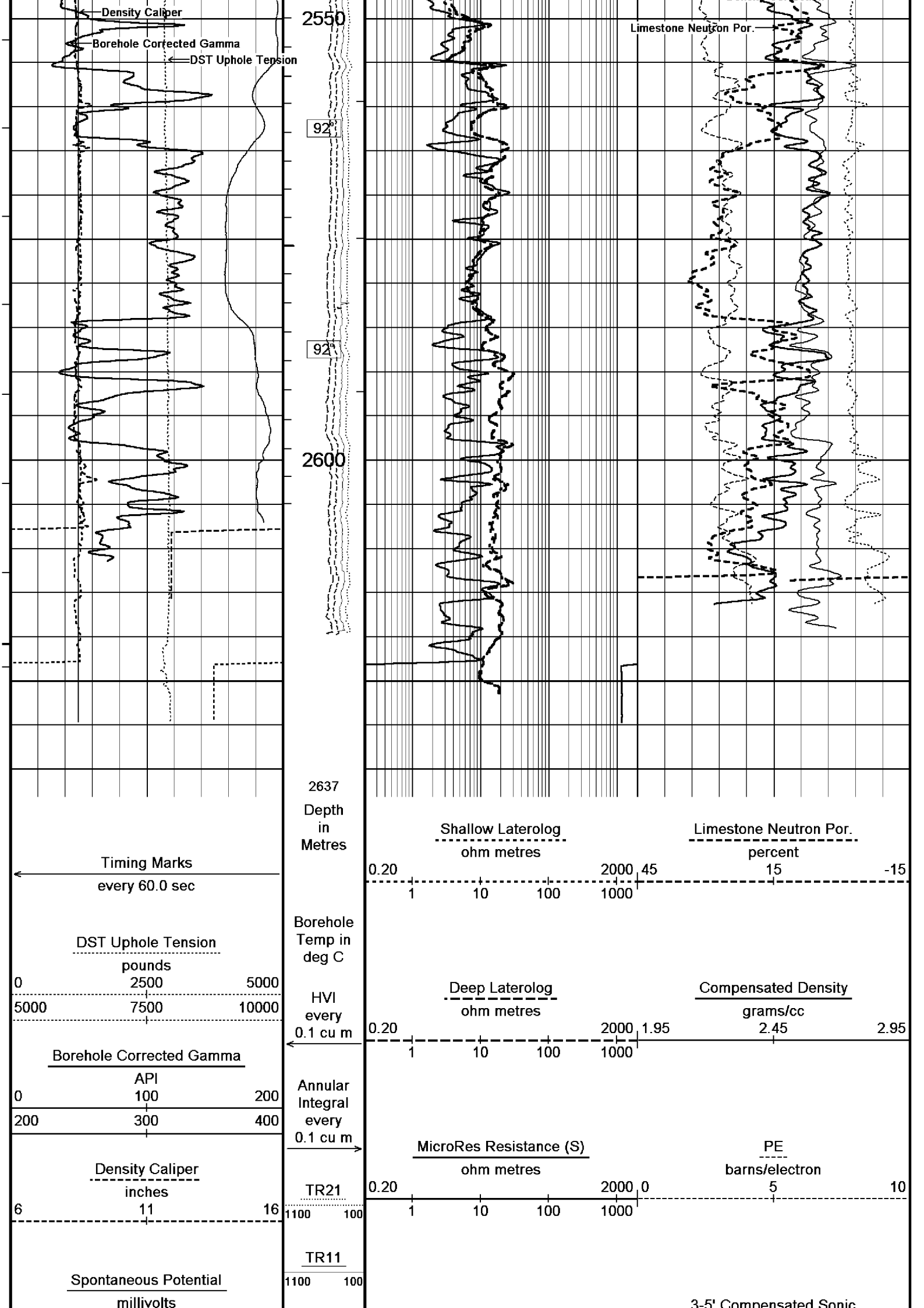
PE
barns/electron
0 5 10

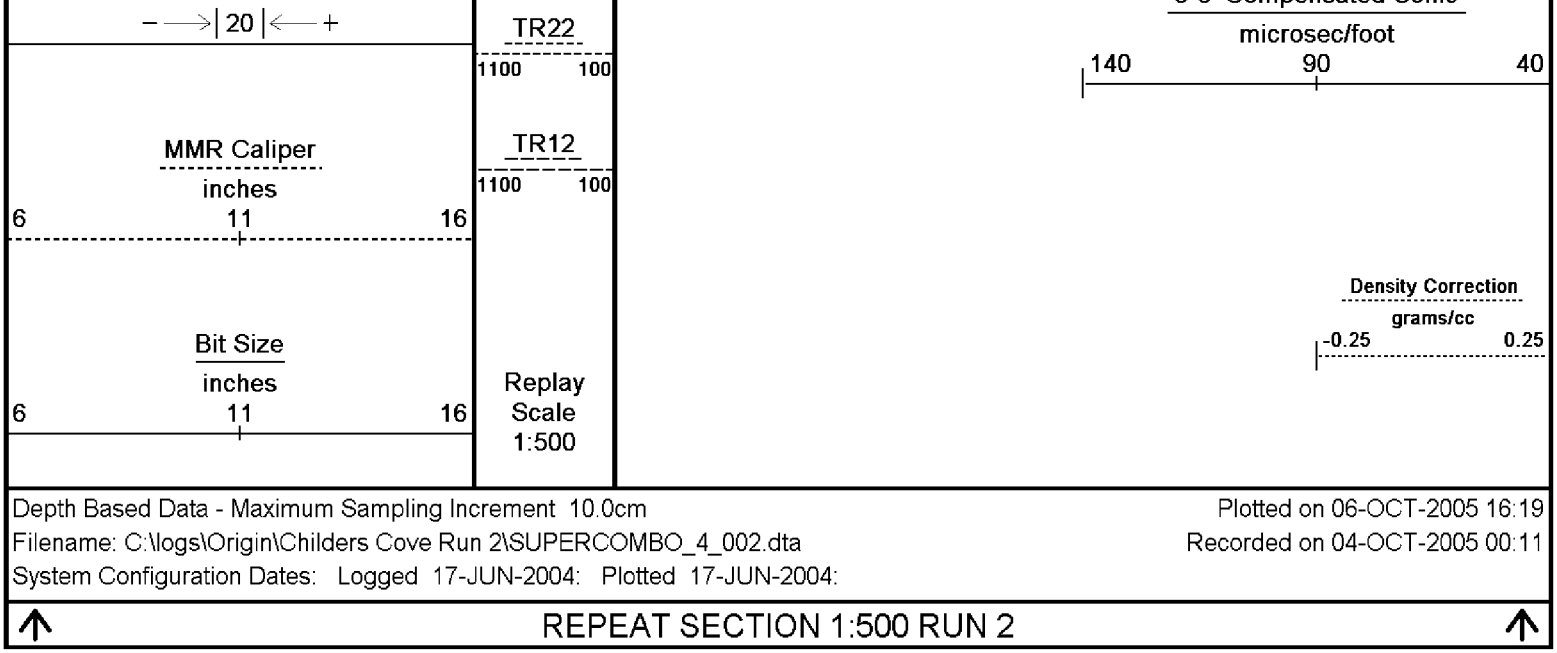
3-5' Compensated Sonic
microsec/foot
140 90 40

Density Correction
grams/cc
-0.25 0.25

Replay Scale 1:500




Density Caliper
Borehole Corrected Gamma
DST Uphole Tension
Limestone Neutron Por.
2550
92°
92°
2600
2637
Depth in Metres
Timing Marks
every 60.0 sec
Shallow Laterolog
ohm metres
0.20
2000
1
10
100
1000
Limestone Neutron Por.
percent
45
15
-15
DST Uphole Tension
pounds
0
2500
5000
5000
7500
10000
Borehole Temp in deg C
HVI every 0.1 cu m
Deep Laterolog
ohm metres
0.20
2000
1
10
100
1000
Compensated Density
grams/cc
1.95
2.45
2.95
Borehole Corrected Gamma
API
0
100
200
200
300
400
Annular Integral every 0.1 cu m
MicroRes Resistance (S)
ohm metres
0.20
2000
1
10
100
1000
PE
barns/electron
0
5
10
Density Caliper
inches
6
11
16
TR21
1100
100
TR11
1100
100
Spontaneous Potential
millivolts
3-5' Compensated Sonic



Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_4_002.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

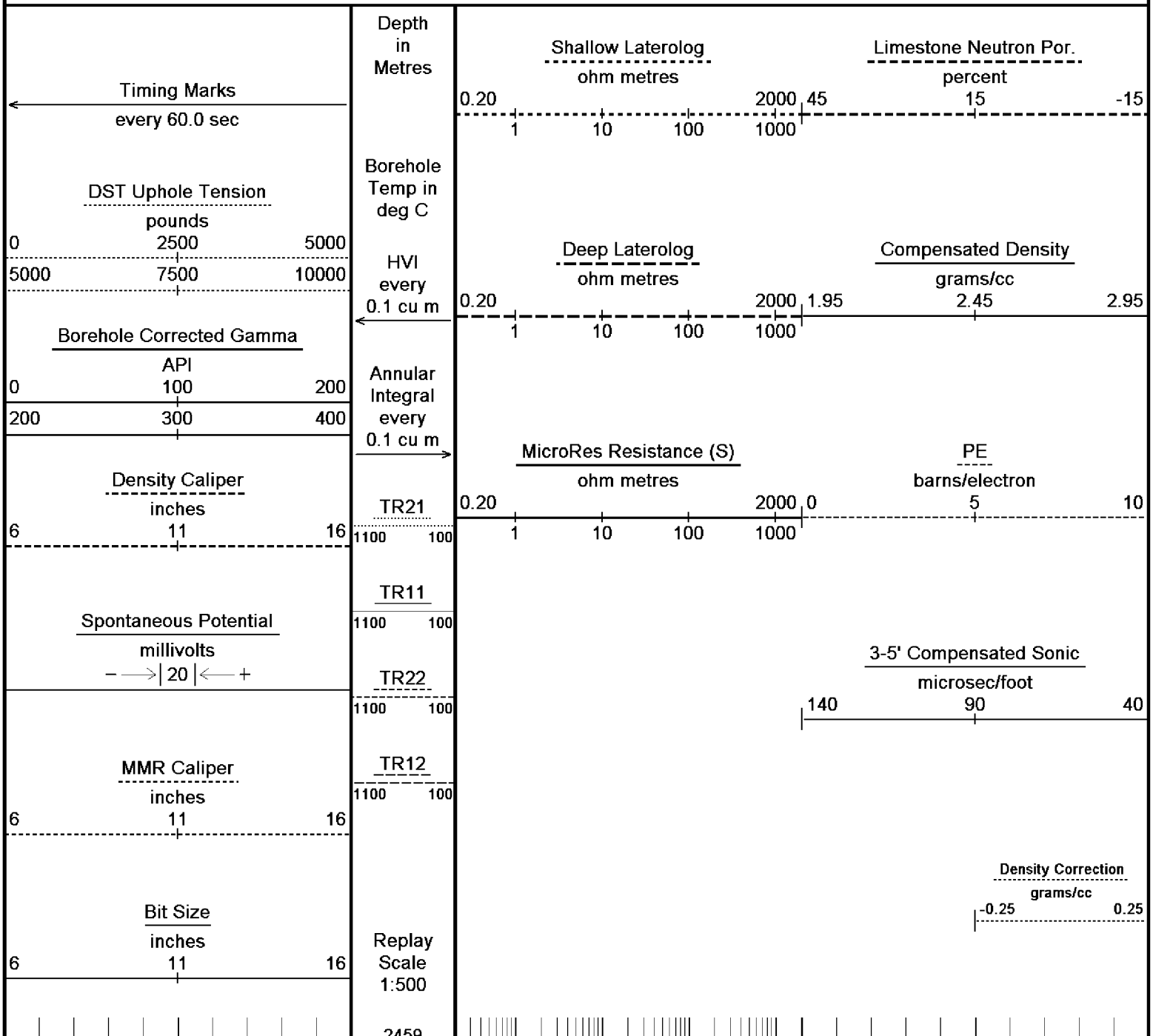
Plotted on 06-OCT-2005 16:19
Recorded on 04-OCT-2005 00:11

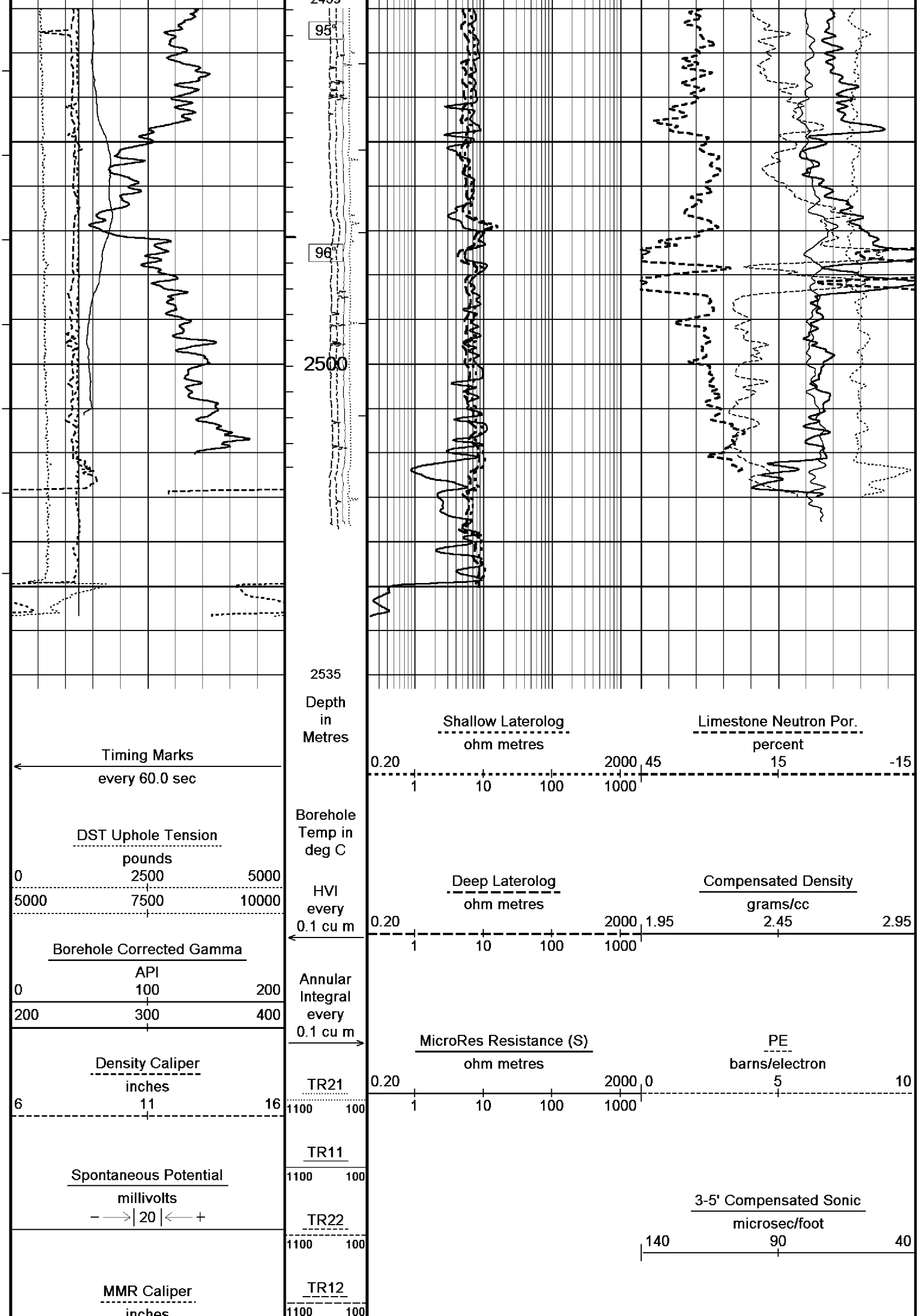
REPEAT SECTION 1:500 RUN 2

REPEAT SECTION 1:500 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 06-OCT-2005 16:19
Recorded on 01-OCT-2005 18:14




95
96
2500
2535
Depth in Metres
Timing Marks
every 60.0 sec
DST Uphole Tension
pounds
0 2500 5000
5000 7500 10000
Borehole Corrected Gamma
API
0 100 200
200 300 400
Density Caliper
inches
6 11 16
Spontaneous Potential
millivolts
20
MMR Caliper
inches
Borehole Temp in deg C
HVI every 0.1 cu m
Annular Integral every 0.1 cu m
TR21
1100 100
TR11
1100 100
TR22
1100 100
TR12
1100 100
Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000
Limestone Neutron Por.
percent
45 15 -15
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000
Compensated Density
grams/cc
1.95 2.45 2.95
MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000
PE
barns/electron
0 5 10
3-5' Compensated Sonic
microsec/foot
140 90 40

6 11 16

Bit Size
inches
6 11 16

Replay
Scale
1:500

Density Correction
grams/cc
-0.25 0.25

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 06-OCT-2005 16:19
Recorded on 01-OCT-2005 18:14

REPEAT SECTION 1:500 RUN 1

DOWNHOLE EQUIPMENT

C:\logs\Origin\Childers Cove\SUPERCOMBO2.dta

Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

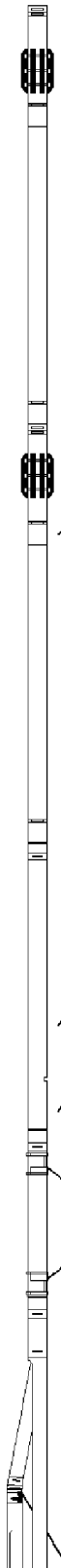
18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

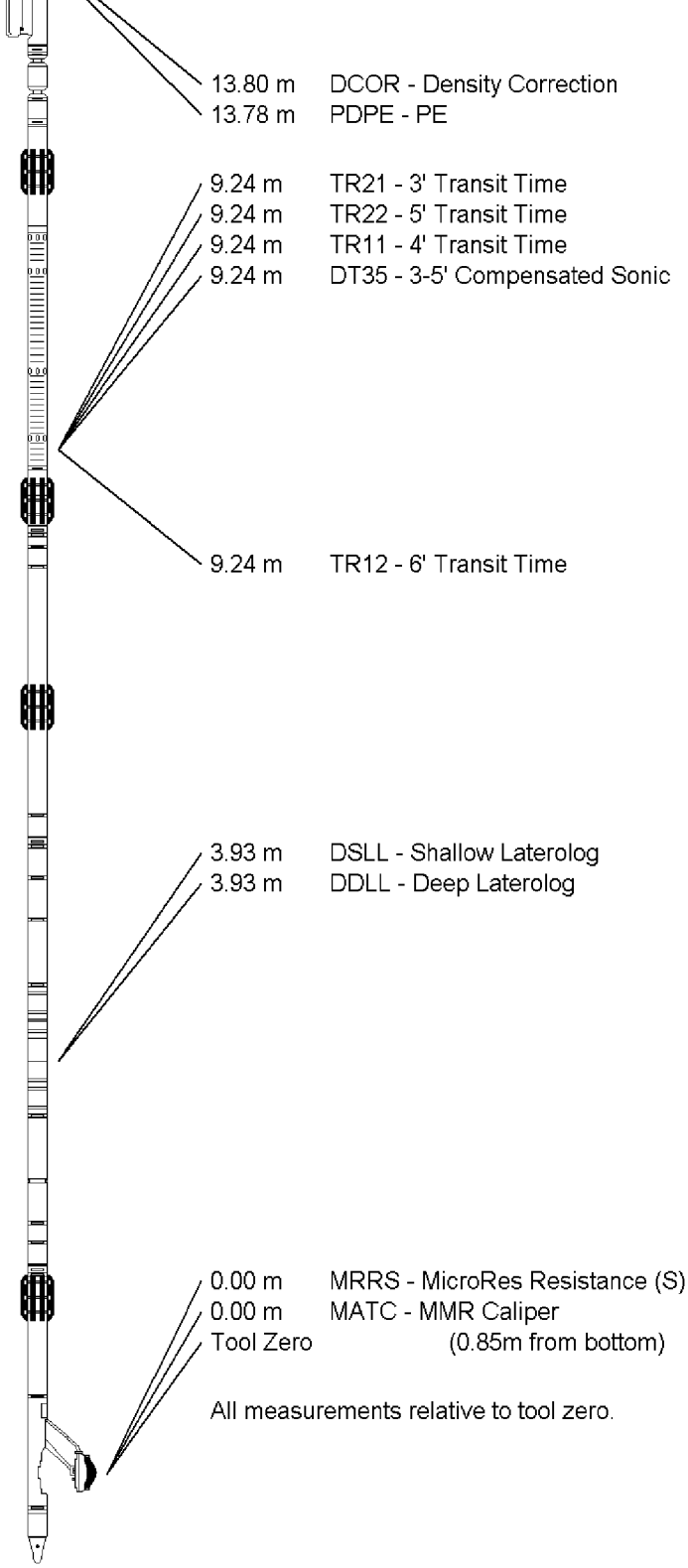
Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.

Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

14.01 m AVOL - Annular Volume
14.01 m HVOL - Hole Volume
14.01 m CLDC - Density Caliper
13.80 m DEN - Compensated Density





Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

C:\logs\Origin\Childers Cove Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000

General Parameters

Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Sonic Porosity
Resistivity used	Deep Laterolog
RWA Constant A	0.610
RWA Constant M	2.150

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13
Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

	918.0	1089.7

Field Check

Field Check

919.8	1086.8

PE Calibration

Base Calibration

	WS	Measured WH	Ratio	Calibrated Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2

Field Check

173.6	795.1

Density Constants MPD 066

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	

Down Hole Fixed Gate Parameters		
Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts
Full Waveform Parameters		
Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2
	0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

COUNTRY/STATE		AUSTRALIA			
Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC

DENSITY - NEUTRON

1:500

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:500

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FINAL PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80	metres	2528.15	metres
Last Reading	2400.00	metres	0.00	metres
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Plotted on 03-NOV-2005 15:40
Recorded on 04-OCT-2005 00:45

Depth in Metres

Timing Marks every 60.0 sec

Borehole Temp in deg C

TR21 1100 100

TR11 1100 100

TR22 1100 100

TR12 1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:500

Limestone Neutron Por. percent 45 -15

PE barns/electron 0 10

Shallow Laterolog ohm metres 0.20 2000 (1 10 100 1000)

Deep Laterolog ohm metres 0.20 2000 (1 10 100 1000)

Density Correction grams/cc -1.50 0.50

3-5' Compensated Sonic microsec/foot 140 40

Compensated Density grams/cc 1.95 2.95

MicroRes Resistance (S) ohm metres 0.20 2000 (1 10 100 1000)

DST Uphole Tension pounds 0 5000 / 5000 10000

Density Caliper inches 6 16

Spontaneous Potential millivolts 40

MMR Caliper inches 6 16

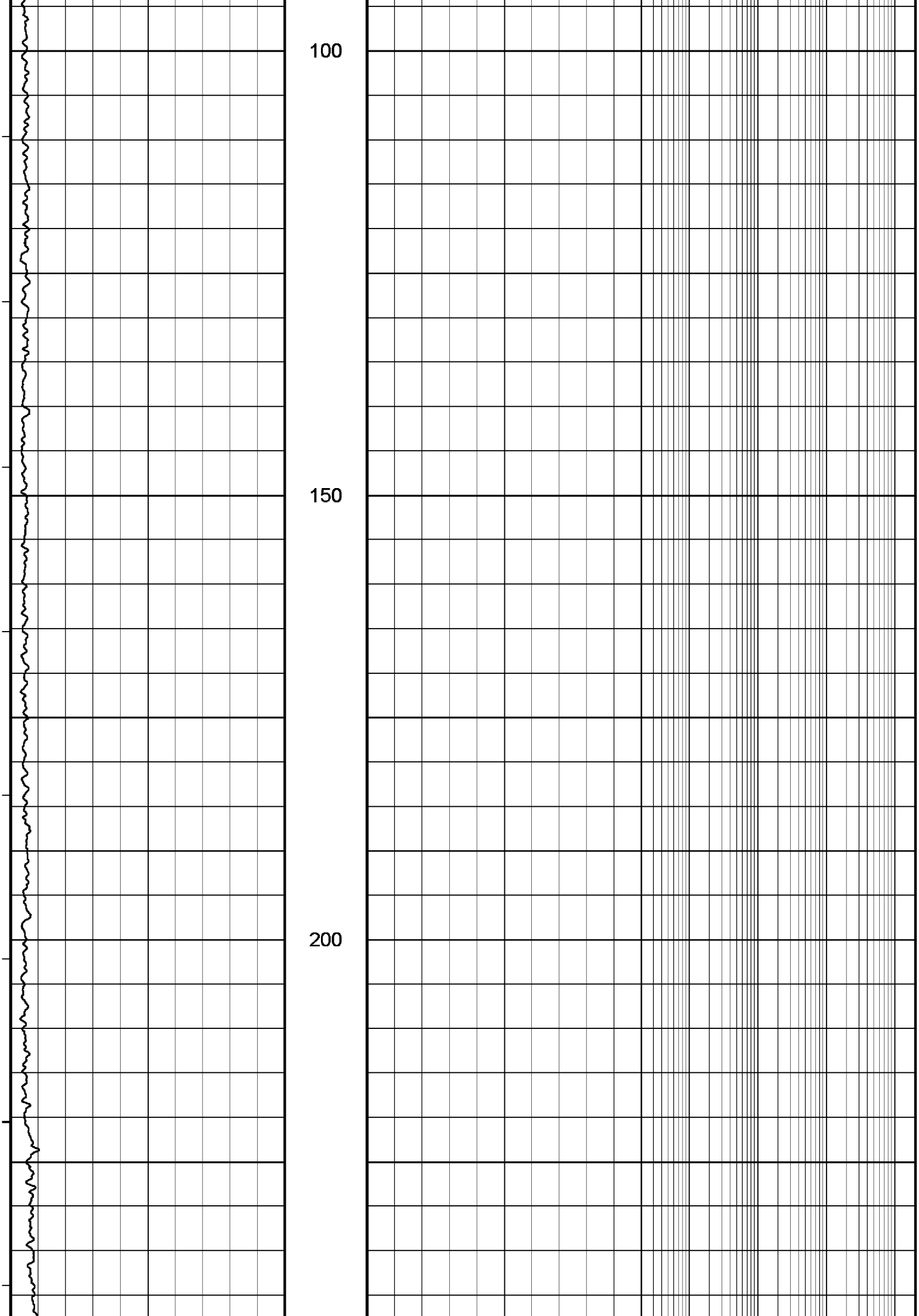
orehole Corrected Gamm API 0 200 / 200 400

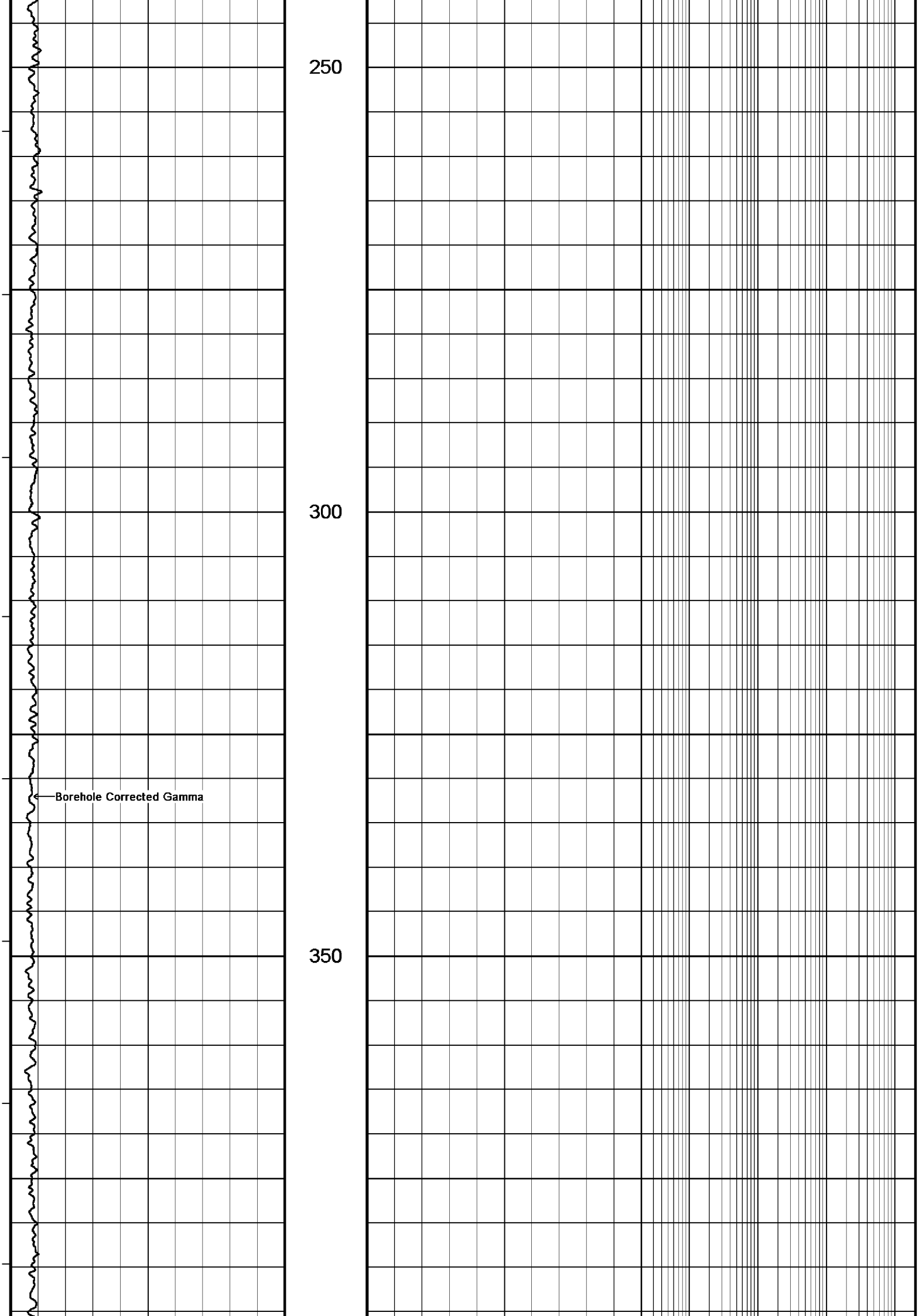
Bit Size inches 6 16

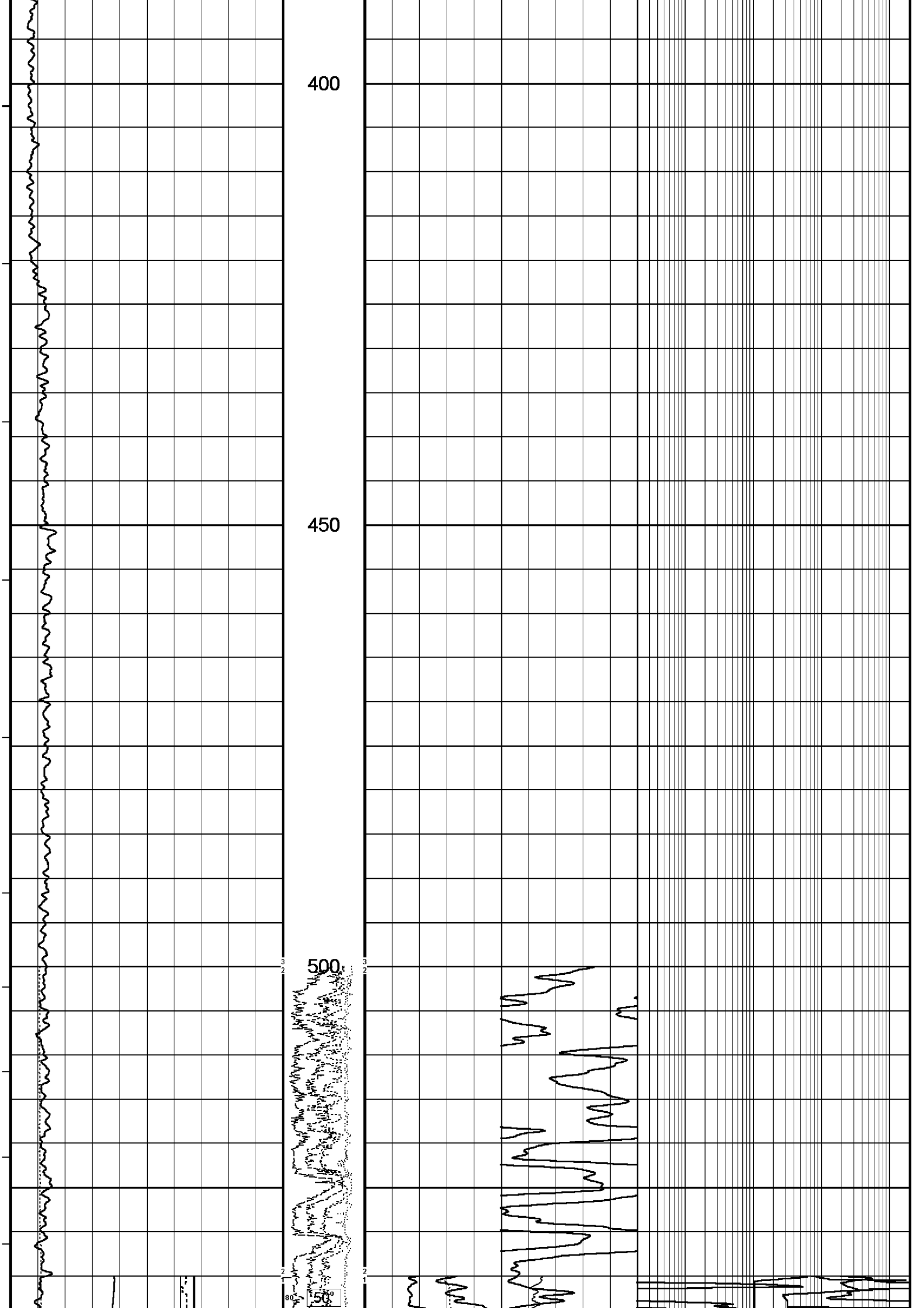
32

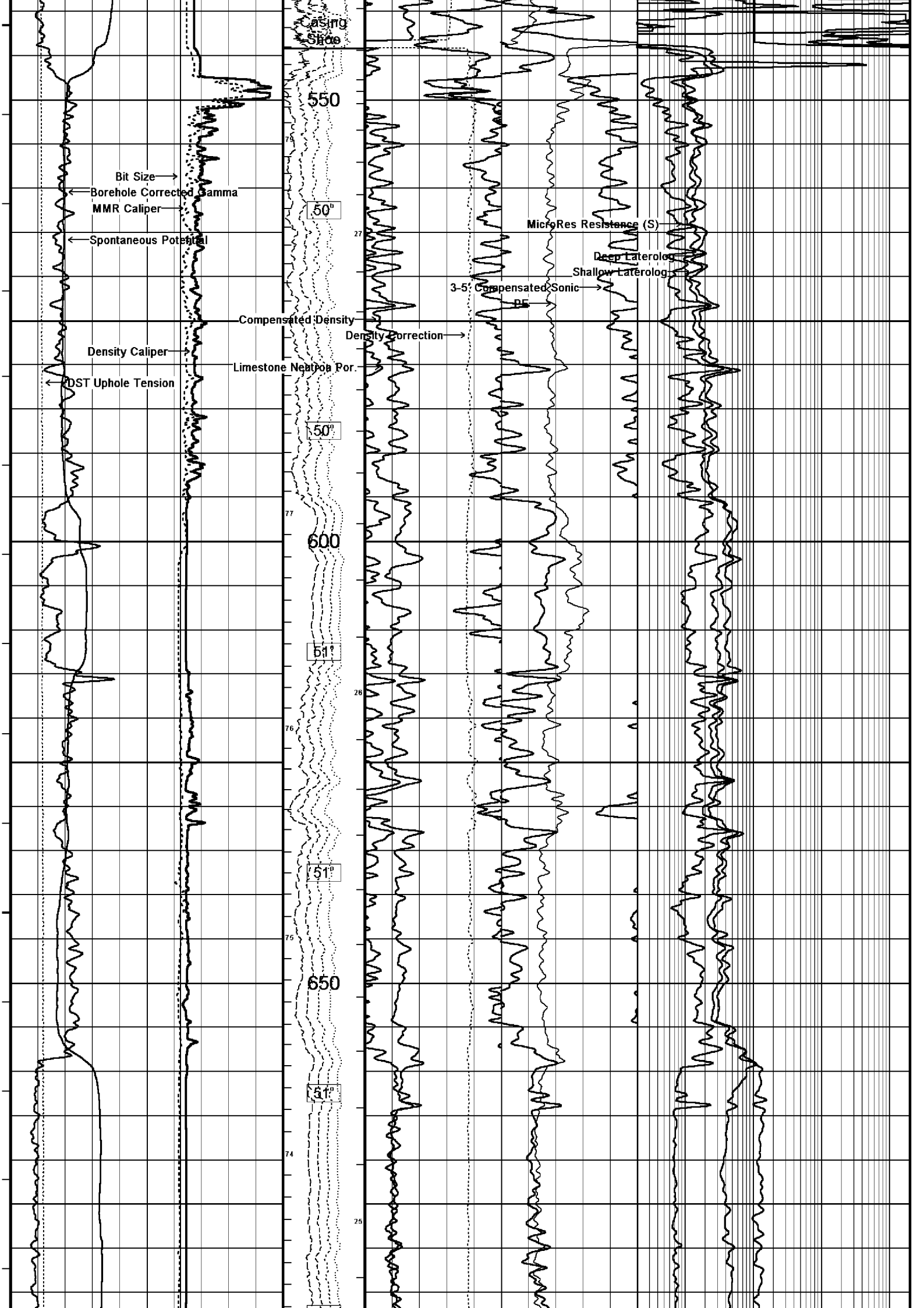
50

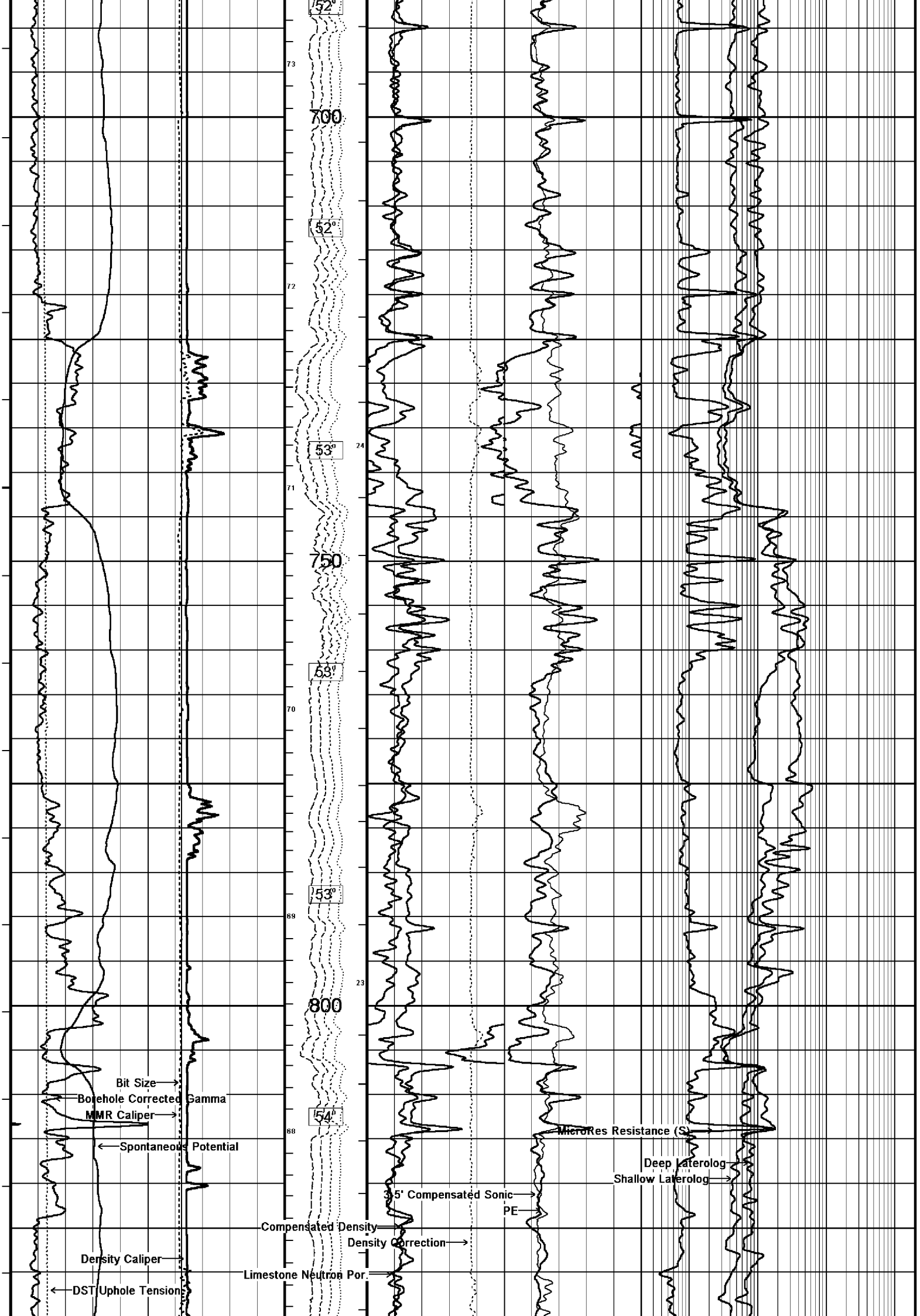
Borehole Corrected Gamma

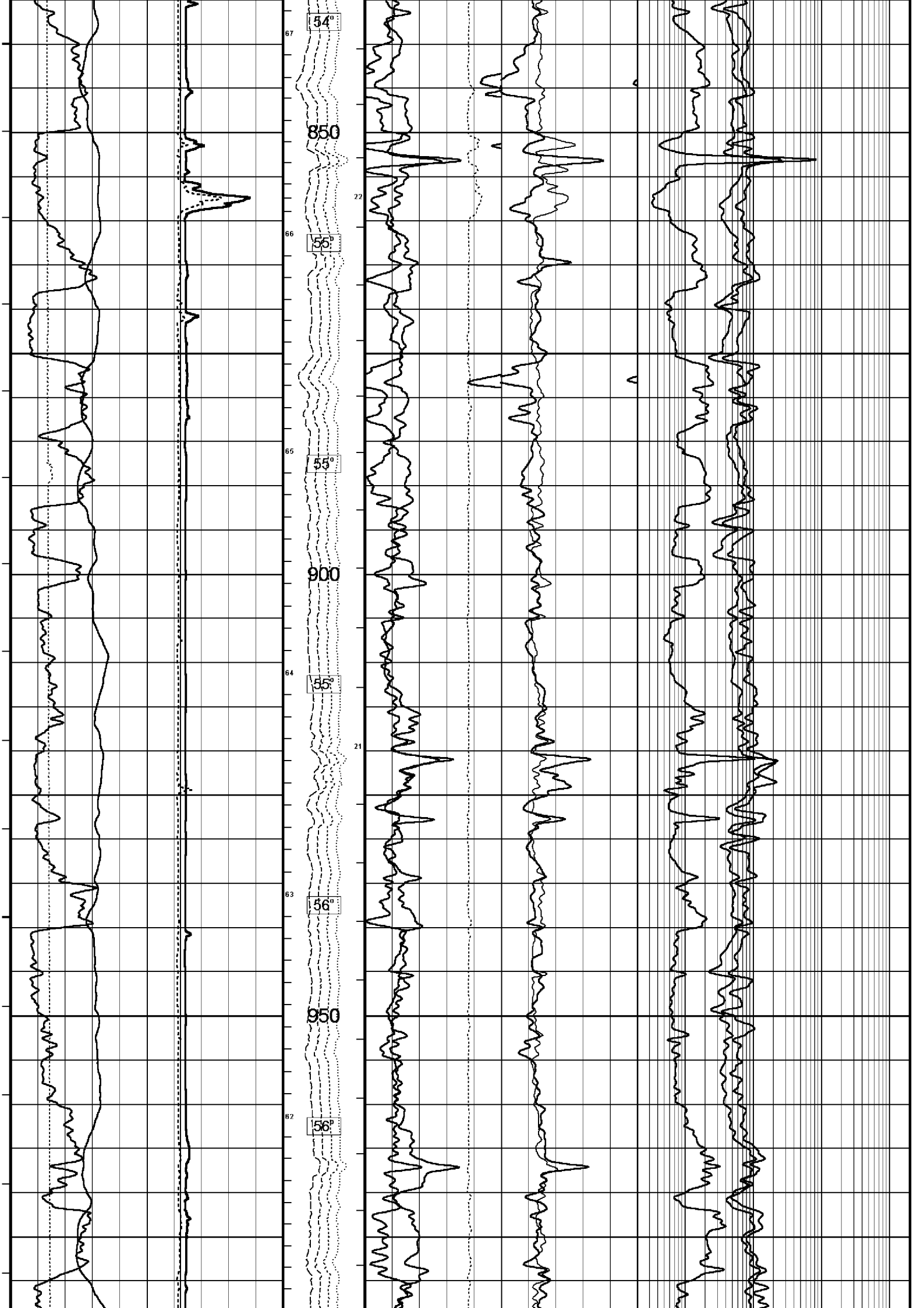

100
150
200

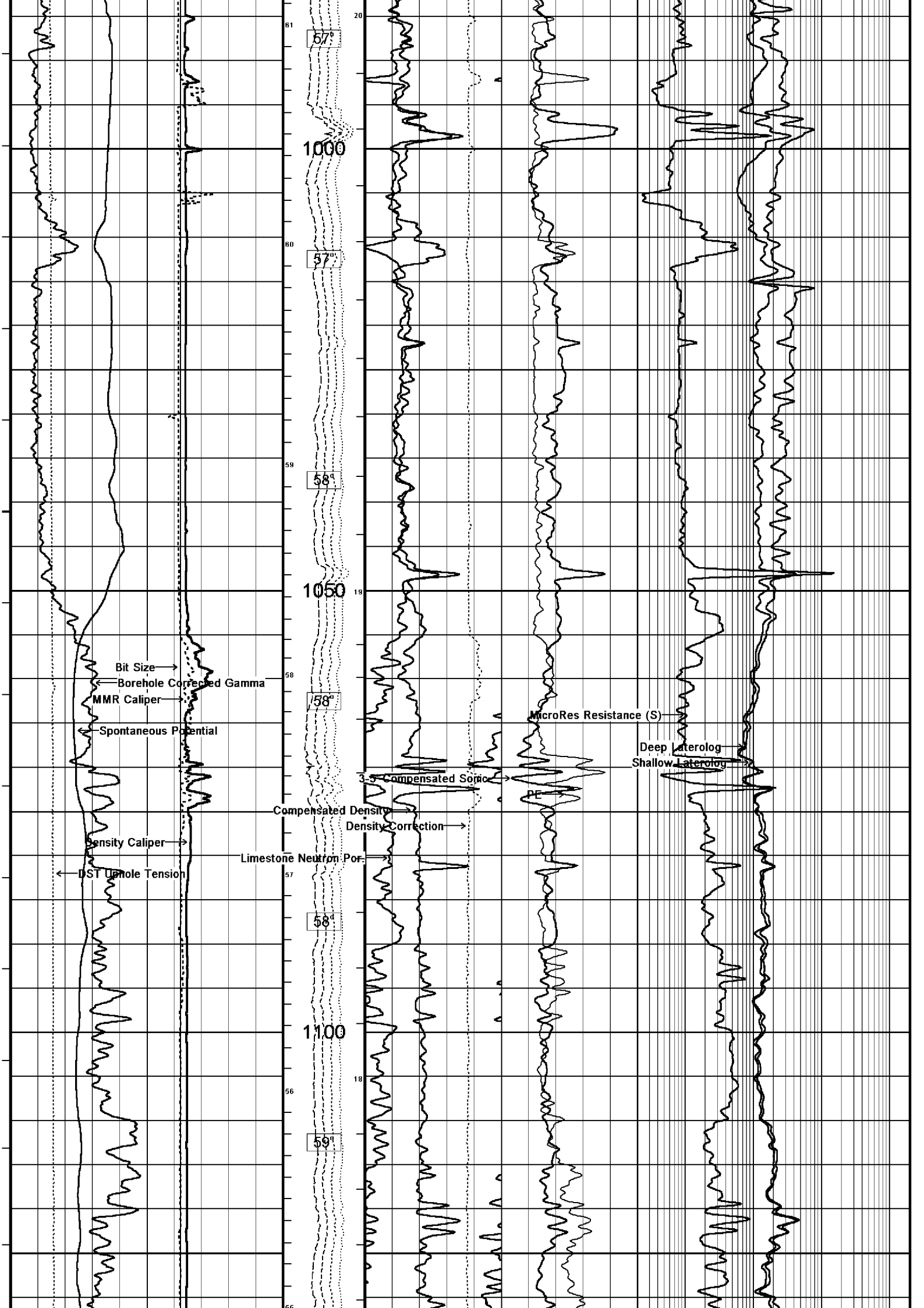

250
300
350
Borehole Corrected Gamma

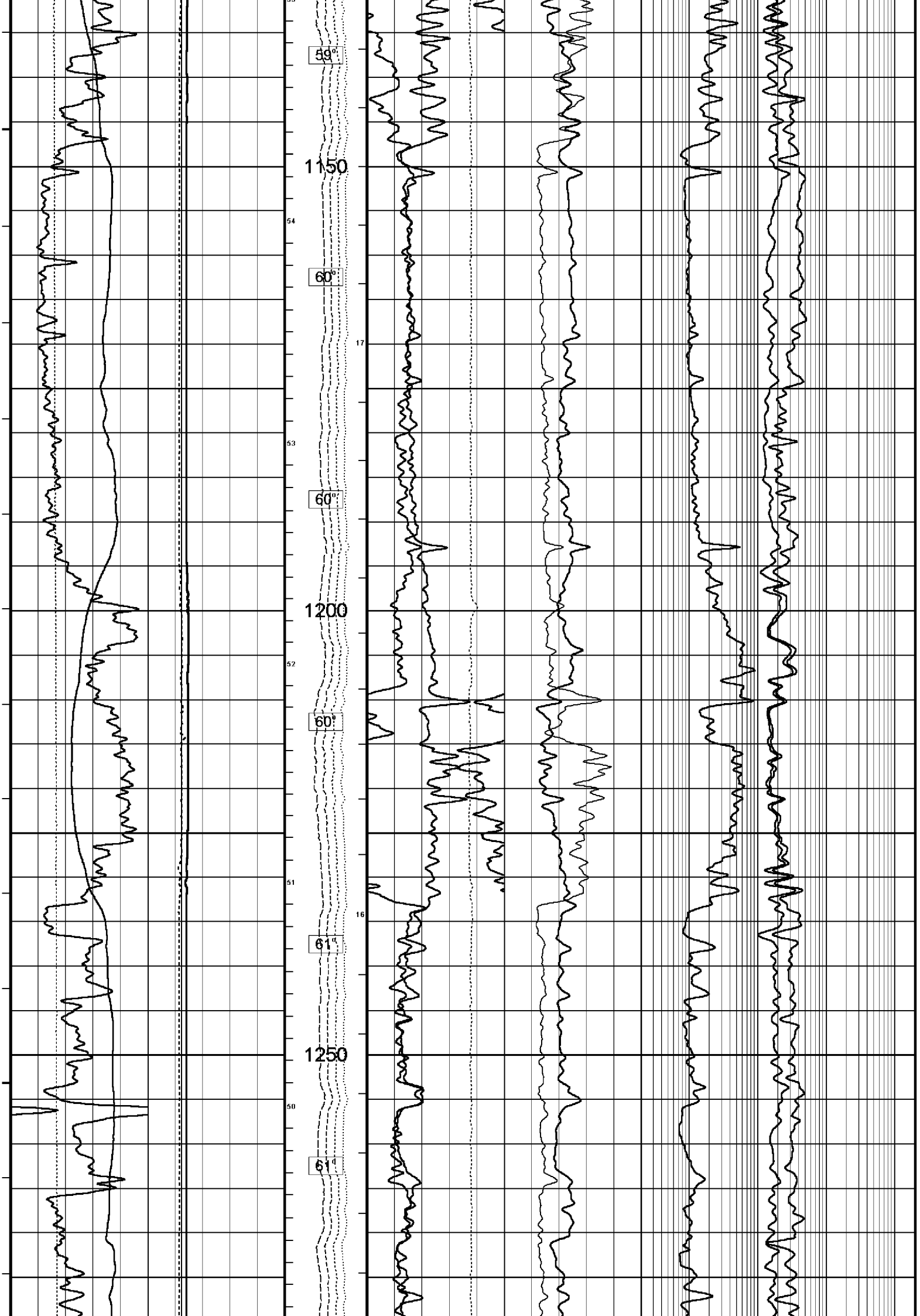

400
450
500

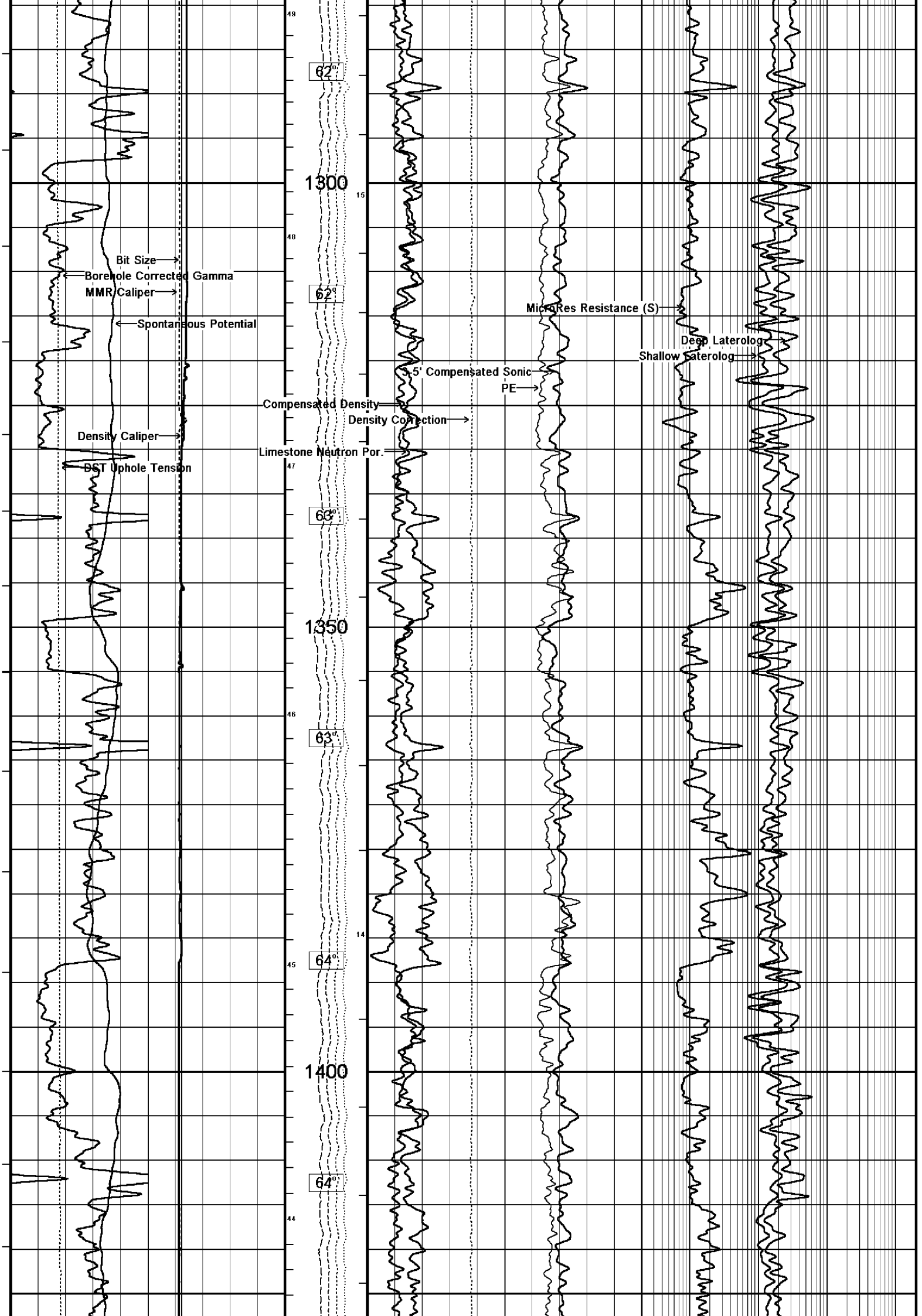

Casing Shoe
550
600
650
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Limestone Neutron Por.
Density Correction
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
50"
50"
51"
51"
51"

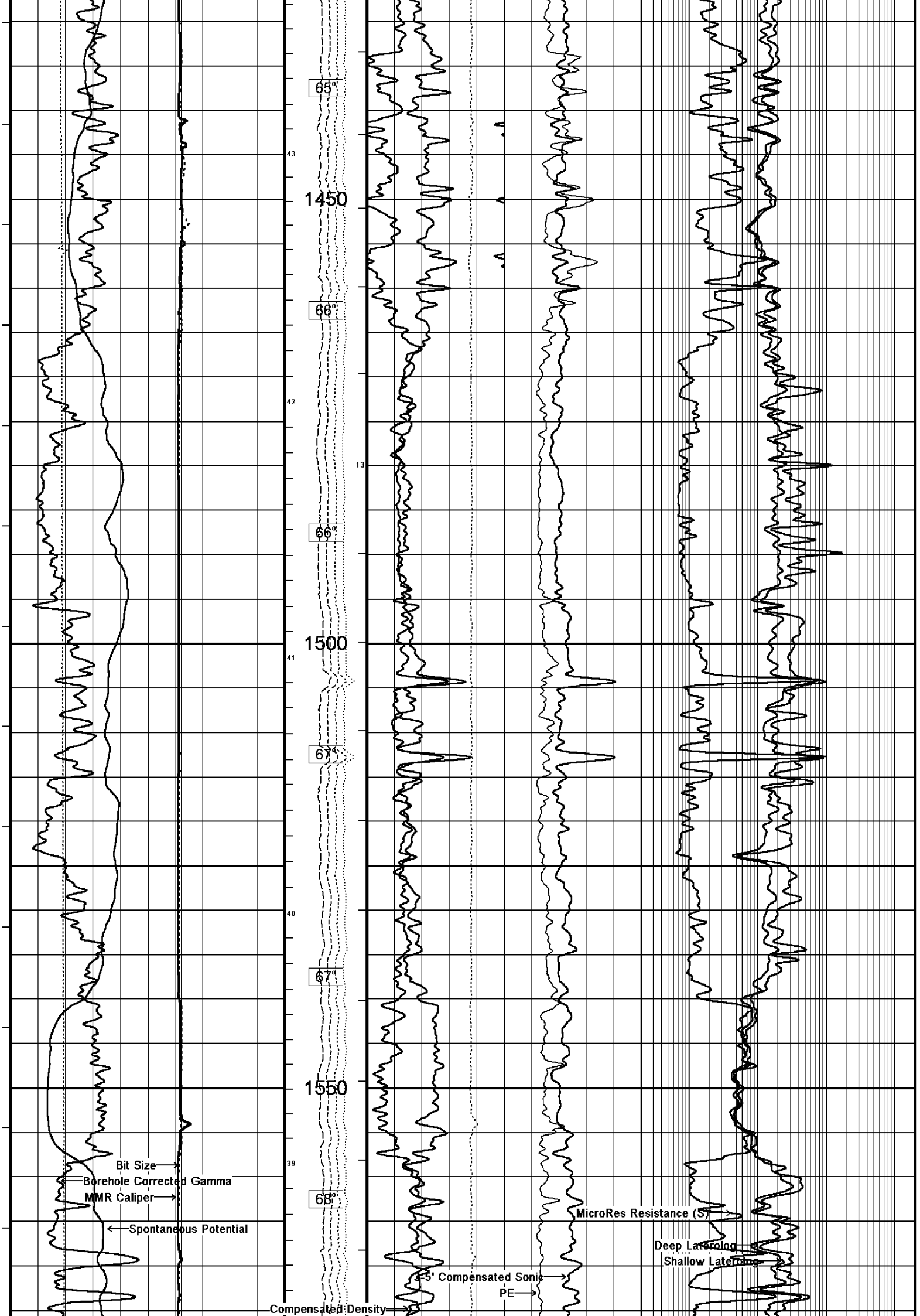

52°
700
52°
53°
750
53°
53°
800
54°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
35' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

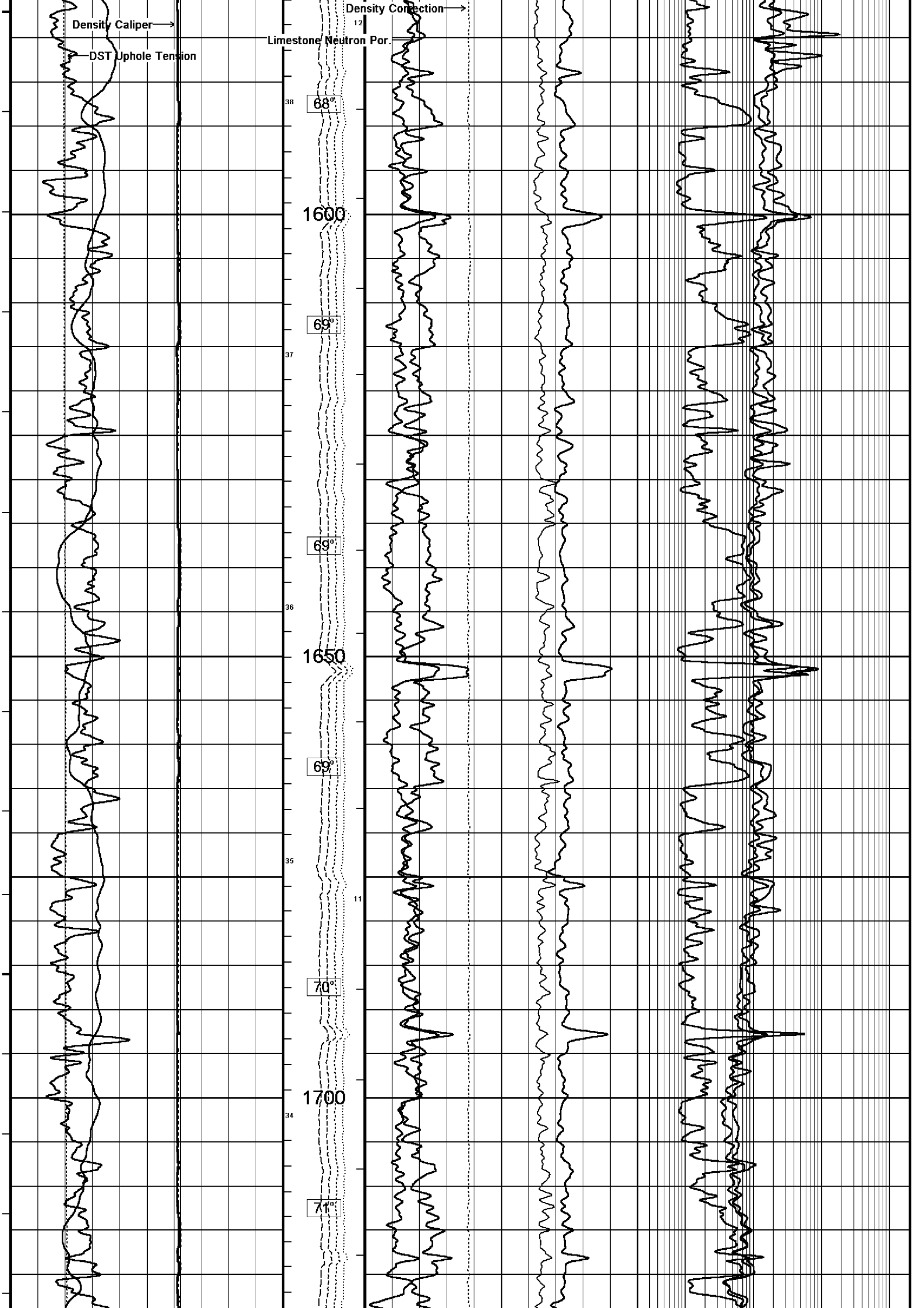

54°
55°
55°
55°
56°
56°
850
900
950
67
66
65
64
63
62
22
21

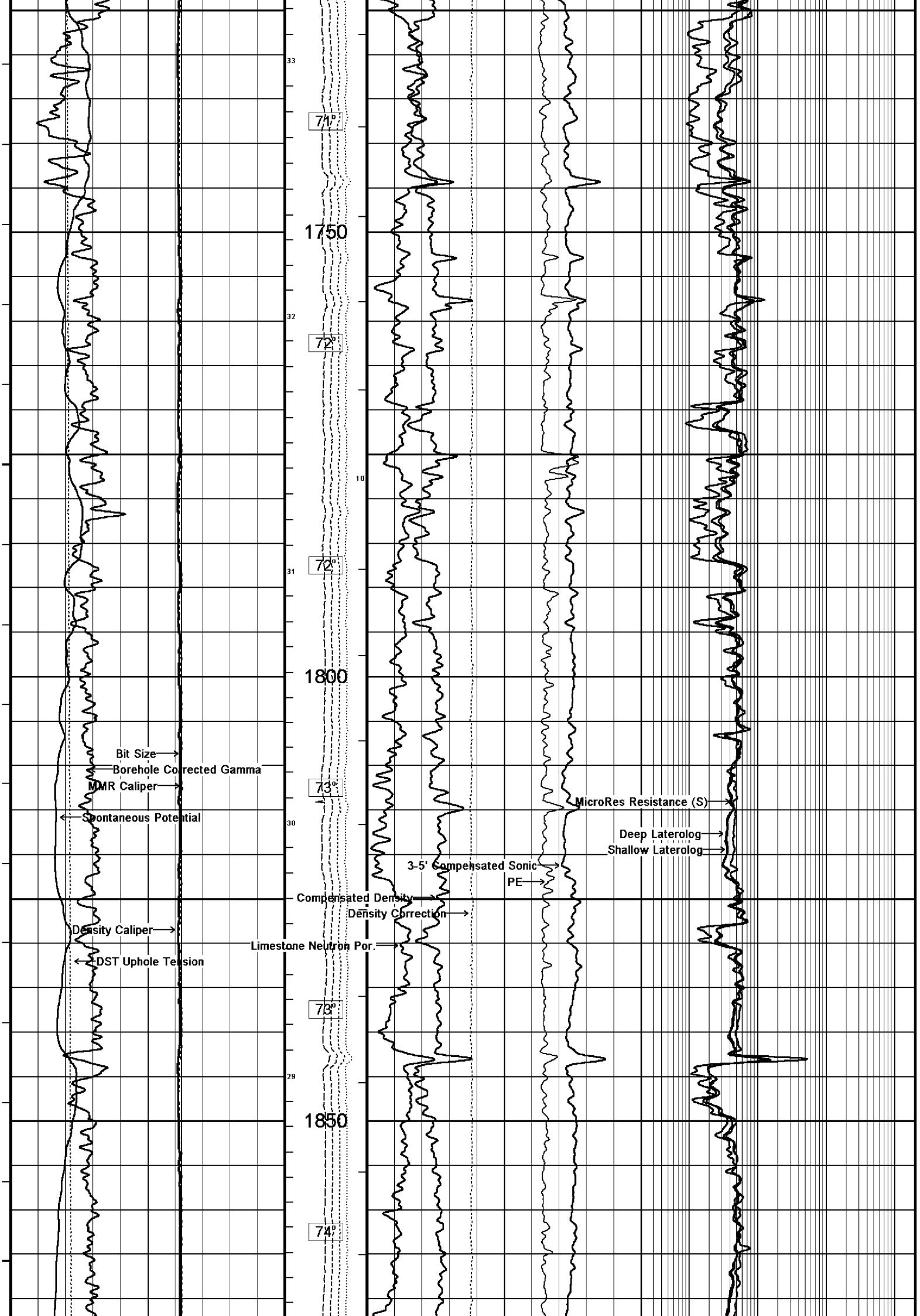

1000
1050
1100
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5 Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por

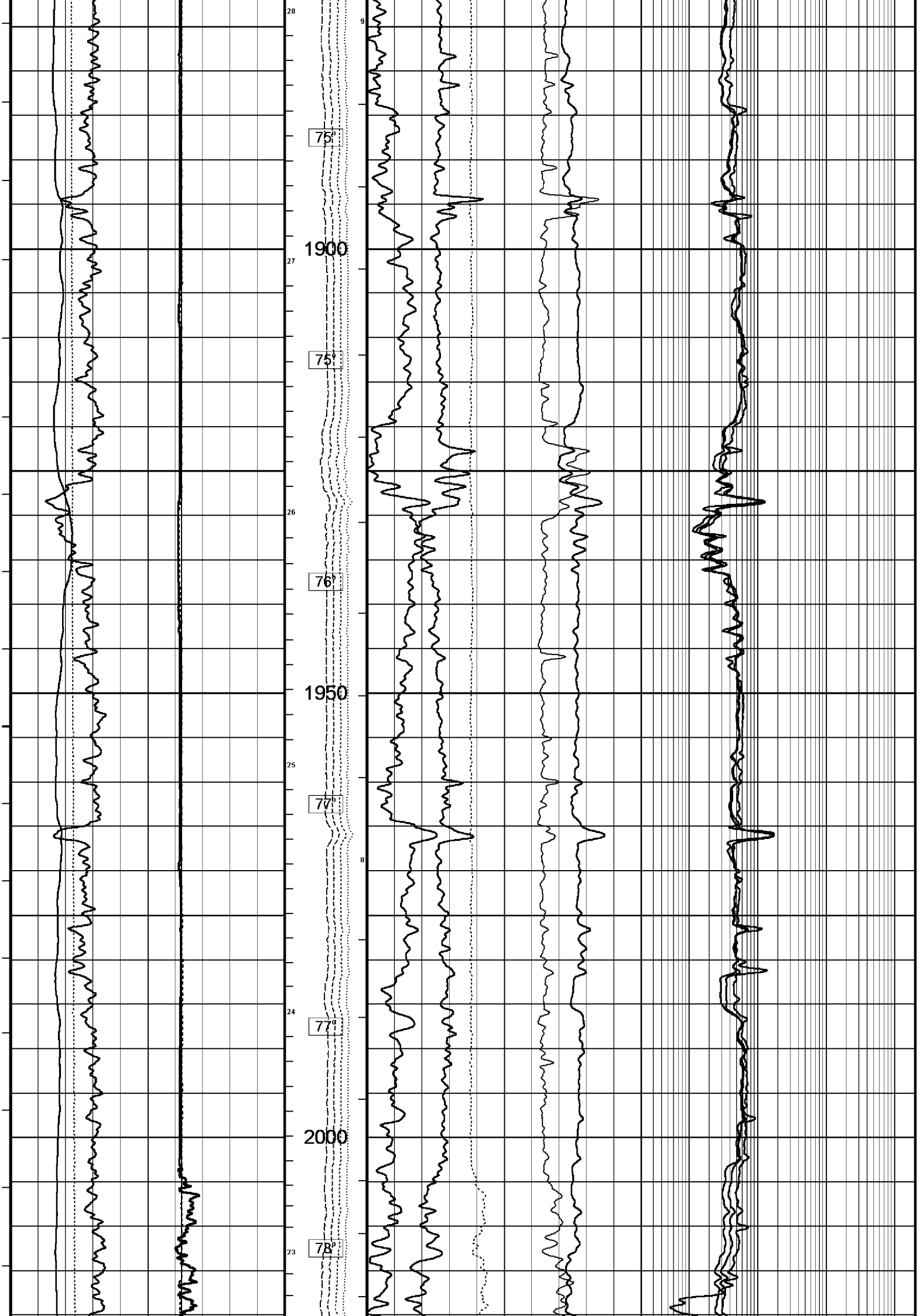

59°
1150
60°
60°
1200
60°
61°
1250
61°

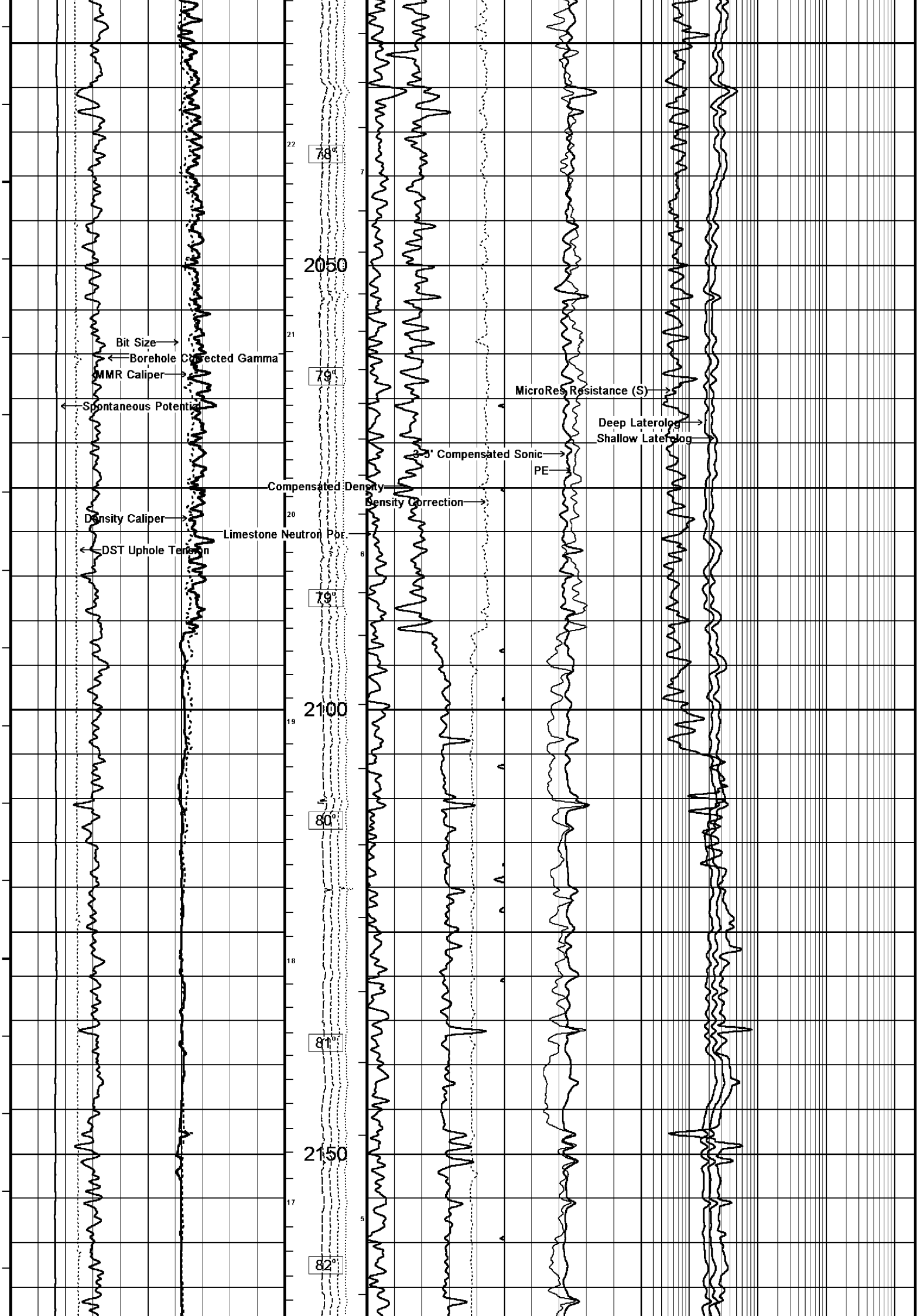

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
1300
1350
1400
62°
62°
63°
63°
64°
64°

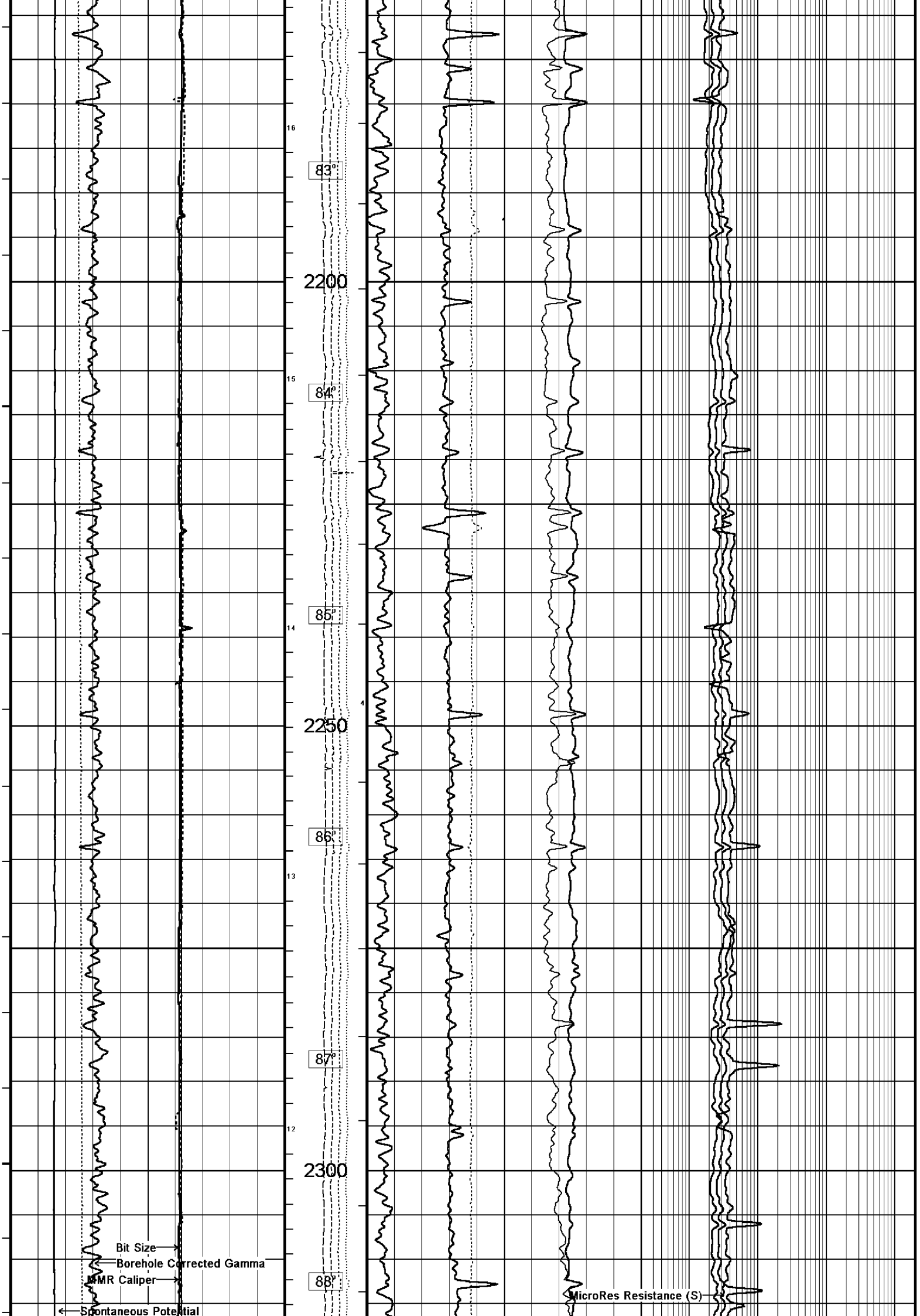

1450
1500
1550
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density

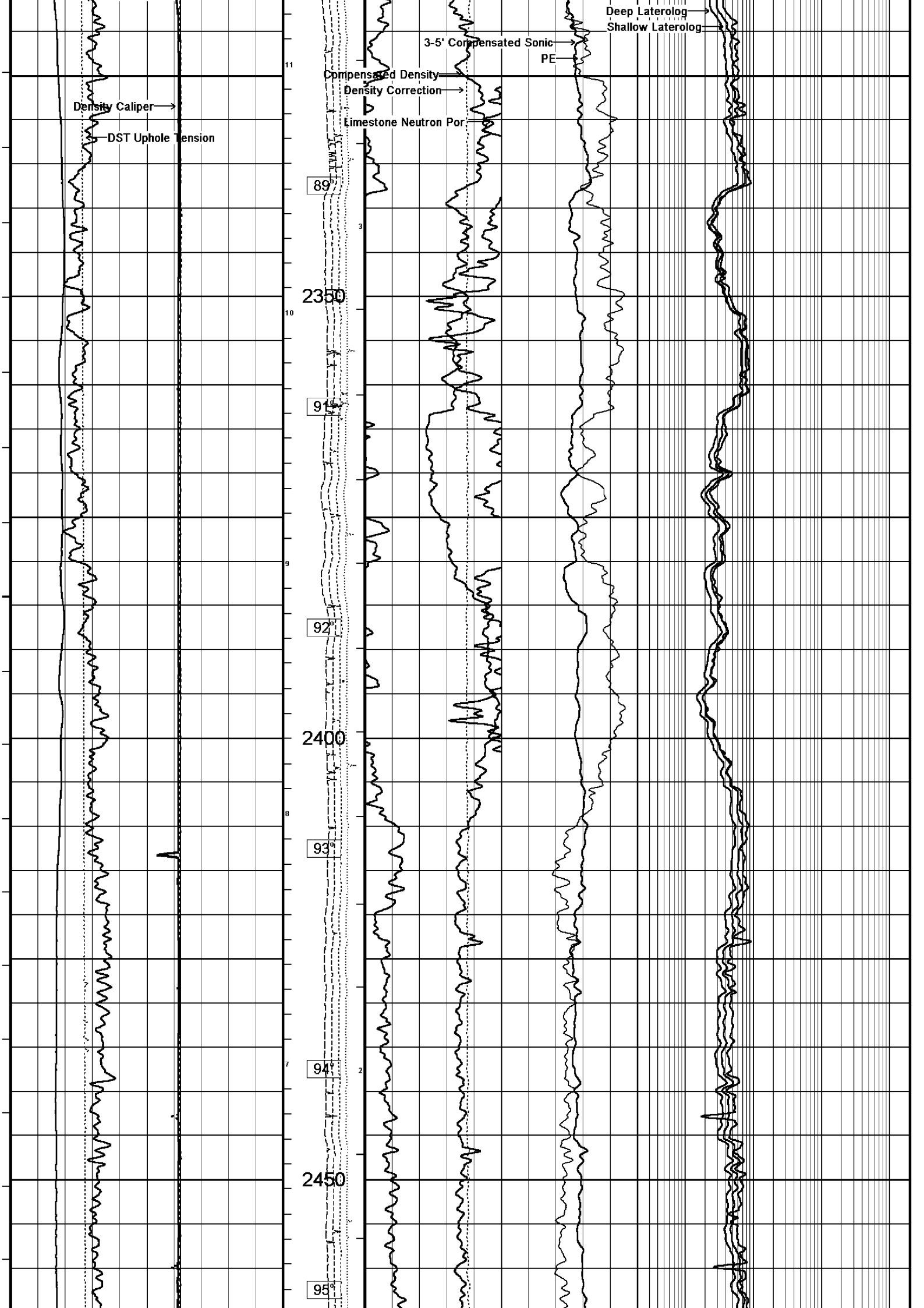

Density Caliper
DST Uphole Tension
Density Correction
Limestone Neutron Por.
38
37
36
35
34
12
11
68°
69°
69°
69°
70°
71°
1600
1650
1700

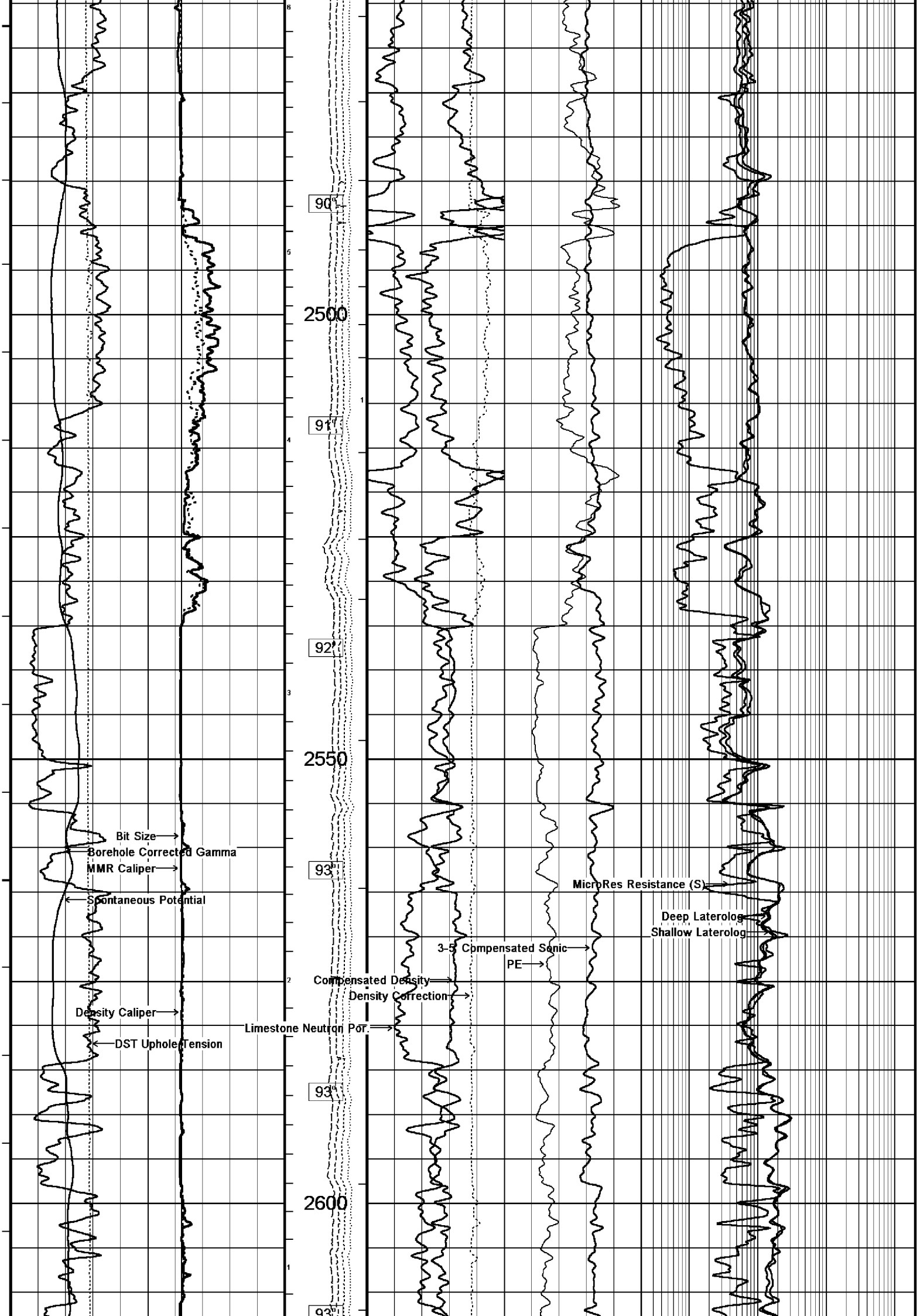

1750
1800
1850
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

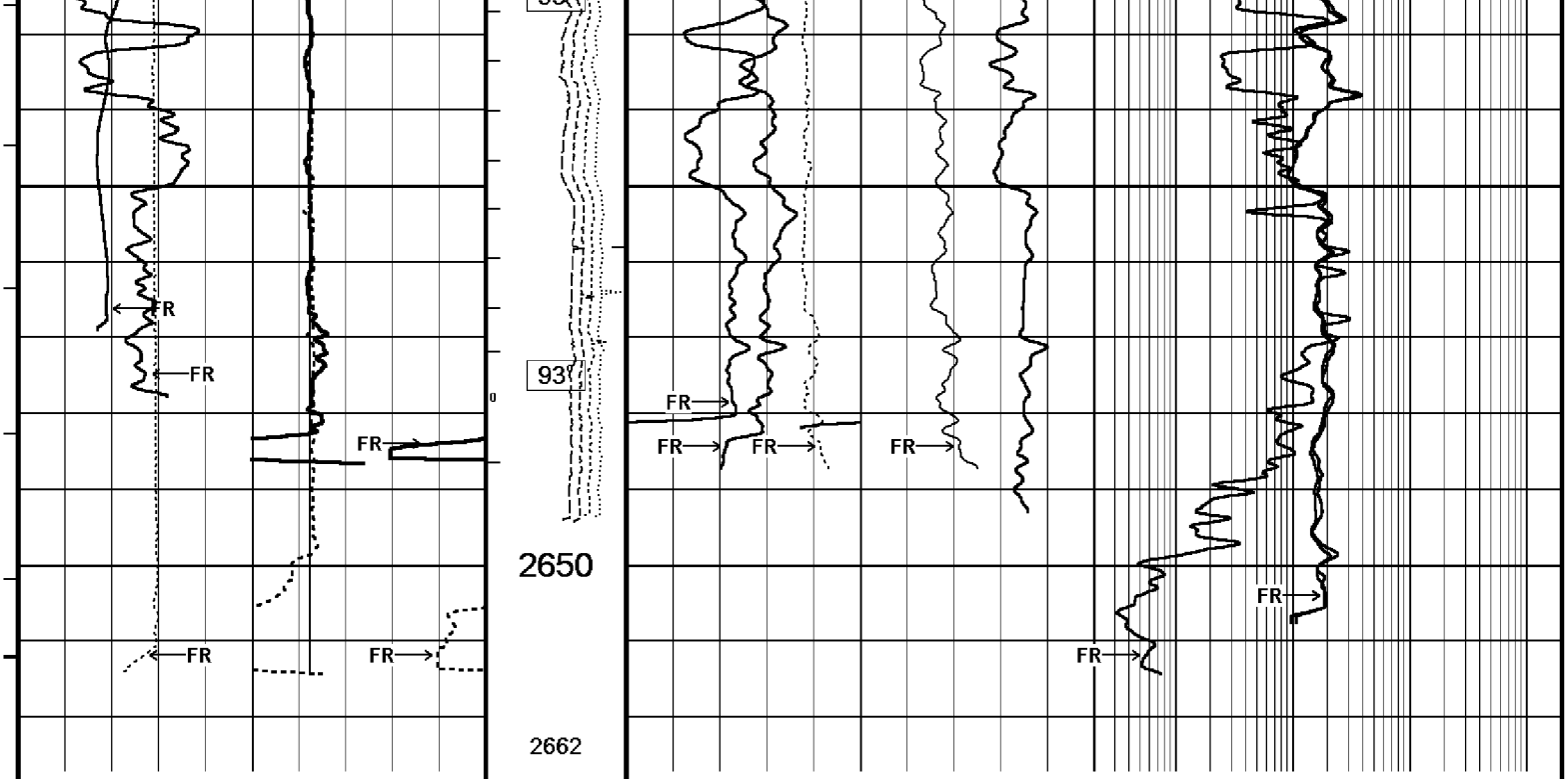

28
75°
1900
27
75°
26
76°
1950
25
77°
24
77°
2000
23
78°


Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
PE
78°
79°
80°
81°
82°
2050
2100
2150


16
83°
2200
15
84°
85°
14
2250
86°
13
87°
12
2300
88°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)


Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por
Density Caliper
DST Uphole Tension
89°
91°
92°
93°
94°
95°
2350
2400
2450


90
2500
91
92
2550
93
93
2600
93
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Upholetension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog



2662

Depth in Metres

Timing Marks every 60.0 sec

Borehole Temp in deg C

TR21 1100 100

TR11 1100 100

TR22 1100 100

TR12 1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:500

Limestone Neutron Por. percent 45 -15

PE barns/electron 0 10

Shallow Laterolog ohm metres 0.20 2000 1 10 100 1000

DST Uphole Tension pounds 0 5000 5000 10000

Density Caliper inches 6 16

Density Correction grams/cc -1.50 0.50

Deep Laterolog ohm metres 0.20 2000 1 10 100 1000

Spontaneous Potential millivolts − 40 +

MMR Caliper inches 6 16

3-5' Compensated Sonic microsec/foot 140 40

Compensated Density grams/cc 1.95 2.95

MicroRes Resistance (S) ohm metres 0.20 2000 1 10 100 1000

orehole Corrected Gamm API 0 200 200 400

Bit Size inches 6 16

Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta
System Configuration Dates: Logged : Plotted 17-JUN-2004:

Plotted on 03-NOV-2005 15:41
Recorded on 04-OCT-2005 00:45

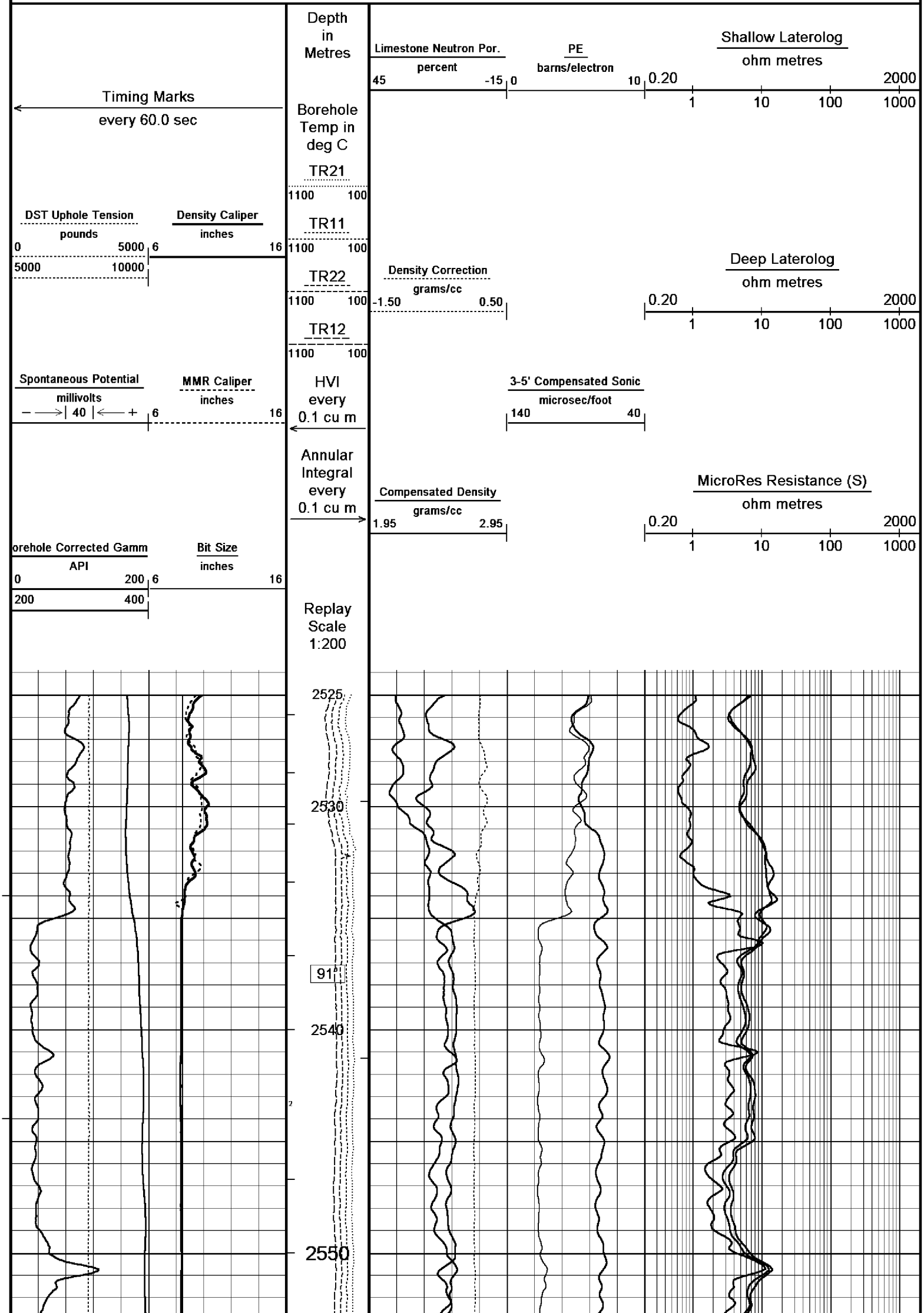
MAIN LOG 1:500

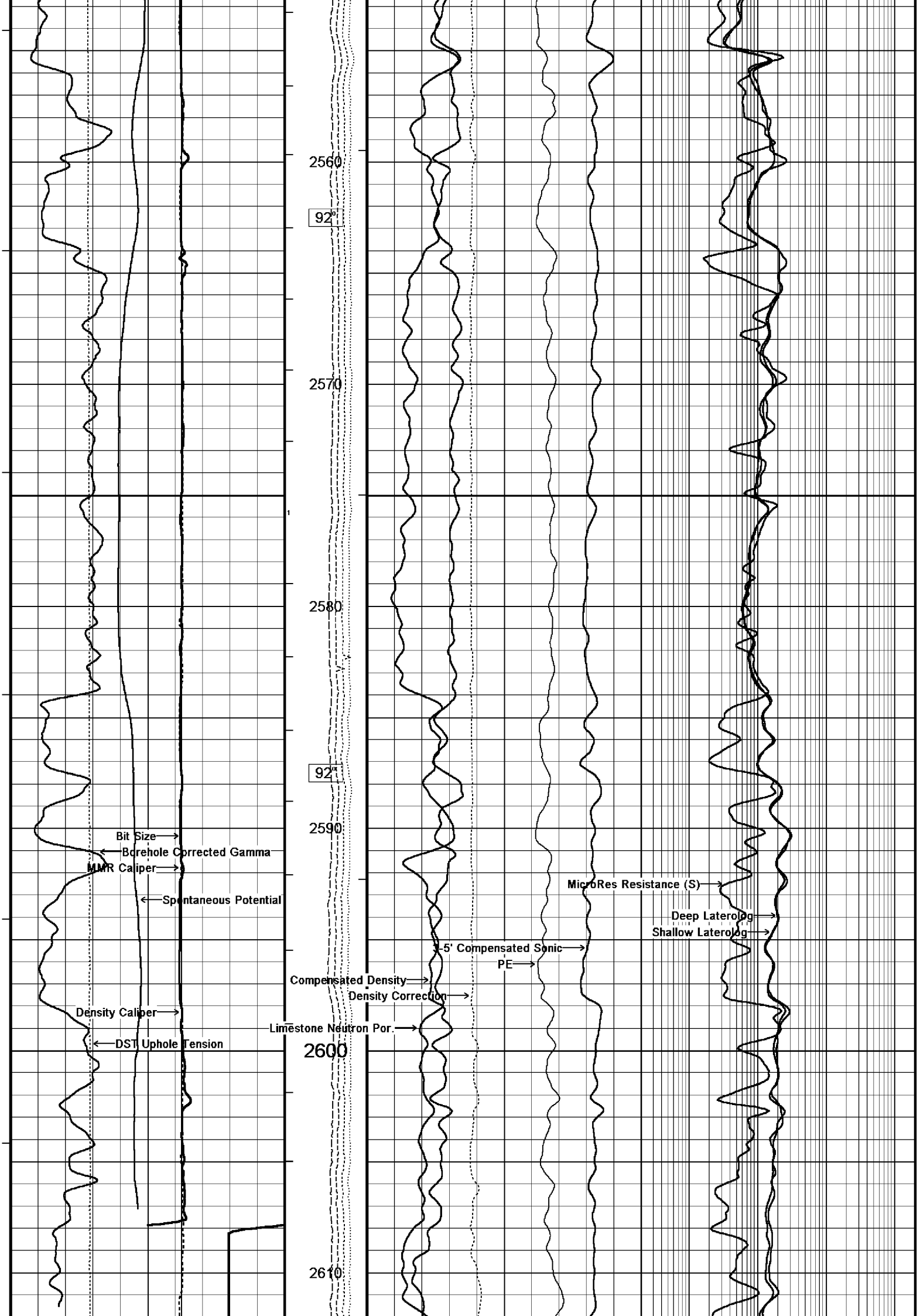
REPEAT SECTION 1:500 RUN 2

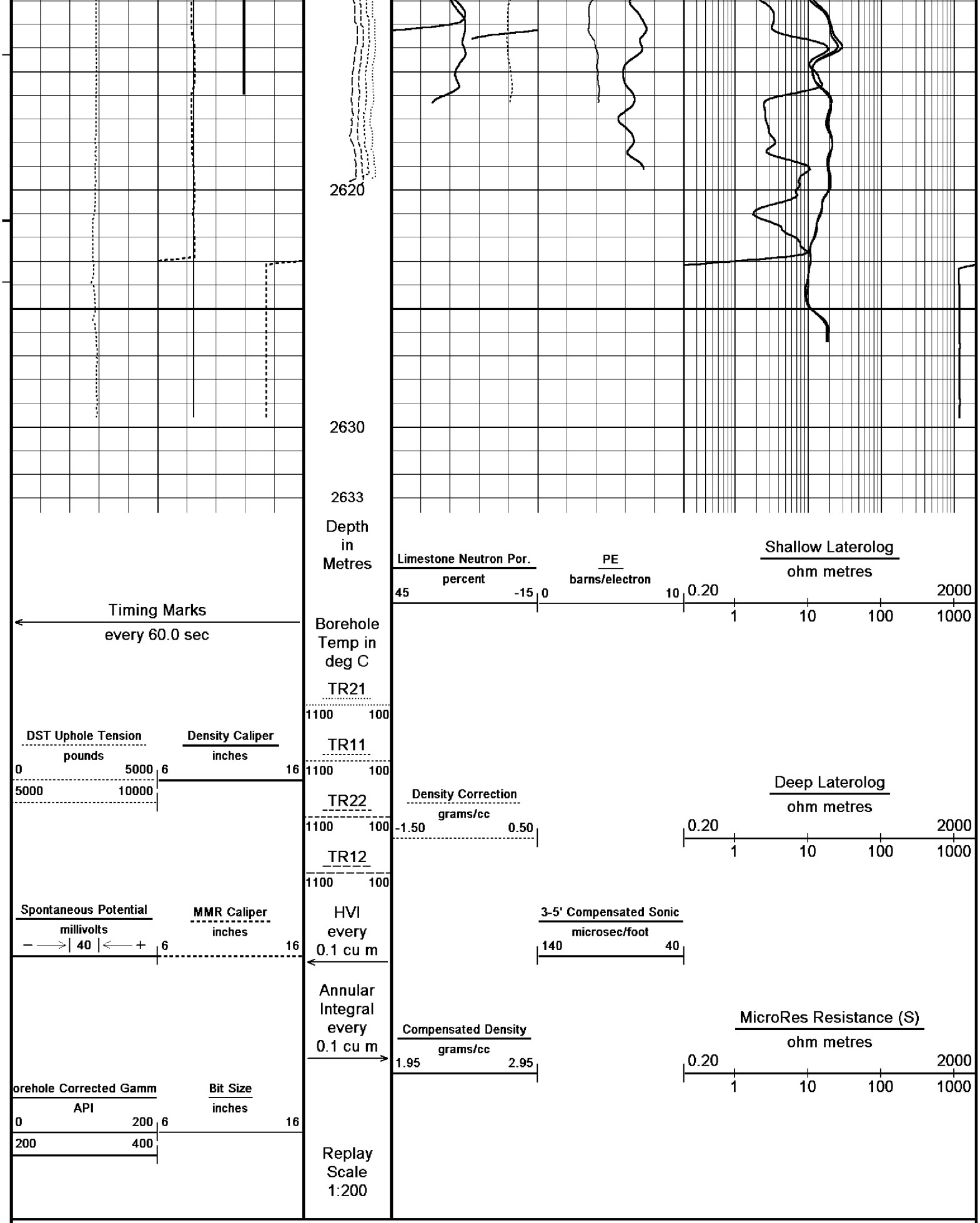
Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_4_002.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 03-NOV-2005 15:41
Recorded on 04-OCT-2005 00:11

System Configuration Dates: Logged 17-JUN-2004. Plotted 17-JUN-2004.




2560
92"
2570
2580
92"
2590
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Density Caliper
Limestone Neutron Por.
DST Uphole Tension
2600
2610



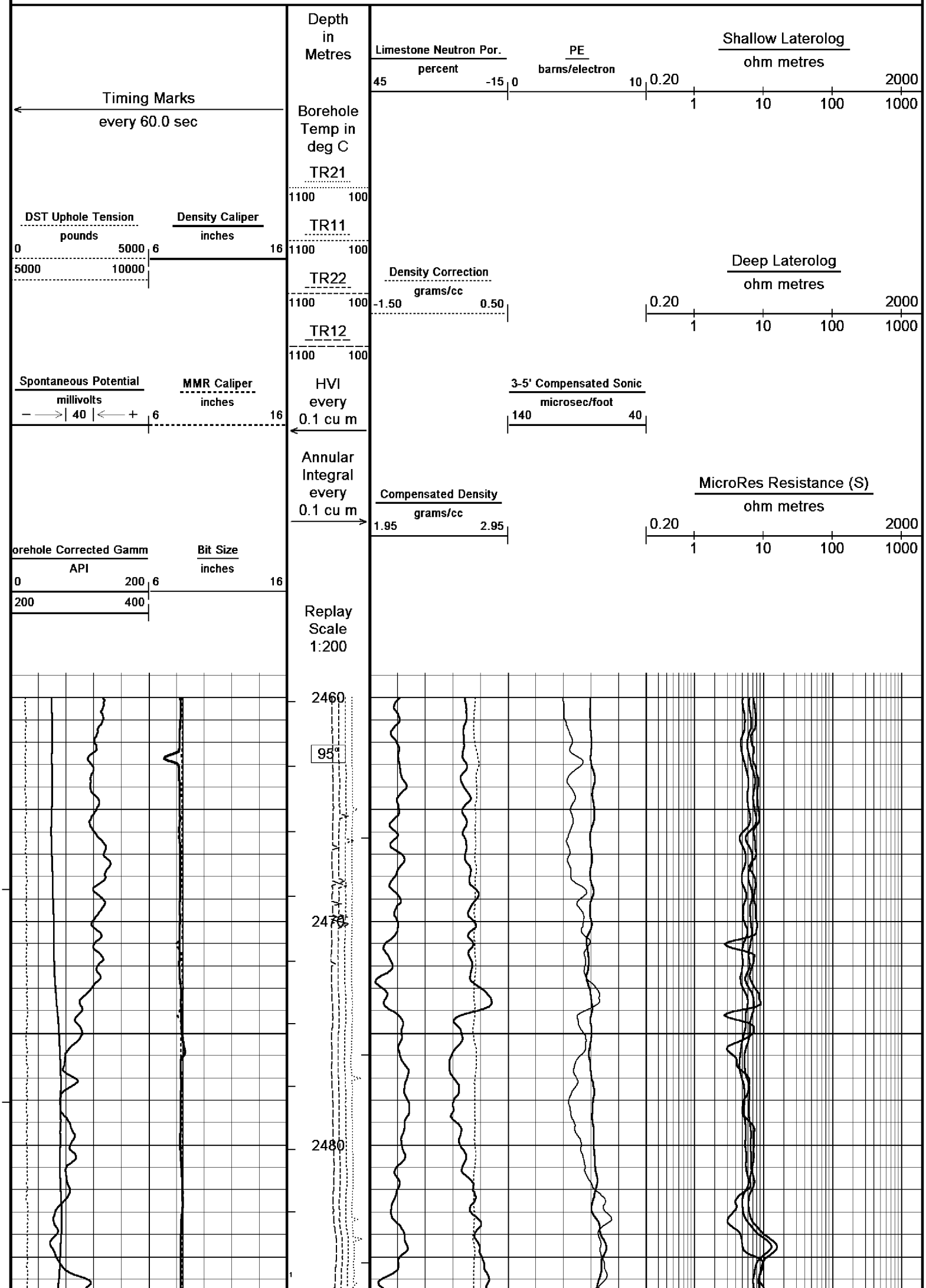
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:41
Filename: C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

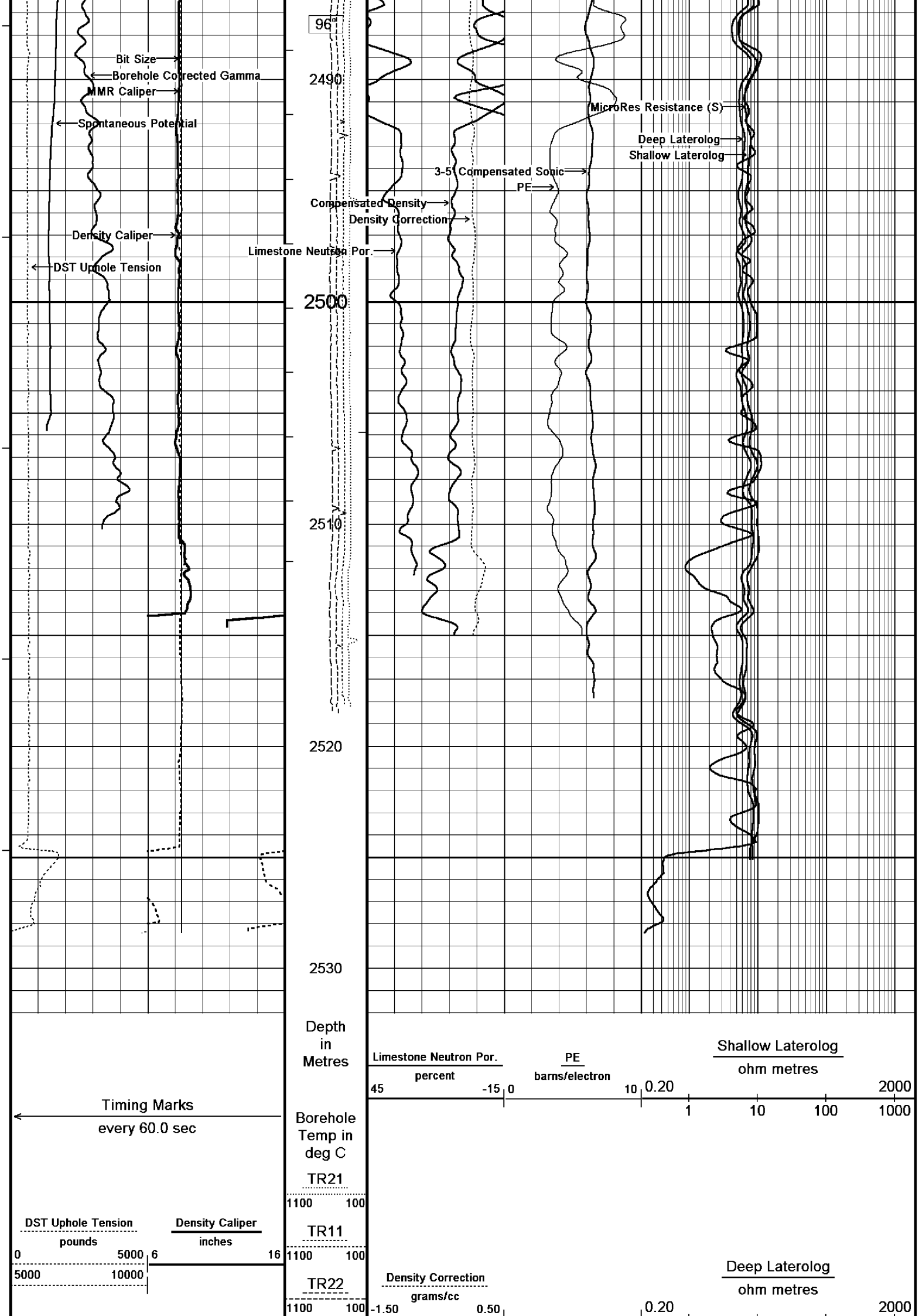
REPEAT SECTION 1:500 RUN 2

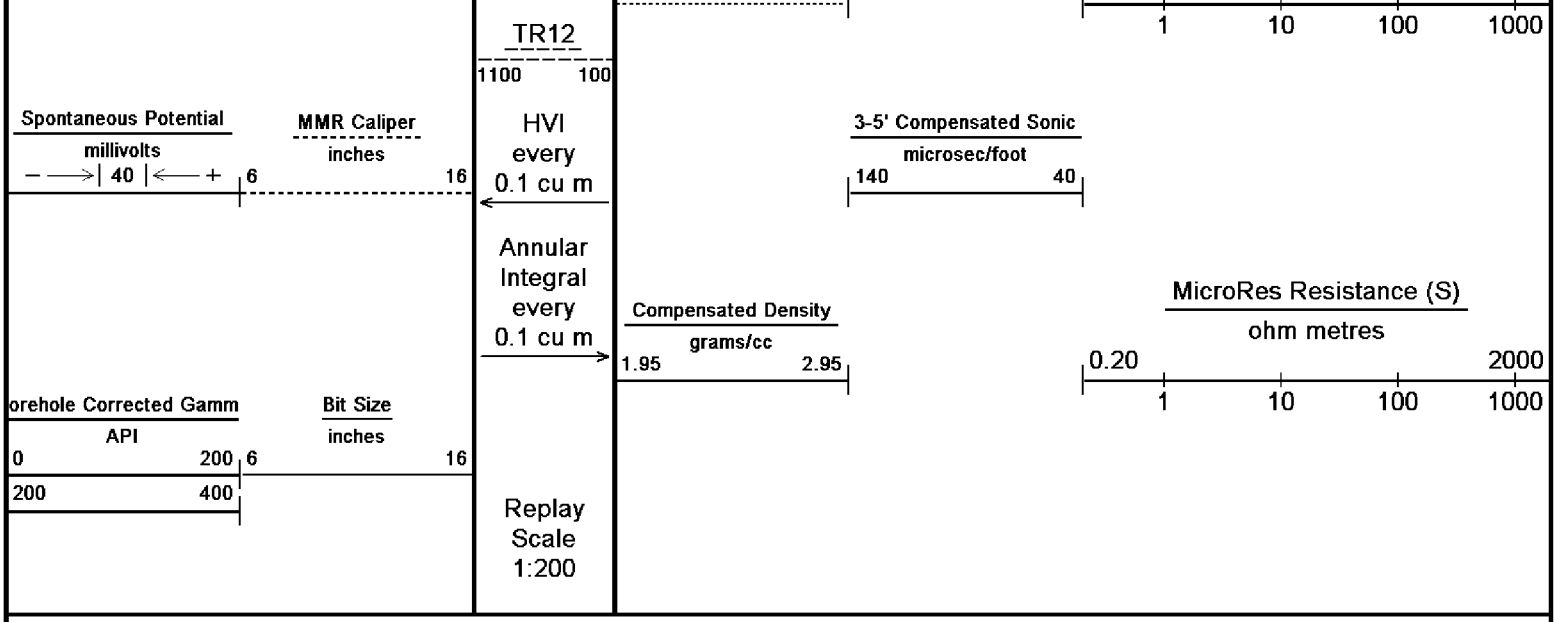
REPEAT SECTION 1:500 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:41

Filename: C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:




Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
96
2490
2500
2510
2520
2530
Limestone Neutron Por.
Compensated Density
Density Correction
3-5 Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
Depth in Metres
Timing Marks every 60.0 sec
Borehole Temp in deg C
TR21
TR11
TR22
1100 100
DST Uphole Tension
pounds
0 5000
5000 10000
Density Caliper
inches
6 16
Limestone Neutron Por.
percent
45 -15
PE
barns/electron
0 10
Density Correction
grams/cc
-1.50 0.50
Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000
Deep Laterolog
ohm metres
0.20 2000

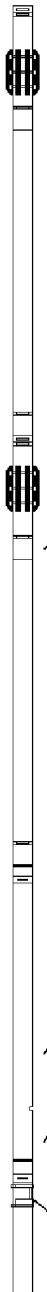


Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 03-NOV-2005 15:41
Filename: C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

REPEAT SECTION 1:500 RUN 1

DOWNHOLE EQUIPMENT

C:\logs\Origin\Childers Cove 1 Run 1\SUPERCOMBO2.dta



Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

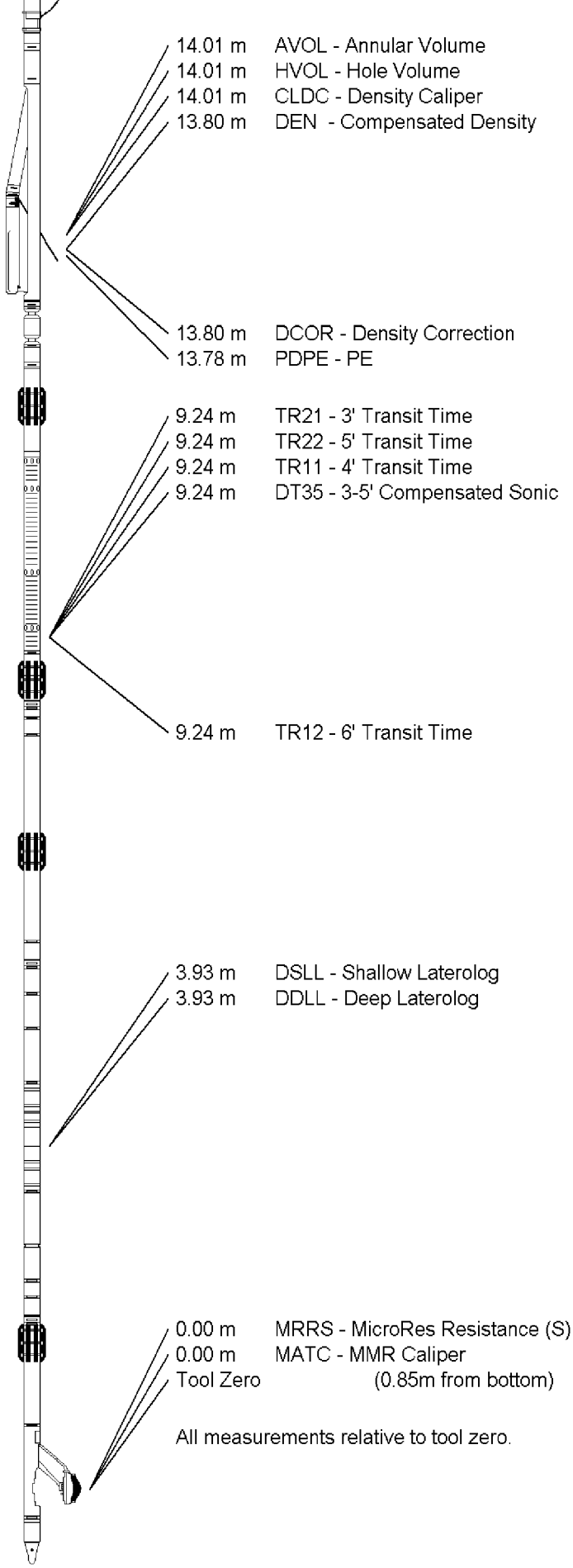
22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.



Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

14.01 m AVOL - Annular Volume
14.01 m HVOL - Hole Volume
14.01 m CLDC - Density Caliper
13.80 m DEN - Compensated Density

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

13.80 m DCOR - Density Correction
13.78 m PDPE - PE

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

9.24 m TR21 - 3' Transit Time
9.24 m TR22 - 5' Transit Time
9.24 m TR11 - 4' Transit Time
9.24 m DT35 - 3-5' Compensated Sonic

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

9.24 m TR12 - 6' Transit Time

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

3.93 m DSLL - Shallow Laterolog
3.93 m DDLL - Deep Laterolog

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

0.00 m MRRS - MicroRes Resistance (S)
0.00 m MATC - MMR Caliper
Tool Zero (0.85m from bottom)

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

All measurements relative to tool zero.

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

C:\logs\Origin\Childers Cove 1 Run 2\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000

General Parameters

Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C

Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13

Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

	918.0	1089.7

Field Check

	919.8	1086.8

PE Calibration

Base Calibration	WS	Measured WH	Measured Ratio	Calibrated Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2	

Field Check

173.6	795.1	

Density Constants MPD 066

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	

MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2
	0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005

Micro Laterolog K Factor	0.0196	

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

Compact

DLL - SLL - MLL - SONIC

DENSITY - NEUTRON

1:500

PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC
DENSITY - NEUTRON
1:500

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E

COMPACT

FINAL PRINT

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 46.2 metres
Log Measured From R.T. @ 5.3 METREabove Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF metres
GL 46.20 metres

Date	03-Oct-2005		01-Oct-2005	
Run Number	TWO		ONE	
Depth Driller	2658.00	metres	2545.00	metres
Depth Logger	2656.80	metres	2529.00	metres
First Reading	2656.80		2528.15	
Last Reading	2400.00		0.00	
Casing Driller	544.50	metres	544.50	metres
Casing Logger	544.20	metres	544.20	metres
Bit Size	8.50	inches	8.50	inches
Hole Fluid Type	KCL/PHPA/POL		KCL/PHPA/POL	
Density / Viscosity	1.16 g/c3	58.00 CP	1.15 g/c3	59.00 CP
PH / Fluid Loss	8.00	5.00	8.60	4.00
Sample Source	FLOWLINE		FLOWLINE	
Rm @ Measured Temp	0.18 @ 25.0	ohm-m	0.65 @ 13.9	ohm-m
Rmf @ Measured Temp	0.20 @ 25.0	ohm-m	1.06 @ 13.9	ohm-m
Rmc @ Measured Temp	0.13 @ 25.0	ohm-m	0.53 @ 14.1	ohm-m
Source Rmf / Rmc	PRESS	FILTER	PRESS	FILTER
Rm @ BHT	0.07 @ 93.5	ohm-m	0.09 @ 95.5	ohm-m
Time Since Circulation	11.8 HOURS		18 HOURS	
Max Recorded Temp	93.50	deg C	95.50	deg C
Equipment Name	COMPACT		COMPACT	
Equipment / Base	8	SALE	8	SALE
Recorded By	BEN MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10		00:00 1/10	

BOREHOLE RECORD

Last Edited: 3-OCT-2005 20:29

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2071
6) RIG:CENTURY 7
PRINTS: 1 FIELD 3 FINALS
7) TOTAL HOLE VOLUME FROM TD TO SURFACE CASING = 79.7 CU.M.
8) TOTAL ANNULAR VOLUME WITH 7 INCH CASING = 27.7 CU.M.
9) SONIC CASING SIGNAL AT 500.5 M.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

MAIN LOG 1:500

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Versions: Plotted with 7.01.0179

Timing Marks
every 60.0 sec

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– → | 40 | ← +

MMR Caliper
inches
6 16

Borehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Depth in Metres

Borehole Temp in deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI every 0.1 cu m

Annular Integral every 0.1 cu m

Replay Scale 1:500

32

50

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-1.50 0.50

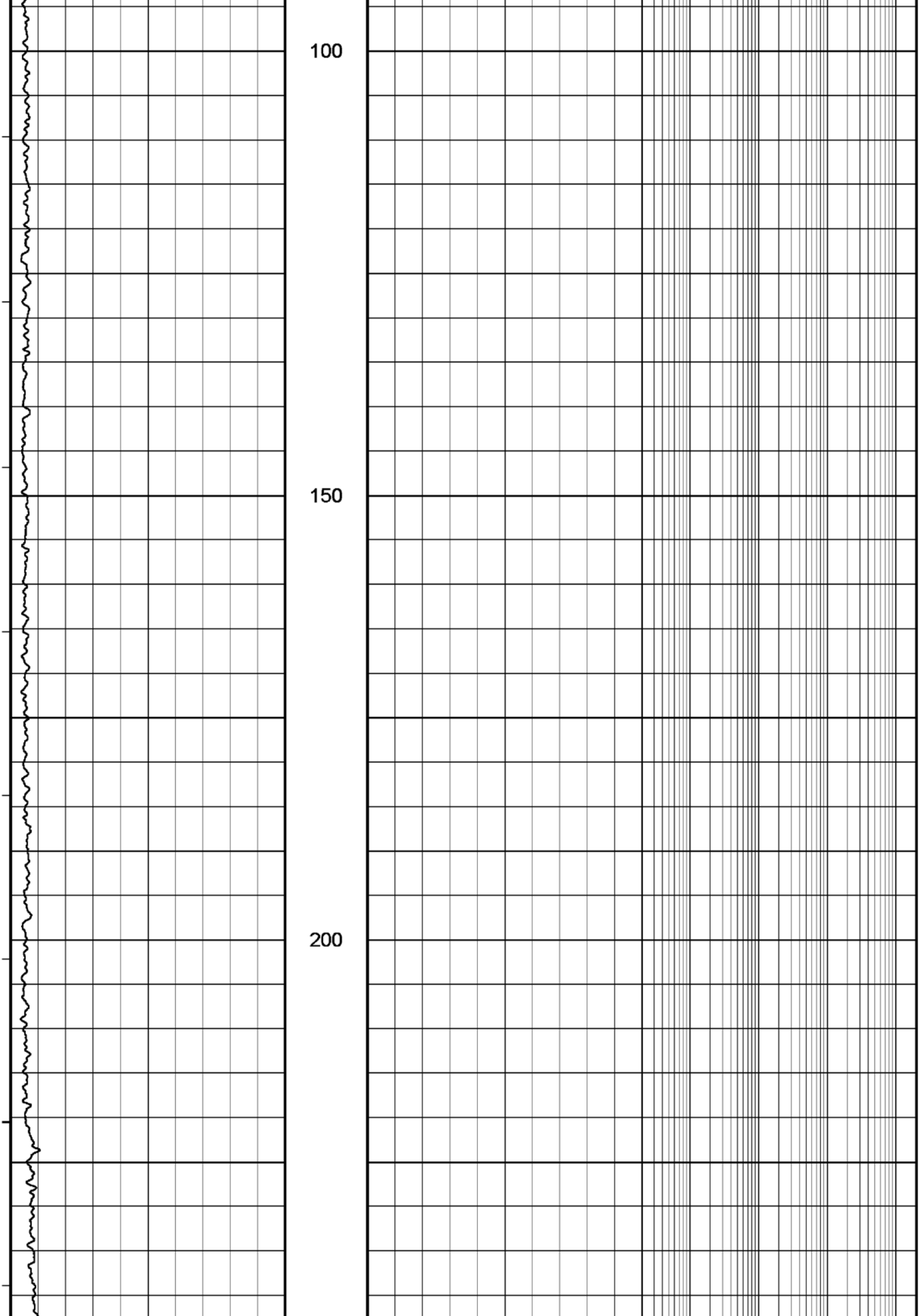
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

3-5' Compensated Sonic
microsec/foot
140 40

Compensated Density
grams/cc
1.95 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

← Borehole Corrected Gamma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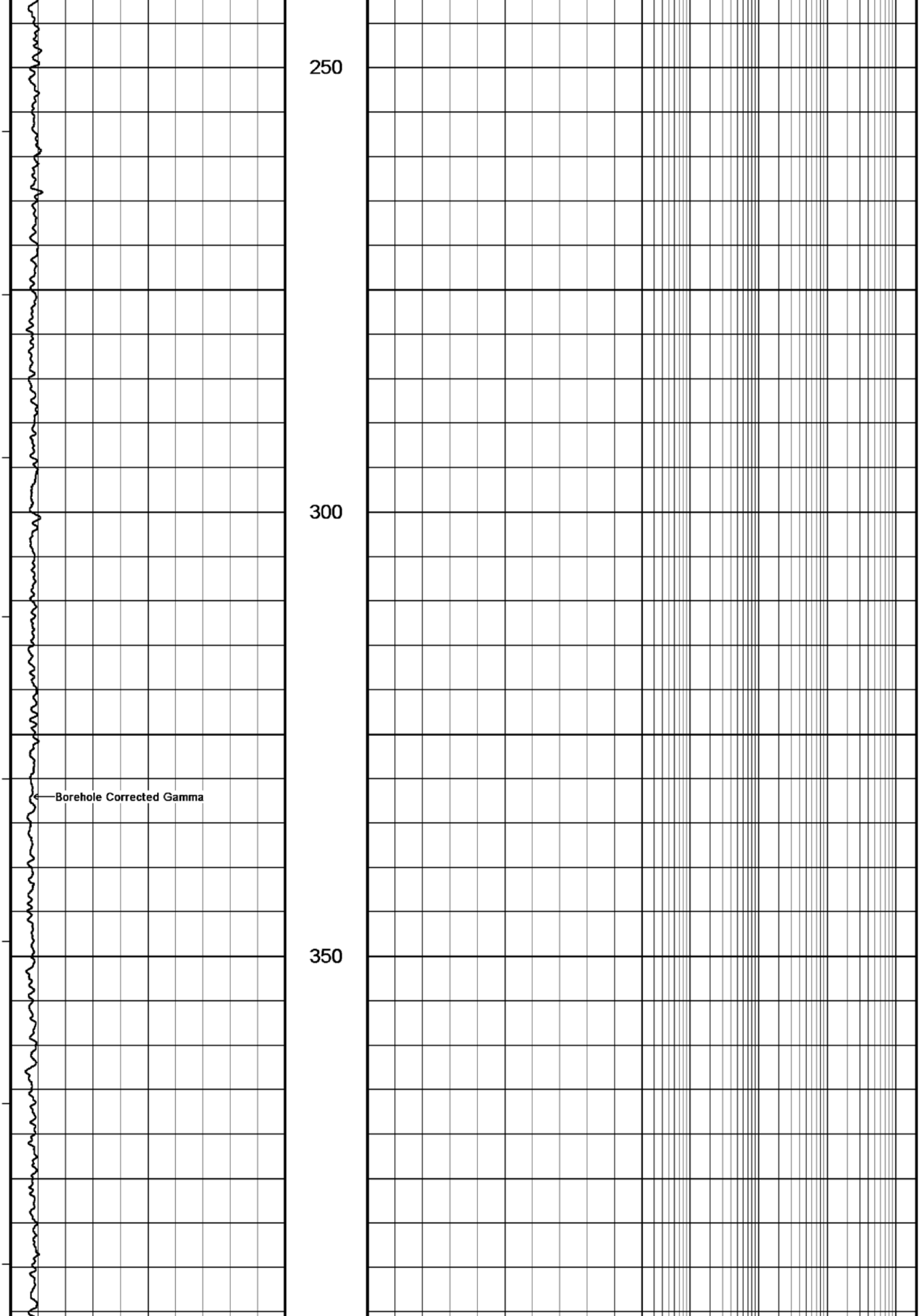
150
200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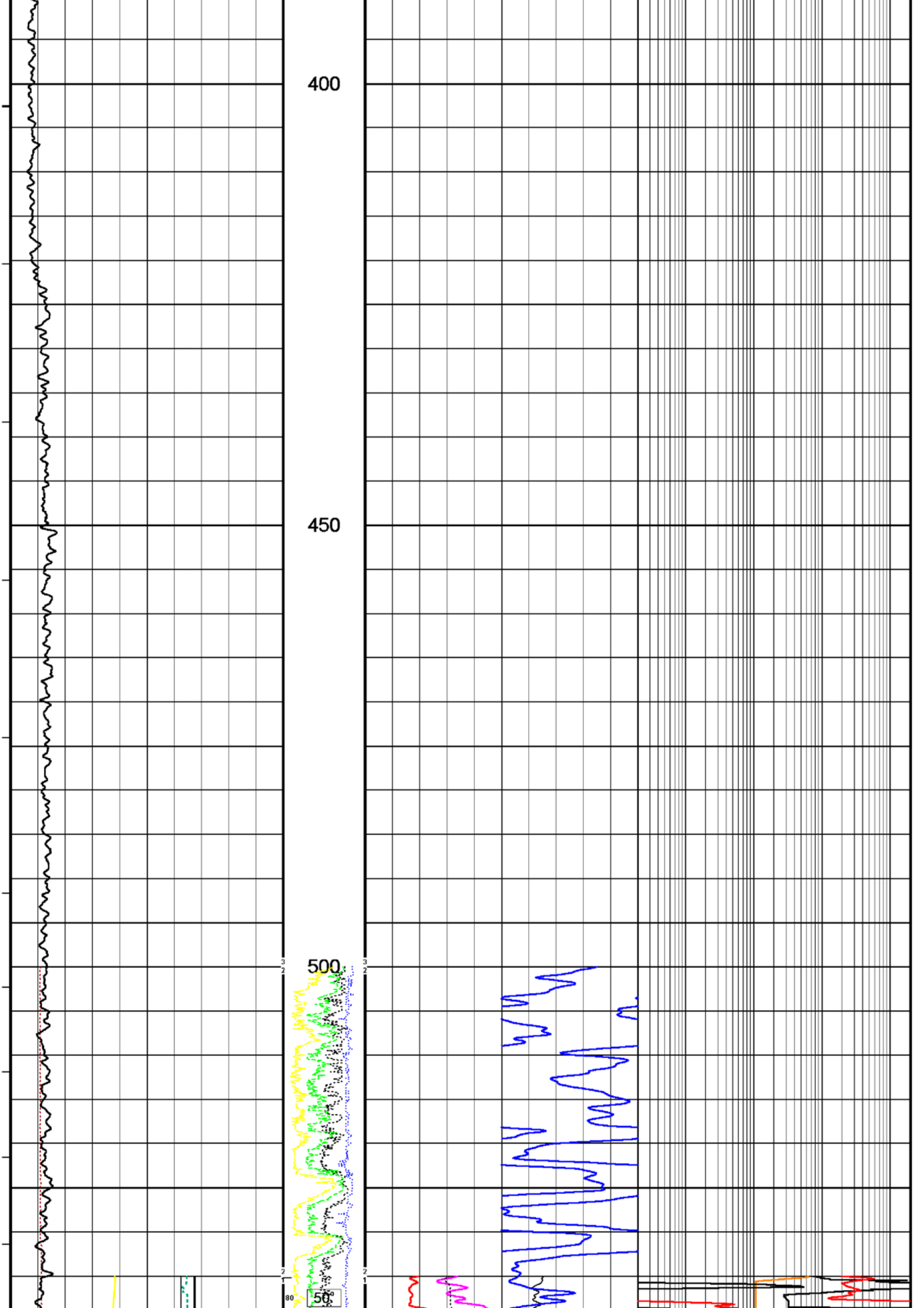
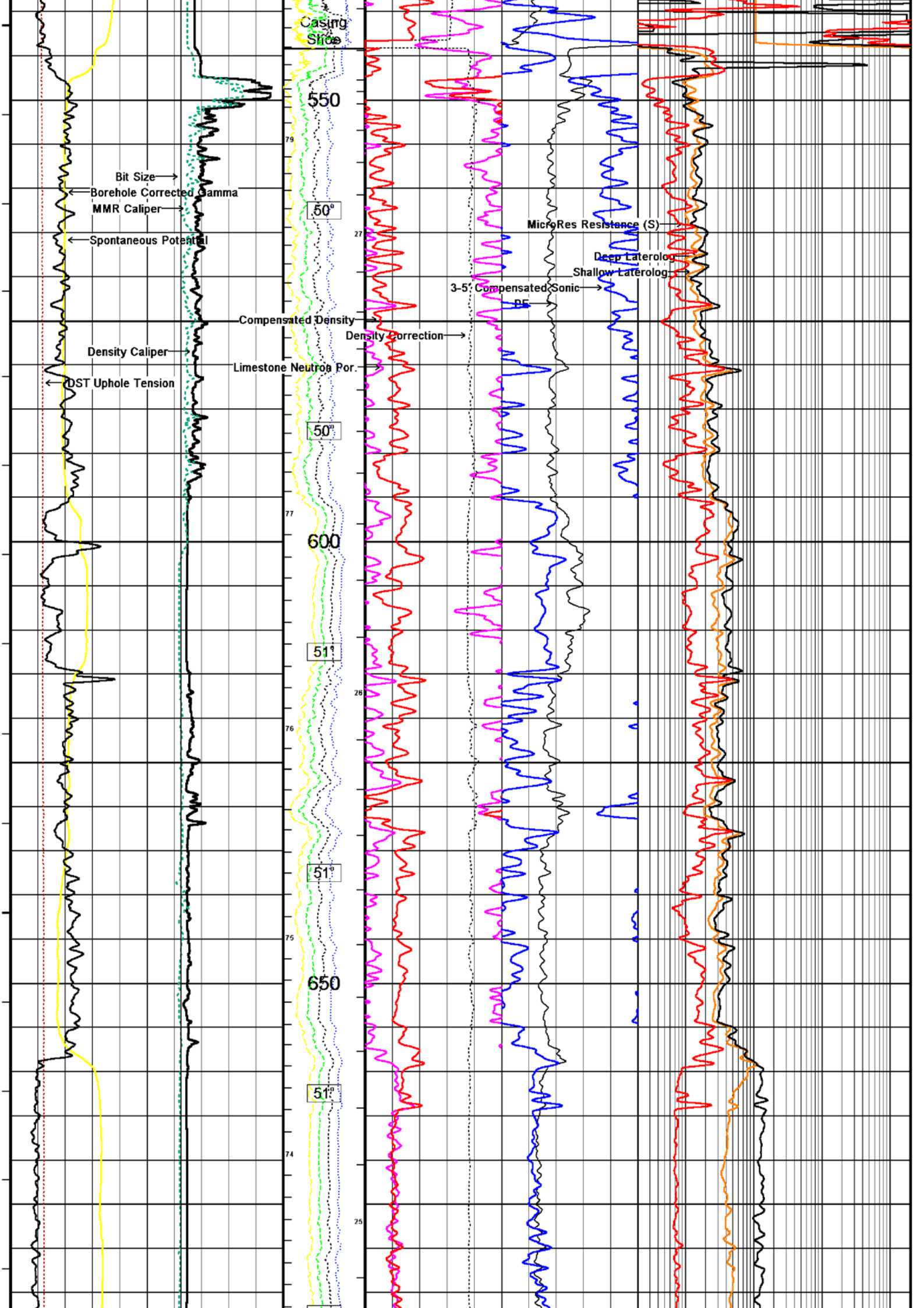
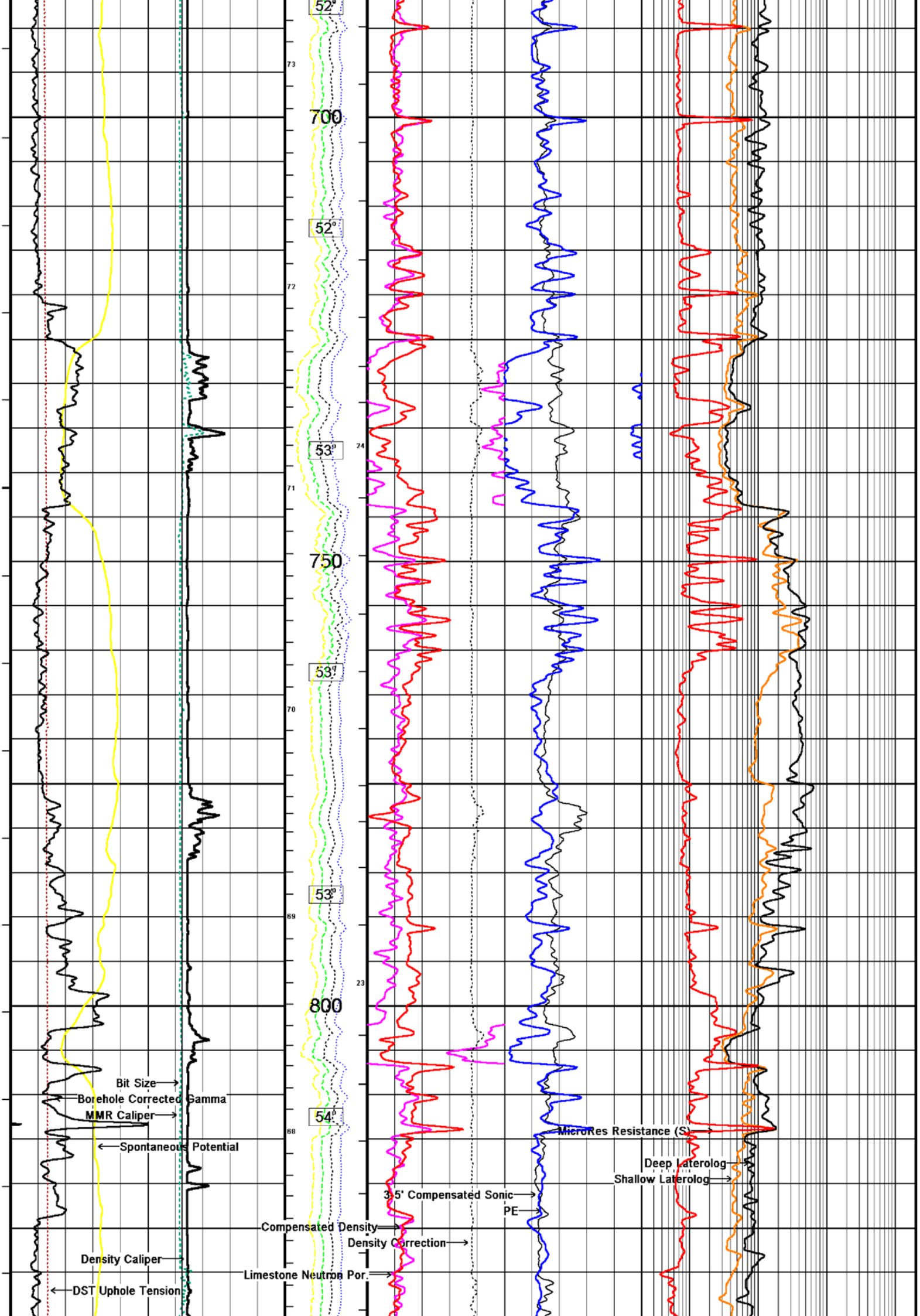
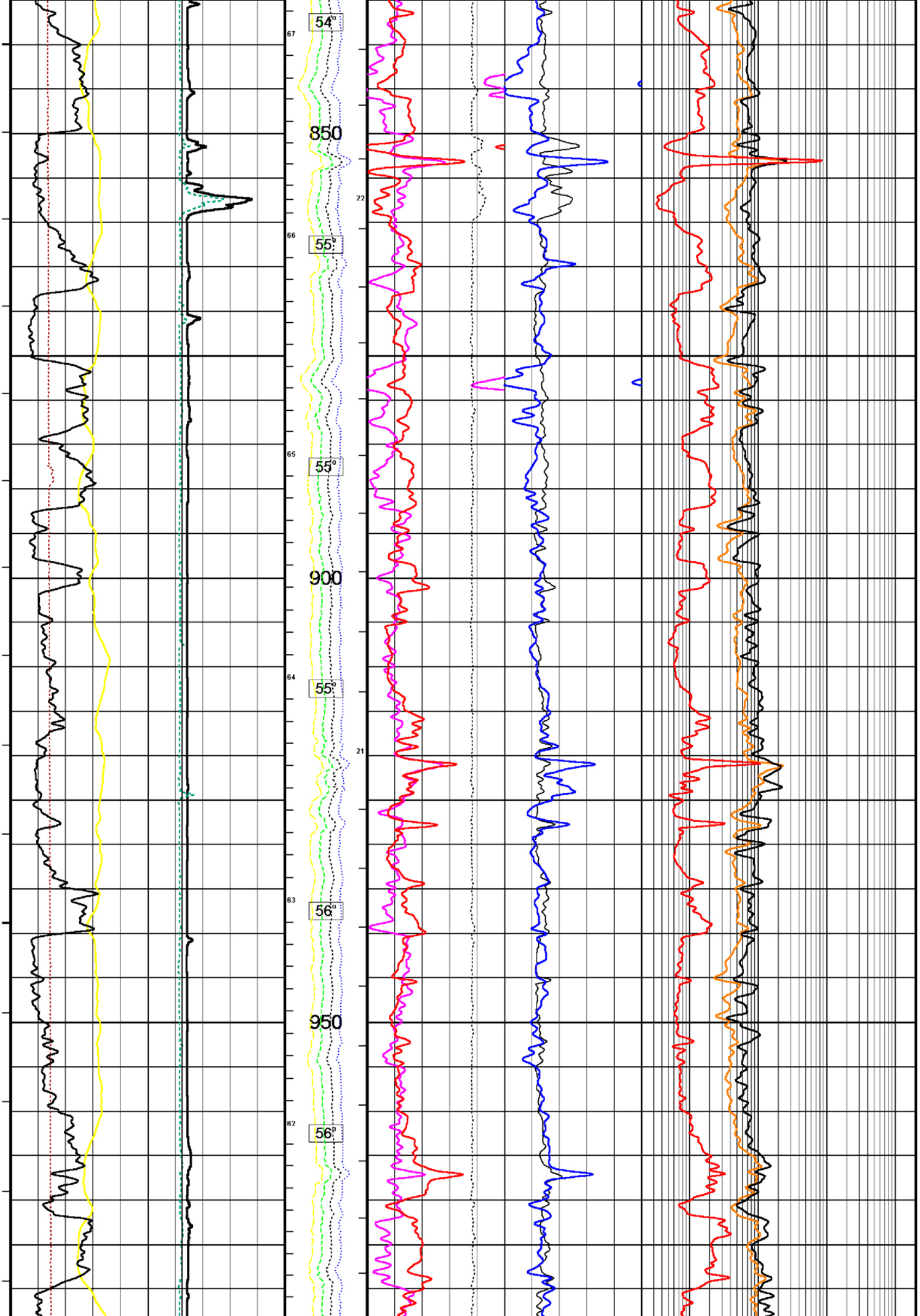
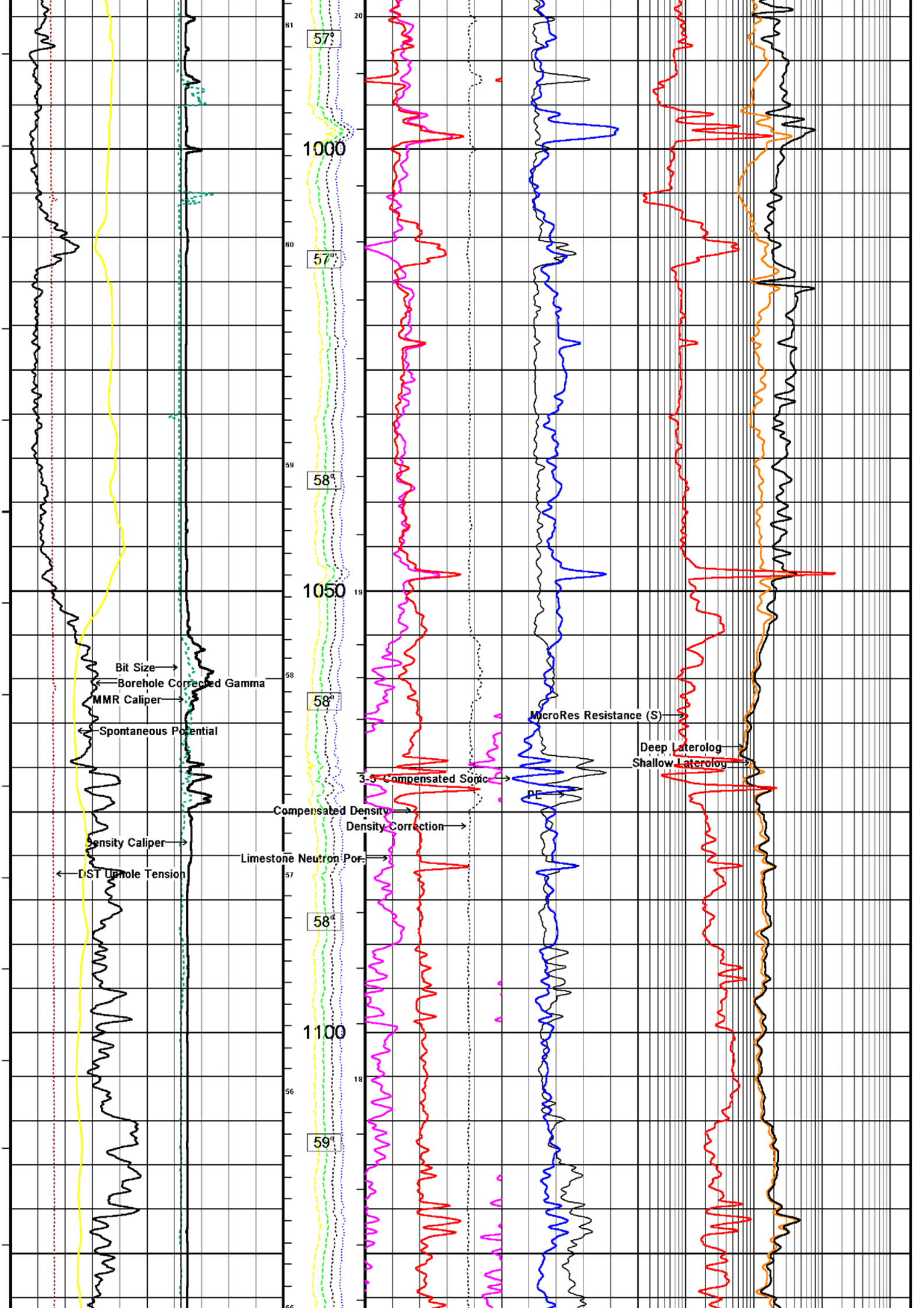
300
350
Borehole Corrected Gamma

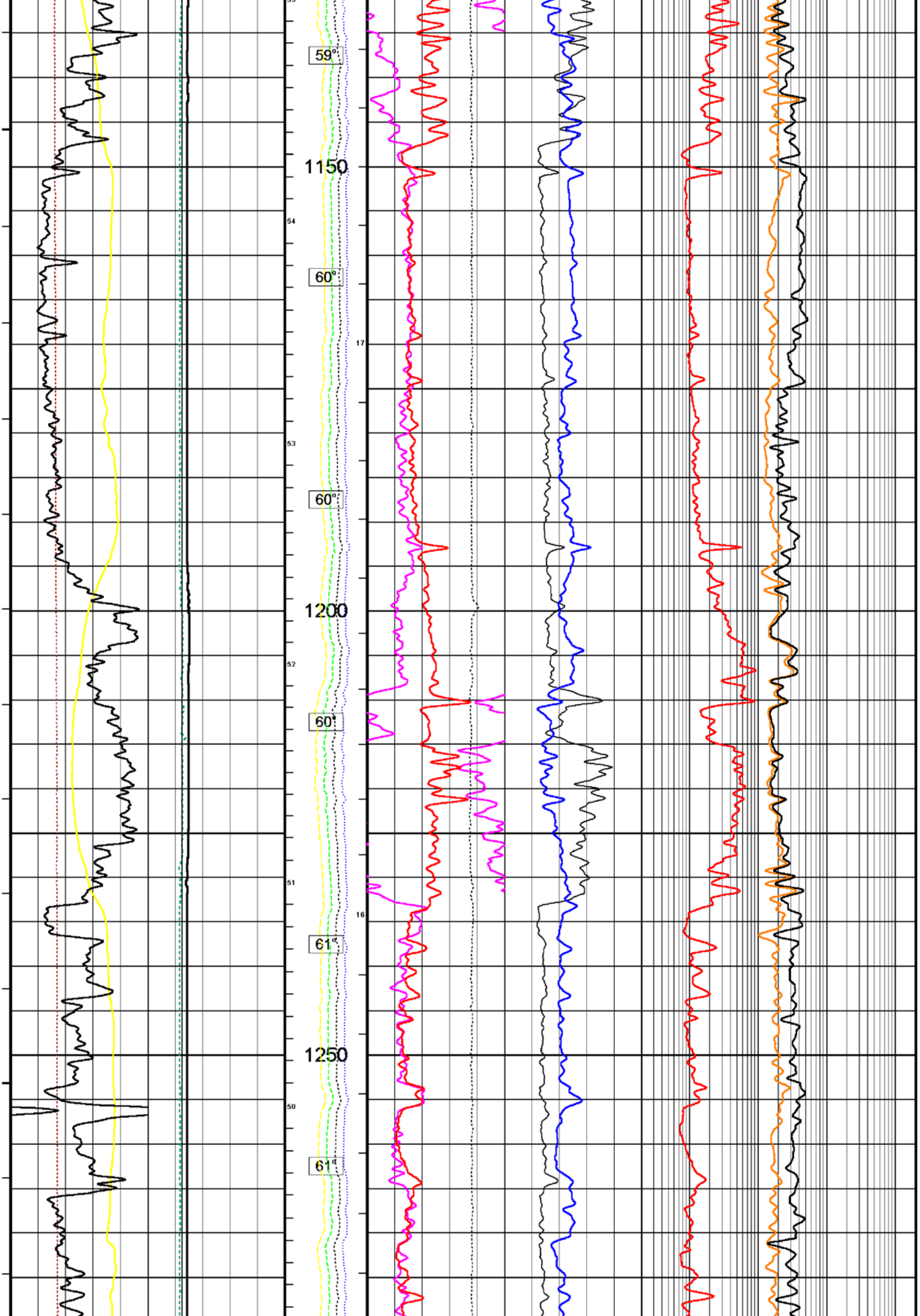

400
450
500
3
2
3
2
2
2
80
50

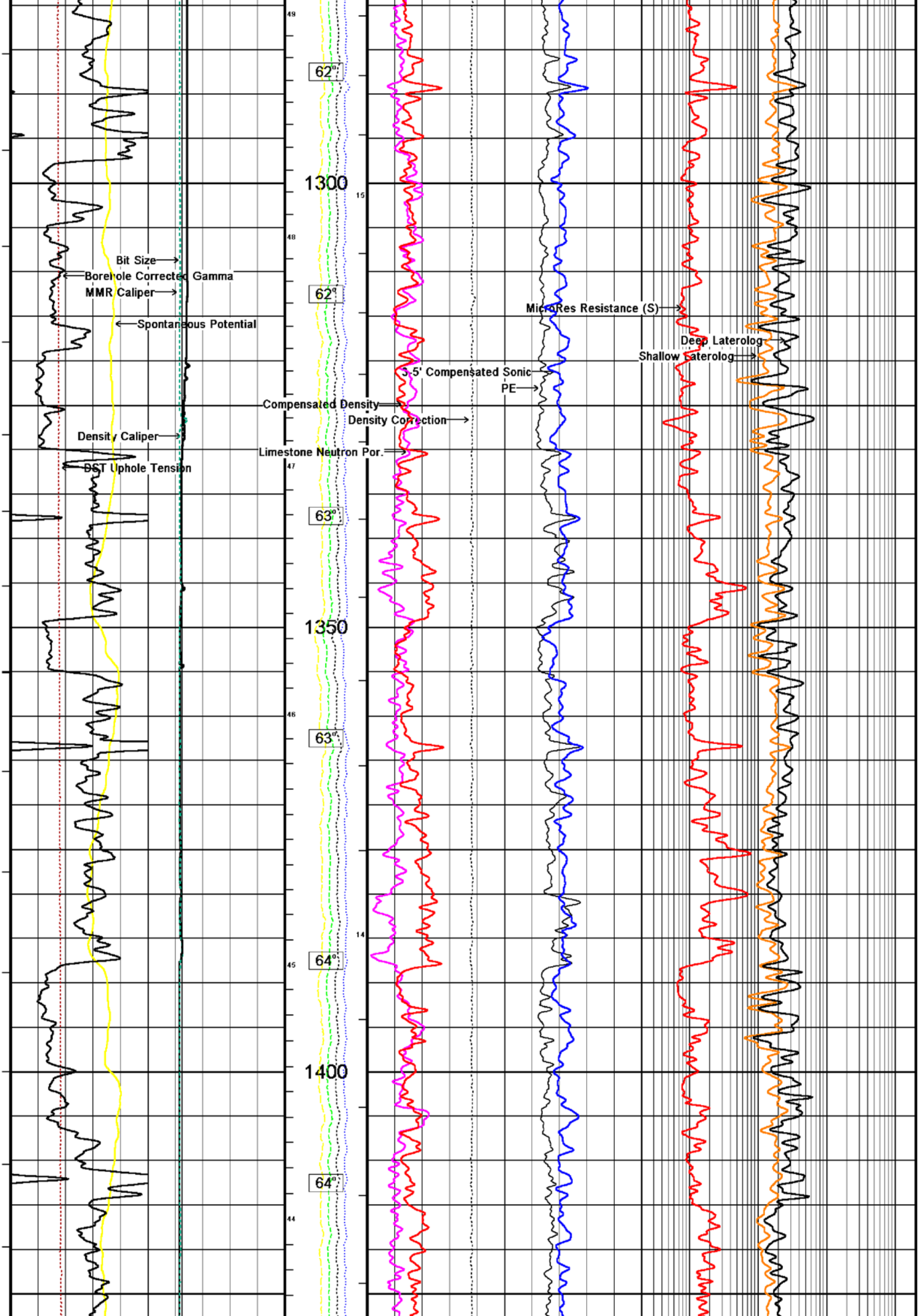

Casing Slice
550
600
650
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Limestone Neutron Por.
Density Correction
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
50°
50°
51°
51°
51°
79
77
76
75
74
27
26
25

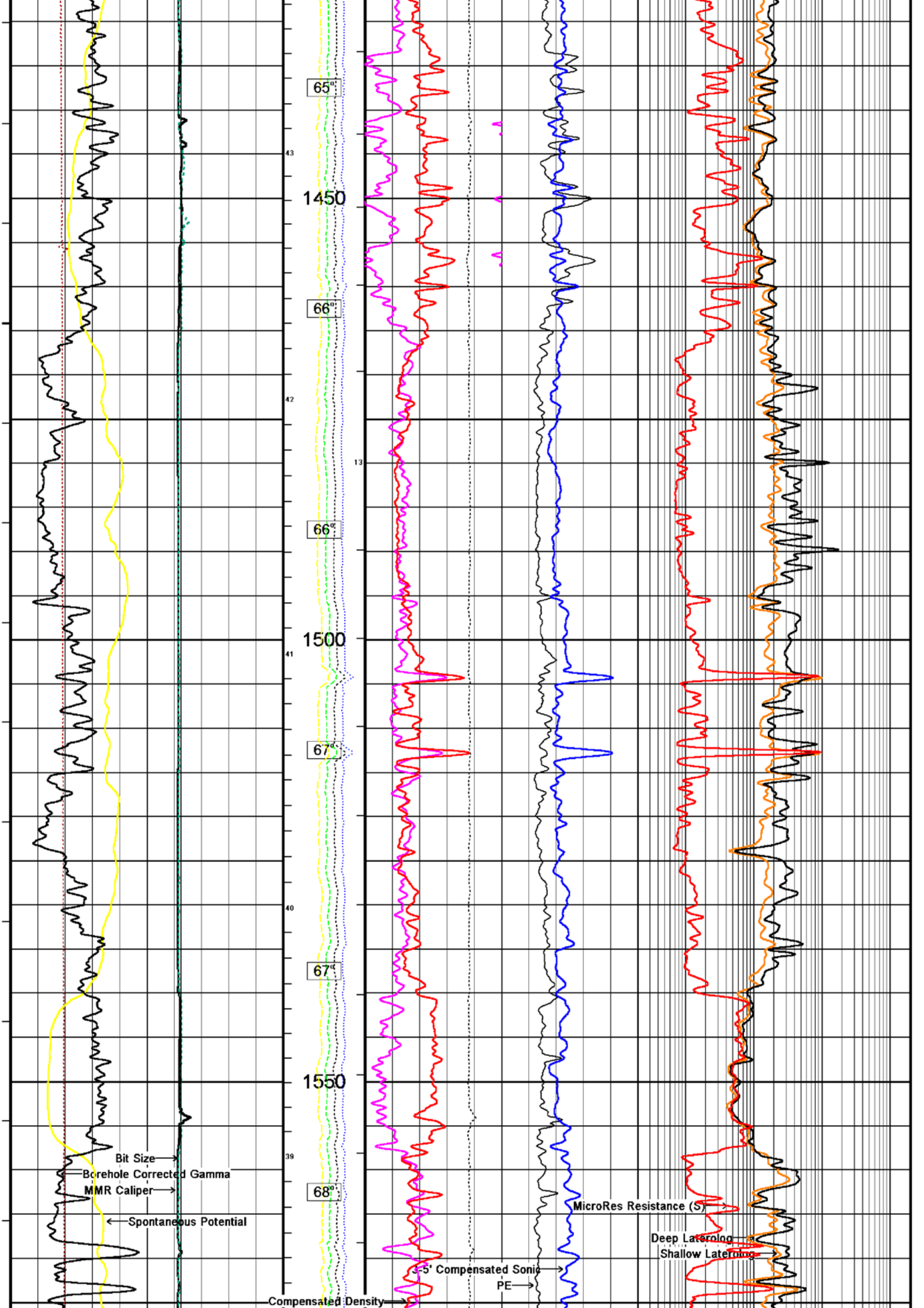

700
750
800
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog

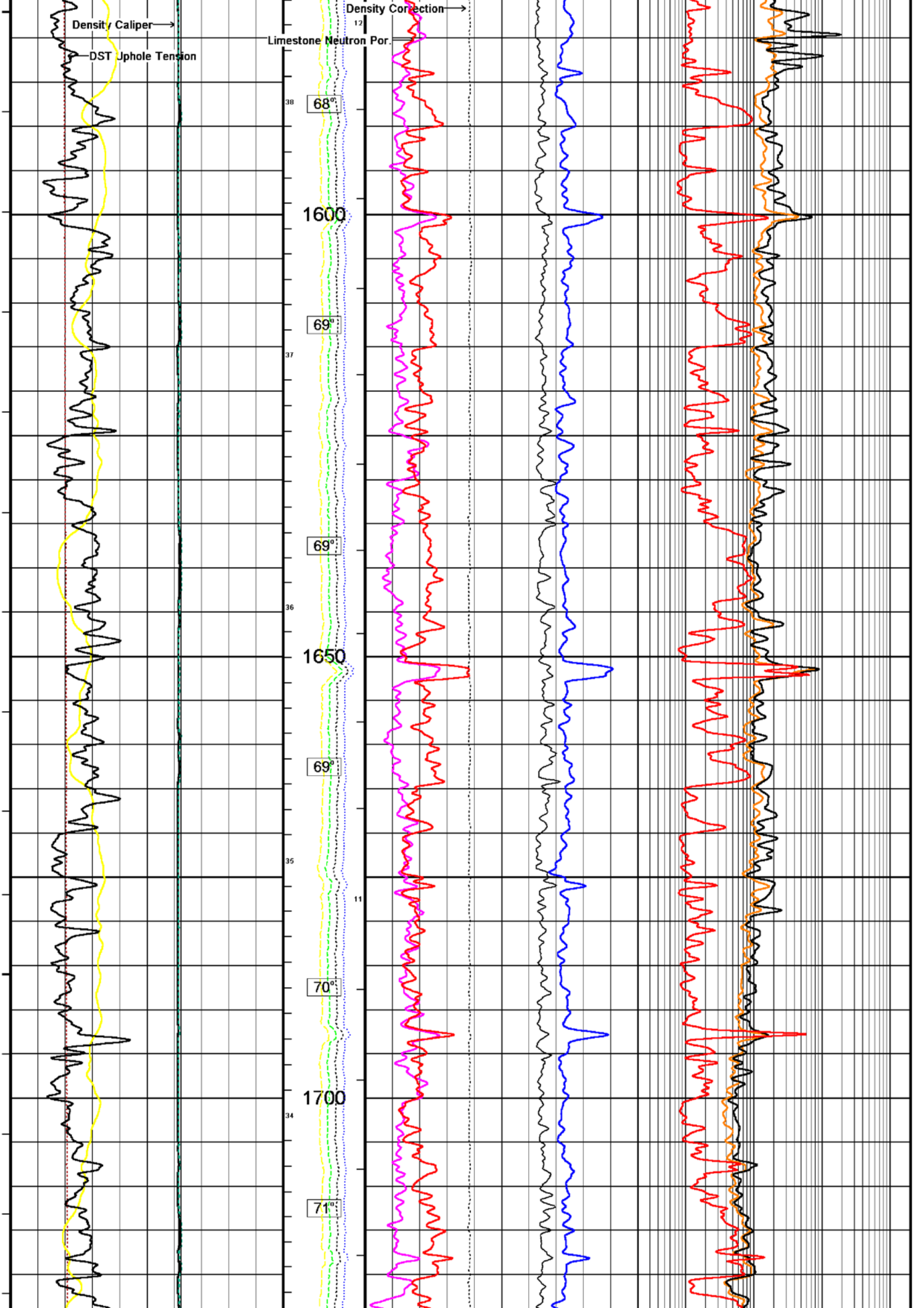

850
900
950

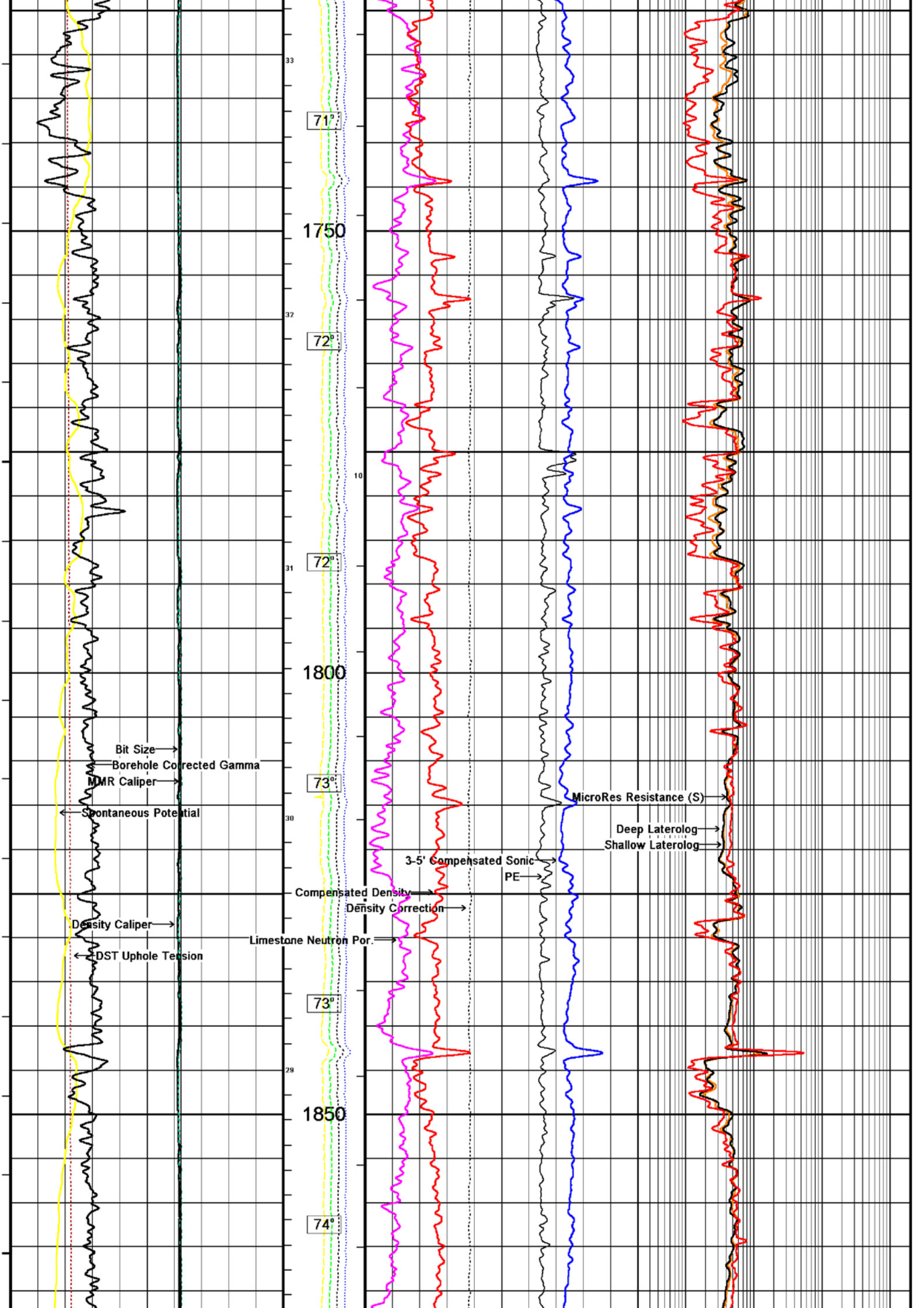

1000
1050
1100
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Sensity Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.

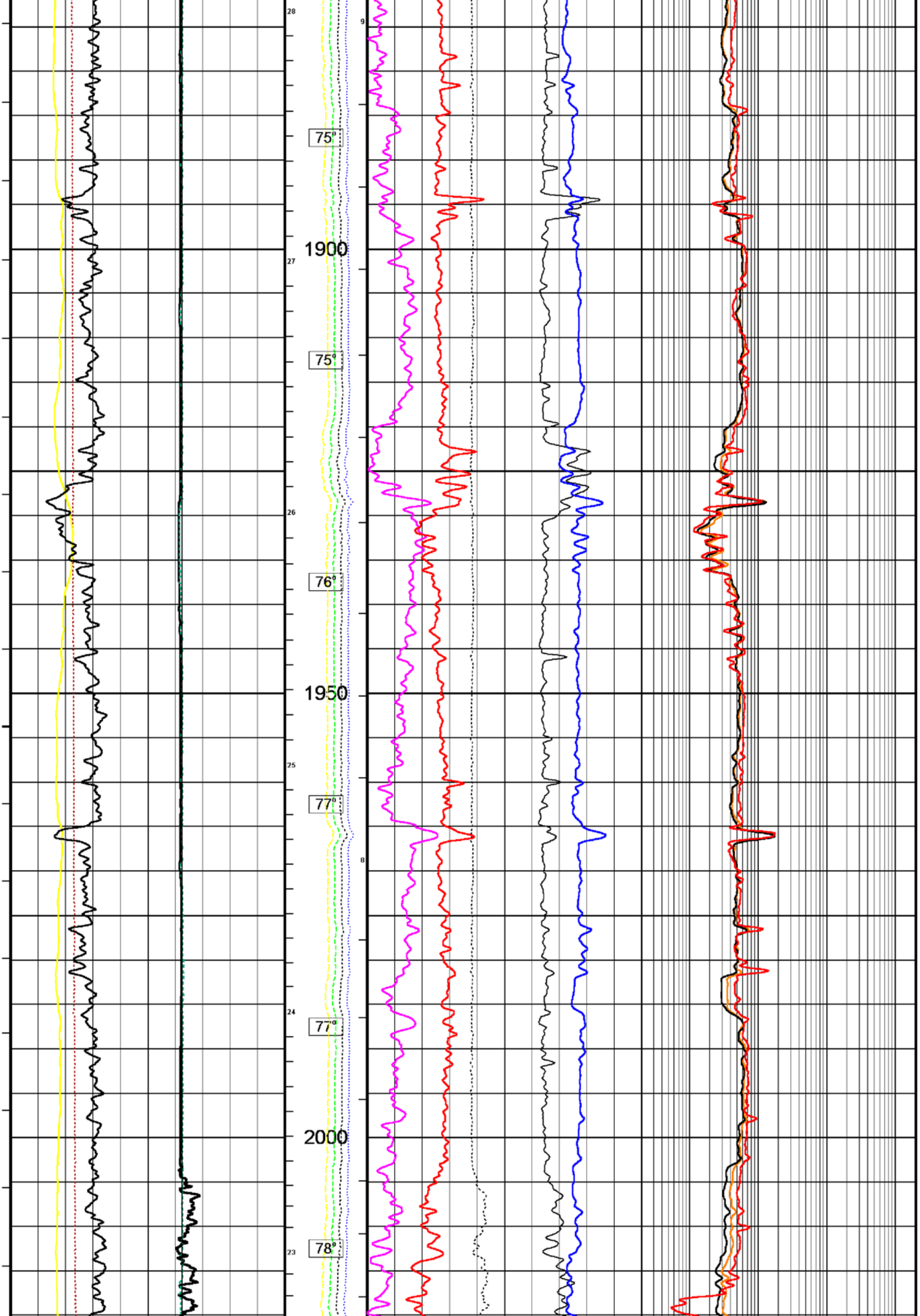

59°
1150
60°
60°
1200
60°
61°
1250
61°

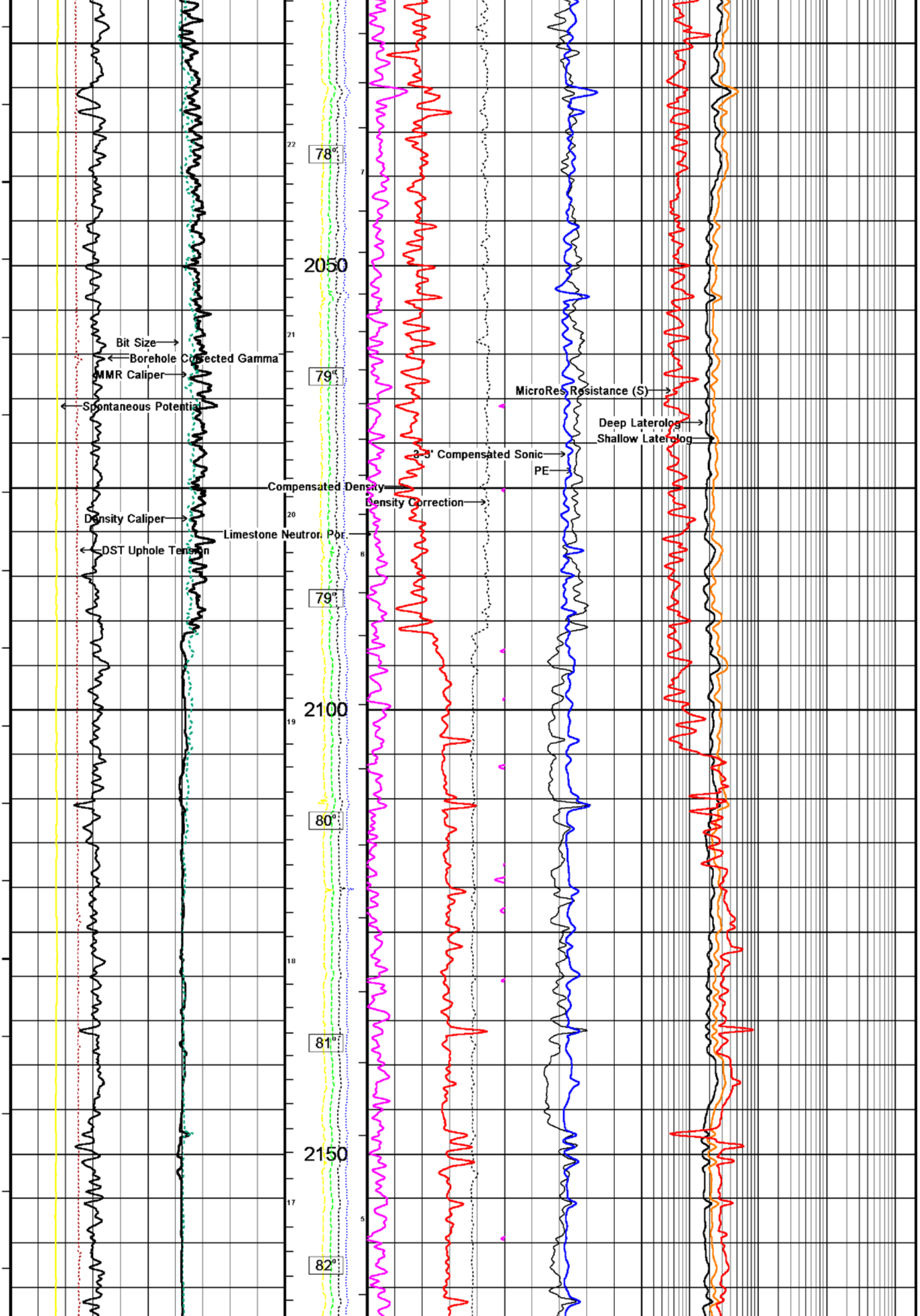

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Compensated Density
Density Correction
Limestone Neutron Por.
3.5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
62°
62°
63°
63°
64°
64°
1300
1350
1400

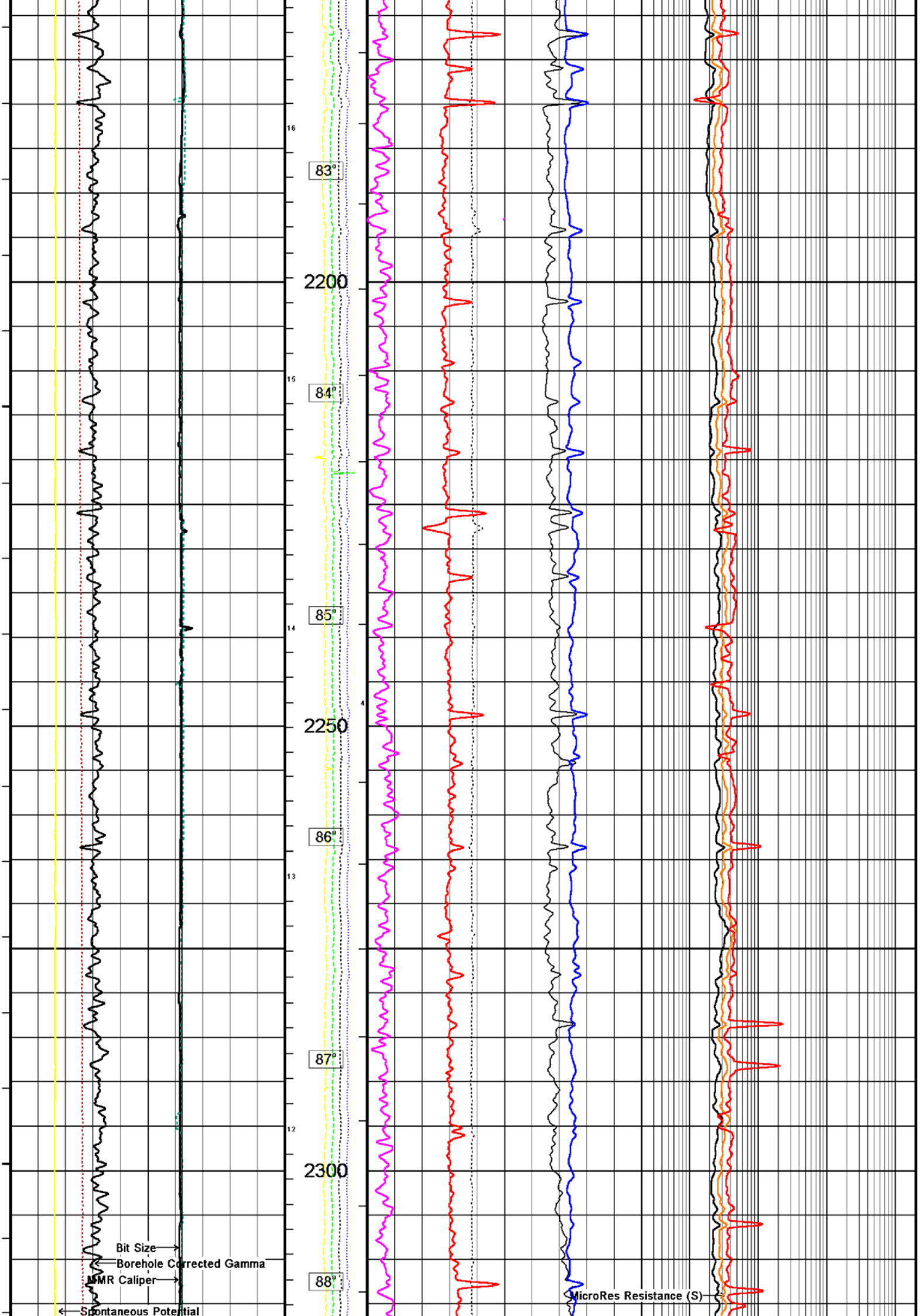

65°
1450
66°
66°
1500
67°
67°
1550
68°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density

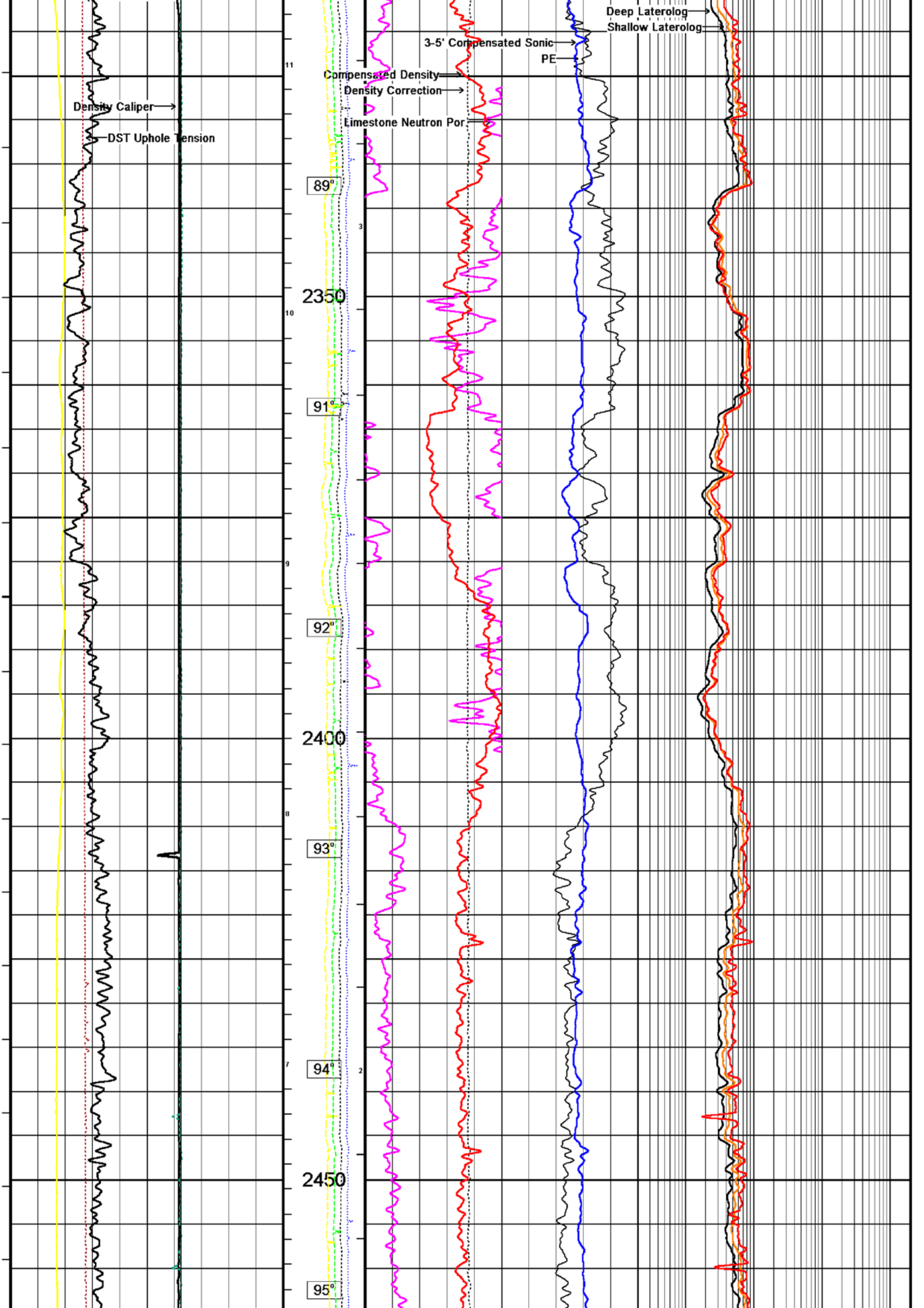

Density Caliper
DST Uphole Tension
Density Correction
Limestone Neutron Por.
38
37
36
35
34
12
11
68°
69°
69°
69°
70°
71°
1600
1650
1700

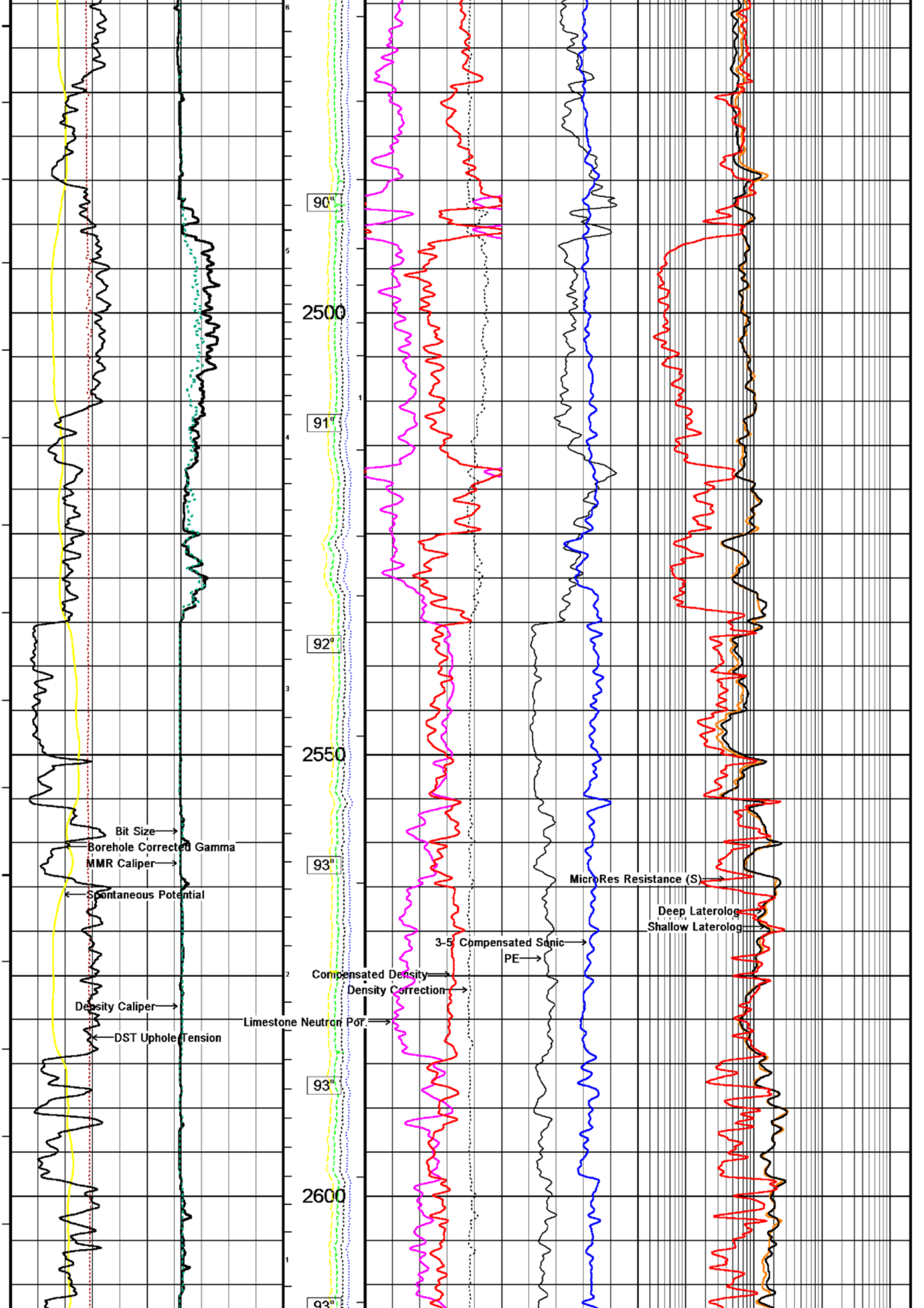

Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
1750
1800
1850
71°
72°
72°
73°
73°
74°
33
32
10
31
30
29

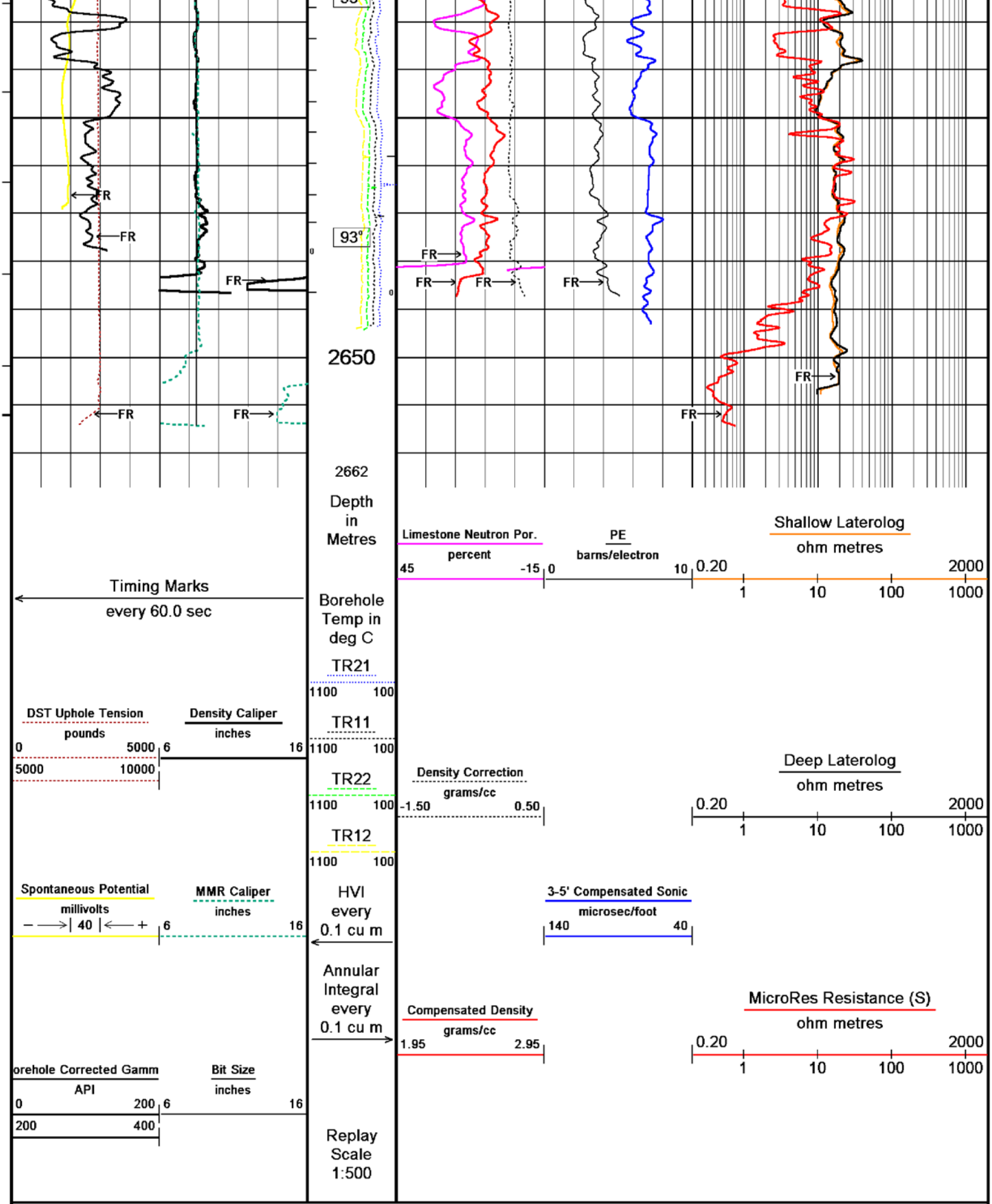

75°
1900
75°
76°
1950
77°
77°
2000
78°


Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
78°
79°
79°
80°
81°
82°
2050
2100
2150


16
83°
2200
15
84°
85°
14
2250
86°
13
87°
12
2300
88°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
MicroRes Resistance (S)


Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por
Density Caliper
DST Uphole Tension
89°
2350
91°
92°
2400
93°
94°
2450
95°


90°
2500
91°
92°
2550
93°
93°
2600
93°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
Limestone Neutron Por.
Compensated Density
Density Correction
3-5' Compensated Sonic
PE
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog



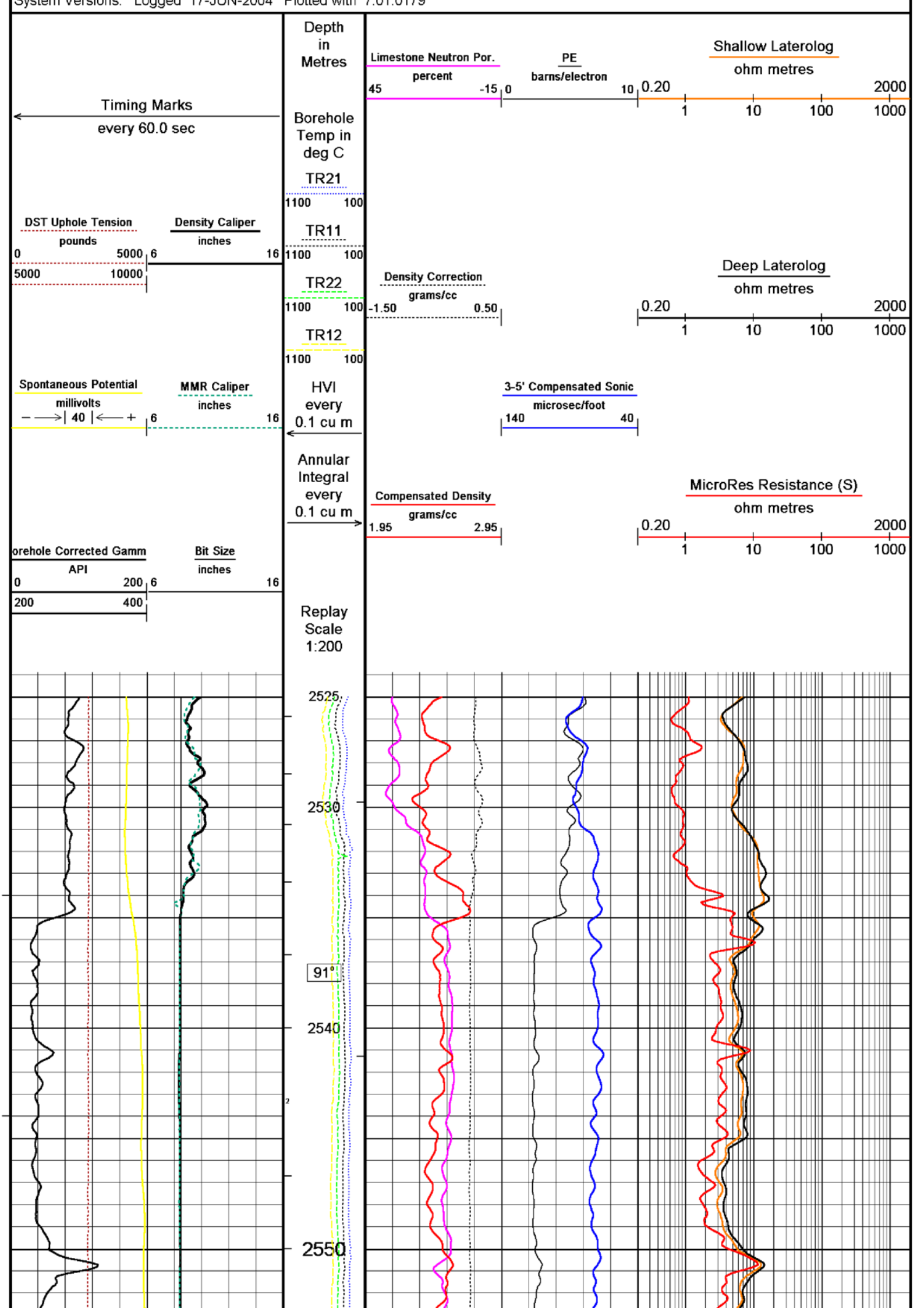
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precisi...\SUPERCOMBO_COMBINED_MAIN_LOG.dta
Recorded on 04-OCT-2005 00:45
System Versions: Plotted with 7.01.0179

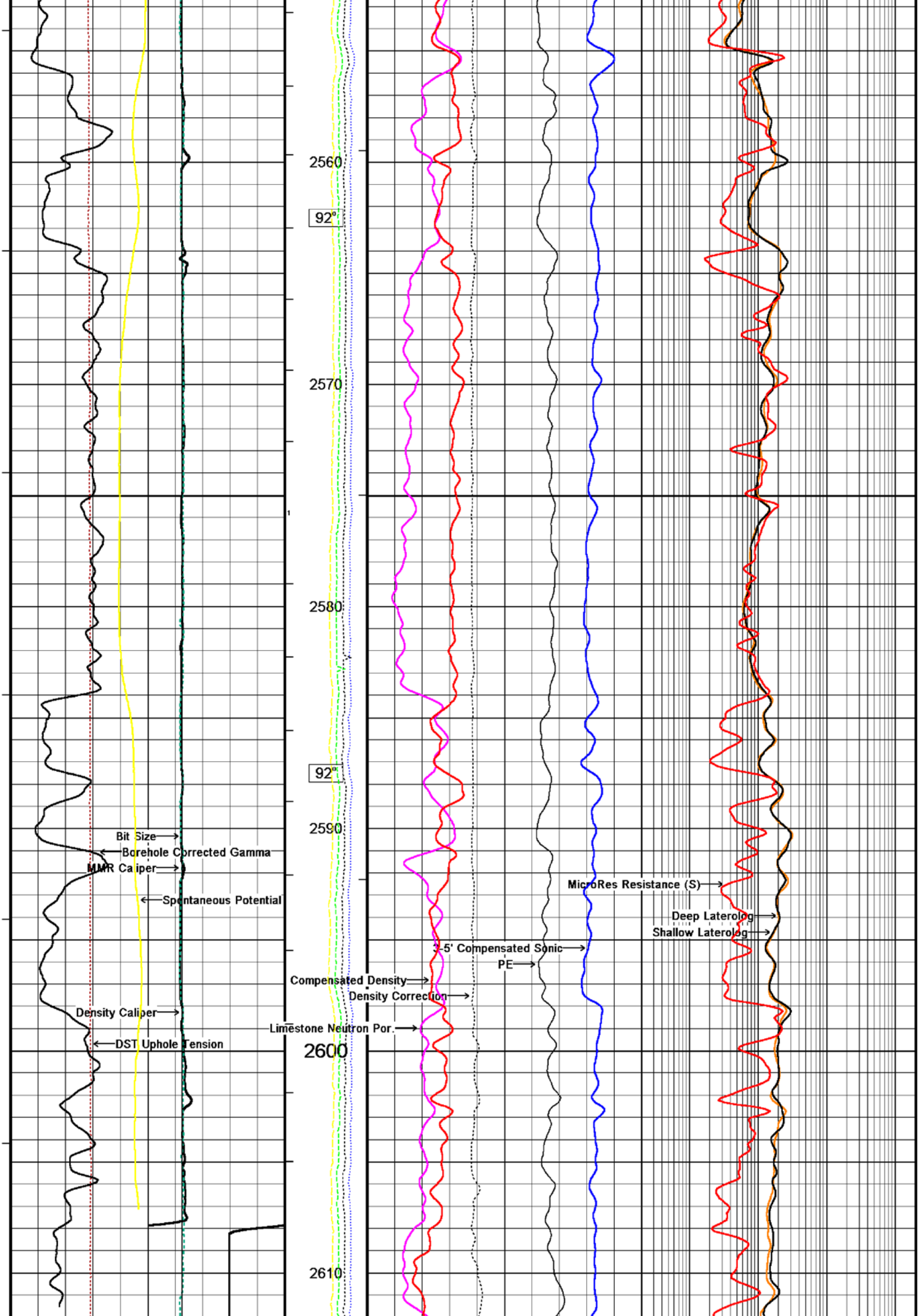
MAIN LOG 1:500

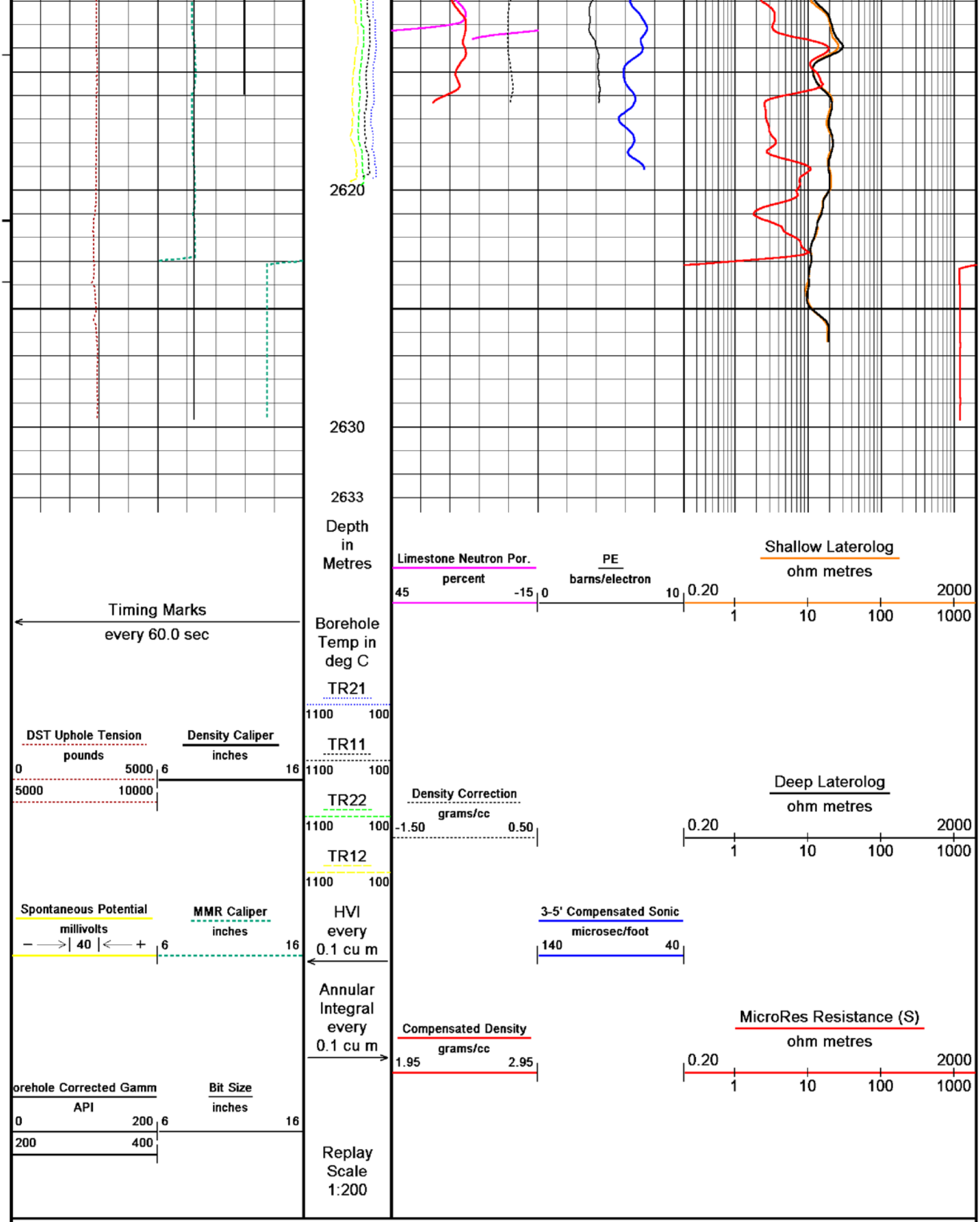
REPEAT SECTION 1:500 RUN 2

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179




2560
92°
2570
2580
92°
2590
2600
2610
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_4_002.dta
Recorded on 04-OCT-2005 00:11
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

REPEAT SECTION 1:500 RUN 2

REPEAT SECTION 1:500 RUN 1

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06

Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

Timing Marks
every 60.0 sec

Depth
in
Metres

Borehole
Temp in
deg C

TR21
1100 100

TR11
1100 100

TR22
1100 100

TR12
1100 100

HVI
every
0.1 cu m

Annular
Integral
every
0.1 cu m

Replay
Scale
1:200

DST Uphole Tension
pounds
0 5000
5000 10000

Density Caliper
inches
6 16

Spontaneous Potential
millivolts
– 40 +

MMR Caliper
inches
6 16

orehole Corrected Gamm
API
0 200
200 400

Bit Size
inches
6 16

Limestone Neutron Por.
percent
45 -15

PE
barns/electron
0 10

Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000

Density Correction
grams/cc
-1.50 0.50

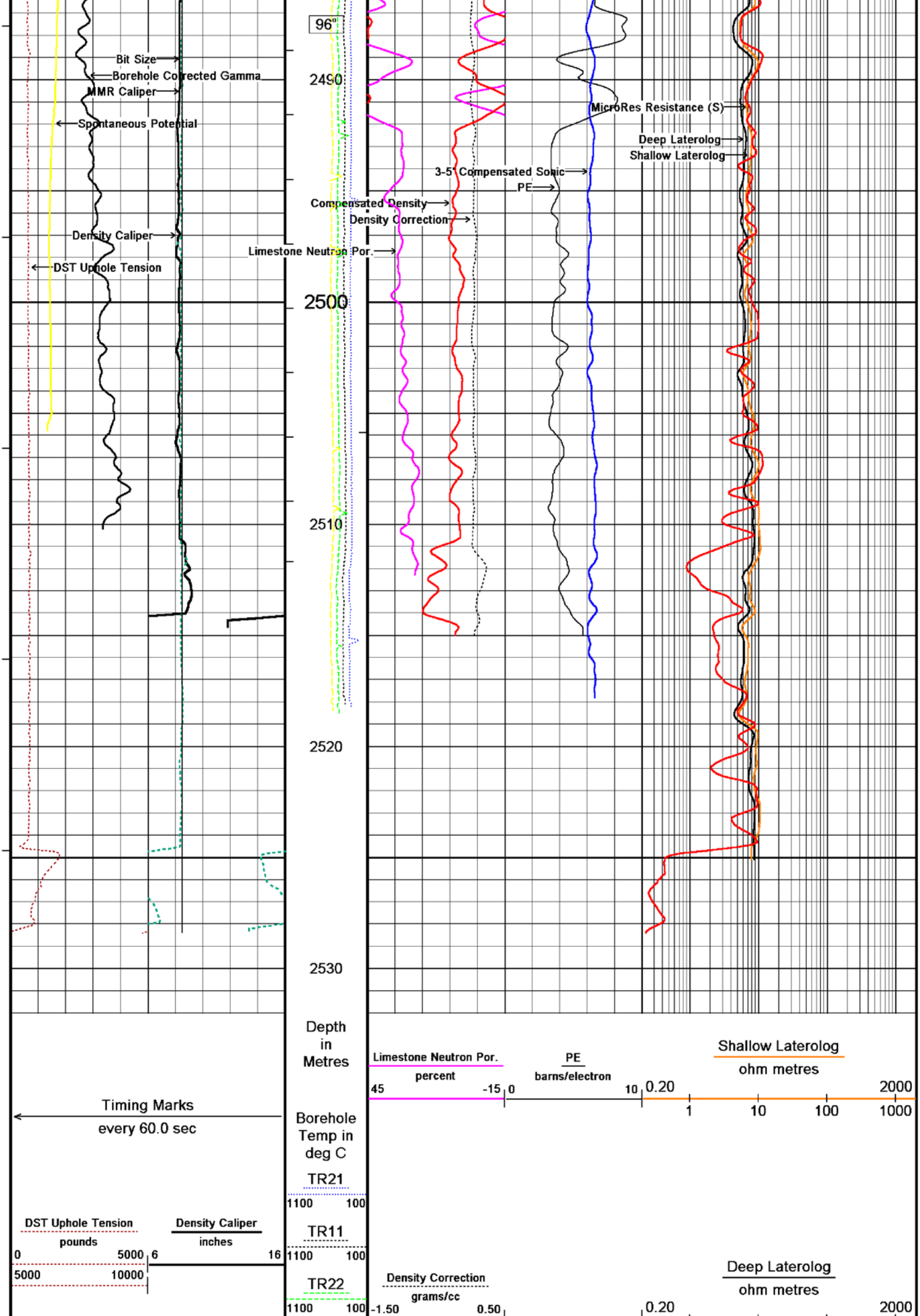
Deep Laterolog
ohm metres
0.20 2000
1 10 100 1000

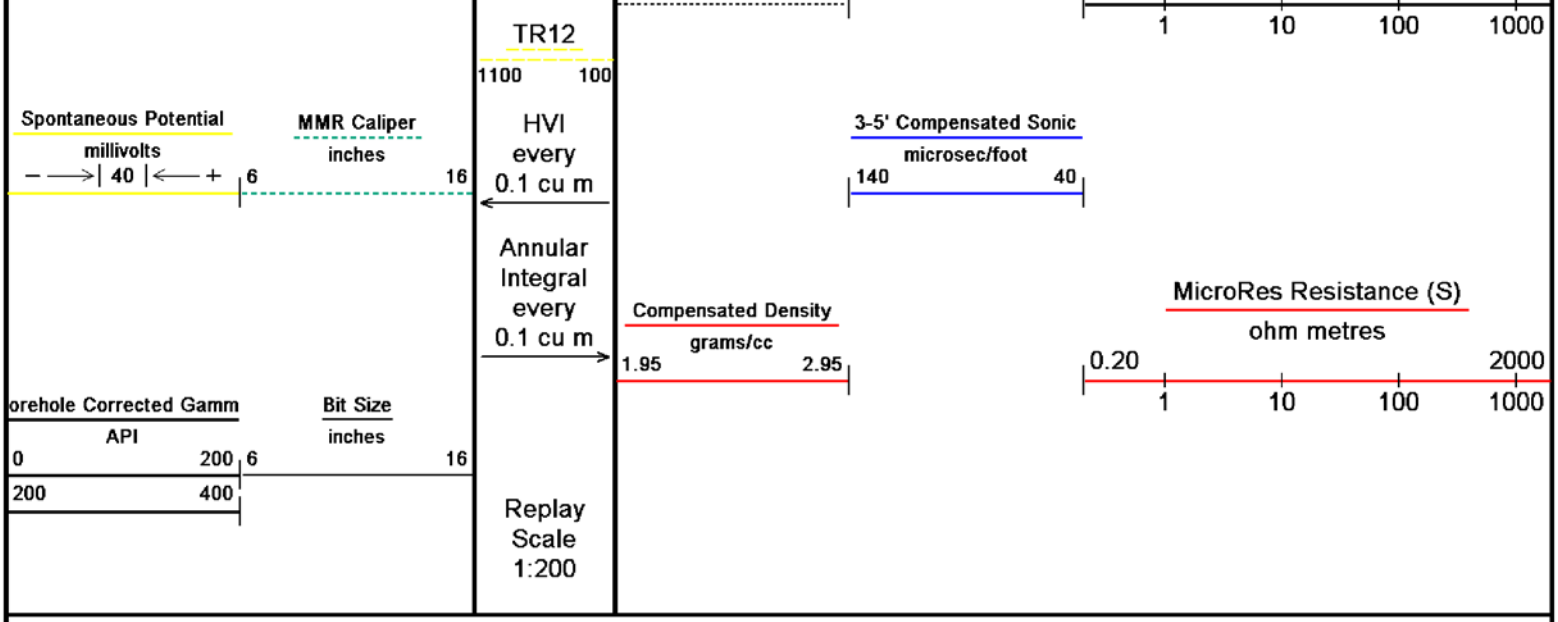
3-5' Compensated Sonic
microsec/foot
140 40

Compensated Density
grams/cc
1.95 2.95

MicroRes Resistance (S)
ohm metres
0.20 2000
1 10 100 1000

2460
95°
2470
2480


96°
Bit Size
Borehole Corrected Gamma
MMR Caliper
Spontaneous Potential
Density Caliper
DST Uphole Tension
2490
2500
2510
2520
2530
MicroRes Resistance (S)
Deep Laterolog
Shallow Laterolog
3-5' Compensated Sonic
PE
Compensated Density
Density Correction
Limestone Neutron Por.
Depth in Metres
Timing Marks
every 60.0 sec
Borehole Temp in deg C
TR21
1100 100
TR11
1100 100
TR22
1100 100
DST Uphole Tension
pounds
0 5000
5000 10000
Density Caliper
inches
6 16
Limestone Neutron Por.
percent
45 -15
PE
barns/electron
0 10
Density Correction
grams/cc
-1.50 0.50
Shallow Laterolog
ohm metres
0.20 2000
1 10 100 1000
Deep Laterolog
ohm metres
0.20 2000



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 04-NOV-2005 16:06
Filename: C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta
Recorded on 01-OCT-2005 18:14
System Versions: Logged 17-JUN-2004 Plotted with 7.01.0179

REPEAT SECTION 1:500 RUN 1

DOWNHOLE EQUIPMENT

C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO2.dta

Compact Stiff Bridle Electrode Sub.
MBE 22 Length: 3.76 m Weight: 94.8 lb

Compact Stiff Bridle Electrode Sub.
MBE 42 Length: 3.76 m Weight: 94.8 lb

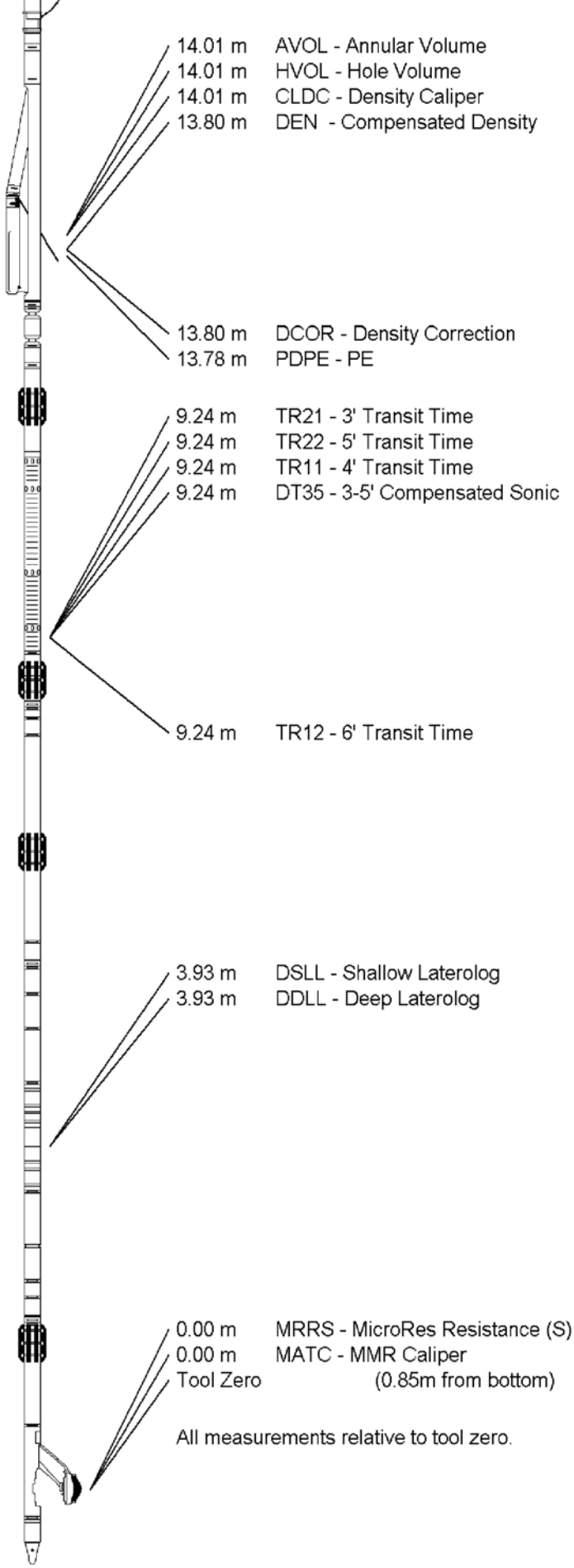
22.90 m SPDL - Spontaneous Potential

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

18.56 m GGCE - Borehole Corrected Gamma
17.67 m CGXT - MCG External Temperature

Compact Neutron
MDN 43 Length: 1.53 m Weight: 50.7 lb

16.69 m NPRL - Limestone Neutron Por.



Compact Density/Caliper
MPD 66 Length: 2.92 m Weight: 90.4 lb

Compact Knuckle Joint
SKJ 3 Length: 0.66 m Weight: 24.3 lb

Compact Sonic
MSS 49 Length: 3.82 m Weight: 72.8 lb

Compact Upper Guard Sub.
MUG 20 Length: 2.74 m Weight: 68.3 lb

Compact Laterolog Electrode Sub.
MLE 16 Length: 3.76 m Weight: 92.6 lb

Compact Micro-Resistivity
MMR 5 Length: 2.62 m Weight: 81.6 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 28.50 m Weight: 740.8 lb

BEFORE SURVEY CALIBRATION

C:\Program Files\Precision\PreView\Precision PreView\SUPERCOMBO_COMBINED_MAIN_LOG.dta

General Constants All 000 — Last Edited on 1-OCT-2005,07:46

General Parameters

Mud Resistivity	3.210	ohm-metres
Mud Resistivity Temperature	20.000	degrees C

Mud Resistivity Temperature	20.000	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	Density Caliper	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	Density Caliper	

Rwa Parameters

Porosity used	Limestone Sonic Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.610	
RWA Constant M	2.150	

Gamma Calibration MCG 098

Field Calibration on 3-OCT-2005,19:46

	Measured	Calibrated (API)
Background	29	22
Calibrator (Gross)	1029	771
Calibrator (Net)	1000	749

Gamma Constants MCG 098

Last Edited on 3-OCT-2005,20:14

Gamma Calibrator Number	30	
Mud Density	1.16	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

High Resolution Temperature Calibration MCG 098

Field Calibration on 3-OCT-2005,20:14

	Measured	Calibrated(Deg C)
Lower	0.00	0.00
Upper	100.00	100.00

High Resolution Temperature Constants MCG 098

Pre-filter Length	11

Neutron Calibration MDN 043

Base Calibration on 22-AUG-2005 15:53
Field Check on 3-OCT-2005,20:14

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3021	94	3714	110
Ratio	32.071		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1674	2333
Ratio	0.717	

Field Check

	Calibrated (cps)	
	1647	2293
Ratio	0.718	

Neutron Constants MDN 043

Last Edited on 3-OCT-2005,20:15

Neutron Source Id	NSNE-747	
Neutron Jig Number	31	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.16	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	20.00	degrees C
Mud Salinity	11.57	kppm
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Photo Density Calibration MPD 066

Base Calibration on 22-AUG-2005,12:13

Field Check on 3-OCT-2005,20:15

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	49825	17938	53111	19310
Reference 2	23308	2480	24951	2530

Field Check at Base

	918.0	1089.7

Field Check

	919.8	1086.8

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	176	793		
Reference 1	15856	49650	0.321	0.320
Reference 2	6240	23176	0.271	0.273

Field Check at Base

176.0	793.2	

Field Check

173.6	795.1	

Density Constants MPD 066

Last Edited on 3-OCT-2005,20:15

Density Source Id	NSDL250	
Nylon Calibrator Number	DNC-D-536	
Aluminium/Fe Calibrator Number	DAC-D-536	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.16	gm/cc
Mud Density Z/A Correction	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc

Matrix Density (gm/cc)	Depth (m)
2.71	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00

Caliper Calibration MPD 066

Base Calibration on 22-AUG-2005 11:11
Field Calibration on 3-OCT-2005,20:15

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	11983	4.01
2	20446	5.99
3	29120	7.98
4	37568	9.94
5	47008	12.01
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.91	8.92

Sonic Constants MSS 049

Maximum Boundary Contrast	100.00	micro-sec/ft
Fluid Transit Time	189.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	

MN3FT	0.00	micro-sec
MX3FT	1500.00	micro-sec

Fixed Gate Parameters

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (m)
0.00	0.00	0.00	
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00

Down Hole Fixed Gate Parameters

Gate Start	0.00	micro-sec
Gate Width	0.00	micro-sec
Initial Discriminator Level	0.0000	mVolts

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
3' Waveform Filter	0	
4' Waveform Filter	0	
5' Waveform Filter	0	
6' Waveform Filter	0	
Semblance Level	0.50	
Semblance Window Width	120.00	micro-sec
Sonic 1 Despiker	100.00	micro-sec/ft
Sonic 2 Despiker	100.00	micro-sec/ft

Laterolog Calibration MLE 016

Base Calibration on 24-AUG-2005 11:54
Field Check on 3-OCT-2005,20:15

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Shallow	9.7	965.7	13.3	1327.3
Deep	9.7	966.0	8.5	852.7
Groningen	9.7	966.3	8.5	852.7

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Shallow	49.4	49.4
Deep	31.7	31.7
Groningen	253.9	253.9

Laterolog Constants MLE 016

Last Edited on 31-AUG-2005,09:24

Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.3273	
Deep Laterolog K Factor	0.8527	
Groningen Laterolog K Factor	0.8527	
Interference Rejection	50 Hz	
SP Connection	SP Bridle Electrode	
Groningen Connection	None	

Borehole Correction Constants

Stand-off	0	
Caliper Source	0	
Hole Size	0.000	0
Mud Resistivity Source	0	
Temp. for Rm Corr.	0	

SP Calibration MLE 016

Field Calibration on 3-OCT-2005,20:16

	Measured	Calibrated (mV)
Reference 1	93.1	100.0
Reference 2	-114.1	-100.0

Micro Laterolog Calibration MMR 005

Base Calibration on 24-AUG-2005 09:35
Field Check on 3-OCT-2005,20:16

Base Calibration

	Measured		Calibrated (ohm-m)	
	Ref 1	Ref 2	Ref 1	Ref 2

0.0	9744.7	0.0	196.0

Base Check (ohm-m)	Field Check (ohm-m)
8.1	8.0

Micro Laterolog Constants MMR 005 — Last Edited on 4-SEP-2005,19:44

Micro Laterolog K Factor	0.0196	
Standoff Offset	0.0000	inches
Borehole Correction Constants		
Mud Cake Source	0	
Mud Cake Thickness	0.0000	0
Mud Cake Thickness Caliper	0	
Mud Cake Resistivity	0.0000	ohm-m

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2656.80	metres
Elevation Drill Floor		metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2656.80	metres

PRECISION ENERGY SERVICES

DLL - SLL - MLL - SONIC

DENSITY - NEUTRON

1:500

APPENDIX 6

PRESSURE SURVEY

Origin Energy

FMT PRESSURE SURVEY

(Preliminary Field Data)

WELL: Childers Cove 1 R.T.: 51.47m TOOL AND GAUGE TYPE:

WITNESS: S.Porter TIME SINCE LAST CIRC.: PROBE / PACKER: DATE: 04/10/05

TEST	FORMATION/ UNIT SANDS	DEPTH R.T.	DEPTH S.S	EXPECT. FORM PRESS. (original)	EXPECT TEMP.	FILE NO.	TEST RESULTS					INTERPRETATION			COMMENTS (all drawn downs 20cc)
							HYDR. BEFORE	FORM. PRESS	HYDR. AFTER	TEMP.	DRAW D. MOBILITY	TYPE D/D	TYPE BUILDUP	DEPLET S/C	
		M	M	PSIA	°C		PSIA	PSIA	PSIA	°C	MD/CP				
	Waarre C														
1	Waarre C	2535.7	-2484.2	3605	93.5			3569.0							Good Test
2	Waarre C	2546.2	-2494.7	3620	93.7			3583.7							Good Test
3	Waarre C	2554.5	-2503.0	3632	94.0			3595.5							Good Test
5	Waarre C	2562.4	-2510.9	3643	94.2			3616.0							S/C ?
	Waarre A														
6	Waarre A	2585.6	-2534.1	3677	94.8			3615.4							Tight
7	Waarre A	2589.9	-2538.5	3683	94.9										Tight
8	Waarre A	2593.4	-2542.0	3688	95.0										Tight
9	Waarre A	2596.7	-2545.2	3693	95.1										Tight
10	Waarre A	2594.2	-2542.8	3690	95.0										Tight
11	Waarre A	2587.2	-2535.7	3679	94.9										Tight
12	Waarre A	2612.1	-2560.6	3715	95.5										Tight
12	Waarre A	2590.5	-2539.0	3684	94.9										Tight
13	Waarre A	2611.9	-2560.4	3715	95.5										Tight
14	Waarre A	2616.8	-2565.3	3722	95.7										Tight
15	Waarre A	2617.1	-2565.6	3723	95.7										Tight

A total of 15 pressure tests were attempted with the MFT tool, with the following results: 3 good, 10 curtailed (tight/low permeability) and 1 (?) supercharged.

ANTICIPATED GEOTHERMAL GRADIENT:
ANTICIPATED WATER GRADIENT: 1.427psi/m (Mylor Waarre)
MUD WEIGHT / GRADIENT: 1.16 g/cc-1.67 psi/m

DRAWDOWN
BUILD UP

NORMAL: PRESSURE DOES NOT DROP TO ZERO
LIMITED: PRESSURE DROPS TO ZERO
TYPES: IMMEDIATE-RAPID-GOOD-SLOW

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FIELD PRINT**

LSD	SEC	TWP	RGE	Other Services
				MCG-MPD-MDN MMR-MDL-MSS

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 50 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:

KB	51.50	metres
DF	51.50	metres
GL	46.20	metres

Date	04-Oct-2005			
Run Number	THREE			
Depth Driller	2658.00	metres		
Depth Logger	2557.50	metres		
First Reading	2554.50	metres		
Last Reading	2535.70	metres		
Casing Driller	544.50	metres		
Casing Logger	544.20	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/PHPA/POL			
Density / Viscosity	1.15 g/c3	59.00 CP		
PH / Fluid Loss	8.60	4.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.65 @ 13.9	ohm-m		
Rmf @ Measured Temp	1.06 @ 13.9	ohm-m		
Rmc @ Measured Temp	0.53 @ 14.1	ohm-m		
Source Rmf / Rmc	FILTER	PRESS		
Rm @ BHT	0.09 @ 95.5	ohm-m		
Time Since Circulation	32 HOURS			
Max Recorded Temp	95.50	deg C		
Equipment Name	MFT			
Equipment / Base	8	SALE		
Recorded By	G. MCMANUS, B.MOSS			
Witnessed By	BRIAN WEB			
CIRC. STOP	13:00 3/10			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MCG, MFT RAN IN COMBINATION.
4) HARDWARE: MFT: 2 X BOWSPRING CENTRALISERS
MCG: 1 X BOWSPRING CENTRALISERS
5) SERVICE ORDER: 2072
6) RIG:CENTURY 7
7) DUE TO FAILURE OF PRIMARY MFT 8, MFT 17 USED IN PLACE. THIS LOG DISPLAYS MFT 8 DATA ONLY.

MFT / RFS - QUARTZ TEST SUMMARY

Test No.	Depth metres	TVD metres	Hyd Pres Before psig	Drawdown Pressure 1 psig	Drawdown Pressure 2 psig	Final Shut-in Pressure psig	Hyd Pres After psig	Mobility 1 md/cp	Mobility 2 md/cp	Remarks
1	2535.71	2535.71	4254.98	0.00	0.00	3569.04	4254.87	0.000	0.000	GOOD TEST
2	2546.21	2546.21	4272.13	0.00	0.00	3583.74	4271.96	0.000	0.000	GOOD TEST
3	2554.50	2554.50	4285.37	0.00	0.00	3595.53	4284.86	0.000	0.000	GOOD TEST

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

GAMMA PASS 2 @ 2570 m

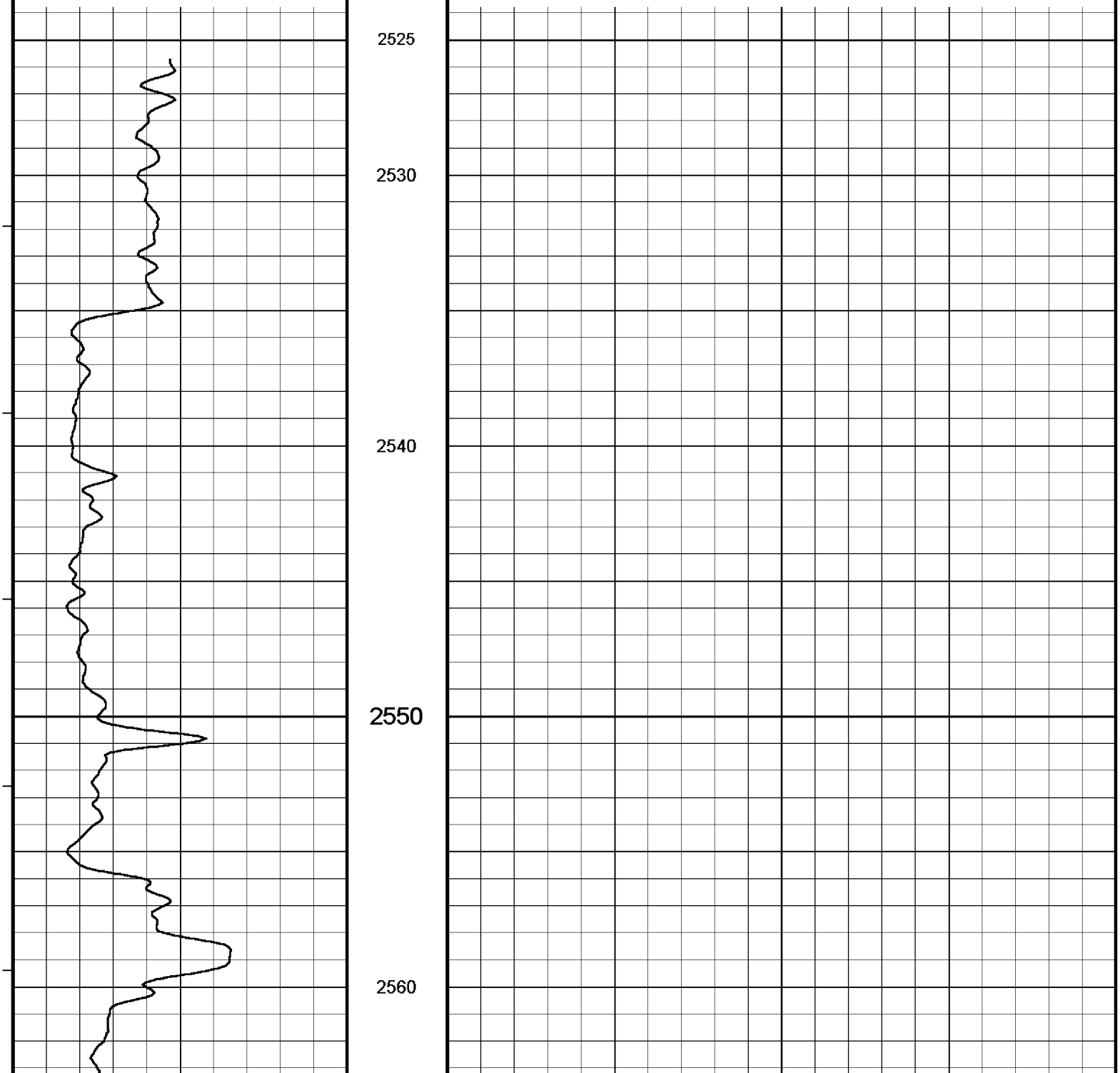
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098_2.dta
Recorded on 05-OCT-2005 00:01
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

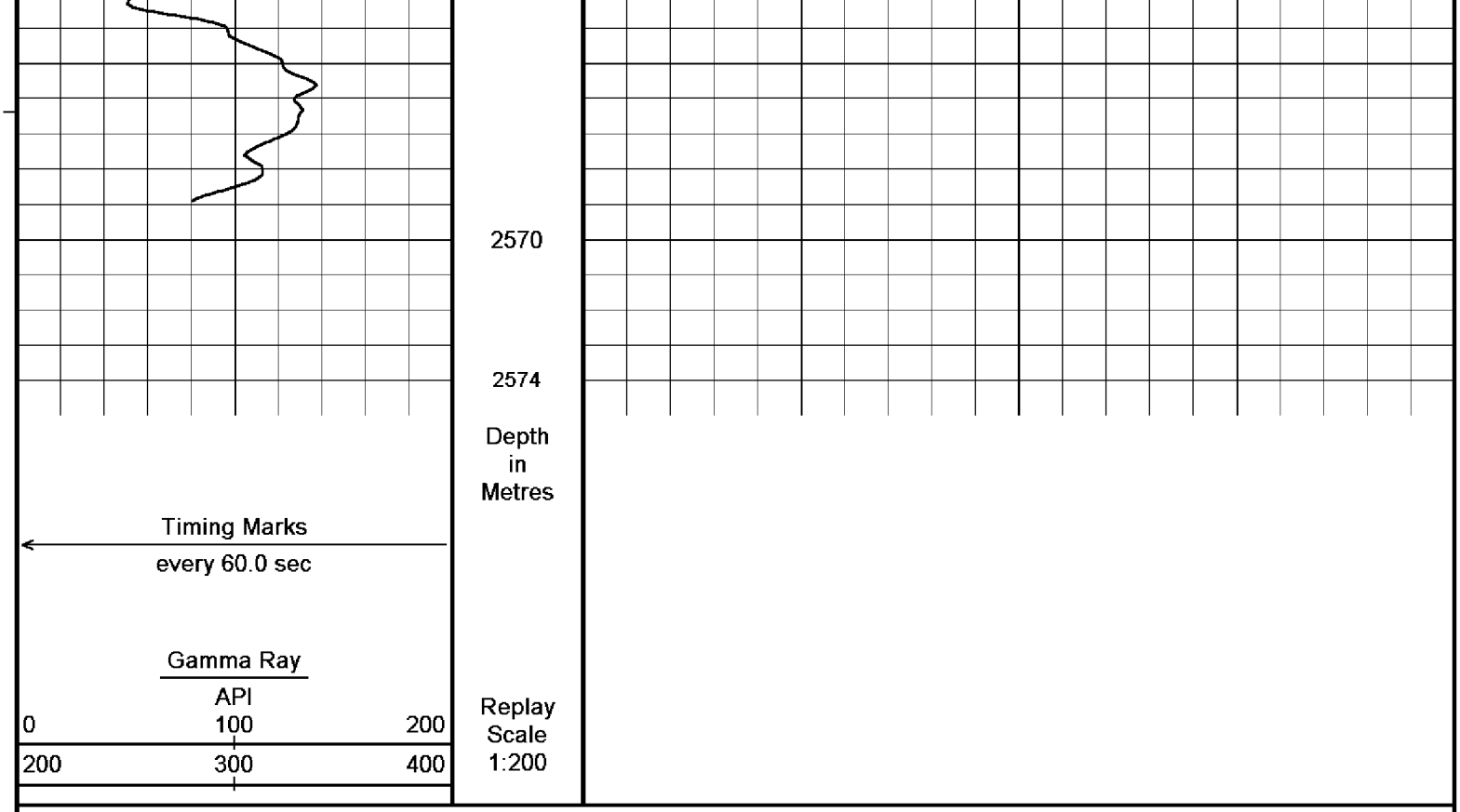
Timing Marks
every 60.0 sec

Gamma Ray
API
0 100 200
200 300 400

Depth in Metres

Replay Scale 1:200



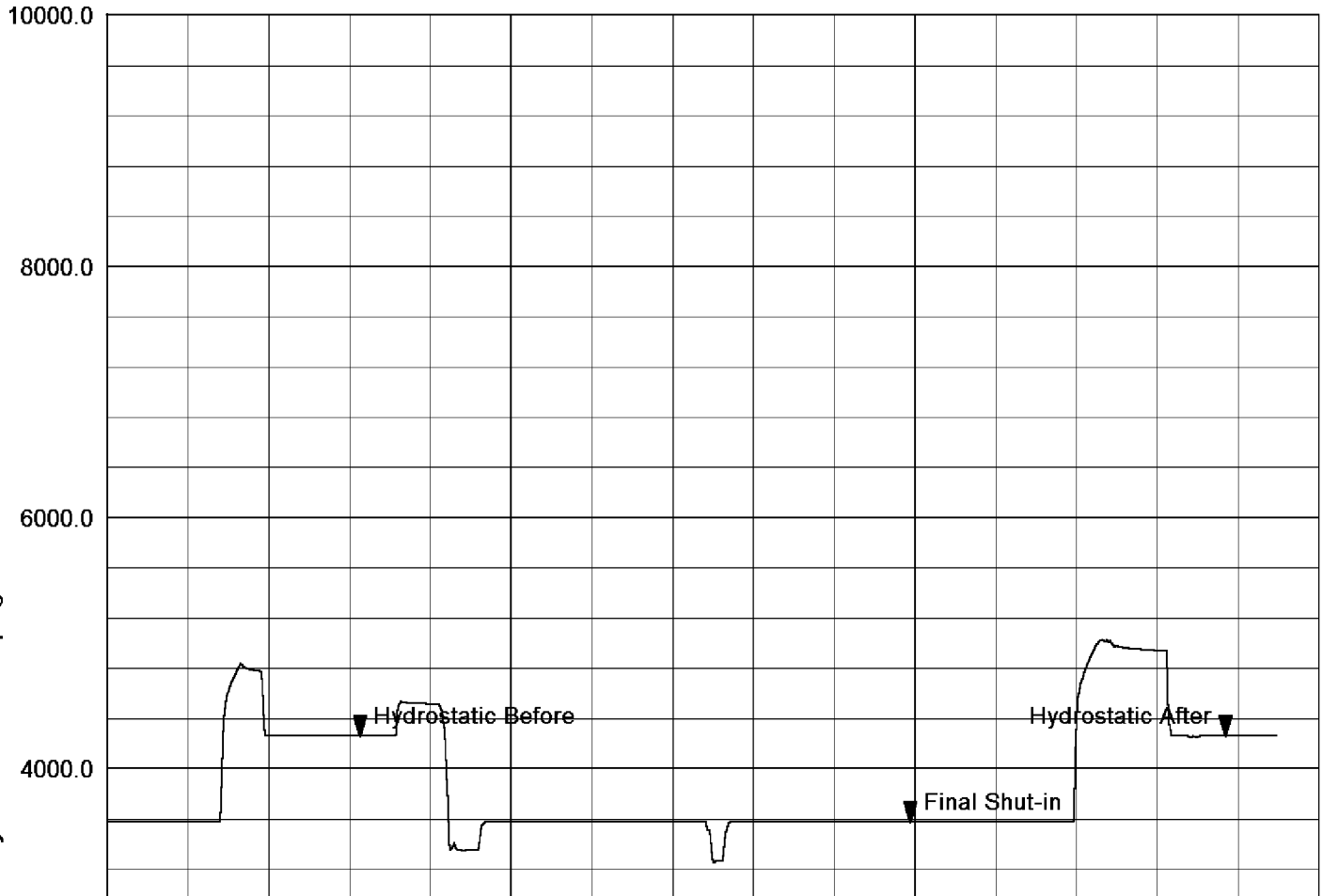


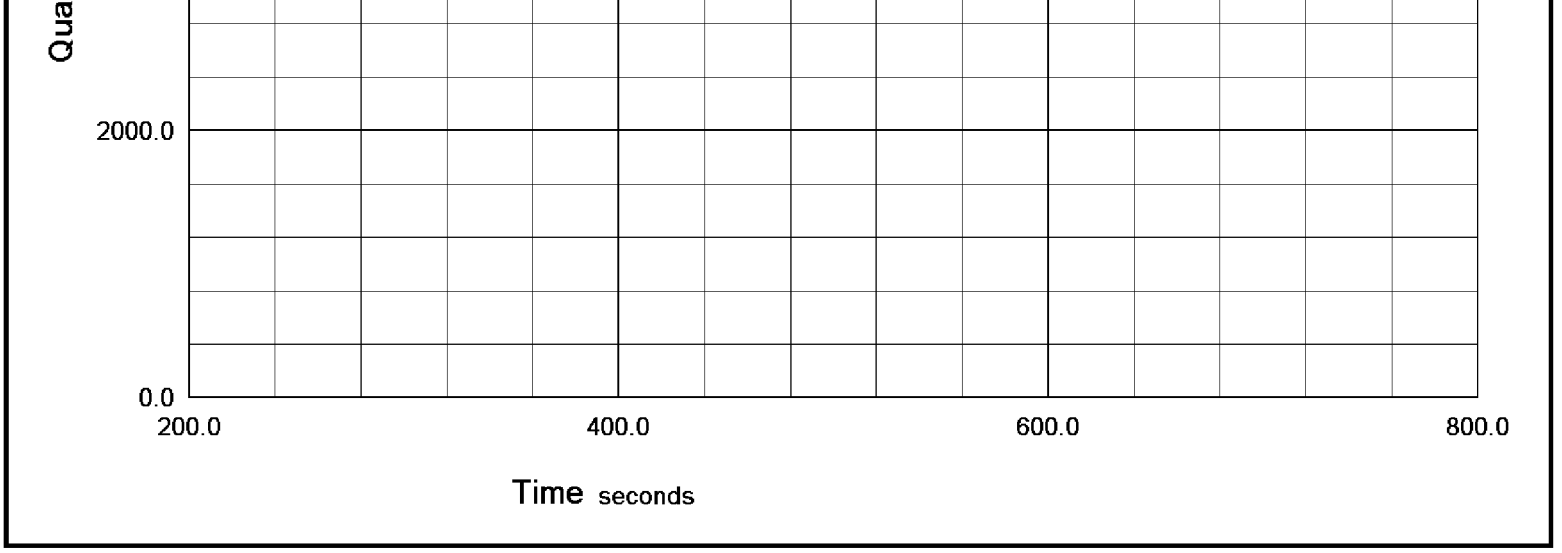
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098_2.dta
Recorded on 05-OCT-2005 00:01
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

GAMMA PASS 2 @ 2570 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_6A.dta
File Date: 04-OCT-2005 21:27:46
Run Id: Pretest 1 at 2535.71 m
Test Number: 1





Pretest 1 at 2535.71 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta
Recorded on 04-OCT-2005 21:25
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

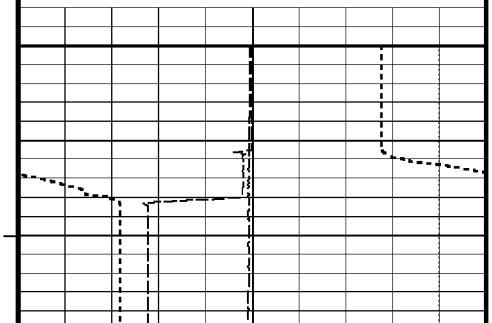
MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

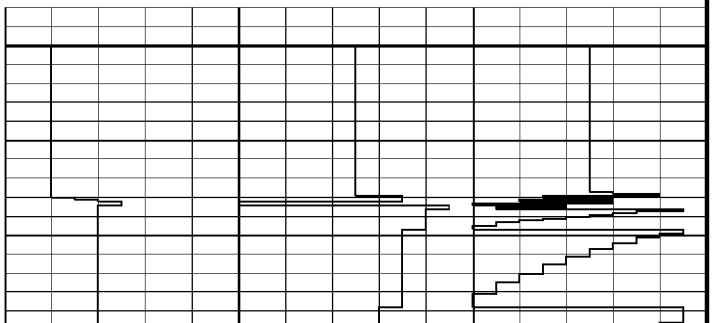
Quartzdyne Pressure
psi
0 1500 3000

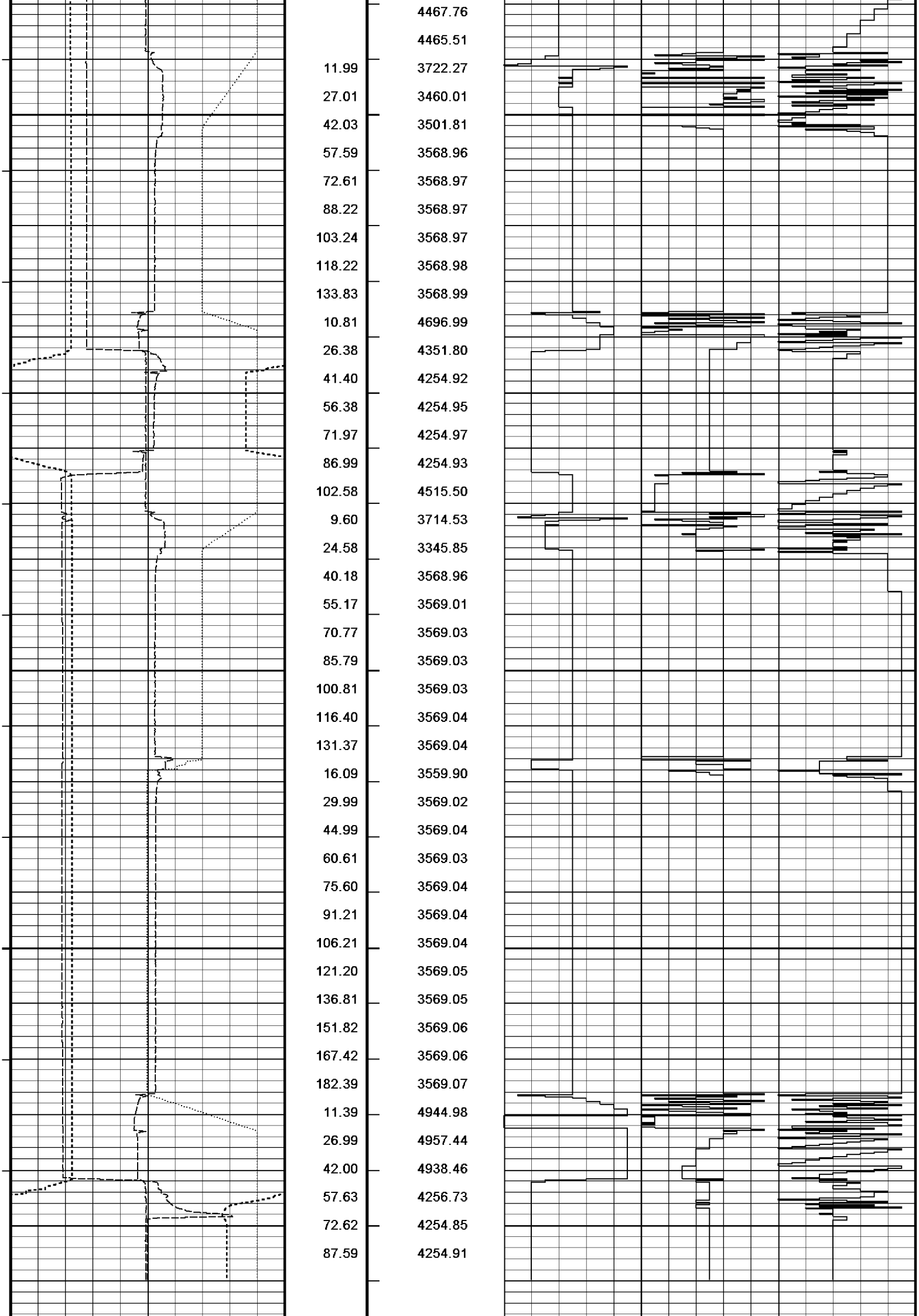
Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

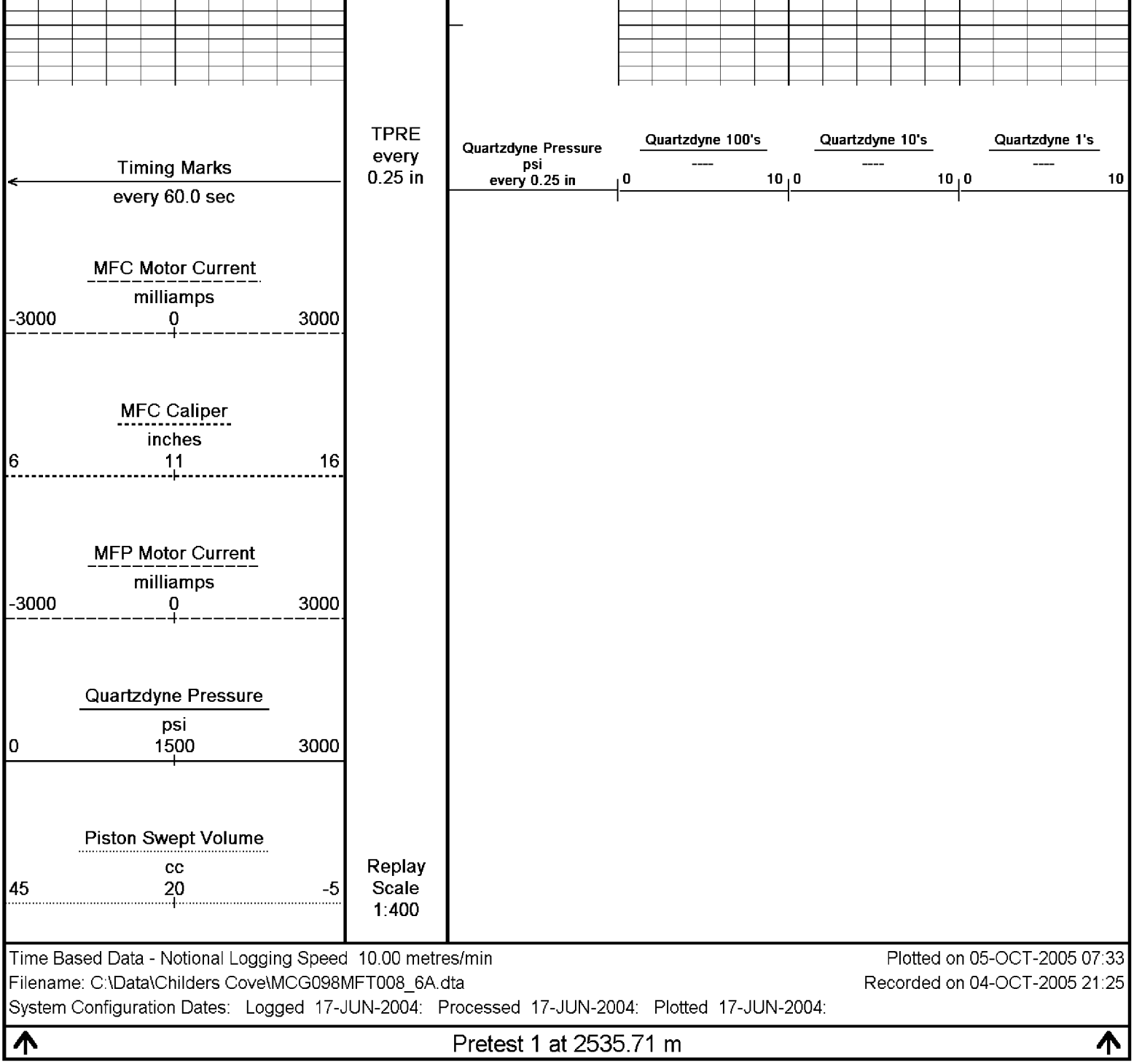


4255.34
4255.21
4255.23
4472.74
4476.23
4470.96





	4467.76
	4465.51
11.99	3722.27
27.01	3460.01
42.03	3501.81
57.59	3568.96
72.61	3568.97
88.22	3568.97
103.24	3568.97
118.22	3568.98
133.83	3568.99
10.81	4696.99
26.38	4351.80
41.40	4254.92
56.38	4254.95
71.97	4254.97
86.99	4254.93
102.58	4515.50
9.60	3714.53
24.58	3345.85
40.18	3568.96
55.17	3569.01
70.77	3569.03
85.79	3569.03
100.81	3569.03
116.40	3569.04
131.37	3569.04
16.09	3559.90
29.99	3569.02
44.99	3569.04
60.61	3569.03
75.60	3569.04
91.21	3569.04
106.21	3569.04
121.20	3569.05
136.81	3569.05
151.82	3569.06
167.42	3569.06
182.39	3569.07
11.39	4944.98
26.99	4957.44
42.00	4938.46
57.63	4256.73
72.62	4254.85
87.59	4254.91

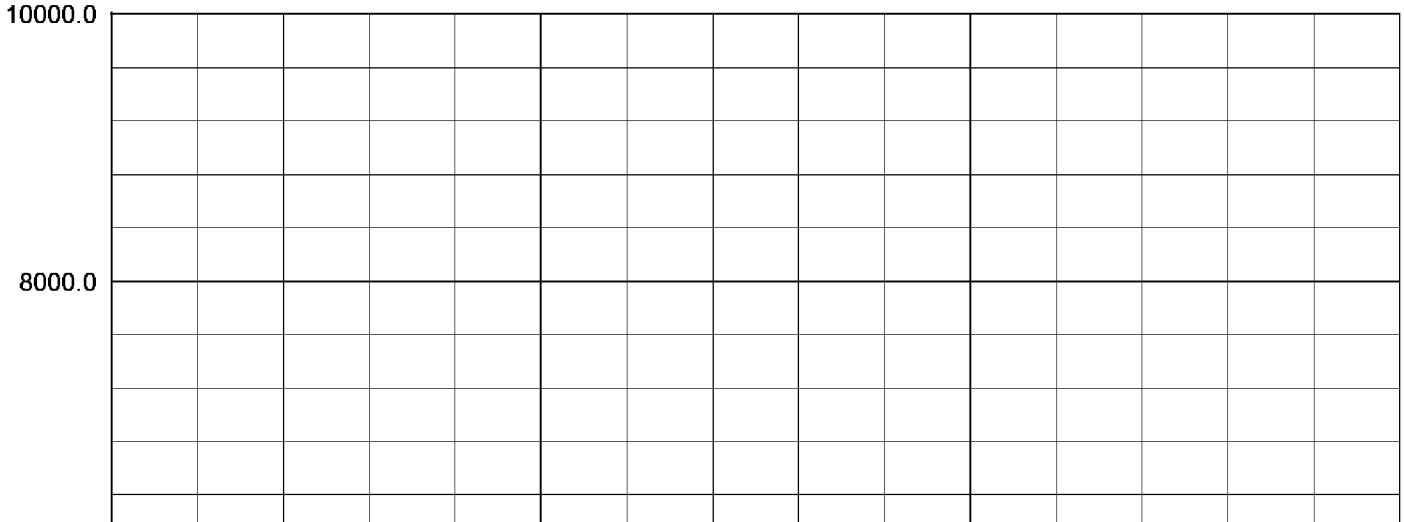


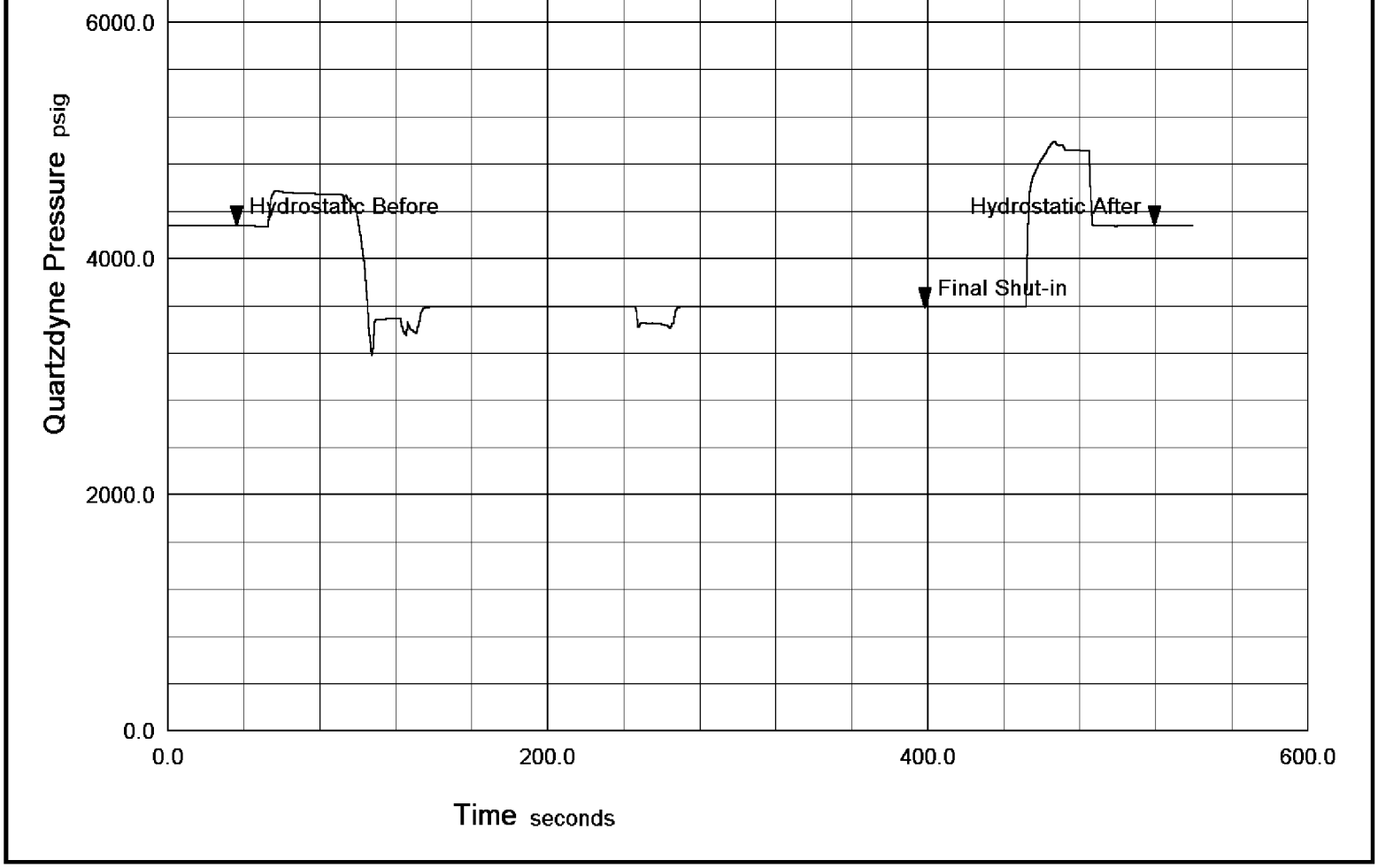
Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta — Recorded on 04-OCT-2005 21:25
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 1 at 2535.71 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_8A.dta — File Date: 04-OCT-2005 21:28:04
Run Id: Pretest 2 at 2546.19 m
Test Number: 2





Pretest 2 at 2546.19 m

Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta — Recorded on 04-OCT-2005 21:54
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume

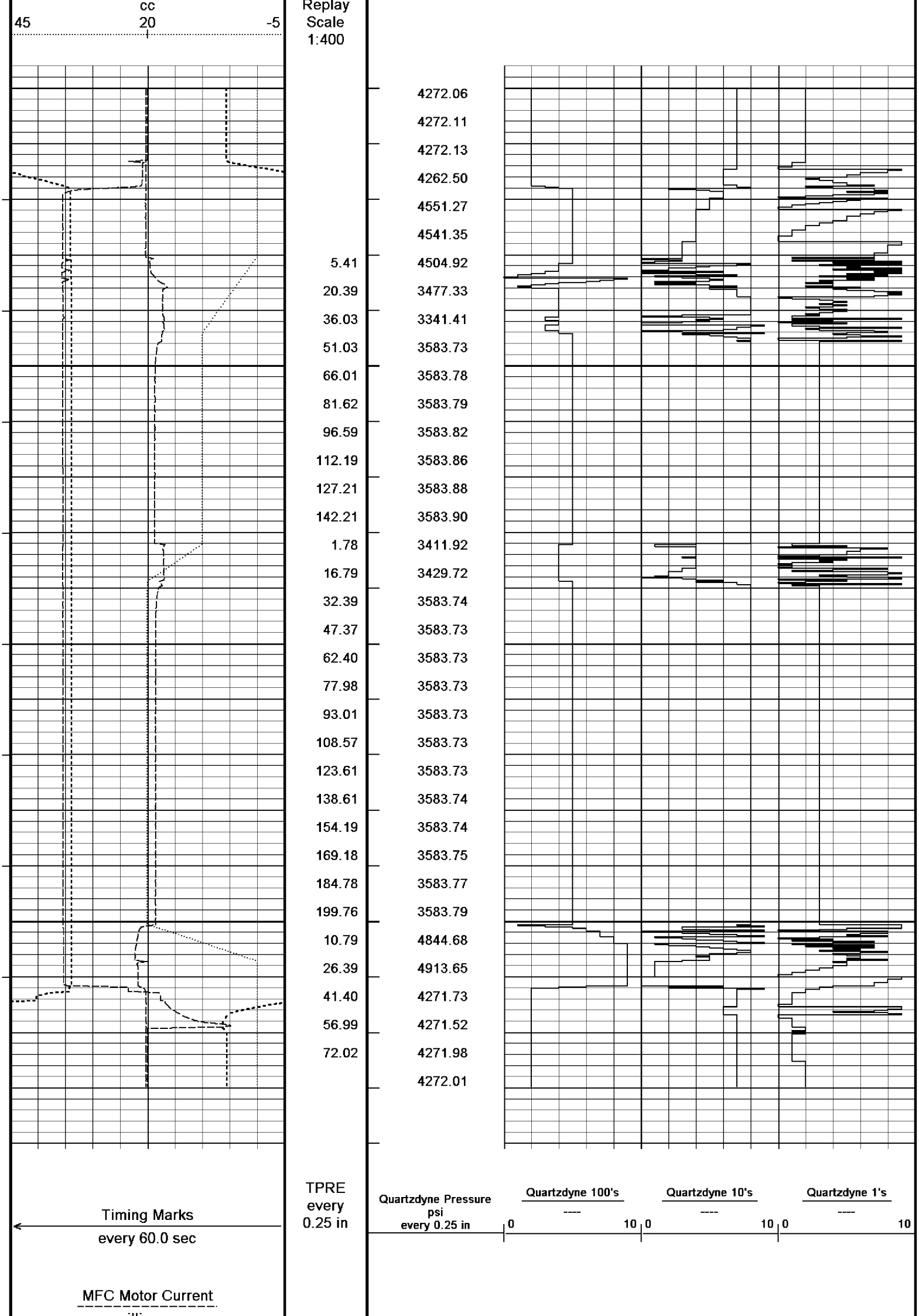
TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10


cc
45
20
-5
Replay
Scale
1:400
4272.06
4272.11
4272.13
4262.50
4551.27
4541.35
5.41
4504.92
20.39
3477.33
36.03
3341.41
51.03
3583.73
66.01
3583.78
81.62
3583.79
96.59
3583.82
112.19
3583.86
127.21
3583.88
142.21
3583.90
1.78
3411.92
16.79
3429.72
32.39
3583.74
47.37
3583.73
62.40
3583.73
77.98
3583.73
93.01
3583.73
108.57
3583.73
123.61
3583.73
138.61
3583.74
154.19
3583.74
169.18
3583.75
184.78
3583.77
199.76
3583.79
10.79
4844.68
26.39
4913.65
41.40
4271.73
56.99
4271.52
72.02
4271.98
4272.01
Timing Marks
every 60.0 sec
TPRE
every
0.25 in
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0
10
0
10
0
10
MFC Motor Current

milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

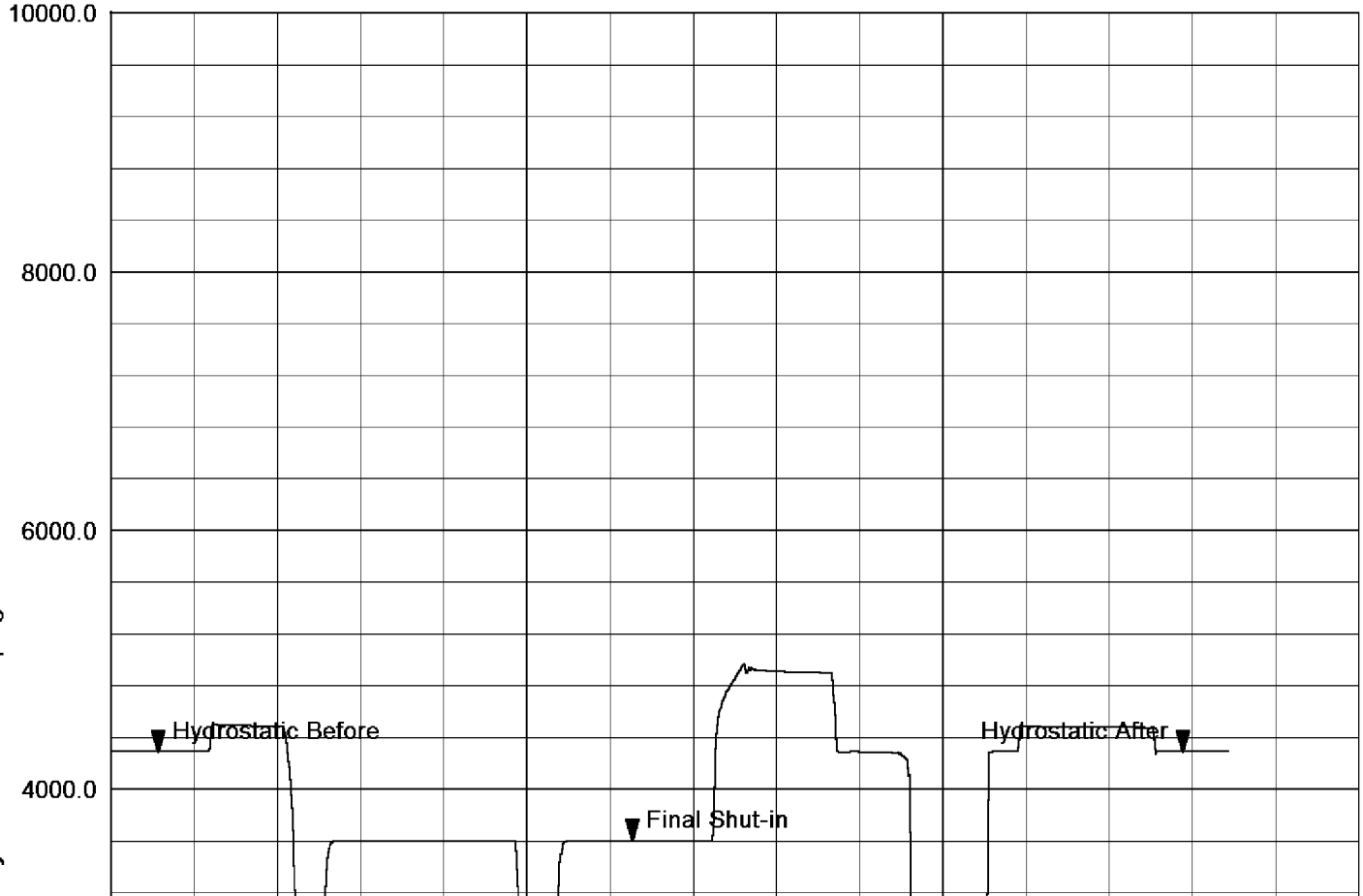
Replay
Scale
1:400

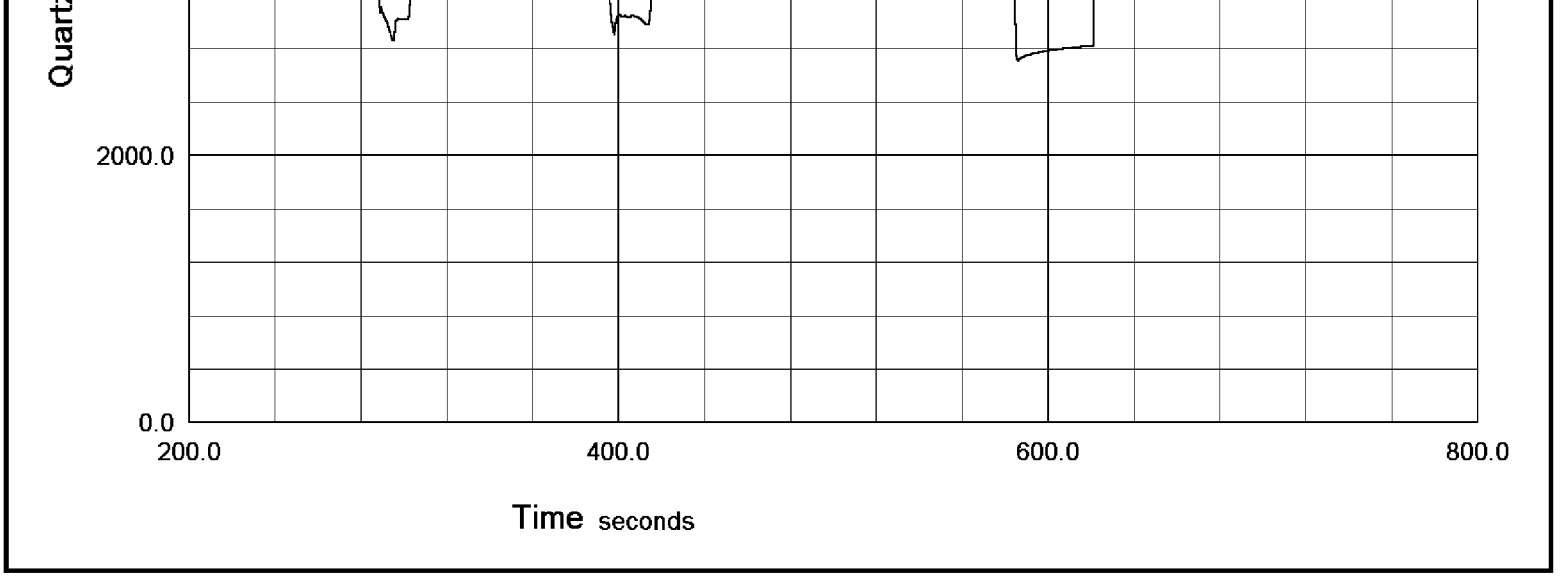
Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta — Recorded on 04-OCT-2005 21:54
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 2 at 2546.19 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_9A.dta — File Date: 04-OCT-2005 21:28:18
Run Id: Pretest 3 at 2554.51 m
Test Number: 3





Pretest 3 at 2554.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta
Recorded on 04-OCT-2005 22:05
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Quartzdyne 100's

Quartzdyne 10's

Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

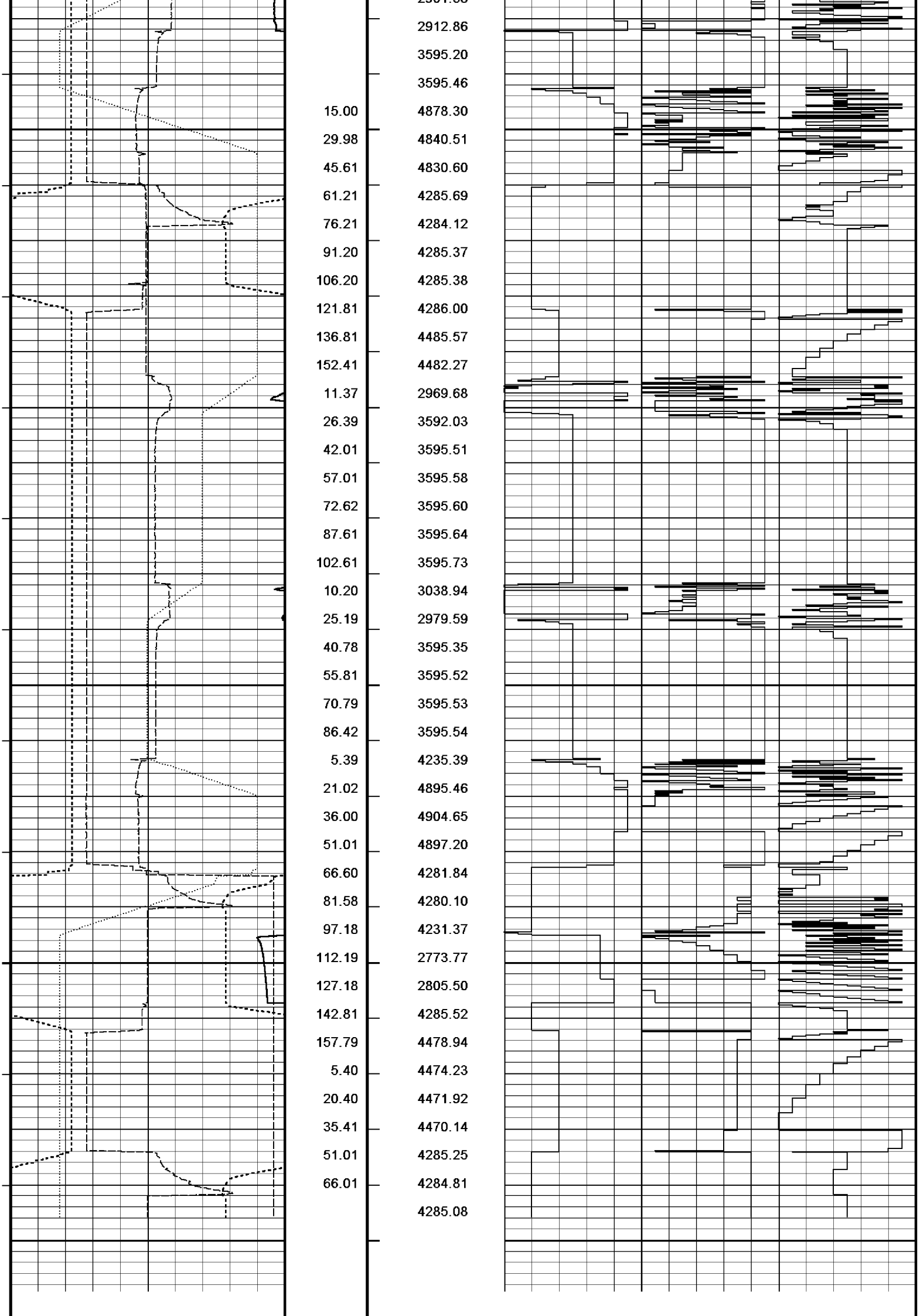
MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

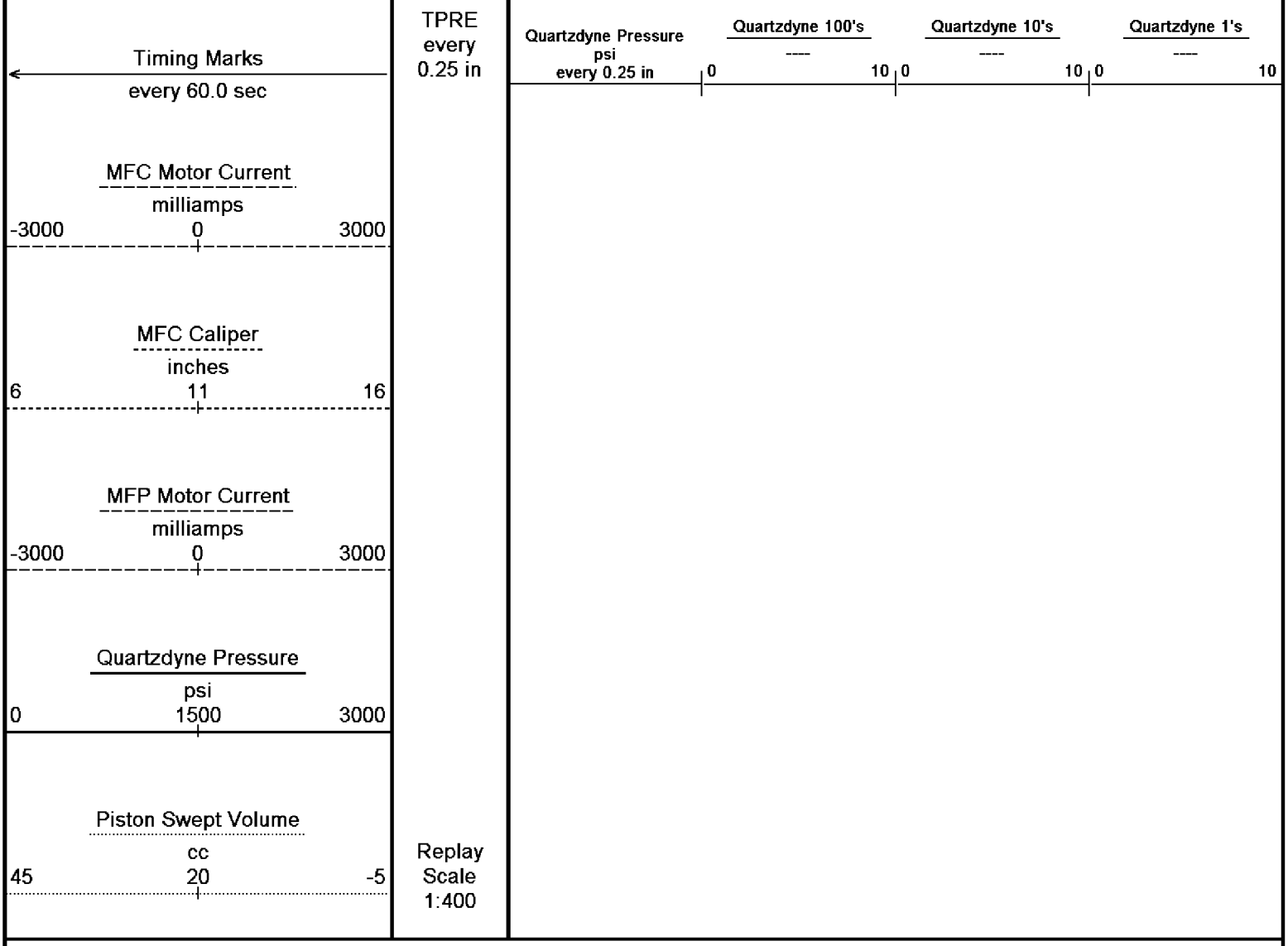
Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

4285.83
4285.78
4285.70
4285.65
4277.71
2901.38



	2912.86
	3595.20
	3595.46
15.00	4878.30
29.98	4840.51
45.61	4830.60
61.21	4285.69
76.21	4284.12
91.20	4285.37
106.20	4285.38
121.81	4286.00
136.81	4485.57
152.41	4482.27
11.37	2969.68
26.39	3592.03
42.01	3595.51
57.01	3595.58
72.62	3595.60
87.61	3595.64
102.61	3595.73
10.20	3038.94
25.19	2979.59
40.78	3595.35
55.81	3595.52
70.79	3595.53
86.42	3595.54
5.39	4235.39
21.02	4895.46
36.00	4904.65
51.01	4897.20
66.60	4281.84
81.58	4280.10
97.18	4231.37
112.19	2773.77
127.18	2805.50
142.81	4285.52
157.79	4478.94
5.40	4474.23
20.40	4471.92
35.41	4470.14
51.01	4285.25
66.01	4284.81
	4285.08



Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 05-OCT-2005 07:33
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta — Recorded on 04-OCT-2005 22:05
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 3 at 2554.51 m

BEFORE SURVEY CALIBRATION

C:\Data\Childers Cove\MCG098MFT008_6A.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.250	ohm-metres
Mud Resistivity Temperature	17.100	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Bit Size	
HVOL Caliper 2	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	N/A	
Resistivity used	N/A	
RWA Constant A	N/A	
RWA Constant M	N/A	

Quartzdyne Calibration Constants and Coefficients MFT 008

Serial Number	156002
Calibration Date	25-JAN-02
Temperature polynomial order	3
Pressure polynomial order	3
Temperature scaling factor	0.0100000000000

Pressure scaling factor	0.0100000000000
Temperature offset frequency	55313.0000000000000
Pressure offset frequency	20231.0000000000000
Span adjustment	1.0000000000000
Offset adjustment	0.00000000000e+000

	T0	T1	T2	T3	T4
P0	1.06712e+001	-5.02859e-001	-2.09468e-002	8.27075e-006	0.00000e+000
P1	4.23434e+001	-2.23910e-002	2.56713e-005	-6.06661e-008	0.00000e+000
P2	-2.04657e-003	1.09786e-005	-2.68807e-008	7.75475e-011	0.00000e+000
P3	6.55210e-007	-2.45045e-009	2.80271e-011	-1.60433e-014	0.00000e+000
P4	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Caliper Calibration MFT 008

Base Calibration on 4-OCT-2005,19:32
Field Calibration on 4-OCT-2005,19:32

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	4371	4.00
2	4944	6.00
3	5833	8.00
4	7161	10.00
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.01	8.00

DOWNHOLE EQUIPMENT

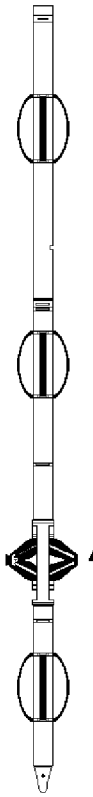
C:\Data\Childers Cove\MCG098MFT008_6A.dta

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

Compact Repeat Formation Tester
MFT 8 Length: 4.17 m Weight: 112.4 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 7.10 m Weight: 183.0 lb



Tool Zero	(2.15m from bottom)
0.00 m	PSVL - Piston Swept Volume
0.00 m	QONE - Quartzdyne 1's
0.00 m	QTEN - Quartzdyne 10's
0.00 m	QHUN - Quartzdyne 100's
0.00 m	QDPF - Quartzdyne Pressure
0.00 m	FPMC - MFP Motor Current
0.00 m	FCCP - MFC Caliper
0.00 m	FCMC - MFC Motor Current

All measurements relative to tool zero.

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2554.50	metres
Elevation Drill Floor	51.50	metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2557.50	metres

FORMATION TESTER

PRECISION

FORMATION TESTER

TIME LOG

BUILD-UP PLOTS

PRECISION ENERGY SERVICES

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FIELD PRINT**

LSD	SEC	TWP	RGE	Other Services
				MCG-MPD-MDN MMR-MDL-MSS

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 50 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:

KB	51.50	metres
DF	51.50	metres
GL	46.20	metres

Date	04-Oct-2005			
Run Number	THREE			
Depth Driller	2658.00	metres		
Depth Logger	2557.50	metres		
First Reading	2554.50	metres		
Last Reading	2535.70	metres		
Casing Driller	544.50	metres		
Casing Logger	544.20	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/PHPA/POL			
Density / Viscosity	1.15 g/c3	59.00 CP		
PH / Fluid Loss	8.60	4.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.65 @ 13.9	ohm-m		
Rmf @ Measured Temp	1.06 @ 13.9	ohm-m		
Rmc @ Measured Temp	0.53 @ 14.1	ohm-m		
Source Rmf / Rmc	FILTER	PRESS		
Rm @ BHT	0.09 @ 95.5	ohm-m		
Time Since Circulation	32 HOURS			
Max Recorded Temp	95.50	deg C		
Equipment Name	MFT			
Equipment / Base	8	SALE		
Recorded By	G. MCMANUS, B.MOSS			
Witnessed By	BRIAN WEB			
CIRC. STOP	13:00 3/10			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MCG, MFT RAN IN COMBINATION.
4) HARDWARE: MFT: 2 X BOWSPRING CENTRALISERS
MCG: 1 X BOWSPRING CENTRALISERS

5) SERVICE ORDER: 2072
6) RIG:CENTURY 7

7) DUE TO FAILURE OF PRIMARY MFT 8, MFT 17 USED IN PLACE. THIS LOG DISPLAYS MFT 8 DATA ONLY.

MFT / RFS - QUARTZ TEST SUMMARY

Test No.	Depth metres	TVD metres	Hyd Pres Before psig	Drawdown Pressure 1 psig	Drawdown Pressure 2 psig	Final Shut-in Pressure psig	Hyd Pres After psig	Mobility 1 md/cp	Mobility 2 md/cp	Remarks
1	2535.71	2535.71	4254.98	0.00	0.00	3569.04	4254.87	0.000	0.000	GOOD TEST
2	2546.21	2546.21	4272.13	0.00	0.00	3583.74	4271.96	0.000	0.000	GOOD TEST
3	2554.50	2554.50	4285.37	0.00	0.00	3595.53	4284.86	0.000	0.000	GOOD TEST

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

GAMMA PASS 2 @ 2570 m

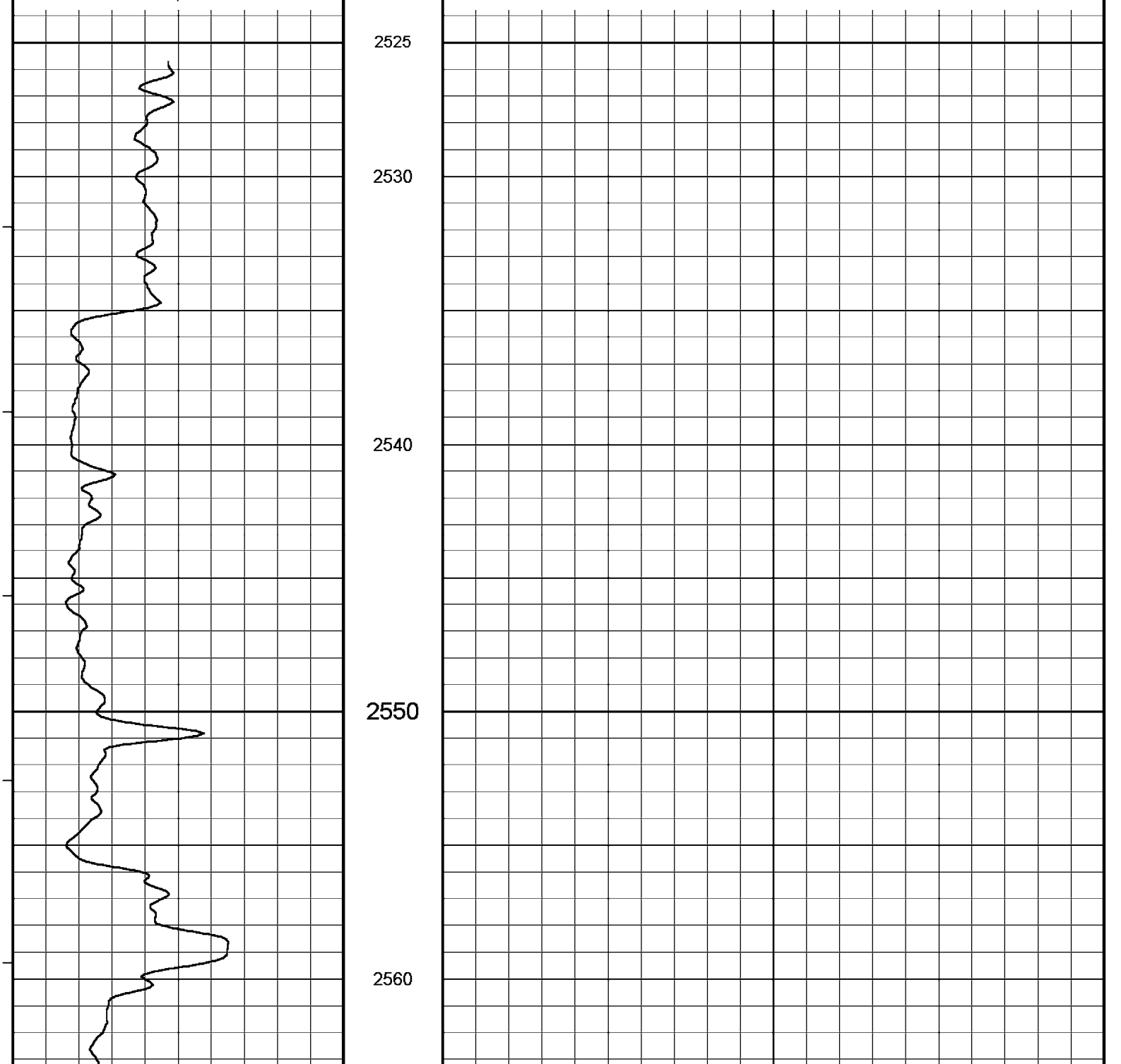
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098_2.dta
Recorded on 05-OCT-2005 00:01
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

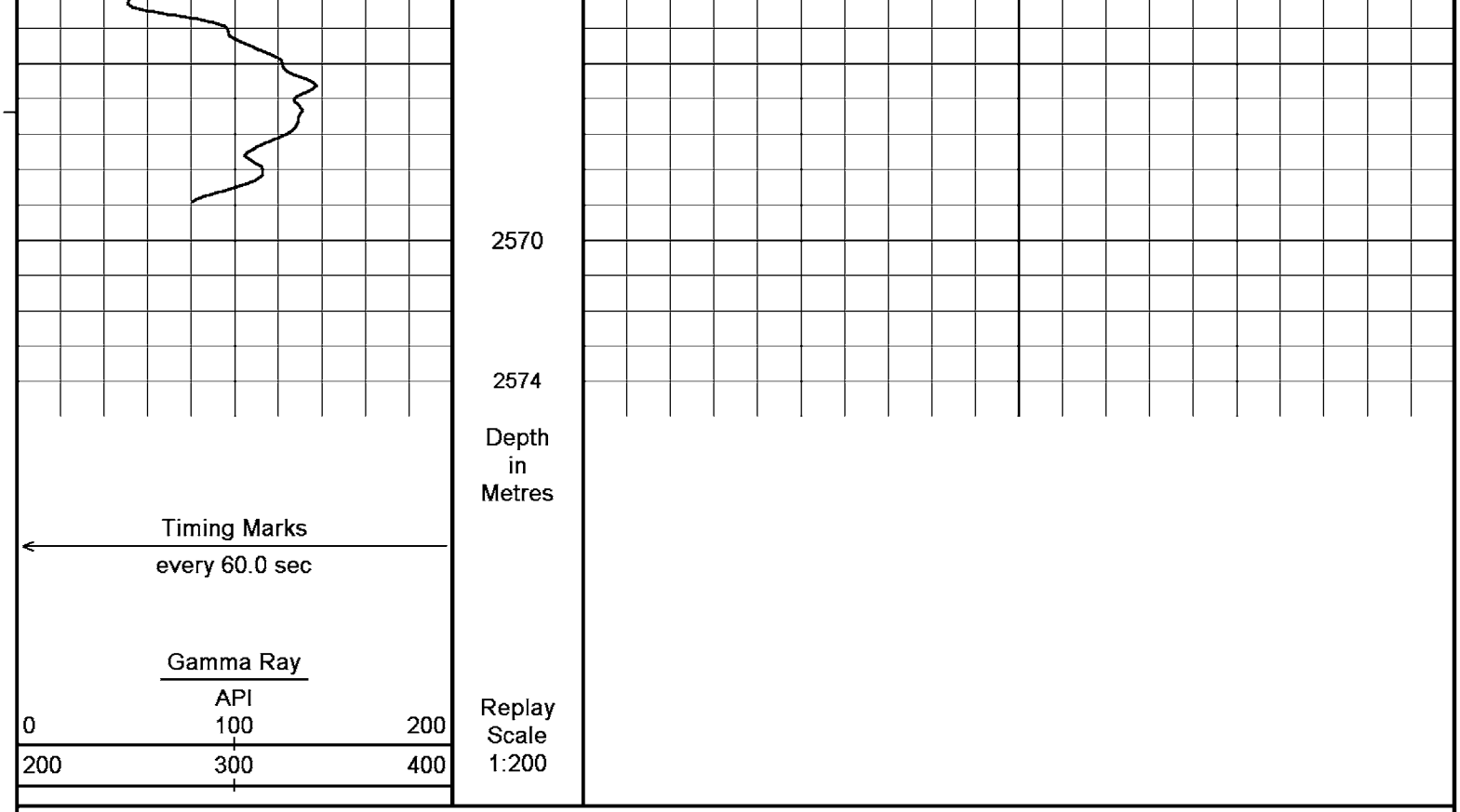
Timing Marks
every 60.0 sec

Gamma Ray
API
0 100 200
200 300 400

Depth in Metres

Replay Scale 1:200



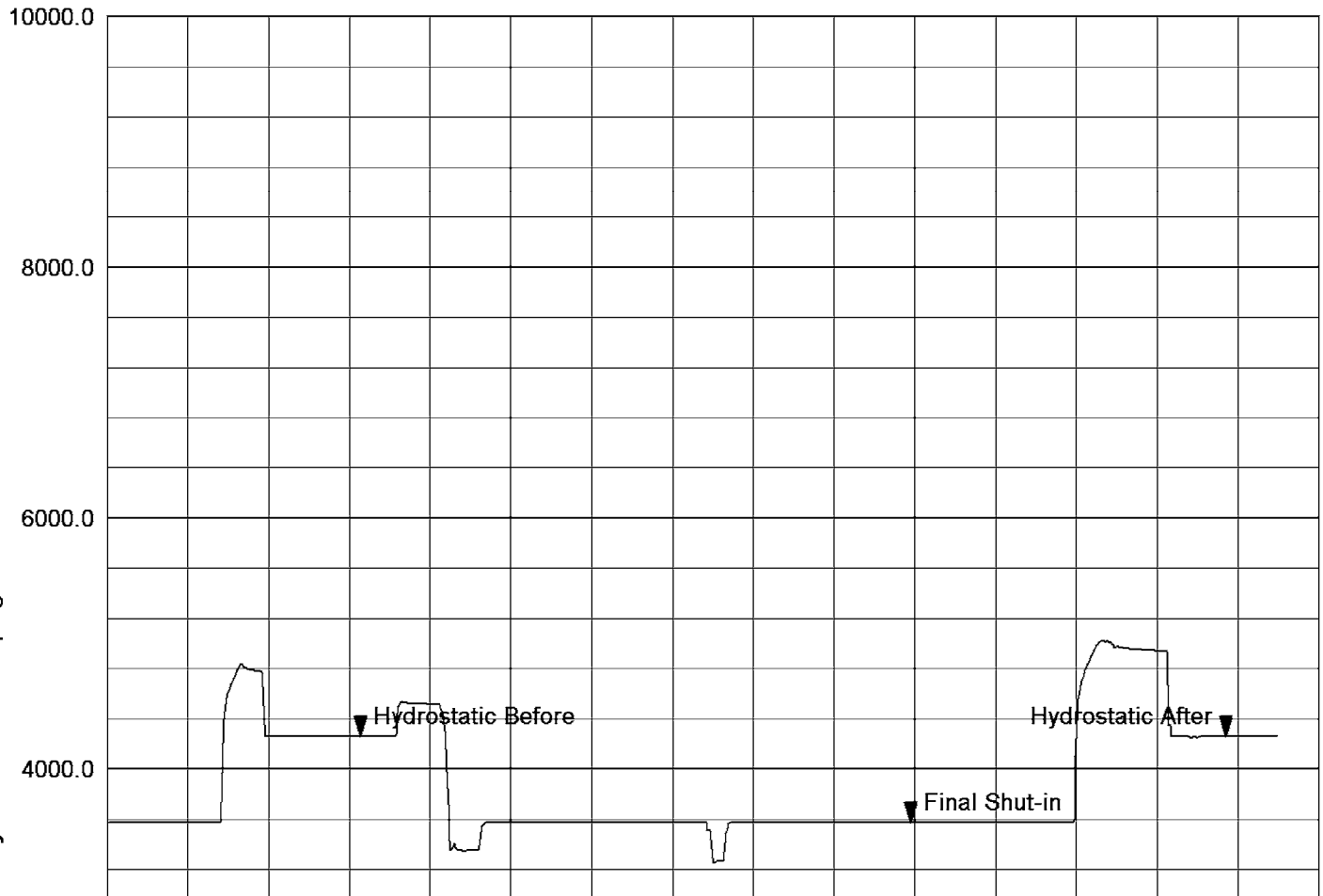


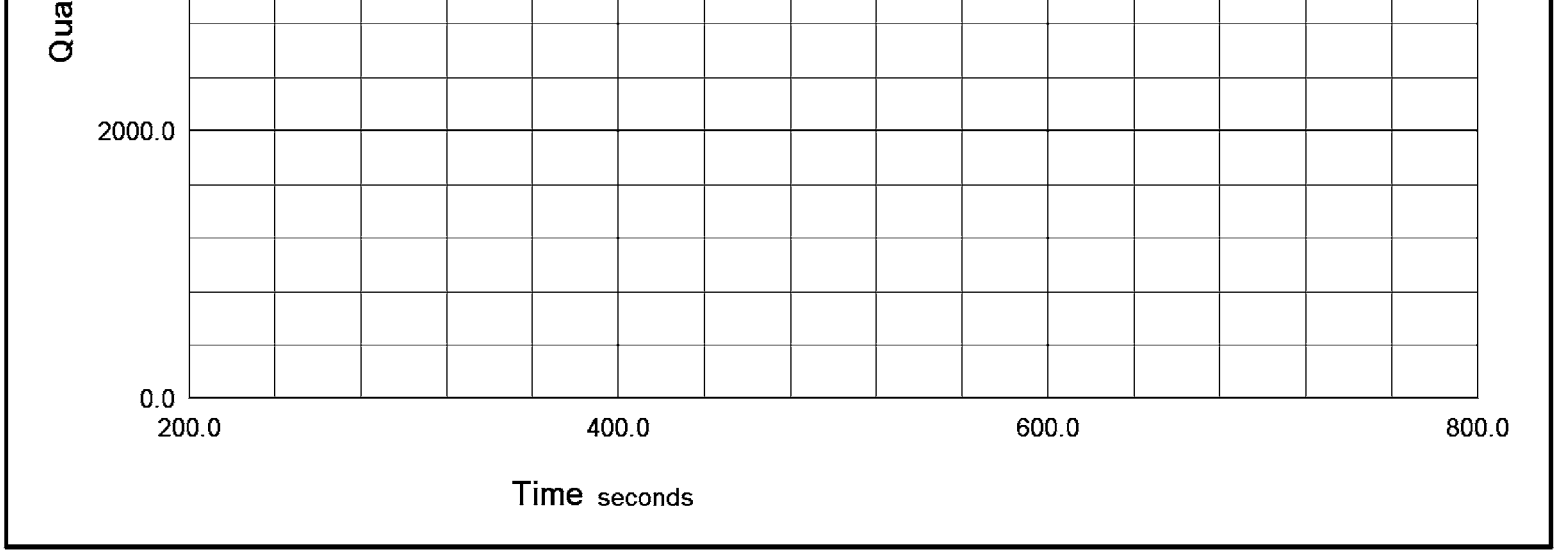
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098_2.dta
Recorded on 05-OCT-2005 00:01
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

GAMMA PASS 2 @ 2570 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_6A.dta
File Date: 04-OCT-2005 21:27:46
Run Id: Pretest 1 at 2535.71 m
Test Number: 1





Pretest 1 at 2535.71 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta
Recorded on 04-OCT-2005 21:25
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

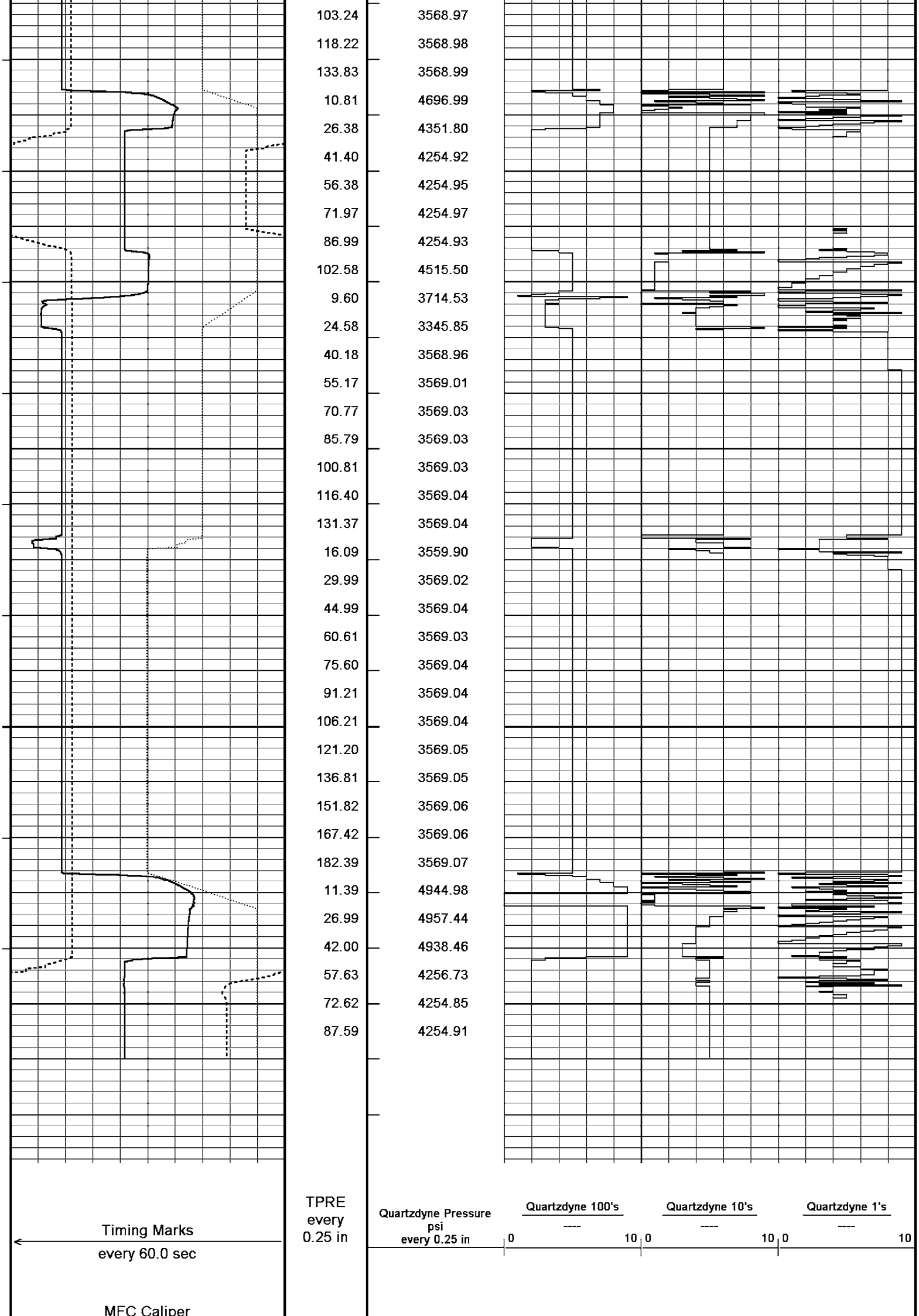
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

	4255.34
	4255.21
	4255.23
	4472.74
	4476.23
	4470.96
	4467.76
	4465.51
11.99	3722.27
27.01	3460.01
42.03	3501.81
57.59	3568.96
72.61	3568.97
88.22	3568.97


103.24 3568.97
118.22 3568.98
133.83 3568.99
10.81 4696.99
26.38 4351.80
41.40 4254.92
56.38 4254.95
71.97 4254.97
86.99 4254.93
102.58 4515.50
9.60 3714.53
24.58 3345.85
40.18 3568.96
55.17 3569.01
70.77 3569.03
85.79 3569.03
100.81 3569.03
116.40 3569.04
131.37 3569.04
16.09 3559.90
29.99 3569.02
44.99 3569.04
60.61 3569.03
75.60 3569.04
91.21 3569.04
106.21 3569.04
121.20 3569.05
136.81 3569.05
151.82 3569.06
167.42 3569.06
182.39 3569.07
11.39 4944.98
26.99 4957.44
42.00 4938.46
57.63 4256.73
72.62 4254.85
87.59 4254.91
Timing Marks
every 60.0 sec
TPRE
every
0.25 in
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0
10
0
10
0
10
MFC Caliper

inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

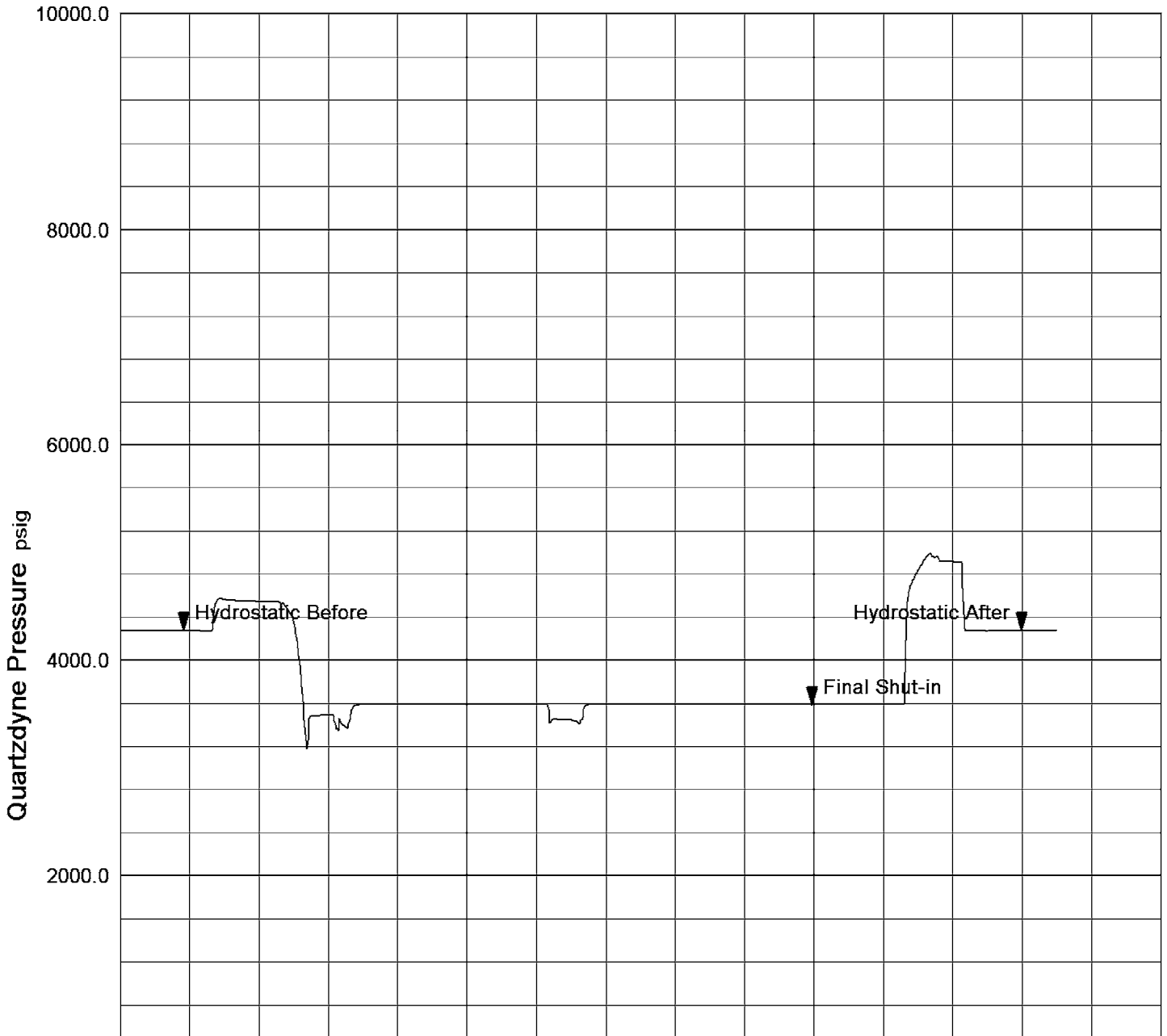
Replay Scale 1:400

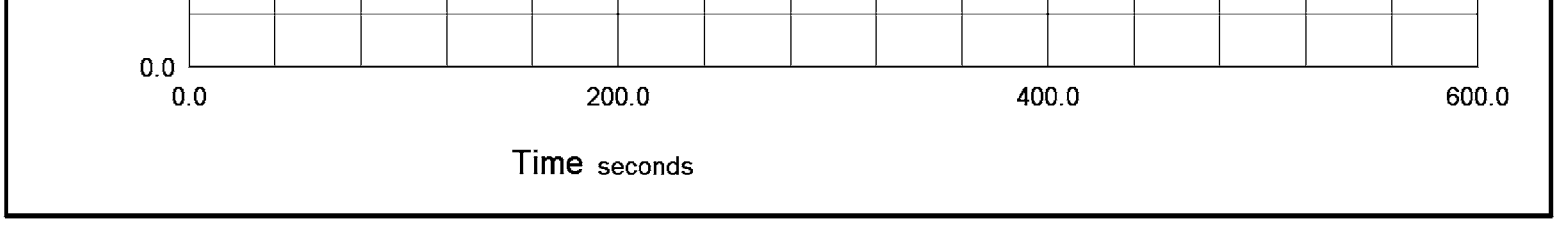
Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta — Recorded on 04-OCT-2005 21:25
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 1 at 2535.71 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_8A.dta — File Date: 04-OCT-2005 21:28:04
Run Id: Pretest 2 at 2546.19 m
Test Number: 2





Pretest 2 at 2546.19 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta
Recorded on 04-OCT-2005 21:54
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

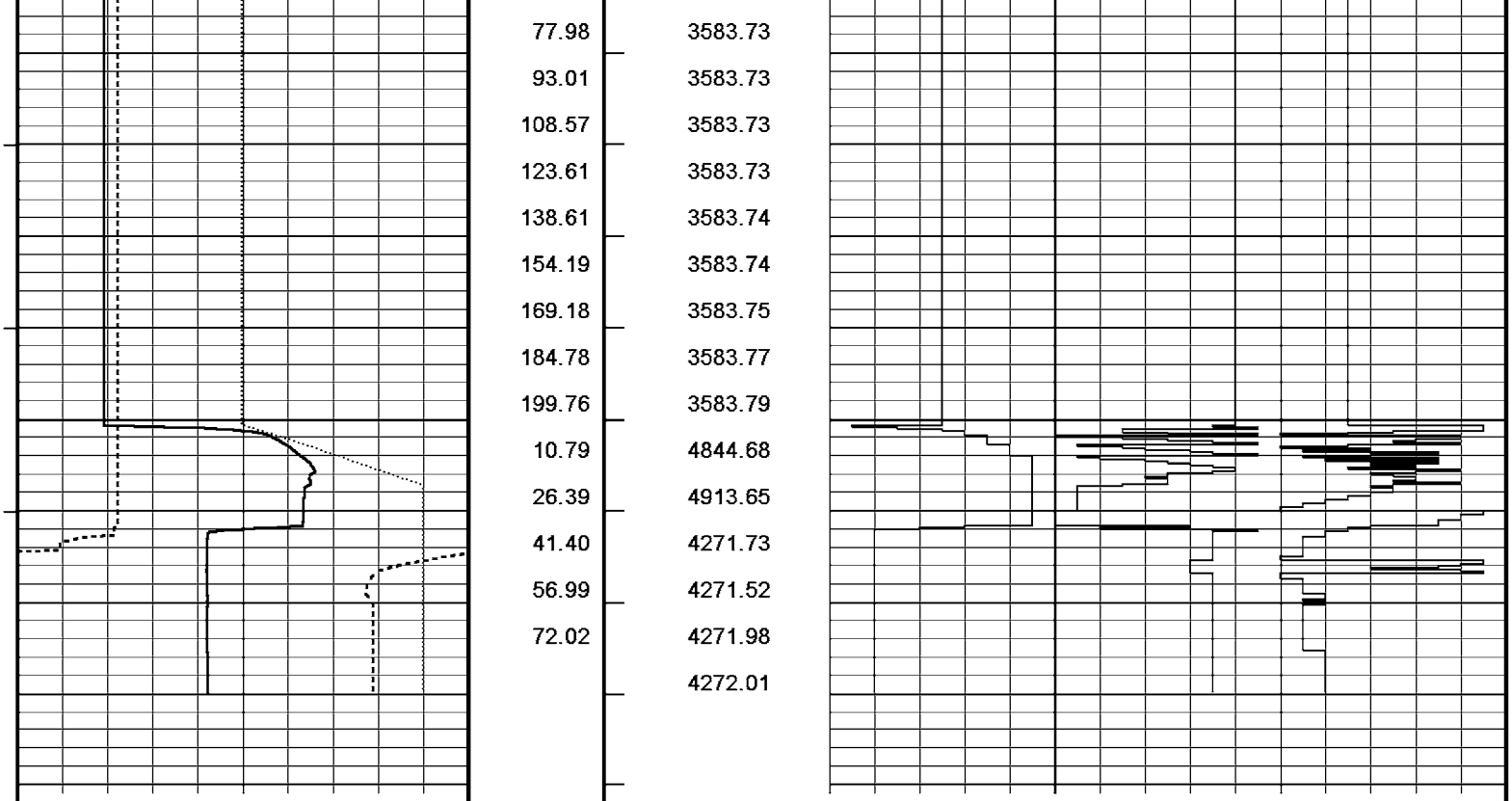
Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

	4272.06
	4272.11
	4272.13
	4262.50
	4551.27
	4541.35
5.41	4504.92
20.39	3477.33
36.03	3341.41
51.03	3583.73
66.01	3583.78
81.62	3583.79
96.59	3583.82
112.19	3583.86
127.21	3583.88
142.21	3583.90
1.78	3411.92
16.79	3429.72
32.39	3583.74
47.37	3583.73
62.40	3583.73



Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

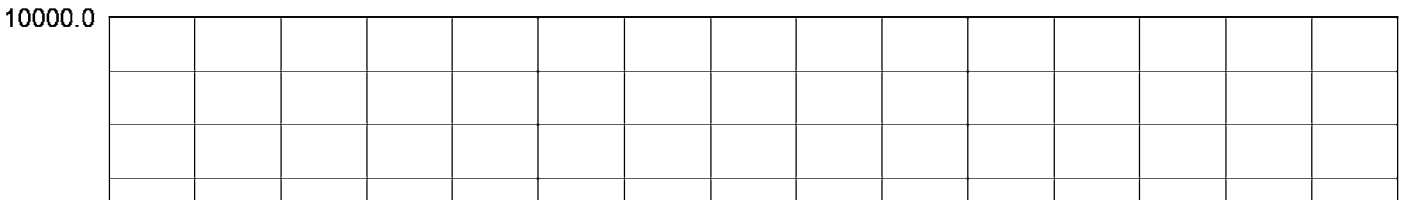
Quartzdyne 1's
0 10

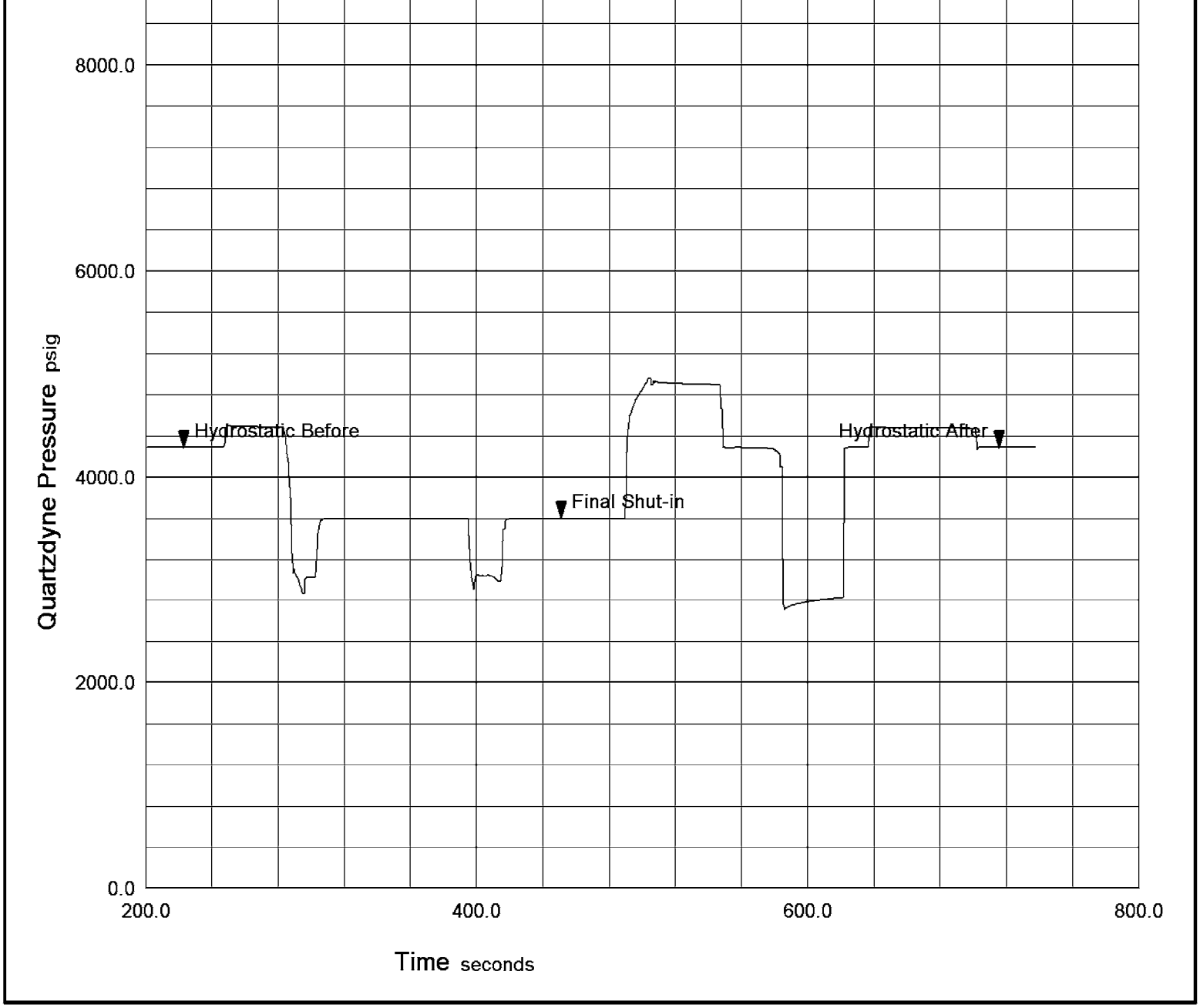
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta
Recorded on 04-OCT-2005 21:54
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 2 at 2546.19 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_9A.dta
File Date: 04-OCT-2005 21:28:18
Run Id: Pretest 3 at 2554.51 m
Test Number: 3





Pretest 3 at 2554.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta — Recorded on 04-OCT-2005 22:05
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

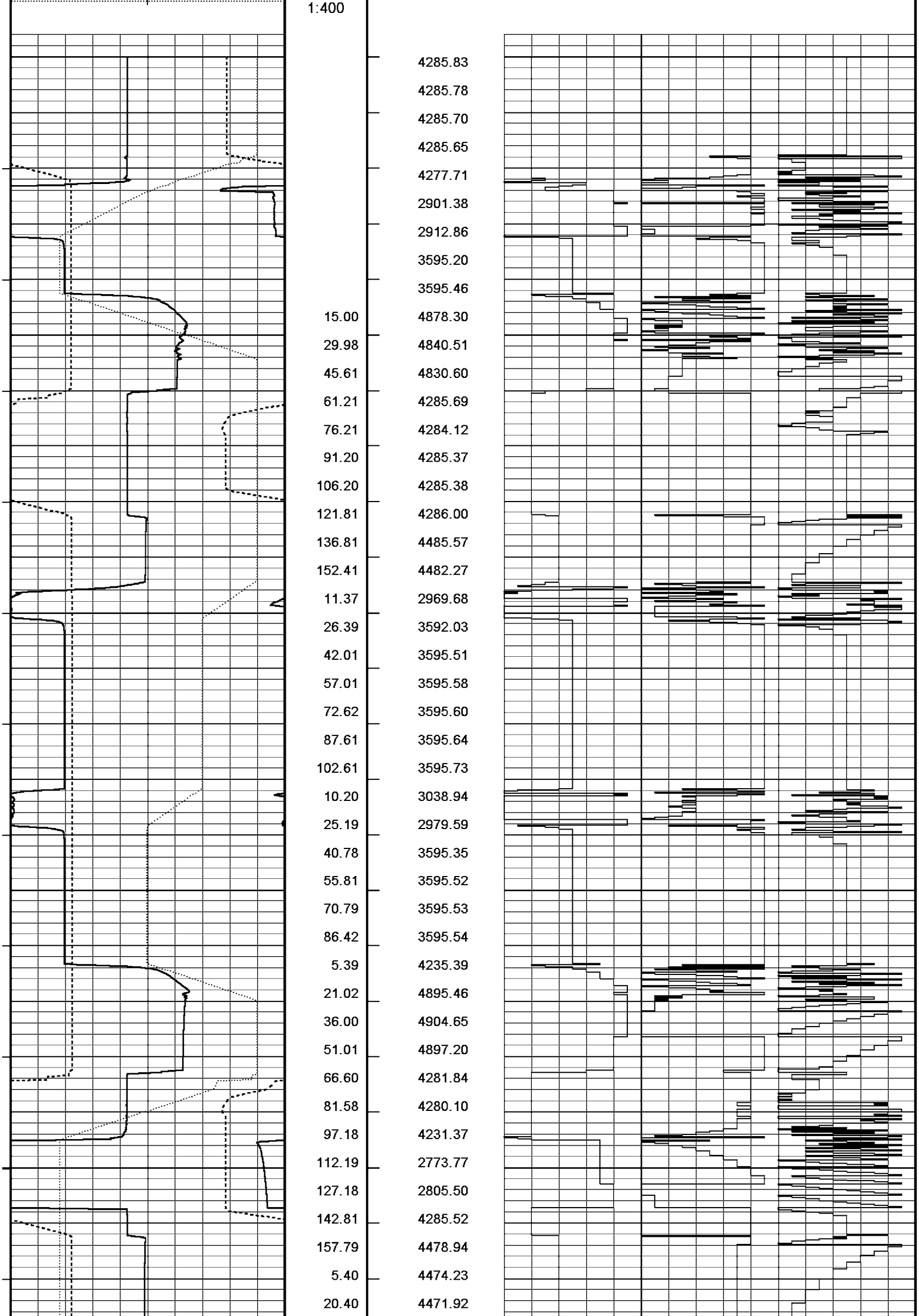
Replay
Scale

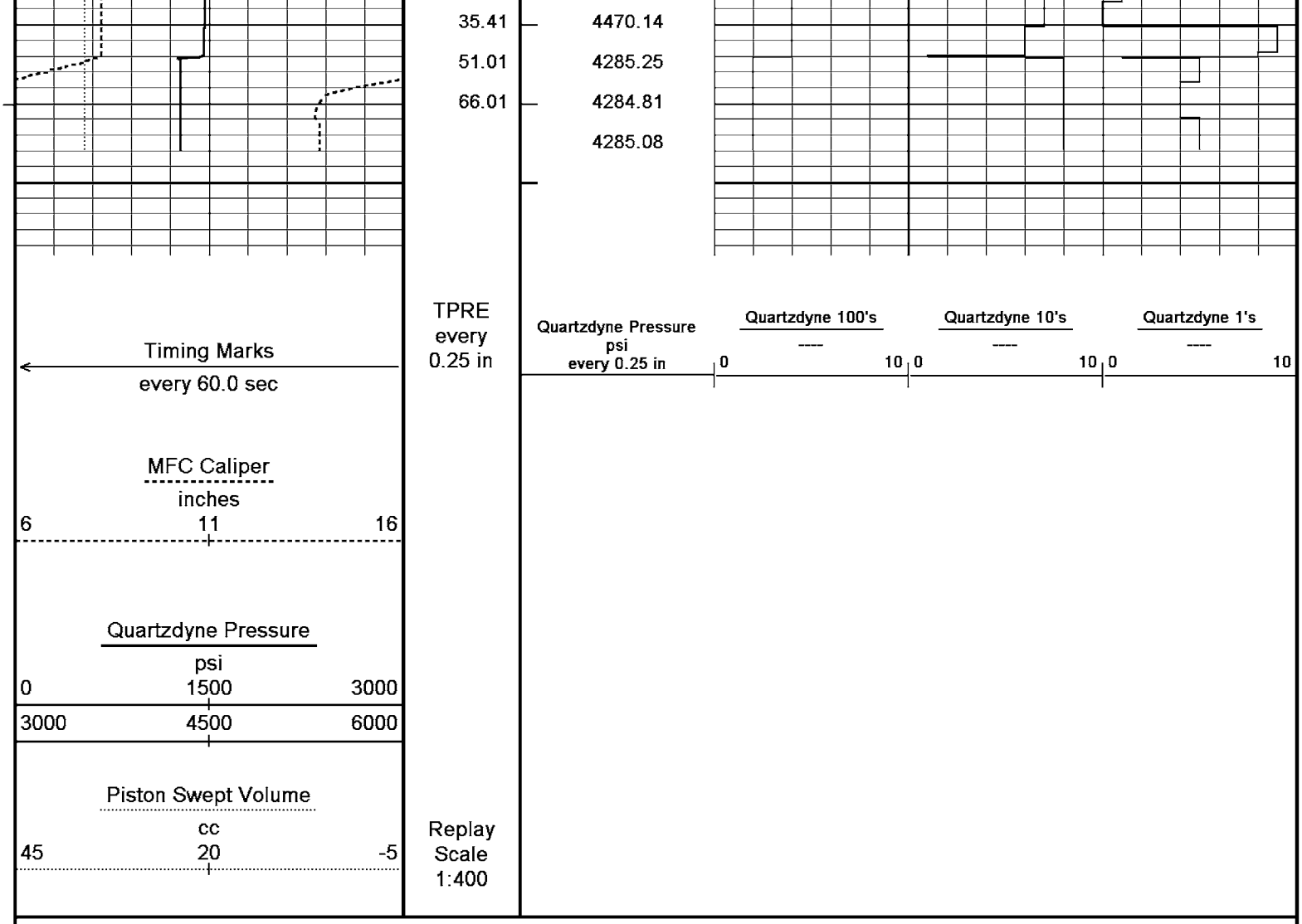
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10


1:400
4285.83
4285.78
4285.70
4285.65
4277.71
2901.38
2912.86
3595.20
3595.46
15.00
4878.30
29.98
4840.51
45.61
4830.60
61.21
4285.69
76.21
4284.12
91.20
4285.37
106.20
4285.38
121.81
4286.00
136.81
4485.57
152.41
4482.27
11.37
2969.68
26.39
3592.03
42.01
3595.51
57.01
3595.58
72.62
3595.60
87.61
3595.64
102.61
3595.73
10.20
3038.94
25.19
2979.59
40.78
3595.35
55.81
3595.52
70.79
3595.53
86.42
3595.54
5.39
4235.39
21.02
4895.46
36.00
4904.65
51.01
4897.20
66.60
4281.84
81.58
4280.10
97.18
4231.37
112.19
2773.77
127.18
2805.50
142.81
4285.52
157.79
4478.94
5.40
4474.23
20.40
4471.92



Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta — Recorded on 04-OCT-2005 22:05
System Configuration Dates: Logged 17-JUN-2004: Processed 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 3 at 2554.51 m

BEFORE SURVEY CALIBRATION

C:\Data\Childers Cove\MCG098MFT008_6A.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.250	ohm-metres
Mud Resistivity Temperature	17.100	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Bit Size	
HVOL Caliper 2	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	N/A	
Resistivity used	N/A	
RWA Constant A	N/A	
RWA Constant M	N/A	

Quartzdyne Calibration Constants and Coefficients MFT 008

Serial Number	156002
Calibration Date	25-JAN-02
Temperature polynomial order	3
Pressure polynomial order	3
Temperature scaling factor	0.0100000000000
Pressure scaling factor	0.0100000000000

Temperature offset frequency	55313.0000000000000
Pressure offset frequency	20231.0000000000000
Span adjustment	1.0000000000000
Offset adjustment	0.00000000000e+000

	T0	T1	T2	T3	T4
P0	1.06712e+001	-5.02859e-001	-2.09468e-002	8.27075e-006	0.00000e+000
P1	4.23434e+001	-2.23910e-002	2.56713e-005	-6.06661e-008	0.00000e+000
P2	-2.04657e-003	1.09786e-005	-2.68807e-008	7.75475e-011	0.00000e+000
P3	6.55210e-007	-2.45045e-009	2.80271e-011	-1.60433e-014	0.00000e+000
P4	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Caliper Calibration MFT 008

Base Calibration on 4-OCT-2005,19:32
Field Calibration on 4-OCT-2005,19:32

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	4371	4.00
2	4944	6.00
3	5833	8.00
4	7161	10.00
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.01	8.00

DOWNHOLE EQUIPMENT

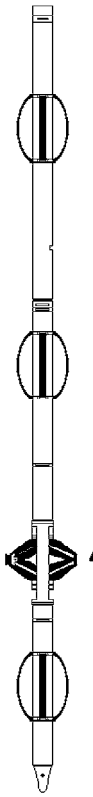
C:\Data\Childers Cove\MCG098MFT008_6A.dta

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

Compact Repeat Formation Tester
MFT 8 Length: 4.17 m Weight: 112.4 lb

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 7.10 m Weight: 183.0 lb



Tool Zero	(2.15m from bottom)
0.00 m	PSVL - Piston Swept Volume
0.00 m	QONE - Quartzdyne 1's
0.00 m	QTEN - Quartzdyne 10's
0.00 m	QHUN - Quartzdyne 100's
0.00 m	QDPF - Quartzdyne Pressure
0.00 m	FPMC - MFP Motor Current
0.00 m	FCCP - MFC Caliper
0.00 m	FCMC - MFC Motor Current

All measurements relative to tool zero.

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2554.50	metres
Elevation Drill Floor	51.50	metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2557.50	metres

FORMATION TESTER

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FIELD PRINT**

LSD	SEC	TWP	RGE	Other Services
				MCG-MPD-MDN MMR-MDL-MSS

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 50 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:

KB	51.50	metres
DF	51.50	metres
GL	46.20	metres

Date	05-Oct-2005			
Run Number	FOUR			
Depth Driller	2658.00	metres		
Depth Logger	2618.50	metres		
First Reading	2617.10	metres		
Last Reading	2562.40	metres		
Casing Driller	544.50	metres		
Casing Logger	544.20	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/PHPA/POL			
Density / Viscosity	1.15 g/c3	59.00 CP		
PH / Fluid Loss	8.60	4.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.65 @ 13.9	ohm-m		
Rmf @ Measured Temp	1.06 @ 13.9	ohm-m		
Rmc @ Measured Temp	0.53 @ 14.1	ohm-m		
Source Rmf / Rmc	FILTER	PRESS		
Rm @ BHT	0.09 @ 95.5	ohm-m		
Time Since Circulation	32 HOURS			
Max Recorded Temp	95.50	deg C		
Equipment Name	MFT			
Equipment / Base	17	SALE		
Recorded By	G. MCMANUS, B.MOSS			
Witnessed By	BRIAN WEB			
CIRC. STOP	13:00 3/10			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MCG, MFT RAN IN COMBINATION.
4) HARDWARE: MFT: 2 X BOWSPRING CENTRALISERS
MCG: 1 X BOWSPRING CENTRALISERS
5) SERVICE ORDER: 2072
6) RIG:CENTURY 7
7) DUE TO FAILURE OF PRIMARY MFT, MFT 17 USED IN PLACE. THIS LOG DISPLAYS MFT 17 DATA ONLY.

MFT / RFS - QUARTZ TEST SUMMARY

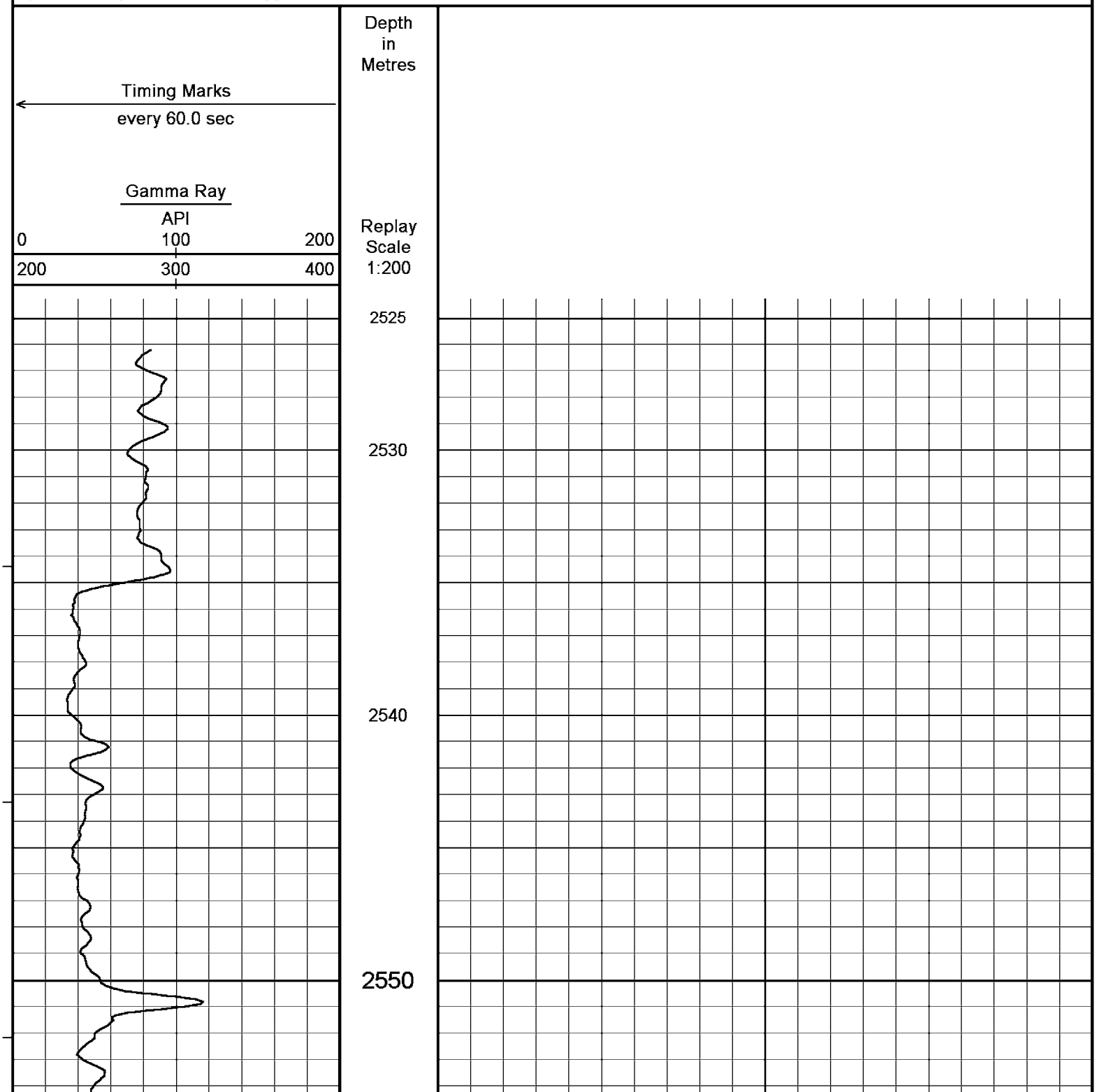
Test No.	Depth metres	TVD metres	Hyd Pres Before psig	Drawdown Pressure 1 psig	Drawdown Pressure 2 psig	Final Shut-in Pressure psig	Hyd Pres After psig	Mobility 1 md/cp	Mobility 2 md/cp	Remarks
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	SURFACE CHECK
2	502.32	502.32	0.00	0.00	0.00	0.00	0.00	0.000	0.000	NO TEST RESULT
3	502.32	502.32	844.41	0.00	0.00	15.88	844.33	0.000	0.000	CASING CHECK
4	2562.41	2562.41	0.00	0.00	0.00	0.00	0.00	0.000	0.000	NO TEST RESULT

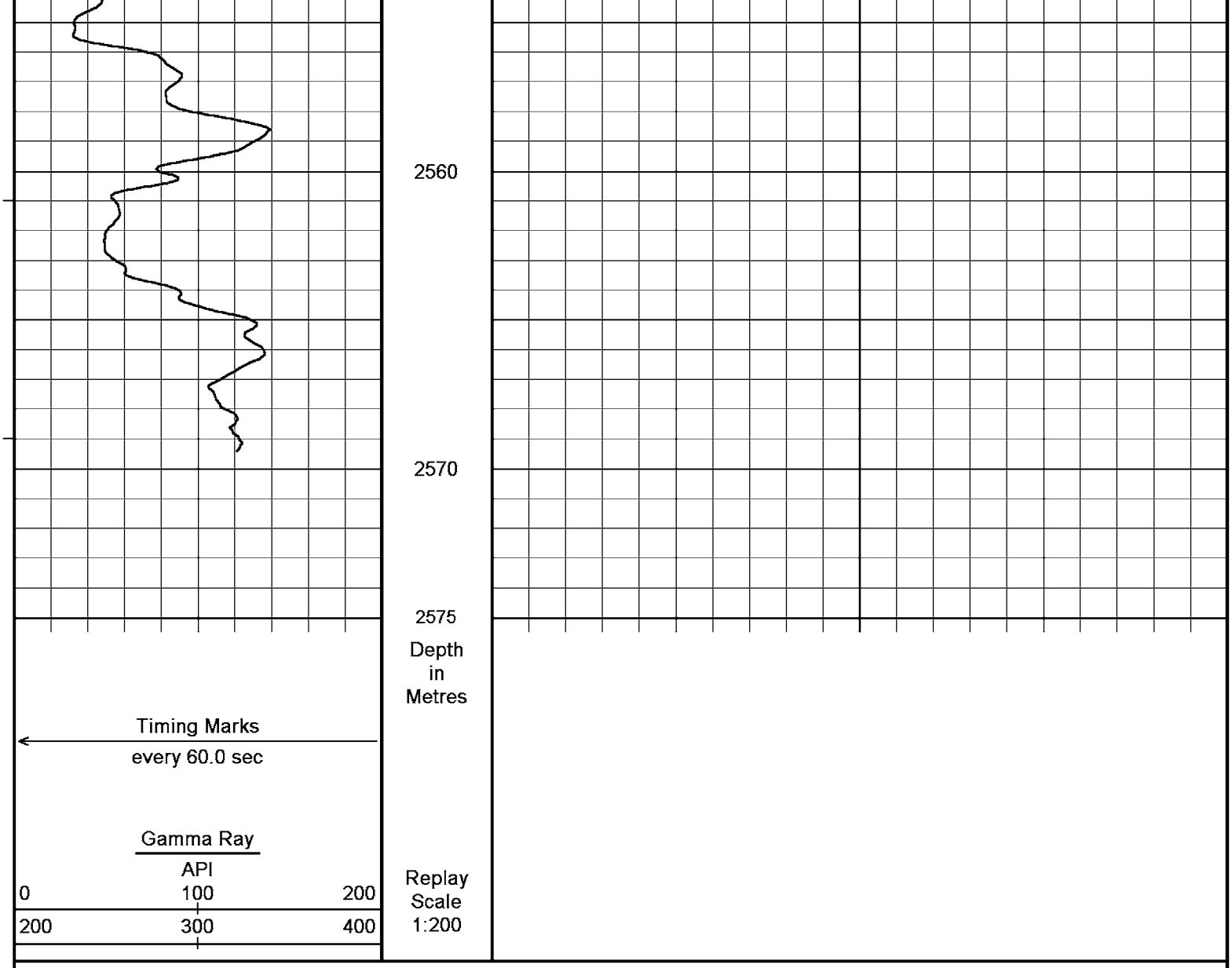
5	2562.41	2562.41	4296.73	0.00	0.00	3616.02	4297.18	0.000	0.000	GOOD TEST
6	2585.55	2585.55	4336.28	0.00	0.00	3615.43	4336.91	0.000	0.000	GOOD TEST
7	2589.92	2589.92	4340.26	0.00	0.00	86.01	4341.52	0.000	0.000	TIGHT TEST
8	2593.43	2593.43	4340.97	0.00	0.00	81.56	4342.81	0.000	0.000	TIGHT TEST
9	2596.65	2596.65	4342.19	0.00	0.00	76.54	4342.29	0.000	0.000	TIGHT TEST
10	2594.22	2594.22	4341.59	0.00	0.00	168.72	4341.57	0.000	0.000	TIGHT TEST
11	2590.51	2590.51	4341.19	0.00	0.00	157.92	4341.17	0.000	0.000	TIGHT TEST
12	2612.09	2612.09	4342.32	0.00	0.00	152.00	4342.44	0.000	0.000	TIGHT TEST
13	2611.90	2611.90	4341.97	0.00	0.00	152.12	4342.11	0.000	0.000	TIGHT TEST
14	2616.80	2616.80	4341.66	0.00	0.00	149.61	4342.61	0.000	0.000	TIGHT TEST
15	2617.11	2617.11	4342.25	0.00	0.00	145.53	4342.96	0.000	0.000	TIGHT TEST

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

GAMMA PASS 3 @ 2570 m

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098_3.dta
Recorded on 05-OCT-2005 03:24
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:





Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\Data\Childers Cove\MCG098_3.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

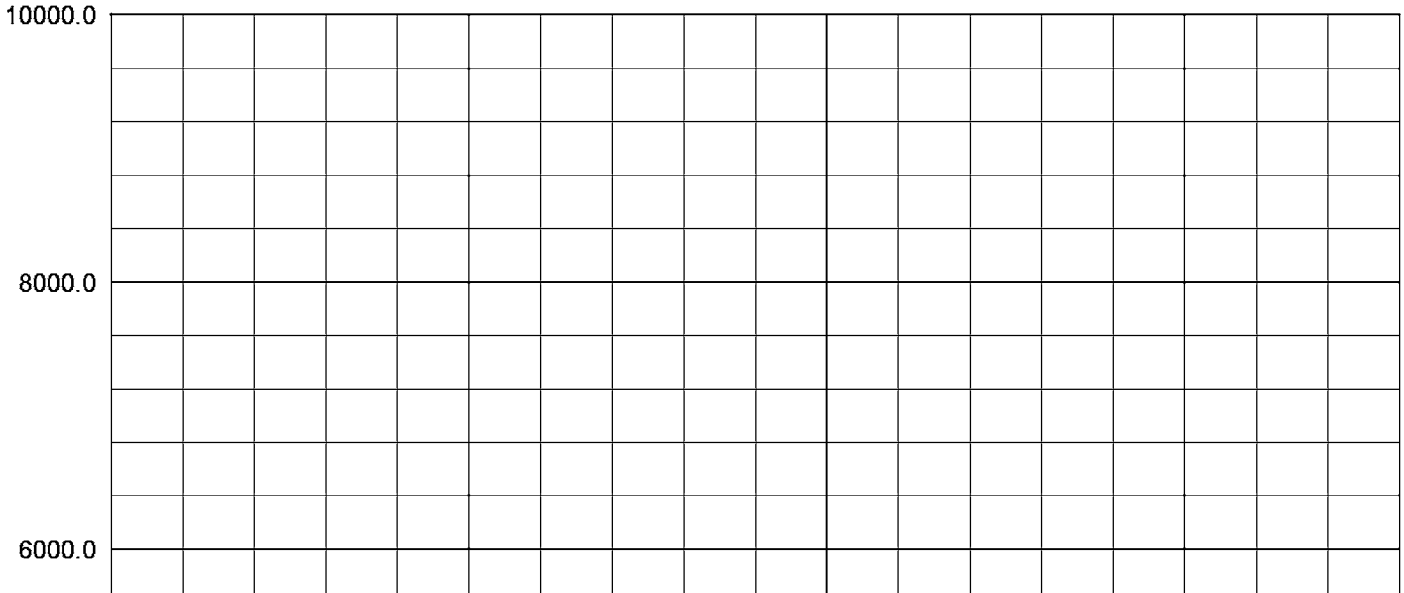
Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 03:24

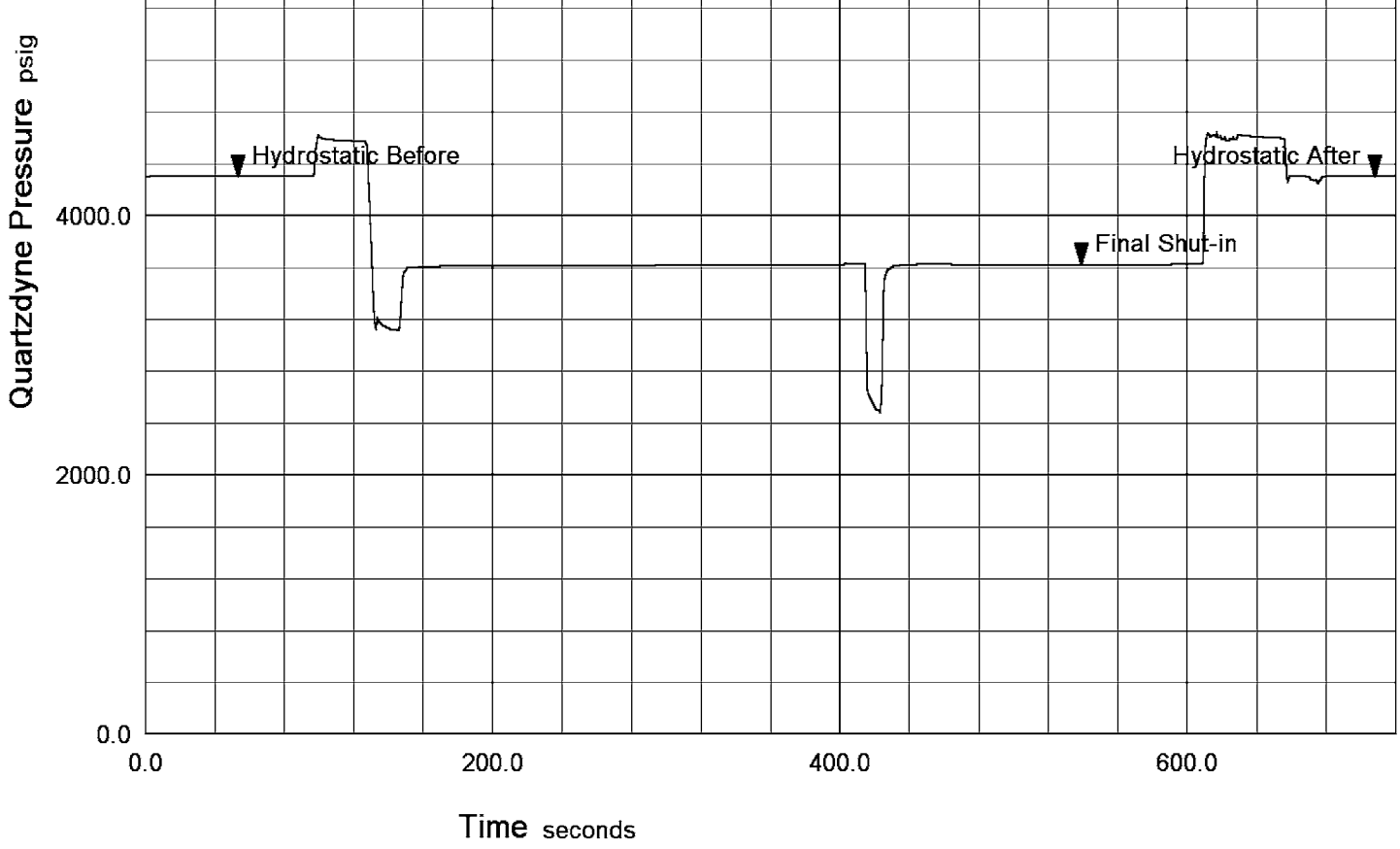
GAMMA PASS 3 @ 2570 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_18.dta
Run Id: Pretest 5 at 2562.41 m
Test Number: 5

File Date: 04-OCT-2005 21:03:50





Pretest 5 at 2562.41 m

Time Based Data - Notional Logging Speed 9.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_18.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 03:37

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

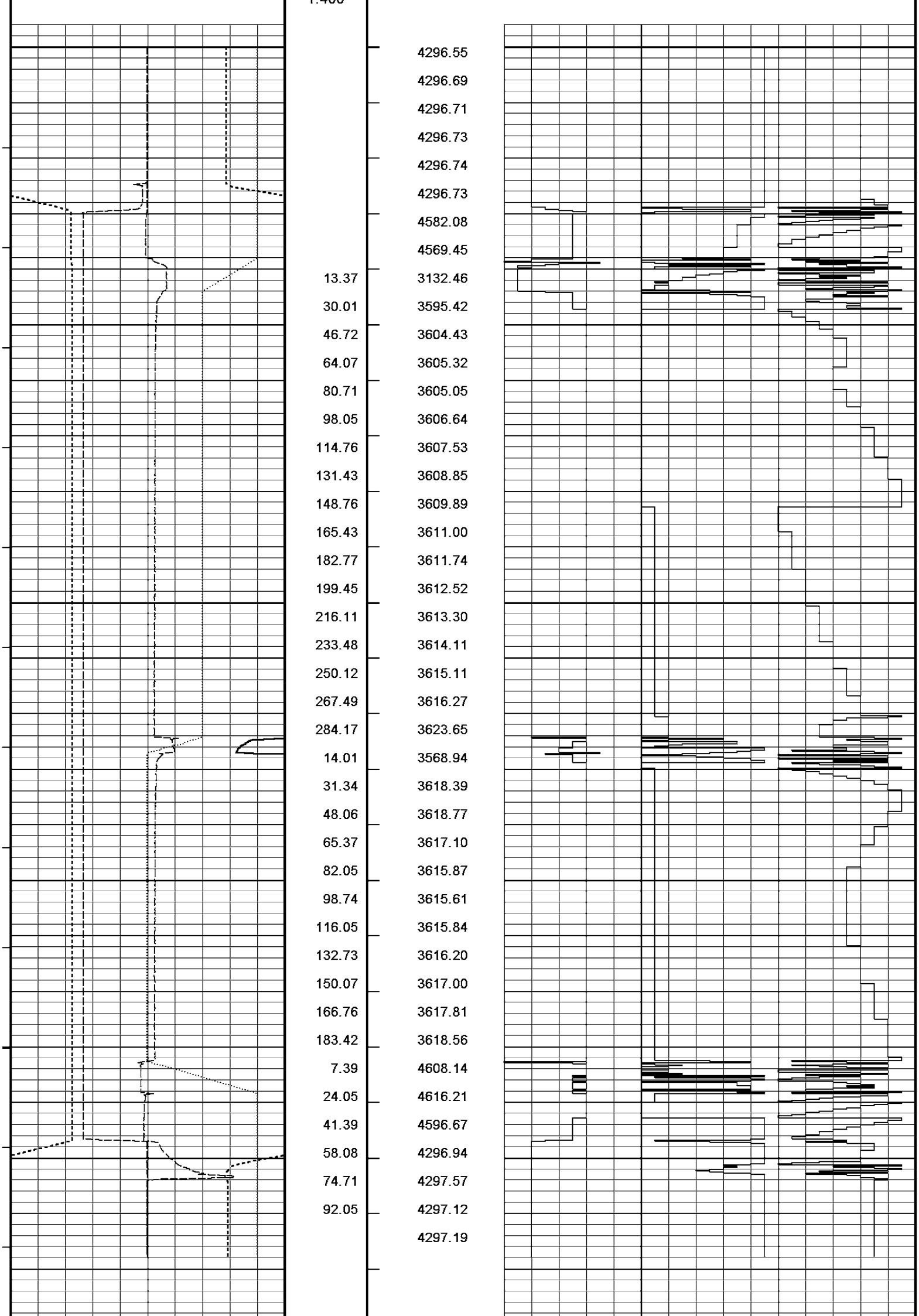
MFC Caliper
inches
6 11 16

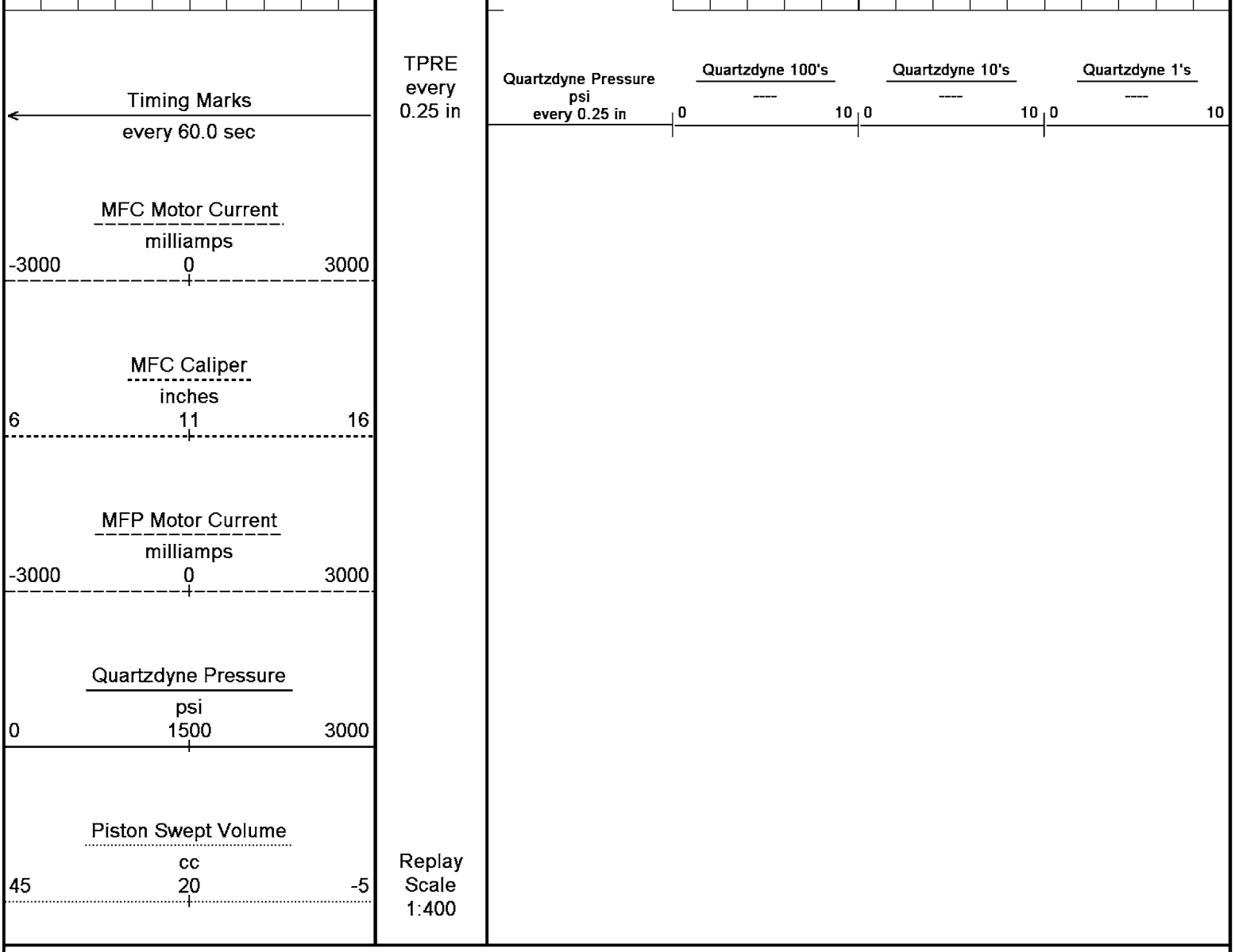
MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400


1:400
4296.55
4296.69
4296.71
4296.73
4296.74
4296.73
4582.08
4569.45
13.37
3132.46
30.01
3595.42
46.72
3604.43
64.07
3605.32
80.71
3605.05
98.05
3606.64
114.76
3607.53
131.43
3608.85
148.76
3609.89
165.43
3611.00
182.77
3611.74
199.45
3612.52
216.11
3613.30
233.48
3614.11
250.12
3615.11
267.49
3616.27
284.17
3623.65
14.01
3568.94
31.34
3618.39
48.06
3618.77
65.37
3617.10
82.05
3615.87
98.74
3615.61
116.05
3615.84
132.73
3616.20
150.07
3617.00
166.76
3617.81
183.42
3618.56
7.39
4608.14
24.05
4616.21
41.39
4596.67
58.08
4296.94
74.71
4297.57
92.05
4297.12
4297.19

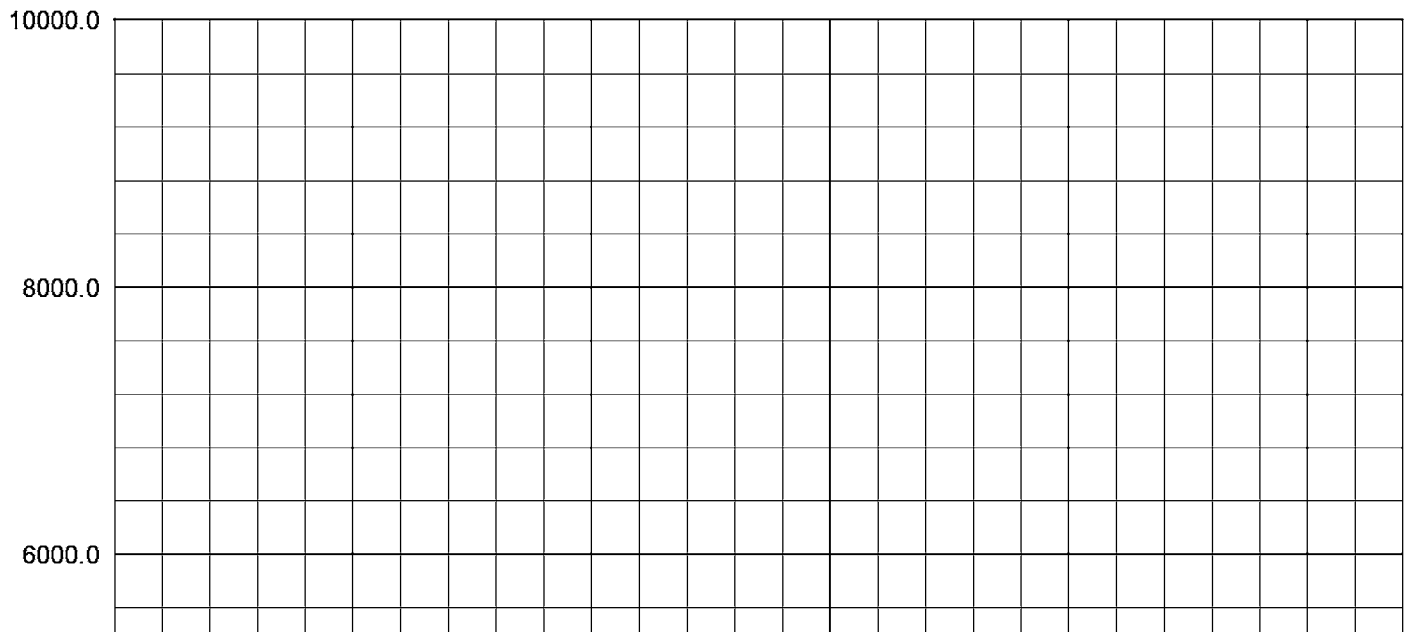


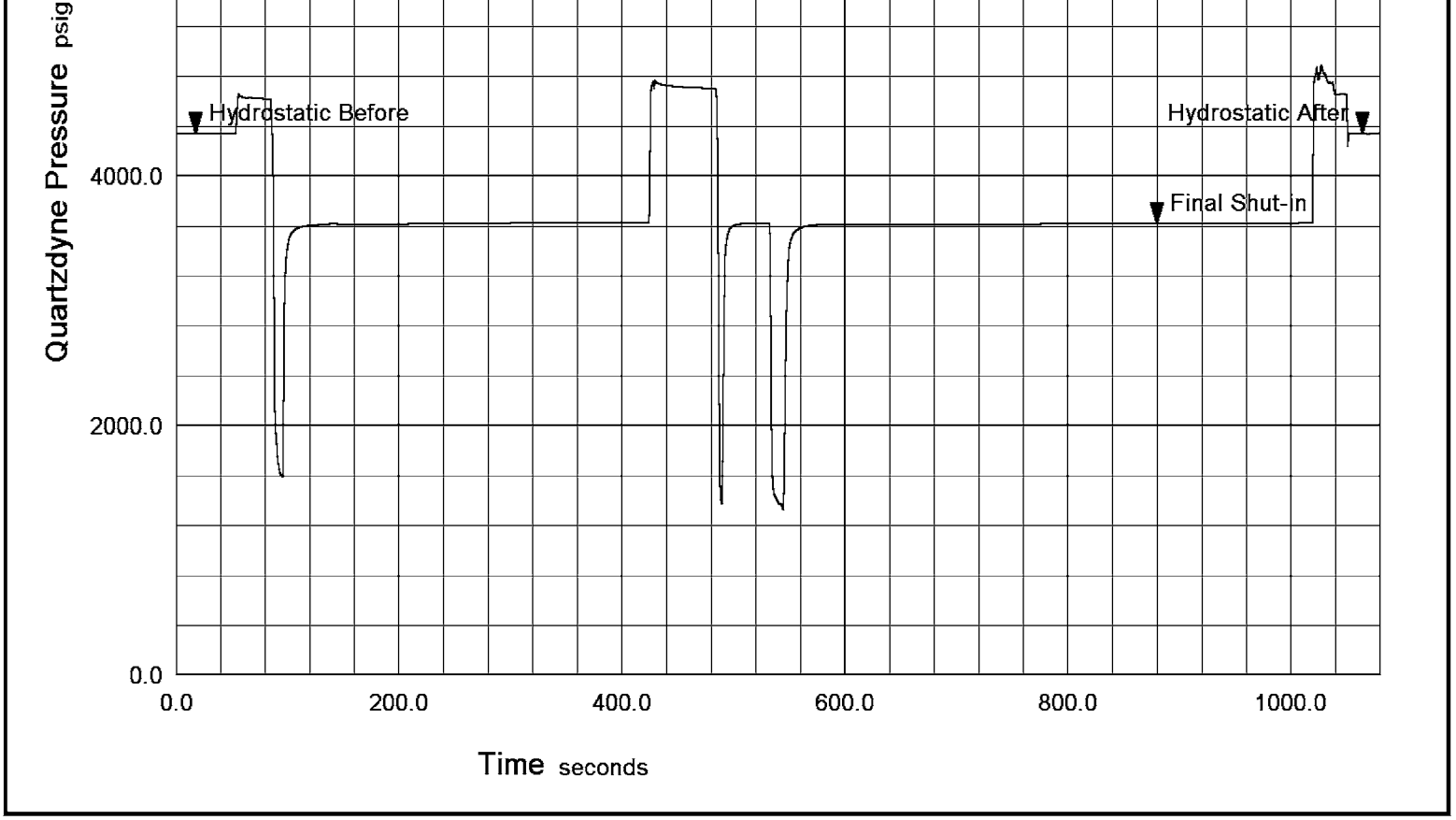
Time Based Data - Notional Logging Speed 9.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_18.dta
Recorded on 05-OCT-2005 03:37
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 5 at 2562.41 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_19.dta
File Date: 04-OCT-2005 21:03:58
Run Id: Pretest 6 at 2585.55 m
Test Number: 6





Pretest 6 at 2585.55 m

Time Based Data - Notional Logging Speed 9.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_19.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 03:56

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

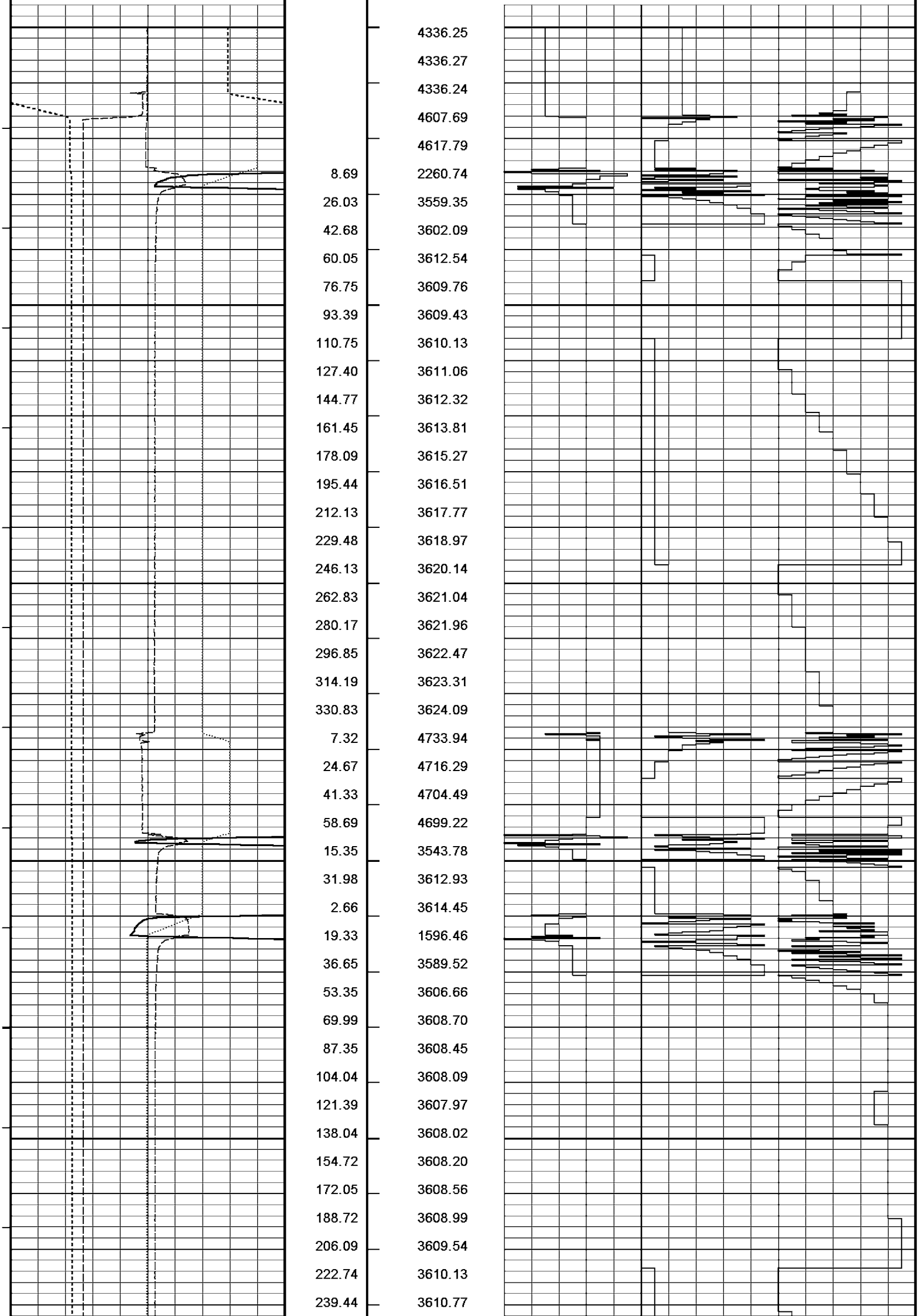
MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

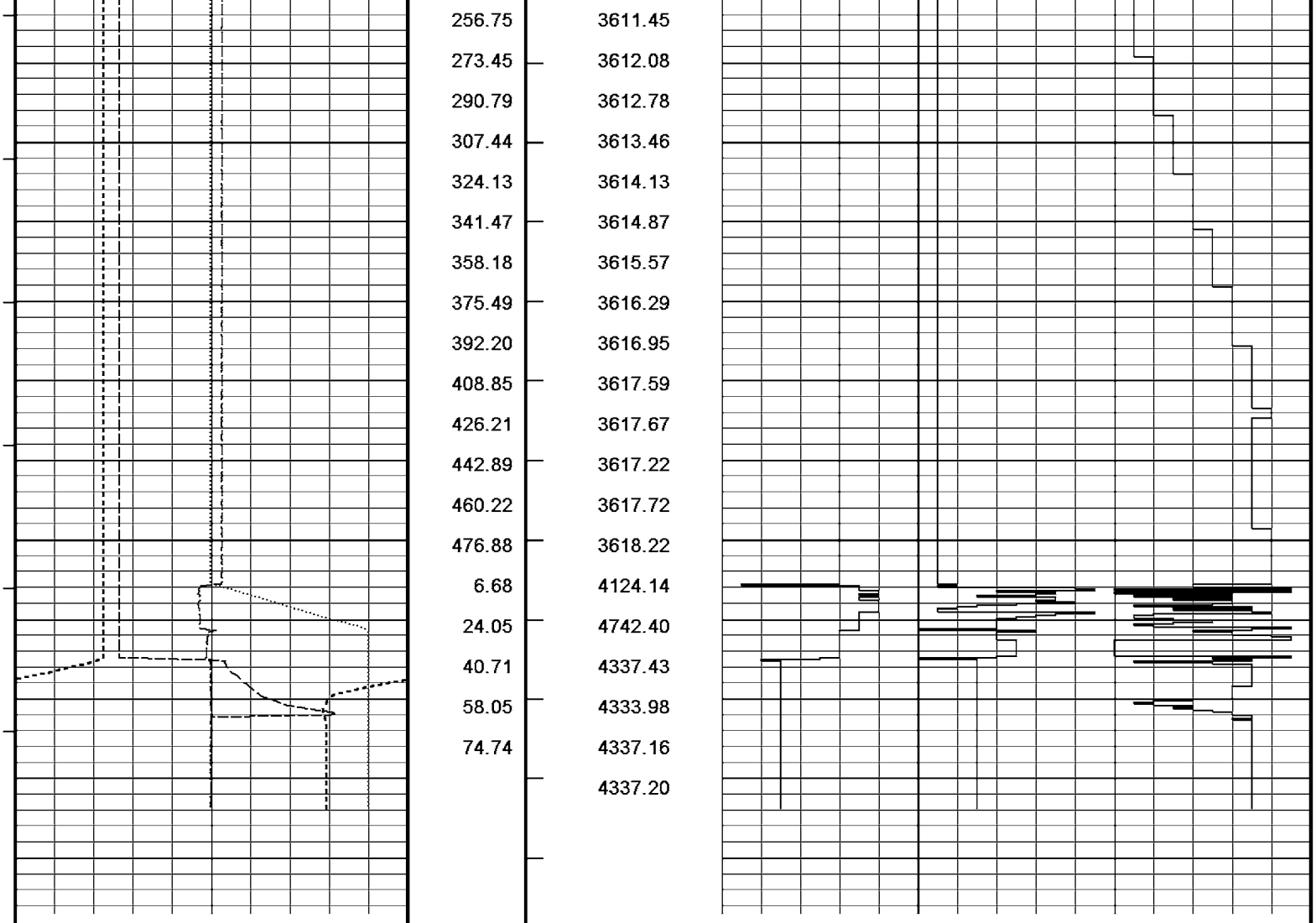
Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400



	4336.25
	4336.27
	4336.24
	4607.69
	4617.79
8.69	2260.74
26.03	3559.35
42.68	3602.09
60.05	3612.54
76.75	3609.76
93.39	3609.43
110.75	3610.13
127.40	3611.06
144.77	3612.32
161.45	3613.81
178.09	3615.27
195.44	3616.51
212.13	3617.77
229.48	3618.97
246.13	3620.14
262.83	3621.04
280.17	3621.96
296.85	3622.47
314.19	3623.31
330.83	3624.09
7.32	4733.94
24.67	4716.29
41.33	4704.49
58.69	4699.22
15.35	3543.78
31.98	3612.93
2.66	3614.45
19.33	1596.46
36.65	3589.52
53.35	3606.66
69.99	3608.70
87.35	3608.45
104.04	3608.09
121.39	3607.97
138.04	3608.02
154.72	3608.20
172.05	3608.56
188.72	3608.99
206.09	3609.54
222.74	3610.13
239.44	3610.77



Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 9.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_19.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

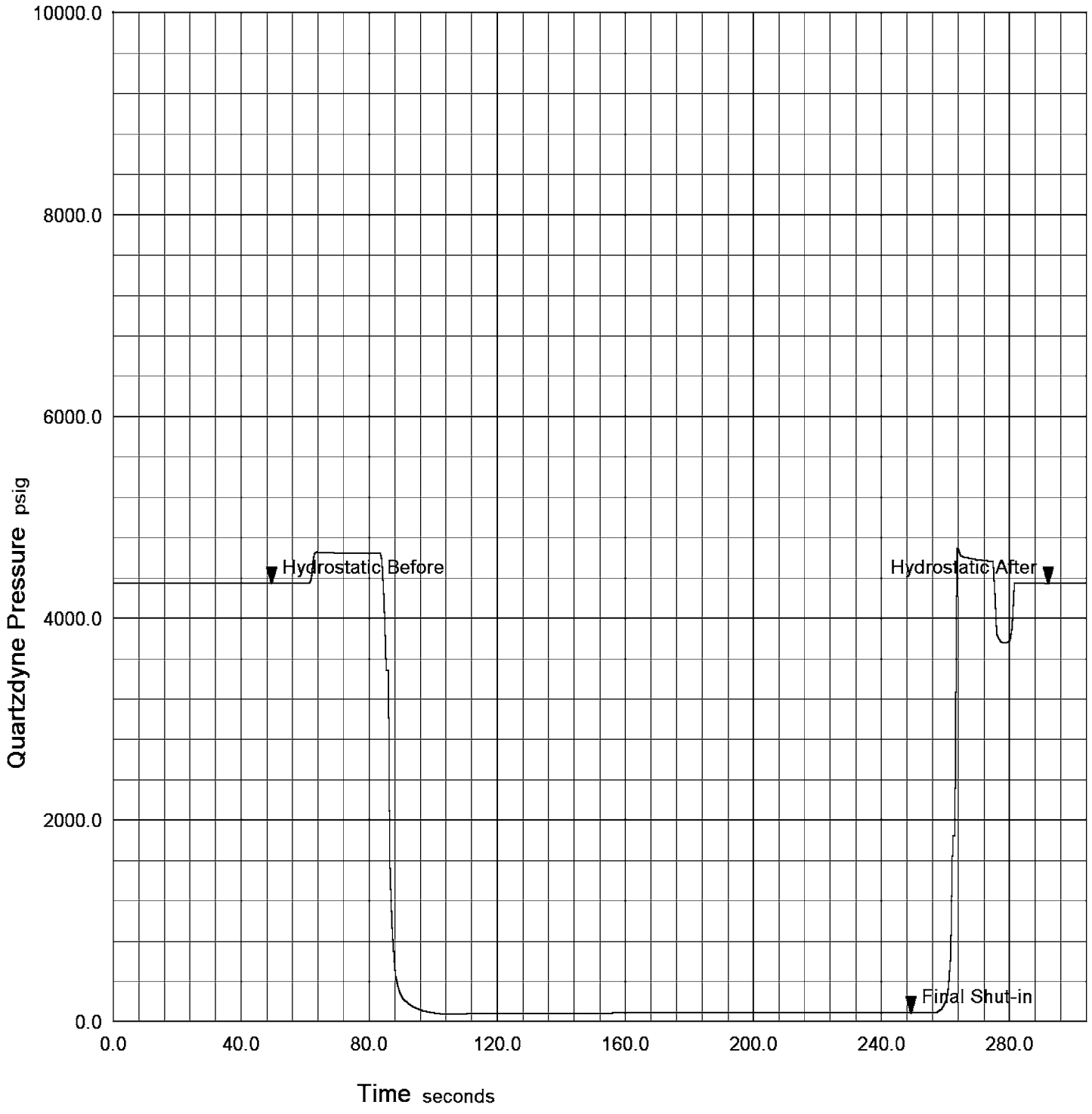
Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 03:56

Pretest 6 at 2585.55 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_20.dta
Run Id: Pretest 7 at 2589.92 m
Test Number: 7

File Date: 04-OCT-2005 21:04:04



Pretest 7 at 2589.92 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_20.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:22

	TPRE	Quartzdyne Pressure	Quartzdyne 100's	Quartzdyne 10's	Quartzdyne 1's

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

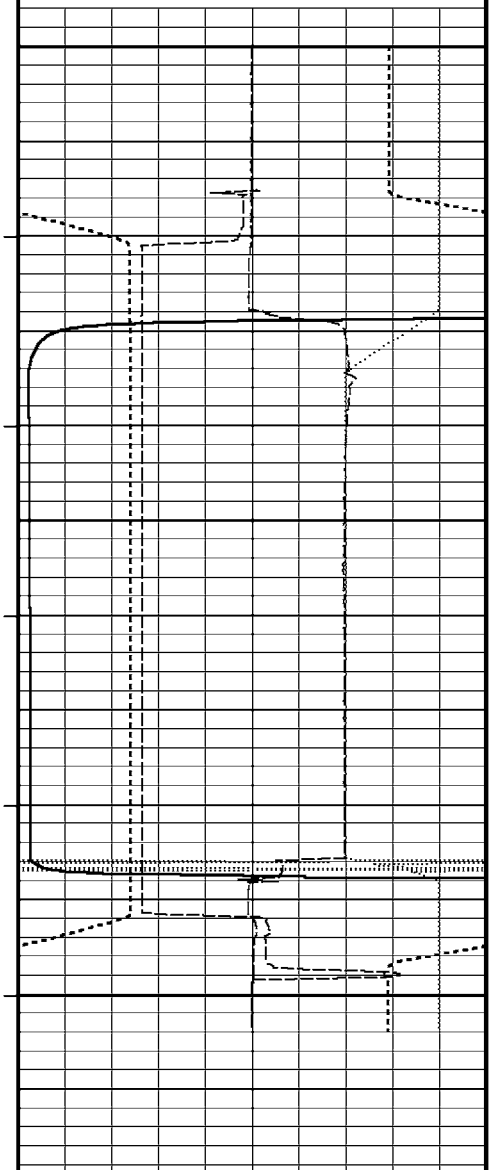
Piston Swept Volume
cc
45 20 -5

every 0.25 in

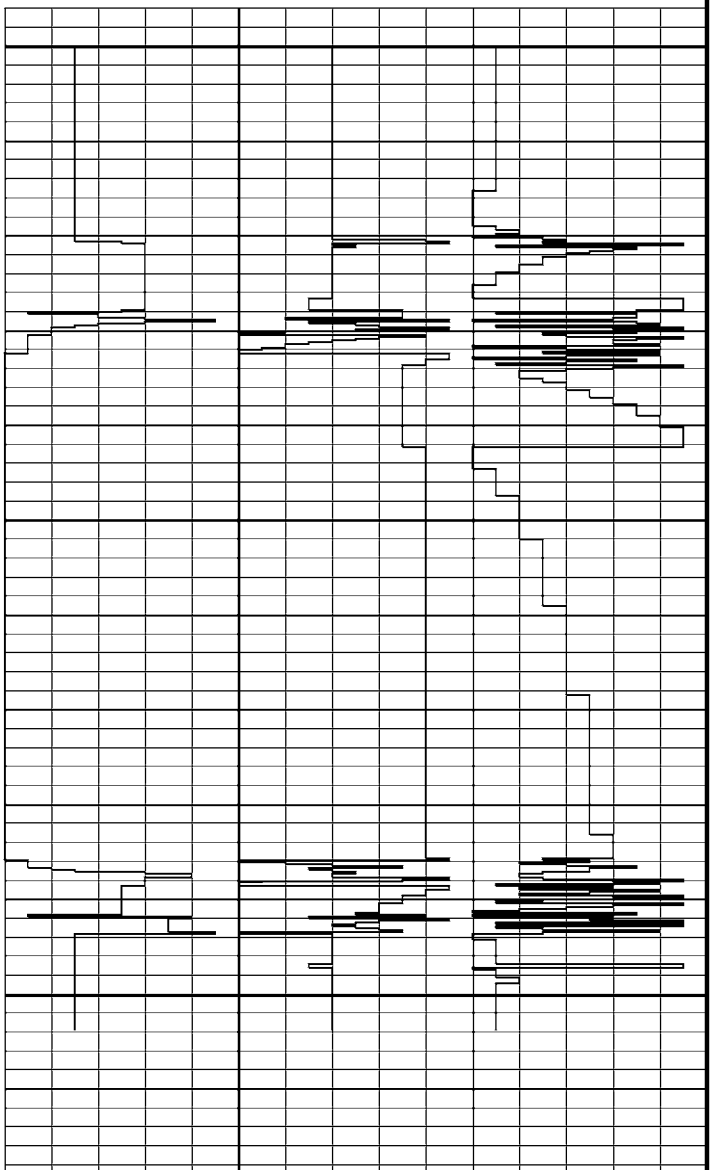
psi
every 0.25 in

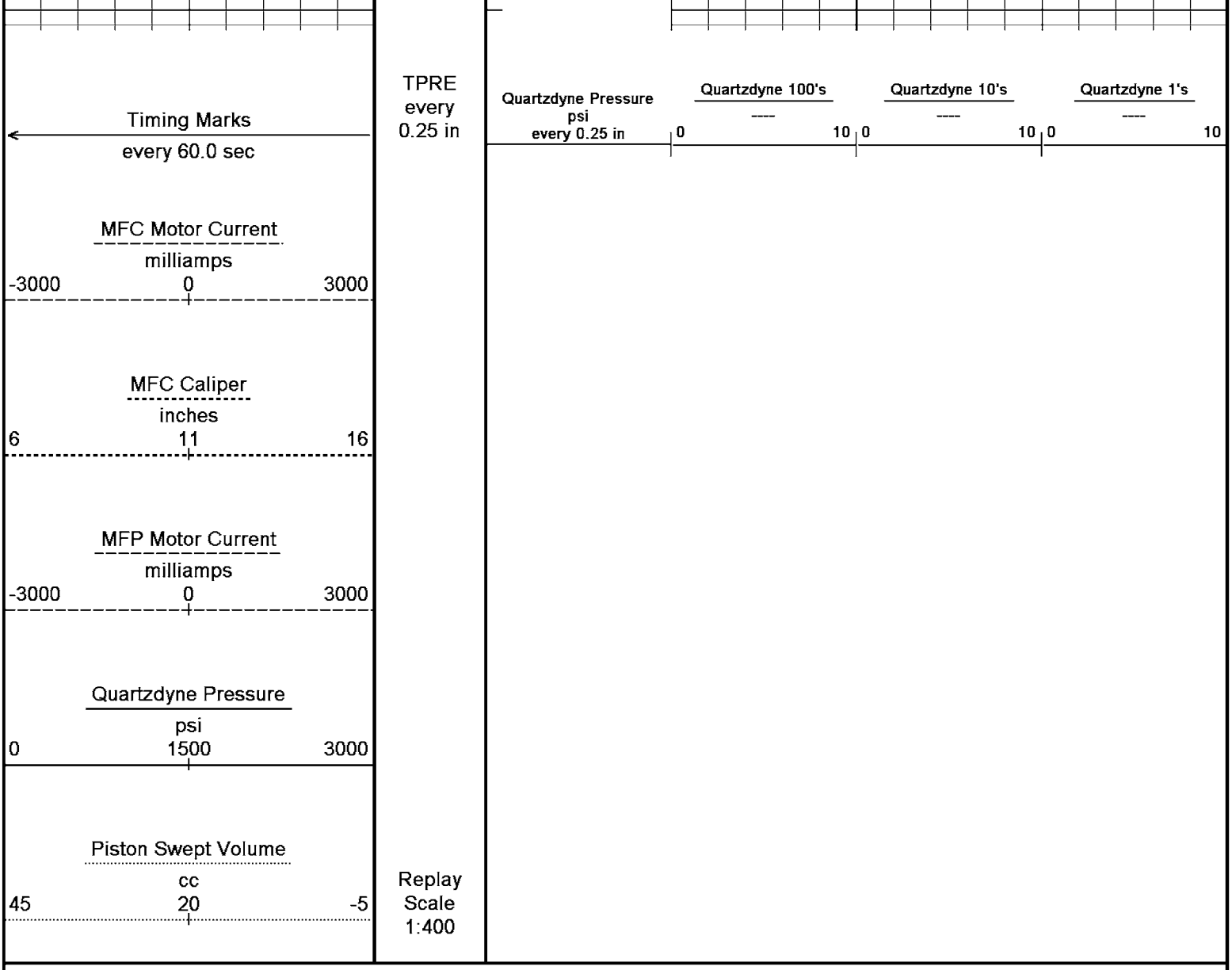
0 10 0 10 0 10

Replay Scale 1:400



	4341.25
	4341.25
	4341.23
	4340.20
	4647.57
	4640.20
11.36	128.19
26.39	75.53
41.99	79.82
56.98	81.76
71.97	82.93
87.56	83.73
102.57	84.40
118.20	84.89
133.17	85.29
148.19	85.66
163.81	85.96
10.84	1842.70
26.44	3751.54
41.44	4341.35
56.41	4341.31



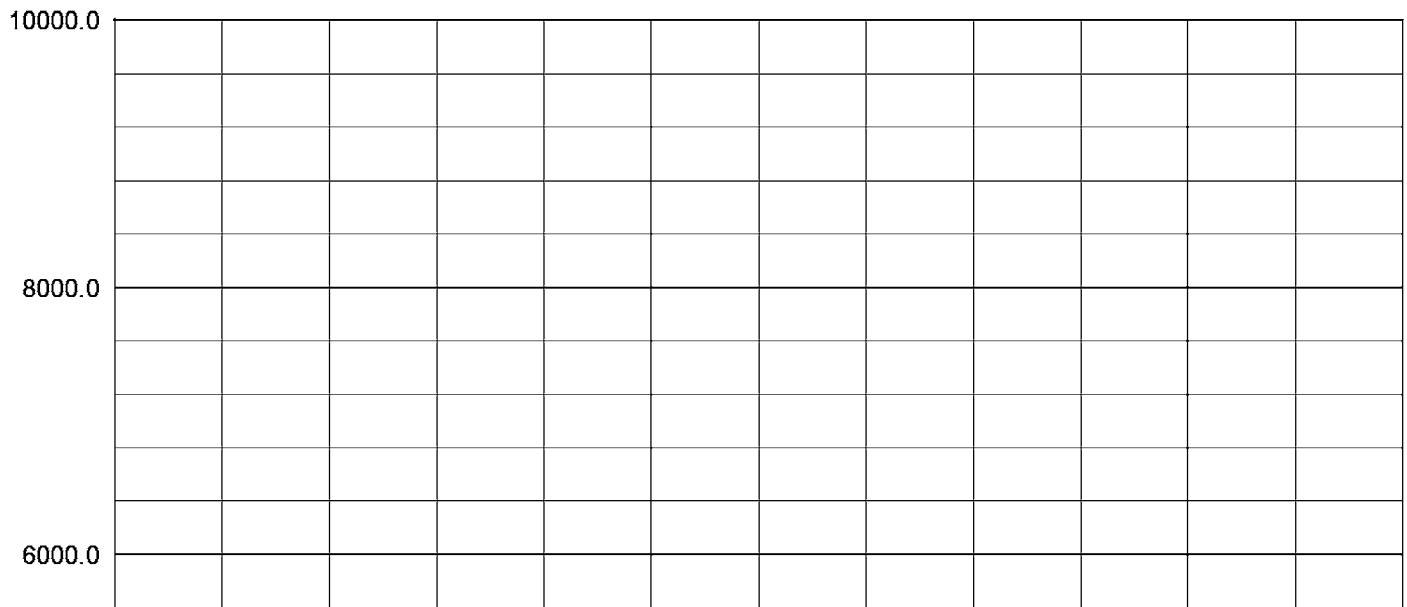


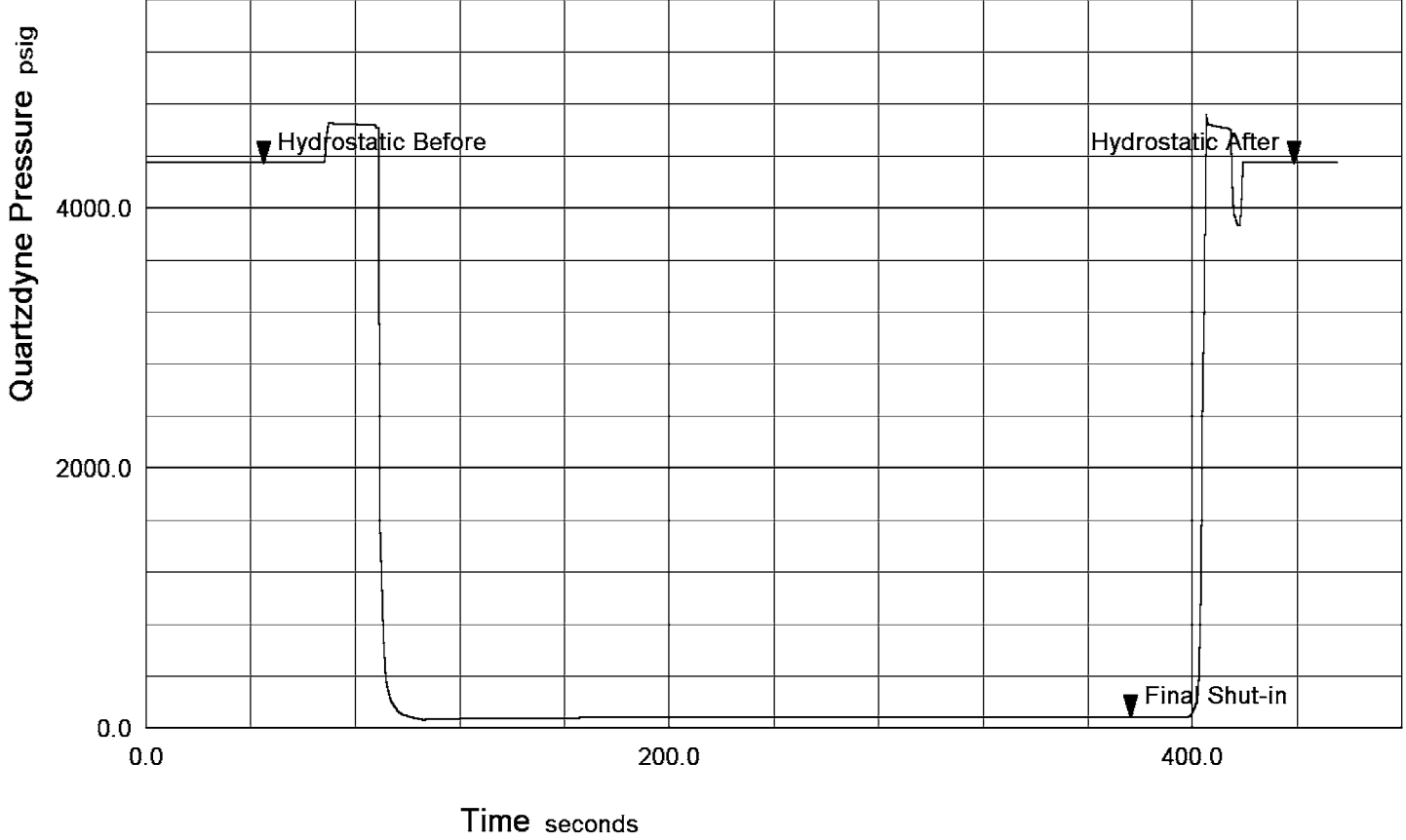
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_20.dta
Recorded on 05-OCT-2005 04:22
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 7 at 2589.92 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_21.dta
File Date: 04-OCT-2005 21:04:12
Run Id: Pretest 8 at 2593.43 m
Test Number: 8





Pretest 8 at 2593.43 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_21.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:31

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

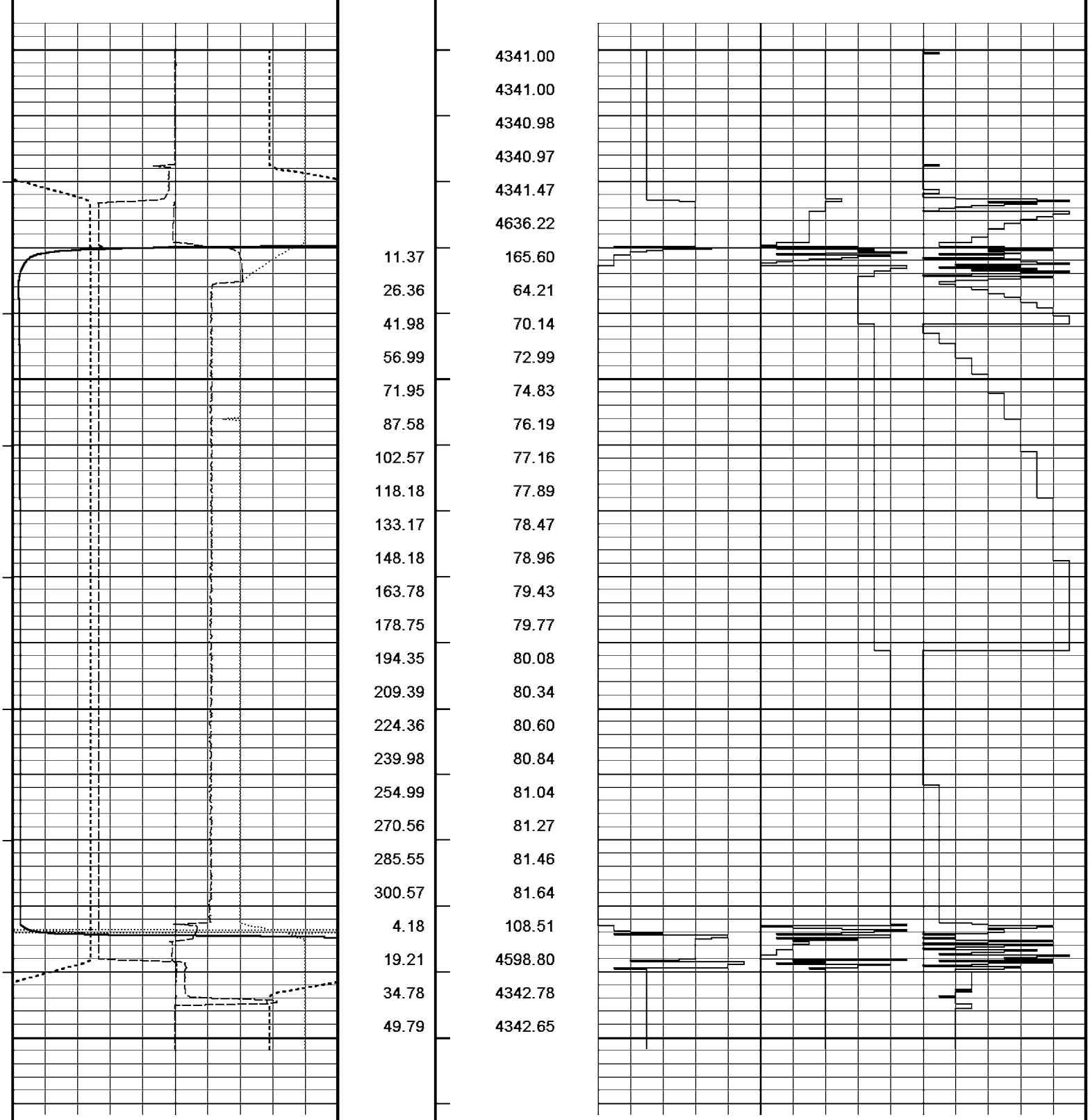
MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400



TPRE every 0.25 in	
11.37	4341.00
26.36	4341.00
41.98	4340.98
56.99	4340.97
71.95	4341.47
87.58	4636.22
102.57	165.60
118.18	64.21
133.17	70.14
148.18	72.99
163.78	74.83
178.75	76.19
194.35	77.16
209.39	77.89
224.36	78.47
239.98	78.96
254.99	79.43
270.56	79.77
285.55	80.08
300.57	80.34
4.18	80.60
19.21	80.84
34.78	81.04
49.79	81.27
	81.46
	81.64
	108.51
	4598.80
	4342.78
	4342.65

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFR Motor Current

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
---
0 10

Quartzdyne 10's
---
0 10

Quartzdyne 1's
---
0 10

MPT Motor Current

milliamps

-3000 0 3000

Quartzdyne Pressure

psi

0 1500 3000

Piston Swept Volume

cc

45 20 -5

Replay Scale 1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35

Filename: C:\Data\Childers Cove\MCG098MFT017_21.dta
Recorded on 05-OCT-2005 04:31

System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

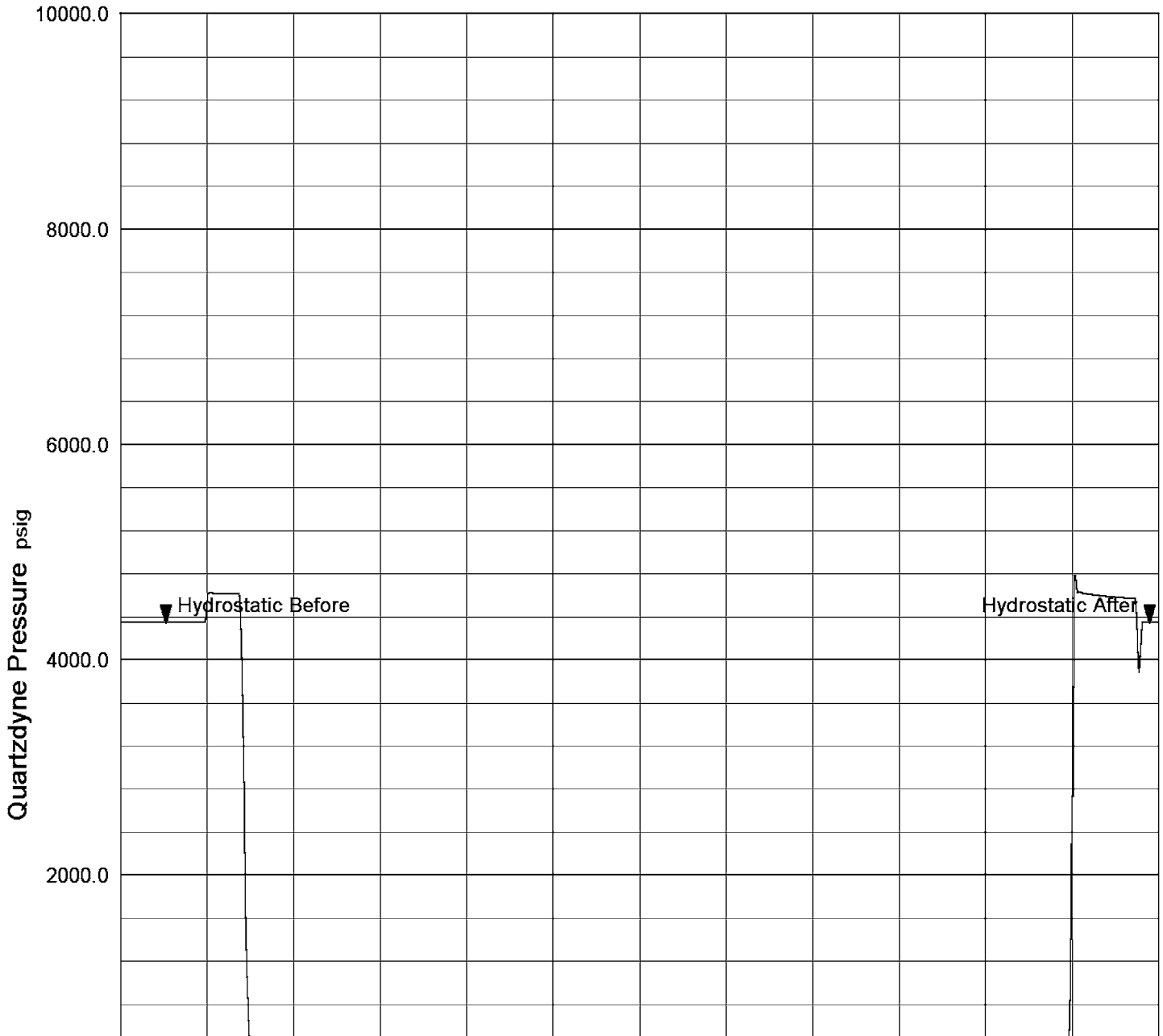
Pretest 8 at 2593.43 m

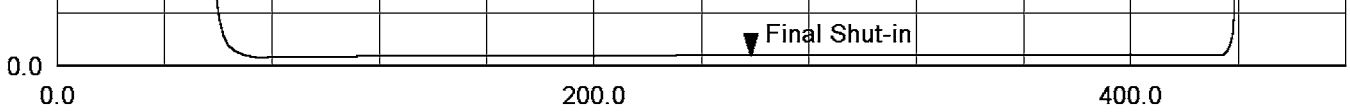
Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_22.dta
File Date: 04-OCT-2005 21:04:22

Run Id: Pretest 9 at 2596.65 m

Test Number: 9





Time seconds

Pretest 9 at 2596.65 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_22.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:42

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

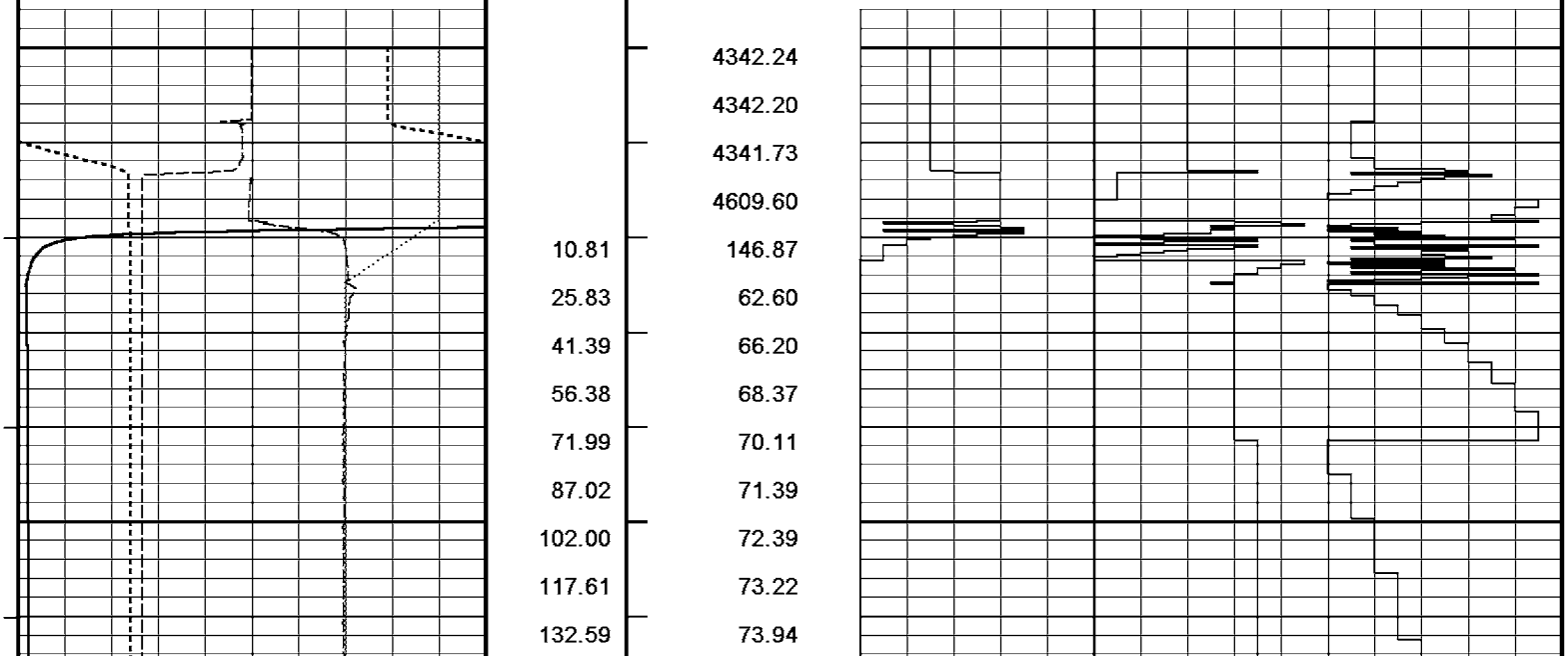
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

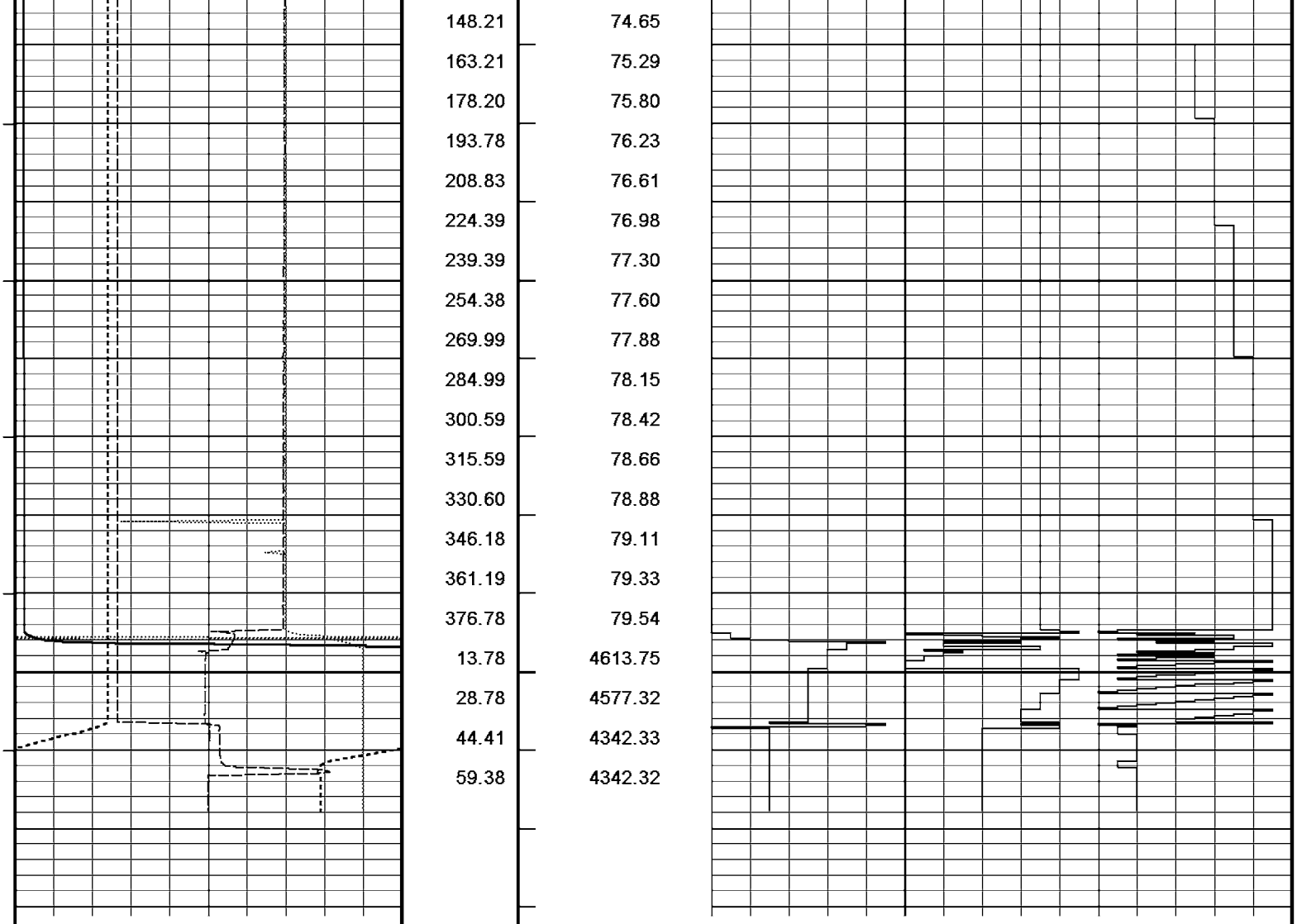
Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Replay
Scale
1:400



	4342.24
	4342.20
	4341.73
	4609.60
10.81	146.87
25.83	62.60
41.39	66.20
56.38	68.37
71.99	70.11
87.02	71.39
102.00	72.39
117.61	73.22
132.59	73.94



Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_22.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

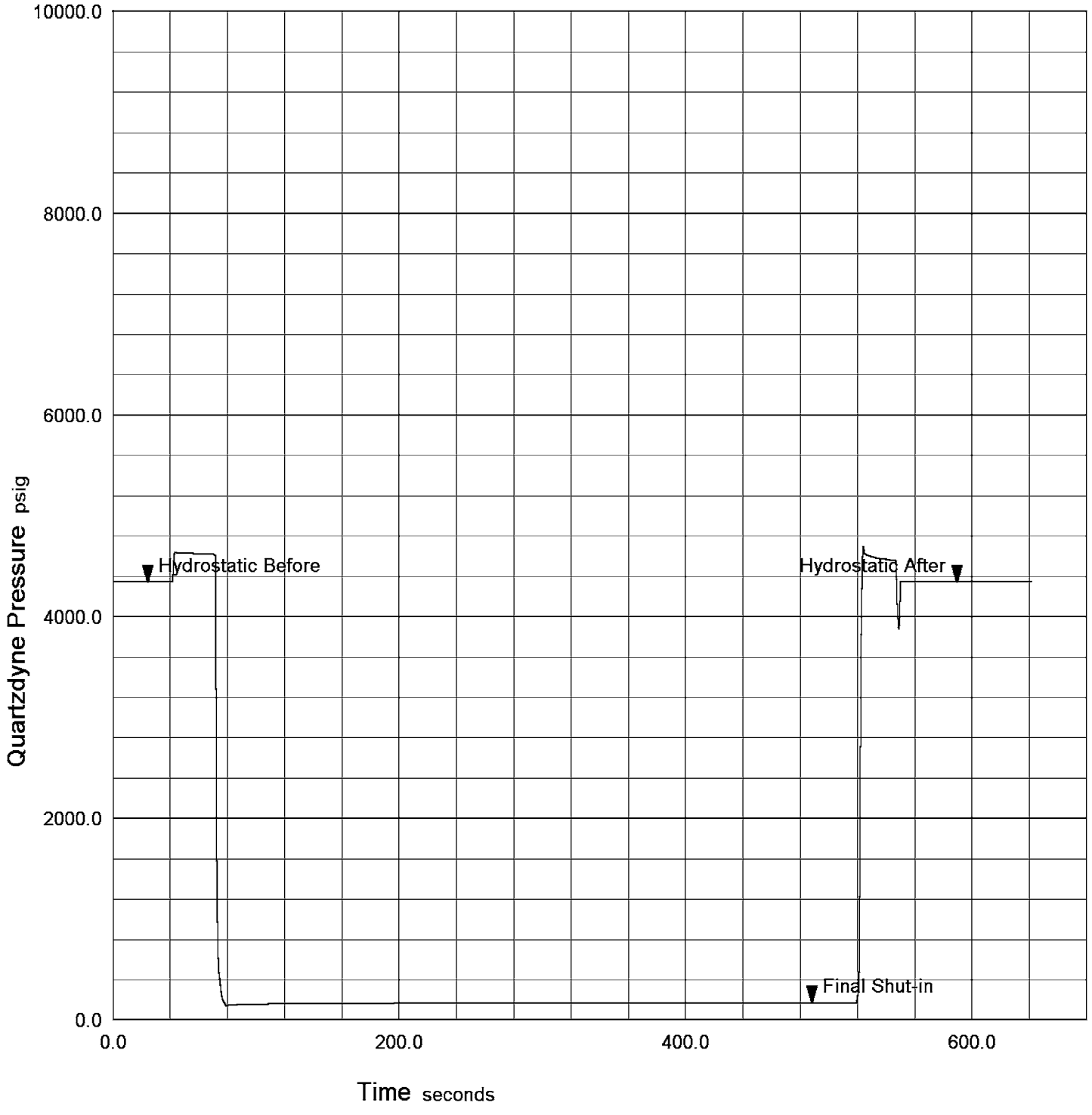
Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:42

Pretest 9 at 2596.65 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_23.dta
Run Id: Pretest 10 at 2594.22 m
Test Number: 10

File Date: 04-OCT-2005 21:04:30



Pretest 10 at 2594.22 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_23.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:54

TPRE

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

TIME
every
0.25 in

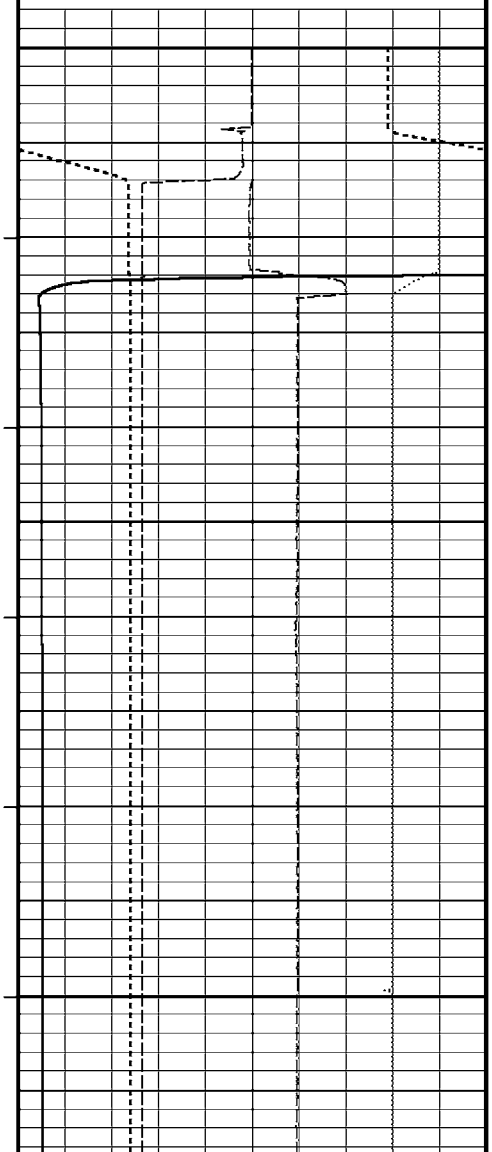
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100 s
----
0 10

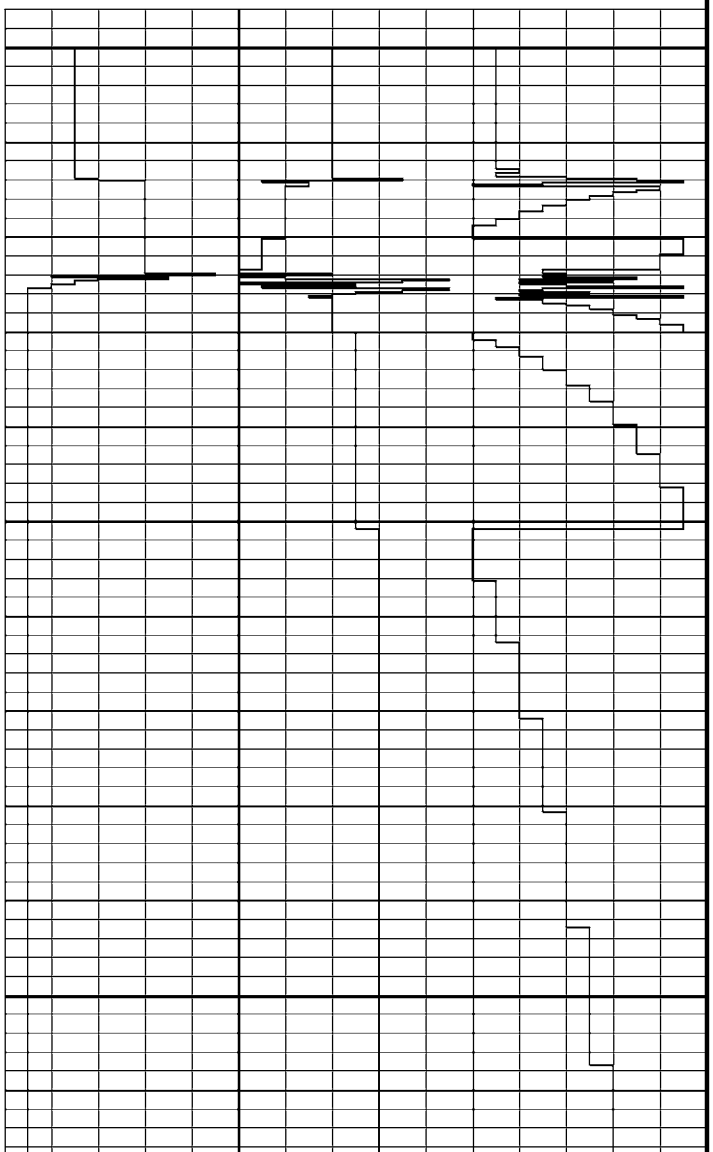
Quartzdyne 10 s
----
0 10

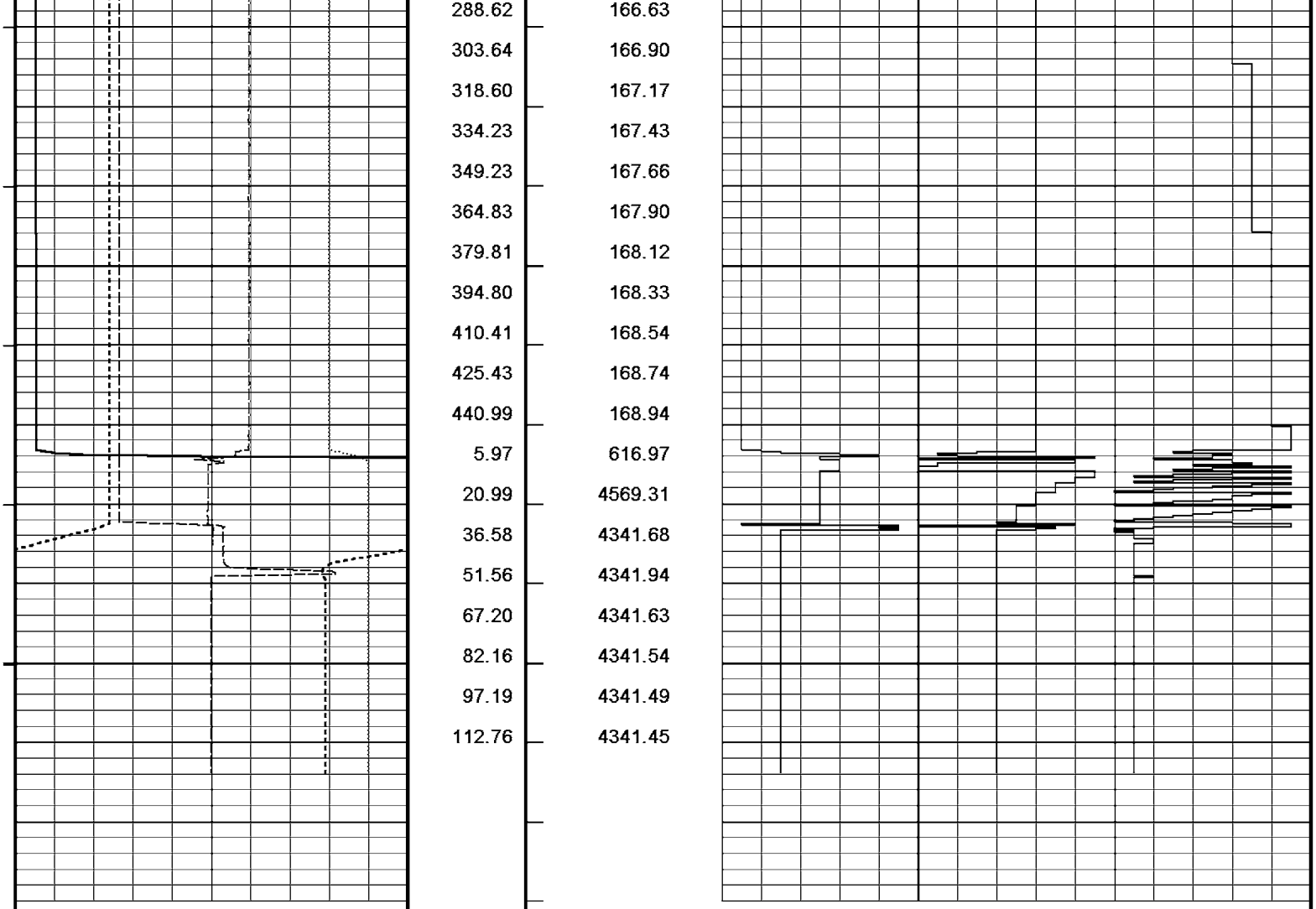
Quartzdyne 1 s
----
0 10

Replay
Scale
1:400



	4341.57
	4341.59
	4341.48
	4624.55
	4619.27
13.83	139.90
29.39	151.88
44.41	155.52
60.03	157.64
75.03	159.07
90.02	160.19
105.63	161.12
120.64	161.88
136.23	162.57
151.22	163.14
166.24	163.66
181.80	164.16
196.81	164.58
212.44	164.99
227.40	165.34
242.39	165.69
258.01	166.03
272.99	166.33





288.62	166.63
303.64	166.90
318.60	167.17
334.23	167.43
349.23	167.66
364.83	167.90
379.81	168.12
394.80	168.33
410.41	168.54
425.43	168.74
440.99	168.94
5.97	616.97
20.99	4569.31
36.58	4341.68
51.56	4341.94
67.20	4341.63
82.16	4341.54
97.19	4341.49
112.76	4341.45

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_23.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

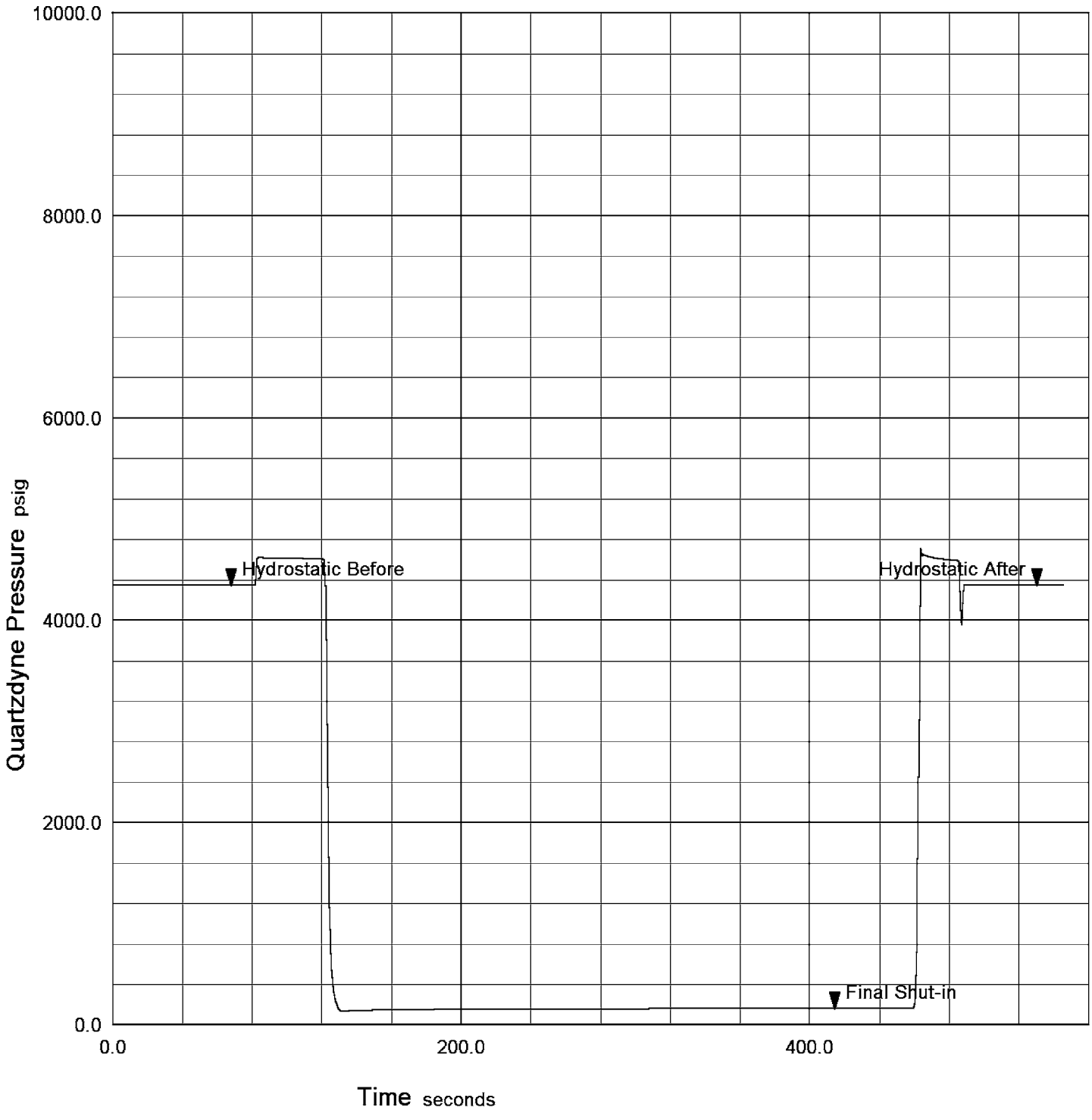
Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 04:54

Pretest 10 at 2594.22 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_24.dta
Run Id: Pretest 11 at 2590.51 m
Test Number: 11

File Date: 04-OCT-2005 21:04:58



Pretest 11 at 2590.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:07

	TPRE every	Quartzdyne Pressure	Quartzdyne 100's	Quartzdyne 10's	Quartzdyne 1's

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

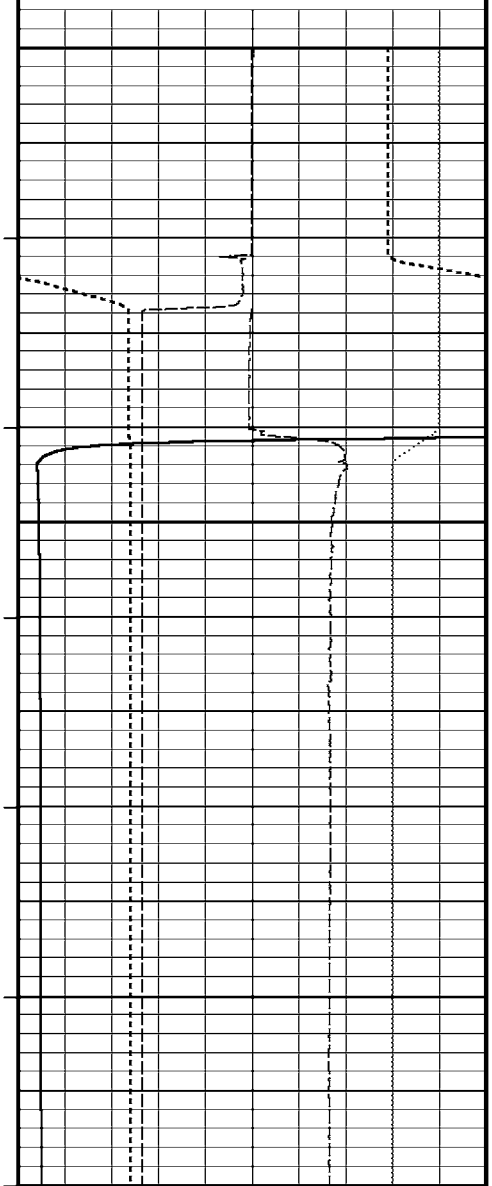
Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

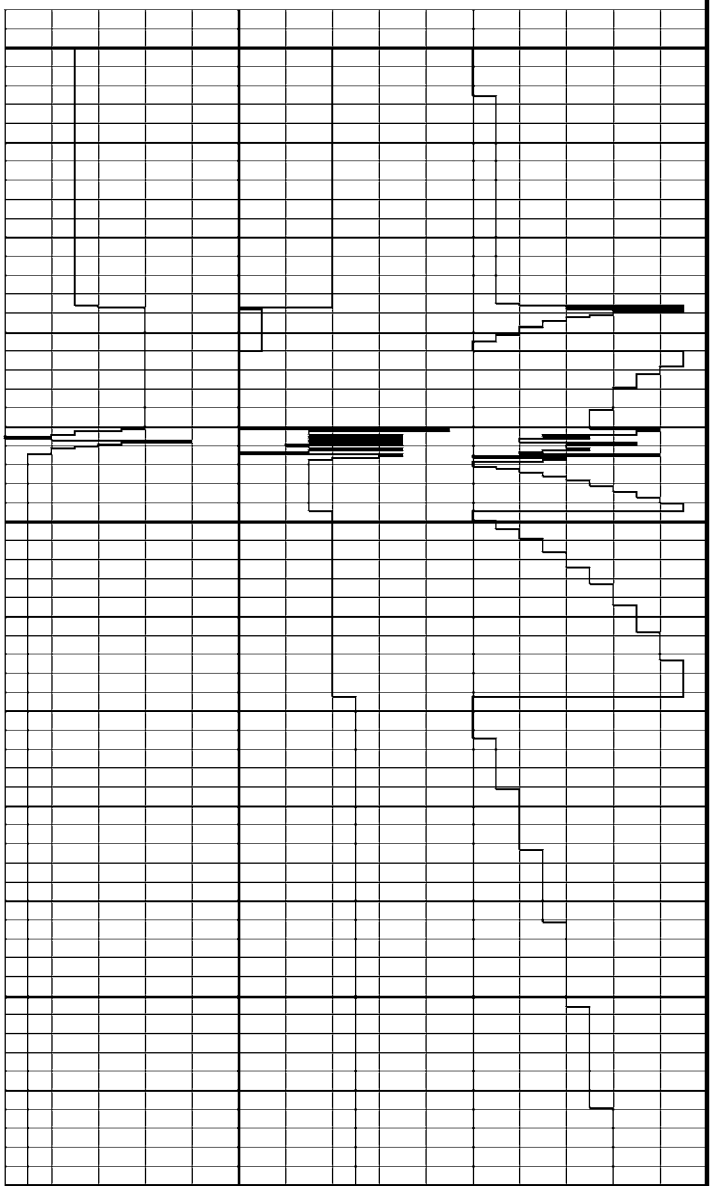
0.25 in

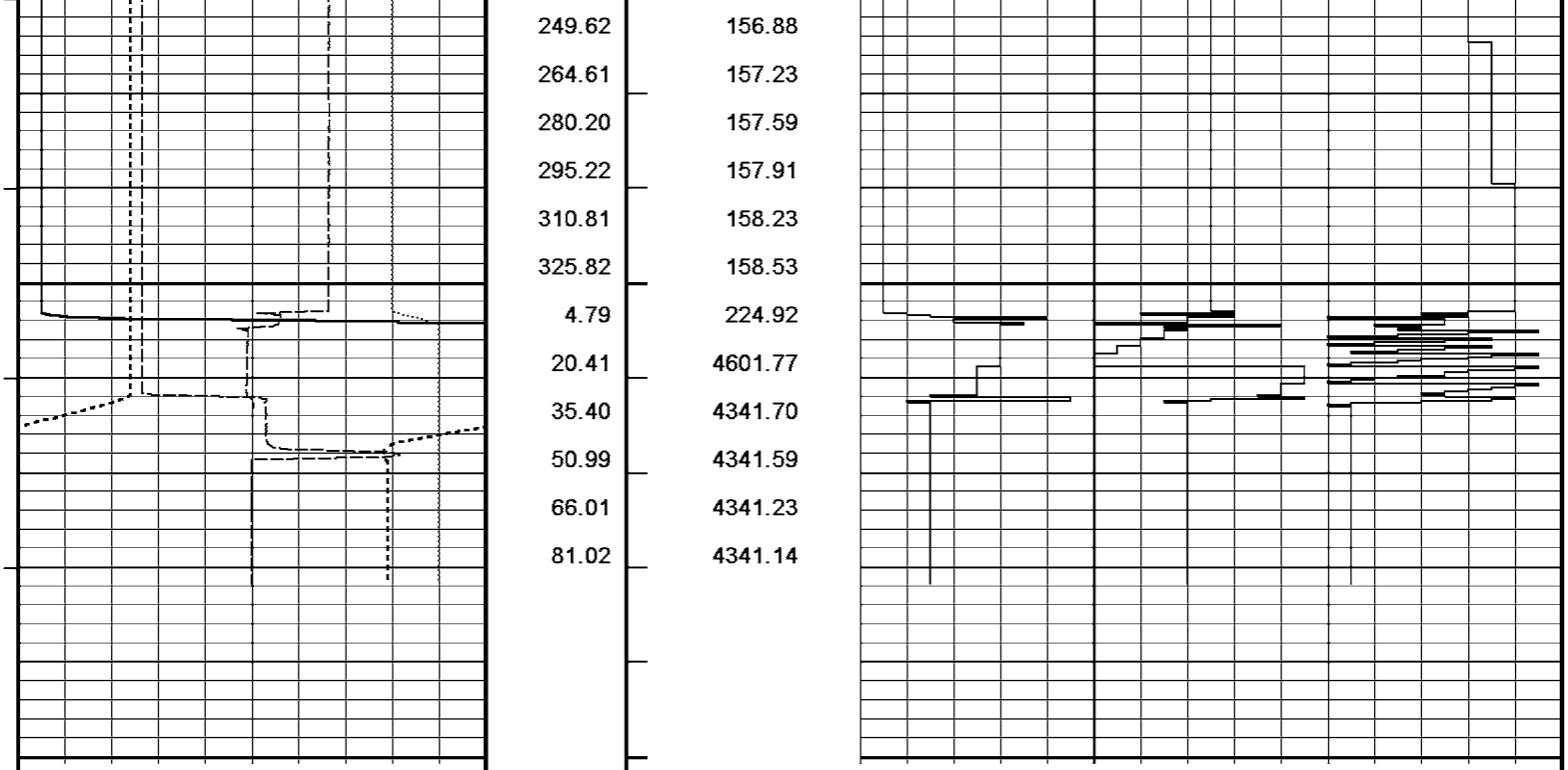
psi
every 0.25 in
0 10 0 10 0 10

Replay
Scale
1:400



	4340.84
	4341.03
	4341.13
	4341.18
	4341.22
	4341.50
	4610.68
	4606.71
6.00	577.35
20.99	136.98
36.03	142.87
51.63	146.13
66.59	148.14
82.22	149.69
97.19	150.85
112.21	151.81
127.82	152.66
142.79	153.38
158.43	154.04
173.42	154.61
188.43	155.14
204.01	155.64
219.01	156.07
234.62	156.49





Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

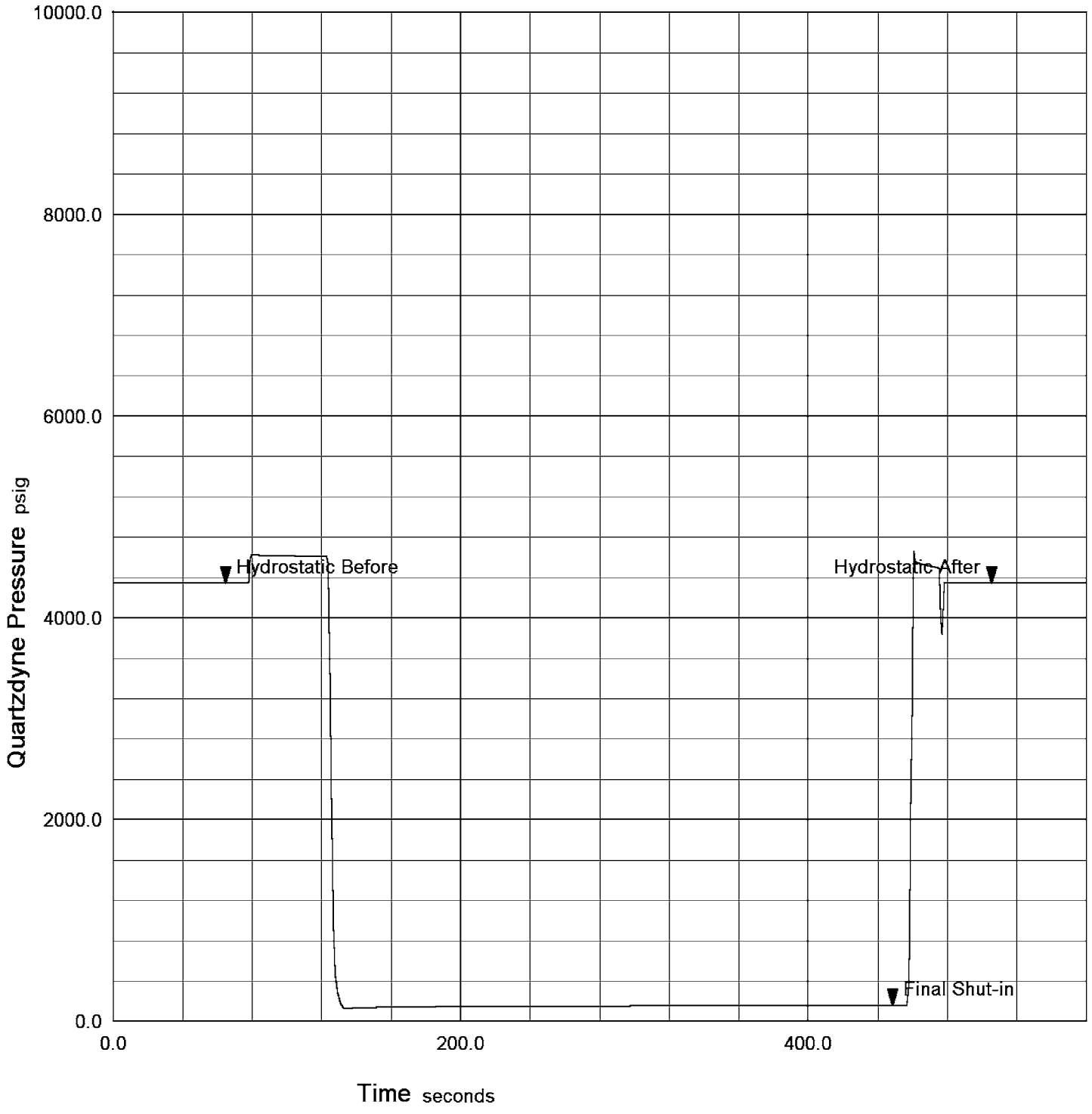
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
Recorded on 05-OCT-2005 05:07
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 11 at 2590.51 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_25.dta
File Date: 04-OCT-2005 21:05:04

Run Id: Pretest 12 at 2612.09 m
Test Number: 12



Pretest 11 at 2590.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:07

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
---- 0 10

Quartzdyne 10's
---- 0 10

Quartzdyne 1's
---- 0 10

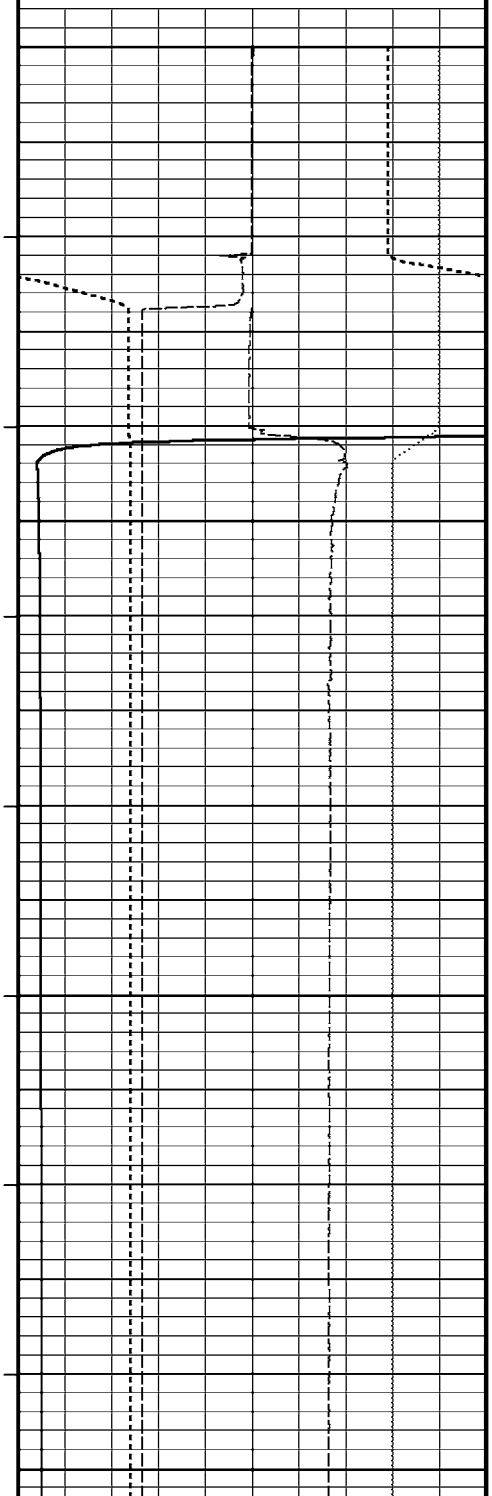
MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

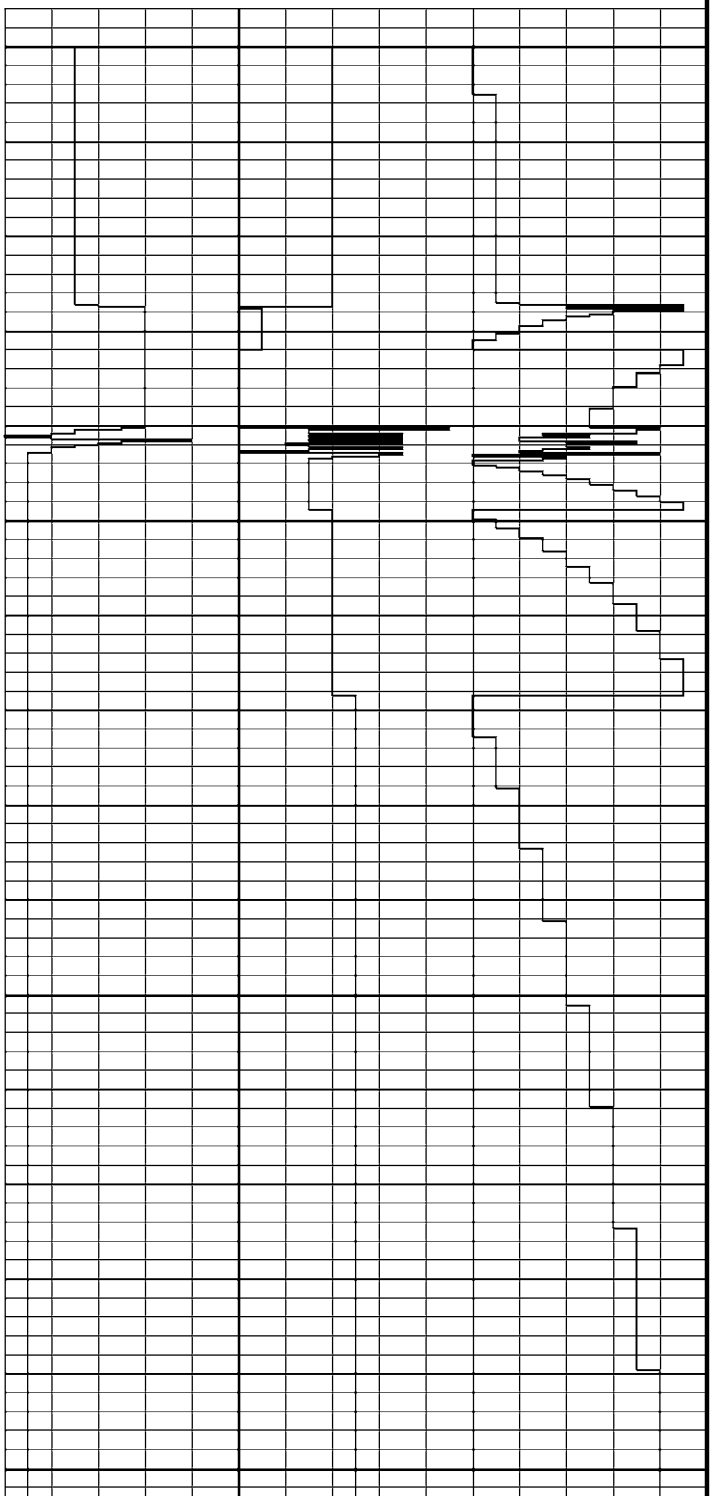
Quartzdyne Pressure
psi
0 1500 3000

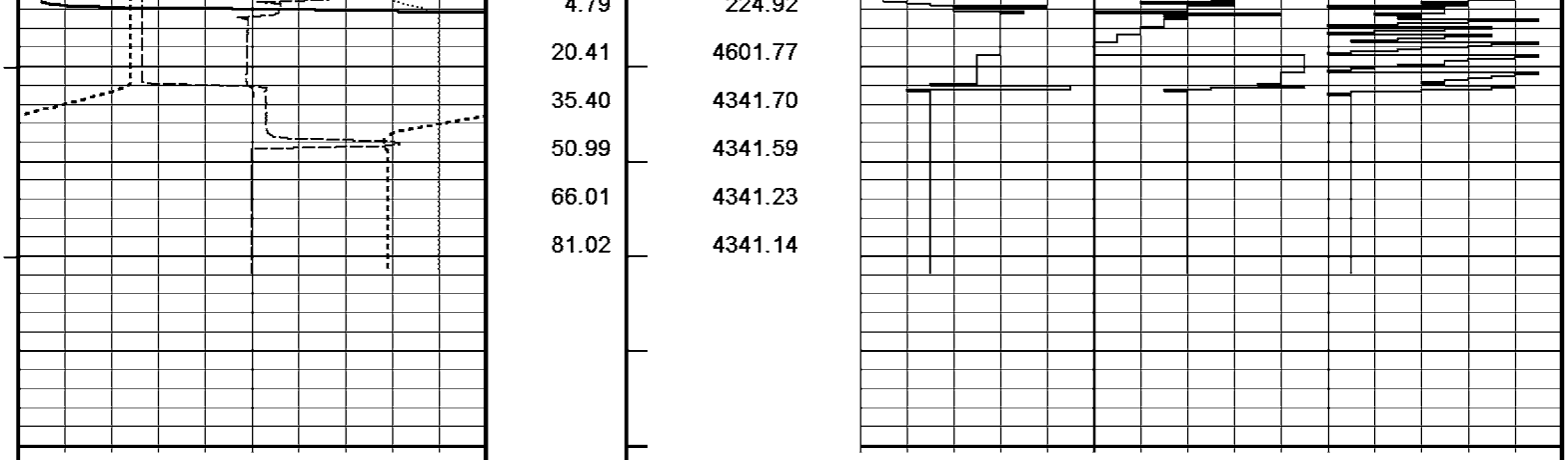
Piston Swept Volume
cc
45 20 -5

Replay Scale 1:400



	4340.84
	4341.03
	4341.13
	4341.18
	4341.22
	4341.50
	4610.68
	4606.71
6.00	577.35
20.99	136.98
36.03	142.87
51.63	146.13
66.59	148.14
82.22	149.69
97.19	150.85
112.21	151.81
127.82	152.66
142.79	153.38
158.43	154.04
173.42	154.61
188.43	155.14
204.01	155.64
219.01	156.07
234.62	156.49
249.62	156.88
264.61	157.23
280.20	157.59
295.22	157.91
310.81	158.23
325.82	158.53





Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

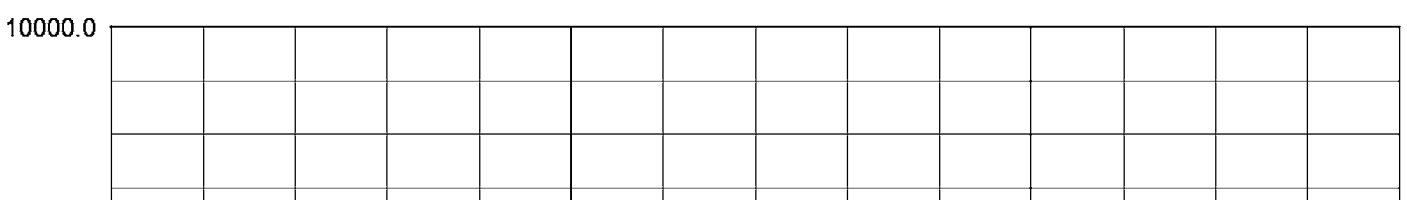
Replay
Scale
1:400

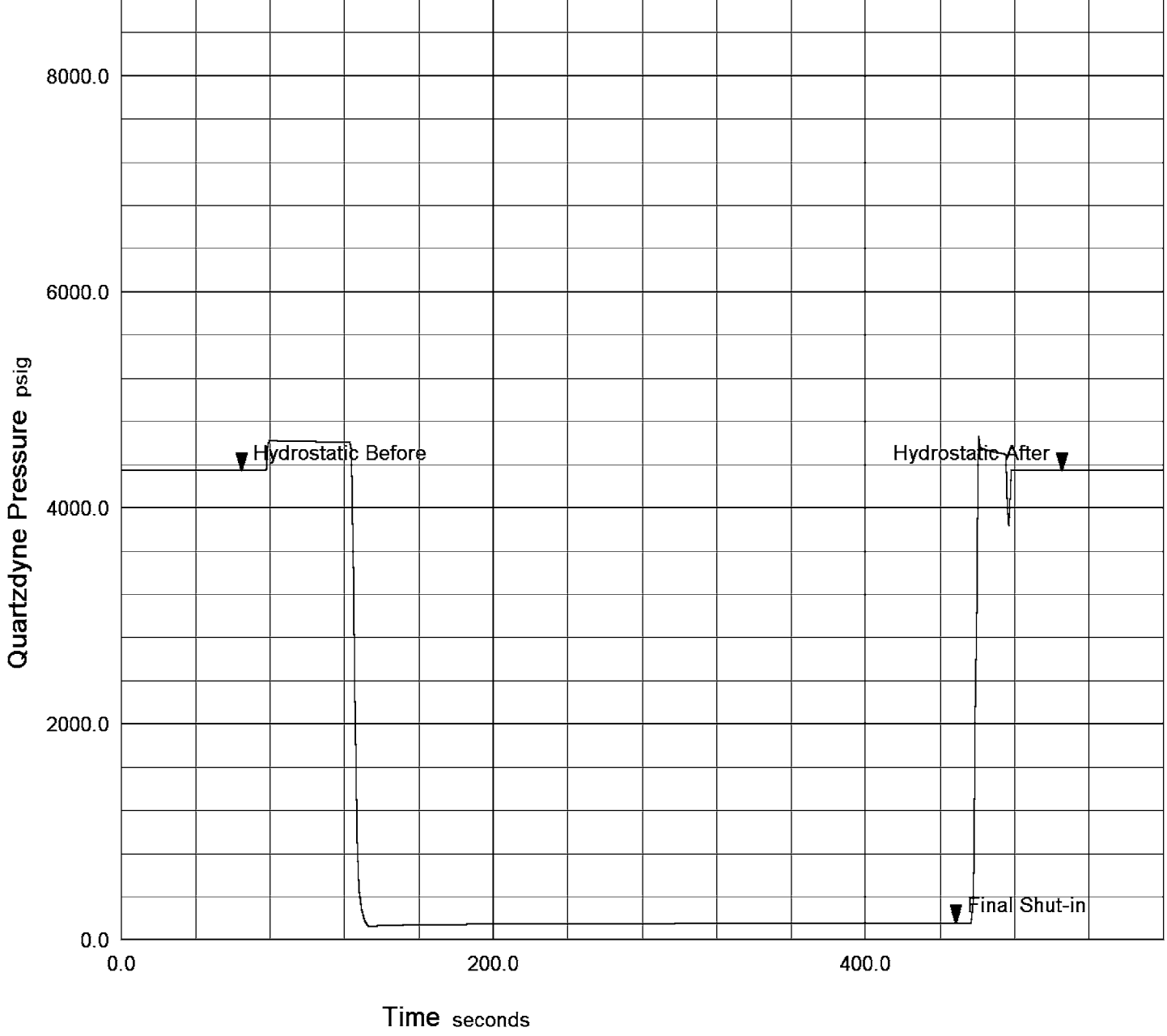
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
Recorded on 05-OCT-2005 05:07
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 11 at 2590.51 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_25.dta
File Date: 04-OCT-2005 21:05:04
Run Id: Pretest 12 at 2612.09 m
Test Number: 12





Pretest 12 at 2612.09 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_25.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:21

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

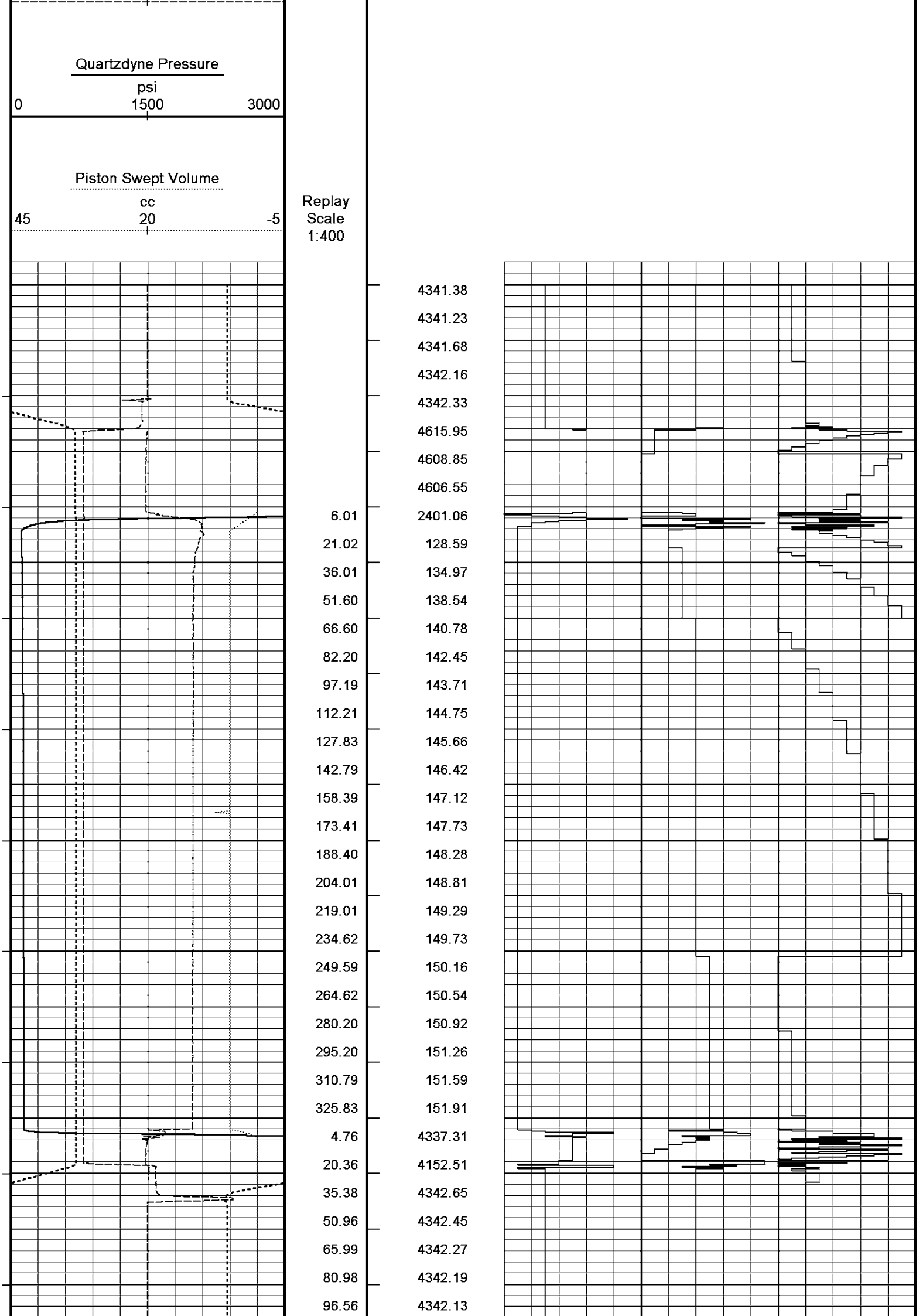
TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10


Quartzdyne Pressure
psi
0
1500
3000
Piston Swept Volume
cc
45
20
-5
Replay
Scale
1:400
4341.38
4341.23
4341.68
4342.16
4342.33
4615.95
4608.85
4606.55
6.01
2401.06
21.02
128.59
36.01
134.97
51.60
138.54
66.60
140.78
82.20
142.45
97.19
143.71
112.21
144.75
127.83
145.66
142.79
146.42
158.39
147.12
173.41
147.73
188.40
148.28
204.01
148.81
219.01
149.29
234.62
149.73
249.59
150.16
264.62
150.54
280.20
150.92
295.20
151.26
310.79
151.59
325.83
151.91
4.76
4337.31
20.36
4152.51
35.38
4342.65
50.96
4342.45
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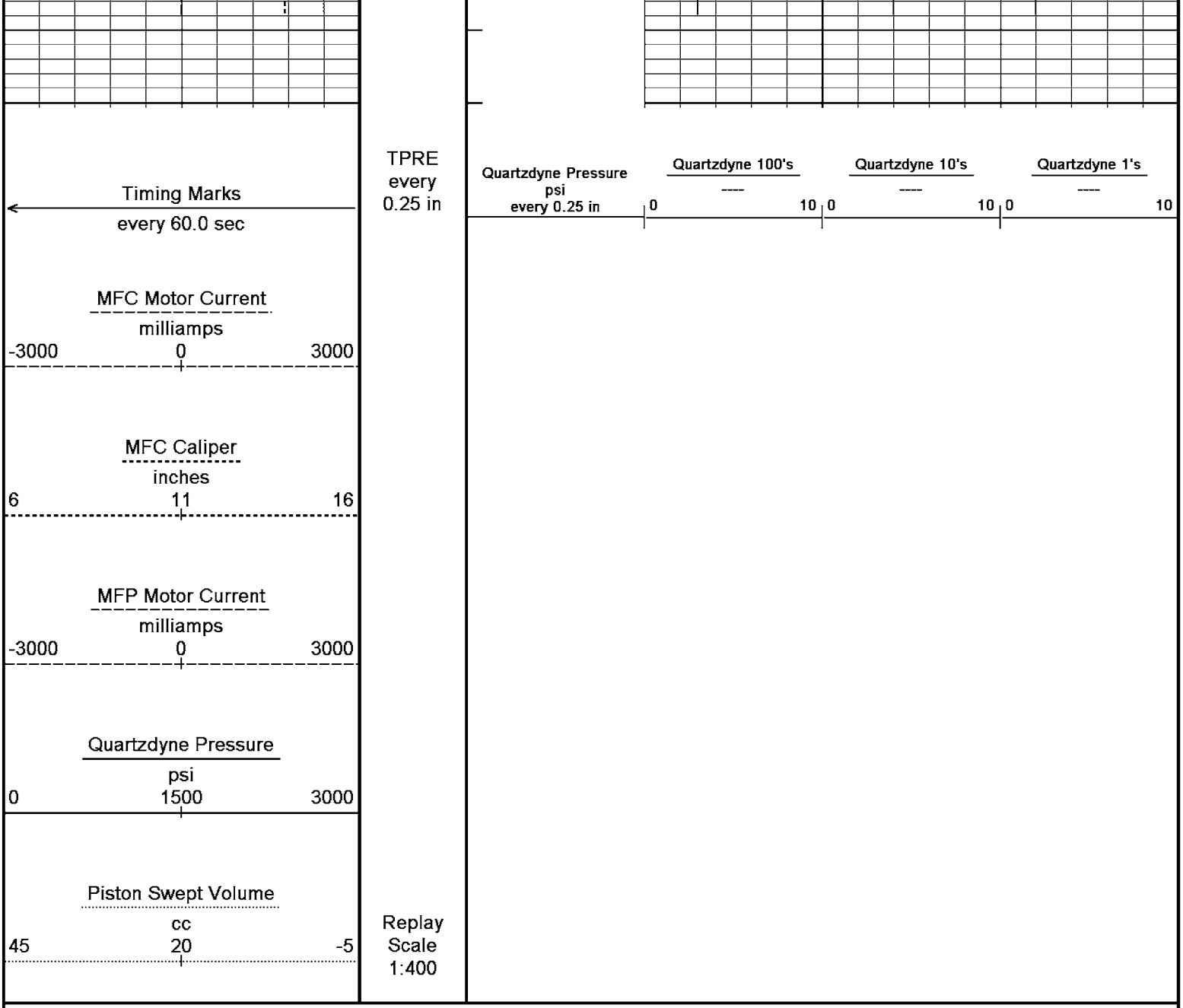
4342.19
96.56
4342.13

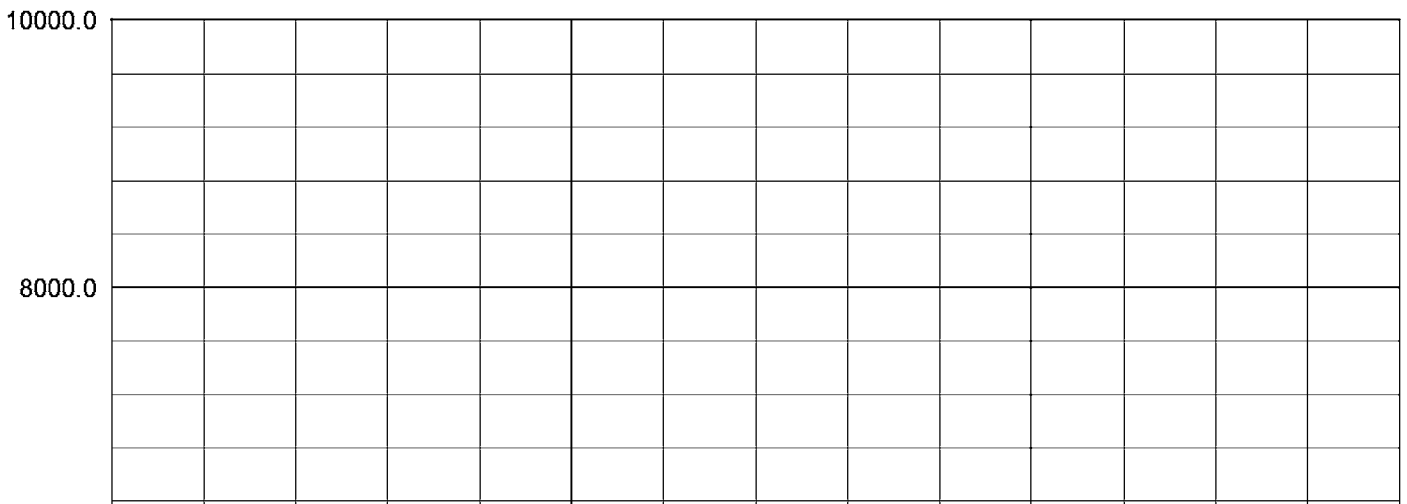


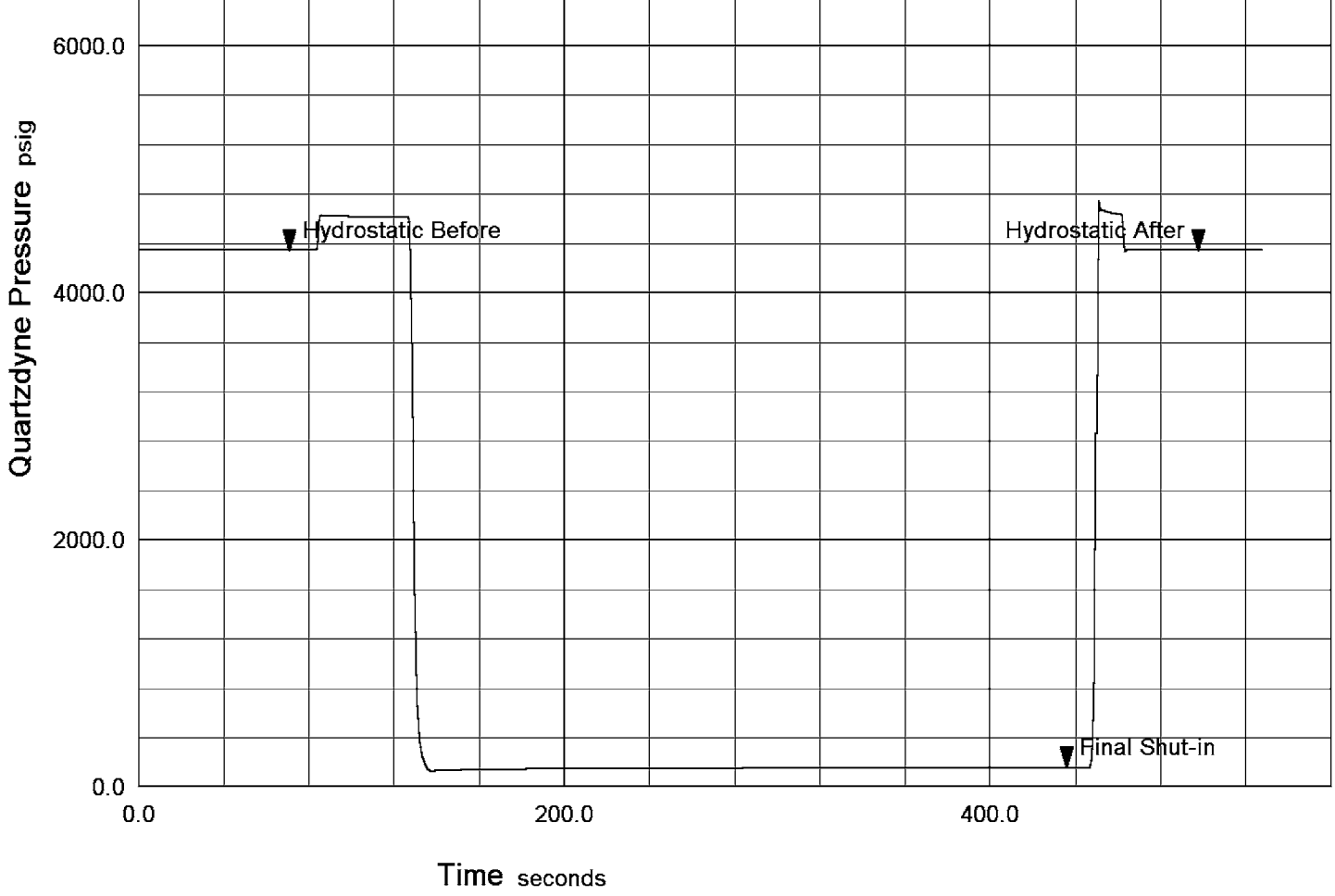
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_25.dta
Recorded on 05-OCT-2005 05:21
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 12 at 2612.09 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_26.dta
File Date: 04-OCT-2005 21:05:10
Run Id: Pretest 13 at 2611.90 m
Test Number: 13





Pretest 13 at 2611.90 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_26.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:31

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

TPRE
every
0.25 in

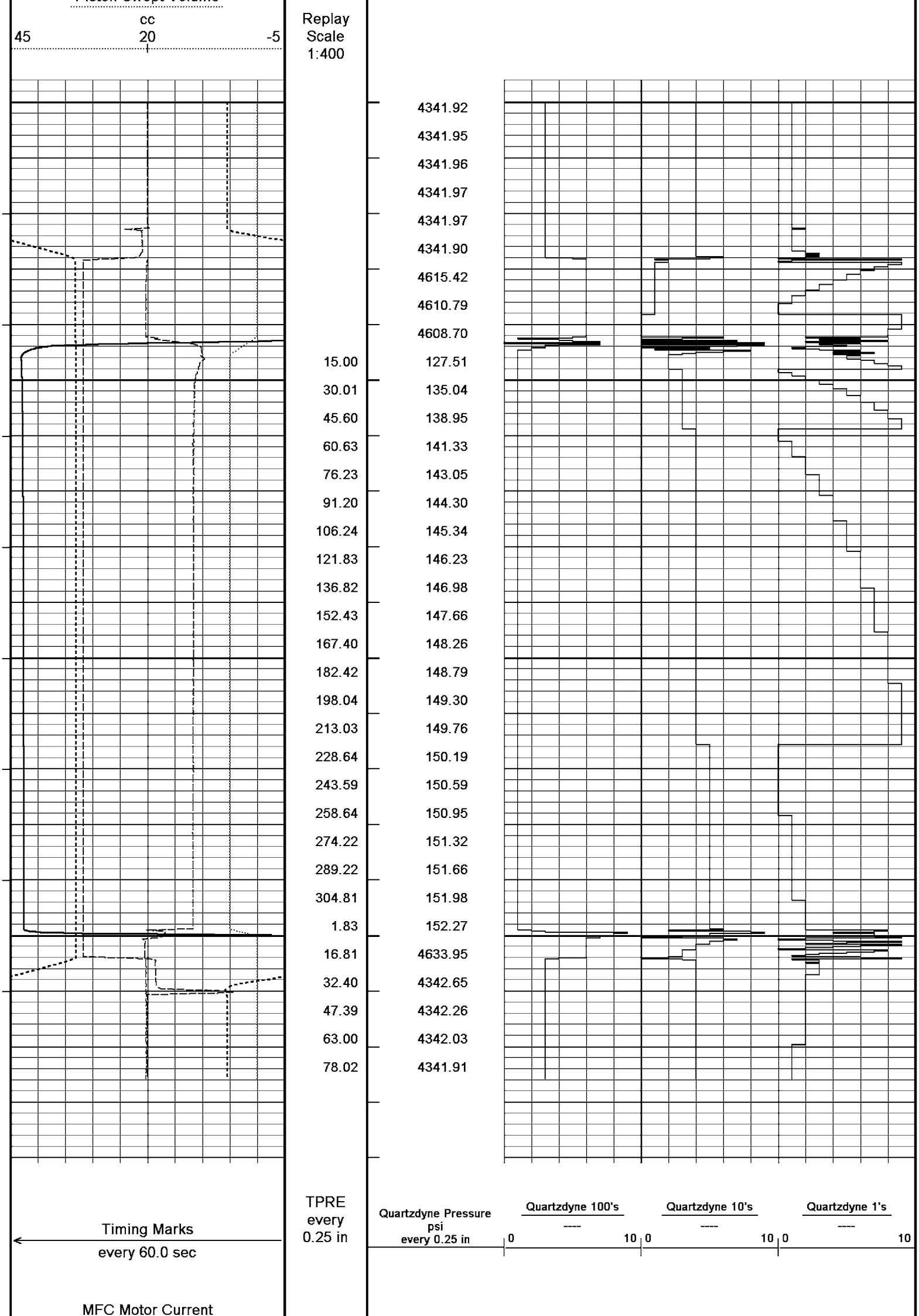
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Piston Swept Volume


cc
45
20
-5
Replay
Scale
1:400
4341.92
4341.95
4341.96
4341.97
4341.97
4341.90
4615.42
4610.79
4608.70
15.00
127.51
30.01
135.04
45.60
138.95
60.63
141.33
76.23
143.05
91.20
144.30
106.24
145.34
121.83
146.23
136.82
146.98
152.43
147.66
167.40
148.26
182.42
148.79
198.04
149.30
213.03
149.76
228.64
150.19
243.59
150.59
258.64
150.95
274.22
151.32
289.22
151.66
304.81
151.98
1.83
152.27
16.81
4633.95
32.40
4342.65
47.39
4342.26
63.00
4342.03
78.02
4341.91
Timing Marks
every 60.0 sec
TPRE
every
0.25 in
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0
10
MFC Motor Current

milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_26.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

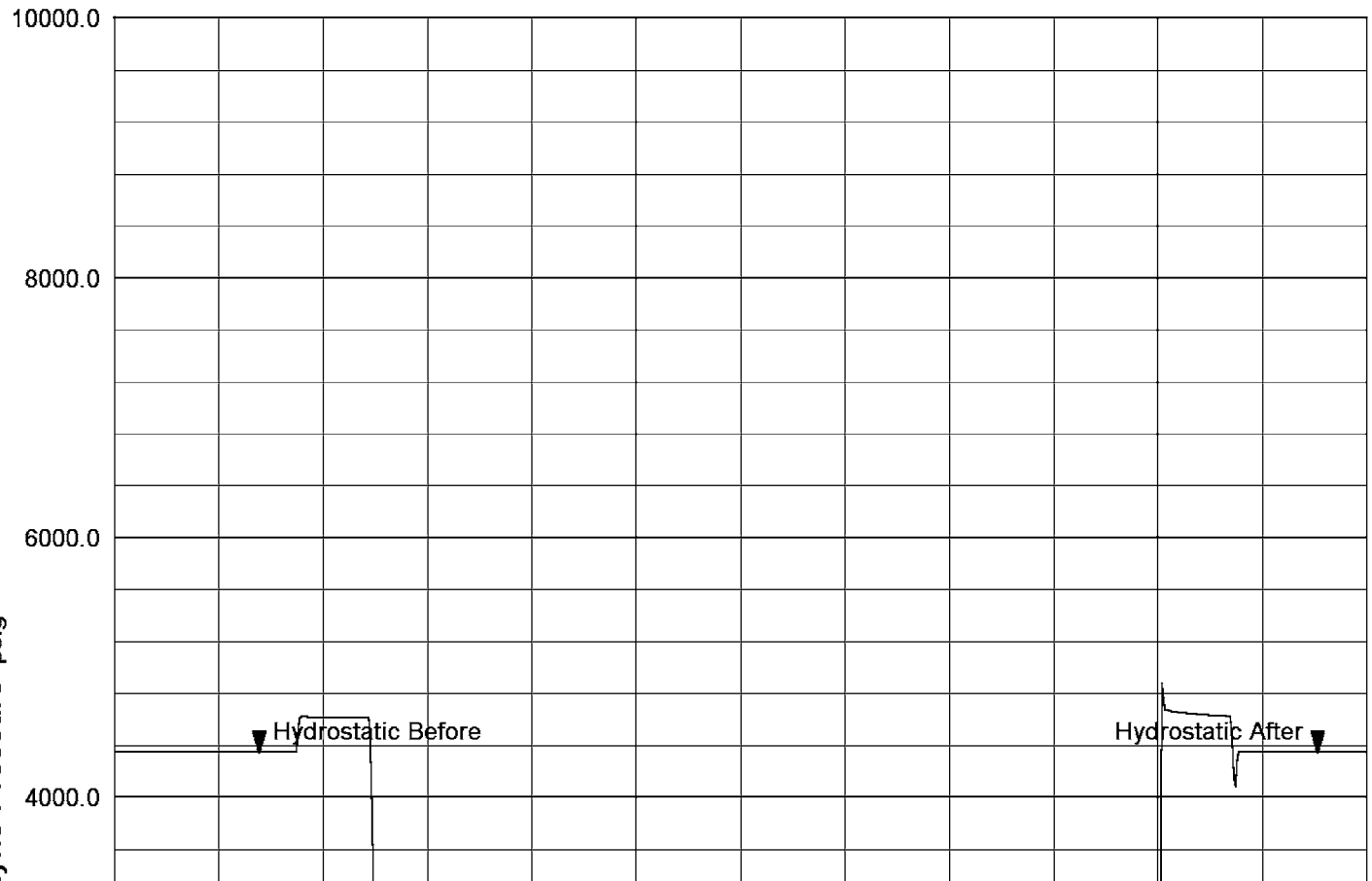
Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:31

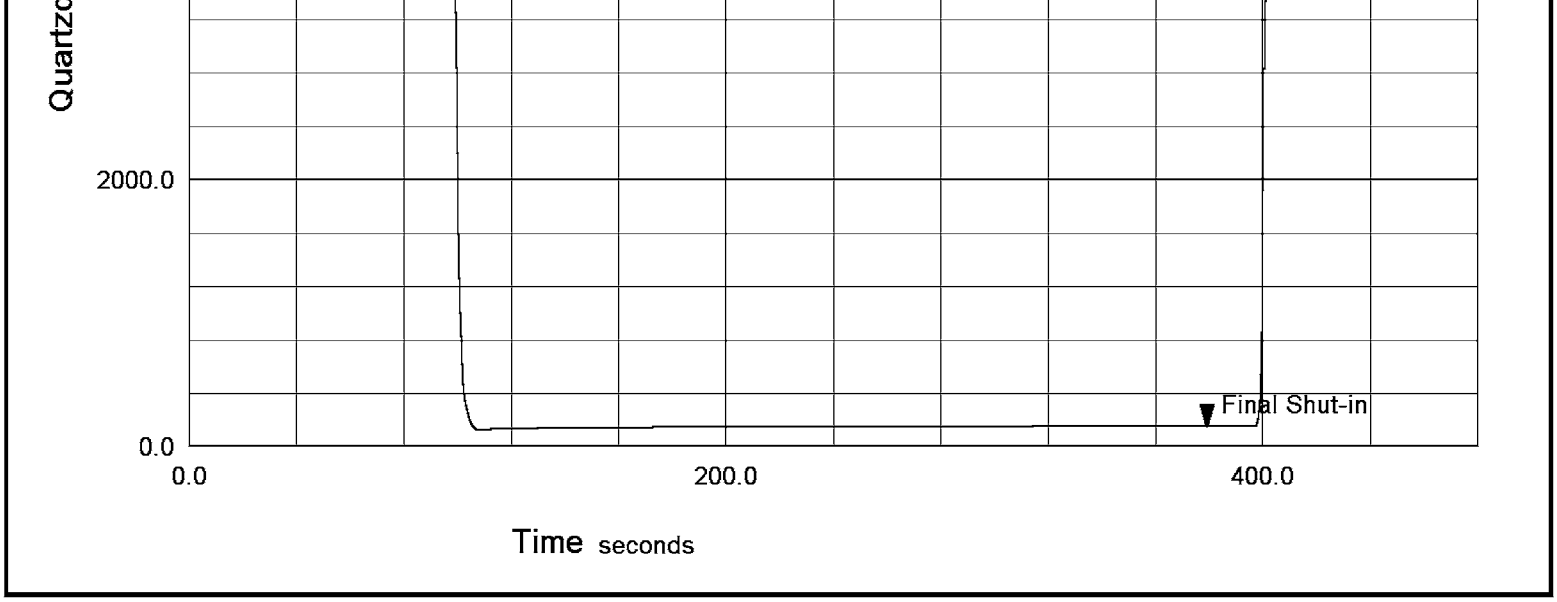
Pretest 13 at 2611.90 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_27.dta
Run Id: Pretest 14 at 2616.80 m
Test Number: 14

File Date: 04-OCT-2005 21:05:18





Pretest 14 at 2616.80 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_27.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:44

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 | 0 10 | 0 10

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

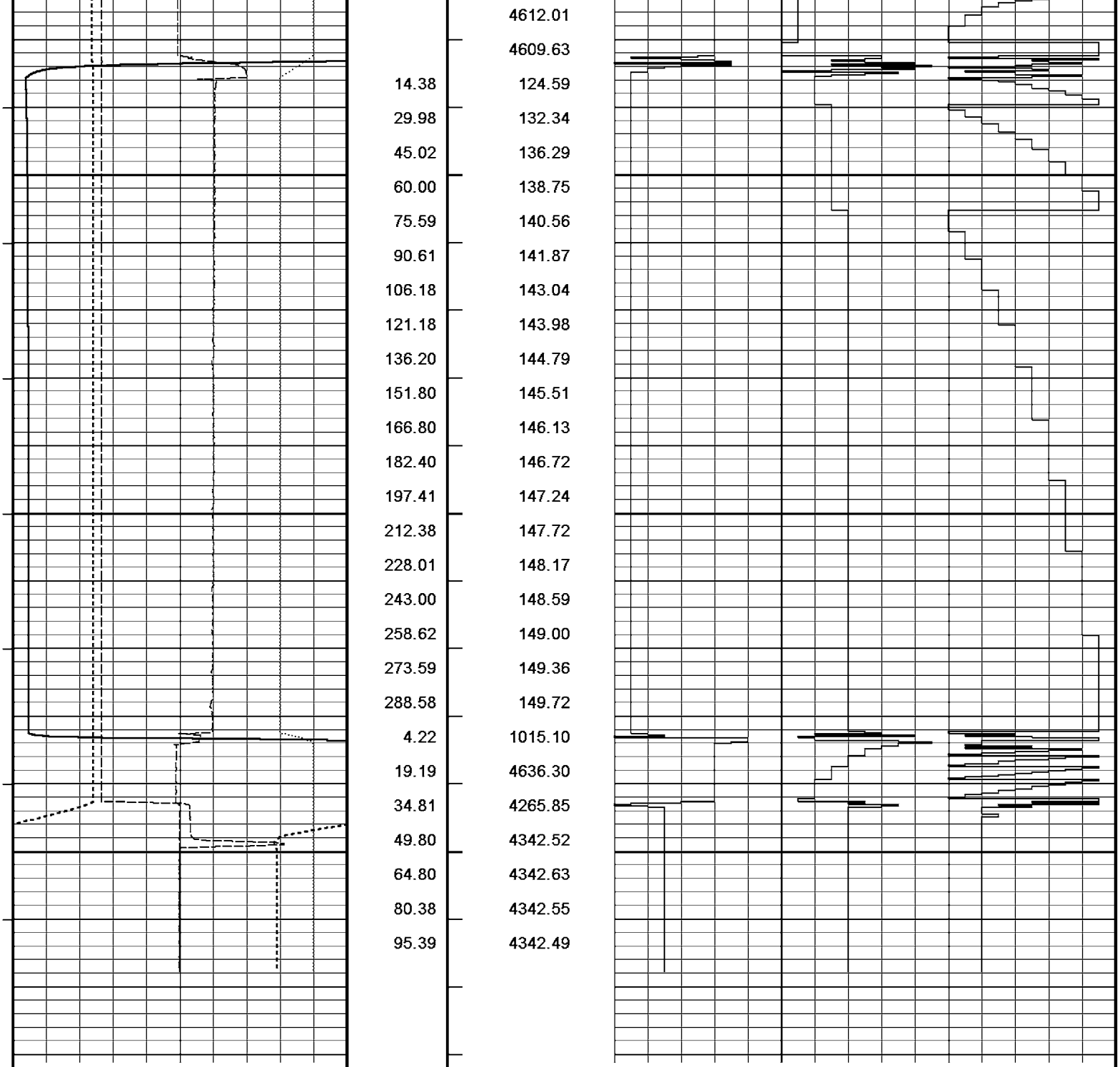
MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

4341.84
4341.76
4341.70
4341.64
4341.52



Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure

psi

0 1500 3000

Piston Swept Volume

cc

45 20 -5

Replay Scale 1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35

Filename: C:\Data\Childers Cove\MCG098MFT017_27.dta
Recorded on 05-OCT-2005 05:44

System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

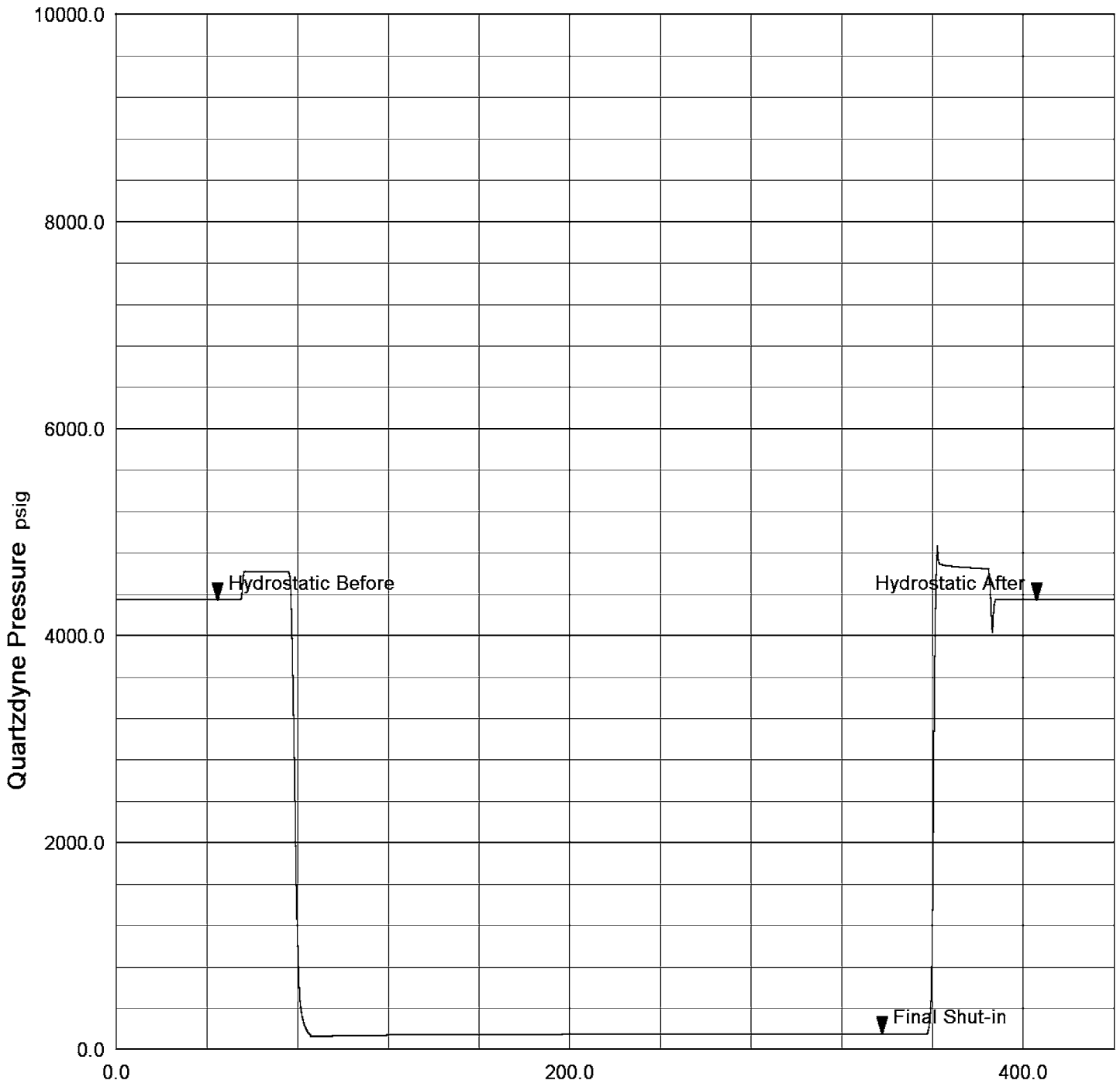
Pretest 14 at 2616.80 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_28.dta
File Date: 04-OCT-2005 21:05:24

Run Id: Pretest 15 at 2617.11 m

Test Number: 15



Time seconds

Pretest 15 at 2617.11 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_28.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 05-OCT-2005 07:35
Recorded on 05-OCT-2005 05:55

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

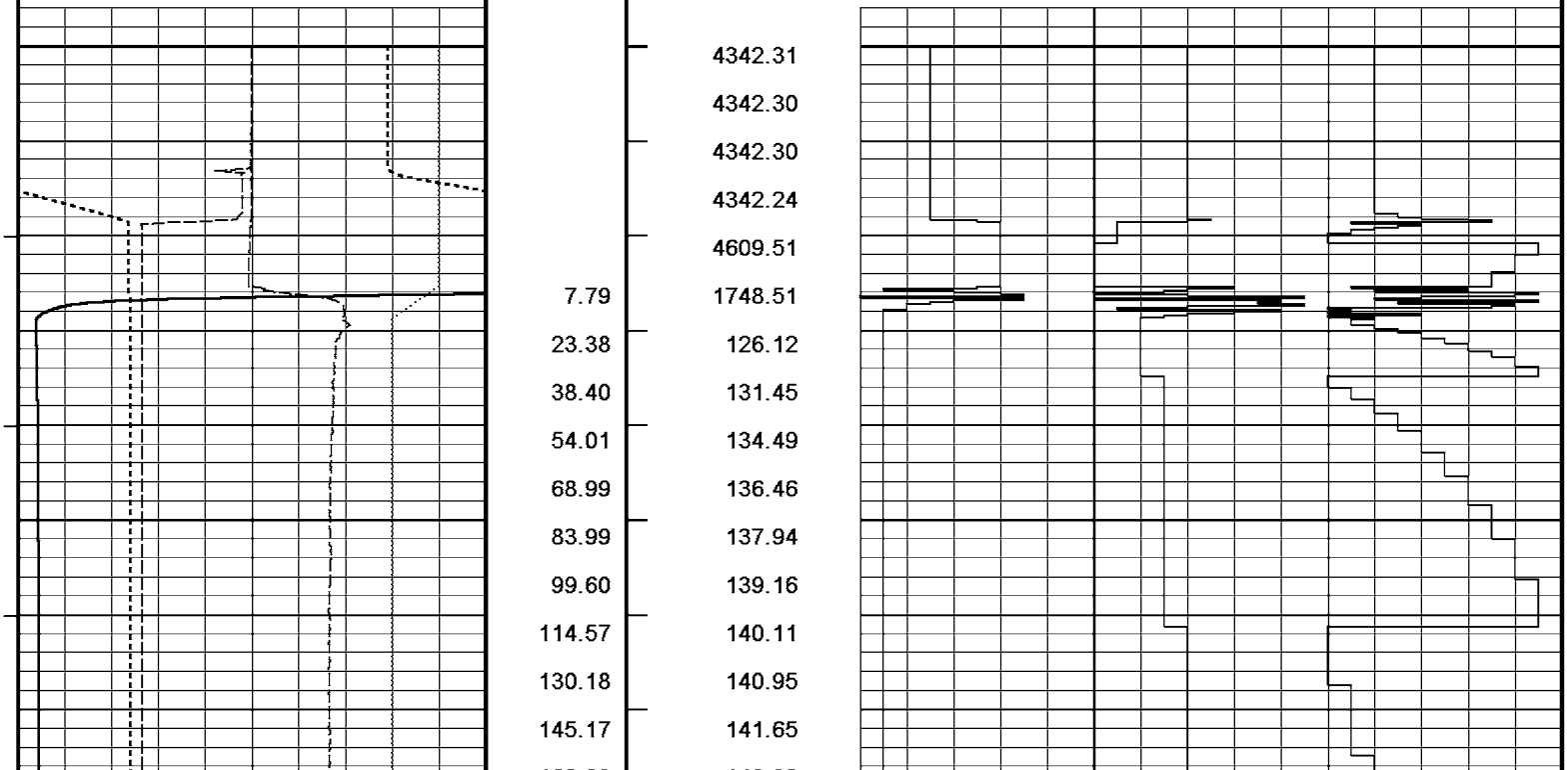
Quartzdyne 100's
0 10

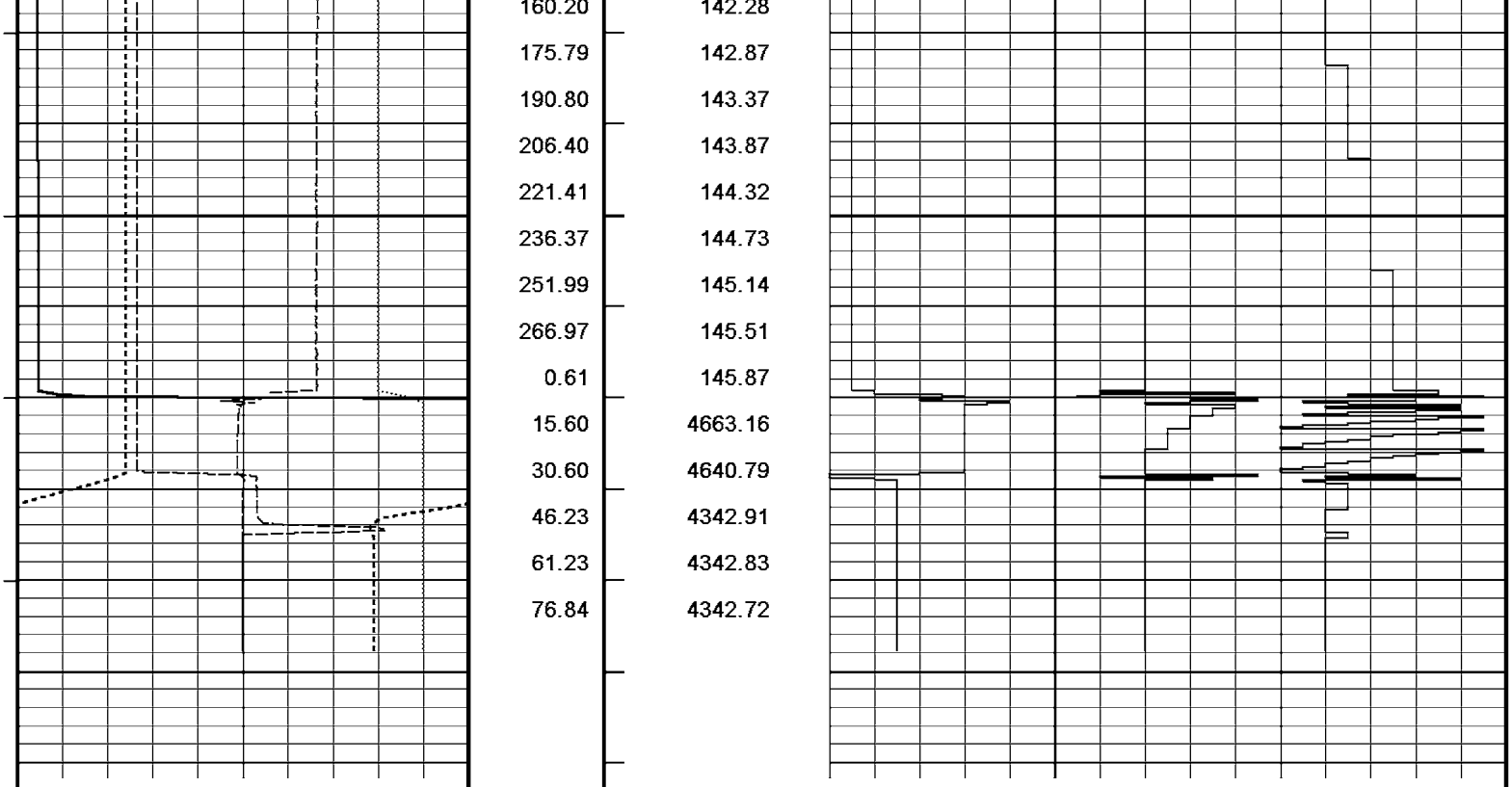
Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Replay
Scale
1:400

	4342.31
	4342.30
	4342.30
	4342.24
	4609.51
7.79	1748.51
23.38	126.12
38.40	131.45
54.01	134.49
68.99	136.46
83.99	137.94
99.60	139.16
114.57	140.11
130.18	140.95
145.17	141.65





Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 05-OCT-2005 07:35
Filename: C:\Data\Childers Cove\MCG098MFT017_28.dta
Recorded on 05-OCT-2005 05:55
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 15 at 2617.11 m

BEFORE SURVEY CALIBRATION

General Constants All 000

General Parameters		
Mud Resistivity	0.250	ohm-metres
Mud Resistivity Temperature	17.100	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Bit Size	
HVOL Caliper 2	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	N/A	
Resistivity used	N/A	
RWA Constant A	N/A	
RWA Constant M	N/A	

Quartzdyne Calibration Constants and Coefficients MFT 017

Serial Number	156287
Calibration Date	11-Oct-02
Temperature polynomial order	3
Pressure polynomial order	3
Temperature scaling factor	0.0100000000000
Pressure scaling factor	0.0100000000000
Temperature offset frequency	52016.0000000000000
Pressure offset frequency	16521.0000000000000
Span adjustment	1.0000000000000
Offset adjustment	0.00000000000e+000

	T0	T1	T2	T3	T4
P0	1.15388e+001	-5.29094e-001	-2.21551e-002	6.67977e-006	0.00000e+000
P1	4.25443e+001	-2.18004e-002	2.94679e-005	-4.87947e-008	0.00000e+000
P2	-2.01669e-003	1.02828e-005	-3.27841e-008	5.19870e-011	0.00000e+000
P3	7.45114e-007	-1.15862e-009	4.16808e-011	3.20970e-014	0.00000e+000
P4	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Caliper Calibration MFT 017

Base Calibration on 6-SEP-2005 20:29
Field Calibration on 4-OCT-2005 13:57

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	4343	4.00
2	4919	6.00
3	5807	8.00
4	7061	10.00
5	0	0.00
6	N/A	N/A

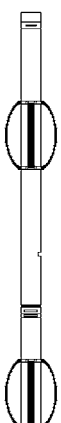
Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.92	8.00

DOWNHOLE EQUIPMENT

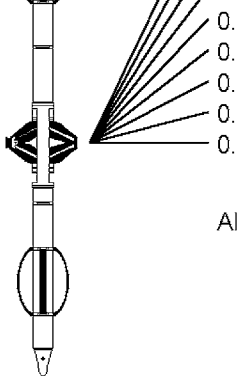
C:\Data\Childers Cove\MCG098MFT017_18.dta

Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb



Compact Repeat Formation Tester
MFT 17 Length: 4.17 m Weight: 112.4 lb

Tool Zero (2.15m from bottom)
0.00 m PSVL - Piston Swept Volume
0.00 m QONE - Quartzdyne 1's
0.00 m QTEN - Quartzdyne 10's



0.00 m	QHUN - Quartzdyne 100's
0.00 m	QDPF - Quartzdyne Pressure
0.00 m	FPMC - MFP Motor Current
0.00 m	FCCP - MFC Caliper
0.00 m	FCMC - MFC Motor Current

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 7.10 m Weight: 183.0 lb

All measurements relative to tool zero.

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2617.10	metres
Elevation Drill Floor	51.50	metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2618.50	metres

PRECISION

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

PRECISION ENERGY SERVICES

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FIELD PRINT**

LSD	SEC	TWP	RGE	Other Services
				MCG-MPD-MDN
				MMR-MDL-MSS

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 50 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:

KB	51.50	metres
DF	51.50	metres
GL	46.20	metres

Date	05-Oct-2005			
Run Number	FOUR			
Depth Driller	2658.00	metres		
Depth Logger	2618.50	metres		
First Reading	2617.10	metres		
Last Reading	2562.40	metres		
Casing Driller	544.50	metres		
Casing Logger	544.20	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/PHPA/POL			
Density / Viscosity	1.15 g/c3	59.00 CP		
PH / Fluid Loss	8.60	4.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.65 @ 13.9	ohm-m		
Rmf @ Measured Temp	1.06 @ 13.9	ohm-m		
Rmc @ Measured Temp	0.53 @ 14.1	ohm-m		
Source Rmf / Rmc	FILTER	PRESS		
Rm @ BHT	0.09 @ 95.5	ohm-m		
Time Since Circulation	32 HOURS			
Max Recorded Temp	95.50	deg C		
Equipment Name	MFT			
Equipment / Base	17	SALE		
Recorded By	G. MCMANUS, B.MOSS			
Witnessed By	BRIAN WEB			
CIRC. STOP	13:00 3/10			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MCG, MFT RAN IN COMBINATION.
4) HARDWARE: MFT: 2 X BOWSPRING CENTRALISERS
MCG: 1 X BOWSPRING CENTRALISERS

5) SERVICE ORDER: 2072
6) RIG:CENTURY 7

7) DUE TO FAILURE OF PRIMARY MFT, MFT 17 USED IN PLACE. THIS LOG DISPLAYS MFT 17 DATA ONLY.

MFT / RFS - QUARTZ TEST SUMMARY

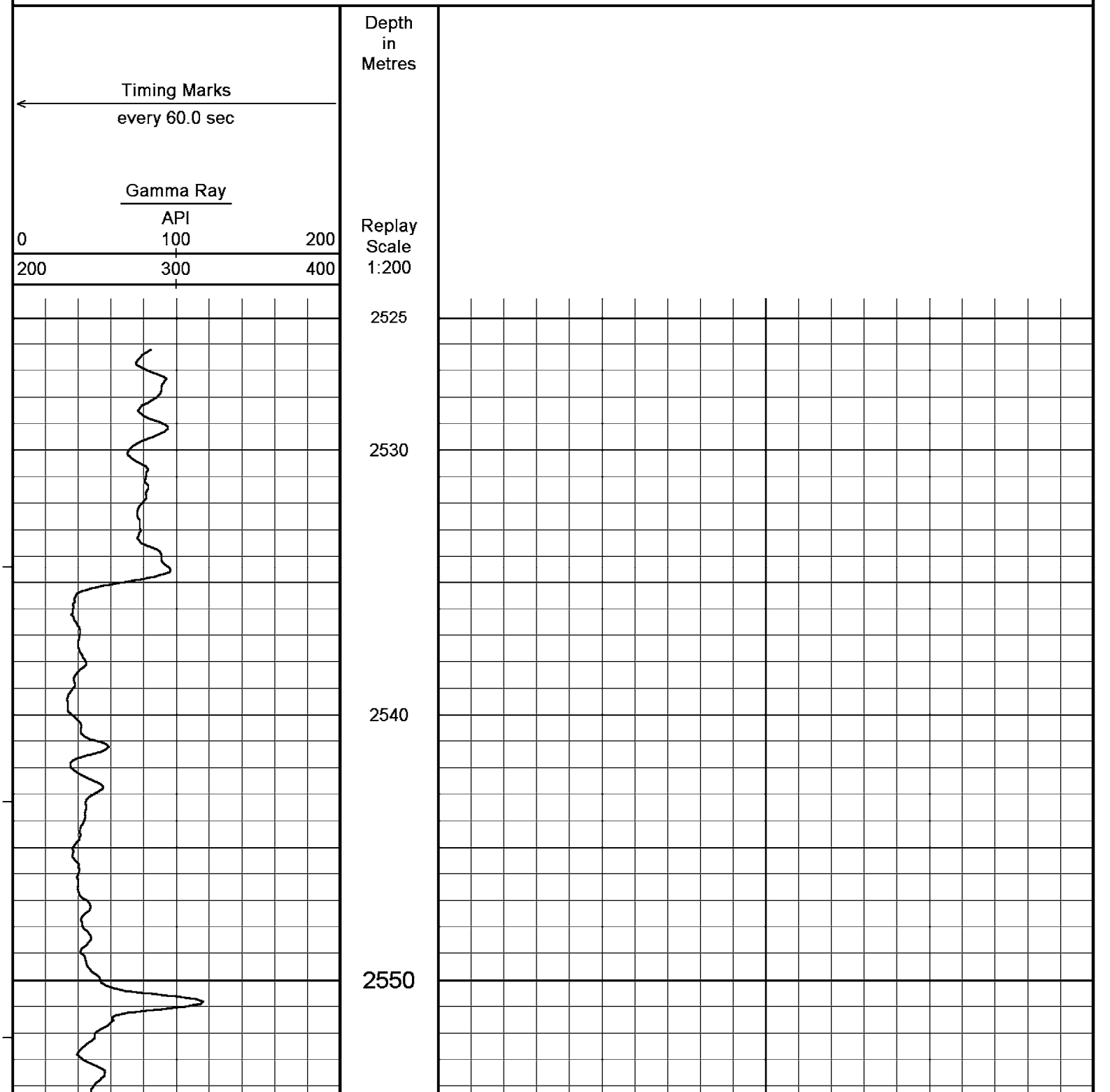
Test No.	Depth metres	TVD metres	Hyd Pres Before psig	Drawdown Pressure 1 psig	Drawdown Pressure 2 psig	Final Shut-in Pressure psig	Hyd Pres After psig	Mobility 1 md/cp	Mobility 2 md/cp	Remarks
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	SURFACE CHECK
2	502.32	502.32	0.00	0.00	0.00	0.00	0.00	0.000	0.000	NO TEST RESULT
3	502.32	502.32	844.41	0.00	0.00	15.88	844.33	0.000	0.000	CASING CHECK
4	2562.41	2562.41	0.00	0.00	0.00	0.00	0.00	0.000	0.000	NO TEST RESULT

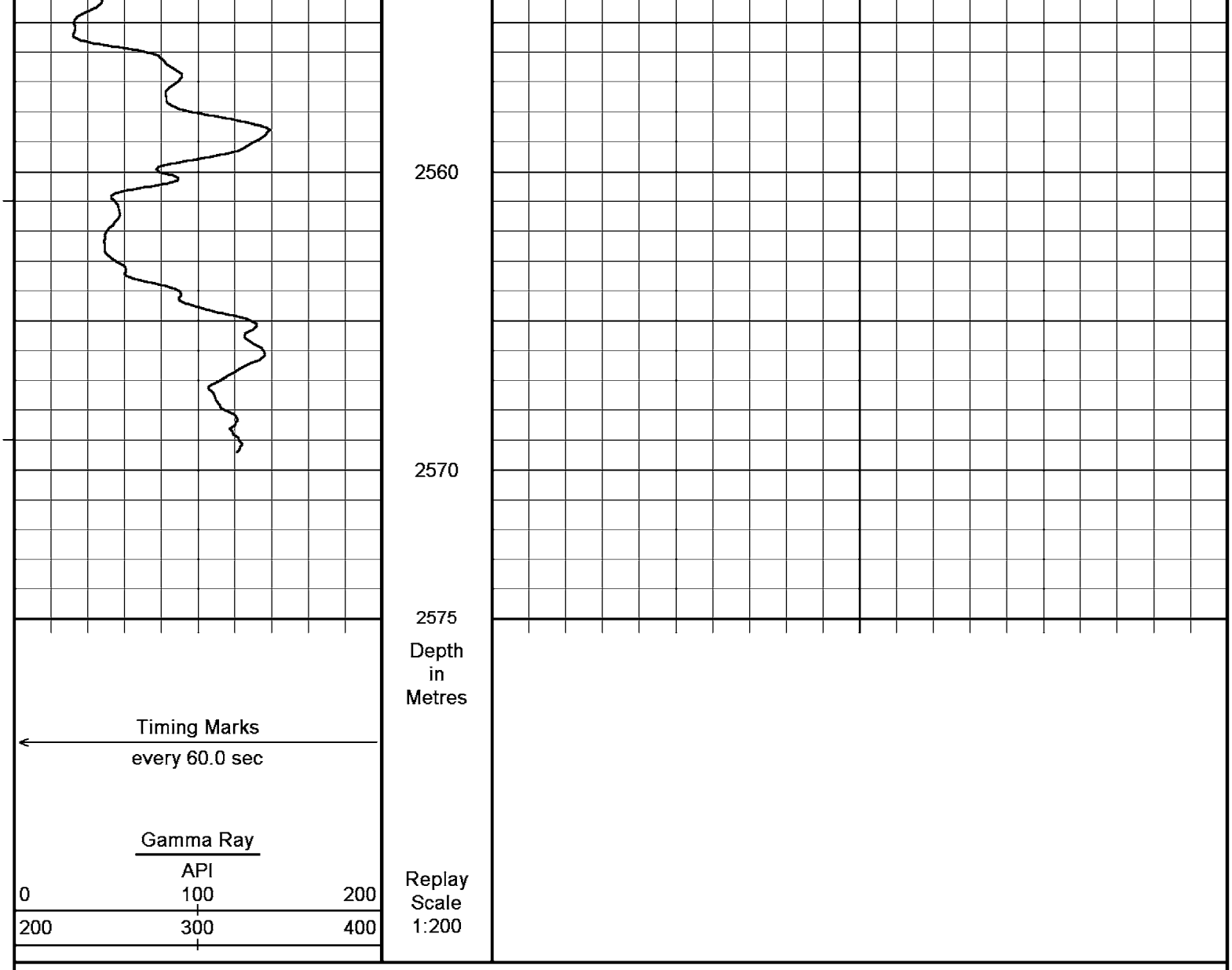
5	2562.41	2562.41	4296.73	0.00	0.00	3616.02	4297.18	0.000	0.000	GOOD TEST
6	2585.55	2585.55	4336.28	0.00	0.00	3615.43	4336.91	0.000	0.000	GOOD TEST
7	2589.92	2589.92	4340.26	0.00	0.00	86.01	4341.52	0.000	0.000	TIGHT TEST
8	2593.43	2593.43	4340.97	0.00	0.00	81.56	4342.81	0.000	0.000	TIGHT TEST
9	2596.65	2596.65	4342.19	0.00	0.00	76.54	4342.29	0.000	0.000	TIGHT TEST
10	2594.22	2594.22	4341.59	0.00	0.00	168.72	4341.57	0.000	0.000	TIGHT TEST
11	2590.51	2590.51	4341.19	0.00	0.00	157.92	4341.17	0.000	0.000	TIGHT TEST
12	2612.09	2612.09	4342.32	0.00	0.00	152.00	4342.44	0.000	0.000	TIGHT TEST
13	2611.90	2611.90	4341.97	0.00	0.00	152.12	4342.11	0.000	0.000	TIGHT TEST
14	2616.80	2616.80	4341.66	0.00	0.00	149.61	4342.61	0.000	0.000	TIGHT TEST
15	2617.11	2617.11	4342.25	0.00	0.00	145.53	4342.96	0.000	0.000	TIGHT TEST

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

GAMMA PASS 3 @ 2570 m

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098_3.dta
Recorded on 05-OCT-2005 03:24
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:



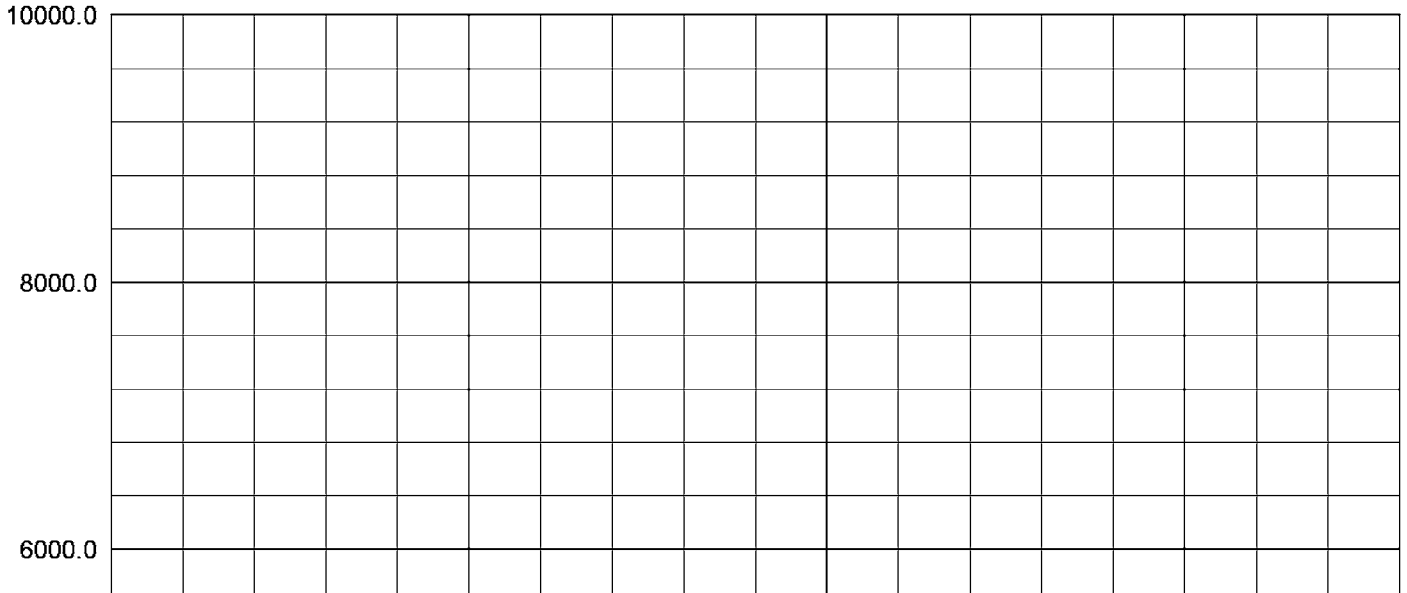


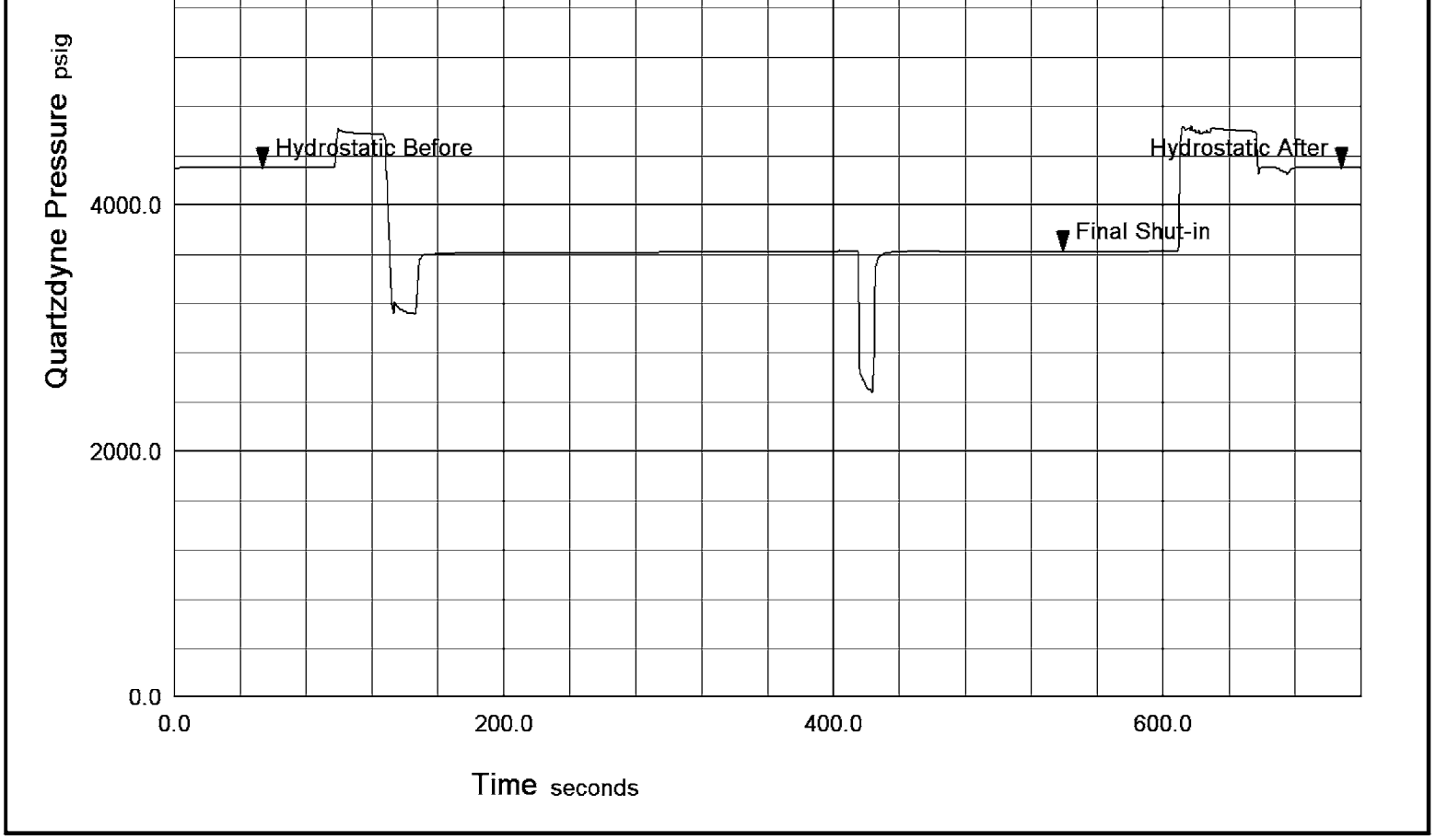
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098_3.dta
Recorded on 05-OCT-2005 03:24
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

GAMMA PASS 3 @ 2570 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_18.dta
File Date: 04-OCT-2005 21:03:50
Run Id: Pretest 5 at 2562.41 m
Test Number: 5





Pretest 5 at 2562.41 m

Time Based Data - Notional Logging Speed 9.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_18.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 03:37

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

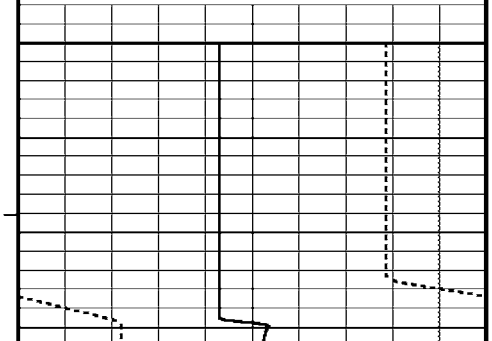
Quartzdyne 1's
0 10

MFC Caliper
inches
6 11 16

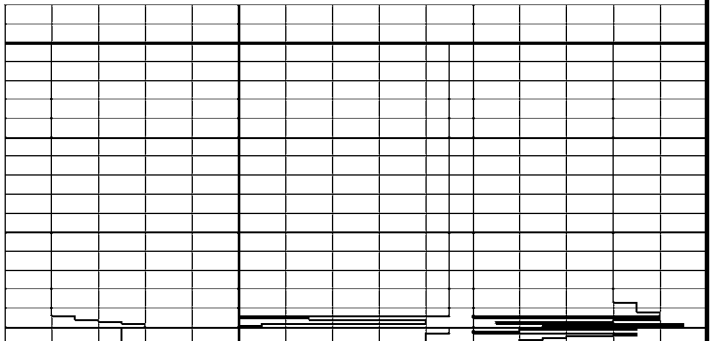
Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

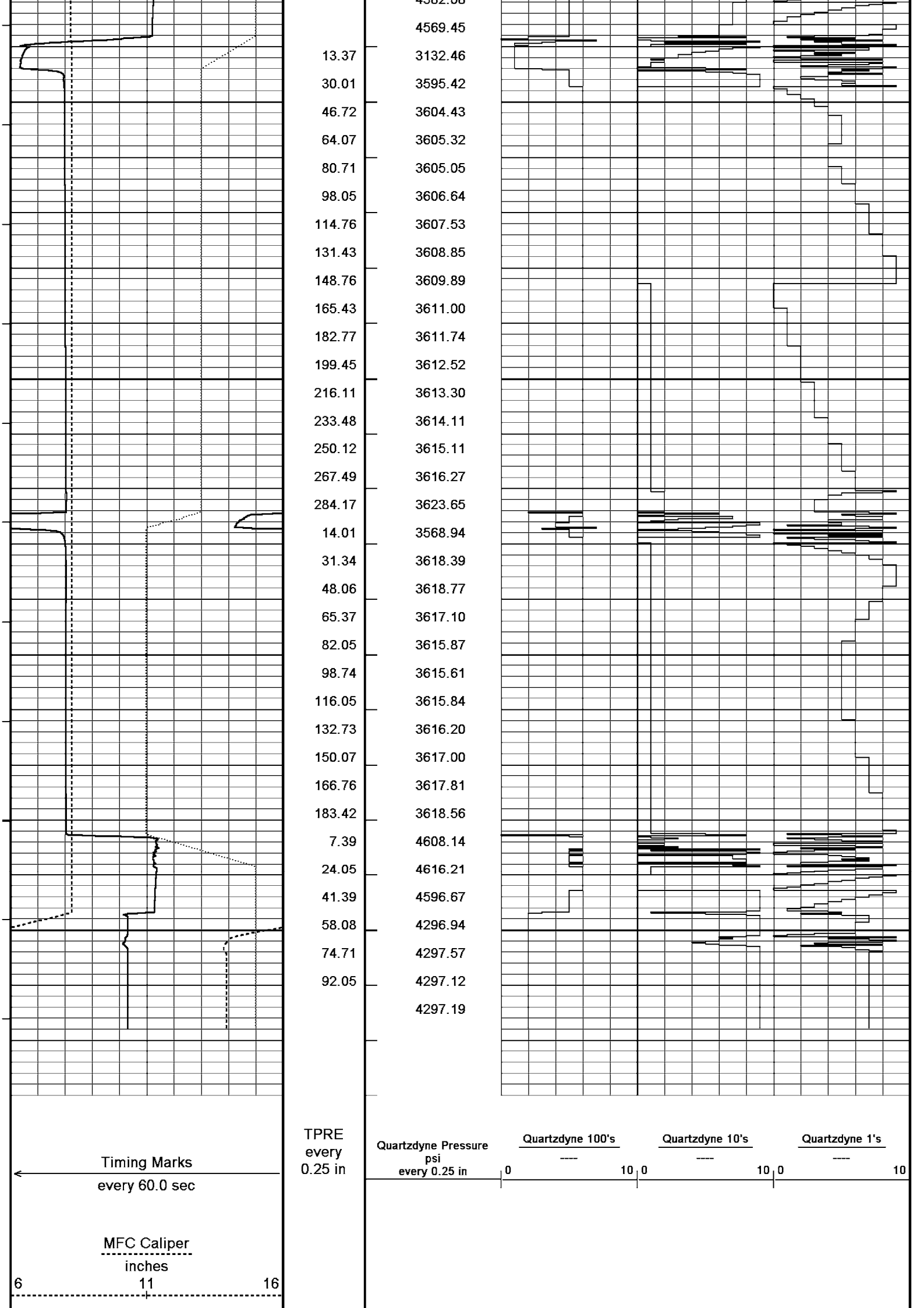
Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400



4296.55
4296.69
4296.71
4296.73
4296.74
4296.73
4582.08




4569.45
13.37 3132.46
30.01 3595.42
46.72 3604.43
64.07 3605.32
80.71 3605.05
98.05 3606.64
114.76 3607.53
131.43 3608.85
148.76 3609.89
165.43 3611.00
182.77 3611.74
199.45 3612.52
216.11 3613.30
233.48 3614.11
250.12 3615.11
267.49 3616.27
284.17 3623.65
14.01 3568.94
31.34 3618.39
48.06 3618.77
65.37 3617.10
82.05 3615.87
98.74 3615.61
116.05 3615.84
132.73 3616.20
150.07 3617.00
166.76 3617.81
183.42 3618.56
7.39 4608.14
24.05 4616.21
41.39 4596.67
58.08 4296.94
74.71 4297.57
92.05 4297.12
4297.19
Timing Marks
every 60.0 sec
TPRE
every
0.25 in
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0
10
MFC Caliper
inches
6
11
16

Quartzdyne Pressure

psi

0	1500	3000
3000	4500	6000

Piston Swept Volume

cc

45	20	-5

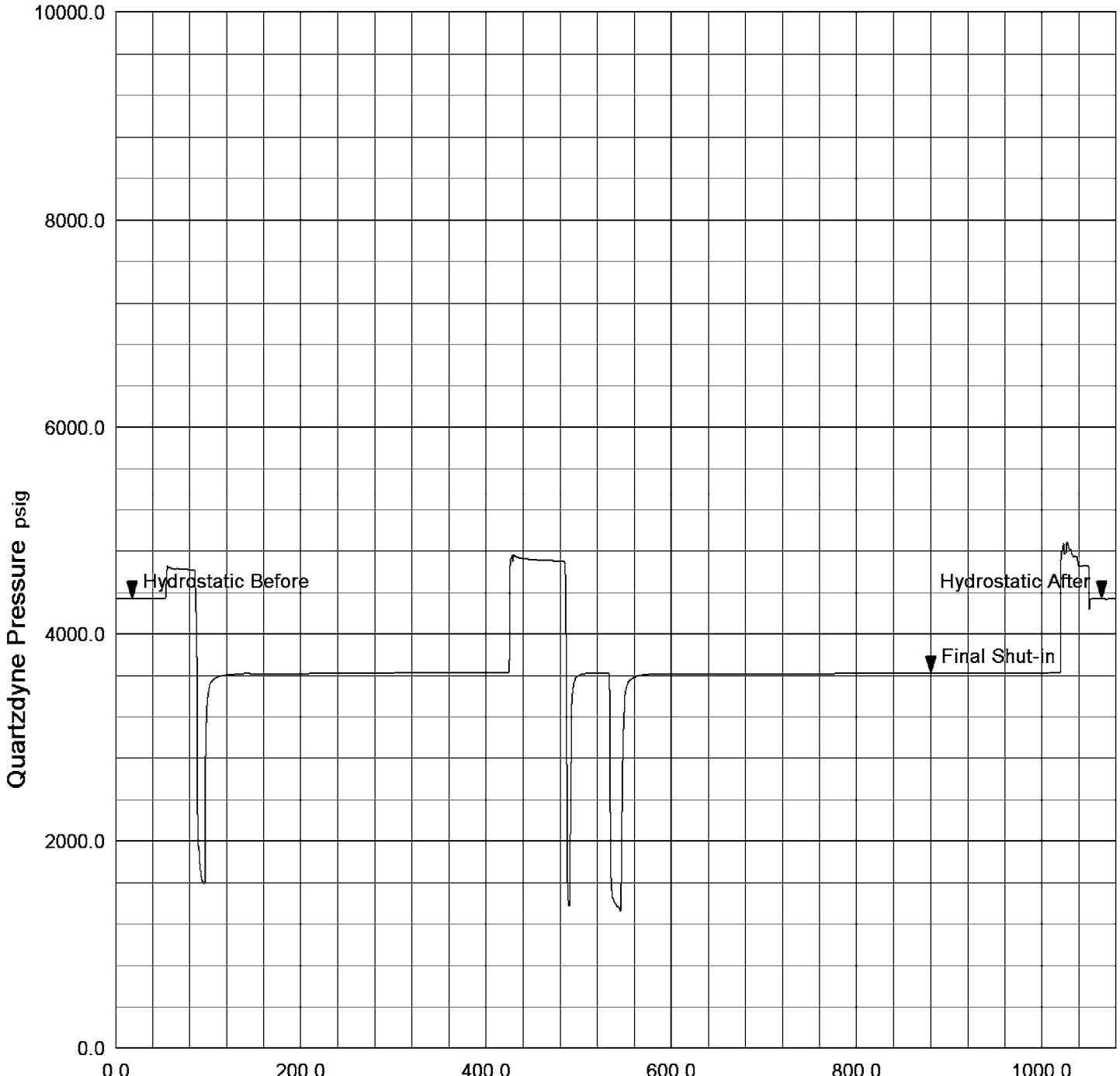
Replay Scale 1:400

Time Based Data - Notional Logging Speed 9.00 metres/min — Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_18.dta — Recorded on 05-OCT-2005 03:37
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 5 at 2562.41 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_19.dta — File Date: 04-OCT-2005 21:03:58
Run Id: Pretest 6 at 2585.55 m
Test Number: 6



Time seconds

Pretest 6 at 2585.55 m

Time Based Data - Notional Logging Speed 9.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_19.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 03:56

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

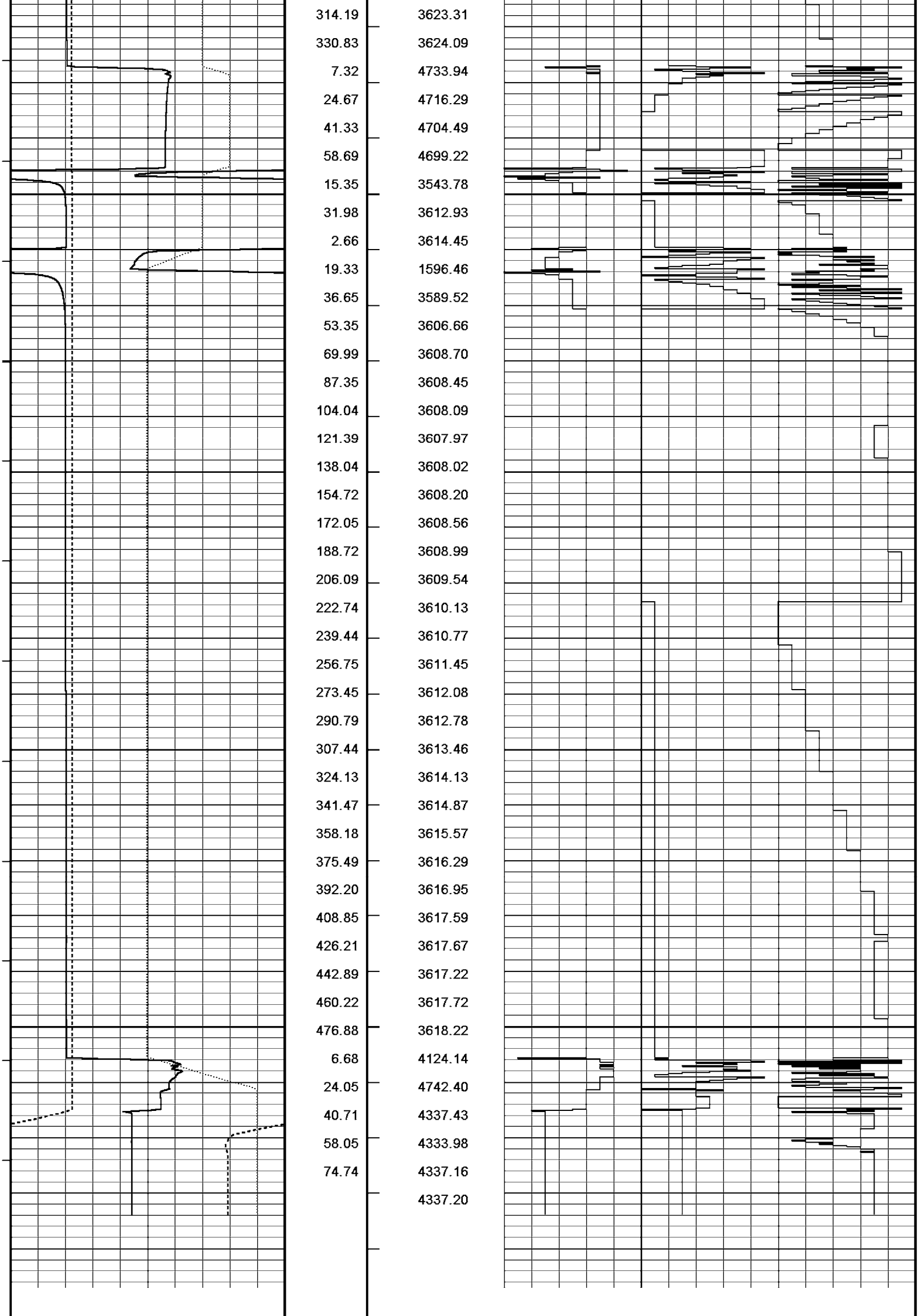
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

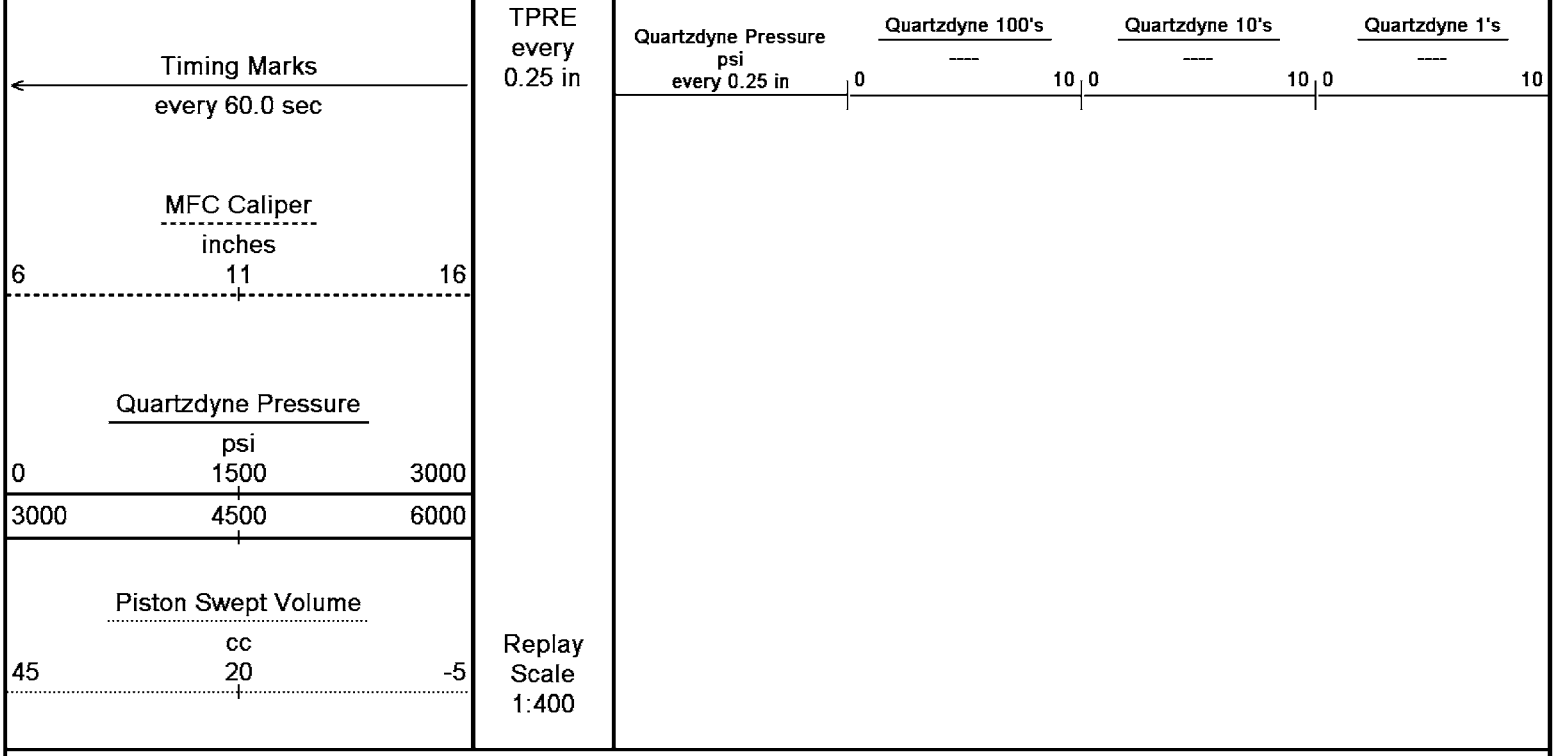
Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

	4336.25
	4336.27
	4336.24
	4607.69
	4617.79
8.69	2260.74
26.03	3559.35
42.68	3602.09
60.05	3612.54
76.75	3609.76
93.39	3609.43
110.75	3610.13
127.40	3611.06
144.77	3612.32
161.45	3613.81
178.09	3615.27
195.44	3616.51
212.13	3617.77
229.48	3618.97
246.13	3620.14
262.83	3621.04
280.17	3621.96
296.85	3622.47



314.19	3623.31
330.83	3624.09
7.32	4733.94
24.67	4716.29
41.33	4704.49
58.69	4699.22
15.35	3543.78
31.98	3612.93
2.66	3614.45
19.33	1596.46
36.65	3589.52
53.35	3606.66
69.99	3608.70
87.35	3608.45
104.04	3608.09
121.39	3607.97
138.04	3608.02
154.72	3608.20
172.05	3608.56
188.72	3608.99
206.09	3609.54
222.74	3610.13
239.44	3610.77
256.75	3611.45
273.45	3612.08
290.79	3612.78
307.44	3613.46
324.13	3614.13
341.47	3614.87
358.18	3615.57
375.49	3616.29
392.20	3616.95
408.85	3617.59
426.21	3617.67
442.89	3617.22
460.22	3617.72
476.88	3618.22
6.68	4124.14
24.05	4742.40
40.71	4337.43
58.05	4333.98
74.74	4337.16
	4337.20

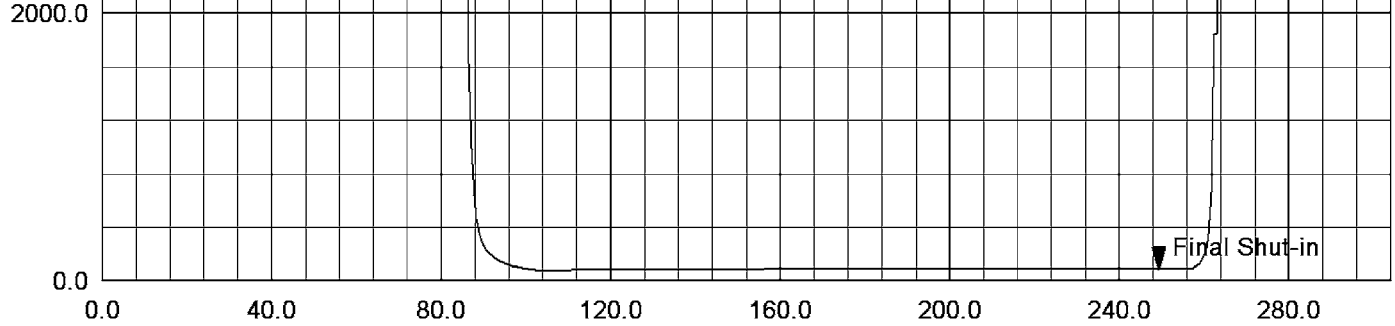


Time Based Data - Notional Logging Speed 9.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_19.dta
Recorded on 05-OCT-2005 03:56
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 6 at 2585.55 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_20.dta
File Date: 04-OCT-2005 21:04:04
Run Id: Pretest 7 at 2589.92 m
Test Number: 7



Pretest 7 at 2589.92 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_20.dta
Recorded on 05-OCT-2005 04:22
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

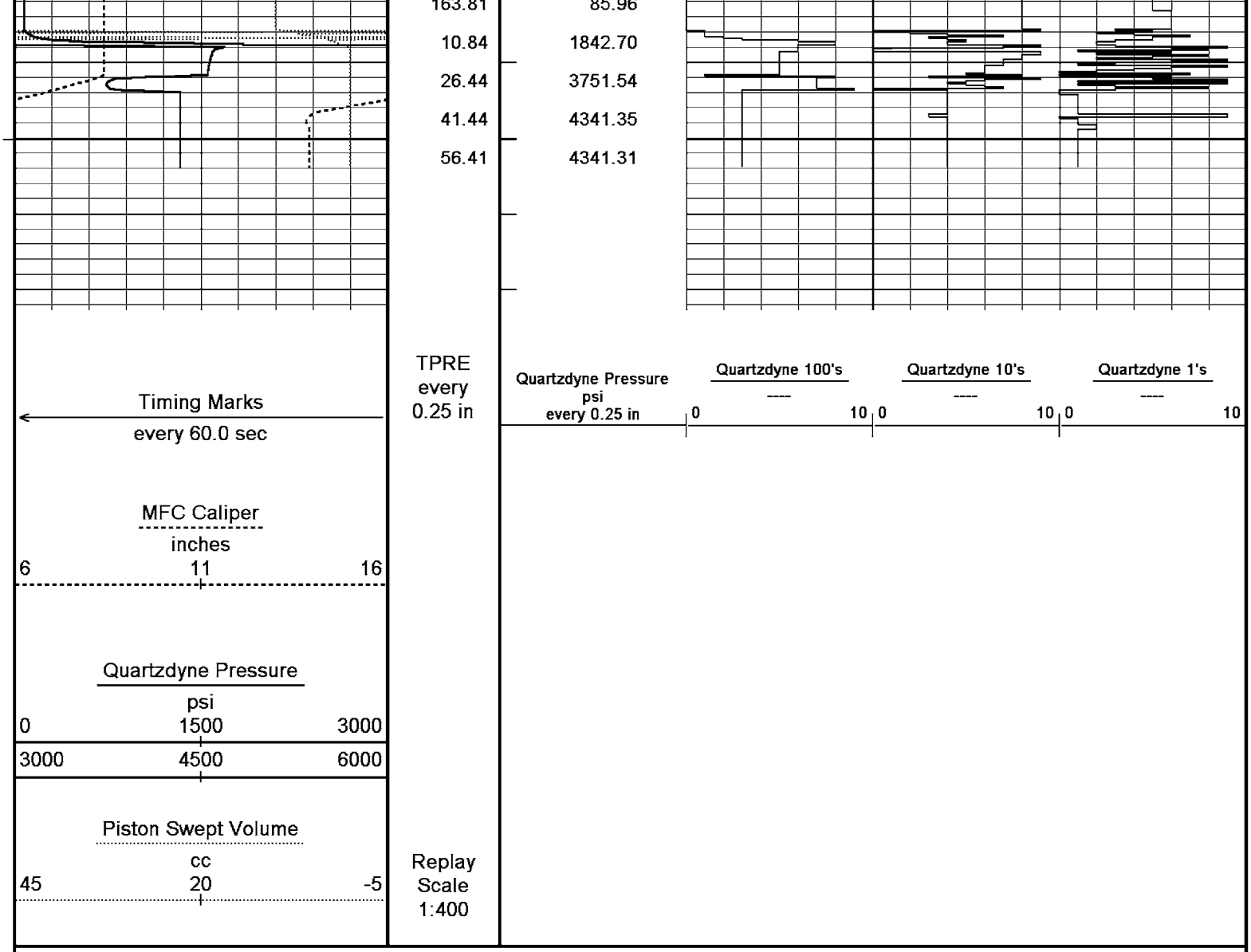
Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Replay
Scale
1:400

	4341.25
	4341.25
	4341.23
	4340.20
	4647.57
	4640.20
11.36	128.19
26.39	75.53
41.99	79.82
56.98	81.76
71.97	82.93
87.56	83.73
102.57	84.40
118.20	84.89
133.17	85.29
148.19	85.66

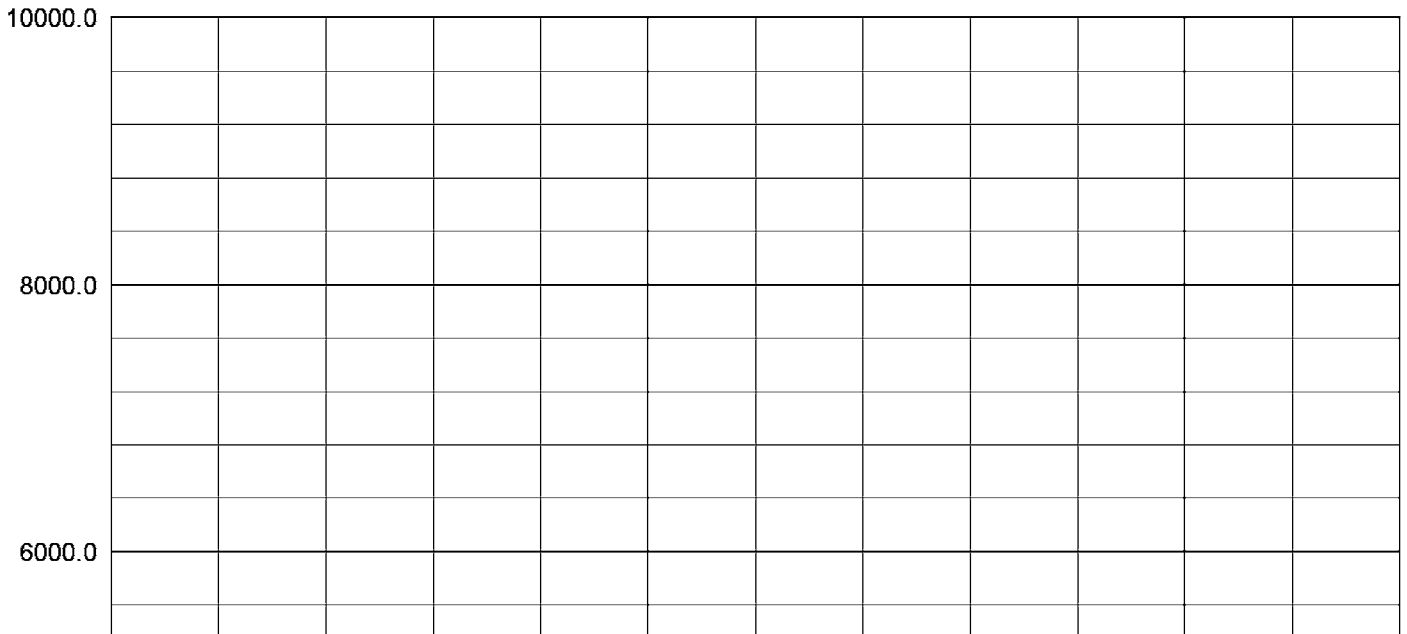


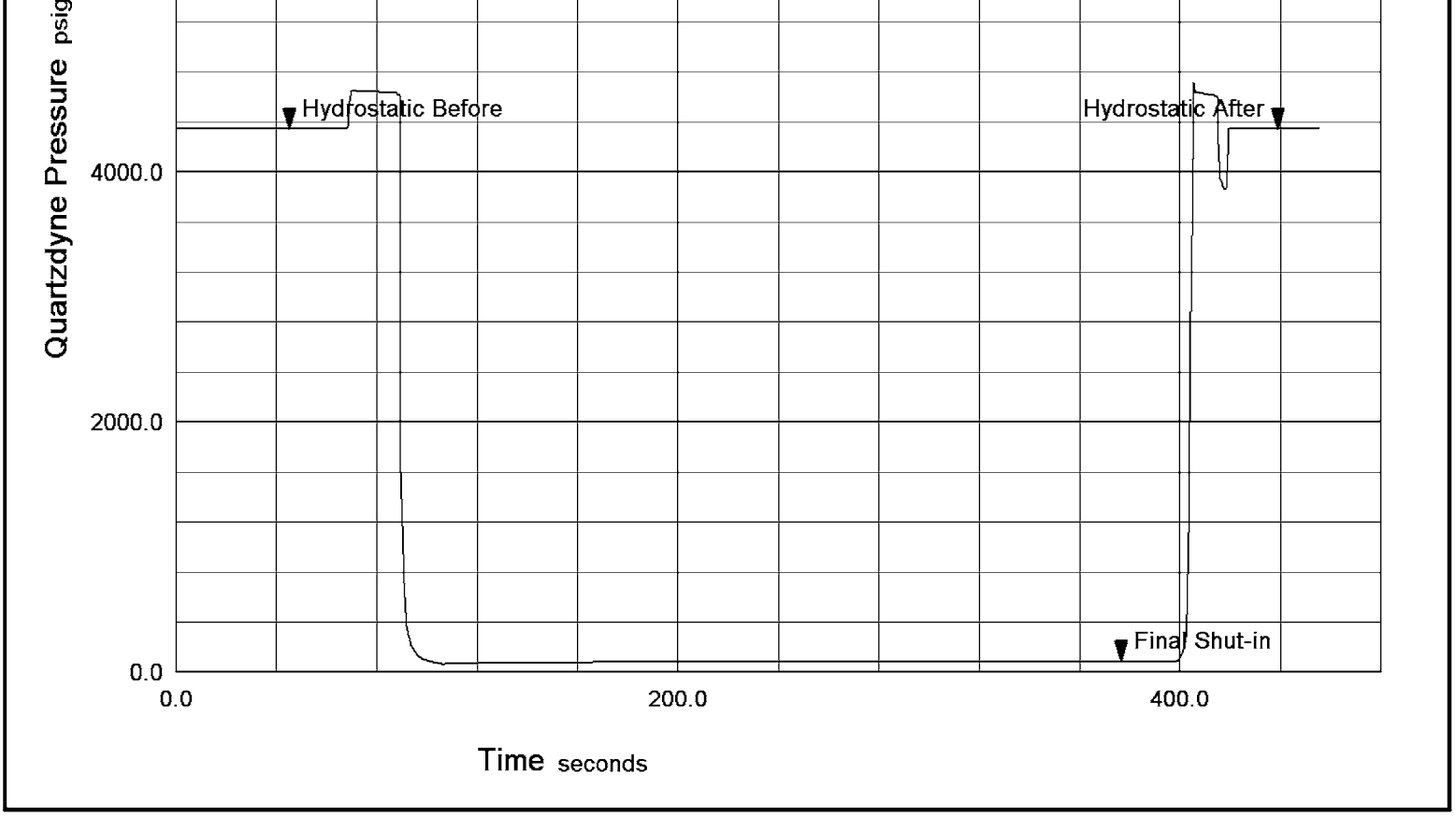
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_20.dta
Recorded on 05-OCT-2005 04:22
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 7 at 2589.92 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_21.dta
File Date: 04-OCT-2005 21:04:12
Run Id: Pretest 8 at 2593.43 m
Test Number: 8





Pretest 8 at 2593.43 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_21.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 04:31

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

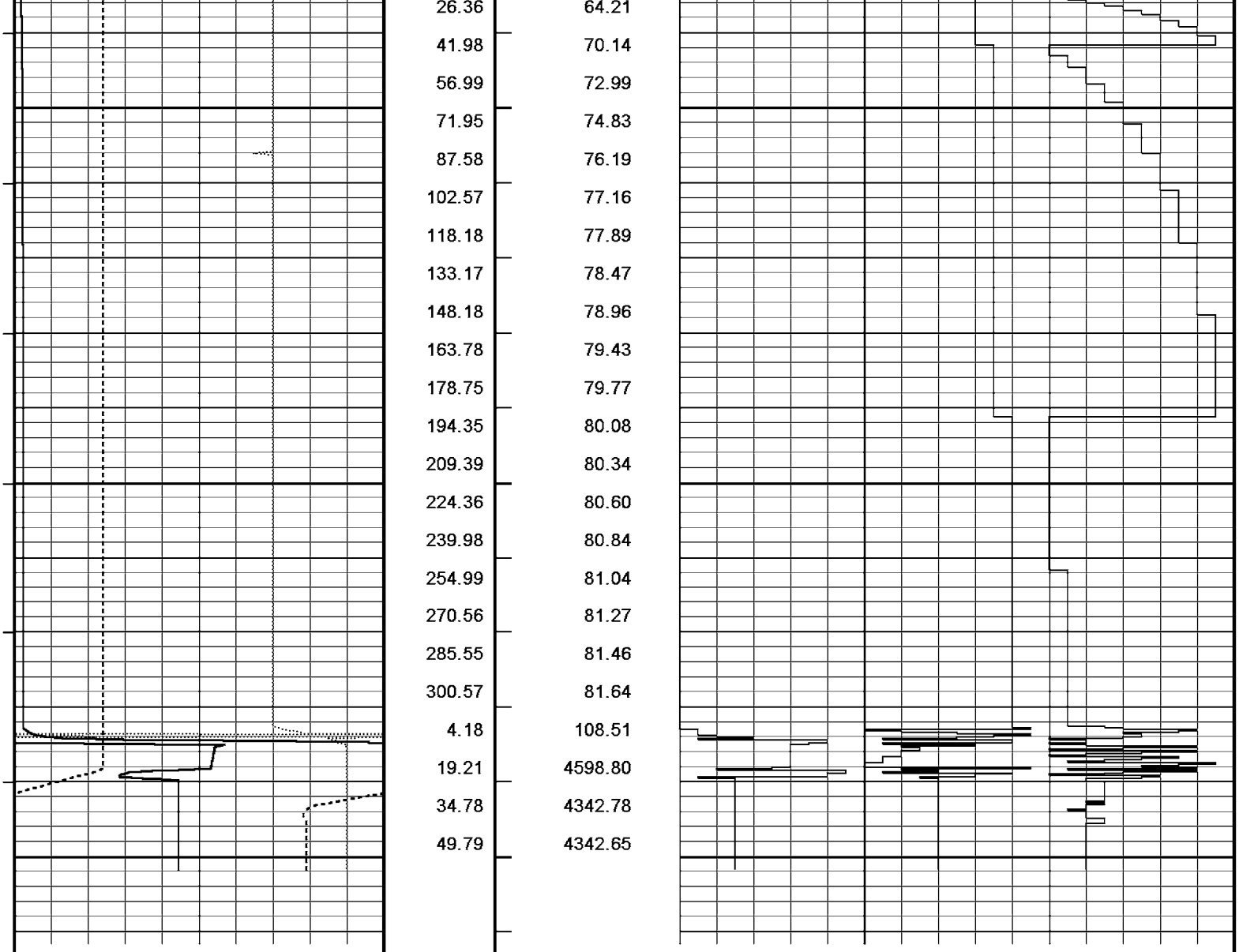
Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

0 10 0 10 0 10

4341.00
4341.00
4340.98
4340.97
4341.47
4636.22
11.37
165.60



Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Quartzdyne 100's

Quartzdyne 10's

Quartzdyne 1's

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

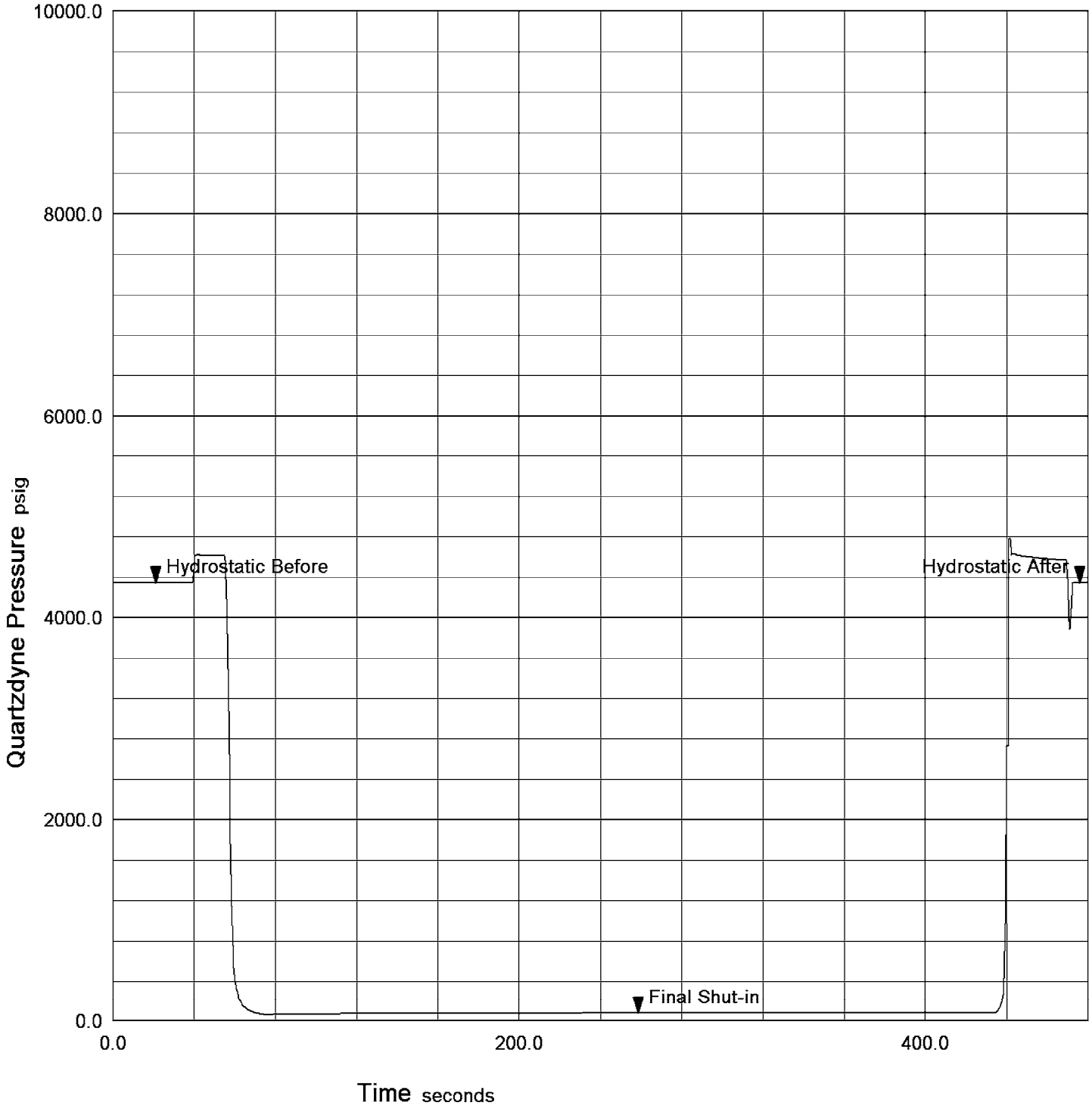
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_21.dta
Recorded on 05-OCT-2005 04:31
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 8 at 2593.43 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_22.dta
Run Id: Pretest 9 at 2596.65 m
Test Number: 9

File Date: 04-OCT-2005 21:04:22



Pretest 9 at 2596.65 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_22.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 04:42

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

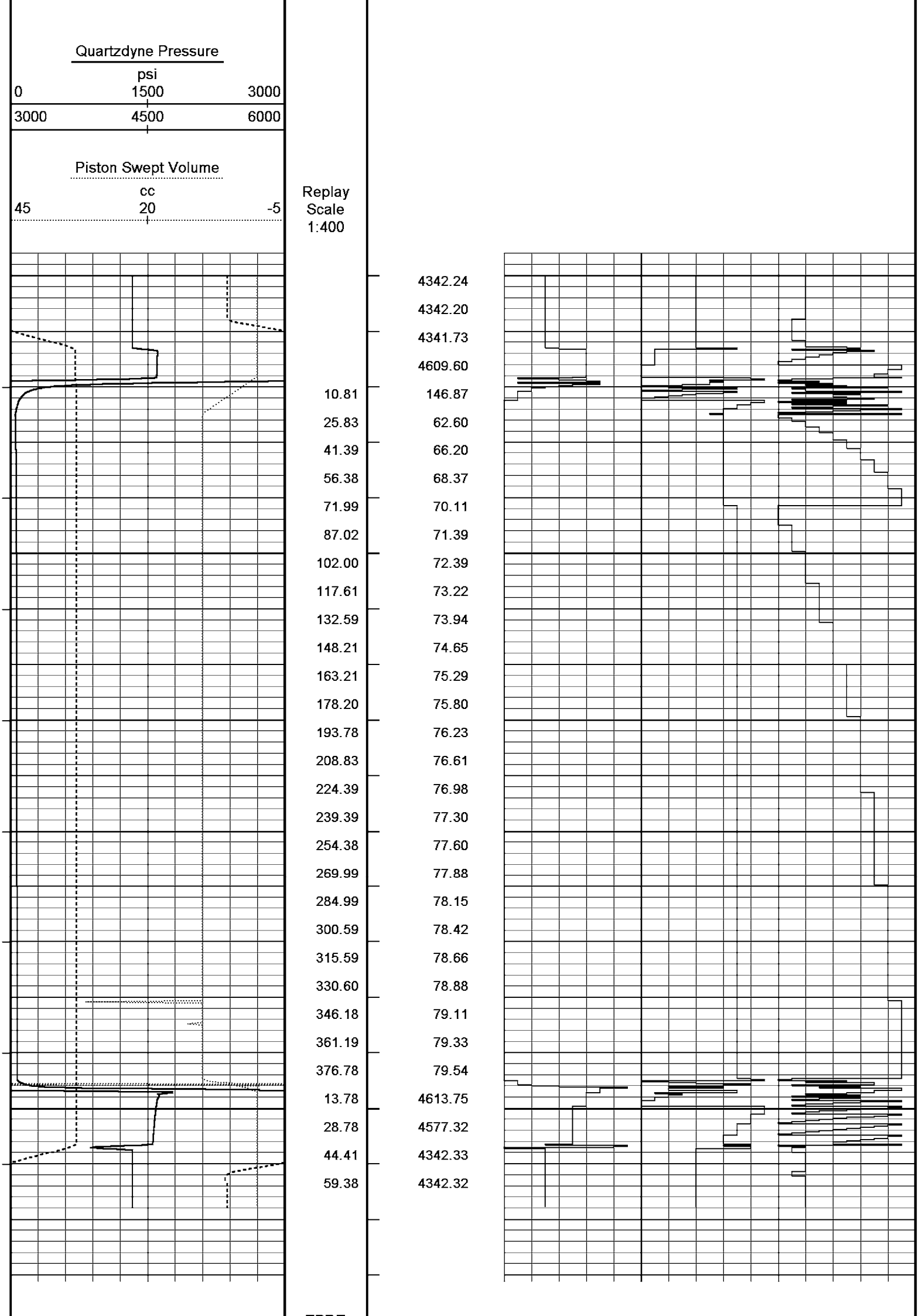
TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in
0 10

Quartzdyne 100's
---- 0 10

Quartzdyne 10's
---- 0 10

Quartzdyne 1's
---- 0 10


Quartzdyne Pressure
psi
0
1500
3000
3000
4500
6000
Piston Swept Volume
cc
45
20
-5
Replay
Scale
1:400
4342.24
4342.20
4341.73
4609.60
10.81
146.87
25.83
62.60
41.39
66.20
56.38
68.37
71.99
70.11
87.02
71.39
102.00
72.39
117.61
73.22
132.59
73.94
148.21
74.65
163.21
75.29
178.20
75.80
193.78
76.23
208.83
76.61
224.39
76.98
239.39
77.30
254.38
77.60
269.99
77.88
284.99
78.15
300.59
78.42
315.59
78.66
330.60
78.88
346.18
79.11
361.19
79.33
376.78
79.54
13.78
4613.75
28.78
4577.32
44.41
4342.33
59.38
4342.32

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_22.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

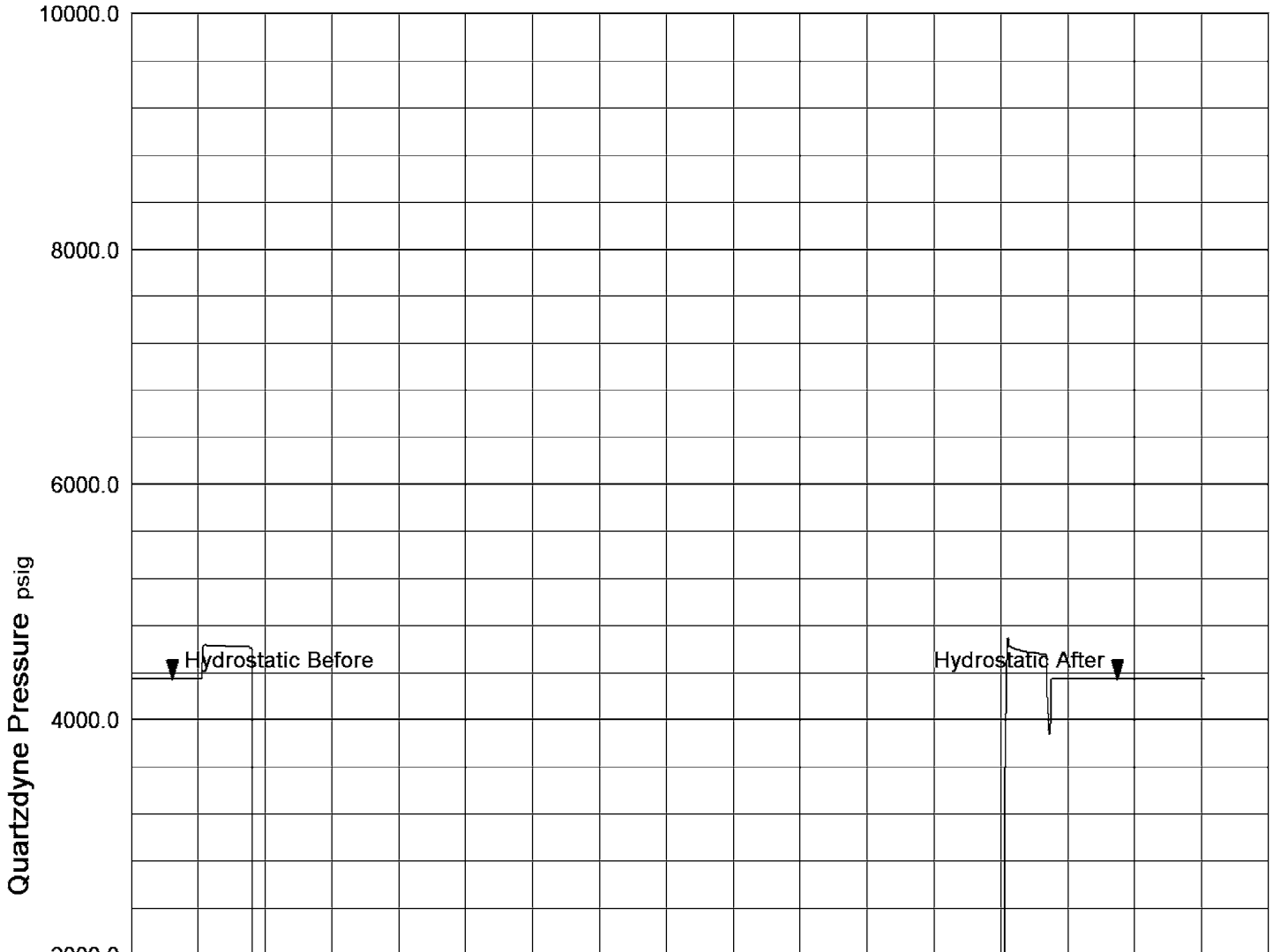
Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 04:42

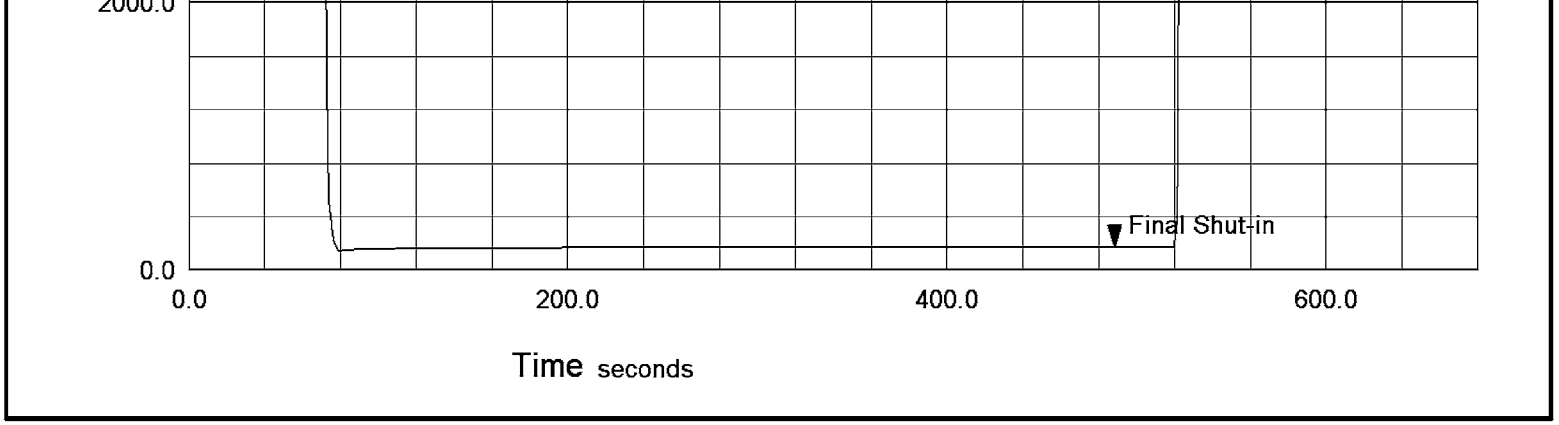
Pretest 9 at 2596.65 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_23.dta
Run Id: Pretest 10 at 2594.22 m
Test Number: 10

File Date: 04-OCT-2005 21:04:30





Pretest 10 at 2594.22 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_23.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:46
Recorded on 05-OCT-2005 04:54

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

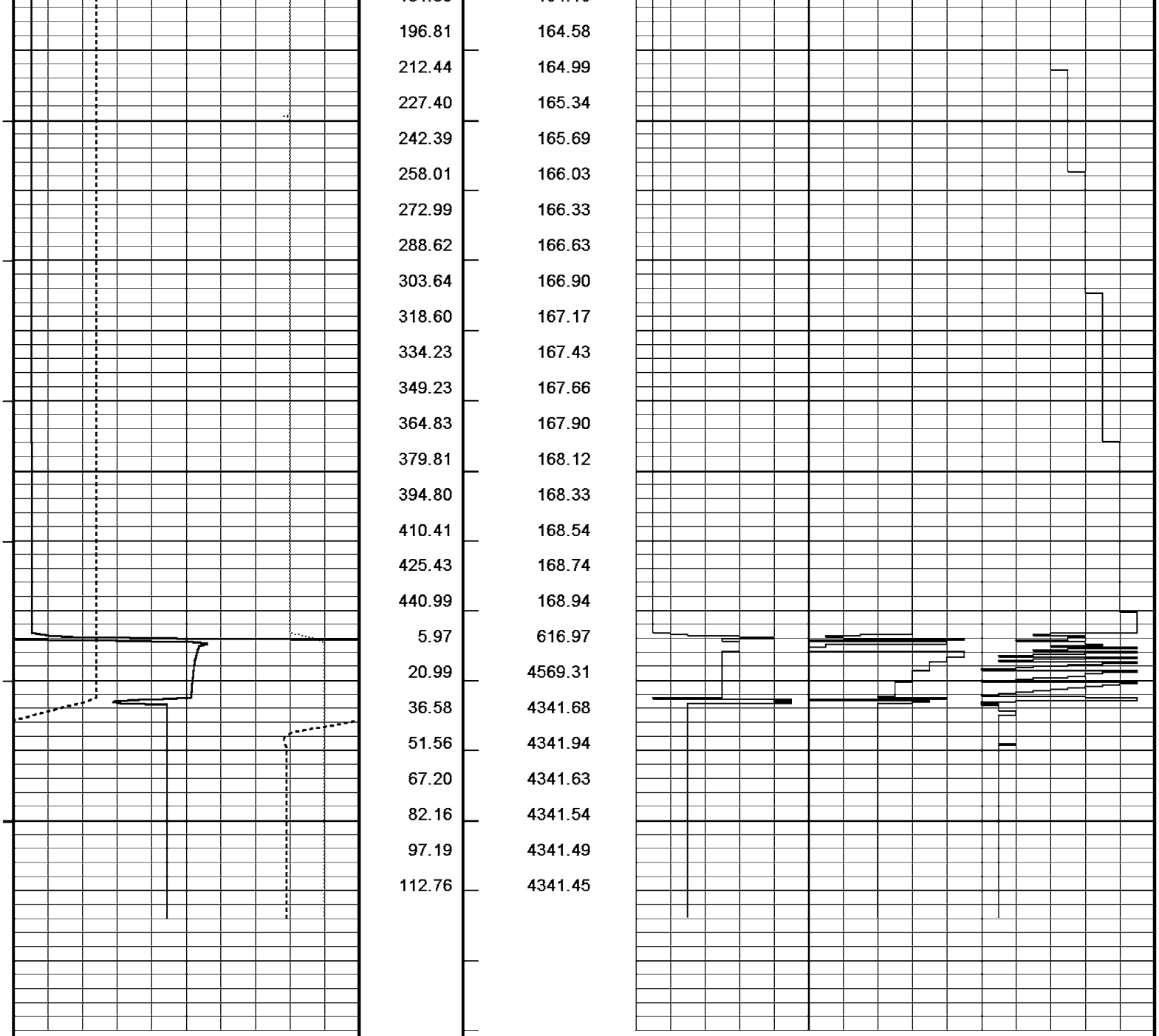
Quartzdyne 100's
---
0 10

Quartzdyne 10's
---
0 10

Quartzdyne 1's
---
0 10

Replay
Scale
1:400

	4341.57
	4341.59
	4341.48
	4624.55
	4619.27
13.83	139.90
29.39	151.88
44.41	155.52
60.03	157.64
75.03	159.07
90.02	160.19
105.63	161.12
120.64	161.88
136.23	162.57
151.22	163.14
166.24	163.66
181.80	164.16



Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

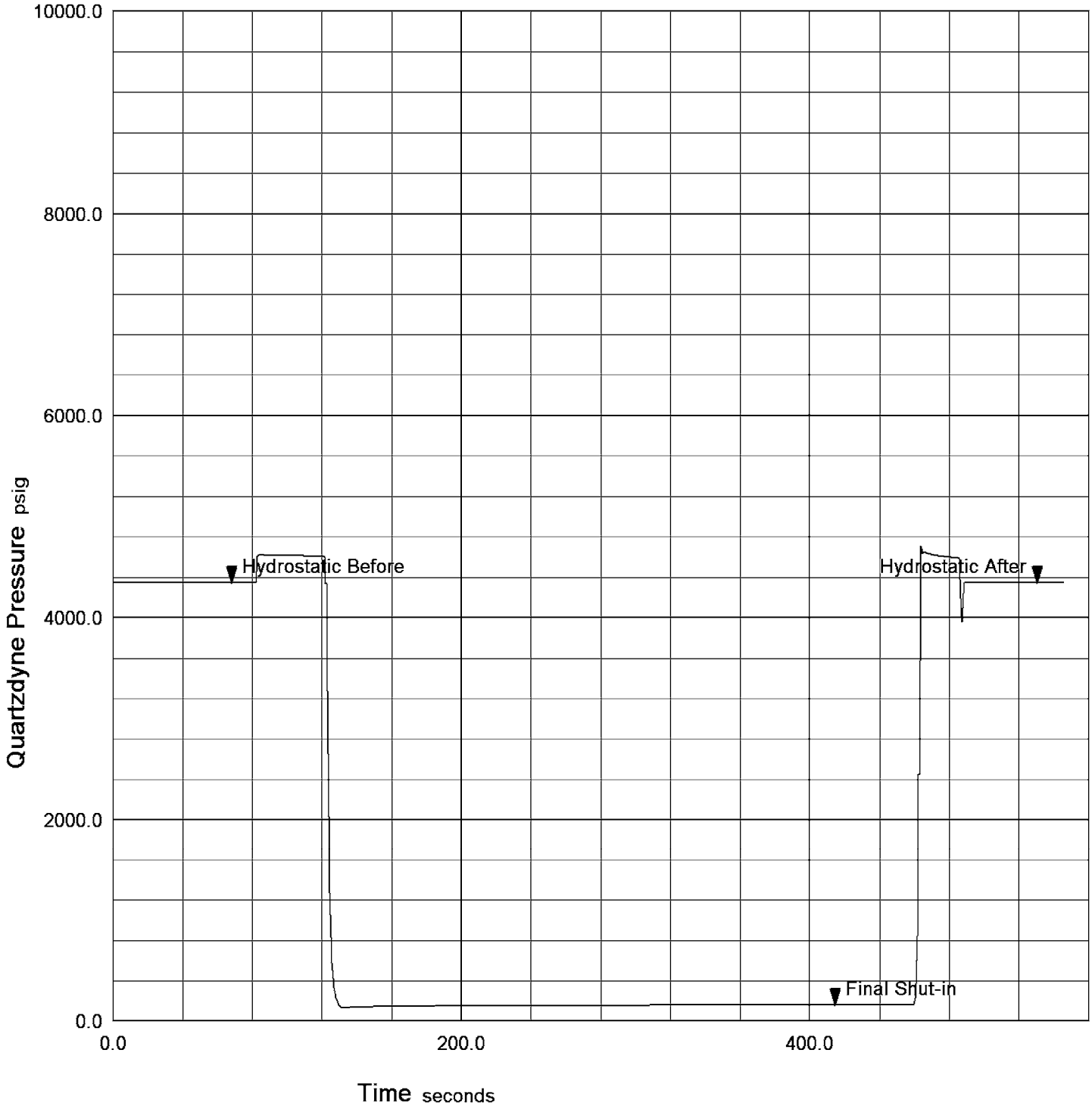
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:46
Filename: C:\Data\Childers Cove\MCG098MFT017_23.dta
Recorded on 05-OCT-2005 04:54

Filename: C:\Data\Childers Cove\MCG098MFT017_25.dta Recorded on 05-OCT-2005 04:54
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 10 at 2594.22 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_24.dta File Date: 04-OCT-2005 21:04:58
Run Id: Pretest 11 at 2590.51 m
Test Number: 11



Pretest 11 at 2590.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta Recorded on 05-OCT-2005 05:07
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks every 60.0 sec	TPRE every 0.25 in	Quartzdyne Pressure psi every 0.25 in	Quartzdyne 100's	Quartzdyne 10's	Quartzdyne 1's
		0 10	0 10	0 10	0 10

MFC Caliper

inches

6 11 16

Quartzdyne Pressure

psi

0 1500 3000

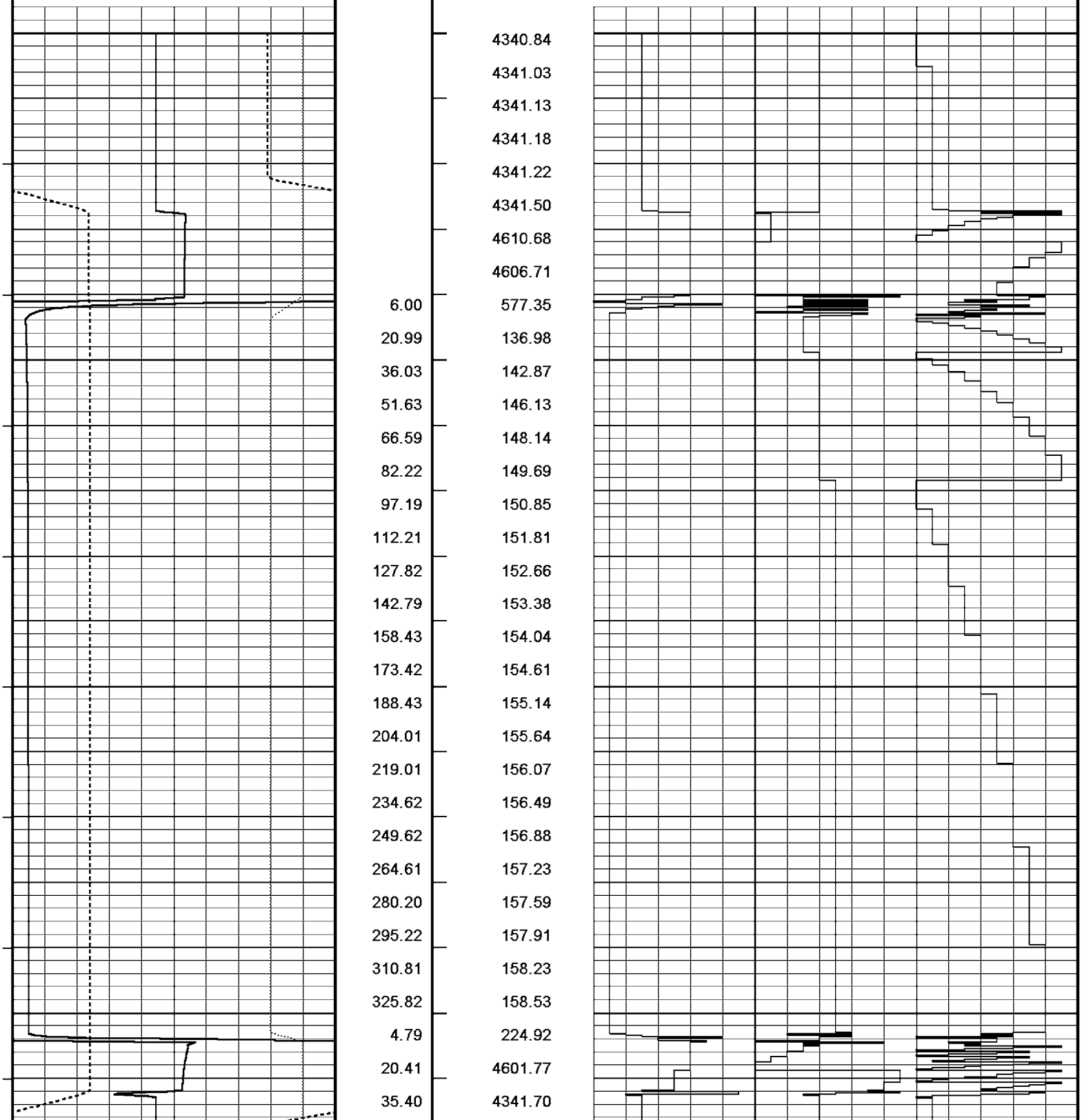
3000 4500 6000

Piston Swept Volume

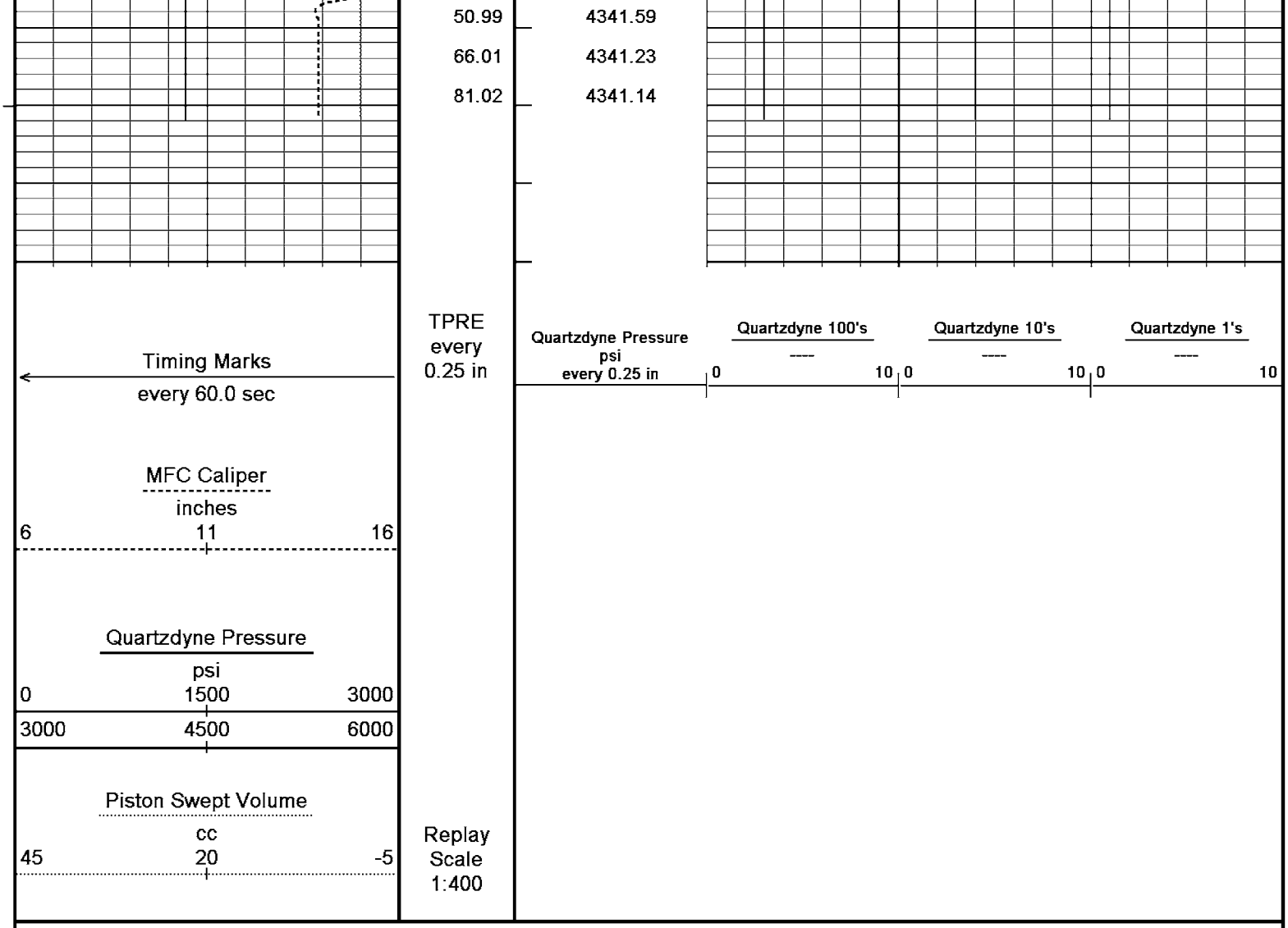
cc

45 20 -5

Replay Scale 1:400



	4340.84
	4341.03
	4341.13
	4341.18
	4341.22
	4341.50
	4610.68
	4606.71
6.00	577.35
20.99	136.98
36.03	142.87
51.63	146.13
66.59	148.14
82.22	149.69
97.19	150.85
112.21	151.81
127.82	152.66
142.79	153.38
158.43	154.04
173.42	154.61
188.43	155.14
204.01	155.64
219.01	156.07
234.62	156.49
249.62	156.88
264.61	157.23
280.20	157.59
295.22	157.91
310.81	158.23
325.82	158.53
4.79	224.92
20.41	4601.77
35.40	4341.70

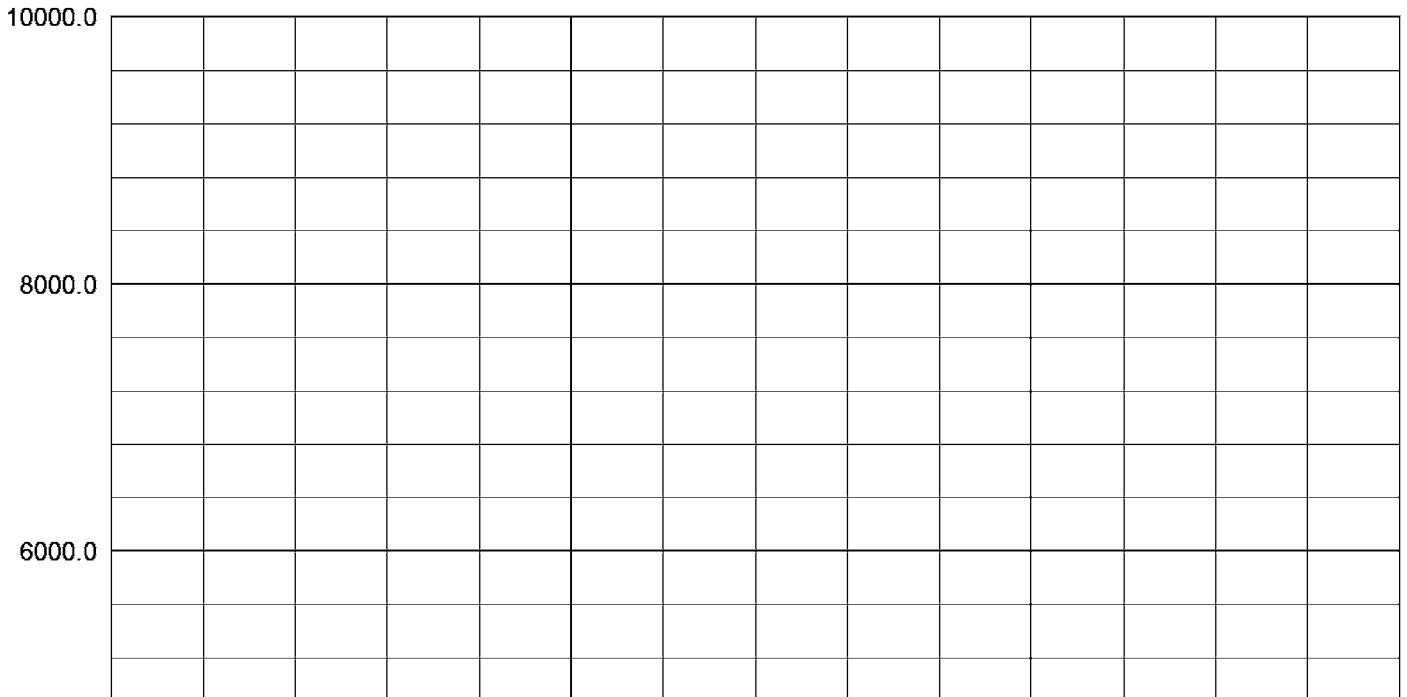


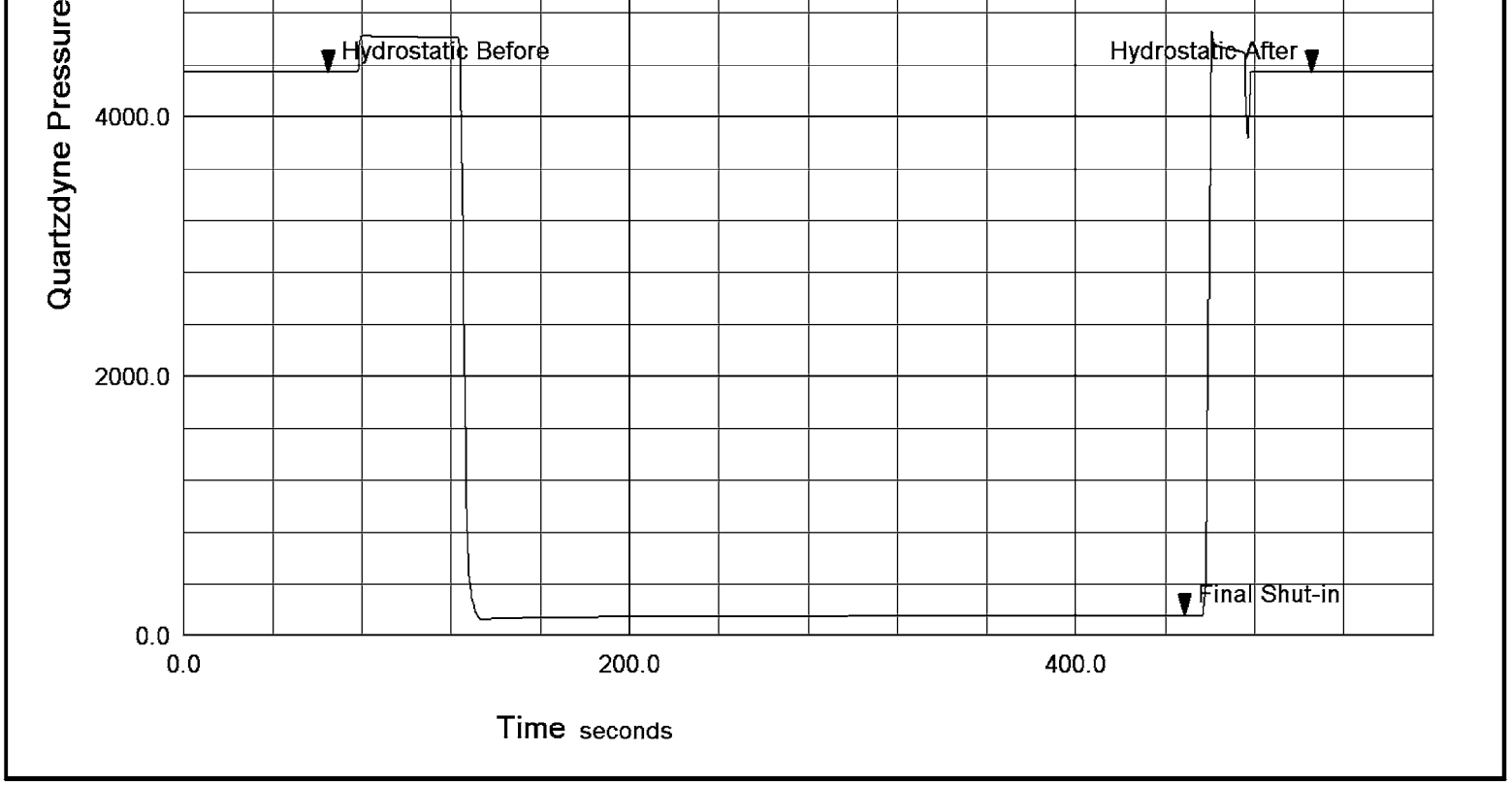
Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
Recorded on 05-OCT-2005 05:07
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 11 at 2590.51 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_25.dta
File Date: 04-OCT-2005 21:05:04
Run Id: Pretest 12 at 2612.09 m
Test Number: 12





Pretest 11 at 2590.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:07

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in
0 10

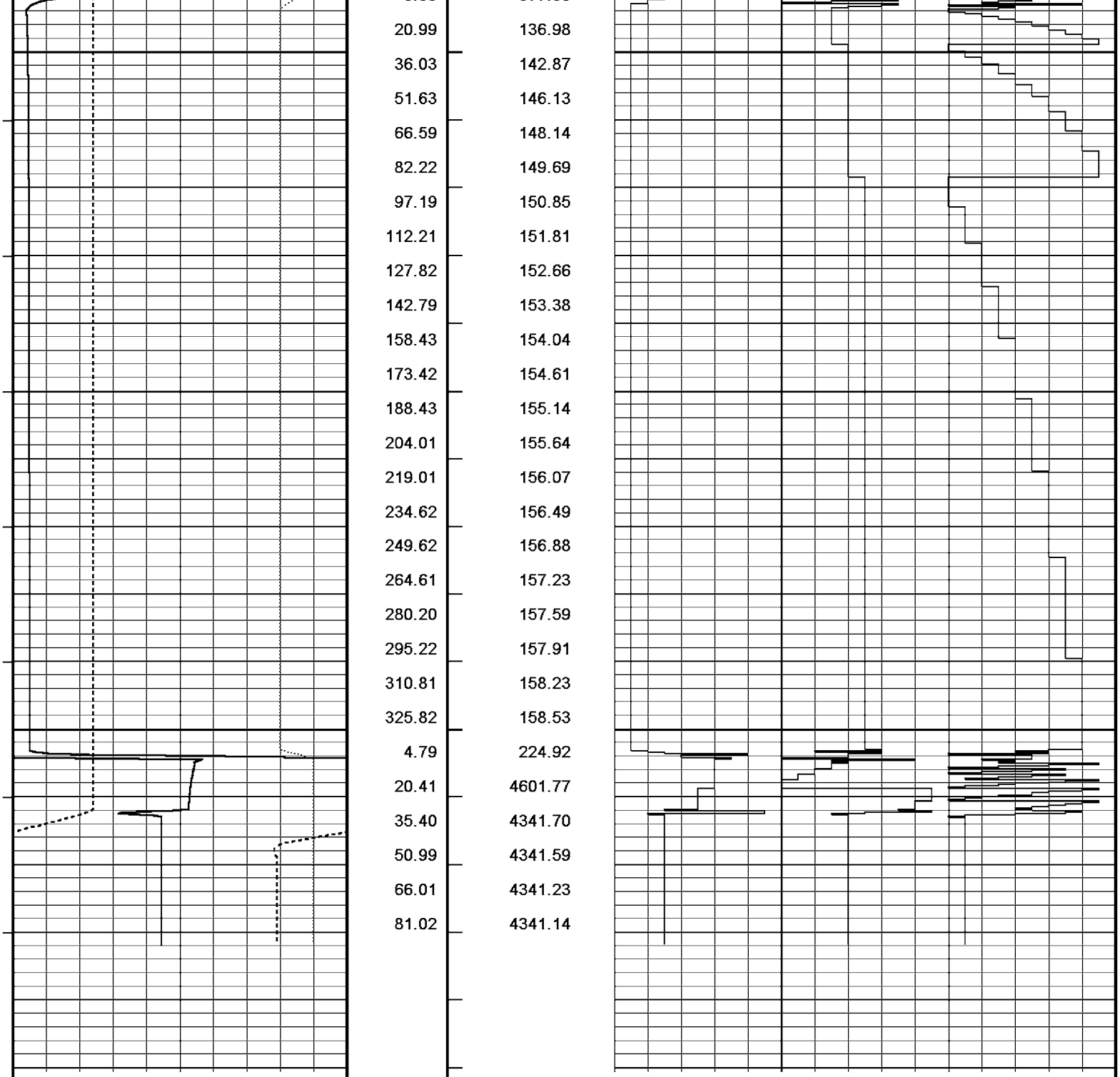
Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

4340.84
4341.03
4341.13
4341.18
4341.22
4341.50
4610.68
4606.71
577.35

6.00



20.99	136.98
36.03	142.87
51.63	146.13
66.59	148.14
82.22	149.69
97.19	150.85
112.21	151.81
127.82	152.66
142.79	153.38
158.43	154.04
173.42	154.61
188.43	155.14
204.01	155.64
219.01	156.07
234.62	156.49
249.62	156.88
264.61	157.23
280.20	157.59
295.22	157.91
310.81	158.23
325.82	158.53
4.79	224.92
20.41	4601.77
35.40	4341.70
50.99	4341.59
66.01	4341.23
81.02	4341.14

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

Replay
Scale

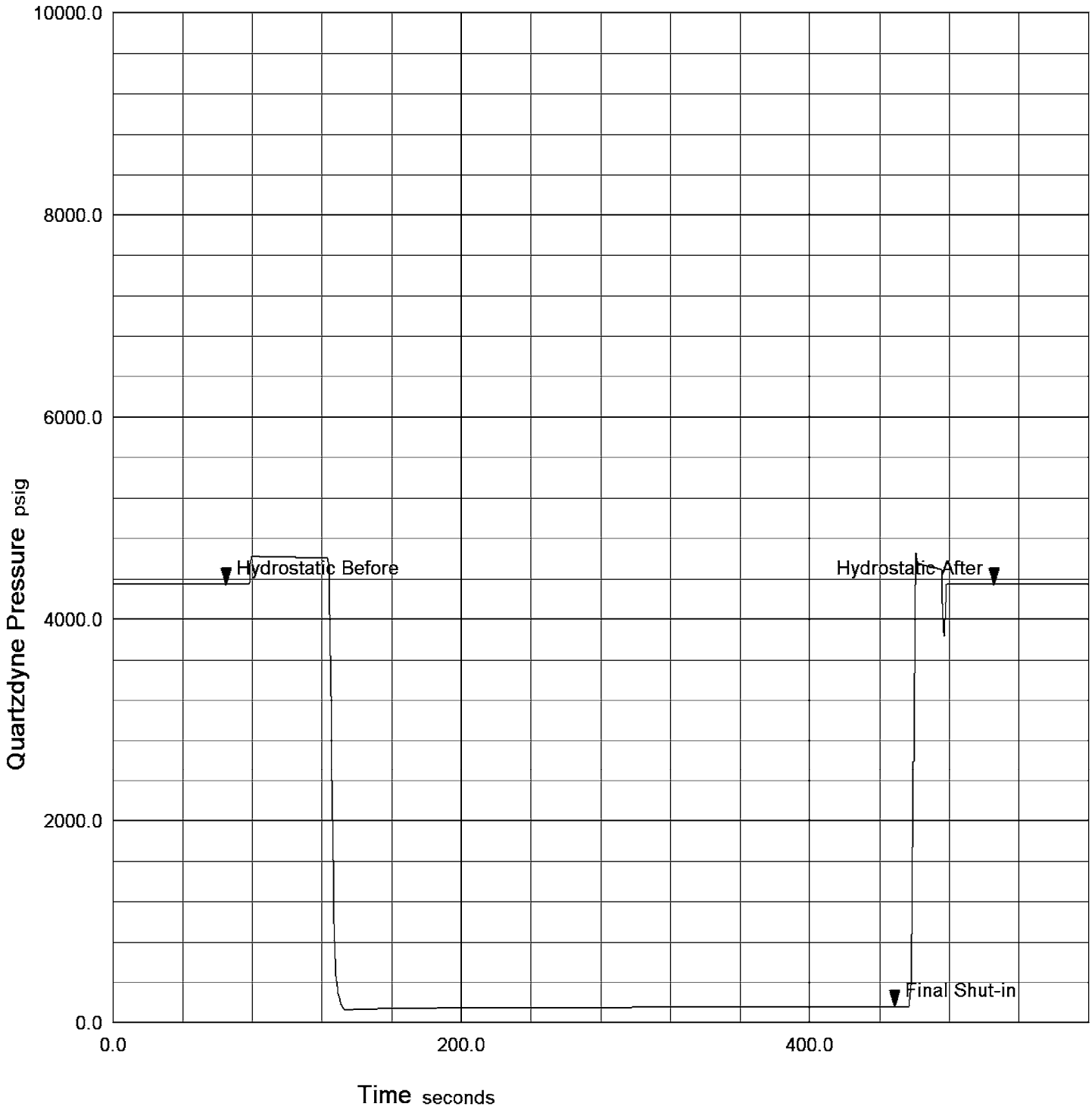
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_24.dta
Recorded on 05-OCT-2005 05:07
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 11 at 2590.51 m

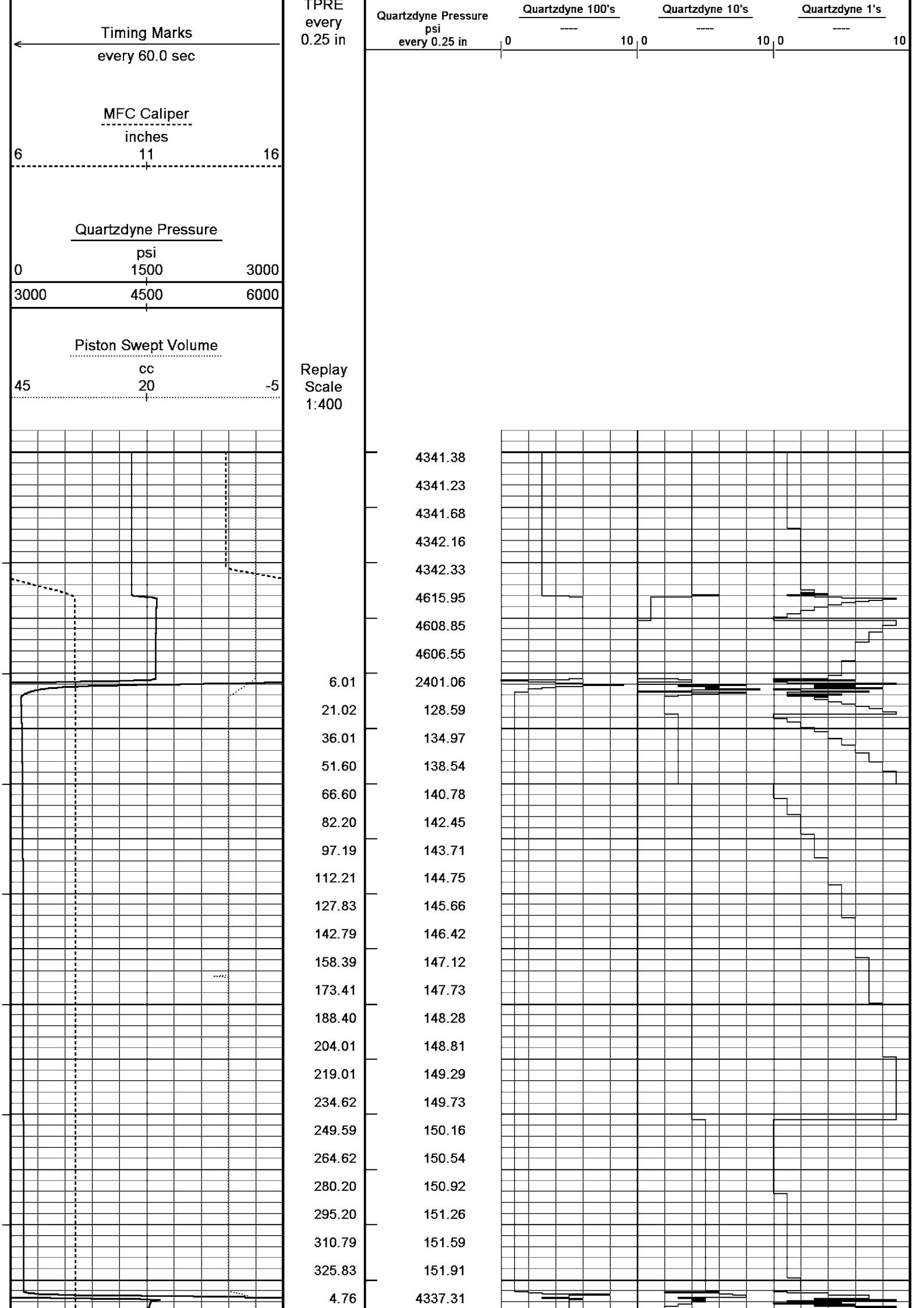
Pressure - Time Plot

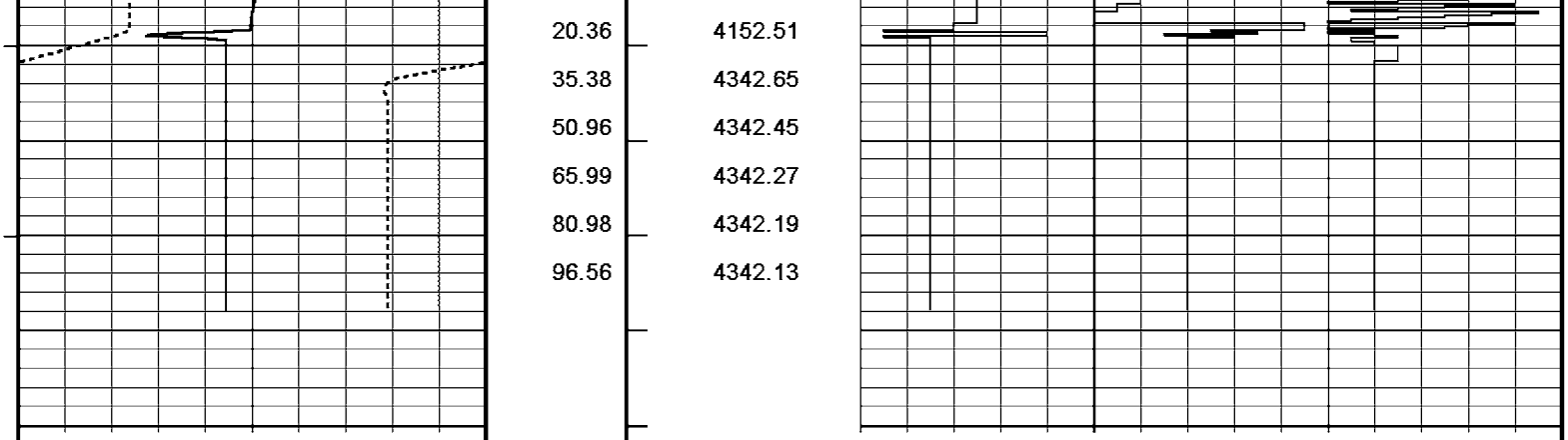
File: C:\Data\Childers Cove\MCG098MFT017_25.dta
File Date: 04-OCT-2005 21:05:04
Run Id: Pretest 12 at 2612.09 m
Test Number: 12



Pretest 12 at 2612.09 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_25.dta
Recorded on 05-OCT-2005 05:21
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:


Timing Marks
every 60.0 sec
MFC Caliper
inches
6
11
16
Quartzdyne Pressure
psi
0
1500
3000
3000
4500
6000
Piston Swept Volume
cc
45
20
-5
TPRE
every
0.25 in
Replay
Scale
1:400
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0
10
4341.38
4341.23
4341.68
4342.16
4342.33
4615.95
4608.85
4606.55
6.01
2401.06
21.02
128.59
36.01
134.97
51.60
138.54
66.60
140.78
82.20
142.45
97.19
143.71
112.21
144.75
127.83
145.66
142.79
146.42
158.39
147.12
173.41
147.73
188.40
148.28
204.01
148.81
219.01
149.29
234.62
149.73
249.59
150.16
264.62
150.54
280.20
150.92
295.20
151.26
310.79
151.59
325.83
151.91
4.76
4337.31



Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_25.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

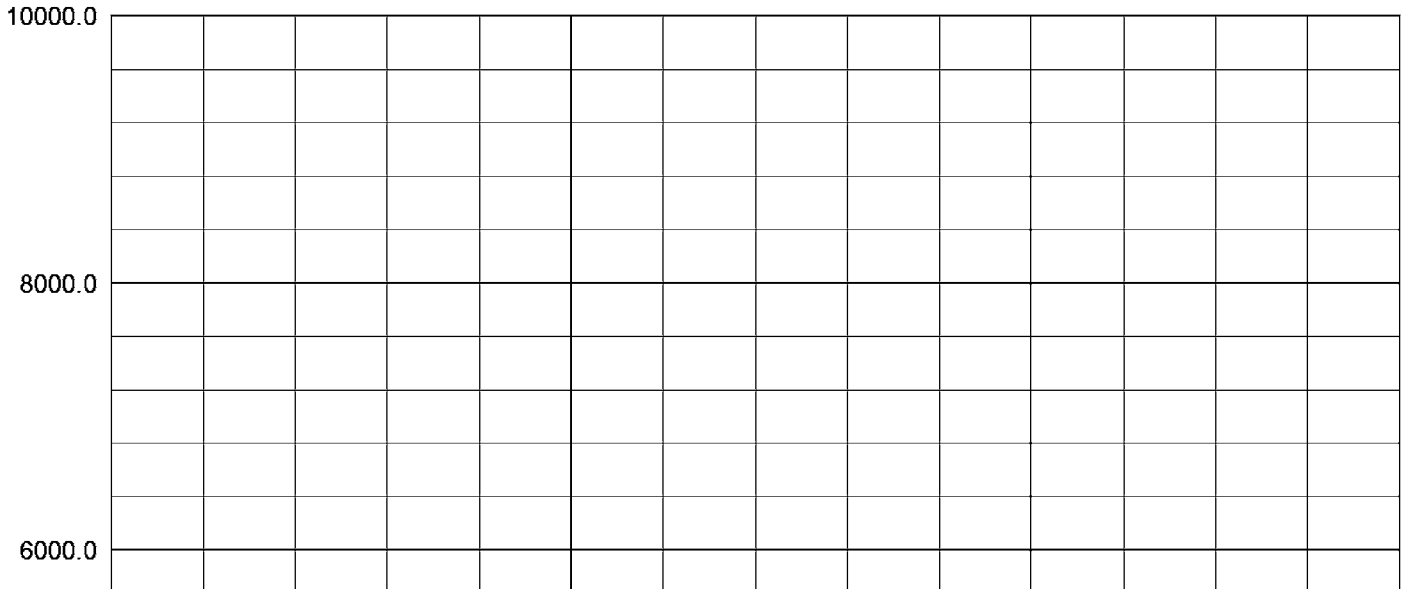
Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:21

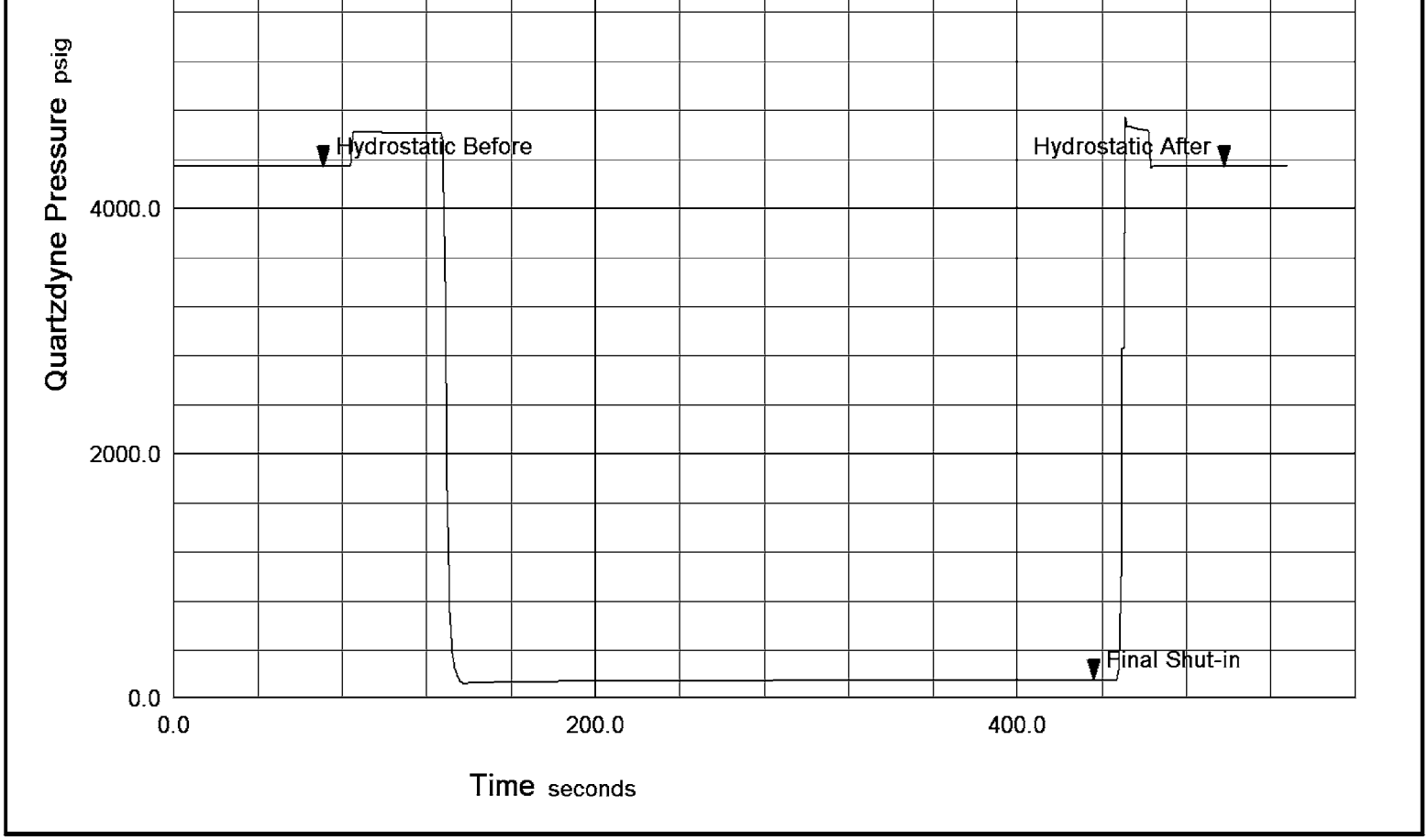
Pretest 12 at 2612.09 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_26.dta
Run Id: Pretest 13 at 2611.90 m
Test Number: 13

File Date: 04-OCT-2005 21:05:10





Pretest 13 at 2611.90 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_26.dta
Recorded on 05-OCT-2005 05:31
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

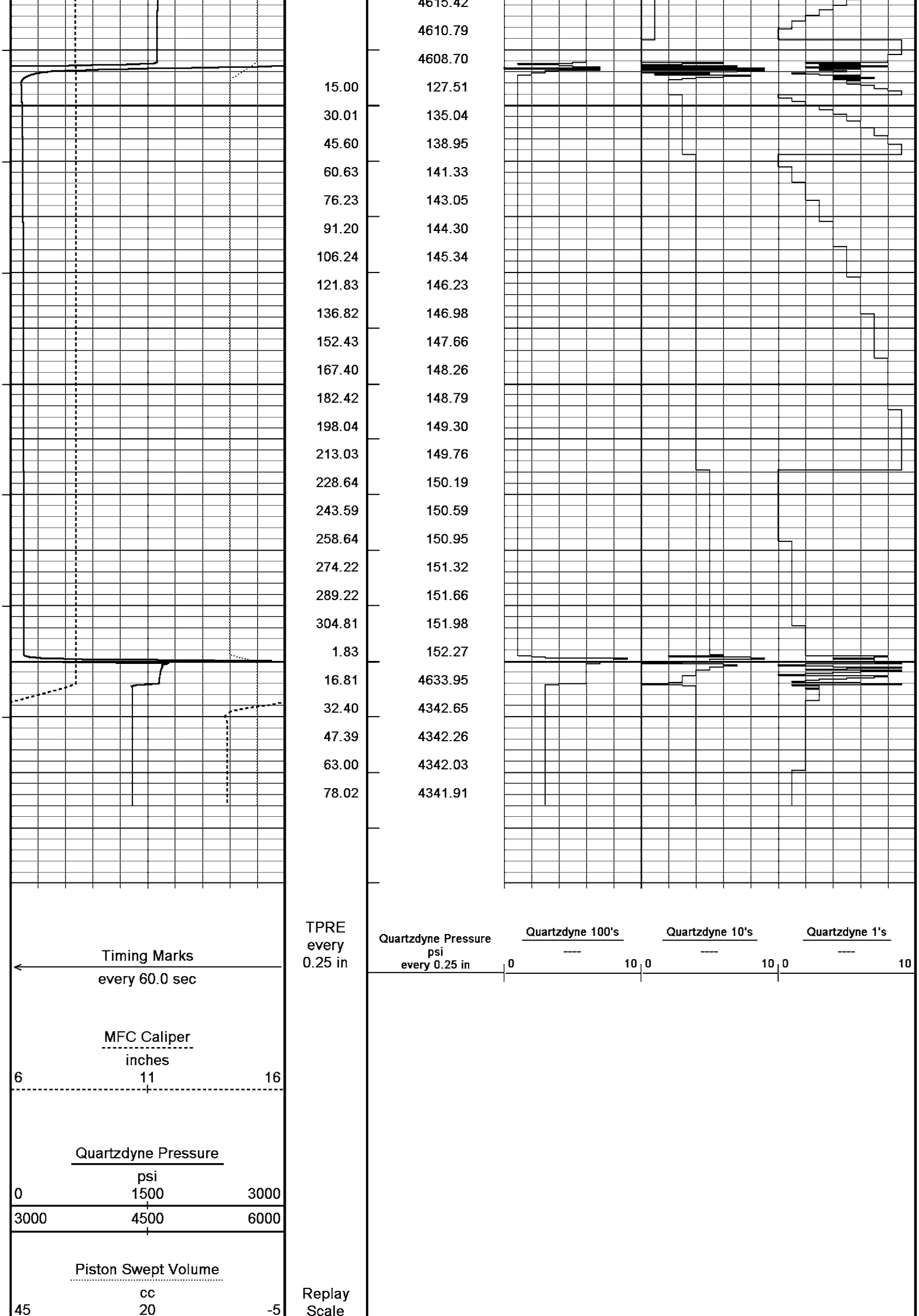
TPRE
every
0.25 in

Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0 10 0 10 0 10

4341.92
4341.95
4341.96
4341.97
4341.97
4341.90


4615.42
4610.79
4608.70
15.00 127.51
30.01 135.04
45.60 138.95
60.63 141.33
76.23 143.05
91.20 144.30
106.24 145.34
121.83 146.23
136.82 146.98
152.43 147.66
167.40 148.26
182.42 148.79
198.04 149.30
213.03 149.76
228.64 150.19
243.59 150.59
258.64 150.95
274.22 151.32
289.22 151.66
304.81 151.98
1.83 152.27
16.81 4633.95
32.40 4342.65
47.39 4342.26
63.00 4342.03
78.02 4341.91
Timing Marks
every 60.0 sec
TPRE
every
0.25 in
Quartzdyne Pressure
psi
every 0.25 in
Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's
0 10 0 10 0 10
MFC Caliper
inches
6 11 16
Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000
Piston Swept Volume
cc
45 20 -5
Replay
Scale

1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_26.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

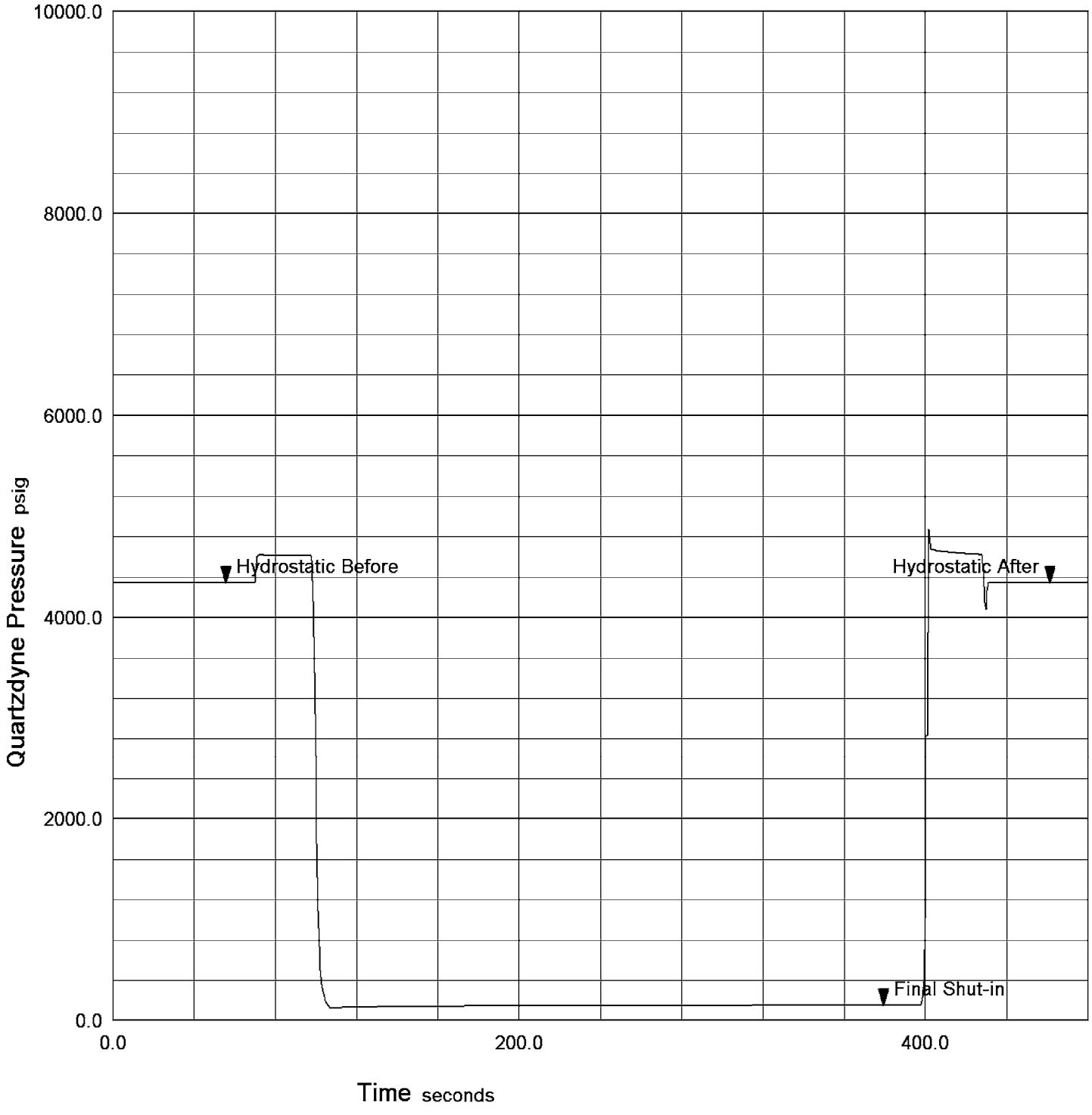
Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:31

Pretest 13 at 2611.90 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_27.dta
Run Id: Pretest 14 at 2616.80 m
Test Number: 14

File Date: 04-OCT-2005 21:05:18



Pretest 14 at 2616.80 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_27.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:44

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

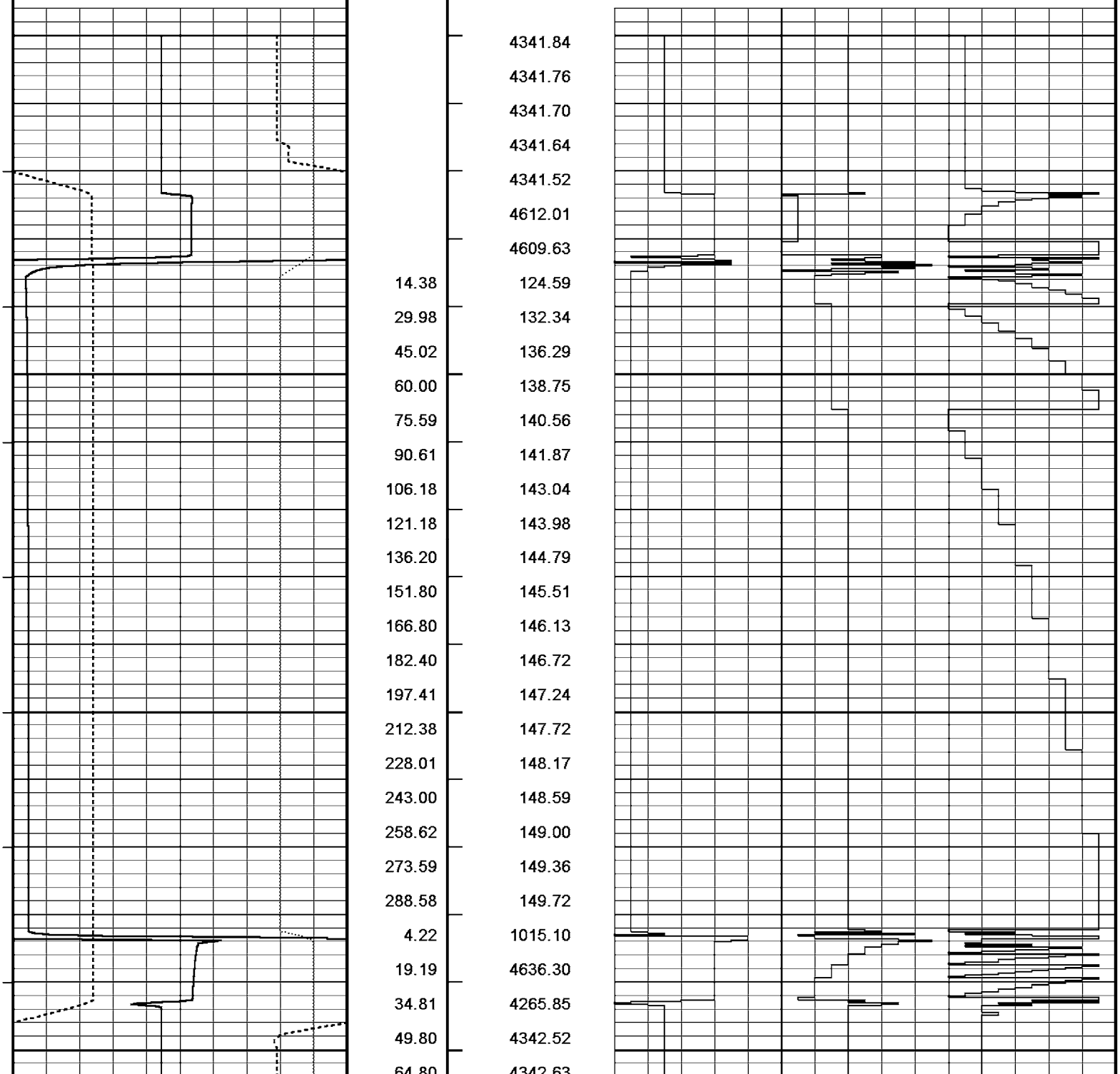
Replay
Scale
1:400

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
---
0 10

Quartzdyne 10's
---
0 10

Quartzdyne 1's
---
0 10



	4341.84
	4341.76
	4341.70
	4341.64
	4341.52
	4612.01
	4609.63
14.38	124.59
29.98	132.34
45.02	136.29
60.00	138.75
75.59	140.56
90.61	141.87
106.18	143.04
121.18	143.98
136.20	144.79
151.80	145.51
166.80	146.13
182.40	146.72
197.41	147.24
212.38	147.72
228.01	148.17
243.00	148.59
258.62	149.00
273.59	149.36
288.58	149.72
4.22	1015.10
19.19	4636.30
34.81	4265.85
49.80	4342.52
64.80	4342.63

80.38 4342.55

95.39 4342.49

TPRE every 0.25 in

Timing Marks every 60.0 sec

MFC Caliper inches
6 11 16

Quartzdyne Pressure psi
0 1500 3000
3000 4500 6000

Piston Swept Volume cc
45 20 -5

Replay Scale 1:400

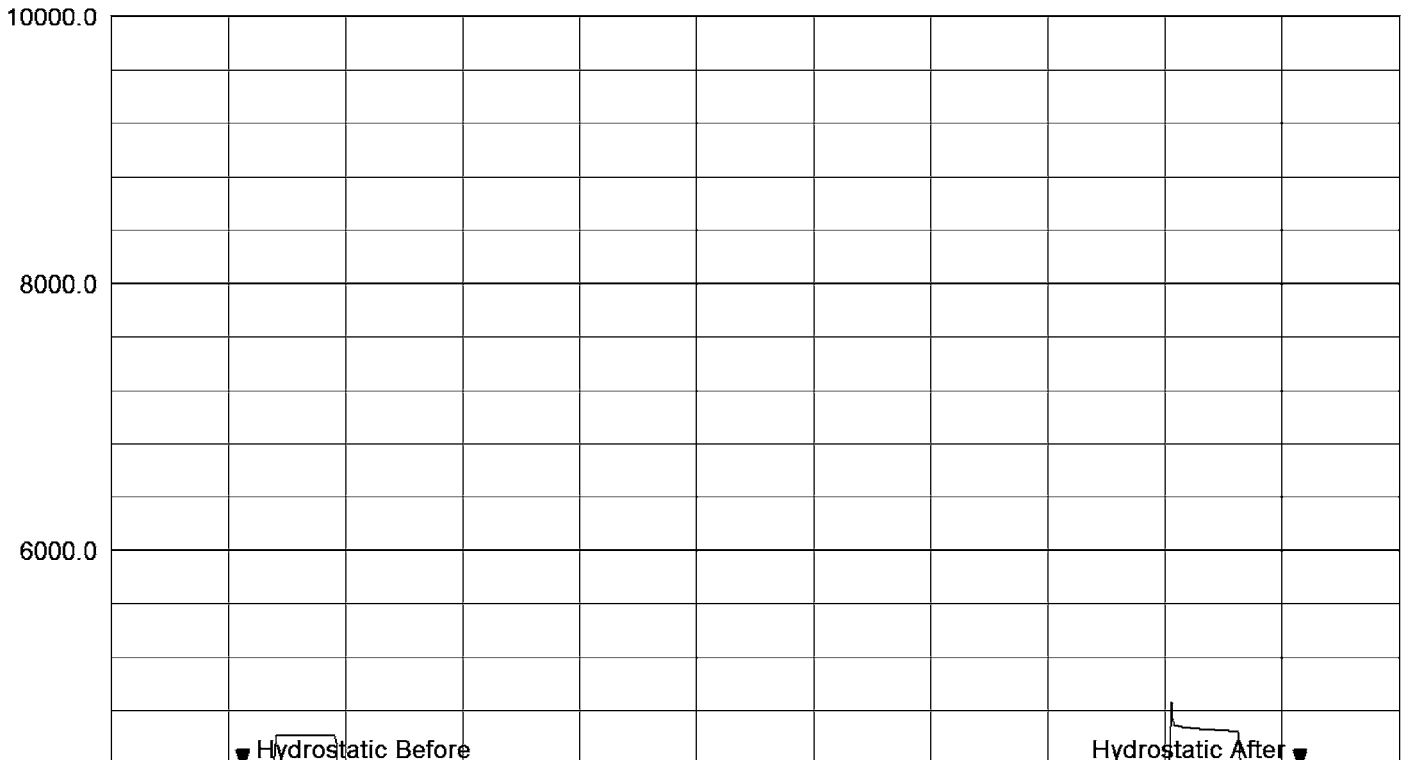
Quartzdyne Pressure psi every 0.25 in
Quartzdyne 100's ---- 0 10
Quartzdyne 10's ---- 0 10
Quartzdyne 1's ---- 0 10

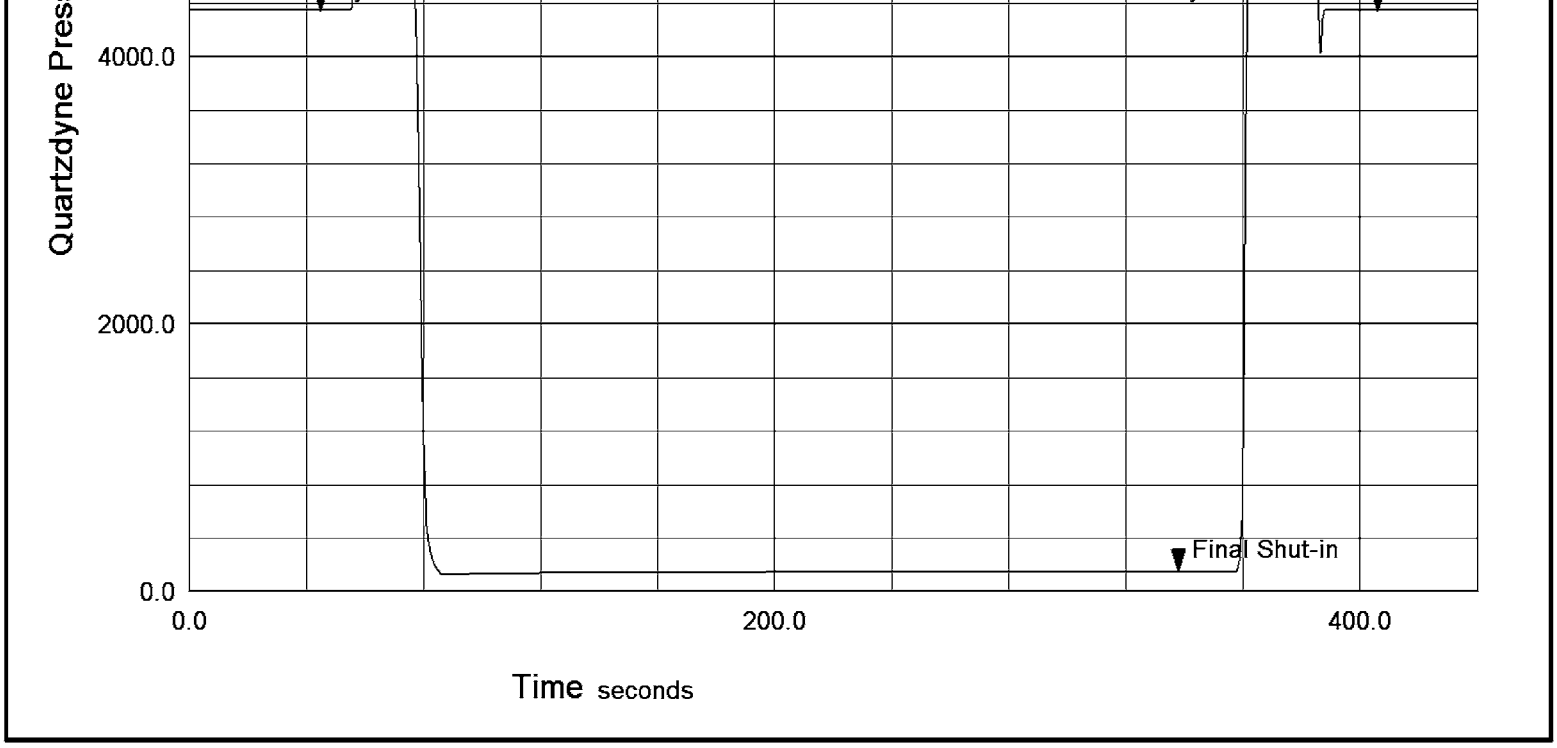
Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_27.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:
Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:44

Pretest 14 at 2616.80 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT017_28.dta
Run Id: Pretest 15 at 2617.11 m
Test Number: 15
File Date: 04-OCT-2005 21:05:24





Pretest 15 at 2617.11 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT017_28.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Plotted on 06-OCT-2005 13:47
Recorded on 05-OCT-2005 05:55

Timing Marks
every 60.0 sec

MFC Caliper
inches
6 11 16

Quartzdyne Pressure
psi
0 1500 3000
3000 4500 6000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

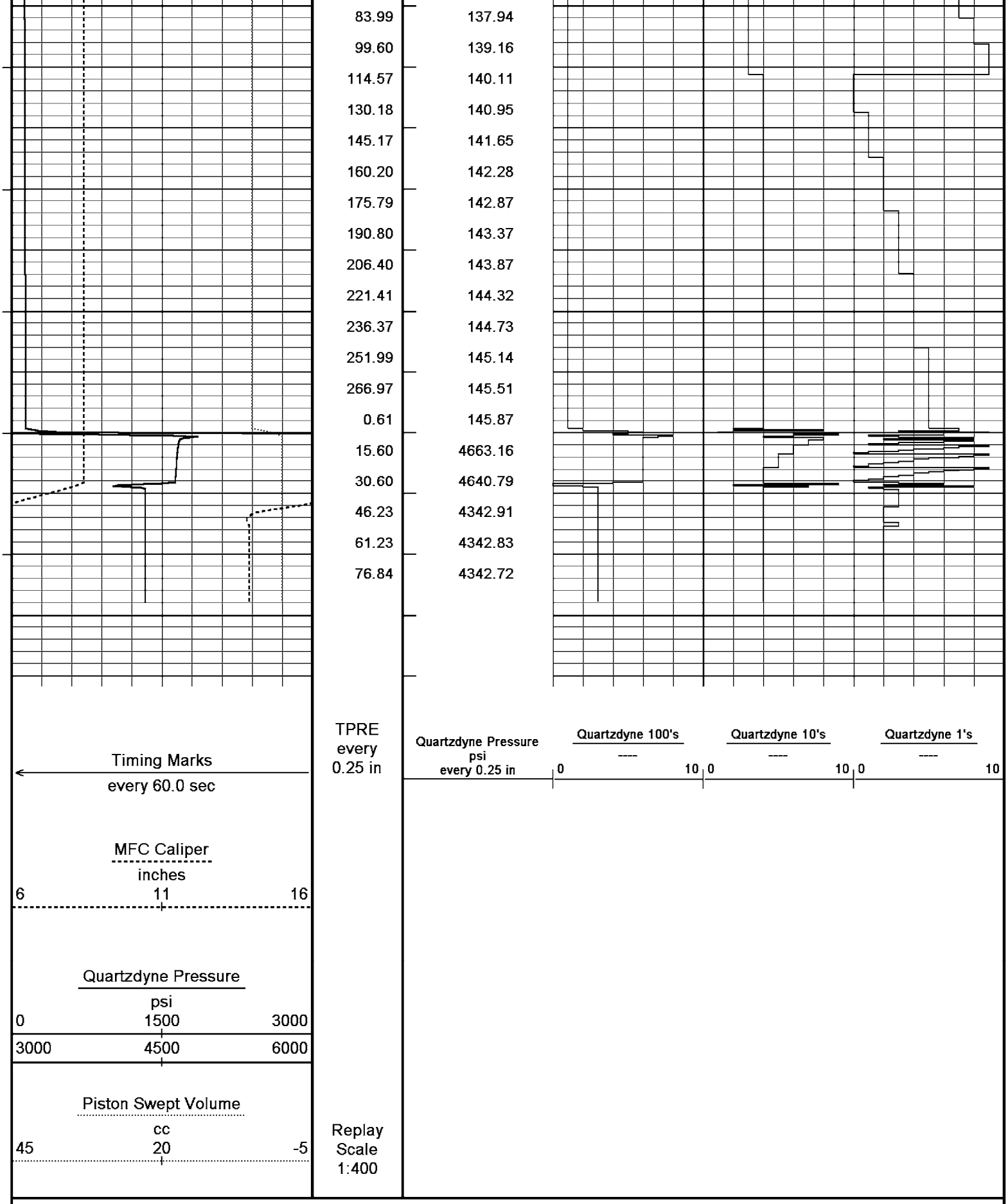
Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

	4342.31
	4342.30
	4342.30
	4342.24
	4609.51
7.79	1748.51
23.38	126.12
38.40	131.45
54.01	134.49
68.99	136.46



Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 06-OCT-2005 13:47
Filename: C:\Data\Childers Cove\MCG098MFT017_28.dta
Recorded on 05-OCT-2005 05:55
System Configuration Dates: Logged 17-JUN-2004: Plotted 23-AUG-2004:

Pretest 15 at 2617.11 m

BEFORE SURVEY CALIBRATION

C:\Data\Childers Cove\MCG098MFT017_18.dta

General Constants All 000

General Parameters

Mud Resistivity	0.250	ohm-metres
Mud Resistivity Temperature	17.100	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Caliper 1	Bit Size	
HVOL Caliper 2	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	N/A
Resistivity used	N/A
RWA Constant A	N/A
RWA Constant M	N/A

Quartzdyne Calibration Constants and Coefficients MFT 017

Serial Number	156287
Calibration Date	11-Oct-02
Temperature polynomial order	3
Pressure polynomial order	3
Temperature scaling factor	0.0100000000000
Pressure scaling factor	0.0100000000000
Temperature offset frequency	52016.0000000000000
Pressure offset frequency	16521.0000000000000
Span adjustment	1.0000000000000
Offset adjustment	0.00000000000e+000

	T0	T1	T2	T3	T4
P0	1.15388e+001	-5.29094e-001	-2.21551e-002	6.67977e-006	0.00000e+000
P1	4.25443e+001	-2.18004e-002	2.94679e-005	-4.87947e-008	0.00000e+000
P2	-2.01669e-003	1.02828e-005	-3.27841e-008	5.19870e-011	0.00000e+000
P3	7.45114e-007	-1.15862e-009	4.16808e-011	3.20970e-014	0.00000e+000
P4	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Caliper Calibration MFT 017

Base Calibration on 6-SEP-2005 20:29
Field Calibration on 4-OCT-2005 13:57

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	4343	4.00
2	4919	6.00
3	5807	8.00
4	7061	10.00
5	0	0.00
6	N/A	N/A

Field Calibration

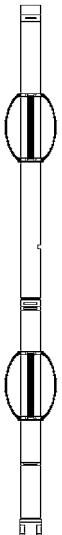
Measured Caliper (in)	Actual Caliper (in)
7.92	8.00

DOWNHOLE EQUIPMENT

C:\Data\Childers Cove\MCG098MFT017_18.dta

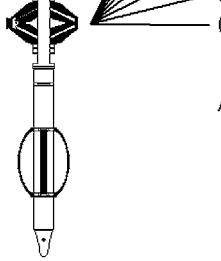
Compact Gamma
MCG 98 Length: 2.65 m Weight: 63.9 lb

Compact Repeat Formation Tester
MFT 17 Length: 4.17 m Weight: 112.4 lb



Tool Zero (2.15m from bottom)

0.00 m	PSVL - Piston Swept Volume
0.00 m	QONE - Quartzdyne 1's
0.00 m	QTEN - Quartzdyne 10's
0.00 m	QHUN - Quartzdyne 100's
0.00 m	QDPF - Quartzdyne Pressure
0.00 m	FPMC - MFP Motor Current
0.00 m	ECCP - MFC Caliper



0.00 m FCMC - MFC Motor Current

Pressure Bung + Hole Finder
HFS 3 Length: 0.28 m Weight: 6.6 lb

Total Length: 7.10 m Weight: 183.0 lb

All measurements relative to tool zero.

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading	2617.10	metres
Elevation Drill Floor	51.50	metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger	2618.50	metres

PRECISION ENERGY SERVICES

FORMATION TESTER

TIME LOG

BUILD-UP PLOTS

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA
LOCATION	38DEG29'31.96"S 142DEG44'46.66"E **FIELD PRINT**

LSD	SEC	TWP	RGE	Other Services

API Number
Permit Number PEP 154

Permanent Datum GROUND LEVEL, Elevation 50 metres
Log Measured From R.T. @ 5.3 METRE above Permanent Datum
Drilling Measured From R.T.

Elevations:
KB 51.50 metres
DF 51.50 metres
GL 46.20 metres

Date	04-Oct-2005			
Run Number	THREE			
Depth Driller	2658.00	metres		
Depth Logger				
First Reading				
Last Reading				
Casing Driller	544.50	metres		
Casing Logger	544.20	metres		
Bit Size	8.50	inches		
Hole Fluid Type	KCL/PHPA/POL			
Density / Viscosity	1.15 g/c3	59.00 CP		
PH / Fluid Loss	8.60	4.00 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	0.65 @ 13.9	ohm-m		
Rmf @ Measured Temp	1.06 @ 13.9	ohm-m		
Rmc @ Measured Temp	0.53 @ 14.1	ohm-m		
Source Rmf / Rmc	FILTER	PRESS		
Rm @ BHT	0.09 @ 95.5	ohm-m		
Time Since Circulation	32 HOURS			
Max Recorded Temp	95.50	deg C		
Equipment Name	COMPACT			
Equipment / Base	8	SALE		
Recorded By	B.MOSS			
Witnessed By	JOHN HOBDAY			
CIRC. STOP	13:00 3/10			

BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	544.50	2658.00

CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K-55	9.625	0.00	544.50	36.00

REMARKS

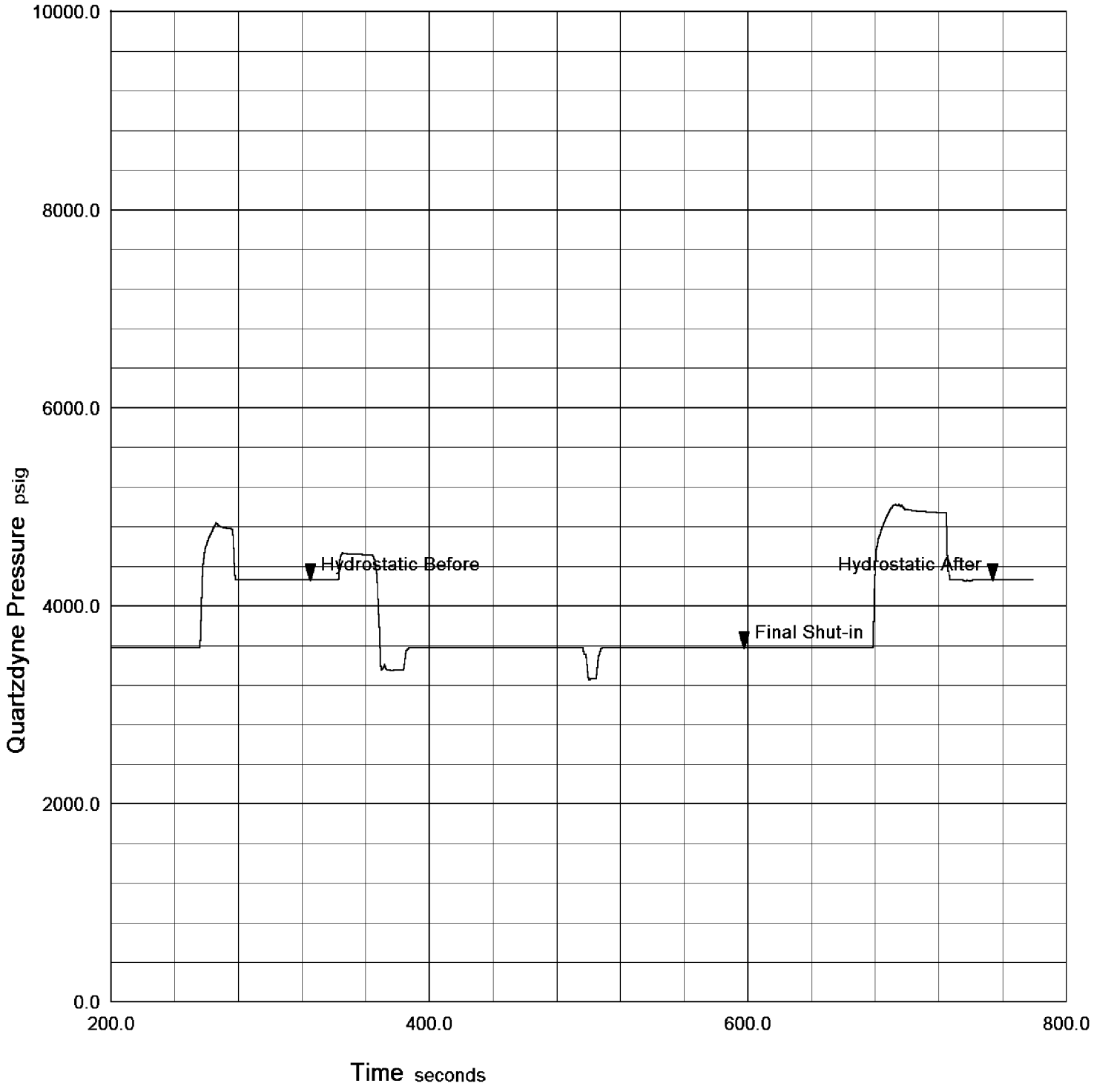
1) SOFTWARE ISSUE: JUN 17, 2004.
2) CUSTOMER SCALES AND INTERVALS LOGGED.
3) HFS, MMR, MLE, MUG, MSS, SKJ, MPD,MDN, MCG, MBE RAN IN COMBINATION.
4) HARDWARE: MMR: ONE 25.4MM STANDOFF
MSS: TWO 25.4MM STANDOFF
MUG: ONE 25.4MM STANDOFF
MBE: ONE 25.4MM STANDOFF
5) SERVICE ORDER: 2070
6) RIG:CENTURY 7

MFT / RFS - QUARTZ TEST SUMMARY

Test No.	Depth metres	TVD metres	Hyd Pres Before psig	Drawdown Pressure 1 psig	Drawdown Pressure 2 psig	Final Shut-in Pressure psig	Hyd Pres After psig	Mobility 1 md/cp	Mobility 2 md/cp	Remarks
1	2535.71	2535.71	4254.98	0.00	0.00	3569.04	4254.87	0.000	0.000	GOOD TEST
2	2546.21	2546.21	4272.13	0.00	0.00	3583.74	4271.96	0.000	0.000	GOOD TEST
3	2554.50	2554.50	4285.37	0.00	0.00	3595.53	4284.86	0.000	0.000	GOOD TEST

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_6A.dta
File Date: 04-OCT-2005 13:30:36
Run Id: Pretest 1 at 2535.71 m
Test Number: 1



All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

Pretest 1 at 2535.71 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Plotted on 04-OCT-2005 23:50
Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta
Recorded on 04-OCT-2005 21:25
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Timing Marks	TPRE every	Quartzdyne Pressure psi	Quartzdyne 100's	Quartzdyne 10's	Quartzdyne 1's
			----	----	----

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

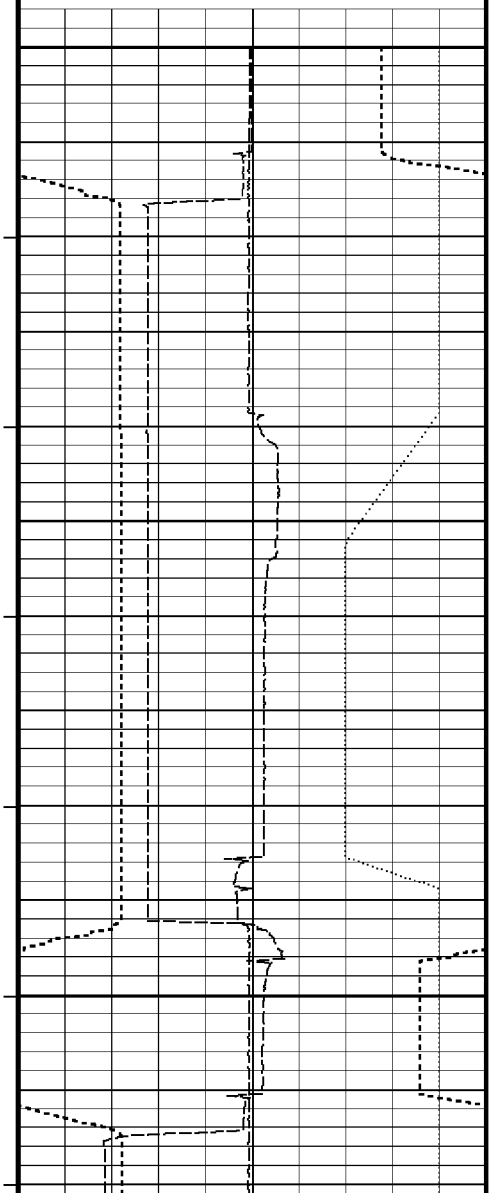
Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

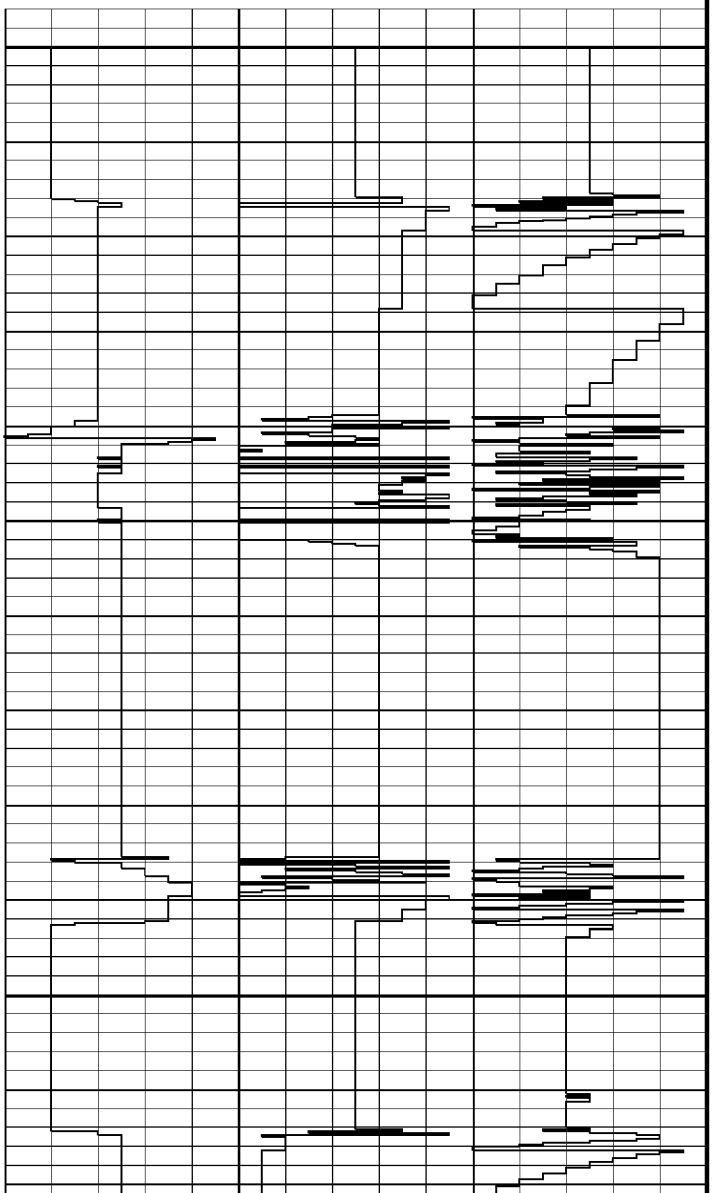
0.25 in

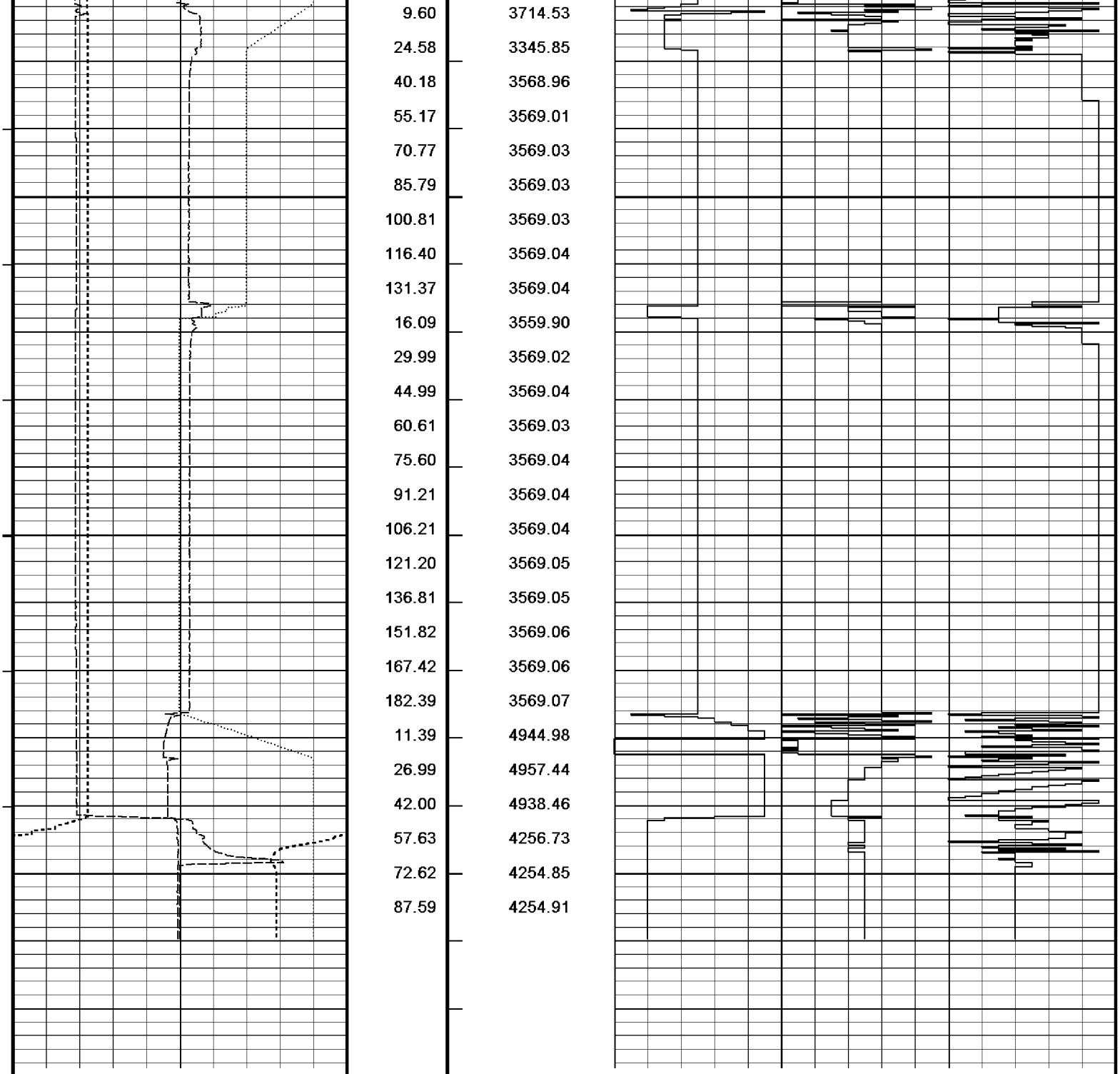
every 0.25 in 0 10 0 10 0 10

Replay Scale 1:400



	4255.34
	4255.21
	4255.23
	4472.74
	4476.23
	4470.96
	4467.76
	4465.51
11.99	3722.27
27.01	3460.01
42.03	3501.81
57.59	3568.96
72.61	3568.97
88.22	3568.97
103.24	3568.97
118.22	3568.98
133.83	3568.99
10.81	4696.99
26.38	4351.80
41.40	4254.92
56.38	4254.95
71.97	4254.97
86.99	4254.93
102.58	4515.50





9.60	3714.53
24.58	3345.85
40.18	3568.96
55.17	3569.01
70.77	3569.03
85.79	3569.03
100.81	3569.03
116.40	3569.04
131.37	3569.04
16.09	3559.90
29.99	3569.02
44.99	3569.04
60.61	3569.03
75.60	3569.04
91.21	3569.04
106.21	3569.04
121.20	3569.05
136.81	3569.05
151.82	3569.06
167.42	3569.06
182.39	3569.07
11.39	4944.98
26.99	4957.44
42.00	4938.46
57.63	4256.73
72.62	4254.85
87.59	4254.91

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
0 10

Quartzdyne 10's
0 10

Quartzdyne 1's
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure

psi

0 1500 3000

Piston Swept Volume

cc

45 20 -5

Replay Scale 1:400

Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 04-OCT-2005 23:50

Filename: C:\Data\Childers Cove\MCG098MFT008_6A.dta — Recorded on 04-OCT-2005 21:25

System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

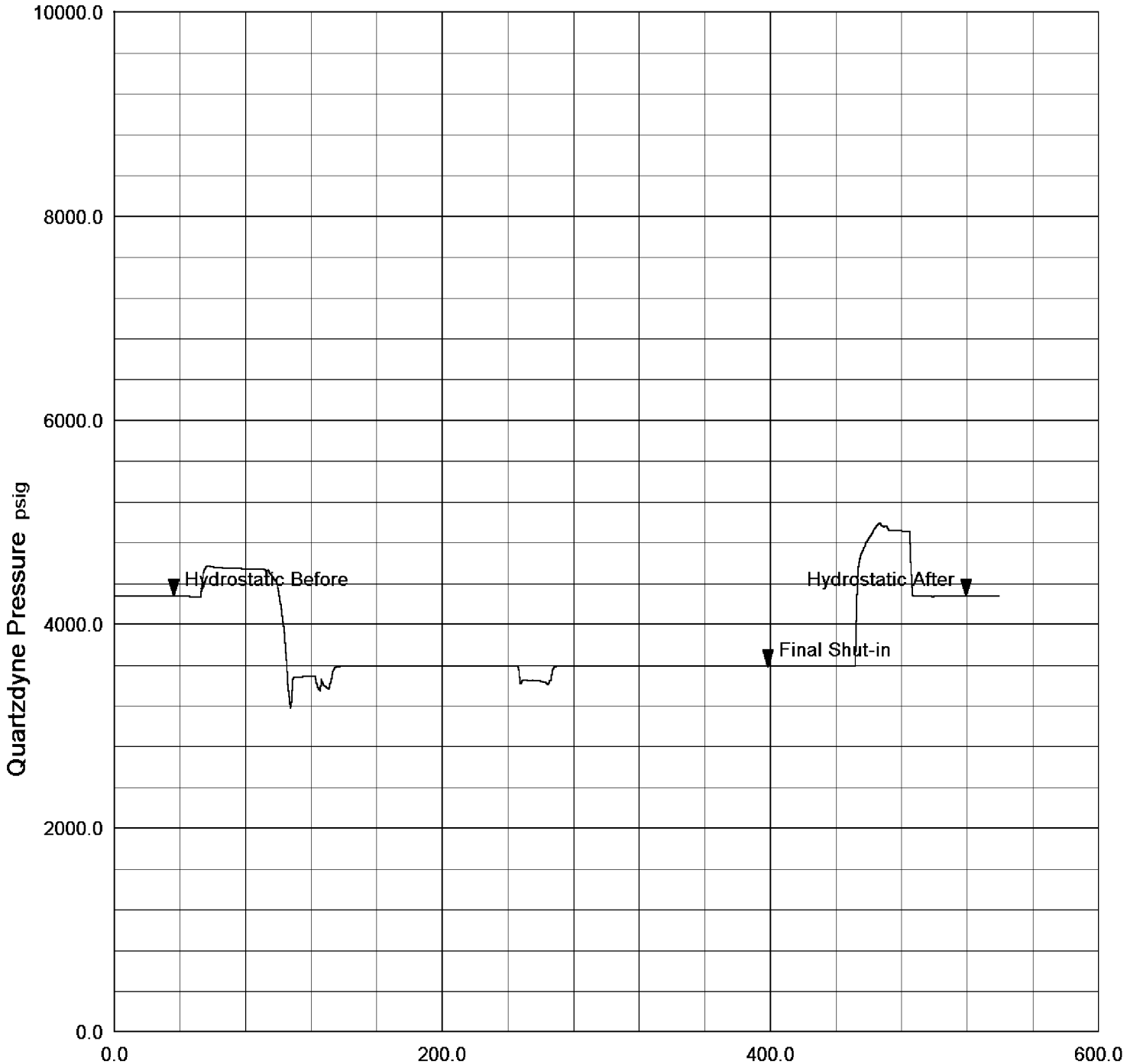
Pretest 1 at 2535.71 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_8A.dta — File Date: 04-OCT-2005 13:30:42

Run Id: Pretest 2 at 2546.19 m

Test Number: 2



Time seconds

Pretest 2 at 2546.19 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 04-OCT-2005 23:50
Recorded on 04-OCT-2005 21:54

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

TPRE
every
0.25 in

Replay
Scale
1:400

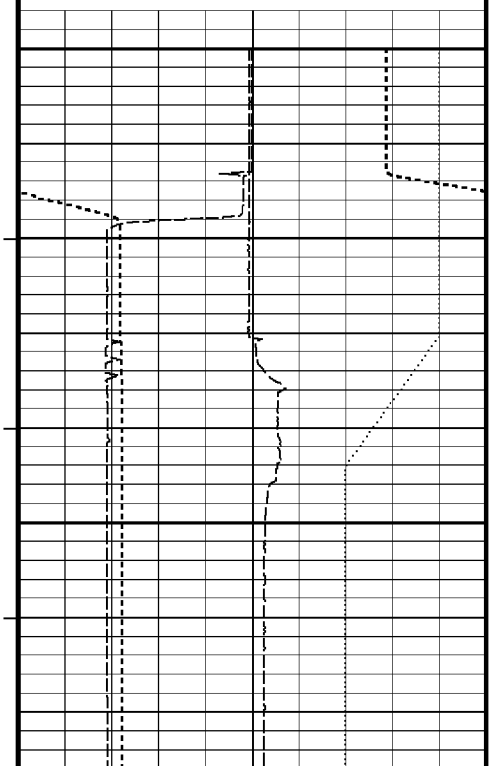
Quartzdyne Pressure
psi
every 0.25 in

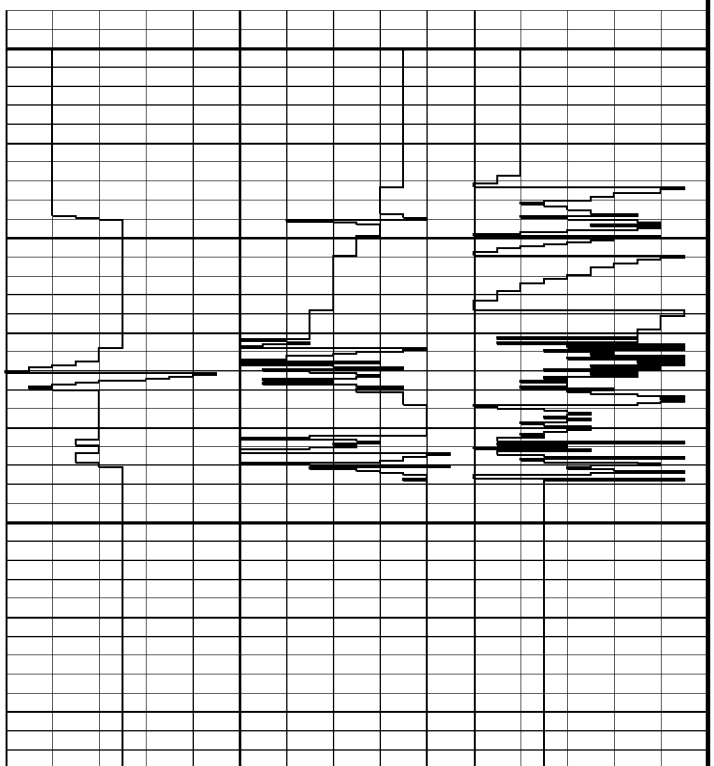
Quartzdyne 100's
---
0 10

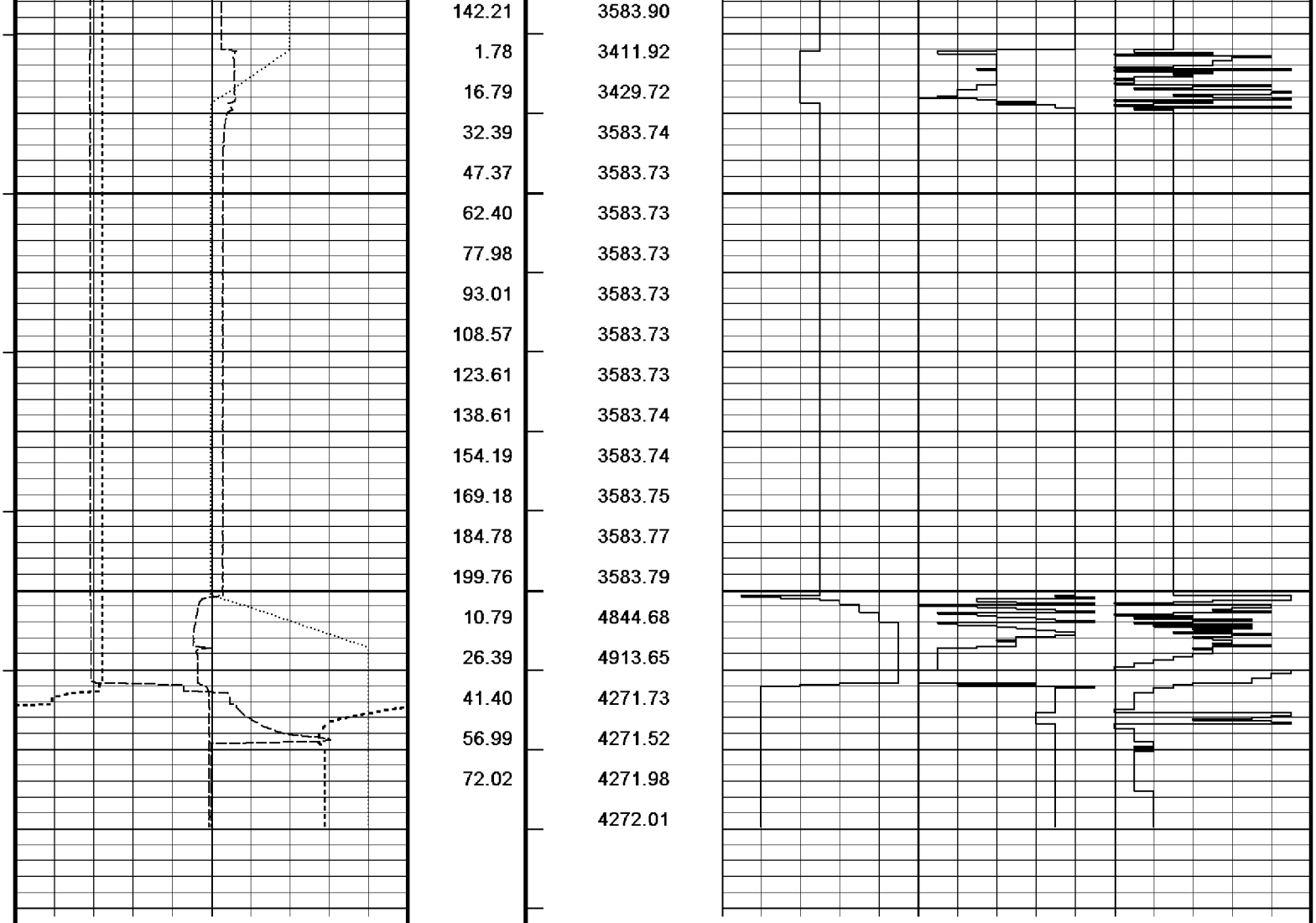
Quartzdyne 10's
---
0 10

Quartzdyne 1's
---
0 10

	4272.06
	4272.11
	4272.13
	4262.50
	4551.27
	4541.35
5.41	4504.92
20.39	3477.33
36.03	3341.41
51.03	3583.73
66.01	3583.78
81.62	3583.79
96.59	3583.82
112.19	3583.86
127.21	3583.88







142.21	3583.90
1.78	3411.92
16.79	3429.72
32.39	3583.74
47.37	3583.73
62.40	3583.73
77.98	3583.73
93.01	3583.73
108.57	3583.73
123.61	3583.73
138.61	3583.74
154.19	3583.74
169.18	3583.75
184.78	3583.77
199.76	3583.79
10.79	4844.68
26.39	4913.65
41.40	4271.73
56.99	4271.52
72.02	4271.98
	4272.01

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
----
0 10

Quartzdyne 10's
----
0 10

Quartzdyne 1's
----
0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

Replay
Scale
1:400

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT008_8A.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

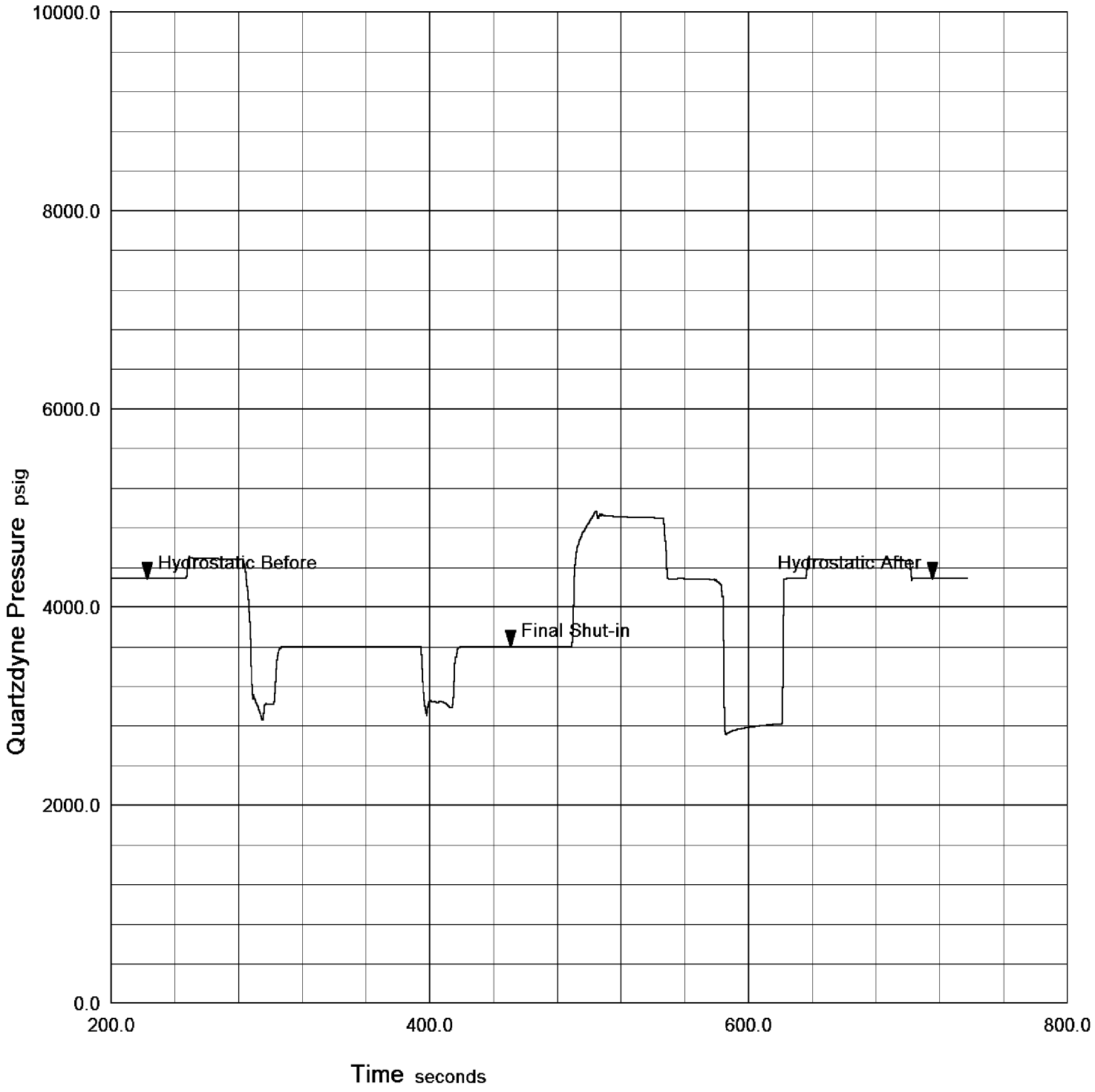
Plotted on 04-OCT-2005 23:50
Recorded on 04-OCT-2005 21:54

Pretest 2 at 2546.19 m

Pressure - Time Plot

File: C:\Data\Childers Cove\MCG098MFT008_9A.dta
Run Id: Pretest 3 at 2554.51 m
Test Number: 3

File Date: 04-OCT-2005 13:30:50



Pretest 3 at 2554.51 m

Time Based Data - Notional Logging Speed 10.00 metres/min
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Plotted on 04-OCT-2005 23:50
Recorded on 04-OCT-2005 22:05

	TPRE	Quartzdyne Pressure	Quartzdyne 100's	Quartzdyne 10's	Quartzdyne 1's

Timing Marks
every 60.0 sec

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

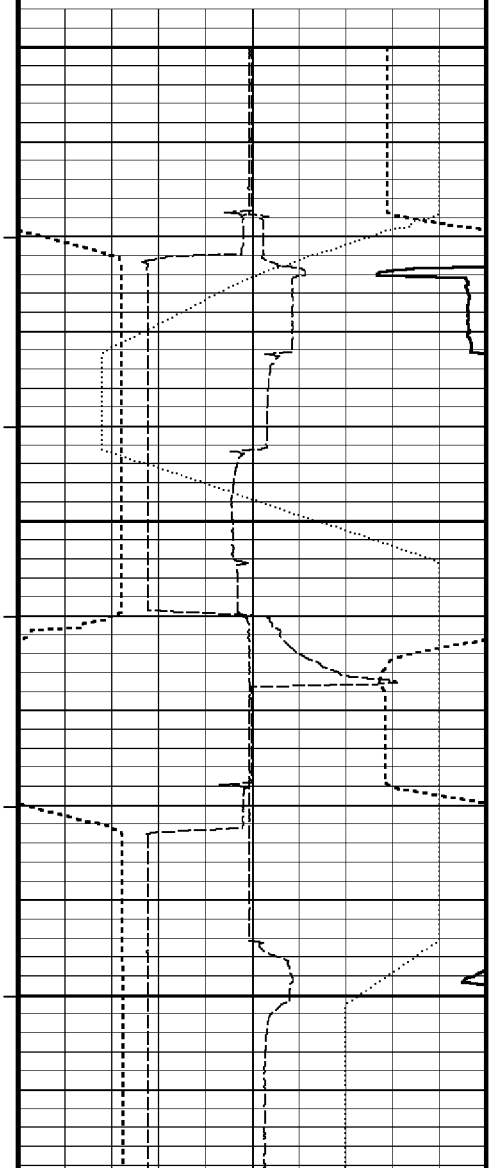
Quartzdyne Pressure
psi
0 1500 3000

Piston Swept Volume
cc
45 20 -5

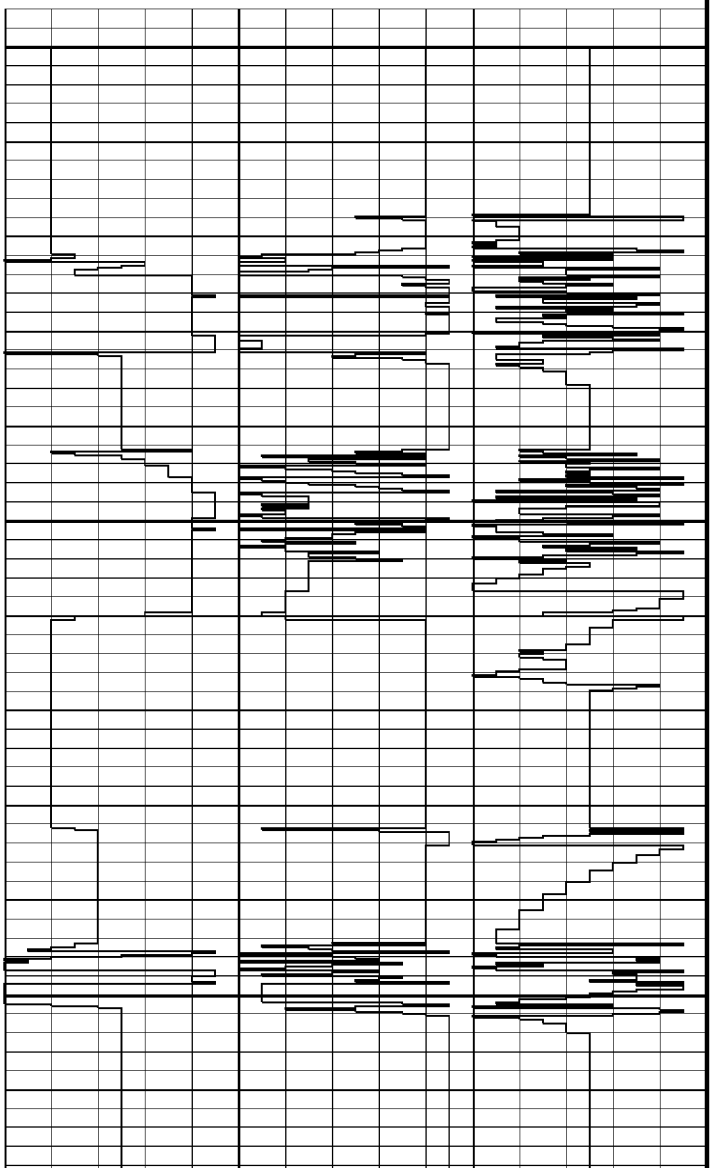
every
0.25 in

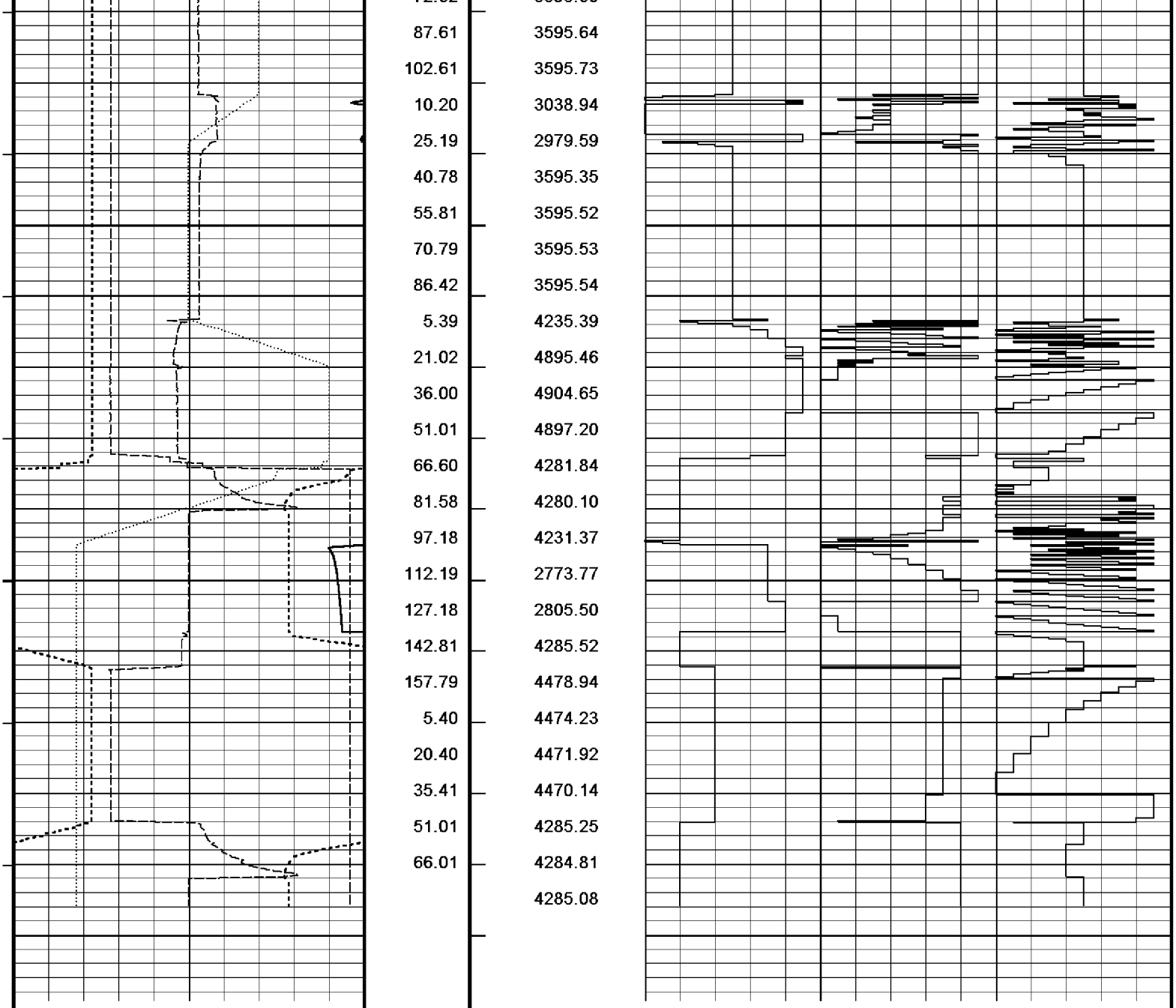
Quartzdyne Pressure
psi
every 0.25 in
0 10 0 10 0 10

Replay
Scale
1:400



	4285.83
	4285.78
	4285.70
	4285.65
	4277.71
	2901.38
	2912.86
	3595.20
	3595.46
15.00	4878.30
29.98	4840.51
45.61	4830.60
61.21	4285.69
76.21	4284.12
91.20	4285.37
106.20	4285.38
121.81	4286.00
136.81	4485.57
152.41	4482.27
11.37	2969.68
26.39	3592.03
42.01	3595.51
57.01	3595.58
72.62	3595.60





87.61	3595.64
102.61	3595.73
10.20	3038.94
25.19	2979.59
40.78	3595.35
55.81	3595.52
70.79	3595.53
86.42	3595.54
5.39	4235.39
21.02	4895.46
36.00	4904.65
51.01	4897.20
66.60	4281.84
81.58	4280.10
97.18	4231.37
112.19	2773.77
127.18	2805.50
142.81	4285.52
157.79	4478.94
5.40	4474.23
20.40	4471.92
35.41	4470.14
51.01	4285.25
66.01	4284.81
	4285.08

Timing Marks
every 60.0 sec

TPRE
every
0.25 in

Quartzdyne Pressure
psi
every 0.25 in

Quartzdyne 100's
Quartzdyne 10's
Quartzdyne 1's

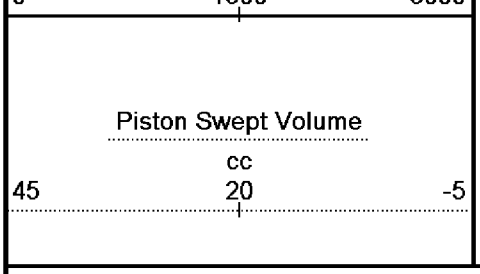
0 10 0 10 0 10

MFC Motor Current
milliamps
-3000 0 3000

MFC Caliper
inches
6 11 16

MFP Motor Current
milliamps
-3000 0 3000

Quartzdyne Pressure
psi
0 1500 3000



Replay Scale 1:400

Time Based Data - Notional Logging Speed 10.00 metres/min — Plotted on 04-OCT-2005 23:50
Filename: C:\Data\Childers Cove\MCG098MFT008_9A.dta — Recorded on 04-OCT-2005 22:05
System Configuration Dates: Logged 17-JUN-2004: Plotted 17-JUN-2004:

Pretest 3 at 2554.51 m

BEFORE SURVEY CALIBRATION

C:\Data\Childers Cove\MCG098MFT008_6A.dta

General Constants All 000

General Parameters		
Mud Resistivity	0.250	ohm-metres
Mud Resistivity Temperature	17.100	degrees C
Water Level	0.000	metres
Density/Neutron Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Caliper 1	Bit Size	
HVOL Caliper 2	Bit Size	
Annular Volume Diameter	7.000	inches
Caliper for Differential Caliper	None	
Rwa Parameters		
Porosity used	N/A	
Resistivity used	N/A	
RWA Constant A	N/A	
RWA Constant M	N/A	

Quartzdyne Calibration Constants and Coefficients MFT 008

Serial Number	156002
Calibration Date	25-JAN-02
Temperature polynomial order	3
Pressure polynomial order	3
Temperature scaling factor	0.0100000000000
Pressure scaling factor	0.0100000000000
Temperature offset frequency	55313.0000000000000
Pressure offset frequency	20231.0000000000000
Span adjustment	1.0000000000000
Offset adjustment	0.00000000000e+000

	T0	T1	T2	T3	T4
P0	1.06712e+001	-5.02859e-001	-2.09468e-002	8.27075e-006	0.00000e+000
P1	4.23434e+001	-2.23910e-002	2.56713e-005	-6.06661e-008	0.00000e+000
P2	-2.04657e-003	1.09786e-005	-2.68807e-008	7.75475e-011	0.00000e+000
P3	6.55210e-007	-2.45045e-009	2.80271e-011	-1.60433e-014	0.00000e+000
P4	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000	0.00000e+000

Caliper Calibration MFT 008

Base Calibration on 4-OCT-2005,19:32
Field Calibration on 4-OCT-2005,19:32

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	4371	4.00
2	4944	6.00
3	5833	8.00
4	7161	10.00
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
8.01	8.00

COMPANY ORIGIN ENERGY RESOURCES LIMITED

COMPANY	ORIGIN ENERGY RESOURCES LIMITED
WELL	CHILDERS COVE 1
FIELD	ONSHORE OTWAY BASIN
PROVINCE/COUNTY	VICTORIA
COUNTRY/STATE	AUSTRALIA

Elevation Kelly Bushing	51.50	metres	First Reading		metres
Elevation Drill Floor	51.50	metres	Depth Driller	2658.00	metres
Elevation Ground Level	46.20	metres	Depth Logger		metres

FORMATION TESTER
TIME LOG
BUILD-UP PLOTS

APPENDIX 7

ANDERDRIFT SURVEY

Num.	Depth (m)	Degree	Type	Num.	Depth (m)	Degree	Type
1.	50.0	0°	Anderdrift	40.	1475.0	0°	Anderdrift
2.	90.4	0°	Anderdrift	41.	1503.0	0°	Anderdrift
3.	102.0	0°	Anderdrift	42.	1531.0	0°	Anderdrift
4.	148.0	0°	Anderdrift	43.	1559.0	0°	Anderdrift
5.	238.0	0°	Anderdrift	44.	1587.0	0°	Anderdrift
6.	297.0	0°	Anderdrift	45.	1615.0	0°	Anderdrift
7.	353.0	0°	Anderdrift	46.	1643.0	½°	Anderdrift
8.	400.0	0°	Anderdrift	47.	1671.0	½°	Anderdrift
9.	447.0	0°	Anderdrift	48.	1690.0	0°	Anderdrift
10.	503.0	0°	Anderdrift	49.	1728.0	½°	Anderdrift
11.	575.0	0°	Anderdrift	50.	1756.0	½°	Anderdrift
12.	603.0	0°	Anderdrift	51.	1784.0	½°	Anderdrift
13.	631.0	0°	Anderdrift	52.	1803.0	½°	Anderdrift
14.	687.0	0°	Anderdrift	53.	1840.0	1°	Anderdrift
15.	715.0	0°	Anderdrift	54.	1868.0	½°	Anderdrift
16.	744.0	0°	Anderdrift	55.	1924.0	½°	TOTCO
17.	772.0	0°	Anderdrift	56.	1943.0	1-½°	Anderdrift
18.	800.0	0°	Anderdrift	57.	1971.0	0°	Anderdrift
19.	837.0	0°	Anderdrift	58.	1999.0	1°	Anderdrift
20.	856.0	0°	Anderdrift	59.	2027.0	1°	Anderdrift
21.	884.0	0°	Anderdrift	60.	2056.0	1°	Anderdrift
22.	912.0	0°	Anderdrift	61.	2084.0	1°	Anderdrift
23.	941.0	0°	Anderdrift	62.	2112.0	1°	Anderdrift
24.	969.0	0°	Anderdrift	63.	2140.0	1°	Anderdrift
25.	997.0	0°	Anderdrift	64.	2168.0	3°	Anderdrift
26.	1025.0	0°	Anderdrift	65.	2177.0	2-½°	Anderdrift
27.	1044.0	0°	TOTCO	66.	2206.0	3-½°	Anderdrift
28.	1053.0	0°	Anderdrift	67.	2234.0	3-½°	Anderdrift
29.	1081.0	0°	Anderdrift	68.	2271.0	3°	Anderdrift
30.	1137.0	0°	Anderdrift	69.	2299.0	3-½°	Anderdrift
31.	1165.0	0°	Anderdrift	70.	2318.0	3°	Anderdrift
32.	1193.0	0°	Anderdrift	71.	2346.0	3°	Anderdrift
33.	1222.0	0°	Anderdrift	72.	2374.0	3°	Anderdrift
34.	1250.0	0°	Anderdrift	73.	2402.0	3°	Anderdrift
35.	1278.0	0°	Anderdrift	74.	2421.0	2-½°	Anderdrift
36.	1334.0	0°	Anderdrift	75.	2430.0	3°	Anderdrift
37.	1381.0	½°	Anderdrift	76.	2458.0	2-½°	Anderdrift
38.	1428.0	½°	Anderdrift	77.	2486.0	3-½°	Anderdrift
39.	1447.0	0°	Anderdrift	78.	2516.0	3°	Anderdrift

APPENDIX 8

CUTTINGS DESCRIPTIONS

Depth	%	Lithology	Gas
40 (1.1)	100	LIMESTONE, off white, yellowish grey, pale brown in part, sparitic, abundant shell and coral fragments, crystalline, unconsolidated, friable to moderately hard.	Nil gas
50 (1.3)	100	LIMESTONE, a. a.	Nil gas
60 (0.5)	100	LIMESTONE, off white, yellowish grey, pale olive, pale brown in part, minor dark yellowish orange, sparitic, abundant shell and coral fragments, crystalline, unconsolidated, friable to moderately hard.	Nil gas
70 (0.6)	100	LIMESTONE, a. a.	Nil gas
80 (0.8)	100	LIMESTONE, off white, yellowish grey, pale olive, pale brown in part, minor dark yellowish orange, sparitic, micritic in part, abundant shell and coral fragments, minor to trace pyrite nodules, crystalline, unconsolidated, friable to moderately hard.	Nil gas
90 (1.4)	100	LIMESTONE, off white, yellowish grey, pale olive, minor medium light grey, sparitic micritic in part, shell and coral fragments, crystalline, unconsolidated, friable to moderately hard.	Nil gas
100 (2.2)	100	LIMESTONE, yellowish grey, light olive grey, minor off white, sparitic, micritic in part, commonly shell and coral fragments, trace to rare green lithics, crystalline, unconsolidated, friable to moderately hard.	Nil gas
110 (1.7)	100	LIMESTONE, a. a.	Nil gas
120 (1.2)	100	LIMESTONE, light olive grey, greenish grey to off white, sparitic, micritic in part, commonly shell and coral fragments, trace to locally occasionally glauconite lithics, crystalline, friable to moderately hard, unconsolidated in part.	Nil gas
130 (1.3)	100	LIMESTONE, a. a.	Nil gas
140 (1.3)	100	LIMESTONE, off white, yellowish grey, light olive grey, sparitic, trace micritic, commonly shell and coral fragments, crystalline, unconsolidated, moderately hard to hard, dominantly nodular hard.	Nil gas
150 (2.1)	100 Tr	LIMESTONE, off white to yellowish grey, light olive grey, trace dark greenish grey, sparitic, commonly locally micritic, trace argillaceous, commonly fossiliferous fragments, crystalline, dominantly moderately hard. MARL, pale grey, argillaceous, soft to soft, blocky to amorphous.	Nil gas
160 (2.4)	100 Tr	LIMESTONE, a. a. MARL, a. a.	Nil gas
170 (1.5)	100 Tr	LIMESTONE, white to off white, greenish grey, olive grey, sparitic, commonly micritic, trace argillaceous, locally minor to commonly fossiliferous fragments, glauconite lithics, crystalline, moderately hard to hard, friable in part. MARL, a. a.	Nil gas
180 (1.4)	100 Tr	LIMESTONE, a. a. MARL, a. a.	Nil gas
190 (2.1)	100 Tr	LIMESTONE, a. a. MARL, a. a.	Nil gas
200 (2.2)	100	LIMESTONE, off white pale olive grey, greenish grey, sparitic, commonly locally micritic, commonly fossiliferous fragments and material, crystalline, friable to moderately hard.	Nil gas
210 (0.8)	100 Tr	LIMESTONE, a. a. MARL, a. a.	Nil gas
220 (1.9)	100 Tr	LIMESTONE, a. a. MARL, a. a.	Nil gas
230 (1.0)	50 50	LIMESTONE, a. a. MARL, light to medium grey, greenish grey, angular, calcareous, minor sparitic LIMESTONE fragments, fossiliferous material and fragments, very soft to soft, blocky to amorphous.	Nil gas
240 (0.8)	100	MARL, light to medium grey, greenish grey, argillaceous, calcareous, minor sparitic LIMESTONE fragments, fossiliferous material and fragments, very soft to soft, blocky to amorphous.	Nil gas
250 (1.0)	100	MARL, a. a.	Nil gas
260 (1.3)	100	MARL, light grey, light olive grey, occasionally medium greenish grey, argillaceous, calcareous, occasionally fossiliferous material, trace dark lithic specks, soft to very soft, sub-blocky to amorphous.	Nil gas

Depth	%	Lithology	Gas
270 (1.5)	100	MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, very soft to soft, blocky to amorphous.	Nil gas
280 (1.3)	100	MARL, a. a.	Nil gas
290 (2.1)	100	MARL, a. a.	Nil gas
300 (2.1)	100	MARL, light to light olive grey, medium greenish grey, argillaceous, calcareous, trace lithics, very soft to soft, rare firm to moderately hard in part, blocky to sub-blocky, amorphous.	Nil gas
310 (1.8)	100	MARL, a. a.	Nil gas
320 (1.6)	100	MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro carbonaceous specks, very soft to soft, dispersive, slightly firm in part, blocky, amorphous.	Nil gas
330 (1.3)	100	MARL, a. a.	Nil gas
340 (1.1)	100	MARL, a. a.	Nil gas
350 (1.2)	100	MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro carbonaceous specks, very soft to soft, dispersive, slightly firm in part, blocky, amorphous.	Nil gas
360 (1.2)	100	MARL, a. a.	Nil gas
370 (0.9)	100	MARL, a. a.	Nil gas
380 (1.1)	100	MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro carbonaceous specks, very soft to soft, dispersive, slightly firm in part, blocky, amorphous.	Nil gas
390 (1.0)	100	MARL, a. a.	Nil gas
400 (1.3)	100	MARL, light grey, light olive grey, medium greenish grey, argillaceous, calcareous, locally commonly shell and coral fragments, trace black micro carbonaceous specks, very soft to soft, dispersive, slightly firm in part, blocky, amorphous.	Nil gas
410 (1.2)	100	MARL, a. a.	Nil gas
420 (1.3)	100	MARL, medium to dark grey, dark greenish grey in part, occasionally medium light grey, argillaceous, carbonaceous, occasionally shell fragments, trace coral and fossiliferous material, very soft to soft, sub-blocky to smor.	Nil gas
430 (1.3)	100	MARL, a. a.	Nil gas
440 (1.3)	100	MARL, a. a.	Nil gas
450 (1.3)	100	MARL, medium to dark grey, medium light grey in part, greenish grey in part, argillaceous, carbonaceous, commonly fossiliferous material, trace light brown lithics, very soft to soft, dispersive, sub-blocky to amorphous.	Nil gas
460 (1.3)	100	MARL, a. a.	Nil gas
470 (1.3)	100	MARL, medium to dark grey, light medium grey, greenish grey in part, commonly fossiliferous material, shell fragments, coral material, soft to occasionally moderately hard in part, sub-blocky to slightly sub-fissile, amorphous.	Nil gas
480 (1.3)	100	MARL, a. a.	Nil gas
490 (2.3)	100	MARL, a. a.	Nil gas
500 (1.2)	100	MARL, medium to dark grey, medium light grey, light to medium greenish grey in part, argillaceous, commonly to locally abundant fossiliferous material, trace crystalline LIMESTONE fragments, soft to firm, moderately hard in part, sub-blocky to occasionally sub-fissile, amorphous.	Nil gas

Depth	%	Lithology	Gas
510 (1.2)	100	MARL, a. a.	Nil gas
520 (1.2)	100	MARL, a. a.	Nil gas
530 (1.6)	100	MARL, a. a.	Nil gas
540 (1.5)	100	MARL, medium to dark grey, greenish grey, light grey in part, argillaceous, commonly to locally abundant fossiliferous material, trace brown lithics and specks, soft to firm, trace moderately hard in part, dominantly sub-blocky, slightly sub-fissile, amorphous.	Nil gas
550 (1.9)	100	MARL, a. a.	Nil gas
555 (1.0)	100	MARL, a. a.	Nil gas
560 (1.0)	100	MARL, MARL, medium to dark grey, light olive grey, argillaceous, slightly grading to SILTSTONE in part, very soft to soft, firm in part, trace shell and coral fragments. Sub-blocky to sub-fissile, amorphous.	Nil gas
565 (0.6)	100	MARL, a. a.	Nil gas
570 (1.0)	100	MARL, a. a.	Nil gas
575 (0.7)	100	MARL, a. a.	Nil gas
580 (0.8)	100	MARL, MARL, medium to dark grey, light olive grey, argillaceous, slightly grading to SILTSTONE in part, very soft to soft, firm in part, trace shell and coral fragments. Sub-blocky to sub-fissile, amorphous.	Nil gas
585 (0.6)	100	MARL, a. a.	Nil gas
590 (0.8)	100	MARL, a. a.	Nil gas
595 (0.6)	50 50	SILTSTONE, pale to medium grey, greyish green, slightly medium to dark grey in part, argillaceous, trace arenaceous in part, very calcareous, soft to firm, sub-blocky to sub-fissile, amorphous in part. MARL, a. a.	Nil gas
600 (1.0)	60 40	SILTSTONE, a. a. LIMESTONE, orange, dark yellowish orange, greyish orange, off white, micritic to lutitic, very calcareous, argillaceous, fossiliferous, microcrystalline, firm to very hard, predominantly moderately hard, soft in part.	Nil gas
605 (0.8)	20 80	SILTSTONE, pale olive, light to medium grey, light olive grey argillaceous, trace arenaceous, calcareous, dispersive to firm, predominantly soft, blocky to amorphous. LIMESTONE, orange to red, moderately reddish brown, reddish orange, off white, micritic, slightly sparitic, argillaceous, crystalline, soft to hard, predominantly moderately hard.	Nil gas
610 (0.8)	10 90	SILTSTONE, a. a. LIMESTONE, a. a.	Nil gas
615 (0.8)	20 80	SILTSTONE, a. a. LIMESTONE, a. a.	Nil gas
620 (0.7)	25 60 15	SILTSTONE, a. a. MARL, pale brown, greyish brown, slightly pale pale olive grey, argillaceous, calcareous, dispersive to soft, minor firm in part, blocky to amorphous. LIMESTONE, a. a.	Nil gas
625 (0.7)	40 50 10	SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
630 (0.7)	50 50	SILTSTONE, a. a. MARL, light grey, medium dark grey, olive grey, argillaceous, dispersive to very soft, moderately firm in part, sub-blocky to amorphous.	Nil gas

Depth	%	Lithology	Gas
635 (0.6)	5 65 20 10	SANDSTONE, translucent, opaque brown, off white, clear, slightly opaque orange in part, fine to medium, moderately well sorted, sub-angular to sub-rounded, moderately strong to strong calcareous cement, trace brown argillaceous matrix, minor pyrite nodules, unconsolidated, loose, poor to fair inferred and visual porosity, no fluorescence. SILTSTONE, pale orange to medium dark orange, pale olive grey, light to medium dark grey, argillaceous, arenaceous, very calcareous, soft to firm, moderately hard in part, sub-blocky to sub-fissile, amorphous. MARL, a. a. LIMESTONE, a. a.	Nil gas
640 (0.6)	20 80 Tr	SANDSTONE, translucent, opaque brown, off white, clear, slightly opaque orange in part, fine to medium, moderately well sorted, sub-angular to sub-rounded, moderately strong to strong calcareous cement, trace brown argillaceous matrix, minor pyrite nodules, unconsolidated, loose, poor to fair inferred and visual porosity, no fluorescence. SILTSTONE, medium grey, medium brownish grey, light brown in part, argillaceous, slightly arenaceous, calcareous, minor black lithics, soft to occasionally firm, blocky to amorphous. LIMESTONE,	Nil gas
645 (0.7)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
650 (0.7)	80 20	SANDSTONE, translucent, pale brown, greyish brown, frosted, rare milky in part, medium to coarse, commonly very coarse, minor fine, moderately well sorted, predominantly loose, poor inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
655 (0.6)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
660 (0.6)	90 10	SANDSTONE, translucent, opaque brown, slightly frosted, dominantly coarse to very coarse, minor medium grains, sub-rounded to sub-angular, weak calcareous and siliceous cement, minor brown argillaceous matrix, loose and predominantly clean, unconsolidated in part, fair to good porosity, no fluorescence. SILTSTONE, light to medium greyish brown, argillaceous, minor arenaceous, soft to firm, dispersive in part, blocky to amorphous.	Nil gas
665 (0.7)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
670 (0.5)	90 10	SANDSTONE, a. a. SILTSTONE, light to medium greyish brown, argillaceous, minor arenaceous, soft to firm, dispersive in part, blocky to amorphous.	Nil gas
675 (0.6)	100 Tr	SANDSTONE, translucent, opaque pale brown, coarse to very coarse, minor medium grains, sub-rounded to sub-angular, weak calcareous and siliceous cement, minor brown argillaceous matrix, loose and predominantly clean, fair to locally good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
680 (0.5)	100 Tr	SANDSTONE, clear to translucent, pale brown, occasionally pale grey, coarse to very coarse, minor medium, moderately well sorted, sub-rounded to sub-angular, weak calcareous and siliceous cement, minor brown argillaceous matrix, loose and predominantly clean, fair to locally good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
685 (0.6)	100 Tr	SANDSTONE, translucent, opaque, opaque brown, opaque grey, dominantly coarse to very coarse, medium in part, moderately well sorted, sub-rounded to round in part, minor sub-angular, weak to locally moderately calcareous cement, trace siliceous cement, minor brown argillaceous matrix, dominantly loose and clean, fair to good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
690 (0.8)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
695 (0.5)	95 5	SANDSTONE, translucent, clear, pale brown, occasionally pale white to off white, medium to coarse grains, minor fine, sub-angular to sub-rounded, siliceous matrix, loose and predominantly clean, moderately hard to very hard, fine to poor inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
700 (0.6)	95 5	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
705 (0.5)	100 Tr	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
710 (0.6)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
715 (0.7)	90 Tr 10	SANDSTONE, translucent to transparent, slightly frosted, light grey to grey, occasionally pale white to off white, clear, medium to coarse, occasionally fine grains, sub-angular to sub-rounded, slightly and weak calcareous cement, slightly matrix, loose and predominantly clean, moderately hard to very hard, fine to poor inferred porosity, no fluorescence. SILTSTONE, a. a. LIMESTONE, milky white to dusky white, lutitic, oolitic, microcrystalline, soft to very soft.	Nil gas
720 (0.9)	80 Tr 20	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	Nil gas
725 (1.0)	80 20	SANDSTONE, a. a. LIMESTONE, a. a.	Nil gas
730 (1.2)	50 30 10 10	SANDSTONE, translucent to clear, pale brown, occasionally pale white to off white, occasionally clear orange, predominantly medium to coarse grains, occasionally fine, siliceous cement, moderately calcareous arenaceous matrix, loose and predominantly clean, moderately hard to very hard, fair to p inferred porosity, no fluorescence. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
735 (1.4)	60 40	SANDSTONE, a. a. LIMESTONE, milky white to dusky white, lutitic, oolitic, microcrystalline, soft to very soft.	Nil gas
740 (1.2)	40 60	SANDSTONE, a. a. MARL, light grey, medium dark grey, olive grey, argillaceous, dispersive to very soft, moderately firm in part, sub-blocky to amorphous.	Nil gas
745 (1.9)	20 40 30 10	SANDSTONE, a. a. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
750 (1.7)	30 40 30 10	SANDSTONE, a. a. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
755 (1.3)	30 40 30 10	SANDSTONE, a. a. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
760 (1.5)	30 40 30 10	SANDSTONE, a. a. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
765 (1.0)	80 20 10 Tr	SANDSTONE, translucent to clear, occasionally opaque to moderately brown, dominantly medium to coarse, occasionally fine, moderately siliceous cement, locally strong calcareous cement, trace argillaceous matrix, dominantly loose and clean, quartz overgrowths with Fe staining, fair inferred porosity, no fluorescence. SILTSTONE, a. a. MARL, a. a. LIMESTONE, a. a.	Nil gas
770 (0.9)	100 Tr	SANDSTONE, translucent to clear, occasionally opaque to moderately brown, dominantly medium to coarse, occasionally fine, moderately siliceous cement, locally strong calcareous cement, trace argillaceous matrix, dominantly loose and clean, quartz overgrowths with Fe staining, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
775 (1.2)	100 Tr	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
780 (0.6)	100 Tr	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
785 (0.5)	80 20	SANDSTONE, translucent to clear, opaque to pale yellowish brown, occasionally milky, minor dark brown grains, dominantly coarse to very coarse, commonly medium, occasionally fine, very poor sorted, round to sub-rounded, occasionally sub-angular, commonly siliceous cement, occasionally locally very strong calcareous cement, rare very strong pyrite cement, trace pale grey argillaceous matrix, commonly disseminated pyrite, trace glauconite, dominantly loose to unconsolidated, clean, occasionally hard to very hard aggregates, nil visual and fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
790 (0.6)	70 30	SANDSTONE, a. a. SILTSTONE, dark greyish brown to greyish olive, occasionally blackish grey, argillaceous, slightly calcareous, commonly black and green lithics, trace disseminated pyrite, dominantly soft, dispersive in part, sub-blocky to amorphous.	Nil gas
795 (0.8)	40 60	SANDSTONE, translucent to clear, opaque to pale yellowish brown, occasionally milky, minor dark brown grains, dominantly coarse to very coarse, commonly medium, occasionally fine, very poor sorted, round to sub-rounded, occasionally sub-angular, commonly siliceous cement, occasionally locally very strong calcareous cement, rare very strong pyrite cement, trace pale grey argillaceous matrix, commonly disseminated pyrite, trace glauconite, dominantly loose to unconsolidated, clean, occasionally hard to very hard aggregates, nil visual and fair inferred porosity, no fluorescence. SILTSTONE, dark greyish brown to greyish black, occasionally pale yellowish brown, dominantly argillaceous, trace calcareous, minor disseminated pyrite, trace green and black lithics, soft to dispersive, sub-blocky to amorphous.	Nil gas
800 (0.7)	10 90	SANDSTONE, a. a. SILTSTONE, dark greyish brown, greyish black in part, occasionally pale greyish green, argillaceous, trace calcareous, occasionally nodular and disseminated pyrite, green lithics, soft to dispersive, sub-blocky, amorphous in part.	Nil gas
805 (0.9)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
810 (1.0)	20 80	SANDSTONE, translucent to clear, opaque, fine to occasionally medium, moderately well sorted, sub-angular to sub-rounded, occasionally round, weak siliceous cement, dark brown argillaceous matrix, commonly loose, friable in part, poor visual and inferred porosity, no fluorescence. SILTSTONE, .a a.	Nil gas
815 (0.6)	10 90	SANDSTONE, a. a. SILTSTONE, dark greyish brown, dark brown in part, argillaceous, commonly nodular and disseminated pyrite, trace pyrite cement, trace carbonaceous specks and flakes, soft to dispersive, firm in part, sub-blocky.	Nil gas
820 (0.6)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
825 (0.5)	60 40	SANDSTONE, translucent to clear, milky to opaque, dominantly medium to coarse, rare very coarse and fine grains, poor sorted, sub-angular to sub-rounded, weak siliceous cement, trace pale brown to off white argillaceous matrix, dominantly clean and loose grains, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
830 (0.5)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
835 (0.5)	90 10	SANDSTONE, a. a. SILTSTONE, medium to dark brownish grey, dark brown in part, argillaceous, trace locally arenaceous, minor disseminated pyrite, trace micromicaceous, soft to dispersive, sub-blocky to amorphous.	Nil gas
840 (0.5)	80 20	SANDSTONE, translucent to clear, opaque to frosted, rare milky, trace very pale brown, fine to medium, commonly coarse, poor sorted, sub-angular to sub-rounded, weak siliceous cement, trace brown argillaceous matrix, trace pyrite nodules, mica, minor angular fracture quartz grains, generally loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
845 (0.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, moderately greyish brown, dusky brown in part, argillaceous, trace micromicaceous, disseminated pyrite, very soft to dominantly dispersive, amorphous, sub-blocky in part.	Nil gas

Depth	%	Lithology	Gas
850 (0.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
855 (1.6)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
860 (0.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, moderately brown to greyish brown, argillaceous, grading to CLAYSTONE in part, locally calcareous, commonly disseminated pyrite, very soft to dispersive, sub-blocky to predominantly amorphous.	Nil gas
865 (0.6)	90 10	SANDSTONE, translucent to clear, opaque, medium to coarse, occasionally fine grains, rare very coarse, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, rare nodular pyrite, trace orange lithics, generally loose and clean, fair to good inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
870 (0.6)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
875 (0.7)	20 80	SANDSTONE, a. a. SILTSTONE, moderately brown to greyish brown, dusky brown in part, argillaceous, grading to CLAYSTONE in part, trace micromicaceous, black lithic specks, dispersive, very soft in part, dominantly amorphous sub-blocky in part.	Nil gas
880 (0.7)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
885 (0.7)	10 90	SANDSTONE, a. a. SILTSTONE, a. a. – occasionally pale yellowish brown.	Nil gas
890 (0.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
895 (0.7)	10 90	SANDSTONE, translucent to clear, pale grey in part, dominantly fine to medium, trace coarse, moderately sorted, sub-angular to sub-rounded, weak to moderately locally calcareous cement, trace siliceous cement, no visual matrix, trace pyrite nodules, cream and black lithics, rare orange lithics, dominantly loose and clean, trace friable aggregates, poor visual and inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
900 (0.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
905 (0.6)	20 80	SANDSTONE, a. a. SILTSTONE, greyish brown, dusky brown, dark yellowish brown, argillaceous, commonly mica flakes, rare disseminated pyrite, very soft to dispersive, amorphous, rare sub-blocky.	Nil gas
910 (0.7)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
915 (0.5)	60 40	SANDSTONE, translucent to clear, opaque to frosted, rare very pale brown, dominantly medium to coarse, occasionally fine and very coarse grains, poor sorted sub-angular to sub-rounded, weak siliceous cement, minor locally strong to very strong pyrite cement, no visual matrix, dominantly loose and clean, occasionally moderately pyrite, rare mica flakes, trace orange and cream lithics, fair to good inferred and tight visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
920 (0.9)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
925 (1.3)	90 10	SANDSTONE, a. a. SILTSTONE, greyish brown, pale to dark yellowish brown, argillaceous, commonly disseminated pyrite, soft to dispersive, firm in part, sub-blocky to amorphous.	Nil gas
930 (0.7)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
935 (0.4)	60 40	SANDSTONE, translucent to clear, frosted to opaque, very pale yellow, medium to coarse, occasionally very coarse, fair fine, poor sorted, sub-angular to sub-rounded, weak siliceous cement, locally strong pyrite cement, trace pale brown argillaceous matrix, commonly nodular pyrite, trace orange lithics, generally loose and clean, fair to good inferred and very poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
940 (0.5)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
945 (0.4)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
950 (0.5)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
955 (0.5)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
960 (0.6)	20 80	SANDSTONE, a. a. SILTSTONE moderately brown to greyish brown, dusky brown in part, argillaceous, grading to CLAYSTONE in part, commonly disseminated pyrite micromicaceous, rare very soft to soft, predominantly amorphous, minor sub-blocky.	Nil gas
965 (0.7)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
970 (1.6)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
975 (0.6)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
980 (0.6)	20 80	SANDSTONE, translucent to clear, milky to opaque, dominantly medium to coarse grains, commonly fine, rare very coarse, sub-angular to sub-rounded, siliceous cement, pale yellowish brown argillaceous matrix, commonly nodular pyrite, loose, rare friable aggregates, poor visual and fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
985 (0.8)	80 20	SANDSTONE, a. a. SILTSTONE, pale to moderately yellowish brown, occasionally dusky brown, greyish brown in part, argillaceous, slightly calcareous, commonly disseminated pyrite, rare micromicaceous, minor black and dark brown lithics, dominantly soft to dispersive, occasionally locally hard, sub-blocky to blocky, commonly amorphous.	Nil gas
990 (0.7)	90 10	SANDSTONE, translucent to clear, milky to opaque, occasionally frosted, very pale yellow in part, dominantly coarse to very coarse, minor medium grains, poor to locally moderately sorted, sub-rounded to round, weak siliceous cement, no visual matrix, nodular pyrite, generally loose and clean, fair to good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
995 (0.7)	90 10	SANDSTONE, translucent to clear, pale brown, frosted to milky in part, pale yellow in part, dominantly coarse to very coarse, minor medium grains, poor to locally moderately sorted, sub-angular to round, sub-angular in part, weak siliceous cement, no visual matrix, nodular pyrite, generally loose and clean, fair to good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1000 (0.7)	95 5	SANDSTONE, a. a. – dominantly very coarse to coarse, minor medium moderately well sorted, no fluorescence. SILTSTONE, a. a.	Nil gas
1005 (0.4)	95 5	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1010 (0.7)	80 20	SANDSTONE, a. a. SILTSTONE, pale to medium yellowish brown, occasionally greyish brown, argillaceous, commonly lithics, trace disseminated pyrite, very soft to dispersive, firm in part, sub-blocky to amorphous.	Nil gas
1015 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1020 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1025 (2.2)	90 10	SANDSTONE, translucent to clear, opaque to frosted, dominantly medium to coarse, commonly very coarse, sub-angular to sub-rounded, rare angular, poor sorted, weak siliceous cement, no visual matrix, generally loose and clean, good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1030 (1.5)	80 20	SANDSTONE, a. a. SILTSTONE, pale to dark yellowish brown, brownish grey, argillaceous, commonly nodular and disseminated pyrite, trace black micro-laminations, predominantly soft to dispersive, locally firm to moderately hard, sub-blocky to blocky, commonly amorphous.	Nil gas
1035 (1.0)	95 5	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1040 ()1.1	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1045 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1050 (4.6)	60 40	SANDSTONE, translucent to opaque, light grey to pale brown, frosted, dominantly fine to medium, coarse in part, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, pre loose, moderately hard to very hard aggregates, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1055 (1.2)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1060 (1.8)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1065 (1.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1070 (2.3)	20 80	SANDSTONE, a. a. SILTSTONE, pale brownish grey, dark grey, greenish grey, argillaceous, grading to CLAYSTONE in part, commonly disseminated pyrite, dispersive to soft, predominantly sub-blocky to blocky, rare sub-fissile.	Nil gas
1075 (2.7)	15 85	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1080 (1.1)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1085 (1.5)	10 90	SANDSTONE, a. a. SILTSTONE, pale brownish grey to light olive grey, occasionally greenish grey, argillaceous, grading to CLAYSTONE in part, commonly disseminated pyrite, dispersive to soft, predominantly sub-blocky to sub-fissile, amorphous.	Nil gas
1090 (0.8)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1095 (1.6)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1100 (1.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1105 (1.3)	10 90	SANDSTONE, translucent to transparent, light grey to pale brown, frosted, dominantly medium grains, fine in part, moderately well sorted, sub-angular to sub-rounded, strong siliceous cement, no visual matrix, moderately hard to very hard aggregates, predominantly loose and clean, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, light brownish grey to dark grey, occasionally greenish grey, arenaceous, grading to CLAYSTONE in part, commonly disseminated pyrite, predominantly dispersive to soft, rare moderately hard to hard, sub-blocky to occasionally sub-fissile, amorph.	Nil gas
1110 (1.5)	50 50	SANDSTONE, translucent to transparent, minor opaque, occasionally pale yellow to light orange, dominantly medium, fine in part, moderately well sorted, predominantly sub-rounded, strong siliceous cement, no visual matrix, trace pyrite nodules, loose and clean, fair porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1115 (1.4)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1120 (1.3)	50 50	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1125 (1.1)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1130 (1.1)	40 60	SANDSTONE, a. a. SILTSTONE, medium grey to dark grey, brownish grey, light olive grey, arenaceous, trace pyrite nodules, commonly moderately hard to hard, friable, rare soft, predominantly sub-blocky, rare sub-fissile.	Nil gas
1135 (1.4)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1140 (1.5)	80 20	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1145 (1.3)	80 20	SANDSTONE, pale yellow, translucent, yellowish brown, slightly frosted, clear, medium to very coarse, minor fine, predominantly coarse grains, moderately poor sorted, sub-angular to sub-rounded, minor siliceous cement, trace to minor brown and trace white argillaceous matrix, loose, fair to locally good porosity, no fluorescence. SILTSTONE, medium to occasionally medium light grey, brownish grey, dark greenish grey, minor moderately yellowish brown, argillaceous, slightly arenaceous in part, soft to dispersive, firm to moderately hard, trace hard in part, sub-blocky to sub-fissile, minor amorphous.	Nil gas
1150 (1.4)	80 20	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1155 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1160 (1.1)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1165 (0.9)	95 5	SANDSTONE, pale yellowish grey, translucent to transparent, medium to coarse, fine in part, moderately well sorted, sub-angular to sub-rounded, moderately strong siliceous cement, no visual matrix, minor pyrite nodules, loose and clean, fair porosity, no fluorescence. SILTSTONE, medium grey to dark grey, dark greenish grey, predominantly arenaceous, minor argillaceous, minor disseminated pyrite, firm to moderately hard, very hard in part, sub-blocky to blocky, trace sub-fissile.	Nil gas
1170 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1175 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1180 (1.0)	90 10	SANDSTONE, pale yellowish grey. translucent, medium to fine, trace coarse grains, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, trace pyrite, loose and clean, trace moderately hard to hard, fair to good inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1185 (0.7)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1190 (0.9)	90 10	SANDSTONE, a. a. SILTSTONE, medium grey to dark grey, greenish grey, brownish grey, argillaceous, trace pyrite, soft to dispersive, sub-blocky to sub-fissile.	Nil gas
1195 (1.6)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1200 (1.0)	70 30	SANDSTONE, a. a. SILTSTONE, medium greenish grey to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, predominantly soft to dispersive, rare firm to moderately hard, trace sub-blocky, amorphous.	Nil gas
1205 (1.0)	10 90	SANDSTONE, a. a. SILTSTONE, medium greenish grey to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, predominantly soft to dispersive, rare firm to moderately hard, trace sub-blocky, amorphous.	Nil gas
1210 (2.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1215 (2.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1220 (1.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1225 (1.9)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1230 (1.0)	60 40	SANDSTONE, translucent to transparent, clear, trace pale orange, predominantly medium to fine, coarse grains in part, moderately well sorted, sub-angular to sub-rounded, strong siliceous cement, no visual matrix, rare pyrite, loose and clean, moderately hard to very hard in part, fair inferred porosity, no fluorescence. SILTSTONE, medium greenish grey to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, predominantly soft to dispersive, rare firm to moderately hard, sub-blocky to blocky, amorphous.	Nil gas
1235 (0.9)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1240 (0.8)	40 60	SANDSTONE, a. a. SILTSTONE, medium grey, medium to dark greenish grey, olive grey, brownish black, argillaceous, minor pyrite, trace carbonaceous specks, predominantly soft to dispersive, trace firm, sub-blocky to amorph.	Nil gas
1245 (1.1)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1250 (1.4)	40 60	SANDSTONE, clear to translucent, minor pale grey, minor frosted, yellowish brown in part, dominantly fine to medium, minor coarse grains, sub-rounded to sub-angular, sub-rounded to round coarse to very coarse grains, weak siliceous cement, pale grey argillaceous matrix, loose and clean, poor to fair inferred porosity, no fluorescence. SILTSTONE, medium light grey, light brownish grey, argillaceous, arenaceous in part, minor shell fragments, dispersive to very soft, minor soft to firm, sub-blocky blocky, amorphous.	Nil gas
1255 (1.3)	80 20	SANDSTONE, clear to translucent, frosted, pale grey in part, trace yellowish grey in part, very fine to medium minor coarse grains, dominantly fine, moderately well to locally well sorted, sub-angular to sub-rounded, trace angular very coarse grains, commonly muscovite flakes, loose and predominantly clean, poor porosity, no fluorescence. SILTSTONE, light to medium grey, slightly brownish grey, argillaceous, arenaceous, commonly grading to very fine SANDSTONE in part, commonly micromicaceous, soft to minor firm, commonly dispersive, blocky, trace sub-fissile in part, commonly amorphous.	Nil gas
1260 (1.4)	80 20	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1265 (1.8)	90 10	SANDSTONE, clear to translucent, opaque, slightly yellowish grey, pale grey in part, very fine to very coarse, dominantly medium, poor sorted, sub-angular to sub-rounded, occasionally angular very coarse fractured grains, weak siliceous cement, pale grey argillaceous matrix, minor disseminated and nodular pyrite, loose and predominantly clean, unconsolidated, poor to fair inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1270 (1.8)	80 20	SANDSTONE, translucent to transparent, clear, colourless, rare yellowish grey, predominantly medium r fine, coarse to very coarse in part, moderately well sorted, sub-angular to sub-rounded, strong siliceous cement, no visual matrix, trace carbonaceous specks, trace pyrite, loose, moderately hard to hard in part, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1275 (1.4)	90 10	SANDSTONE, translucent, frosted, minor clear, slightly yellowish grey, very fine to very coarse, dominantly medium to coarse, moderately sorted, sub-angular to sub-rounded, minor angular very coarse fracture grains, weak siliceous cement, rare off white argillaceous matrix, trace black and pinkish orange lithics, minor pyrite nodules, loose and clean, fair porosity, no fluorescence. SILTSTONE, pale grey, arenaceous, grading to very fine SANDSTONE, argillaceous, soft to locally firm, sub-blocky to blocky, amorphous.	Nil gas
1280 (1.1)	80 20	SANDSTONE, a. a. – predominantly medium, decreasing argillaceous very coarse grains, no fluorescence. SILTSTONE, light to medium grey, dark grey in part, arenaceous, grading to very fine SANDSTONE in part, minor argillaceous, micromicaceous, dispersive to locally firm, blocky to sub-blocky, amorphous.	Nil gas
1285 (1.2)	80 20	SANDSTONE, a. a. SILTSTONE, light to medium grey, brownish grey, arenaceous, grading to very fine SANDSTONE in part, argillaceous, dispersive to firm, predominantly soft, blocky to sub-blocky, amorphous.	Nil gas
1290 (2.6)	70 30	SANDSTONE, translucent, frosted, pale yellow, yellowish orange, pale grey, fine to very coarse, dominantly coarse, moderately sorted, sub-rounded to sub-angular, round very coarse grains, weak siliceous, rare pale grey argillaceous matrix, pyrite nodules, minor biotite flakes, predominantly loose, fair porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1295 (2.4)	85 15	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1300 (2.6)	95 5	SANDSTONE, clear to translucent, pale grey, pale yellow, fine to very coarse, pre medium to coarse, moderately sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, nodular pyrite, loose and clean, fair to good porosity, no fluorescence. SILTSTONE, light to occasionally dark grey, arenaceous, argillaceous in part, soft to firm, blocky to sub-blocky, amorphous.	Nil gas
1305 (1.9)	90 10	SANDSTONE, a. a. SILTSTONE, lr to medium grey, greyish brown, occasionally dark greyish brown, argillaceous, arenaceous in part, soft to minor firm in part, sub-blocky to blocky, amorphous.	Nil gas
1310 (1.5)	90 10	SANDSTONE, translucent to clear, colourless, trace pale yellowish brown, dominantly medium to fine grains, coarse to very coarse in part, moderately well sorted, weak siliceous cement, no visual matrix, trace pyrite, rare carbonaceous specks, loose and clean, occasionally hard to very hard aggregates, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1315 (1.5)	80 20	SANDSTONE, a. a. SILTSTONE, dark grey, greyish black, occasionally medium to dark grey, argillaceous, slightly calcareous, occasionally micromicaceous, minor disseminated pyrite, trace carbonaceous specks, dominantly very soft to soft, occasionally firm to moderately hard in part, sub-blocky to blocky, amorphous.	Nil gas
1320 (1.9)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1325 (1.2)	90 10	SANDSTONE, translucent to clear, frosted to opaque, medium to coarse, occasionally fine, rare very coarse grains, sub-angular to angular, occasionally sub-rounded, weak siliceous cement, trace dark grey to off white argillaceous matrix, occasionally carbonaceous specks and fragments, minor moderately pyrite, rare mica flakes, generally clean and loose, fair to good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1330 (1.4)	70 30	SANDSTONE, a. a. SILTSTONE, medium to dark grey, minor greyish black, dominantly argillaceous, commonly locally arenaceous, occasionally carbonaceous specks, minor disseminated pyrite, very soft to soft, sub-blocky to blocky, amorphous in part.	Nil gas
1335 (2.0)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1340 (1.4)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1345 (1.6)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1350 (1.2)	20 80	SANDSTONE, a. a. SILTSTONE, medium grey, medium to dark grey, argillaceous, arenaceous in part, occasionally micromicaceous, trace carbonaceous specks, trace glauconite, very soft to dispersive, amorphous to sub-blocky.	Nil gas
1355 (0.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1360 (1.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1365 (1.7)	100	SILTSTONE, a. a.	Nil gas
1370 (1.2)	100	SILTSTONE, a. a.	Nil gas
1375 (1.5)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1380 (1.3)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1385 (1.2)	90 10	SANDSTONE, translucent to clear, frosted, opaque to milky in part, medium to coarse, commonly very coarse, occasionally fine, a to sub-rounded, occasionally angular, trace weak siliceous cement, trace nodular pyrite, carbonaceous fragments, loose and clean, fair to good porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1390 (1.0)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1395 (1.3)	30 70	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish brown, argillaceous, minor to locally commonly carbonaceous specks, occasionally disseminated pyrite, trace glauconite, soft, dispersive in part, blocky to amorphous.	Nil gas
1400 (1.9)	30 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1405 (2.0)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1410 (1.5)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1415 (1.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1420 (1.4)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1425 (1.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1430 (2.2)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1435 (1.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to dark grey, brownish grey, dark greenish grey, argillaceous, arenaceous in part, commonly nodular and disseminated pyrite, occasionally glauconite, carbonaceous specks, soft to firm, occasionally dispersive, sub-blocky to blocky, amorphous.	Nil gas
1440 (2.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1445 (2.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1450 (2.3)	Tr 100	SANDSTONE, translucent to clear, frosted, off white to very pale grey, very fine to coarse, dominantly medium to coarse, poor sorted, sub-angular to sub-rounded, weak siliceous cement, commonly locally pale grey to brown argillaceous matrix, occasionally nodular pyrite, glauconite, minor carbonaceous specks and fragments, dominantly loose and clean, locally friable to moderately hard aggregates, poor visual and fair inferred porosity, no fluorescence. SILTSTONE, medium to dark grey, brownish grey, dark greenish grey, argillaceous, arenaceous in part, commonly nodular and disseminated pyrite, occasionally glauconite, carbonaceous specks, soft to firm, occasionally dispersive, sub-blocky to blocky, amorphous.	Nil gas
1455 (1.4)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1460 (1.5)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1465 (1.1)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1470 (1.1)	60 40	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish black, dark greenish grey, dominantly argillaceous, arenaceous in part, commonly disseminated pyrite, occasionally micromicaceous, nodular pyrite, soft to firm, sub-blocky to blocky.	Nil gas
1475 (1.0)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1480 (1.0)	50 50	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1485 (1.3)	80 20	SANDSTONE, translucent to clear, frosted, very pale grey, fine to medium, occasionally coarse to very coarse, moderately sorted, sub-angular to sub-rounded, locally weak to moderately siliceous cement, locally pale grey argillaceous matrix, grading to arenaceous SILTSTONE in part, minor to commonly nodular pyrite, occasionally mica flakes, carbonaceous fragments, predominantly loose and clean grains, rare moderately hard aggregates, poor visual and fair to good inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1490 (1.1)	90 10	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1495 (1.2)	90 10	SANDSTONE, translucent to clear, frosted to opaque, dominantly fine to medium, rare coarse to very coarse grains, moderately well sorted, sub-angular to sub-rounded, trace siliceous cement, rare white to off white argillaceous matrix, trace nodular pyrite, carbonaceous grags, predominantly loose and clean, moderately hard aggregates, fair to inferred and poor to fair visual porosity, no fluorescence SILTSTONE, a. a.	Nil gas
1500 (1.1)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1505 (7.9)	40 60	SANDSTONE, a. a. SILTSTONE, medium to dark brown, brownish grey, occasionally light grey, dominantly argillaceous, commonly arenaceous in part, slightly calcareous, grading to very fine SANDSTONE in part, commonly disseminated pyrite, occasionally glauconite, dominantly firm to moderately hard, sub-blocky to blocky.	Nil gas
1510 (1.5)	60 40	SANDSTONE, translucent to clear, frosted, fine to medium, occasionally coarse, moderately sorted, sub-angular to sub-rounded, trace weak calcareous cement, weak to moderately locally siliceous cement, trace pale brown to grey argillaceous matrix, commonly disseminated pyrite, occasionally carbonaceous specks and fragments, trace pale yellow lithics, dominantly loose and clean, occasionally moderately hard to hard aggregates, poor visual and fine to poor inferred porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1515 (6.4)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1520 (1.6)	70 30	SANDSTONE, a. a. SILTSTONE, light to medium grey, dark grey, greyish black, arenaceous, commonly argillaceous, micromicaceous, commonly disseminated pyrite, trace calcareous material, dominantly firm to moderately hard, soft in part, sub-blocky to blocky.	Nil gas
1525 (1.6)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1530 (1.6)	70 30	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1535 (1.6)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1540 (1.6)	20 80	SANDSTONE, a. a. SILTSTONE, medium grey to dark grey, greyish black, arenaceous, trace argillaceous, dominantly soft to moderately hard, rare firm, sub-blocky y blocky.	Nil gas
1545 (2.4)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1550 (3.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1555 (3.1)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1560 (1.6)	40 60	SANDSTONE, translucent, clear, trace pale yellow, frosted, predominantly medium to coarse grains, minor fine, moderately well sorted, predominantly sub-rounded, trace sub-angular, weak siliceous cement, no visual porosity, trace disseminated pyrite, commonly carbonaceous specks, rare mica, loose and clean, hard to very hard aggregates, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1565 (1.1)	40 60	SANDSTONE, translucent to transparent, clear, colourless, frosted, predominantly medium to fine, minor coarse grains, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, trace pyrite nodules, commonly carbonaceous specks, rare mica loose and clean, hard to very hard, fine inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1570 (1.5)	50 50	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1575 (1.6)	50 50	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1580 (1.1)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas

Depth	%	Lithology	Gas
1585 (1.5)	60 40	SANDSTONE, translucent, clear, frosted, predominantly medium to fine, minor coarse grains, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, trace pyrite nodules, commonly carbonaceous specks, loose and clean, hard to very hard aggregates, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, medium grey to dark grey, dark olive grey, greyish black, arenaceous, trace pyrite, trace carbonaceous specks, soft to firm, moderately hard in part, predominantly sub-blocky, sub-fissile to fissile in part, amorphous.	Nil gas
1590 (1.5)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1595 (0.9)	60 40	SANDSTONE, translucent, clear, frosted, trace pale yellow, medium to coarse, fine grains in part, moderately well sorted, sub-angular to sub-rounded, predominantly sub-rounded, weak siliceous cement, no visual porosity, trace pyrite nodules, commonly carbonaceous specks, loose and clean, hard to very hard, fair inferred and pt visual porosity, no fluorescence. SILTSTONE, medium to dark grey to dark grey, arenaceous, firm to moderately hard in part, very hard, trace pyrite, sub-blocky to sub-fissile, amorphous.	Nil gas
1600 (3.5)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1605 (1.6)	20 80	SANDSTONE, translucent, clear, frosted, predominantly medium to coarse, minor fine, moderately well sorted, sub-rounded to sub-angular, weak siliceous cement, no visual matrix, trace carbonaceous specks, loose and clean, moderately hard to very hard, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, predominantly medium grey to dark grey, greyish black, minor light grey, arenaceous, minor argillaceous, commonly carbonaceous specks, trace pyrite, predominantly firm to moderately hard, locally soft to dispersive, sub-blocky to sub-fissile.	Nil gas
1610 (1.0)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1615 (1.3)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1620 (1.1)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1625 (1.1)	70 30	SANDSTONE, translucent, clear, rare pale yellowish white, predominantly medium, fine in part, moderately well sorted, sub-rounded to sub-angular, weak siliceous cement, no visual matrix, trace pyrite nodules, minor carbonaceous specks, loose and clean, moderately hard to very hard, fair inferred and poor visual porosity, no fluorescence. SILTSTONE, a. a.	Nil gas
1630 (1.0)	80 20	SANDSTONE, a. a. SILTSTONE, a. a.	Nil gas
1635 (1.0)	30 70	SANDSTONE, frosted, translucent, minor clear, milky in part, very coarse to coarse, minor medium, trace fine grains, moderately well sorted, sub-angular to sub-rounded, angular very coarse fractured grains, trace calcareous and siliceous cement, rare grey argillaceous matrix, disseminated and nodular pyrite, loose and clean, fair to good, lo poor porosity, no fluorescence. SILTSTONE, light grey, light brownish grey, moderately grey in part, predominantly arenaceous, occasionally argillaceous, micromicaceous, commonly black carbonaceous specks and micro-laminations, soft to firm, minor moderately hard, sub-blocky to sub-fissile, minor amorphous.	1 (95,5,0,0,0)
1640 (1.4)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	1 (93,7,0,0,0)

Depth	%	Lithology	Gas
1645 (1.5)	30 70	SANDSTONE, frosted, translucent, minor clear, milky in part, very coarse to coarse, trace medium, increasing fine and very fine grains, moderately well sorted, sub-angular to sub-rounded, commonly angular very coarse fractured grains, occasionally grading to arenaceous SILTSTONE in part, trace to locally moderately calcareous cement, minor siliceous cement, white to off white argillaceous matrix, increasing nodular and disseminated pyrite, carbonaceous specks, loose coarse and very coarse grains, firm to moderately hard very fine to fine grain aggregates, fair to good inferred and poor visual porosity, no fluorescence. SILTSTONE, light brownish grey, slightly light olive grey, medium grey, occasionally black grey in part, argillaceous, dominantly arenaceous, commonly grading to very fine SANDSTONE, commonly carbonaceous specks and micro-laminations, firm to moderately hard, sub-blocky to sub-fissile.	1 (96,4,0,0,0)
1650 ***Spot***	Tr 100	SANDSTONE, a. a. SILTSTONE, 1) wt to very light grey, very argillaceous, calcareous, minor carbonaceous specks, dispersive to very soft. 2) medium light to dark grey, minor argillaceous, dominantly arenaceous, grading to very fine SANDSTONE in part, friable to occasionally moderately hard, sub-blocky to sub-fissile, occasionally fissile in part.	
1650 (1.3)	30 70	SANDSTONE, frosted, clear to translucent, milky in part, commonly very coarse to coarse, very fine to medium, poor to locally moderately sorted, abundant angular very coarse fractured grains, sub-angular to sub-rounded, weak to locally strong calcareous cement, white to off white argillaceous matrix, trace disseminated and nodular pyrite, trace carbonaceous specks, loose and clean coarse to very coarse grains, firm to moderately hard aggregates, good inferred and poor to fair visual porosity, no fluorescence. SILTSTONE, medium light grey to dark grey, white to very pale grey, argillaceous, arenaceous in part, firm to moderately hard, very soft to dispersive, sub-blocky to sub-fissile, amorphous in part.	1 (90,10,0,0,0)
1655 (7.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, 1) wt to very light grey, very argillaceous, calcareous, minor carbonaceous specks, dispersive to very soft. 2) medium light to dark grey, minor argillaceous, dominantly arenaceous, grading to very fine SANDSTONE in part, friable to occasionally moderately hard, sub-blocky to sub-fissile, occasionally fissile in part.	1 (100,0,0,0,0)
1660 (1.5)	Tr 100	SANDSTONE, clear to translucent, frosted, very fine to fine, rare medium to coarse grains, well sorted, sub-angular to sub-rounded, weak to moderately calcareous cement, white to very pale grey argillaceous matrix, loose and clean, poor porosity, no fluorescence. SILTSTONE, dominantly white to very pale grey, medium to medium dark grey i/.p, argillaceous, arenaceous in part, trace micrp carbonaceous specks, dispersive to firm in part, amorphous to blocky, minor sub-blocky to sub-fissile.	0 (91,9,0,0,0)
1665 (1.8)	100	SILTSTONE, medium grey to light brownish grey, decreasing white to very pale grey, greenish grey, trace dark grey, argillaceous, trace arenaceous, micro carbonaceous specks, dominantly dispersive, very soft to soft, locally firm to moderately hard in part, amorphous, sub-blocky to sub-fissile in part.	0 (79,21,0,0,0)
1670 (3.0)	10 90	SANDSTONE, a. a. SILTSTONE, a. a. – increasing slightly light brownish grey to greyish green.	1 (99,1,0,0,0)
1675 (3.5)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	0 (94,6,0,0,0)
1680 (1.7)	30 70	SANDSTONE, a. a. SILTSTONE, predominantly light grey to light greenish grey, yellowish off white, light grey to medium grey in part, argillaceous, arenaceous in part, abundant carbonaceous specks, dispersive to soft, rare soft to firm, sub-blocky to blocky, amorphous.	0 (89,11,0,0,0)
1685 (1.5)	60 40	SANDSTONE, clear, translucent, rare pale orange to pale yellow, generally medium to fine, rare coarse grains in part, moderately well sorted, sub-angular to sub-rounded, trace very well rounded, weak siliceous cement, no visual matrix, trace argillaceous matrix, commonly carbonaceous specks, loose and unconsolidated, moderately hard to very hard, fair to good inferred and fair visual porosity, no fluorescence. SILTSTONE, a. a.	1 (90,10,0,0,0)
1690 (3.3)	60 40	SANDSTONE, a. a. SILTSTONE, a. a.	1 (98,2,0,0,0)

Depth	%	Lithology	Gas
1695 (5.3)	30 70	SANDSTONE, a. a. – minor pyrite nodules, no fluorescence. SILTSTONE, 1) white to very pale grey, very argillaceous, slightly to moderately calcareous, dispersive to very soft, amorphous. 2)medium to light grey, slightly greenish grey, minor medium blue grey, dominantly argillaceous, minor arenaceous, minor carbonaceous specks, soft to trace firm in part, blocky to sub-blocky, dominantly amorphous.	2 (99,1,0,0,0)
1700 (1.8)	60 40	SANDSTONE, frosted, translucent to clear, colourless, occasionally milky, trace very pale grey, medium to very coarse, predominantly medium to coarse, moderately sorted, predominantly sub-angular, commonly angular very coarse fractured grains, sub-rounded in part, weak calcareous and siliceous cement, trace off white to very pale grey argillaceous matrix, mica flakes, loose and predominantly clean, poor to locally fair porosity, no fluorescence. SILTSTONE, medium light to medium grey, slightly brownish grey, argillaceous, arenaceous in part, abundant mica flakes, minor carbonaceous specks and laminations, soft to minor firm, sub-blocky to minor sub-fissile, predominantly blocky, amorphous.	3 (95,5,0,0,0)
1705 (2.3)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	2 (95,5,0,0,0)
1710 (2.6)	15 85	SANDSTONE, a. a. SILTSTONE, light grey to greyish black, light brownish grey, white to colourless, argillaceous, commonly carbonaceous specks, generally very soft to dispersive, rare firm, sub-blocky to sub-fissile, amorphous.	2 (97,3,0,0,0)
1715 (2.4)	15 85	SANDSTONE, a. a. SILTSTONE, a. a.	2 (95,5,0,0,0)
1720 (5.2)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	2 (94,6,0,0,0)
1725 (3.5)	10 90	SANDSTONE, clear, translucent, light grey to colourless, predominantly medium to fine, rare coarse grains, predominantly sub-angular, minor sub-rounded, weak siliceous cement, no visual matrix, trace pyrite nodules, trace carbonaceous specks, loose grains, hard to very hard aggregates, fair inferred and poor to fair visual porosity, no fluorescence. SILTSTONE, a. a.	3 (93,7,0,0,0)
1730 (2.5)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	3 (95,5,0,0,0)
1735 (2.7)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	3 (94,6,0,0,0)
1740 (3.1)	30 70	SANDSTONE, a. a. SILTSTONE, medium to dark grey, light grey, arenaceous, argillaceous in part, occasionally carbonaceous specks and flakes, minor disseminated pyrite, soft to dispersive, blocky to amorphous.	2 (96,4,0,0,0)
1745 (7.0)	30 70	SANDSTONE, translucent to clear, white to pale grey, very fine to fine, well sorted, minor to weak calcareous cement, abundant kaolinitic matrix, minor light brown lithics, trace carbonaceous material, nodular pyrite, friable poor visual porosity, no fluorescence. SILTSTONE, a. a.	3 (97,3,0,0,0)
1750 (3.1)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	2 (96,4,0,0,0)
1755 (3.9)	20 80	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish brown, light grey, argillaceous, minor arenaceous, minor glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous.	1 (100,0,0,0,0)
1760 (4.5)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	1 (98,2,0,0,0)
1765 (2.5)	20 80	SANDSTONE, translucent to clear, white to off white, very pale grey, very fine to fine, trace medium, moderately well sorted, sub-angular to sub-rounded, locally abundant pale grey to brown argillaceous matrix, trace kaolinitic matrix, grading to arenaceous SILTSTONE in part, trace glauconite, carbonaceous specks, dominantly friable, rare moderately hard in part, poor visual porosity, no fluorescence. SILTSTONE, a. a.	3 (96,4,0,0,0)
1770 (2.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	3 (96,4,0,0,0)
1775 (2.8)	30 70	SANDSTONE, a. a. – increasing glauconite and carbonaceous material, no fluorescence. SILTSTONE, a. a.	3 (97,3,0,0,0)

Depth	%	Lithology	Gas
1780 (3.3)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	3 (97,3,0,0,0)
1785 (2.2)	10 90	SANDSTONE, translucent to clear, off white to very pale grey, very fine to fine, well sorted, sub-angular to sub-rounded, trace weak calcareous cement, commonly to locally abundant pale grey to off white argillaceous matrix, trace locally kaolinitic matrix, occasionally carbonaceous specks, rare nodular pyrite, trace glauconite, dominantly friable, unconsolidated in part, poor porosity, no fluorescence. SILTSTONE, a. a.	4 (97,3,0,0,0)
1790 (2.7)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	2 (96,4,0,0,0)
1795 (2.5)	20 80	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish brown, light grey, argillaceous, minor arenaceous, minor glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous.	1 (96,4,0,0,0)
1800 (2.7)	20 80	SANDSTONE, translucent to clear, pale grey to off white, very fine to fine, well sorted, trace weak calcareous cement, abundant white to off white argillaceous matrix, rare carbonaceous specks, trace nodular pyrite, friable, poor visual porosity, no fluorescence. SILTSTONE, a. a.	3 (96,4,0,0,0)
1803 (3.2)	30 70	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish brown, light grey, argillaceous, minor arenaceous, minor glauconite, micromicaceous, trace carbonaceous specks, very soft to dispersive, dominantly amorphous.	2 (97,3,0,0,0)
1806 (2.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	2 (97,3,0,0,0)
1809 (2.7)	30 70	SANDSTONE, a. a. SILTSTONE, medium grey to brownish grey, light grey, argillaceous, commonly arenaceous, occasionally carbonaceous specks, soft to dispersive, soft to dispersive, sub-blocky, amorphous.	2 (99,1,0,0,0)
1812 (2.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	2 (98,2,0,0,0)
1815 (2.5)	10 90	SANDSTONE, translucent to clear, pale grey to off white, very fine to fine, well sorted, trace weak calcareous cement, abundant white to off white argillaceous matrix, rare carbonaceous specks, trace nodular pyrite, friable, poor visual porosity, no fluorescence. SILTSTONE, a. a.	1 (98,2,0,0,0)
1818 (2.9)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	2 (99,1,0,0,0)
1821 (2.9)	20 80	SANDSTONE, translucent to clear, pale grey to brown, off white, very fine to fine, well sorted, trace siliceous cement, abundant white to off white argillaceous matrix, grading to arenaceous SILTSTONE in part, minor to commonly carbonaceous specks and micro-laminations, trace dark green lithics, friable, poor porosity, no fluorescence. SILTSTONE, a. a.	2 (99,1,0,0,0)
1824 (5.0)	20 80	SANDSTONE, a. a. SILTSTONE, medium grey to brownish grey, light grey, argillaceous, commonly arenaceous, occasionally carbonaceous specks, soft to dispersive, soft to dispersive, sub-blocky, amorphous.	2 (100,0,0,0,0)
1827 (3.8)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	3 (99,1,0,0,0)
1830 (1.6)	20 80	SANDSTONE, a. a. SILTSTONE, medium grey to brownish grey, light grey, argillaceous, commonly arenaceous, occasionally carbonaceous specks, soft to dispersive, soft to dispersive, sub-blocky, amorphous.	4 (99,1,0,0,0)
1833 (1.8)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	3 (99,1,0,0,0)
1836 (1.6)	10 90	SANDSTONE, a. a. SILTSTONE, light to medium brownish grey, medium grey, argillaceous, occasionally arenaceous, grading to very fine SANDSTONE in part, commonly carbonaceous specks, occasionally mica, trace dark green lithics, very soft to dispersive, sub-blocky to blocky, amorphous.	3 (99,1,0,0,0)
1839 (1.4)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	3 (99,1,0,0,0)
1842 (7.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	3 (100,0,0,0,0)

Depth	%	Lithology	Gas
1845 (1.2)	5 95	SANDSTONE, a. a. – slightly calcareous, trace micromicaceous, no fluorescence. SILTSTONE, light to medium brownish grey, medium grey, argillaceous, occasionally arenaceous, grading to very fine SANDSTONE in part, commonly carbonaceous specks, occasionally mica, trace dark green lithics, very soft to dispersive, sub-blocky to blocky, amorphous.	3 (99,1,0,0,0)
1848 (1.8)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	4 (99,1,0,0,0)
1851 (2.1)	20 80	SANDSTONE, a. a. SILTSTONE, light to medium brownish grey, medium grey, argillaceous, occasionally arenaceous, grading to very fine SANDSTONE in part, commonly carbonaceous specks, occasionally mica, trace dark green lithics, very soft to dispersive, sub-blocky to blocky, amorphous.	3 (99,1,0,0,0)
1854 (2.1)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	3 (99,1,0,0,0)
1857 (2.0)	20 70	SANDSTONE, a. a. SILTSTONE, a. a.	5 (98,2,0,0,0)
1860 (2.7)	10 90	SANDSTONE, a. a. SILTSTONE, medium to dark grey, light to medium greyish brown, argillaceous, commonly arenaceous, commonly carbonaceous specks, trace micromicaceous, dominantly very soft to firm, occasionally locally firm to moderately hard, sub-blocky to blocky, amorphous.	3 (99,1,0,0,0)
1863 (2.6)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	3 (99,1,0,0,0)
1866 (2.2)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	3 (98,2,0,0,0)
1869 (2.6)	100	SILTSTONE, dominantly medium to dark grey, occasionally light to medium grey, argillaceous, trace arenaceous, occasionally carbonaceous specks, disseminated pyrite, trace calcareous material, soft to firm, rare moderately hard in part, sub-blocky to sub-fissile.	4 (98,2,0,0,0)
1872 (2.0)	100	SILTSTONE, a. a.	4 (98,2,0,0,0)
1875 (1.6)	100	SILTSTONE, a. a. – medium to dark grey, light to medium brownish grey.	3 (98,2,0,0,0)
1878 (2.0)	100	SILTSTONE, a. a.	3 (98,2,0,0,0)
1881 (2.0)	100	SILTSTONE, a. a. – medium to dark grey, brownish grey.	3 (98,2,0,0,0)
1884 (2.3)	100	SILTSTONE, a. a.	3 (99,1,0,0,0)
1887 (2.2)	100	SILTSTONE, light grey to medium grey, medium dark grey, dominantly arenaceous, minor argillaceous, grading to very fine SANDSTONE in part, commonly disseminated pyrite, soft to firm, dispersive in part, sub-blocky to sub-fissile.	3 (98,2,0,0,0)
1890 (2.1)	100	SILTSTONE, a. a.	3 (98,2,0,0,0)
1893 (1.8)	100	SILTSTONE, a. a.	3 (98,2,0,0,0)
1896 (1.8)	100	SILTSTONE, a. a.	3 (97,3,0,0,0)
1899 (2.1)	100	SILTSTONE, dominantly light grey to medium grey, trace medium dark grey, dominantly arenaceous, minor argillaceous, grading to very fine SANDSTONE in part, commonly disseminated pyrite, commonly carbonaceous specks, dominantly soft to moderately firm, trace dispersive, sub-blocky to sub-fissile.	3 (97,3,0,0,0)
1902 (2.9)	100	SILTSTONE, a. a.	3 (98,2,0,0,0)
1905 (2.0)	100	SILTSTONE, a. a.	4 (98,2,0,0,0)
1908 (2.0)	100	SILTSTONE, a. a.	4 (98,2,0,0,0)
1911 (1.7)	100	SILTSTONE, brownish grey, medium grey, minor light grey, argillaceous, commonly arenaceous, occasionally carbonaceous specks and minor laminations, soft to moderately hard in part, dispersive in part, sub-blocky t	3 (98,2,0,0,0)
1914 (1.8)	100	SILTSTONE, a. a.	3 (97,3,0,0,0)

Depth	%	Lithology	Gas
1917 (2.1)	100	SILTSTONE, a. a.	4 (97,3,0,0,0)
1920 (2.8)	100	SILTSTONE, a. a.	4 (98,2,0,0,0)
1923 (2.0)	10 90	SANDSTONE, clear to translucent, pale green, pale grey, fine to medium, moderately well sorted, sub-angular, weak calcareous and siliceous cement, light greenish grey to light bluish grey argillaceous matrix, glauconite, loose and clean, fair to poor porosity, no fluorescence. SILTSTONE, predominantly light grey, light greenish grey, occasionally medium grey, trace dark grey, dominantly argillaceous, minor arenaceous, occasionally carbonaceous specks, soft to dispersive, trace soft to firm, sub-blocky to sub-fissile.	4 (99,1,0,0,0)
1926 (3.6)	10 90	SANDSTONE, a. a. SILTSTONE, light greenish grey to light bluish grey, pale grey, dark greenish grey in part, predominantly argillaceous, dominantly dispersive, trace to minor firm to moderately hard in part, amorphous, minor sub-blocky to sub-fissile.	3 (99,1,0,0,0)
1929 (1.3)	30 70	SANDSTONE, clear to translucent, pale green to pale grey, colourless, trace orange grains, very fine to medium, trace coarse grains, moderately sorted, sub-angular, weak siliceous cement, white argillaceous matrix, glauconite, predominantly loose, friable to moderately hard aggregates, poor to fair ing and poor to very poor visual porosity, no fluorescence. SILTSTONE, a. a. – increasing glauconite.	3 (99,1,0,0,0)
1932 (4.2)	15 85	SANDSTONE, a. a. SILTSTONE, predominantly light greenish grey to medium greenish grey, light grey, trace medium dark grey, dominantly argillaceous, minor arenaceous, trace carbonaceous specks, commonly soft to dispersive, rare moderately hard to firm.	4 (98,2,0,0,0)
1935 (2.3)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	6 (97,3,0,0,0)
1938 (2.1)	10 90	SANDSTONE, pale orange, medium dark orangish yellow, frosted, medium to coarse grains, sub-rounded, weak siliceous cement, no visual matrix, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	5 (98,2,0,0,0)
1941 (2.0)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	7 (97,3,0,0,0)
1944 (2.3)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	7 (98,2,0,0,0)
1947 (2.8)	10 90	SANDSTONE, light yellowish orange to light orange, frosted, fine to medium grains, dominantly medium grains, moderately well sorted, weak siliceous cement, no visual matrix, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a, a,	5 (98,2,0,0,0)
1950 (3.0)	5 95	SANDSTONE, a. a. SILTSTONE, light grey to medium grey, trace medium grey to medium dark grey, dark greenish grey, dominantly arenaceous, minor argillaceous, commonly carbonaceous specks, soft to firm, sub-blocky to sub-fissile, amorphous.	5 (98,2,0,0,0)
1953 (3.6)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	5 (97,3,0,0,0)
1956 (2.8)	5 95	SANDSTONE, light yellowish orange to light orange, frosted, fine to medium grains, dominantly medium grains, moderately well sorted, weak siliceous cement, no visual matrix, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	4 (97,3,0,0,0)
1959 (3.2)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	5 (97,3,0,0,0)
1962 (3.9)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	5 (97,3,0,0,0)
1965 (8.5)	10 90	SANDSTONE, a. a. SILTSTONE, predominantly light grey to medium grey, medium dark grey, off white to dirty white, dominantly argillaceous, locally arenaceous, minor carbonaceous specks, trace glauconite, soft to dispersive, moderately firm in part, sub-blocky to sub-fissile, amorphous.	3 (98,2,0,0,0)
1968 (3.6)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	3 (98,2,0,0,0)

Depth	%	Lithology	Gas
1971 (5.1)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	2 (98,2,0,0,0)
1974 (4.6)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	2 (98,2,0,0,0)
1977 (3.5)	5 95	SANDSTONE, a. a. SILTSTONE, light grey, light medium grey, light greenish grey, predominantly arenaceous, minor argillaceous, trace carbonaceous specks, soft to dispersive, moderately firm in part, sub-blocky to sub-fissile, amorphous.	2 (98,2,0,0,0)
1980 (2.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, light grey, light greenish grey, light yellowish grey, trace medium to dark grey, dominantly arenaceous, trace argillaceous, grading to very fine SANDSTONE in part, trace carbonaceous specks, generally soft to dispersive, occasionally firm, sub-blocky to sub-fissile, amorphous.	3 (98,2,0,0,0)
1983 (1.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, light grey, light greenish grey, trace medium to dark grey, dominantly arenaceous, argillaceous, grading to very fine SANDSTONE in part, trace carbonaceous specks, generally soft to dispersive, occasionally firm, sub-blocky to sub-fissile, amorphous.	3 (97,3,0,0,0)
1986 (3.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	2 (99,1,0,0,0)
1989 (3.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	2 (98,2,0,0,0)
1992 (2.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	4 (97,3,0,0,0)
1995 (2.4)	Tr 100	SANDSTONE, a. a. SILTSTONE, generally light grey to medium grey, light greenish grey, trace medium to dark grey, trace off white to dirty white, dominantly arenaceous, minor argillaceous, grading to very fine SANDSTONE, commonly disseminated carbonaceous specks, very soft to soft and dispersive, rare soft to firm, sub-blocky to sub-fissile, amorphous.	3 (97,3,0,0,0)
1998 (2.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	4 (96,4,0,0,0)
2001 (2.5)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	4 (96,4,0,0,0)
2004 (2.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, light brownish grey, slightly olive grey, moderately light grey, minor light to medium grey, arenaceous, increasing argillaceous, calcareous in part, minor micromicaceous, minor micro-carbonaceous specks, trace orange lithics, soft to firm, occasionally moderately hard, dispersive in part, sub-blocky, sub-fissile in part, amorphous.	3 (97,3,0,0,0)
2007 (2.6)	10 90	SANDSTONE, clear to translucent, colourless, opaque, orange, very fine to fine, moderately well sorted, trace siliceous cement, no visual matrix, loose, fair porosity, no fluorescence. SILTSTONE, a. a.	3 (97,3,0,0,0)
2010 (2.5)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	4 (97,3,0,0,0)
2013 (2.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, olive grey, light brownish grey, medium grey arenaceous, inc argillaceous, increasing glauconite, minor carbonaceous specks, dispersive in part, firm to minor moderately hard, blocky to sub-blocky, amorphous.	4 (96,4,0,0,0)
2016 (1.5)	100	SILTSTONE, light olive grey, greenish grey, light olive grey, argillaceous, glauconite, minor carbonaceous specks and material, rare pyrite, dispersive, soft to firm, rare moderately hard, sub-blocky to blocky, amorphous.	5 (96,4,0,0,0)
2019 (2.3)	100	SILTSTONE, a. a.	4 (96,4,0,0,0)
2022 (2.2)	100	SILTSTONE, light olive grey, light brownish grey, argillaceous, glauconite, minor carbonaceous material and specks, rare pyrite nodules, dispersive, soft to rare firm, blocky to sub-blocky, amorphous.	4 (97,3,0,0,0)
2025 (1.8)	100	SILTSTONE, a. a.	4 (97,3,0,0,0)
2028 (4.2)	100	SILTSTONE, 1) 90% brownish grey to olive grey, trace dark greyish black, argillaceous, soft to firm, glauconite, very soft to soft, trace firm to moderately hard, blocky to sub-blocky, trace to rare sub-fissile, dominantly amorphous. 2) 10% white to very pale grey, greenish grey to moderately green, commonly glauconite, dispersive, amorphous.	3 (97,3,0,0,0)

Depth	%	Lithology	Gas
2031 (5.2)	Tr 100	SANDSTONE, clear to translucent, colourless, opaque, orange, very fine to fine, moderately well sorted, trace siliceous cement, no visual matrix, loose, fair porosity, no fluorescence. SILTSTONE, brownish grey to olive grey, minor off white, argillaceous, trace LIMESTONE inclusions, commonly glauconite inclusions, firm to trace moderately hard, soft in part, sub-blocky to sub-fissile.	3 (97,3,0,0,0)
2034 (2.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,4,0,0,0)
2037 (1.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, light brown, brownish grey, greenish grey in part, argillaceous, commonly carbonaceous and glauconite, trace LIMESTONE inclusions, firm to hard, soft in part, sub-blocky to sub-fissile.	5 (96,4,0,0,0)
2040 (3.2)	5 95	SANDSTONE, clear to translucent, frosted, milky, very fine to fine, well sorted, sub-angular to sub-rounded, weak siliceous cement, no visual matrix, commonly glauconite, carbonaceous, loose and clean, ft to fair porosity, no fluorescence. SILTSTONE, a. a.	4 (97,3,0,0,0)
2043 (2.7)	10 90	SANDSTONE, a. a. SILTSTONE, brownish grey, light brown, dark grey to black, argillaceous, slightly arenaceous, commonly carbonaceous specks and material, glauconite, friable to moderately hard in part, sub-fissile to sub-blocky.	4 (96,4,0,0,0)
2046 (1.9)	100	SILTSTONE, light to medium brown, off white in part, argillaceous, arenaceous in part, commonly carbonaceous specks and material, glauconite, friable to moderately hard in part, sub-fissile to sub-blocky.	3 (97,3,0,0,0)
2049 (2.0)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, cream, micritic, argillaceous/fossiliferous, soft to brittle.	2 (98,2,0,0,0)
2052 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2055 (1.5)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2058 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	3 (97,3,0,0,0
2061 (1.5)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2064 (1.5)	Tr 100 Rr	SANDSTONE, a. a. – very fine glauconite, abundant matrix, friable, sub-angular to sub-rounded, no fluorescence. SILTSTONE, a. a. LIMESTONE, a. a.	6 (96,4,0,0,0)
2067 (1.5)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2070 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, predominantly grey to brownish grey, very argillaceous, grading to CLAYSTONE in part, locally commonly glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly to moderately calcareous in part, sub-fissile to sub-blocky. LIMESTONE, a. a.	4 (96,4,0,0,0)
2073 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2076 (1.7)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2079 (1.5)	Tr 100 Rr	SANDSTONE, off white to brownish grey, very fine, occasionally fine, generally very well sorted, sub-angular to sub-rounded, very weak calcareous in part, generally siliceous. Abundant argillaceous matrix, dominantly to commonly glauconite, unconsolidated, very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a. LIMESTONE, a. a.	4 (96,4,0,0,0)

Depth	%	Lithology	Gas
2082 (1.5)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	7 (95,4,1,0,0)
2085 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	7 (95,4,1,0,0)
2088 (2.5)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a. – crystalline, argillaceous.	6 (96,4,0,0,0)
2091 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	7 (96,4,0,0,0)
2094 (1.7)	Tr 100 Rr	SILTSTONE, predominantly grey to brownish grey, very argillaceous, grading to CLAYSTONE in part, locally commonly glauconite in part, trace carbonaceous material in part, generally soft to firm in part, slightly to moderately calcareous in part, sub-fissile to sub-blocky.	7 (96,4,0,0,0)
2097 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	6 (96,4,0,0,0)
2100 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. – increasing brown, decreasing grey, occasionally hard, calcareous, glauconite. LIMESTONE, a. a.	7 (95,4,1,0,0)
2103 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, brownish grey, argillaceous, commonly grading to CLAYSTONE, sandy in part, occasionally carbonaceous material, locally cam glauconite, generally very soft to soft, occasionally hard, slightly, calcareous in part, generally sub-fissile to sub-blocky.	6 (96,4,0,0,0)
2106 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (96,4,0,0,0)
2109 (2.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	6 (96,4,0,0,0)
2112 (1.8)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	8 (95,4,1,0,0)
2115 (1.8)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2118 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2121 (1.9)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2124 (1.8)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2127 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	6 (97,3,0,0,0)
2130 (1.3)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. – occasionally medium brown, very fine arenaceous, hard with commonly calcareous. LIMESTONE, a. a.	5 (97,3,0,0,0)
2133 (1.3)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	3 (97,3,0,0,0)
2136 (2.4)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. – firm to moderately hard, sub-fissile to sub-blocky. LIMESTONE, (heavy trace), a. a.	5 (95,4,1,0,0)
2139 (1.3)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	6 (97,3,0,0,0)

Depth	%	Lithology	Gas
2142 (1.5)	100 Rr	SILTSTONE, a. a. LIMESTONE, a. a.	6 (97,3,0,0,0)
2145 (1.4)	100 Rr	SILTSTONE, a. a. LIMESTONE, a. a.	3 (97,3,0,0,0)
2148 (2.4)	100 Rr	SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2151 (1.4)	100 Rr	SILTSTONE, a. a. – increasing glauconite, very hard in part, calcareous. LIMESTONE, a. a.	6 (97,3,0,0,0)
2154 (1.4)	100 Rr	SILTSTONE, a. a. LIMESTONE, (tr) light brown to medium brown, micritic, argillaceous, very hard, sub-blocky.	4 (97,3,0,0,0)
2157 (1.5)	100 Rr	SILTSTONE, s. s. LIMESTONE, a. a.	5 (97,3,0,0,0)
2160 (1.6)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (96,4,0,0,0)
2163 (1.7)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (97,3,0,0,0)
2166 (1.4)	100	SILTSTONE, a. a.	6 (97,3,0,0,0)
2169 (1.5)	100	SILTSTONE, a. a.	4 (97,3,0,0,0)
2172 (2.4)	100	SILTSTONE, a. a.	3 (97,3,0,0,0)
2175 (2.1)	100	SILTSTONE, a. a.	5 (96,4,0,0,0)
2178 (2.1)	Tr 100	SANDSTONE, off white to very pale grey, very fine, well sorted, sub-angular to sub-rounded, off white argillaceous matrix, white siliceous, friable siliceous, friable, very poor tight visual porosity, no fluorescence. SILTSTONE, a. a.	5 (97,3,0,0,0)
2181 (1.5)	100	SILTSTONE, a. a.	6 (97,3,0,0,0)
2184 (1.2)	100	SILTSTONE, a. a.	7 (96,3,1,0,0)
2187 (1.3)	100	SILTSTONE, a. a. – occasionally very siliceous, hard, light brown, mottled with green glauconite.	6 (96,3,1,0,0)
2190 (1.36)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, (rare) light brown, micritic, argillaceous, oolitic, crystalline, soft to firm.	5 (96,3,1,0,0)
2193 (2.1)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	5 (97,3,0,0,0)
2196 (3.1)	Tr 100 Rr	SANDSTONE, a. a. SILTSTONE, a. a. LIMESTONE, a. a.	4 (97,3,0,0,0)
2199 (3.1)	Tr 100	SANDSTONE, off white to very light grey, very fine, well sorted, sub-angular to sub-rounded, weak siliceous cement, off white argillaceous matrix, friable, very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	5 (96,3,1,0,0)
2202 (3.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2205 (2.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2208 (4.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, predominantly brownish grey to light brown, commonly mottled green, arenaceous, occasionally argillaceous, locally commonly glauconite in part, generally firm, generally siliceous and hard, minor trace calcareous in part, predominantly sub-fissile to sub-blocky, occasionally blocky.	4 (97,3,0,0,0)
2211 (4.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2214 (2.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (96,3,1,0,0)

Depth	%	Lithology	Gas
2217 (3.4)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2220 (3.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2223 (4.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (96,3,1,0,0)
2226 (6.4)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (97,3,0,0,0)
2229 (3.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (96,3,1,0,0)
2232 (4.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium grey to dark grey, medium greenish grey to dark greenish grey, dominantly argillaceous, minor arenaceous, trace carbonaceous specks, trace glauconite, soft to firm, moderately hard in part, sub-blocky to sub-fissile, amorphous.	6 (96,3,1,0,0)
2235 (4.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (97,3,0,0,0)
2238 (4.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (97,3,0,0,0)
2241 (3.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	7 (96,3,1,0,0)
2244 (4.4)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (96,3,1,0,0)
2247 (4.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (97,3,0,0,0)
2250 (2.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to medium dark grey, predominantly argillaceous, occasionally arenaceous, micromicaceous, commonly carbonaceous specks, minor to trace glauconite, firm to moderately hard in part, trace pyrite nodules, sub-blocky to sub-fissile, trace fissile.	4 (98,2,0,0,0)
2253 (2.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	7 (98,2,0,0,0)
2256 (2.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (98,2,0,0,0)
2259 (3.4)	Tr 100	SANDSTONE, off white to very light grey, very fine, well sorted, sub-angular to sub-rounded, weak siliceous cement, off white argillaceous matrix, friable, very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	4 (98,2,0,0,0)
2262 (4.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (98,2,0,0,0)
2265 (2.2)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (98,2,0,0,0)
2268 (2.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to dark grey, argillaceous, decreasing carbonaceous specks, commonly grading to CLAYSTONE in part, trace LIMESTONE material, firm to moderately hard, sub-blocky to sub-fissile.	7 (97,3,0,0,0)
2271 (4.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	7 (97,3,0,0,0)
2274 (3.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	5 (97,3,0,0,0)
2277 ()5.9	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to dark grey, argillaceous, decreasing carbonaceous specks, commonly grading to CLAYSTONE in part, trace LIMESTONE material, firm to moderately hard, sub-blocky to sub-fissile.	4 (98,2,0,0,0)
2280 (6.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	4 (98,2,0,0,0)
2283 (9.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	6 (97,3,0,0,0)
2286 (6.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to medium dark grey, brownish grey, olive grey in part, rare greenish grey, argillaceous, locally commonly carbonaceous specks, glauconite, trace white to off white, very argillaceous, lithics, friable to moderately hard, hard to very hard in part, sub-blocky to sub-fissile.	7 (98,2,0,0,0)
2289 (4.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	9 (98,2,0,0,0)

Depth	%	Lithology	Gas
2292 (5.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	10 (98,2,0,0,0)
2295 (4.6)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium to medium dark grey, brownish grey, olive grey in part, rare greenish grey, argillaceous, locally to commonly carbonaceous specks, glauconite, trace white to off white very argillaceous lithics, trace LIMESTONE, friable to moderately hard, hard to very hard in part, sub-blocky to sub-fissile.	13 (98,2,0,0,0)
2298 (2.2)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	17 (98,2,0,0,0)
2301 (3.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	16 (98,2,0,0,0)
2304 (5.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium dark grey to dark grey, medium green, grey to dark greenish grey, trace light grey to off white, dirty white, argillaceous, commonly carbonaceous specks, firm to moderately hard, good in part, sub-blocky to sub-fissile.	15 (98,2,0,0,0)
2307 (2.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	16 (98,2,0,0,0)
2310 (2.7)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	14 (98,2,0,0,0)
2313 (4.9)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	9 (98,2,0,0,0)
2316 (5.5)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	8 (98,2,0,0,0)
2319 (7.1)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	8 (98,2,0,0,0)
2322 (5.0)	Tr 100	SANDSTONE, a. a. SILTSTONE, medium dark to dark grey, dark brownish grey, dark greenish grey, argillaceous, commonly carbonaceous specks, commonly glauconite, trace micromicaceous, firm to moderately hard, locally hard in part, sub-blocky to sub-fissile.	8 (99,1,0,0,0)
2325 (2.8)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	10 (99,1,0,0,0)
2328 (4.0)	5 95	SANDSTONE, a. a. SILTSTONE, medium dark to dark grey, dark brownish grey, dark greenish grey, argillaceous, minor to trace carbonaceous specks, minor glauconite, trace micromicaceous, firm to moderately hard, locally hard in part, sub-blocky to sub-fissile.	8 (99,1,0,0,0)
2331 (4.6)	5 95	SANDSTONE, clear to translucent, very pale grey, very pale brown, very fine to medium, moderately sorted, sub-angular to sub-rounded, moderately to minor siliceous cement, trace off white to pale brown argillaceous matrix, carbonaceous specks, glauconite, loose, poor porosity, no fluorescence. SILTSTONE, a. a.	7 (99,1,0,0,0)
2334 (5.5)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	7 (99,1,0,0,0)
2337 (3.4)	10 90	SANDSTONE, a. a. SILTSTONE, greyish green, dark greyish green, medium dark grey, brownish grey in part, argillaceous, arenaceous in part, occasionally grading to very fine SANDSTONE in part, carbonaceous and glauconite, commonly dispersive, soft to firm, amorphous, sub-blocky to sub-fissile.	19 (99,1,0,0,0)
2340 (1.7)	10 90	SANDSTONE, clear to translucent, very pale grey, pale brown, very fine to medium, moderately sorted, sub-angular to sub-rounded, moderately to minor siliceous cement, trace off white to pale brown argillaceous matrix, carbonaceous specks, glauconite, loose, poor porosity, no fluorescence. SILTSTONE, a. a.	22 (99,1,0,0,0)
2343 (1.7)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	21 (99,1,0,0,0)
2346 (2.2)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	26 (99,1,0,0,0)
2349 (3.4)	10 90	SANDSTONE, a. a. SILTSTONE, medium to dark grey, greyish brown, olive grey, dark greenish grey, argillaceous, arenaceous in part, carbonaceous specks, soft to firm, moderately hard to hard in part, sub-blocky, abundant sub-fissile to fissile in part.	22 (99,1,0,0,0)

Depth	%	Lithology	Gas
2352 (4.5)	10 90	SANDSTONE, translucent, pale yellow, siliceous pale grey, clear, very fine to medium, rare very coarse grains, moderately well sorted, sub-angular to sub-rounded, trace strong siliceous cement, white to pale grey argillaceous matrix, rare angular very coarse fractured grains, loose, moderately hard aggregates, poor inferred and very poor visual porosity, no fluorescence. SILTSTONE, a. a.	14 (99,1,0,0,0)
2355 (6.3)	Tr 100	SANDSTONE, a. a. SILTSTONE, a. a.	10 (99,1,0,0,0)
2358 (7.2)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	10 (100,0,0,0,0)
2361 (4.4)	20 80	SANDSTONE, a. a. SILTSTONE, dark greenish grey, dusky green, medium to dark grey, argillaceous, minor arenaceous soft to firm, sub-blocky to sub-fissile, fissile in part.	12 (99,1,0,0,0)
2364 (1.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	12 (99,1,0,0,0)
2367 (2.0)	40 60	SANDSTONE, translucent dusky yellowish green, greyish green, clear, fine to rare coarse grains, predominantly medium, moderately sorted, sub-rounded to sub-angular, weak siliceous cement, trace dark greenish grey argillaceous matrix, abundant glauconite, chlorite, loose, poor to fair porosity, no fluorescence. SILTSTONE, a. a.	11 (99,1,0,0,0)
2370 (1.6)	50 50	SANDSTONE, a. a. SILTSTONE, a. a.	12 (99,1,0,0,0)
2373 (1.7)	60 40	SANDSTONE, clear to translucent, pale grey, frosted, fine to medium, moderately well sorted, sub-angular to sub-rounded, weak siliceous cement, pale greenish grey argillaceous matrix, loose, poor to locally fair visual and inferred porosity, no fluorescence. SILTSTONE, a. a.	10 (100,0,0,0,0)
2376 (1.8)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	6 (100,0,0,0,0)
2379 (1.7)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	6 (100,0,0,0,0)
2382 (2.3)	10 90	SANDSTONE, a. a. SILTSTONE, pale reddish brown to greyish red, minor olive grey, dark grey, argillaceous, grading to CLAYSTONE in part, very soft to slightly firm in part, generally blocky to amorphous.	7 (100,0,0,0,0)
2385 (3.6)	100	SILTSTONE, 1) pale reddish brown, generally argillaceous with commonly sandy inclusions, commonly dispersive with minor firm, siliceous with minor calcareous, predominantly amorphous, occasionally sub-blocky to blocky. 2) medium to dark olive grey, arenaceous, rare chlorite in part, generally firm to occasionally moderately hard, siliceous, predominantly sub-blocky to blocky.	7 (100,0,0,0,0)
2388 (2.1)	100	SILTSTONE, a. a.	8 (100,0,0,0,0)
2391 (1.6)	100	SILTSTONE, a. a.	8 (100,0,0,0,0)
2394 (1.9)	100	SILTSTONE, pale reddish brown to greyish red, minor to rare olive grey, dark grey, argillaceous, grading to CLAYSTONE in part, very soft to slightly firm in part, predominantly amorphous with occasionally blocky aggregates.	7 (100,0,0,0,0)
2397 (2.1)	100	SILTSTONE, a. a.	8 (100,0,0,0,0)
2400 (2.2)	100	SILTSTONE, a. a.	10 (100,0,0,0,0)
2403 (3.1)	100	SILTSTONE, light to medium grey, greyish brown, commonly reddish brown, minor mottled grey and green in part, very argillaceous, grading to CLAYSTONE, minor arenaceous in part, moderately calcareous in part, commonly sticky, generally very soft, greyish brown, moderately firm, fissile to amorphous, commonly dispersive.	7 (100,0,0,0,0)
2406 (4.8)	100	SILTSTONE, a. a.	6 (100,0,0,0,0)
2409 (4.6)	100	SILTSTONE, a. a.	9 (99,1,0,0,0)
2412 (4.8)	100	SILTSTONE, a. a.	7 (99,1,0,0,0)

Depth	%	Lithology	Gas
2415 (4.8)	100	SILTSTONE, a. a.	7 (99,1,0,0,0)
2418 (4.0)	10 90	SANDSTONE, medium to dark greyish brown, minor very light brownish cream, commonly mottled with green and dark green lithics, very fine, very well sorted, sub-angular to sub-rounded, moderately strong calcareous cement, dominantly argillaceous to silty matrix, commonly lithics and minor chlorite, commonly friable to moderately firm in part, occasionally firm to moderately hard, very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	9 (99,1,0,0,0)
2421 (5.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	6 (99,1,0,0,0)
2424 (4.0)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	5 (99,1,0,0,0)
2427 (5.5)	20 80	SANDSTONE, dark grey, commonly mottled dark grey, brown, very fine to occasionally fine, moderately well sorted, sub-angular to sub-rounded, moderately calcareous cement, dark silty to argillaceous matrix, rare to trace glauconite in part, very friable to firm in part, very poor visual porosity, no fluorescence. SILTSTONE, a. a.	6 (99,1,0,0,0)
2430 (3.2)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	6 (99,1,0,0,0)
2433 (3.2)	100	SILTSTONE, a. a.	9 (98,2,0,0,0)
2436 (3.3)	5 95	SANDSTONE, very dark grey, commonly mottled dark grey to dark brown, very fine to occasionally fine, moderately well sorted, sub-angular to sub-rounded, moderately calcareous cement, very commonly dark silty matrix, rare clean and loose, trace glauconite in part, friable to moderately firm in part, poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	8 (98,2,0,0,0)
2439 (3.9)	10 90	SANDSTONE, a. a. SILTSTONE, medium to dark greyish brown, minor trace reddish brown, argillaceous and sticky in part, commonly very arenaceous grading to very fine SANDSTONE, moderately calcareous, fissile to amorphous, commonly dispersive.	6 (98,2,0,0,0)
2442 (3.6)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	6 (98,2,0,0,0)
2445 (5.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	5 (98,2,0,0,0)
2448 (5.3)	100	SILTSTONE, a. a.	6 (98,2,0,0,0)
2451 (4.0)	5 95	SANDSTONE, medium brownish grey, mottled off white in part, occasionally green specks, very fine to occasionally fine, well sorted, round to sub-angular, moderately calcareous cement, brownish argillaceous matrix, occasionally loose and clean, minor trace glauconite in part, generally friable, poor to tight visual and poor inferred porosity, no fluorescence. SILTSTONE, a. a.	5 (98,2,0,0,0)
2454 (4.1)	100	SILTSTONE, medium to dark greyish brown, slightly dark olive grey, trace reddish brown, argillaceous, trace arenaceous, minor carbonaceous specks, trace cream lithics, firm to moderately hard, hard in part, fissile to sub-blocky.	4 (98,2,0,0,0)
2457 (6.2)	100	SILTSTONE, a. a.	6 (98,2,0,0,0)
2460 (5.3)	100	SILTSTONE, a. a.	6 (97,3,0,0,0)
2463 (5.1)	100	SILTSTONE, light to medium grey, brownish grey, moderately brown in part, argillaceous, minor micromicaceous, dark grey lithics, firm to moderately hard, hard in part, fissile to sub-fissile, sub-blocky in part.	6 (97,3,0,0,0)
2466 (4.6)	100	SILTSTONE, a. a.	6 (97,3,0,0,0)
2469 (5.4)	100	SILTSTONE, a. a.	4 (97,3,0,0,0)

Depth	%	Lithology	Gas
2472 (5.1)	20 80	SANDSTONE, opaque yellow, translucent, minor clear, medium to very coarse, poor to locally moderately sorted, sub-rounded to angular, weak siliceous and locally moderately calcareous cement, off white to light grey argillaceous matrix, very angular fractured very coarse grains, loose unconsolidated, friable to moderately hard in part, poor to locally fair inferred and very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	4 (99,1,0,0,0)
2475 (3.2)	70 30	SANDSTONE, translucent, pale yellow, frosted, minor clear, fine to very coarse, predominantly medium to coarse, very poor sorted, weak to moderately siliceous and calcareous cement, off white and medium grey argillaceous matrix, commonly angular fractured coarse to very coarse grains, loose, unconsolidated, friable r moderately hard aggregates, poor to locally fair inferred and tight to porosity visual porosity, no fluorescence. SILTSTONE, a. a.	10 (98,2,0,0,0)
2478 (4.9)	80 20	SANDSTONE, a. a. SILTSTONE, pale green, minor brownish orange, dark grey, predominantly argillaceous, minor arenaceous, very soft to soft, firm to moderately hard, sub-blocky to sub-fissile, amorphous in part.	3 (99,1,0,0,0)
2481 (3.9)	70 30	SANDSTONE, translucent to clear, frosted, pale yellow, pale grey, minor pale green, medium to very coarse, poor to locally moderately sorted, angular to sub-rounded, weak to locally moderately calcareous and weak siliceous cement, trace white to pale greyish green argillaceous matrix, occasionally angular fractured coarse to very coarse grains, trace whitish orange lithics, loose, unconsolidated, trace moderately hard aggregates, fair inferred and tight to very poor visual porosity, no fluorescence. SILTSTONE, a. a.	3 (99,1,0,0,0)
2484 (8.7)	10 90	SANDSTONE, a. a. SILTSTONE, light brownish grey, greenish grey, light to medium grey, minor medium reddish brown, dark grey, argillaceous, minor arenaceous, firm to predominantly moderately hard to hard, very hard in part, blocky to sub-fissile.	2 (100,0,0,0,0)
2487 (9.9)	10 90	SANDSTONE, a. a. SILTSTONE, light grey to medium dark grey, light orange yellow to light orange brown, arenaceous, grading to very fine SANDSTONE, trace carbonaceous material, firm to moderately hard, hard in part, sub-blocky, occasionally sub-fissile.	3 (98,2,0,0,0)
2490 (8.2)	5 95	SANDSTONE, clear, translucent, frosted, fine to medium grains, moderately well sorted, strong slightly cement, no visual matrix, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	3 (97,3,0,0,0)
2493 (7.3)	5 95	SANDSTONE, a. a. SILTSTONE, a. a.	7 (95,5,0,0,0)
2496 (7.6)	100	SILTSTONE, light grey, greenish grey, medium grey in part, minor light brown, predominantly arenaceous, argillaceous in part, trace weak carbonaceous specks, glauconite, chlorite, trace to rare pyrite nodules, minor micromicaceous in part, firm to moderately hard, locally very hard in part, trace r minor dispersive, sub-fissile to sub-blocky, minor fissile in part, slightly amorphous.	7 (94,5,1,0,0)
2499 (7.6)	100	SILTSTONE, a. a.	7 (94,5,1,0,0)
2502 (9.1)	100	SILTSTONE, a. a.	7 (93,6,1,0,0)
2505 (12.2)	100	SILTSTONE, a. a.	7 (93,6,1,0,0)
2508 (12.8)	5 95	SANDSTONE, predominantly clear, translucent, frosted, minor pale yellow to pale yellowish brown, fine to medium grains, occasionally coarse grains, moderately well sorted, sub-rounded, trace sub-angular, moderately weak siliceous cement, no visual matrix, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, very light grey, dark grey, trace light brown, minor pale green, very argillaceous, trace to locally minor arenaceous, dispersive, trace to minor firm to moderately hard, blocky in part, amorphous.	9 (92,6,2,0,0)
2511 (3.9)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	14 (95,4,1,0,0)
2514 (3.1)	100	SILTSTONE, a. a.	14 (96,3,1,0,0)

Depth	%	Lithology	Gas
2517 (10.0)	100	SILTSTONE, a. a.	11 (95,4,1,0,0)
2520 (7.6)	10 90	SANDSTONE, light yellowish green to pale yellow, clear to translucent in part, dominantly medium to coarse grains, minor fine grains, sub-angular, weak siliceous cement, no visual matrix, loose and clean, occasionally consolidated with siliceous cement, fair inferred and poor to fair visual porosity, no fluorescence. SILTSTONE, a. a.	18 (95,4,1,0,0)
2523 (4.9)	20 80	SANDSTONE, a. a. SILTSTONE, a. a.	24 (95,4,1,0,0)
2526 (2.6)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	25 (95,4,1,0,0)
2529 (3.2)	50 50	SANDSTONE, dominantly light yellow to light yellowish green, light yellowish orange, dusky yellow, off white, opaque, predominantly fine to medium grains, minor coarse grains, moderately well sorted, sub-rounded, occasionally sub-angular, trace moderately calcareous cement, generally weak siliceous cement, no visual matrix, trace carbonaceous material, loose and clean, fair inferred porosity, no fluorescence. SILTSTONE, a. a.	17 (95,4,1,0,0)
2532 (9.2)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	75 (91,5,2,1,1)
2535 (11.3)	70 30	SANDSTONE, frosted, translucent, milky, pale yellow to pale yellowish orange, pale grey, minor clear in part, fine to very coarse, predominantly coarse, poor sorted, round to angular, predominantly sub-angular to sub-rounded, angular very coarse fractured grains, strong calcareous cement, trace white to pale grey argillaceous matrix, minor pyrite nodules, light to medium brown lithics, loose and clean, unconsolidated, minor firm to hard aggregates, fair to locally good inferred and tight to nil visual porosity, no fluorescence. SILTSTONE, light pale grey, medium grey in part, greyish brown, dark greyish green, light to medium brown, argillaceous, arenaceous in part, calcareous, trace carbonaceous specks, firm to moderately hard, hard in part, sub-blocky y sub-fissile.	71 (86,7,4,2,1)
2538 (8.3)	60 40	SANDSTONE, a. a. SILTSTONE, a. a. – increasing dark grey to black, decreasing calcareous,	53 (96,7,4,2,1)
2541 (4.9)	70 30	SANDSTONE, translucent, frosted, milky in part, pale yellow, pale greyish green, minor clear, very poor sorted, coarse to very coarse, minor trace medium grains, angular to sub-rounded, dominantly angular very coarse fractured grains, moderately to locally strong calcareous cement, trace to rare white argillaceous matrix, minor pyrite nodules, minor pale green and dark green lithics, loose, unconsolidated, poor to locally gr porosity, trace mineral fluorescence, no cut. SILTSTONE, a. a.	128 (82,8,5,3,2)
2544 (3.6)	80 20	SANDSTONE, a. a. – trace mineral fluorescence, no cut. SILTSTONE, greyish brown, off white, cream, greenish grey, dark greyish brown, light to moderately brown, black in part, arenaceous, argillaceous, minor micromicaceous, micro carbonaceous specks and laminations, moderately hard to hard, minor soft to firm, sub-blocky to sub-fissile, trace fissile, minor blocky in part.	134 (84,8,4,2,2)
2547 (4.6)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	23 (95,4,1,0,0)
2550 (4.9)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	13 (97,3,0,0,0)
2553 (8.1)	20 80	SANDSTONE, translucent, pale grey, frosted, trace clear, fine to very coarse, predominantly medium grains, poor to moderately sorted, dominantly sub-angular to sub-rounded, trace angular fractured coarse to very coarse grains, moderately to locally strong siliceous cement, weak argillaceous matrix, minor yellowish orange lithics, loose and unconsolidated, firm to moderately hard aggregates, poor to fair inferred and poor to very poor visual porosity, no fluorescence. SILTSTONE, 1) 90% brownish grey, olive grey, light medium to dark grey, slightly light brown, occasionally dark greenish black, arenaceous argillaceous in part, carbonaceous material and specks, trace micromicaceous, rare pyrite with glauconite inclusions, firm to hard. 2) 10% white to off white, very argillaceous, dispersive, amorphous.	10 (97,3,0,0,0)

Depth	%	Lithology	Gas
2556 (9.5)	50 50	SANDSTONE, translucent, very pale grey, frosted, trace clear, fine to very coarse, predominantly medium grains, poor to moderately sorted, dominantly sub-angular to sub-rounded, trace angular fractured coarse grains, moderately to locally strong siliceous cement, white argillaceous matrix, minor yellowish orange lithics, loose, unconsolidated, friable to moderately hard aggregates, poor to fair inferred and poor to very poor visual porosity, no fluorescence. SILTSTONE, 1) 60% white to off white, very argillaceous, dispersive, amorphous. 2) 40% dark grey, dark greyish brown, slightly dark greyish green, brownish grey in part, argillaceous, slightly arenaceous, minor micromicaceous, carbonaceous specks and material, soft to firm, moderately hard to hard in part, blocky to sub-fissile, amorphous in part.	9 (93,5,2,0,0)
2559 (6.3)	40 60	SANDSTONE, a. a. SILTSTONE, a. a.	27 (81,9,7,3,0)
2562 (9.3)	30 70	SANDSTONE, a. a. SILTSTONE, light grey, light greyish brown, white, rare dark grey and greyish brown, argillaceous, dispersive to soft, minor firm, blocky, amorphous.	21 (82,9,7,2,0)
2565 (10.7)	20 80	SANDSTONE, a. a. SILTSTONE, light grey, medium light to medium dark grey, increasing brownish grey in part, slightly greenish grey, light olive grey in part, argillaceous, minor micromicaceous, minor pyrite, soft to firm, sub-blocky to sub-fissile, amorphous in part.	19 (84,10,5,1,0)
2568 (12.3)	10 90	SANDSTONE, a. a. SILTSTONE, light grey to off white, medium to dark grey, minor olive grey, brownish grey, argillaceous, commonly arenaceous, occasionally grading to very fine SANDSTONE, minor calcareous inclusions, disseminated and nodular pyrite, carbonaceous specks and laminations, minor to locally commonly chlorite, soft to firm, moderately hard to hard, sub-blocky to sub-fissile, amorphous.	20 (85,11,4,1,0)
2571 (8.8)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	19 (86,11,3,0,0)
2574 (10.9)	100	SILTSTONE, light grey, light greyish brown, light olive grey, minor medium dark grey, predominantly argillaceous, arenaceous in part, minor carbonaceous specks and micro-laminations, chlorite, rare LIMESTONE material, disseminated and nodular pyrite, firm to moderately hard, hard in part, sub-fissile to sub-blocky, fissile in part.	20 (86,11,3,0,0)
2577 (5.7)	100	SILTSTONE, a. a.	25 (88,10,2,0,0)
2580 (6.1)	10 90	SANDSTONE, clear to translucent, frosted, milky, very pale yellow in part, very fine to medium, predominantly fine, well sorted, sub-angular to sub-rounded, strong to very strong calcareous cement, white kaolinitic matrix, disseminated and nodular pyrite, loose, unconsolidated, moderately hard to very hard in part, fair inferred and poor to tight visual porosity, no fluorescence. SILTSTONE, 1) 90% white to off white, very argillaceous, slightly calcareous, dispersive, amorphous. 2) 10% light to medium grey, greyish brown, olive grey, argillaceous, arenaceous, firm to moderately hard, sub-blocky to sub-fissile.	26 (88,10,2,0,0)
2582 ***SPOT***	20 80	SANDSTONE, clear to translucent, frosted, milky, very pale yellow in part, very fine to medium, predominantly fine, well sorted, sub-angular to sub-rounded, strong to very strong calcareous cement, white kaolinitic matrix, disseminated and nodular pyrite, loose, unconsolidated, moderately hard to very hard in part, fair inferred and poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	
2583 (4.5)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	335 (88,8,3,1,0)
2586 (5.5)	30 70	SANDSTONE, translucent to clear, frosted, milky, fine to coarse, predominantly medium grains, moderately well sorted, sub-rounded to sub-angular, strong calcareous cement, off white to pale grey argillaceous matrix, minor pyrite nodules, loose unconsolidated, very hard aggregates, poor to minor fair inferred and nil to tight visual porosity, no fluorescence. SILTSTONE, a. a.	162 (90,7,2,1,0)

Depth	%	Lithology	Gas
2589 (6.5)	10 90	SANDSTONE, translucent, milky, frosted, minor clear, very fine to medium, predominantly fine, moderately well sorted, sub-angular to sub-rounded, strong calcareous and rare pyrite cement, white argillaceous/kaolinitic matrix, nodular and disseminated pyrite, loose, unconsolidated, moderately to very hard aggregates, poor to fair inferred and very poor to tight visual porosity, rare to trace fluorescence. SILTSTONE, a. a. **Fluorescence, trace, dim to moderately bright, whitish blue, pinpoint, very slow whitish blooming crush cut, very thin dull whitish ring residue.**	173 (89,8,2,1,0)
2592 (3.2)	40 60	SANDSTONE, a. a. SILTSTONE, a. a. **Fluorescence, trace, dim to moderately bright, whitish blue, pinpoint, very slow whitish blooming crush cut, very thin dull whitish ring residue.**	326 (90,7,2,1,0)
2595 (3.4)	60 40	SANDSTONE, a. a. SILTSTONE, a. a. **Fluorescence, trace, dim to moderately bright, whitish blue, pinpoint, very slow whitish blooming crush cut, very thin dull whitish ring residue.**	481 (89,8,2,1,0)
2598 (7.1)	40 60	SANDSTONE, translucent, milky, frosted, minor clear, very fine to medium, predominantly fine, moderately well sorted, sub-angular to sub-rounded, strong calcareous cement and rare pyrite cement, white argillaceous/kaolinitic matrix, nodular and disseminated pyrite, chlorite, loose, unconsolidated, moderately to very hard aggregates, poor to fair inferred and very poor to tight visual porosity, no fluorescence. SILTSTONE, light to medium grey, olive grey, medium to medium dark grey, minor greyish green, dark grey in part, whitish pale grey, argillaceous, slightly calcareous in part, chlorite, very soft to dispersive, firm to moderately hard, sub-blocky to sub-fissile, amorphous.	68 (89,9,2,1,0)
2601 (8.1)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	42 (89,8,3,0,0)
2604 (5.1)	30 70	SANDSTONE, a. a. SILTSTONE, a. a.	83 (89,8,2,1,0)
2607 (4.3)	80 20	SANDSTONE, translucent to clear, milky, frosted, fine to very coarse, very poor sorted, angular to sub-rounded, commonly angular fractured coarse and very coarse grains, moderately strong calcareous cement, white kaolinitic matrix, minor pyrite nodules, loose, unconsolidated, moderately to very hard aggregates, poor to fair inferred and very poor to tight visual porosity, no fluorescence. SILTSTONE, a. a.	60 (90,8,2,0,0)
2610 (3.7)	10 90	SANDSTONE, a. a. SILTSTONE, 1) 80% brownish grey, olive grey, argillaceous, minor micromicaceous, grading to CLAYSTONE in part, carbonaceous specks and material, very soft to firm, moderately hard in part, sub-blocky to sub-fissile, amorphous in part. 2) 20% white to very pale grey, very argillaceous, dispersive, amorphous.	180 (90,7,2,1,0)
2613 (9.4)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	111 (88,8,3,1,0)
2616 (7.2)	40 60	SANDSTONE, generally translucent to off white, very fine to medium, predominantly fine, occasionally coarse, poor sorted, sub-angular to angular, occasionally sub-rounded, moderately strong calcareous cement, commonly white kaolinitic matrix, minor trace pyrite nodules, occasionally laminations with SILTSTONE, generally loose with friable aggregates in part, very poor to tight visual porosity and poor inferred porosity, no fluorescence. Medium olive brown, brownish grey, occasionally medium dark brown, arenaceous, slightly to moderately calcareous in part, generally soft to moderately firm in part, fissile to sub-blocky, generally sub-fissile.	260 (88,8,3,1,0)
2619 (14.2)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	35 (88,9,3,0,0)
2622 (10.9)	10 90	SANDSTONE, a. a. SILTSTONE, a. a.	34 (88,9,3,0,0)
2625 (12.1)	100	TUFF, off white to very light greenish grey, trace pinkish red in part, minor trace yellowish orange, commonly clays, rare to trace quartz, abundant calcareous, moderately chlorite, commonly dispersive, very soft to occasionally slightly firm, commonly amorphous with occasionally sub-blocky to blocky aggregates, minor alterations.	16 (89,8,3,0,0)
2628 (14.2)		TUFF, a. a.	12 (91,7,2,0,0)

Depth	%	Lithology	Gas
2631 (7.7)	100	TUFF, off white to very light green, trace pinkish red in part, minor trace yellowish orange, commonly clays, trace to commonly quartz, abundant calcareous, minor chlorite, commonly dispersive to very soft, occasionally slightly firm to friable, commonly amorphous, slightly increasing alteration.	10 (92,6,2,0,0)
2634 (14.1)	100	TUFF, a. a.	7 (93,5,2,0,0)
2637 (7.3)	100	TUFF, a. a.	8 (95,4,1,0,0)
2640 (9.4)	100	TUFF, off white to very light green, trace pinkish red in part, minor trace yellowish orange, commonly mottled, abundant quartz and mottled aggregates, loose to friable, commonly amorphous clays.	7 (94,3,1,0,0)
2643 (6.3)	100	TUFF, a. a.	11 (97,3,0,0,0)
2646 (7.8)	100	TUFF, a. a.	11 (97,3,0,0,0)
2649 (8.4)	100	TUFF, light grey to light greenish grey, occasionally off white, minor clear quartz grains, commonly sticky clays, commonly quartz, abundant calcareous, commonly chlorite, generally loose quartz with mottled sticky clay aggregates, generally amorphous.	9 (97,3,0,0,0)
2652 (6.0)	100	TUFF, a. a.	11 (97,3,0,0,0)
2655 (9.3)	100	TUFF, a. a.	8 (97,3,0,0,0)
2658 (7.5)	100	TUFF, a. a.	10 (97,3,0,0,0)
		Childers Cove-1 TD of 2658.0nRT @ 0800hours 3rd October, 2005	

APPENDIX 9

PETROPHYSICAL EVALUATION REPORT

PEP 154, OTWAY BASIN, VICTORIA

CHILDERS COVE - 1

PETROPHYSICAL INTERPRETATION

2450 – 2658 mRT

Origin Energy Resources Limited
Second Floor, South Tower, John Oxley Centre
339 Coronation Drive
MILTON QLD 4064

Andy Hall, October 2005

EXECUTIVE SUMMARY

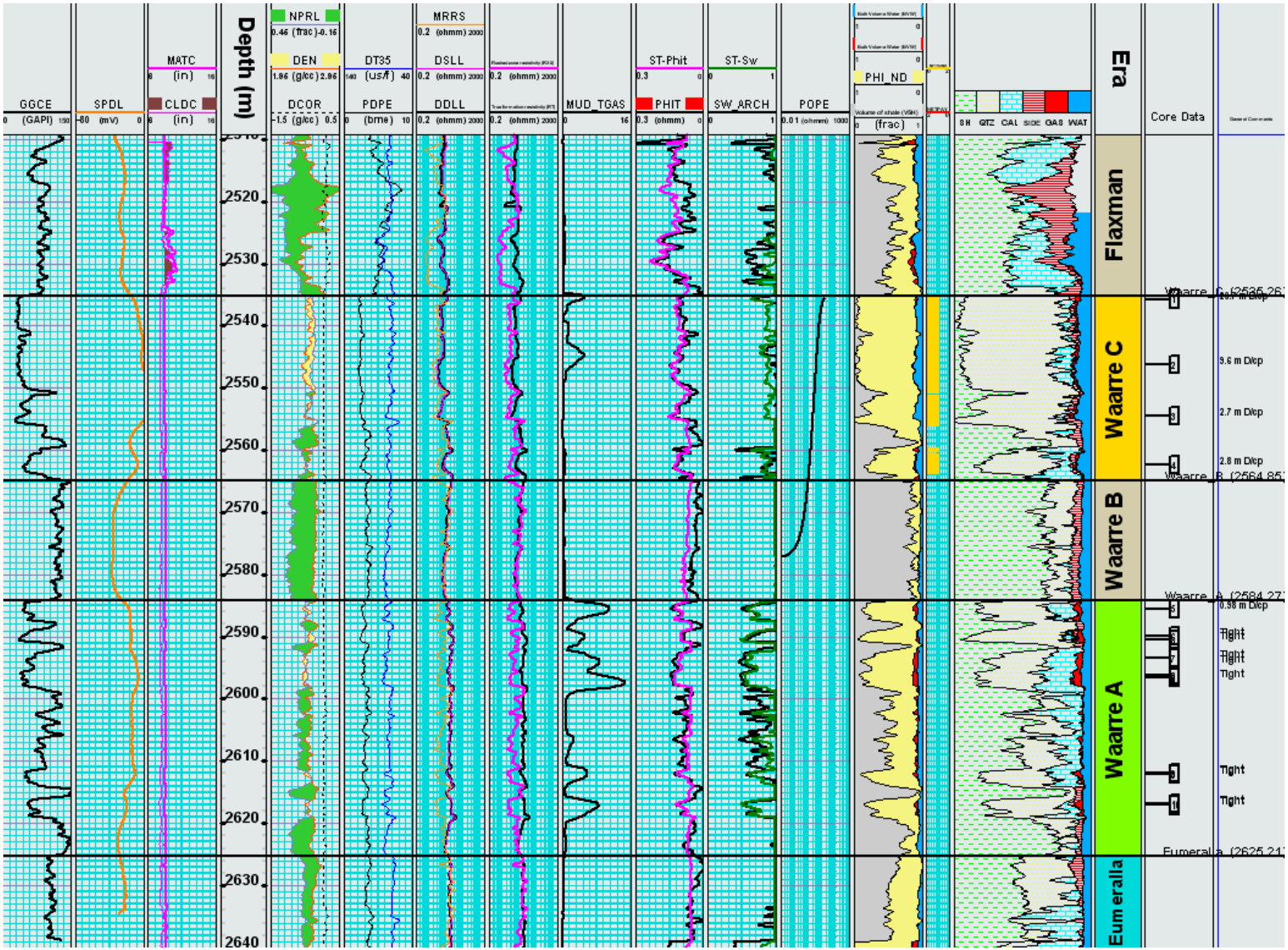
Childers Cove-1 was drilled in September / October 2005 to test the hydrocarbon potential of a series of seismic amplitudes, believed to originate from Waarre sandstones, in a deeper section of the Port Campbell Embayment than had previously been tested. The Waarre C and Waarre A sandstones were the primary and secondary target respectively.

The well was drilled to an initial TD of 2545 mRT in the belief that the amplitudes had been penetrated without any sandstones being recognised. One wireline log run comprising GR-NPHI-DEN-PEF-RES-DT-SP-CAL was acquired. Correlation of the logs with surrounding wells indicated that the amplitudes originated from very dense sandstones at the top of the Flaxman Formation. The Waarre C sandstone was probably penetrated at the base of the well, but was not covered by wireline logs. The well was drilled a further 113 metres to a new TD at 2658 mRT and encountered Waarre C and Waarre A sandstones with gas shows. Three wireline logging runs, comprising GR-NPHI-DEN-PEF-RES-DT-SP-CAL and MFT pressures (2 runs), were acquired over this interval. No full diameter or sidewall cores were acquired in this well.

The Waarre C was penetrated between 2535.3 – 2564.8 mRT. 12.0 metres (41%) of this is calculated to be net sand for gas with an average porosity of 11.7% and geometric average permeability of 4.2 mD. Only minor gas saturation, interpreted to be residual, was calculated to be present. MFT pressures also indicated a water gradient in the permeable interval of the sandstone. Hence, no net pay is interpreted to be present.

The Waarre A was penetrated from 2584.3 to 2624.9 mRT (40.6 metres thick). Moderate gas saturation was calculated to be present in the Waarre A from the resistivity / porosity logs using the formation water and Archie parameters determined in the Waarre C. When these zones were tested with the MFT, all points were tight and, as for the Waarre C, the gas saturation is interpreted to be residual. No net sand is interpreted to be present in the Waarre A.

Figure 1: Interpreted Log Across the Waarre C, Waarre B and Waarre A intervals in Childers Cove-1



WELL DETAILS

Latitude		Longitude	Drill Floor		Ground Elevation
38° 29' 31.90" S		142° 44' 46.66" E	5.30 m AGL		46.17 m AMSL
			Rig		Century #7
Borehole Record			**Casing Record**		
Inches	**mm**	**Base (mRT)**	**Inches**	**mm**	**Shoe Depth (mRT)**
			20	508	27.0
12 ¼	311	550	$9\ ^{5}/_{8}$	244	544.5
8 ½	216	2658	Not Run		
Childers Cove-1					
Spud date		19 September 2005	**TD (mRT)**		2658
End Date		3 October 2005			

The well was drilled to an initial TD of 2545 mRT in the belief that the amplitudes had been penetrated without any sandstones being recognised. When at TD, the well was drilling a sandstone with moderate gas shows. One wireline log run comprising GR-NPHI-DEN-PEF-RES-DT-SP-CAL was acquired. Unfortunately, the wireline logs would not pass beneath 2529 mRT. Correlation of the logs with surrounding wells indicated that the amplitudes originated from very dense sandstones at the top of the Flaxman Formation. The Waarre C sandstone was probably penetrated at the base of the well, but was not covered by wireline logs.

The well was drilled a further 113 metres to a new TD at 2658 mRT and encountered Waarre A sandstones with gas shows. Three wireline logging runs, comprising GR-NPHI-DEN-PEF-RES-DT-SP-CAL and MFT pressures (2 runs), were acquired over this interval.

No full diameter or sidewall cores were acquired in this well.

METHODOLOGY

The interpretation was conducted using a Terrastation II TCL macro. The macro, with all the details of the interpretation is included in Appendix A of this report.

The shale volume was determined from the minimum of the gamma ray and neutron-density cross-plot determination. The two determinations give a very similar answer across the Waarre C and A sandstone intervals.

Porosity was determined from the sonic, density and neutron density curves, all appropriately shale corrected. The neutron-density cross-plot porosity was assumed to be the best representation of actual formation conditions and was used in the interpretation.

Permeability was derived from the MFT mobility assuming a fluid viscosity of 0.5 cp. MFT mobility shows no clear trend when plotted against log derived porosity (Figure 2), therefore, porosity cannot be used to determine permeability in this well. The mobility data does, however, exhibit a clear trend of decreasing mobility with increasing depth below top Waarre C (Figure 3). This could be due to changing depositional environment or increasing diagenesis with depth. Permeability was calculated from the depth below top Waarre C function (Figure 3).

Water saturation was calculated using the Archie equation as the sands are sufficiently clean for a shaly sand equation to have negligible effect on the calculated saturation. The formation water salinity was determined from the Pickett Plot (Figure 4) for the Waarre C to be 0.12 Ω.m at 96°C (0.303 Ω.m at 25°C – 19,070 ppm NaCl equiv). This is similar to the measured water resistivity from the samples acquired from the Waarre A in DST-1 in the Howmains-1 well, which were measured to have a resistivity of 0.29 Ω.m at 25°C (20,000 ppm NaCl equiv).

Net Sand was defined as Shale Volume < 40% and Permeability > 0.2 mD. No porosity cut-off was directly implied as the MFT mobilities demonstrate that there is not a good correlation between permeability and porosity (Figure 2). Net Pay was defined as Net Sand = 1 and Water Saturation < 60%. Intervals of net sand / net pay properties less than 0.5 metres thick were not included in the net summary.

The Terrastation II module Statlith (a statistical lithology model) was also used to interpret the interval from 2450 – 2640 mRT. The Statlith model incorporated quartz, calcite, shale, gas and water. Siderite was also entered to represent the dense, high PEF minerals in the shale intervals that are thought, from offset wells, to be iron rich. The input curves / parameters are given below. All curves were given equal weighting.

	Conductive	PDPE	GGCE	DT35	DEN	NPRL
Lower Limit		0	0	40	1.50	-0.20
Upper Limit		10	300	140	3.50	1.00
Shale	y	3.4	160	80	2.60	0.30
Calcite	n	1.81	30	51.5	2.65	-0.05
Quartz	n	5.08	20	47.5	2.71	0.00
Siderite	n	15	20	47	3.89	0.12
Gas		0.1	10	350	0.30	0.40
Water		0.5	10	189	1.00	1.00

A very good correlation between the actual and calculated logs was derived throughout the interval (Figure 5). The sandstones are interpreted to be fairly clean, with calcite cement and a trace of heavy minerals. Gas is interpreted to be present in the Waarre C sandstone at very low saturation and in the Waarre A sandstone at higher saturation. Permeability was not derived for the Statlith model.

INTERPRETATION

The **Flaxman Formation** was penetrated from 2318.6 to 2535.3 mRT. The Statlith interpretation suggests that the Flaxman Formation contains a significant proportion of dense minerals, modelled as siderite in Statlith, but possibly other dense, probably iron rich minerals. Goethite was described in offset wells.

The **Waarre C** was penetrated between 2535.3 – 2564.8 mRT (20 metres thick). It is described as being medium – coarse grained, with weak to moderate cementation. No hydrocarbon fluorescence was observed. Up to 5% total gas was recorded over the upper 12 metres of the sandstone, with components up to C5 being recognised.

The mobility of the Waarre C sandstones can be estimated from the MFT pressure build-ups. Four pre-test pressures were measured in the interval. The maximum measured mobility was 26.7 mD/cp at the top of the sandstone. This decreased downwards through the sandstone to 2.8 mD/cp at the base. This approximately corresponds to a permeability range of 1.4 - 13.3 mD. The deepest MFT point was slightly super-charged. The upper three points of the MFT pressure programme give a pressure gradient of 0.429 psi / ft, corresponding to water.

The calculated water saturation indicates residual gas saturation in isolated intervals of the sandstone. These correspond with minor peaks on the mud gas and the observation of a water gradient in the three valid pressure points (Figure 6).

The Waarre C is 29.5 metres thick at Childers Cove-1. 12.0 metres (41%) of this is calculated to be net sand for gas with an average porosity of 11.7% and geometric average permeability of 4.2 mD. No net pay is calculated to be present. A slightly higher net sand thickness (17.4 metres) is calculated using the outputs from the Statlith model with similar calculated net sand porosity and permeability.

The **Waarre B** was penetrated from 2564.9 to 2584.3 mRT (19.4 metres thick). The interval is siltstone / shale throughout and does not contain any net sand.

The **Waarre A** was penetrated from 2584.3 to 2624.9 mRT (40.6 metres thick). The sandstones are described as being very fine to medium, predominantly fine grained with

strong calcite cement and white argillaceous kaolinitic or chloritic cement. A trace of dim to moderately bright white / blue fluorescence with a very slow white blooming crush cut and very thin dull white residual ring was observed between 2592 – 2598 mRT. Moderate gas shows were observed between 2584 – 2600 mRT (loggers depth) during drilling.

Using the formation water parameters derived from the Waarre C, the gas saturation in the Waarre C is calculated to be 40 – 50% in the more porous sandstones from 2584 to 2598 mRT and in sandstones at 2612 mRT and 2616 mRT, corresponding to the increased mud gas. The MFT pre-test mobility for each of these intervals suggests that each of these sandstones is tight. A high residual gas saturation is, therefore, interpreted to be present in each sandstone.

No net sand is interpreted to be present in the interval.

The **Eumeralla Formation** was penetrated from 2624.9 mRT to total depth at 2658 mRT (33.1 metres thick). The interval is siltstone / shale throughout and does not contain any net sand.

Figure 2: MFT Mobility Data Plotted Against Log Porosity

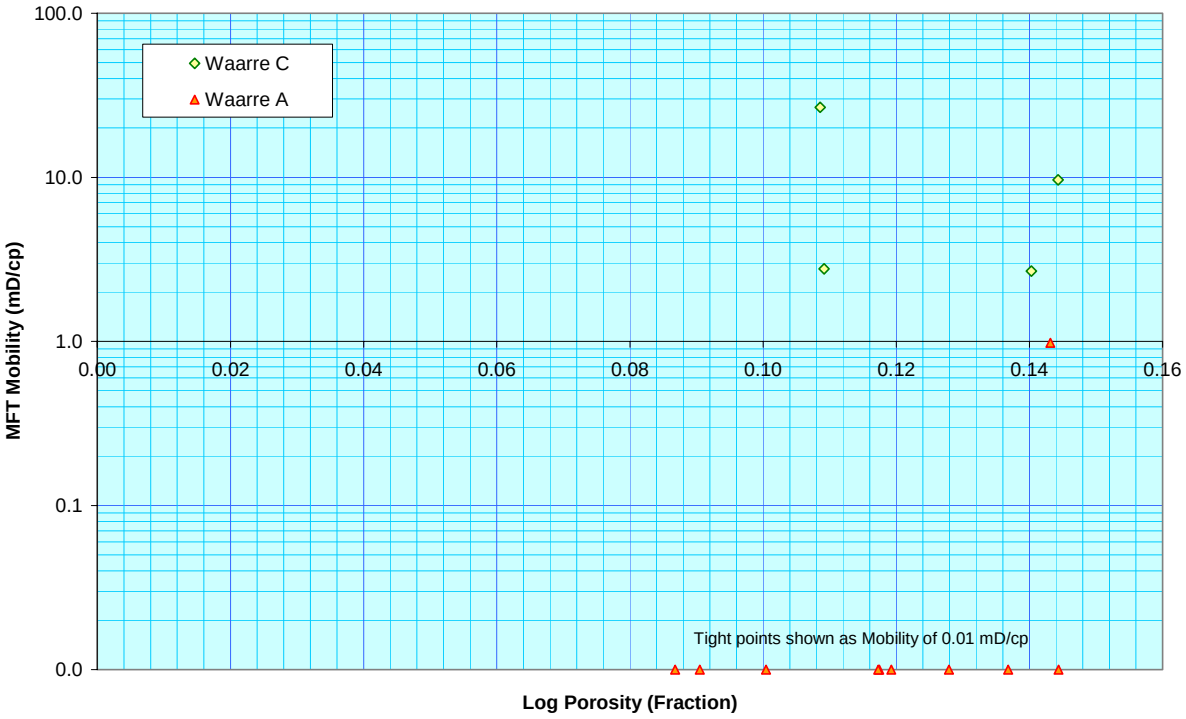


Figure 3: MFT Mobility Plotted against Depth Below Top Waarre C

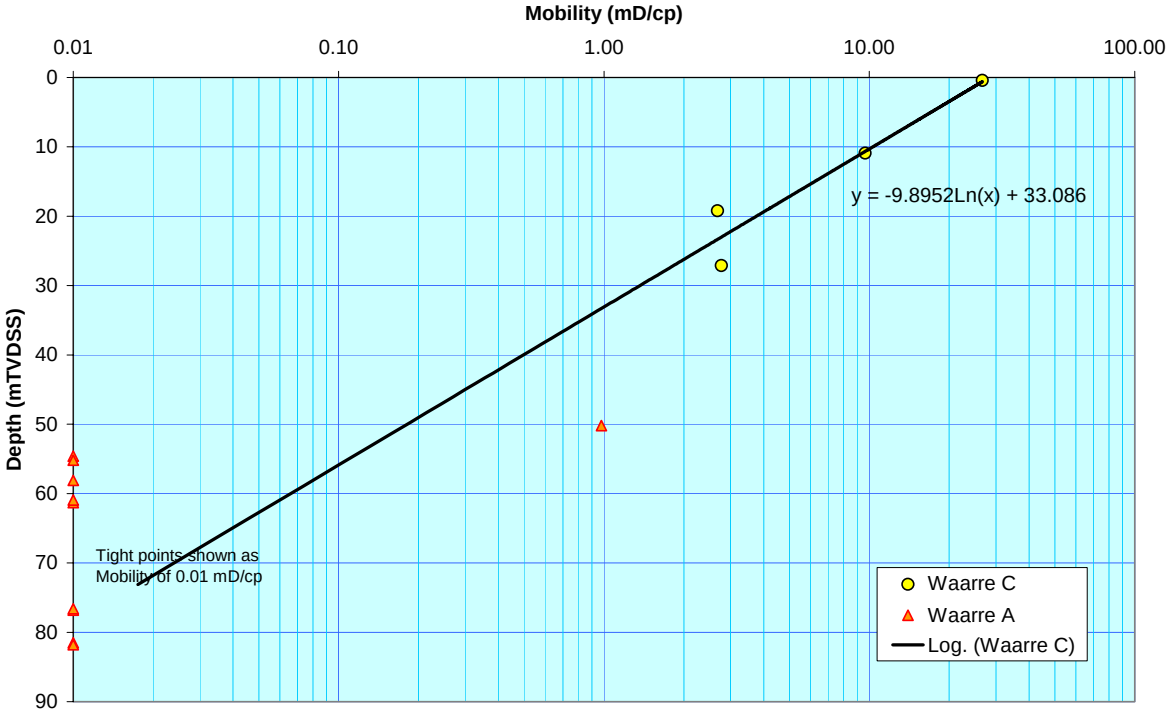


Figure 4: Pickett Plot from the Waarre C Sandstone in Childers Cove-1

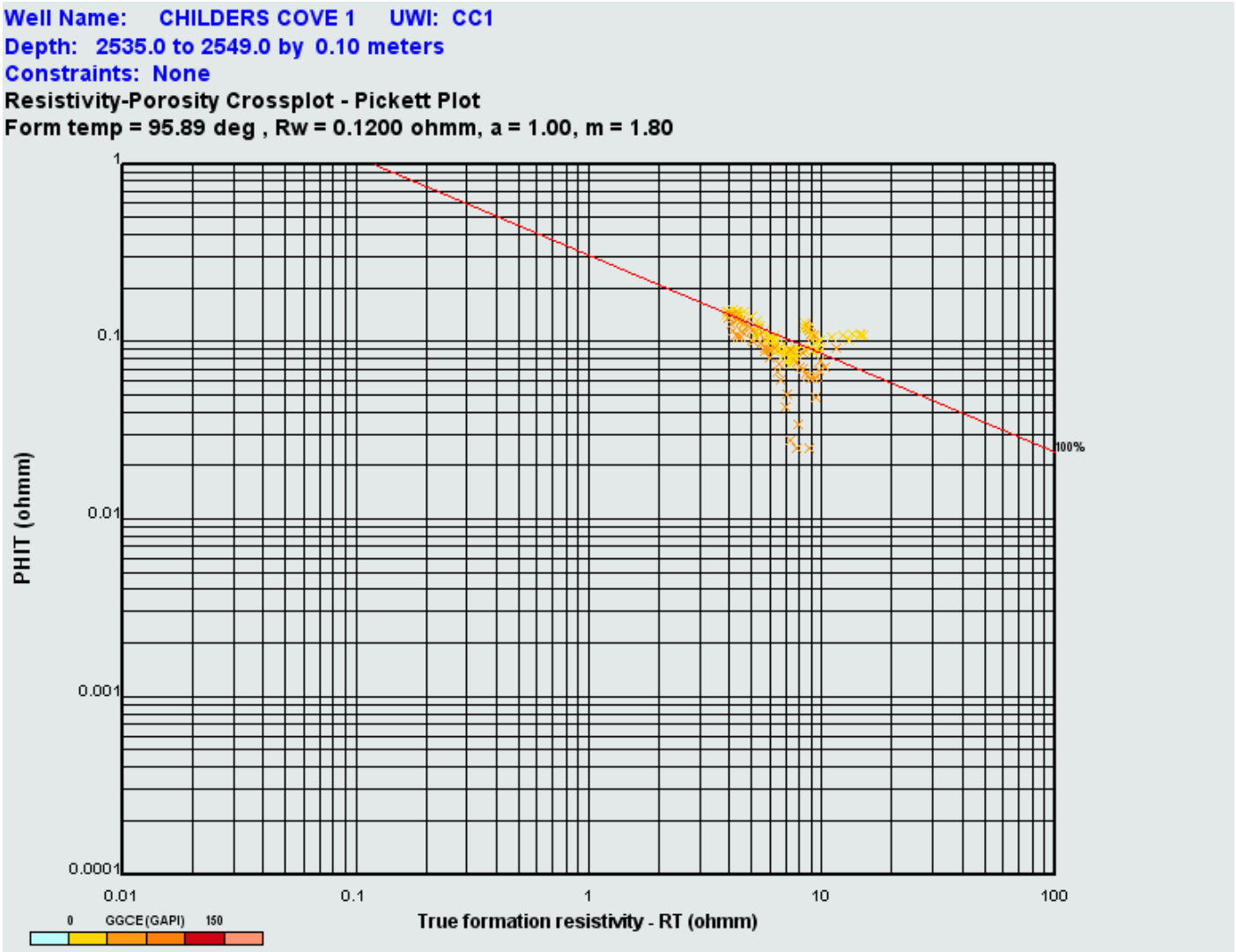
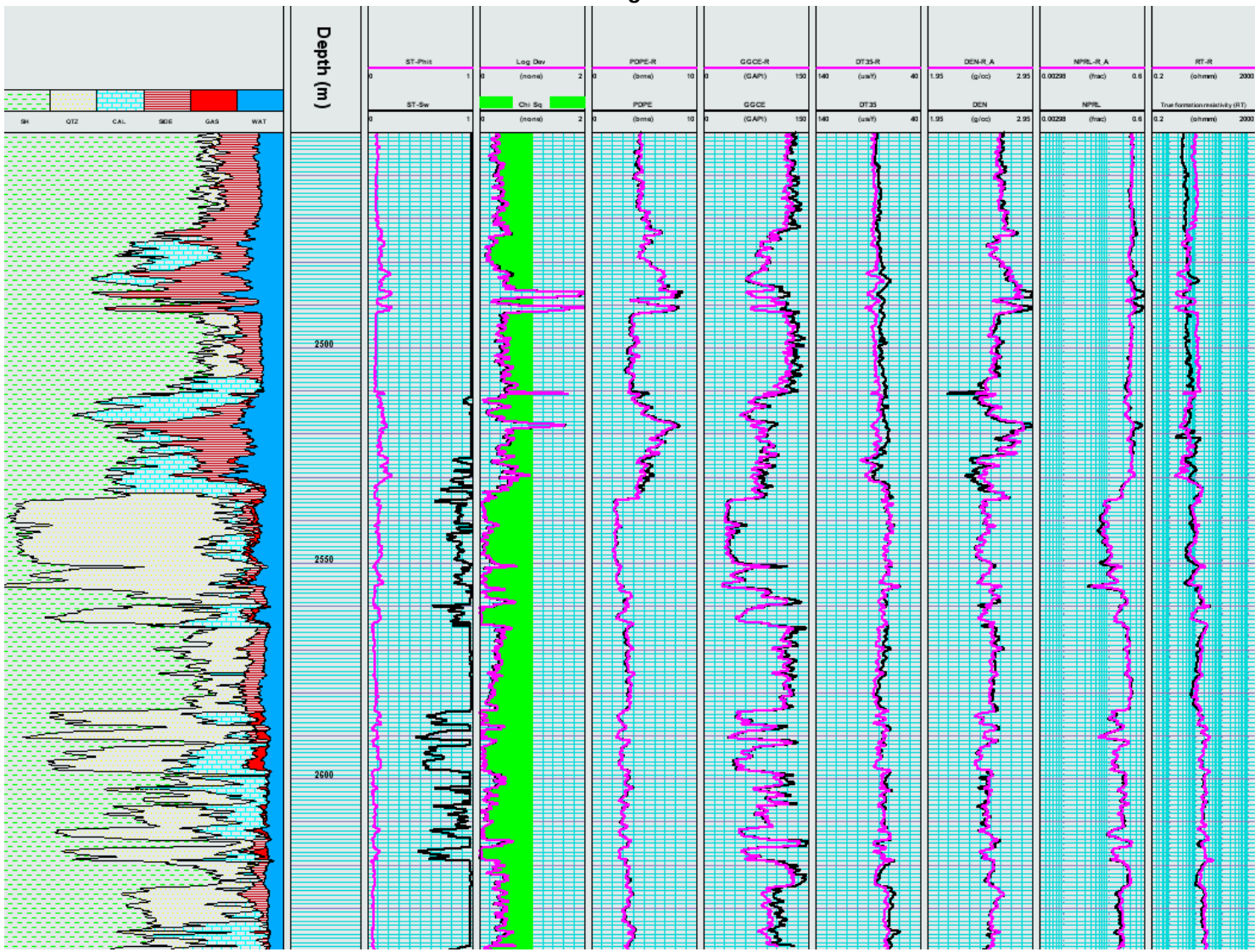


Figure 5: Childers Cove-1: Statlith Model



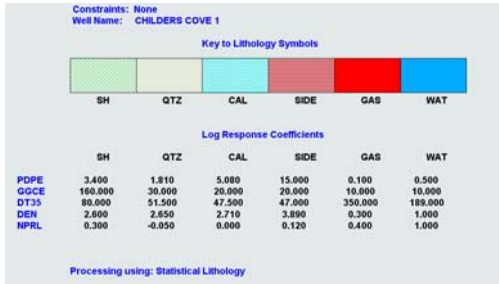
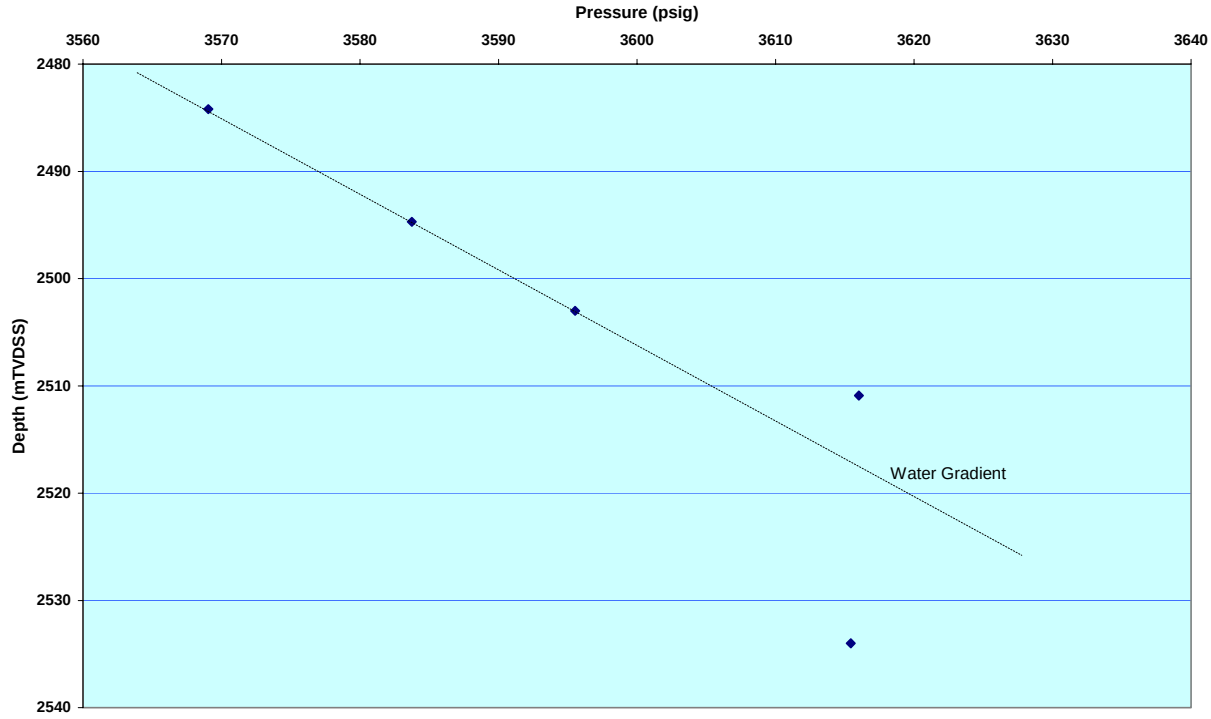


Figure 6: MFT Pre-test Pressures for the Waarre C in Childers Cove-1



Appendix A: Terrastation TCL Macro Used to Interpret Childers Cove-1

```
**********************************************
* Mud properties RM (C7), RMF (C9), RMC (C5), MW (C25)
* Temperatures RM (C8), RMF (C10), RMC (C6)
*
* MW
        C25= 1.15*8.347
* Rm
        C7 = 0.65
        C8 = 13.9
* Rmf
        C9 = 1.06
        C10 = 13.9
* Rmc
        C5 = 0.53
        C6 = 14.1
PRINT Mud Properties entered
**********************************************
* Temperature Log
*
* SET BHT (C13) and Depth (C20), Surface Temp (C14) and Depth (C34)
        C13 = 95.5
        C20 = 2529
        C14 = 20
        C34 = 5.3
SET DEPTH INTERVAL 2400 2640
BEGIN
        VT= C14 + (C13 - C14) * (VDEPTH - C34) / (C20 - C34)
ENDBEGIN
PRINT Temperature Log Created
**********************************************
*
* Formation Water Resistivity and Archie 'a'
*
* Set Rw (C11) and RW temp (C12)
C11 = 0.12
C12 = 95.89
*
* Set Archie a (C16)
C16=1
PRINT Rw and Archie a entered
*Set Flag for cycling zones
C40=0
**********************************************
*
BEGIN
* Matrix GR (C61), Density (C62), Sonic (C63), Neutron (C64)
        C61 = 30
        C62 = 2.65
        C63 = 51.5
        C64 = -0.06
*
* Shale GR (C65), Density (C66), Sonic (C67), Neutron (C68)
        C65 = 130
        C66 = 2.53
        C67 = 80
        C68 = 0.36
*
* Fluid GR (C69), Density (C70), Sonic (C71), Neutron (C72)
        C69 = 10
        C70 = 1
        C71 = 189
        C72 = 1.00
        if (VDEPTH > 2595 & VDEPTH < 2599)
                C71 = 250
        endif
*
* Archie Parameters
* Set m (C17), n (C18)
C17 = 1.8
C18 = 2.0
*-----------------------------------------------------------------
*-----------------------------------------------------------------
```

```
* Shale Volume
        VVSH_GRL = (VGGCE-C61)/(C65 - C61)
        V1375 = (C62 - C70) * (C72 - VNPRL) - (VDEN-C70)*(C72 - C64)
        V1376 = (C62 - C70) * (C72 - C68)-(C66-C70)*(C72 - C64)
        VVSH_ND=V1375 / V1376
*
        if (VVSH_GRL<=VVSH_ND)
                VVSH = VVSH_GRL
        else
                VVSH=  VVSH_ND
        endif
*
        if (VVSH < 0)
                VVSH=0
        endif
        if (VVSH > 1)
                VVSH=1
        endif
*
*-------------------------------------------------------------
* Porosity
*
        VPHI_D = (C62 - VDEN) / (C62 - C70)
*
        VDTSC = VDT35 - VVSH * 23
        VPHI_S = (VDTSC - C63) / (C71 - C63)
*
        VNPSC = VNPRL_SS - VVSH * 0.33
        VPHI_ND = (VPHI_D + VNPSC) / 2
*
        VPHIT = VPHI_ND
*
*
*-------------------------------------------------------------
* Permeability
*
        C50 = VDEPTH - 2535.3
*
        if (C50 < 0.1)
                GOTO ENDPERM
        endif
        VPOPE = (-5.7875 * @LN(C50) + 21.621) * 0.5
*
:ENDPERM
*
*-------------------------------------------------------------
* Water Saturation
* Rw and Rmf correction
*
        VRW_T = C11 * (C12 + 21.5) / (VT + 21.5)
        VRMF_T = C9 * (C10 + 21.5) / (VT + 21.5)
*
* Archie Water saturation
        VSW_ARCH = ((C16/VPHIT^C17)*(VRW_T/VRT))^(1/C18)
        VSXO_ARCH = ((C16/VPHIT^C17)*(VRMF_T/VRX0))^(1/C18)
*
        VBVW = VPHIT * VSW_ARCH
        if (VBVW > VPHIT)
                VBVW = VPHIT
        endif
        if (VBVW < 0)
                VBVW = 0
        endif
*
*
*-------------------------------------------------------------
* Net Sand and Net Pay Determination
*
        if (VVSH < 0.4 & VPOPE > 0.2)
                VNETSAND = 1
        else
                VNETSAND = 0
        endif
ENDBEGIN
```

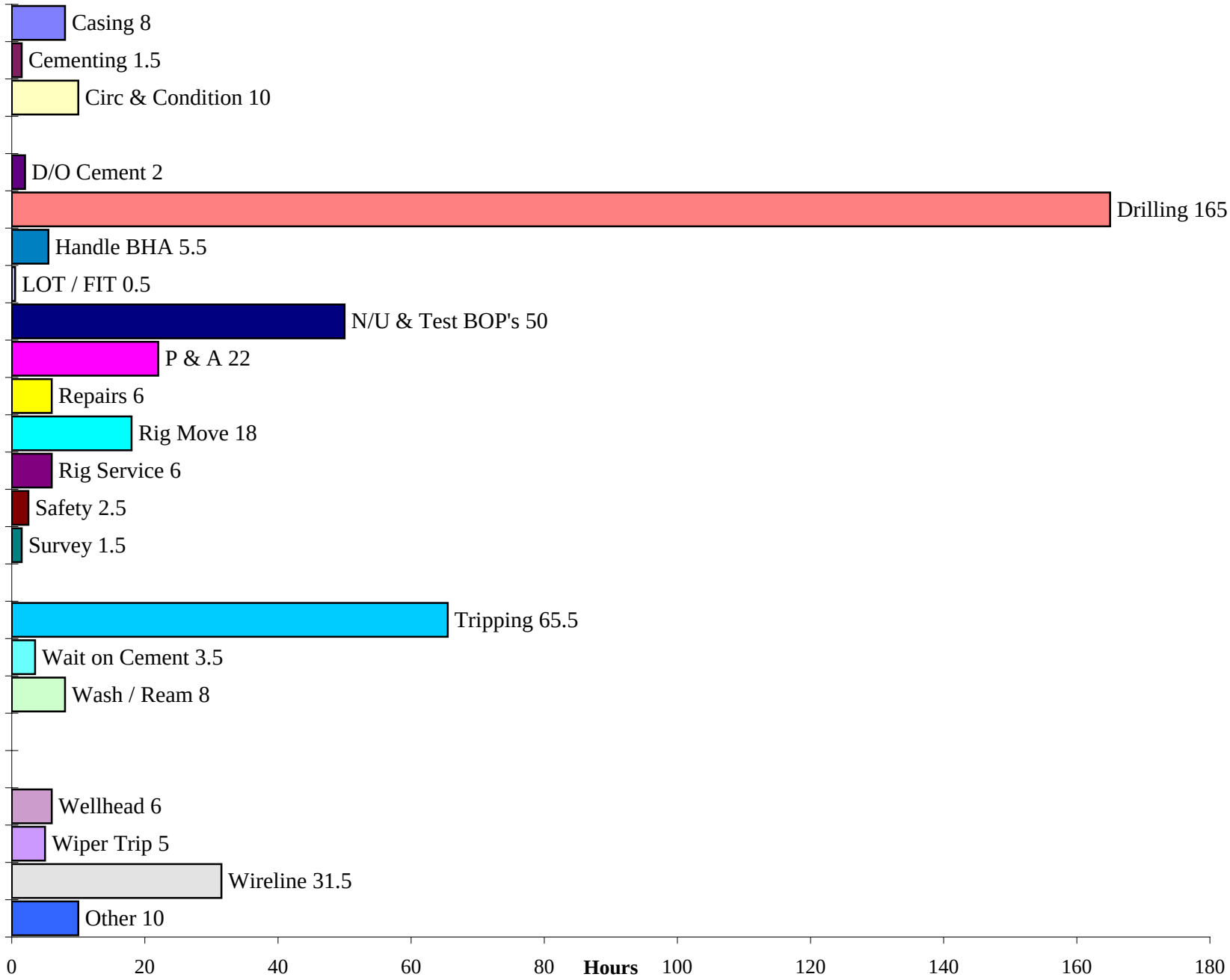
APPENDIX 10

TIME BREAKDOWN

AND

TIME/DEPTH CURVE

Childers Cove 1- 428Hrs Total



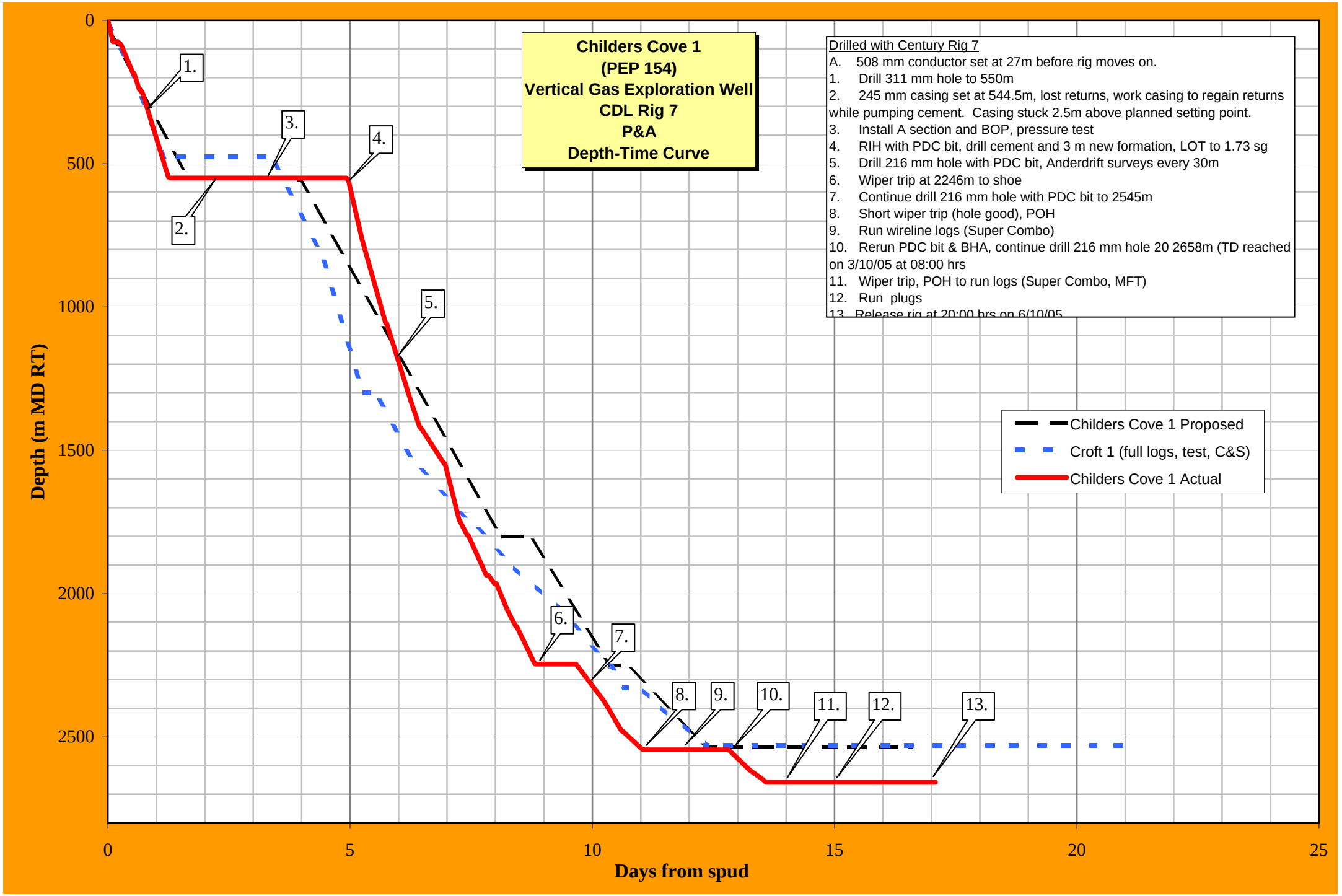

Childers Cove 1
(PEP 154)
Vertical Gas Exploration Well
CDL Rig 7
P&A
Depth-Time Curve
Drilled with Century Rig 7
A. 508 mm conductor set at 27m before rig moves on.
1. Drill 311 mm hole to 550m
2. 245 mm casing set at 544.5m, lost returns, work casing to regain returns while pumping cement. Casing stuck 2.5m above planned setting point.
3. Install A section and BOP, pressure test
4. RIH with PDC bit, drill cement and 3 m new formation, LOT to 1.73 sg
5. Drill 216 mm hole with PDC bit, Anderdrift surveys every 30m
6. Wiper trip at 2246m to shoe
7. Continue drill 216 mm hole with PDC bit to 2545m
8. Short wiper trip (hole good), POH
9. Run wireline logs (Super Combo)
10. Rerun PDC bit & BHA, continue drill 216 mm hole 20 2658m (TD reached on 3/10/05 at 08:00 hrs
11. Wiper trip, POH to run logs (Super Combo, MFT)
12. Run plugs
13. Release rig at 20:00 hrs on 6/10/05
Childers Cove 1 Proposed
Croft 1 (full logs, test, C&S)
Childers Cove 1 Actual
Depth (m MD RT)
0
500
1000
1500
2000
2500
Days from spud
0
5
10
15
20
25

FIGURE 4

APPENDIX 11

BIT RECORD

ORIGIN ENERGY

BIT RECORD

Well : **Childers Cove 1** Basin / Area : **Otway** Permit : **PEP 154** Field : **Otway**

Location : Latitude : **142° 44' 46.70'' S** G.L. **13.00** metres Spud Date: **19-Sep-05**

Longitude : **38° 29' 32.00'' E** Well Site Supervisor: **S.Porter / B.Webb** K.B. **18.30** metres T.D. Date: **3-Oct-05**

Contractor : **Century Resources Ltd** Rig #: **7** Proposed TD: **2075** metres Rig Released Date: **6-Oct-05**

PUMPS				MUD TYPE				
No.	**Type**	**Stroke (in)**	**Liner (in)**	**Output (gps)**	**Section**	**Dev**	**Interval**	**Type**	**Wt**
1	8-P-80 Triplex	8.50	6.00	3.03	Surface	0.00°	0m to 550m	KCL/PHPA	8.65
2	8-P-80 Triplex	8.50	6.00	3.03	Main	4.50°	550m to 2658m	KCL/PHPA	9.60

Bit No.	Run No.	Size (in)	Make	Type	IADC Code	Serial No.	# of nozzles Size- 32nds			Motor Y / N	Shock-Sub Serial No.	Depth Out	Metres	Hours	ROP (m/hr)	Accum Hours	Bit Grading I	O	D	L	B	G	O	R	WOB Mn	WOB Mx	RPM Mn	RPM Mx	Press (psi)	Pump (gpm)
1	A			Auger								27	27	0	0.0	0													
2	1RR1	12.25	Varel	CH1GMS	117	198598	3			N		550	523	26	20.1	26	2	1	WT	A	E	I	NO	TD	5	17	80	120	1500	600
							16																							
3	2	8.5	Hughes	HC605S	S323	7002589	1	5		N		2545	1995	121	16.5	147	2	2	WT	N	X	I	NO	TD	5	20	90	120	2000	550
							14	13																						
4	2RR1	8.5	Hughes	HC605S	S323	7002589.0	1	5		N		2658	113	18	6.3	165	3	2	WT	N	X	I	NO	TD	12	20	90	120	2000	500
							14	13																						
													2108	139	15.2															

Comments : 2RR1- decision made to deepen well after wireline logging

APPENDIX 12

CASING AND CEMENTING REPORT

CASING AND CEMENTING REPORT

WELL: Childers Cove 1 **SUPERVISOR:** S.Porter / B.Webb **DATE:** 21/09/05

CASING DETAILS

Size (")	9 5/8	Weight (ppf)	36	Grade	K-55	Landed depth (mRT)	544.5	Av. Length	12.02	Collapse (psi)	2020	Burst (psi)	3520		
Joints on location	45	No. of joints run	45	Joints in shoe track	1	Float shoe (Y/N)	Y	Float collar (Y/N)	Y						
Final displ. (psi)	517	Buoyed wt. (kLb)	55	Set weight (kLb)	19	Displ. (Bbls)	23	Coupling	BTC						

PRE JOB CIRCULATION

Pump 1 (spm)		Pump 2 (spm)	100	Pressure	300	Time (mins)	40	Vol. Pumped (Bbls)	288	Mud wt (ppg)	9.0

PRE-FLUSH

Volume (Bbls)	20	Wt(ppg)	8.34	Hyd. Loss (psi)	12	**Additives:**		Kg			Kg

TAIL SLURRY

Wt(ppg)	15.8	Class	G	Volume (Bbls)	56	Yield	1.16	Sacks	270	Water (g/sx)	5.10	Water (Bbls)	33	Design top	397
OH/Cal	OH	Excess (%)	95	Hole size (")	12.25	Mix (bpm)	6	Mix (psi)	200	Start	21:21	Finish	21:35		

Additives:								
0.2	%	CFR-2		gals	CFR-2	55.0	lb	
	%			gals			lb	

LEAD SLURRY

Wt(ppg)	13.2	Class	G	Volume (Bbls)	140	Yield	1.81	Sacks	435	Water (g/sx)	9.62	Water (Bbls)	100	Design top	0
OH/Cal	OH	Excess (%)	70	Hole size (")	12.25	Mix (bpm)	6	Mix (psi)	180	Start	20:55	Finish	21:21		

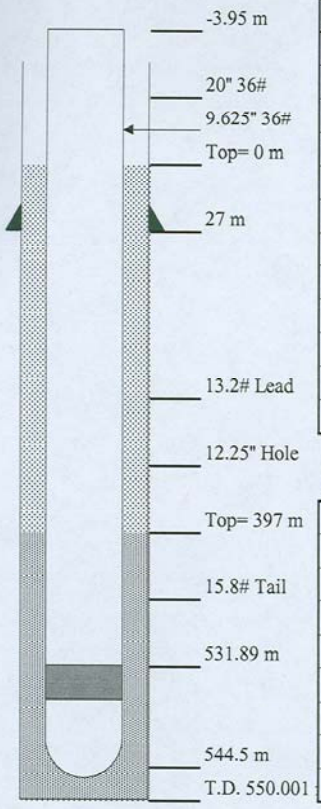
Additives:								
	%	Econolite	156.0	gals	0.354 gals/sack		lb	
	%	Econolite		gals			lb	

DISPLACEMENT

Fluid type	Water	Wt	8.34	Calculated (Bbls)	135	Pumped (Bbls)	139	Bump pressure (psi)	1000	Used (Rig/Unit)	Unit				
Time: Start	21:35	Finish	21:58	Returns (%)	95	Top plug (Y/N)	Y	Bottom plug (Y/N)	Y	Floats held (Y/N)	Y				
Pressure (psi)	Initial	150	final	630	max	630	min	150	**Rate (bpm)**	Initial	7.5	final	4.5	max	7.5	min	2

LOT / FIT

OMW (ppg)	8.50	FIT (ppg)	14.42	FIT Pressure (psi)	550	Test pressure (psi)	550	EMW (ppg)	14.42



CASING RUN LIST

QTY	DESCRIPTION	LENGTH	FROM	TO
1	Float Shoe	0.44	544.06	544.50
1	Joint, 9-5/8" 36# K-55BTC R3 casing	11.86	532.20	544.06
1	Float Collar	0.31	531.89	532.20
44	Joints, 9-5/8" 36# K-55 BTC R3 casing	528.82	3.07	531.89
1	Landing Joint	7.02	-3.95	3.07

COMMENTS

Casing was tight running in from 200 - 240m then ran to bottom OK.
Circulated hole clean, there was lots of large cuttings/cavings returned
Mixed & pumped cement with good slurries. Lost returns during displacement, worked casing & re-gained returns. Just prior to bumping ther plug, casing became stuck with no warning. Attempted to work free, no success, and ended up 2.5m above the proposed setting point.
Got a S.O.W Bradenhead over from Adelaide, welded that on and procedded with nipple up.
2 cu/m of ready-mix concrete was used to fill the 9-5/8" - 20" annulus as the cement slumped down 6m
RT - Bradenhead = 4.85m

APPENDIX 13

FLUIDS RECAPS

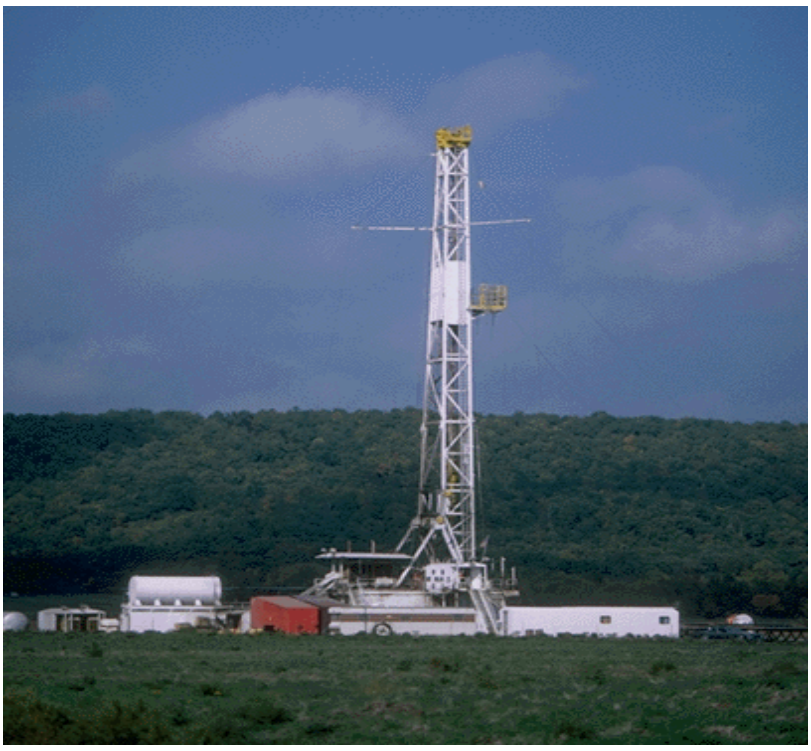
AND

DAILY MUD REPORT

Fluids Recap

Origin Energy

Childer's Cove-1
Onshore Otway Basin
Exploration
Victoria



Prepared by: **Nigel Warman**

MI SWACO

M-I *L.L.C.*

ONE-TRAX

DRILLING FLUID DATA MANAGEMENT SYSTEM

Operator:	Origin Energy	**Spud Date:**	19/09/2005
Well Name:	Childer's Cove-1	**TD Date:**	30/09/2005
Field/Area:	PEP 154	**Location Code:**	7001
Description:	Vertical Exploration	**Project Engineer:**	Nigel Warman
Location:	Onshore Otway Basin	**Mud Engineer:**	Mike McKay
Warehouse:	Adelaide	**Mud Engineer:**	
Contractor:	Century Drilling Ltd.	**M-I Well No.**	27393

Comments: Childer's Cove-1 was plugged and abandoned.

Type	Size in	Depth m	TVD m	Hole in	Max MW sp.gr.	Fluid 1	Fluid2	Drilling Problem	Days	Cost A$
Casing	20	16	16	20	1	N/A	N/A	N/A		
Casing	9.625	545	545	12.25	1.09	Spud Mud	Potassium System	None	3	5849.15
Open Hole	.	2658	2658	8.5	1.15	KCL/PHPA	N/A	Lost Circulation	14	70298.63

Total Depth: 2545 m TVD: 2545 m Water Depth: m Drilling Days: 17 Total Cost: 76,147.78

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

CONTENTS:

– DISCUSSION BY INTERVAL

– DAILY DISCUSSION REPORT

– COST BY INTERVAL

– DAILY VOLUME SUMMARY SHEET

– TOTAL MATERIAL COST

– HYDRAULICS REPORT

– DRILLING FLUIDS SUMMARY

– PRODUCT CONSUMPTION

– DAILY MUD REPORTS

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

DISCUSSION
BY
INTERVAL

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

INTRODUCTION

Origin Energy was the Operator for the vertical gas exploration well Childer's Cove-1, situated in block PEP 154 onshore Otway Basin Victoria, approximately 10 kms south-east of the coastal town of Warrnambool. The co-ordinates of the well were: Latitude: 38° 29' 32.0" South and Longitude: 142° 51' 33.3" East. The rig used was the truck mounted double Century Drilling Rig #7.

Childer's Cove-1 was spudded on the 19th September 2005 and initially total depth was called at 2545 metres on the 30th September 2005. However, due to the primary objective not being seen on the electric logs, actual total depth was reached at 2658 metres on 3rd October 2005.

The primary objective was the basal Sherbrook sandstones of the Waarre Formation and / or Flaxman Formation. The Waarre Formation is the productive reservoir unit in the Port Campbell Embayment. In contrast to the existing gas discoveries that are all located on high-side fault blocks, this well is planned to test a new play type that combines a "low-side fault block" with a "stratigraphic pinch-out".

Analyses of offset well data show no indication of significant over-pressuring in the Waarre Formation. There has been some evidence of elevated pore pressure in the Belfast Mudstone, which results in unstable hole conditions. The mud density has been typically increased to 1.13 sg through this section. On the offset well, Curdie-1, there were indications of a Belfast Mudstone pore pressure of 1.26 sg equivalent mud density (EMD). There were no indications that this pore pressure was transmitted to the adjacent Waarre Formation. The highest tested pore pressure in the Waarre Formation from offset wells is 1.017 sg EMD. The assumed in-situ gas gradient is 0.058 psi/ft. No temperature gradient is given.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

Formation Tops:

Formation	Lithology	Depth (TVD)
Port Campbell Limestone	5.3	
Gellibrand Marl	148	213
Clifton Formation	566	595.5
Narrawaturk Formation	596	623
Mepunga Formation	665	645
Dilwyn Formation	754	775
Pember Mudstone	1140	1191
Pebble Point Formation	1199	1225
Paaratte Formation	1289	1287
Skull Creek Mudstone	1760	1757
Nullawarre Greensand	1926	1920
Belfast Mudstone	2032	2335
Top Amplitudes (possible Eumeralla Fm.)	2349	2435
Base Amplitudes	2486	n/a
Target Depth (shallow)	**2536**	**2545**
Eumeralla Formation	2707	a/a
Target Depth	**2747**	**2658**

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

Interval I	0 - 550 m	12¼" Hole section	9⅝" Casing set @ 545m

MUD TYPE : Pre-hydrated bentonite and 2% potassium chloride.

PROBLEMS : Moderate sub-surface losses.

MUD PROPERTIES :

Mud Density	:	1.04 - 1.09 sg
Funnel Viscosity	:	40 - 70 sec/ qt
Yield Point	:	30 - 55 / 100 ft^2
Plastic Viscosity	:	alap
pH	:	8.5 - 9.5

OPERATIONS

The 12¼" interval was spudded with 23 pounds per barrel (ppb) pre-hydrated Bentonite (PHG). The PHG was used to drill the Port Campbell limestone. Moderate sub-surface losses were seen while drilling the limestone but not treated with lost circulation material. Along with the sub-surface losses it was noted that the volume of cuttings returned at the shale shakers were less than the cuttings generated from the hole being drilled. To prevent annulus cuttings loading the rate of penetration was controlled and extra time was spent circulating prior to connections.

The top of the "mud-making" or "gumbo" Gellibrand Marl was prognosed at 148 metres. The actual formation top was 213 metres. Immediately prior to the prognosed formation top 2% potassium chloride was introduced directly to the PHG spud mud active circulating system.

The K^+ ions were added to provide inhibition of hydration of the clay fraction of the marl. To compensate for depletion, 3% potassium chloride was added in the maintenance premixes.

From 140 metres to target depth at 550 metres only premixed potassium chloride brine was added to the active system. No direct additions of water or potassium chloride were made to the active system.

To ensure that there was always good hole cleaning the funnel viscosity was allowed to increase to ± 70 seconds per quart before introducing the 200-barrel brine lots. These dilutions typically cut back the active circulating system's funnel viscosity to 40 - 45 seconds per quart.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

The shale shakers were fitted with 110-mesh screens. The gun-line possum-belly jet was run continuously to prevent flow-line blockage. The desander and desilter were used once the drilled solids content had increased to where the hydroclones could work efficiently. There were no problems with flow-line blockage or shale shaker screen blinding by "gumbo" as experienced on the previous well.

The hole cleaning and cuttings integrity were good throughout the drilling of the interval. Moderate amounts of large blocky cavings were noted while drilling the upper half of the Gellibrand Marl, these cavings were noted again on circulating bottoms-up after the wiper trip prior to pulling out of the hole to run the 9⅝" casing and during cementing. Five metres of fill were seen on the wiper trip.

A brine dilution was made prior to pulling out of the hole to run the 9⅝" casing to decrease the gel strengths and thereby decrease the likelihood of surge losses while running the casing and cement channelling.

While running the casing tight hole was experienced from 203 metres to 239 metres coinciding with the top of the Gellibrand Marl, 213 metres.

The 9⅝" casing was run and set at 547 metres. The casing required reciprocation to prevent packing-off during the cement job. There were good cement returns to surface.

No problems were experienced while drilling this interval, although there was a potential for problems with major sub-surface mud losses through the shallow depth fractured Port Campbell limestone formations and cavings from the top section of the Gellibrand Marl formation.

MUD SYSTEM AND MAINTENANCE

Care was taken never to reduce the hole cleaning properties of the system by allowing the viscosities to increase prior to dilution with potassium chloride brine. Dumping and dilution were required to manage the viscosities and density.

The depletion of K^+ ions appeared to be high, indicating the reactive nature of the clay fraction of the Gellibrand Marl. The replacement dilution concentration of potassium chloride was increased to 3% to ensure the active potassium chloride concentration did not decrease below the desired programmed concentration of 2%.

SOLIDS CONTROL EQUIPMENT

The solids control equipment consisted of: DFE ALS shale shakers (x 2), a desander (12" x 2 cones) and a desilter (4" x 10 cones).

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

The shale shakers were dressed with 110-mesh screens. The desander and desilter were run when the drilled solids content of the mud allowed for efficient operation. The maximum-recorded sand content was 0.5%.

The dilutions made to control the viscosities also controlled the mud density, which ranged from 1.04 sg to 1.09 sg.

OBSERVATIONS AND RECOMMENDATIONS

The PHG used at the start of the interval providing good hole cleaning until drilling the mud-making Gellibrand Marl. Thereafter, the K^+ ions from the potassium chloride brine dilutions provided excellent cuttings inhibition and regulated the intermittent rapid viscosity / mud density increases.

It is recommended that all dilution on future wells be made exclusively by premixed brine additions so as to ensure a regulated concentration of the inhibitive K^+ ions and therefore preventing problems with "gumbo" blockage of the flow-line and shale shaker screen blinding.

On drilling the Gellibrand Marl the sub-surface losses to the Port Campbell limestone decreased. Care was taken so as not to induce greater sub-surface losses by cuttings loading of the annulus.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

Interval II	550 - 2658 m	8½" Hole section	P & A

MUD TYPE : KCl / PHPA / POLYMER

MUD RELATED HOLE PROBLEMS : Swabbing on trip

MUD PROBLEMS: : Polymer shearing and shale shaker efficiency.

MUD PROPERTIES:

Mud Density	:	1.05 - 1.16 sg
Funnel Viscosity	:	45 - 70 sec/ qt
Plastic Viscosity	:	10 - 27 cP
Yield Point	:	16 - 35 lbs/ 100 ft^2
6 rpm reading	:	6 - 8
Fluid Loss	:	4.0 - 7.0 mls./ 30 min
pH	:	8.6 - 9.7
Methylene Blue Capacity	:	2.0 - 10.0 ppb
Sulphite (excess)	:	20 - 200 mg/ lt
PHPA (excess)	:	0.5 – 1.3 ppb
Potassium chloride	:	4.0 – 5.5 % wt/ vol
Drilled Solids	:	3.6 - 6.6 % vol/ vol

OPERATIONS

Prior to drilling-out, KCl / PHPA / Polymer mud was mixed in all of the available pit space with a reduced concentration of PHPA. The shale shakers were fitted with 54-mesh screens. The installation of the coarse screen mesh size and the reduced concentration of PHPA were to minimise losses at the shale shakers of the cold, un-sheared mud.

Due to the top of the Gellibrand formation being intersected deeper than prognoses it was thought that more of this "mud-making" formation would be drilled than expected. On this basis no pre-hydrated bentonite was used in the initial premix. The programmed called for 4 ppb PHG to be added to the initial mud to enhance wall cake build-up (and decrease fluid loss).

On running in the hole cement was tagged at 523 metres. Drill-water, in a closed system from the slug pit, was used to drill-out cement. The KCl / PHPA / Polymer mud was displaced to the hole immediately prior to drilling-out the shoe. On drilling 3 metres of new hole a formation integrity test (FIT) was performed. The desire equivalent mud density (EMD) was 2.0 sg, however the formation leaked-off at 1.63 sg EMD.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

On drilling ahead and as the mud sheared, attempts were made to increase the concentration of PHPA (Polyplus) with high concentration premixes. The high concentration premix was mixed using the "slam-dunk" method.

The interval was drilled with high rates of penetration. There were surface losses due to possum-belly / flow-line blockage while drilling shale followed by sub-surface losses to sandstone. Replacement volume was built as quickly as possible. As such there was a delay in decreasing the mesh size on the shale shakers resulting in a high sand content. Eventually 110-mesh screens were fitted. With the finer shale shaker mesh size and having enough volume in the pits allowing the sand trap to be dumped the sand content decreased.

The fluid loss was reduced with Polypac UL to < 7.0 mls / 30 minutes before drilling the Dilwyn (aquifer) formation. The lower fluid loss was to minimise contamination of the regional aquifer.

There were sub-surface seepage losses to the Dilwyn (aquifer) formation and later in the Paaratte formation. When the sub-surface losses increased to 25 barrels per hour lost circulation material (Kwik Seal Fine) was added directly to the top of the active suction pit.

In an attempt to minimise losses at the shale shakers the PHPA concentration in the maintenance pre-mixes was restricted. Once the losses (sub-surface and over the flow-line) stabilised and the flow-line temperature had increased an attempt was made to increase the active PHPA concentration to 1.25 - 1.5 ppb. This, however, induced further loss at the shale shakers. It should be noted that there was no ability to shear the polymer(s) and the shale shakers are inadequate.

Sodium sulphite oxygen scavenger (OS-1) was added for corrosion control and maintained between 80 -200 milligrams per litre (mg/ lt) to total depth.

The fluid loss was reduced to < 5.0 mls / 30 minutes before entering the Belfast mudstone by increasing the Polypac UL concentration in the premixes added to the active. The overall concentration of Polypac UL to 2246 metres was 2.9 ppb. This high consumption was due to the lack of shearing.

Sub-surface seepage losses were suspected throughout drilling the interval.

A wiper trip was performed at 2246 metres. The hole was deemed to be in good condition.

The mud density was increased to 1.13 sg while drilling the Belfast Mudstone and before entering the top amplitude expected at 2349 metres. The final mud density was 1.16 sg at total depth.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

One shale shaker was fitted with 140-mesh screens and the second with 175-mesh screens. PHPA was added for depletion and the carrying capacity was maintained with additions of Duotec.

Initial total depth was called at 2545 metres. A wiper trip was performed to 2100 metres with no over-pull. On pulling out of the hole (for electric logging) swabbing was observed from 1731 metres to 827 metres (from the Paaratte formation) and over-pull of 20 - 30 klbs. As the Paaratte formation was not known to be a reactive formation, one possibility for the swabbing and over-pull could be due to wall-cake build-up across seepage loss zones in the sandstone members in an in-gauge hole. The swabbing would be compounded by build-up on the bit and stabilizers of wall-cake dragged off the well bore. Alternatively osmotic uptake could explain under-gauge un-reactive formations.

Electric logs showed the hole to be mostly in-gauge or slightly under-gauge. The primary objective Waarre Formation was not present. The maximum bottom hole temperature from the electric logs was 95.5°C. The logging depth was 2529 metres with the driller's depth at 2545 metres. The wire-line was thought to have hung-up on a ledge.

Due to the unexpected lithology it was decided to drill ahead. On the initial bottoms-up after the electric logs two distinct types of cavings / slough were seen. The first were pebble-sized cavings that did not appear to be stress generated. The second were typical overburdened stressed slough (see Observations and Recommendations).

Drilling continued to 2658 metres where the secondary total depth was called. The maximum flow-line temperature was 63°C. The hole was wiped back to 2400 metres, a high viscosity pill was spotted across bottom to suspend any cavings / slough and the string was pulled out of the hole for electric logs without any problems.

Electric logs were run to 2567 metres without any problems. The hole remained in good condition throughout and extended electric logging programme. The maximum bottom hole temperature from the electric logs was again 95.5°C. A comparison between the initial and second calliper log gave some indication of the zones from which the cavings / slough were being generated (see: Observations and Recommendations).

Childer's Cove-1 was plugged and abandoned on 5th October 2005.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

MUD SYSTEMS AND MAINTENANCE

After the initial displacement to the new mud system and sufficient shearing through the bit had occurred, the polymer concentrations were increased as the shaker efficiency allowed. However, due to the need to build large amounts of replacement volume a fully sheared system was not seen until 2100 metres.

There were losses due to inefficient shale shakers, both over the screens and from dumping due to cuttings build-up in the mud pit. The cuttings build-up occurred because of a poor screen fit and splitting of the screens. The problem with the shale shakers was due to bed wear. The beds are to be replaced.

There was substantial sub-surface loss to the bottom of the Paaratte formation at 1760 metres and seepage losses were suspected (but not quantified) throughout the drilling of the interval. The high volume of un-sheared replacement volume contributed to the higher than expected Polypac UL consumption.

The water from the sump was recycled and used for the premix make-up water. This had the advantage of reducing transport costs for the removal of the sump water as well as reclaiming some of the polymers and salts that would normally have been lost from the mud system. This is also the reason why a study of the mass balances will show discrepancies for things like the salt concentration of the mud compared to the actual salt additions made. The reclaimed water was treated with biocide to ensure there was no microbial degradation of the mud. The disadvantages of recycling the sump were the re-introduction of drilled colloidal solids and cement contamination to the mud system.

The mud was treated with biocide to prevent any microbial degradation of the mud. OS-1 oxygen scavenger was used for corrosion control.

Some extra additions of Duotec and Polyplus were required directly to the active system to more closely control rheological and maintain excess PHPA, respectively.

SOLIDS CONTROL EQUIPMENT

The solids control equipment consisted of: DFE ALS shale shakers (x 2), a desander (12" x 2 cones) and a desilter (4" x 10 cones).

The shale shakers were initially dressed with 54-mesh screens and as conditions allowed the screen mesh size was decreased to a final configuration of 3 x 140-mesh and 3 x 175-mesh. The desander and desilter were run when the drilled solids content of the mud allowed for as efficient operation as possible.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

The replacement volume dilutions allowed the drilled solids content to remain low. The methylene blue capacity began to increase on the use of recycled sump water.

OBSERVATIONS AND RECOMMENDATIONS

Calliper Logs

The two calliper runs showed the hole to be mostly in-gauge. However, the deterioration of "washed-out" sections gave an indication of zones from which the two types of cavings / slough where being generated.

The non-stressed pebble-sized cavings where generated from the upper section of the interval, possibly from the Narrawaturk Marl (615 - 632 metres); Mepunga formation (725 - 740 metres); the top of the Dilwyn formation (775 - 784 metres) and / or the bottom of the Dilwyn formation (1055 - 1075 metres).

The stressed slough was probably generated from the Nullawarre formation (2005 - 2090 metres) and / or what was thought to be the Eumeralla formation (2491 - 2530 metres).

One remarkable aspect of the hole was the slightly under-gauge calliper to the bottom of the Paaratte formation. This cannot be attributed to wall-cake build-up as the under-gauge hole is generally across non-permeable formations. The formations are not thought to be reactive. An increase salt concentration should be considered - not so much for an increase in the inhibitive K^+ ions but to decrease the osmotic gradient.

Possible Sub-surface loss zones:

Seepage loss was seen to the Dilwyn formation. Further possible fault / fracture loss zones were seen at 857, 780, 805, 820, 871, 941, 993 and 1005 metres.

Mud shearing and Shale Shakers:

With the common use of modern polymer mud all operational rigs should be installed with an efficient shearing device and shale shakers.

The high consumption of Polypac UL can be attributed to poor shearing and poor shale shaker efficiency. As can the inability to increase the Polyplus concentration due to high volume losses at the shale shakers.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

SOLIDS CONTROL

Both the desander and desilter were inefficient. If not for the high replacement volume required for losses on this well the drilled solids would have been a major problem. The use of centrifugal pumps compounds drilled solids problems by breaking-down the drilled solids to super fines. At least one centrifuge with a positive displacement feed pump should be installed.

The shale shakers were inadequate. The worn shaker screen beds are to be replaced.

GENERAL

The hole was deemed to be in good condition. There were only minor problems on the first trip out of the hole past newly drilled formation and the final electric logs ran to bottom.

The mud cost was in line with the programmed mud cost.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

DAILY DISCUSSION REPORT

MI SWACO	**Operator :** Origin Energy	**Field/Area :** PEP 154	**Daily Discussion**
	Well Name : Childer's Cove-1	**Description :** Vertical Exploration	
	Contractor : Century Drilling Ltd.	**Location :** Onshore Otway Basi	M-I Well : **27393**

19/09/2005	TD = 84 m	Day 1

Rig-up. Drill rat / mouse holes. Spud at 18:00 hours. Drill ahead.
Mix spud mud. Install 110-mesh shale shaker screens. Initial sub-surface losses at 6-10 bbls per joint drilled in Port Campbell Limestone.

Mix spud mud. Spud at 18:00 hours. Drill ahead.Initial sub-surface losses at 6-10 bbls per joint drilled in limestone.

20/09/2005	TD = 543 m	Day 2

Drill ahead.
Add 2% KCl to active at 140 m. prior to entering the top of the Gellibrand Marl prognosed at 145 m. (actual 213 m.). Viscosity and density controlled by dump and dilute with KCl brine. Minor sub-surface losses apparent. Excellent hole cleaning and cuttings integrity. Minor slough returns.

Drill ahead. Add 2% KCl for Gellibrand Marl. Dump and dilute with KCl brine. Minor sub-surface losses apparent.

21/09/2005	TD = 550 m	Day 3

Drill to TD at 550 m. Circulate hole clean. Wiper trip. Fill 5 m. circulate with large blocky slough returns. POOH. Run and set 9-5/8" casing at 547 m. No fill. Work casing through tight hole from 203 - 239 m. (Gellibrand Marl top at 213 m.). Displace cement with drillwater.
Prior to TD add brine dilution to moderate viscosities and gels strengths for tripping, casing run and cement job. Sub-surface loss while tripping - 42 bbls; running casing - 27 bbls. Cement returns to surface. Assume all mud as dumped for accounting purposes.

Drill to TD at 550 m. Run and set 9-5/8" casing at 547 m.

22/09/2005	TD = 550 m	Day 4

Nipple-up. Corrected shoe depth from 550 - 544.5 m.
Dump and clean pits. Install 54-mesh screens to shakers. Build new whole KCl / PHPA / polymer mud with 0.5 ppb PHPA. Received material as per M-I DT#43.

Nipple-up. Build new whole KCl / PHPA / polymer mud with 0.5 ppb PHPA.

23/09/2005	TD = 550 m	Day 5

Wait on pump module.
Build KCL / PHPA / polymer mud. Total built = 566 bbls.

Build KCL / PHPA / polymer mud. Wait on pump module.

24/09/2005	TD = 766 m	Day 6

Pressure test BOPs. M/u BHA. Repace pump module. RIH. TOC at 523 m. Drill-out. Drill new hole. LOT to 1.63 sg. EMD. Drill ahead.
Circulate through gun-lines to shear mud. Drill-out with drillwater in closed system on slug pit. Displace to KCl / PHPA mud in shoe track. Increase PHPA concentration. Lower fluid loss. Increase carrying capacity. Losses due to 'possum-belly blockage. Sub-surface losses add LCM directly to suction pit.

Drill ahead. Treat mud properties. Surface and sub-surface losses.

25/09/2005	TD = 1327 m	Day 7

Drill ahead. Surveys = 0 deg.
Sub-surface seepage losses continue through Dilwyn fmt (775 - 1191 m.). Build new volume. Increase carrying capacity. Change out shaker screens to 110-mesh. Decrease sand content. Dump sandtraps. Run desilter.

Drill ahead. Sub-surface seepage losses continue through Dilwyn fmt (775 - 1191 m.).

26/09/2005	TD = 1742 m	Day 8

Drill ahead.
Build replacement volume. Temperature increasing. Increase PHPA concentration. Adjust LCM inventory. Erroneous viscometer readings due to PHPA additions. Dump sandtrap.

Drill ahead. Build replacement volume. Temperature increasing. Increase PHPA concentration.

27/09/2005	TD = 2058 m	Day 9

Drill ahead. Constantly change split shaker screens. Losses at shakers. Solids to mud pits - dump sandtrap regularly.
Build replacement mud with recycled sump fluid. Increase PHPA concentration. Losses at shakers. Erroneous viscometer readings and funnel viscosity due to PHPA additions. Order material.

Drill ahead. Build replacement mud with recycled sump fluid. Increase PHPA concentration.

28/09/2005	TD = 2246 m	Day 10

Drill ahead to 2246 m. Circulate hole clean. Slug pipe. POOH for wiper trip.
Build replacement volume with recycled sump fluid - increasing MBC / hardness. Increase carrying capacity. Build slug. Dump cuttings full sandtrap due to split screens.

Drill ahead to 2246 m. Wiper trip. Build replacement volume with recycled sump fluid. Increase carrying capacity.

29/09/2005	TD = 2377 m	Day 11

Wiper trip to shoe. Drill ahead. Non-stressed caving returns from trip.
Increase mud density to 1.13 sg. Change shaker screens. Add caustic to assist alkalinity maker for possible CO2 from Waarre - see 14:00 hr mud check for base-line alkalinity.

Wiper trip to shoe. Drill ahead.

30/09/2005	TD = 2545 m	Day 12

Drill ahead to total depth at 2545 m.
Add OS-1 for corrosion control. Add biocide prior yo wiper trip. Build slug.

1/10/2005	TD = 2545 m	Day 13

POOH. Swabbing. Back-ream swabbing hole. Tight hole 20-30 klbs over-pull from 1731 - 827 m. R/u and run electric logs. Prepare to plug and abandon.
Unaccounted for losses - probable sub-surface losses while back-reaming swabbing hole. Credit for caustic soda x 3 drums. Barytes for slugs.

POOH. Swabbing. Back-ream. R/u and run electric logs.

2/10/2005	TD = 2616 m	Day 14

No primary objective seen on e-logs. RIH. Wash and ream. Slough returns. Drill ahead.
Build replacement volume. Costs for Defoam A added to cummulative costs. Maximum BHT from logs = 95.5 deg.C. Unaccounted for losses assumed sub-surface.

No primary objective seen on e-logs. Drill ahead. Build replacement volume.

3/10/2005	TD = 2658 m	Day 15

Drill to secondary TD at 2658 m. Circulate hole clean. Slug. Wiper trip to 2400 m. RIH. Circulate hole clean. Spot high viscosity pill. Slug. POOH for e-logs. Hole good.
Build high viscosity pill. Build slug. KCl / Cl- increases from recycled sump water. Unaccounted for losses attributed to formation.
Inventory adjustment: credit - Polyplus x 1 sx. Cost correction for Defoamer x 2 debit = $198.80.

Drill to secondary TD at 2658 m. Wiper trip. POOH for e-logs.

4/10/2005	TD = 2658 m	Day 16

E-log. M/u and RIH with stinger. Change of plans. POOH. Wait on e-log. E-log.
Mud losses.

E-log. M/u and RIH with stinger. Change of plans. POOH. Wait on e-log. E-log. Mud losses.

5/10/2005	TD = 2658 m	Day 17

E-log. RIH with stinger. Circulate b/u - no caving returns. Plug and abandon.
Assume all mud as dumped (317 bbls.) or left-in-hole (507 bbls.).

E-log. RIH with stinger. Circulate b/u - no caving returns. Plug and abandon. Assume all mud as dumped or left-in-hole.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

COST
BY
INTERVAL

MI SWACO Australia

PRODUCT SUMMARY

Operator : Origin Energy
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin

SUMMARY OF PRODUCT USAGE FOR 12-1/4" INTERVAL 19/09/2005 - 21/09/2005, 0 - 550 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A$)	PROD COST (A$)
1 - SODA ASH	25 KG BG	3	15.33	45.99
2 - CAUSTIC SODA (DRY)	25 KG DM	2	34.84	69.68
3 - Trugel 13A	25 KG BG	240	8.36	2006.40
4 - POTASSIUM CHLORIDE	25 KG BG	203	18.36	3727.08

SUB TOTAL:	5849.15
TAX:	0.00
WATER-BASED MUD TOTAL COST:	5849.15

TOTAL MUD COST FOR INTERVAL: 5849.15

MI SWACO Australia

PRODUCT SUMMARY

Operator : Origin Energy
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin

SUMMARY OF PRODUCT USAGE FOR 8-1/2" INTERVAL 22/09/2005 - 5/10/2005, 550 - 2658 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A$)	PROD COST (A$)
1 - CAUSTIC SODA (DRY)	25 KG DM	4	34.84	139.36
2 - KWIK SEAL FINE	40 LB BG	34	45.70	1553.80
3 - SODIUM BICARBONATE	25 KG BG	20	16.97	339.40
4 - M-I BAR	25 KG BG	518	7.84	4061.12
5 - POTASSIUM CHLORIDE	25 KG BG	1044	18.36	19167.84
6 - GLUTE 25	25 LT CN	17	103.20	1754.40
7 - DEFOAM A	25 LT CN	2	99.40	198.80
8 - Polyplus Powder	25 KG BG	54	133.85	7227.90
9 - DUOTEC	25 KG BG	53	270.83	14353.99
10 - POLYPAC UL	25 KG BG	156	130.54	20364.24
11 - OS-1	25 KG BG	21	54.18	1137.78

SUB TOTAL:	70298.63
TAX:	0.00
WATER-BASED MUD TOTAL COST:	70298.63

TOTAL MUD COST FOR INTERVAL: 70298.63

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

DAILY VOLUME
SUMMARY SHEET

Origin Energy Ltd
Childer's Cove-1

Daily Volume Summary
12-1/4" Hole Interval
Pre-hydrated bentonite and 2% Potassium Chloride

		Mud Volume Status (bbls)				Mud Volume Built (bbls)					Mud Volume Lost (bbls)						
Date 2005	Depth (m)	Hole	Surface Active	Reserse	Total Volume	Water	Chemical	Barytes	Daily Total	Cum. Built	Solids Equip.	Surface	Dump	Hole	Csg / Plugs	Daily Total	Cum. Lost
19-Sep	84	43	318	147	508	564	14		578	578	20			50		70	70
20-Sep	543	322	310	216	848	1055	17		1072	1650	88	35	459	150		732	802
21-Sep	550				0				0	1650	26	10	743	69		848	1650

8-1/2" Hole Interval
KCl / PHPA / Polymer Mud

		Mud Volume Status (bbls)				Mud Volume Built (bbls)					Mud Volume Lost (bbls)						
Date 2005	Depth (m)	Hole	Surface Active	Reserve	Total Volume	Water	Chemical	Barytes	Daily Total	Cum. Built	Solids Equip.	Surface	Dump	Hole	Left in hole	Daily Total	Cum. Lost
22-Sep	550		396	4	400	390	10		400	400						0	0
23-Sep	550		333	233	566	161	5		166	566						0	0
24-Sep	766	152	253	160	565	154	14		168	734	5	65	18	81		169	169
25-Sep	1327	269	358	90	717	446	16		462	1196	66	115	66	63		310	479
26-Sep	1742	356	439	89	884	414	15		429	1625	60	147	55			262	741
27-Sep	2058	422	454	9	885	600	23		623	2248	85	387	150			622	1363
28-Sep	2246	482	346	9	837	319	12	1	332	2580	52	205	123			380	1743
29-Sep	2377	488	380	88	956	167	4	7	178	2758	20	39				59	1802
30-Sep	2545	523	388	33	944	169	4	5	178	2936	40	120	30			190	1992
1-Oct	2545	591	232	20	843			4	4	2940	9	26		70		105	2097
2-Oct	2616	537	409	103	1049	392	14		406	3346	18	80		102		200	2297
3-Oct	2658	618	225	31	874		2	3	5	3351	12	45	45	78		180	2477
4-Oct	2658	618	169	37	824				0	3351		25		25		50	2527
5-Oct	2658				0				0	3351			317		507	824	3351

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

TOTAL
MATERIAL
COST

MI SWACO Australia

PRODUCT SUMMARY

Operator : Origin Energy
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin

SUMMARY OF PRODUCT USAGE FOR INTERVAL 19/09/2005 - 5/10/2005, 0 - 2658 m

WATER-BASED MUD	SIZE	AMOUNT	UNIT COST (A$)	PROD COST (A$)
1 - SODA ASH	25 KG BG	3	15.33	45.99
2 - CAUSTIC SODA (DRY)	25 KG DM	6	34.84	209.04
3 - KWIK SEAL FINE	40 LB BG	34	45.70	1553.80
4 - SODIUM BICARBONATE	25 KG BG	20	16.97	339.40
5 - M-I BAR	25 KG BG	518	7.84	4061.12
6 - Trugel 13A	25 KG BG	240	8.36	2006.40
7 - POTASSIUM CHLORIDE	25 KG BG	1247	18.36	22894.92
8 - GLUTE 25	25 LT CN	17	103.20	1754.40
9 - DEFOAM A	25 LT CN	2	99.40	198.80
10 - Polyplus Powder	25 KG BG	54	133.85	7227.90
11 - DUOTEC	25 KG BG	53	270.83	14353.99
12 - POLYPAC UL	25 KG BG	156	130.54	20364.24
13 - OS-1	25 KG BG	21	54.18	1137.78

SUB TOTAL:	76147.78
TAX:	0.00
WATER-BASED MUD TOTAL COST:	76147.78

TOTAL MUD COST FOR INTERVAL: 76147.78

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

HYDRAULICS
REPORT

HYDRAULICS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		19/09/2005	20/09/2005	21/09/2005	23/09/2005	24/09/2005	25/09/2005	26/09/2005	27/09/2005
Depth	m	84	430	550	550	766	1327	1742	2058
Days Since Spud		1	2	3	5	6	7	8	9
*RHEOLOGICAL PROPERTIES									
Mud Wt	sp.gr.	1.05	1.09	1.06	1.03	1.04	1.07	1.08	1.09
Plastic Visc	cP	10	10	10	13	12	15	23	25
Yield Point	lb/100ft²	19	38	33	17	18	28	31	35
3-rpm Rdg	Fann deg	5	13	7	5	5	5	6	5
np Value		.4274	.273	.3017	.5194	.4854	.4317	.5119	.5025
Kp Value	lb•s^n/100ft²	2.1524	9.3316	6.9923	1.2549	1.5508	3.1072	2.3666	2.7883
na Value		.2725	.2084	.3133	.3953	.3807	.4809	.4774	.5382
Ka Value	lb•s^n/100ft²	3.4205	9.873	4.4804	2.7994	2.867	2.4346	2.9385	2.2177
*FLOW DATA									
Flow Rate	gal/min	666	572	0	0	627	630	630	554
Pump Pressure	psi	1400	1470	0	0	1000	1112	1800	2100
Pump	hhp	544	491	*	*	366	409	662	679
*PRESSURE LOSSES									
Drill String	psi	108	270	*	*	501	758	1122	1073
Bit	psi	1032	790	*	*	493	512	517	403
Annulus	psi	2	18	*	*	76	174	259	285
Total System	psi	1142	1078	*	*	1070	1444	1898	1761
*BIT HYDRAULICS									
Nozzles	1/32"	3x16	3x16			14	14	14	14
Nozzles	1/32"					5x13	5x13	5x13	5x13
Bit Pressure	%	74	54	*	*	49	46	29	19
Bit	hhp	401	264	*	*	180	188	190	130
Bit HSI	(index)	3.4	2.24	*	*	3.18	3.32	3.35	2.3
Jet Velocity	ft/s	111	95	*	*	77	77	77	68
Impact Force	lbf	1095	839	*	*	709	737	744	580
DRILL COLLARS ANNULUS									
Velocity	m/min	45	27	*	*	141	142	142	125
Critical Vel	m/min	78	115	*	*	116	146	162	168
Reynolds Number		1000	205	*	*	3411	2314	1975	1541
Crit Re (Lam - Tran)		2884	3096	*	*	2805	2879	2769	2782
*DRILL PIPE ANNULUS									
Velocity	m/min	45	24	*	*	90	91	91	80
Critical Vel	m/min	78	112	*	*	102	122	136	136
Reynolds Number		1000	174	*	*	2052	1543	1312	1089
Crit Re (Lam - Tran)		2884	3096	*	*	2805	2879	2769	2782
*HOLE CLEANING									
Slip Velocity	m/min	7	4	*	*	6	6	5	6
Rising Velocity	m/min	38	20	*	*	84	85	85	74
Lifting Capacity	%	85	82	*	*	93	93	94	93
Cutting Conc	%	5.93	1.72	*	*	2.35	1.23	0.68	1.41
Penetration Rate	m/h	100	24	0	0	85	45	25	45
CASING SHOE PRESSURES									
ECD	sp.gr.	1.06	1.1	*	*	1.09	1.14	1.16	1.17
ECD+Cuttings	sp.gr.	1.14	1.12	*	*	1.12	1.16	1.17	1.19
TOTAL DEPTH PRESSURES									
ECD	sp.gr.	1.07	1.11	*	*	1.11	1.16	1.18	1.19
ECD+Cuttings	sp.gr.	1.15	1.14	*	*	1.14	1.18	1.19	1.21

MI SWACO

HYDRAULICS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		28/09/2005	29/09/2005	30/09/2005	1/10/2005	2/10/2005	3/10/2005	4/10/2005
Depth	m	2246	2377	2545	2545	2616	2658	2658
Days Since Spud		10	11	12	13	14	15	16
*RHEOLOGICAL PROPERTIES								
Mud Wt	sp.gr.	1.09	1.13	1.15	1.15	1.16	1.16	1.16
Plastic Visc	cP	25	27	24	24	22	25	26
Yield Point	lb/100ft²	34	34	35	35	35	33	31
3-rpm Rdg	Fann deg	5	4	4	4	4	4	4
np Value		.5097	.5287	.4924	.4924	.4709	.5171	.5421
Kp Value	lb•s^n/100ft²	2.6218	2.4075	2.9201	2.9201	3.226	2.4614	2.0686
na Value		.5203	.6018	.6018	.6018	.5746	.593	.6018
Ka Value	lb•s^n/100ft²	2.2831	1.5992	1.5992	1.5992	1.6717	1.6223	1.5992
*FLOW DATA								
Flow Rate	gal/min	554	521	500	0	500	496	0
Pump Pressure	psi	2100	1800	1860	0	1500	1950	0
Pump	hhp	679	547	543	*	438	*	*
*PRESSURE LOSSES								
Drill String	psi	741	1163	1109	*	1101	*	*
Bit	psi	403	370	347	*	350	*	*
Annulus	psi	177	305	315	*	313	*	*
Total System	psi	1322	1837	1771	*	1764	*	*
*BIT HYDRAULICS								
Nozzles	1/32"	14	14	14		14	14	14
Nozzles	1/32"	5x13	5x13	5x13		5x13	5x13	5x13
Bit Pressure	%	19	21	19	*	23	*	*
Bit	hhp	130	112	101	*	102	*	*
Bit HSI	(index)	2.3	1.98	1.78	*	1.8	*	*
Jet Velocity	ft/s	68	64	61	*	61	*	*
Impact Force	lbf	580	532	499	*	503	*	*
DRILL COLLARS ANNULUS								
Velocity	m/min	125	117	113	*	125	*	*
Critical Vel	m/min	160	168	166	*	160	*	*
Reynolds Number		1655	1424	1368	*	1654	*	*
Crit Re (Lam - Tran)		2772	2746	2795	*	2825	*	*
*DRILL PIPE ANNULUS								
Velocity	m/min	80	75	72	*	72	*	*
Critical Vel	m/min	131	131	129	*	121	*	*
Reynolds Number		1149	1075	1032	*	1124	*	*
Crit Re (Lam - Tran)		2772	2746	2795	*	2825	*	*
*HOLE CLEANING								
Slip Velocity	m/min	6	6	6	*	6	*	*
Rising Velocity	m/min	74	69	66	*	66	*	*
Lifting Capacity	%	93	92	91	*	91	*	*
Cutting Conc	%	0.47	1.18	0.28	*	1.23	*	*
Penetration Rate	m/h	15	35	8	0	35	9	0
CASING SHOE PRESSURES								
ECD	sp.gr.	1.16	1.2	1.22	*	1.22	*	*
ECD+Cuttings	sp.gr.	1.17	1.22	1.22	*	1.24	*	*
TOTAL DEPTH PRESSURES								
ECD	sp.gr.	1.19	1.22	1.24	*	1.24	*	*
ECD+Cuttings	sp.gr.	1.2	1.24	1.24	*	1.26	*	*

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

DRILLING
FLUIDS
SUMMARY

MI SWACO Australia

DRILLING FLUIDS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		19/09/2005	20/09/2005	20/09/2005	21/09/2005	22/09/2005	23/09/2005
Depth/TVD	m	84/84	430/430	311/ 311	550/550	/	550/550
Activity		Drill 12-1/4" hole	Drill 12-1/4"hole	Drill 12-1/4"hole	Nipple-up	Nipple-up	Rig repair
Mud Type		Spud mud	Spud mud	Spud mud	Spud mud	KCl/PHPA/Po	KCl/PHPA/Po
Hole Size	in	12.25	12.25	12.25	12.25	8.5	8.5
Circ Volume	bbl	361	632	632		396	333
Flow Rate	gal/min	666	572	572	0	0	0
Circ Pressure	psi	1400	1470	1470	0	0	0
Avg ROP	m/hr	100	24	24	0	0	0
Sample From		Pit	Pit	Pit	Pit		Pit
Flow Line Temp	°C	19	34	28	37		n/a
Mud Weight	sp.gr.	1.05@19 °C	1.09 @33 °C	1.05 @28 °C	1.06@35 °C	@ °C	1.03@20 °C
Funnel Viscosity	s/qt	42	65	45	43		54
PV	cP	10	10	8	10		13
YP	lb/100ft²	19	38	18	33		17
R600/R300/R200		39/29/20	58/48/39	34/26/17	53/43/32	/ /	43/30/25
R100/R6/R3		13/7/5	27/15/13	15/11/8	21/9/7	/ /	20/7/5
10s/10m/30m Gel	lb/100ft²	6/12/18	18/37/54	10/24/38	10/18/33	//	5/7/7
API Fluid Loss	cc/30 min	n/c	n/c	n/c	n/c		10
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	/	/	/	/	/	1/
Solids	%Vol	2	4	2	3		5
Oil/Water	%Vol	/98	/96	/98	/97	/	/95
Sand	%Vol	0.25	0.5	0.25	0.5		0
MBT	lb/bbl	20	32	24			0
pH		9.5	8.5	8.5	8.5		8.4
Alkal Mud (Pm)							0.2
Pf/Mf		/	/	/	/	/	0.1/0.4
Chlorides	mg/l						23000
Hardness Ca							100
KCl	%		2.0	2.5	2.2		4
PHPA	ppb.						0.5
Sulphite	mg/l						nil
Daily Mud Cost	A$	1996.67	3852.48		0.00	5719.50	3010.75
Cuml Mud Cost	A$	1996.67	5849.15		5849.15	11568.65	14579.40
Sales Engineer		Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay
Products Used		SodaAsh / 3	TruGel / 15			DUOTEC / 8	DUOTEC / 4
		Caustic / 2	KCl / 203			PacUL / 8	PacUL / 4
		TruGel / 225				Bicarb / 2	Bicarb / 1
						KCl / 100	KCl / 50
						Glut / 1	Glut / 1
						PHPA / 4	DefoamA / 1
							PHPA / 2

REMARKS

19/09/2005: Mix spud mud. Spud at 18:00 hours. Drill ahead.Initial sub-surface losses at 6-10 bbls per joint drilled in limestone.
20/09/2005: Drill ahead. Add 2% KCl for Gellibrand Marl. Dump and dilute with KCl brine. Minor sub-surface losses apparent.

21/09/2005: Drill to TD at 550 m. Run and set 9-5/8" casing at 547 m.
22/09/2005: Nipple-up. Build new whole KCl / PHPA / polymer mud with 0.5 ppb PHPA.
23/09/2005: Build KCL / PHPA / polymer mud. Wait on pump module.

MI SWACO Australia

DRILLING FLUIDS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		24/09/2005	24/09/2005	25/09/2005	25/09/2005	26/09/2005	26/09/2005
Depth/TVD	m	766/766	648/648	1327/1327	1032/1032	1742/1742	1568/1568
Activity		Drill 8-1/2" hole.	Drill 8-1/2" hole.	Drill 8-1/2" hole.	Drill 8-1/2" hole.	Drill 8-1/2" hole.	Drill 8-1/2" hole.
Mud Type		KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po
Hole Size	in	8.5	8.5	8.5	8.5	8.5	8.5
Circ Volume	bbl	405	405	627	627	795	795
Flow Rate	gal/min	627	627	630	630	630	630
Circ Pressure	psi	1000	1000	1112	1112	1800	1800
Avg ROP	m/hr	85	85	45	45	25	25
Sample From		Pit	Pit	Pit	Pit	Pit	Pit
Flow Line Temp	°C	37	33	46	39	53	50
Mud Weight	sp.gr.	1.04@35 °C	1.04@30 °C	1.07@35 °C	1.06@35 °C	1.08 @40 °C	1.08@40 °C
Funnel Viscosity	s/qt	47	52	52	58	61	52
PV	cP	12	13	15	16	23	16
YP	lb/100ft²	18	16	28	22	31	26
R600/R300/R200		42/30/23	42/29/22	58/43/34	54/38/27	77/54/45	58/42/33
R100/R6/R3		19/7/5	18/6/4	27/8/5	19/7/5	32/8/6	22/8/6
10s/10m/30m Gel	lb/100ft²	7/9/11	5/7/8	6/8/9	7/10/12	9/13/15	7/10/12
API Fluid Loss	cc/30 min	7.0	7.5	5.8	6.5	5.5	6.2
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/
Solids	%Vol	6	4	7	6	8	8
Oil/Water	%Vol	/94	/96	/93	/94	/92	/92
Sand	%Vol	0.75	tr	0.5	1.0	0.5	0.3
MBT	lb/bbl	3	2	4	3.75	5	5
pH		9.5	9.7	8.7	9.0	8.7	8.7
Alkal Mud (Pm)		0.4	0.4	0.3	0.3	0.22	0.2
Pf/Mf		0.1/0.7	0.1/0.5	0.1/0.45	0.1/0.6	0.1/0.4	0.1/0.3
Chlorides	mg/l	22000	21000	21000	22000	22000	21000
Hardness Ca		100	100	180	100	200	180
KCl	%	4.2	4	4	4	4.2	4
PHPA	ppb.	0.75	0.75	1.0	1.1	1.4	0.6
Sulphite	mg/l	0	0	0	0	200	0
Daily Mud Cost	A$	6791.22		9328.95		9571.52	
Cuml Mud Cost	A$	21370.62		30699.57		40271.09	
Sales Engineer		Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay
Products Used		DUOTEC / 6		DUOTEC / 10		DUOTEC / 2	
		PacUL / 5		PacUL / 24		PacUL / 35	
		Kwik F / 34		Bicarb / 2		OS-1 / 4	
		Bicarb / 2		KCl / 155		Bicarb / 3	
		KCl / 90		Glut / 2		KCl / 128	
		Glut / 1		PHPA / 3		Glut / 1	
		DefoamA / 1				PHPA / 13	
		PHPA / 8					

REMARKS

24/09/2005: Drill ahead. Treat mud properties. Surface and sub-surface losses.

25/09/2005: Drill ahead. Sub-surface seepage losses continue through Dilwyn fmt (775 - 1191 m.).

26/09/2005: Drill ahead. Build replacement volume. Temperature increasing. Increase PHPA concentration.

MI SWACO Australia

DRILLING FLUIDS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		27/09/2005	27/09/2005	28/09/2005	28/09/2005	29/09/2005	29/09/2005
Depth/TVD	m	2058/2058	1943/1943	2246/2246	2246/2246	2377/2377	2285/2285
Activity		Drill 8-1/2" hole.	Drill 8-1/2" hole.	Wiper trip.	Wiper trip.	Drill 8-1/2" hole	Drill 8-1/2" hole
Mud Type		KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po
Hole Size	in	8.5	8.5	8.5	8.5	8.5	8.5
Circ Volume	bbl	876	876	828	828	868	868
Flow Rate	gal/min	554	554	554	554	521	521
Circ Pressure	psi	2100	2100	2100	2100	1800	1800
Avg ROP	m/hr	45	45	15	15	35	35
Sample From		Pit	Pit	Pit	Pit	Pit	Pit
Flow Line Temp	°C	56	54	n/c	58	58	54
Mud Weight	sp.gr.	1.09@45 °C	1.09@45 °C	1.09@35 °C	1.09@45 °C	1.13 @40 °C	1.13@40 °C
Funnel Viscosity	s/qt	65	77	60	55	66	62
PV	cP	25	25	25	25	27	22
YP	lb/100ft²	35	34	34	34	34	23
R600/R300/R200		85/60/47	84/59/45	84/59/46	84/59/46	88/61/49	67/45/36
R100/R6/R3		33/7/5	32/7/5	31/7/5	31/7/5	33/7/4	23/5/3
10s/10m/30m Gel	lb/100ft²	7/10/13	7/10/12	6/11/13	5/10/12	6/10/11	6/9/11
API Fluid Loss	cc/30 min	5.1	5.5	4.8	4.8	5.0	5.3
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/
Solids	%Vol	10	10	11	11	8	8
Oil/Water	%Vol	/90	/90	/89	/89	/92	/92
Sand	%Vol	0.75	0.5	0.5	0.5	0.6	0.5
MBT	lb/bbl	7.5	7.5	10	10	10	10
pH		8.8	8.7	8.7	8.7	9.5	9.5
Alkal Mud (Pm)		0.3	0.2	0.3	0.3	0.6	0.5
Pf/Mf		0.1/0.4	0.1/0.4	0.1/0.4	0.1/0.4	0.2/1.1	0.2/0.8
Chlorides	mg/l	22000	22000	22000	22000	26000	24000
Hardness Ca		420	400	520	520	100	100
KCl	%	4	4	4	4	4.3	4.2
PHPA	ppb.	1.5	1.5	1.25	1.3	1.0	0.9
Sulphite	mg/l	180	80	80	100	80	100
Daily Mud Cost	A$	13574.29		6551.49		3811.58	
Cuml Mud Cost	A$	53845.38		60396.87		64208.45	
Sales Engineer		Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay
Products Used		DUOTEC / 7		DUOTEC / 4		DUOTEC / 3	
		PacUL / 43		PacUL / 21		Caustic / 5	
		OS-1 / 5		OS-1 / 4		Bicarb / 1	
		Bicarb / 5		Bicarb / 3		M-I Bar / 176	
		KCl / 196		M-I Bar / 40		KCl / 43	
		Glut / 1		KCl / 100		Glut / 1	
		PHPA / 15		Glut / 3		PHPA / 4	

REMARKS

27/09/2005: Drill ahead. Build replacement mud with recycled sump fluid. Increase PHPA concentration.

28/09/2005: Drill ahead to 2246 m. Wiper trip. Build replacement volume with recycled sump fluid. Increase carrying capacity.

29/09/2005: Wiper trip to shoe. Drill ahead.

MI SWACO Australia

DRILLING FLUIDS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		30/09/2005	30/09/2005	1/10/2005	2/10/2005	2/10/2005	3/10/2005
Depth/TVD	m	2545/2545	2506/2506	2545/2545	2616/2616	2454/2454	2658/2658
Activity		TD wiper trip	TD wiper trip	Electric logging	Drill 8-1/2" hole.	Drill 8-1/2" hole.	Electric logging
Mud Type		KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po
Hole Size	in	8.5	8.5	8.5	8.5	8.5	8.5
Circ Volume	bbl	902	902	823	946	946	843
Flow Rate	gal/min	500	500	0	500	500	496
Circ Pressure	psi	1860	1860	0	1500	1500	1950
Avg ROP	m/hr	8	8	0	35	35	9
Sample From		Pit	Pit	Pit	Pit	Pit	Pit
Flow Line Temp	°C	62	59	n/a	65	n/a	n/a
Mud Weight	sp.gr.	1.15@40 °C	1.15 @45 °C	1.15@40 °C	1.16@40 °C	1.15@35 °C	1.16@35 °C
Funnel Viscosity	s/qt	59	60	60	62	78	58
PV	cP	24	25	24	22	25	25
YP	lb/100ft²	35	35	35	35	35	33
R600/R300/R200		83/59/47	85/60/48	83/59/47	79/57/45	85/60/48	83/58/46
R100/R6/R3		33/7/4	33/7/4	33/7/4	30/7/4	33/7/4	32/7/4
10s/10m/30m Gel	lb/100ft²	5/11/13	5/11/13	5/11/13	6/10/12	6/12/14	5/10/12
API Fluid Loss	cc/30 min	4.0	4.2	4.0	4.2	4.0	5.0
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	1/	1/	1/	1/
Solids	%Vol	8.6	8.6	8.6	9.5	8.9	9.6
Oil/Water	%Vol	/91.4	/91.4	/91.4	/90.5	/91.1	/90.4
Sand	%Vol	0.25	0.3	0.25	0.5	0.25	0.5
MBT	lb/bbl	7.5	7.5	7.5	10	7.5	8
pH		8.6	8.7	8.6	9.3	9.5	9.1
Alkal Mud (Pm)		0.4	0.35	0.4	0.5	0.4	0.3
Pf/Mf		0.05/0.9	0.05/0.8	0.05/0.9	0.1/1.1	0.05/1	0.02/0.9
Chlorides	mg/l	26000	26000	26000	27000	26000	28000
Hardness Ca		280	280	280	200	280	320
KCl	%	4.2	4.3	4.3	5.3	4.7	5.4
PHPA	ppb.	0.7	0.8	0.8	0.9	0.75	0.75
Sulphite	mg/l	180	20	80	20	80	80
Daily Mud Cost	A$	2801.51		772.16	6786.27		1477.47
Cuml Mud Cost	A$	67009.96		67782.12	74568.39		76045.86
Sales Engineer		Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay	Mike McKay
Products Used		DUOTEC / 2		OS-1 / 2	DUOTEC / 5		DUOTEC / 2
		OS-1 / 2		M-I Bar / 98	PacUL / 15		PacUL / 1
		M-I Bar / 104			OS-1 / 4		M-I Bar / 87
		KCl / 43			Caustic / 2		KCl / 14
		Glut / 4			Bicarb / 1		
		PHPA / 1			KCl / 125		
					Glut / 2		
					PHPA / 5		

REMARKS

30/09/2005:

1/10/2005: POOH. Swabbing. Back-ream. R/u and run electric logs.
2/10/2005: No primary objective seen on e-logs. Drill ahead. Build replacement volume.

3/10/2005: Drill to secondary TD at 2658 m. Wiper trip. POOH for e-logs.

MI SWACO Australia

DRILLING FLUIDS SUMMARY

Operator : Origin Energy
Field/Area : PEP 154
Well Name : Childer's Cove-1
Description : Vertical Exploration
Contractor : Century Drilling Ltd.
Location : Onshore Otway Basin

Date		3/10/2005	4/10/2005	5/10/2005			
Depth/TVD	m	2658/2658	2658/2658	/			
Activity		Electric logging	Electric logging	P&A Final DMR			
Mud Type		KCl/PHPA/Po	KCl/PHPA/Po	KCl/PHPA/Po			
Hole Size	in	8.5	8.5	8.5			
Circ Volume	bbl	843	787				
Flow Rate	gal/min	496	0	0			
Circ Pressure	psi	1950	0	0			
Avg ROP	m/hr	9	0	0			
Sample From		Pit	Pit				
Flow Line Temp	°C	63	n/a				
Mud Weight	sp.gr.	1.16@35 °C	1.16@30 °C	@ °C			
Funnel Viscosity	s/qt	58	58				
PV	cP	25	26				
YP	lb/100ft²	33	31				
R600/R300/R200		83/58/46	83/57/46	/ /			
R100/R6/R3		32/7/4	33/7/4	/ /			
10s/10m/30m Gel	lb/100ft²	5/10/12	5/10/12	//			
API Fluid Loss	cc/30 min	5.0	5.0				
HTHP Fluid Loss	cc/30 min						
Cake API/HT	1/32"	1/	1/	/			
Solids	%Vol	9.6	9.2				
Oil/Water	%Vol	/90.4	/90.8	/			
Sand	%Vol	0.5	0.5				
MBT	lb/bbl	8	8				
pH		9.1	9.0				
Alkal Mud (Pm)		0.3	0.4				
Pf/Mf		0.02/0.9	0.02/1	/			
Chlorides	mg/l	28000	28000				
Hardness Ca		320	320				
KCl	%	5.4	5.5				
PHPA	ppb.	0.75	0.75				
Sulphite	mg/l	80	20				
Daily Mud Cost	A$		0.00	101.92			
Cuml Mud Cost	A$		76045.86	76147.78			
Sales Engineer		Mike McKay	Mike McKay	Mike McKay			
Products Used				M-I Bar / 13			

REMARKS

4/10/2005: E-log. M/u and RIH with stinger. Change of plans. POOH. Wait on e-log. E-log. Mud losses.
5/10/2005: E-log. RIH with stinger. Circulate b/u - no caving returns. Plug and abandon. Assume all mud as dumped or left-in-hole.

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

PRODUCT CONSUMPTION

Product Consumption

Operator : Origin Energy
Well Name : Childer's Cove-1
Location : Onshore Otway Basin
Field/Area: PEP 154

Contractor: Century Drilling Ltd.
M-I Engineer: Mike McKay
Rig Name: Century Rig #7
Stock Point: Adelaide

Product Name	Product Price	Sep 19, 2005 Qty	Sep 19, 2005 Cost	Sep 20, 2005 Qty	Sep 20, 2005 Cost	Sep 21, 2005 Qty	Sep 21, 2005 Cost	Sep 22, 2005 Qty	Sep 22, 2005 Cost	Sep 23, 2005 Qty	Sep 23, 2005 Cost	Page Totals
		DATES										
CALCIUM CHLORIDE	15.33		0.00		0.00		0.00		0.00		0.00	0.00
CITRIC ACID	56.00		0.00		0.00		0.00		0.00		0.00	0.00
SODA ASH	15.33	3	45.99		0.00		0.00		0.00		0.00	45.99
CAUSTIC SODA (DRY)	34.84	2	69.68		0.00		0.00		0.00		0.00	69.68
KWIK SEAL FINE	45.70		0.00		0.00		0.00		0.00		0.00	0.00
SODIUM BICARBONATE	16.97		0.00		0.00		0.00	2	33.94	1	16.97	50.91
M-I BAR	7.84		0.00		0.00		0.00		0.00		0.00	0.00
Trugel 13A	8.36	225	1881.00	15	125.40		0.00		0.00		0.00	2006.40
POTASSIUM CHLORIDE	18.36		0.00	203	3727.08		0.00	100	1836.00	50	918.00	6481.08
GLUTE 25	103.20		0.00		0.00		0.00	1	103.20	1	103.20	206.40
KWIK SEAL MEDIUM	45.70		0.00		0.00		0.00		0.00		0.00	0.00
DEFOAM A	99.40		0.00		0.00		0.00		0.00	1	99.40	99.40
Polyplus Powder	133.85		0.00		0.00		0.00	4	535.40	2	267.70	803.10
Omnycarb40	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DUOTEC	270.83		0.00		0.00		0.00	8	2166.64	4	1083.32	3249.96
POLYPAC UL	130.54		0.00		0.00		0.00	8	1044.32	4	522.16	1566.48
KWIK SEAL COARSE	45.70		0.00		0.00		0.00		0.00		0.00	0.00
MIX II MEDIUM	40.13		0.00		0.00		0.00		0.00		0.00	0.00
MIX II FINE	40.13		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	54.18		0.00		0.00		0.00		0.00		0.00	0.00
CONQOR 303A	446.10		0.00		0.00		0.00		0.00		0.00	0.00
PIPE-LAX W	623.15		0.00		0.00		0.00		0.00		0.00	0.00
Cumulative Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Daily Product			1996.67		3852.48		0.00		5719.50		3010.75	14579.40
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			1996.67		5849.15		5849.15		11568.65		14579.40	14579.40
Cumulative Cost			1996.67		5849.15		5849.15		11568.65		14579.40	14579.40

Product Consumption

Operator : Origin Energy
Well Name : Childer's Cove-1
Location : Onshore Otway Basin
Field/Area: PEP 154

Contractor: Century Drilling Ltd.
M-I Engineer: Mike McKay
Rig Name: Century Rig #7
Stock Point: Adelaide

Product Name	DATES											
	Previous	Sep 24, 2005		Sep 25, 2005		Sep 26, 2005		Sep 27, 2005		Sep 28, 2005		Page
	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
CALCIUM CHLORIDE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
CITRIC ACID	0.00		0.00		0.00		0.00		0.00		0.00	0.00
SODA ASH	45.99		0.00		0.00		0.00		0.00		0.00	45.99
CAUSTIC SODA (DRY)	69.68		0.00		0.00		0.00		0.00		0.00	69.68
KWIK SEAL FINE	0.00	34	1553.80		0.00		0.00		0.00		0.00	1553.80
SODIUM BICARBONATE	50.91	2	33.94	2	33.94	3	50.91	5	84.85	3	50.91	305.46
M-I BAR	0.00		0.00		0.00		0.00		0.00	40	313.60	313.60
Trugel 13A	2006.40		0.00		0.00		0.00		0.00		0.00	2006.40
POTASSIUM CHLORIDE	6481.08	90	1652.40	155	2845.80	128	2350.08	196	3598.56	100	1836.00	18763.92
GLUTE 25	206.40	1	103.20	2	206.40	1	103.20	1	103.20	3	309.60	1032.00
KWIK SEAL MEDIUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DEFOAM A	99.40	1	99.40		0.00		0.00		0.00		0.00	198.80
Polyplus Powder	803.10	8	1070.80	3	401.55	13	1740.05	15	2007.75		0.00	6023.25
Omnycarb40	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DUOTEC	3249.96	6	1624.98	10	2708.30	2	541.66	7	1895.81	4	1083.32	11104.03
POLYPAC UL	1566.48	5	652.70	24	3132.96	35	4568.90	43	5613.22	21	2741.34	18275.60
KWIK SEAL COARSE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
MIX II MEDIUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
MIX II FINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	0.00		0.00		0.00	4	216.72	5	270.90	4	216.72	704.34
CONQOR 303A	0.00		0.00		0.00		0.00		0.00		0.00	0.00
PIPE-LAX W	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Cumulative Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Daily Product			6791.22		9328.95		9571.52		13574.29		6551.49	60396.87
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			21370.62		30699.57		40271.09		53845.38		60396.87	60396.87
Cumulative Cost			21370.62		30699.57		40271.09		53845.38		60396.87	60396.87

Product Consumption

Operator : Origin Energy
Well Name : Childer's Cove-1
Location : Onshore Otway Basin
Field/Area: PEP 154

Contractor: Century Drilling Ltd.
M-I Engineer: Mike McKay
Rig Name: Century Rig #7
Stock Point: Adelaide

	DATES											
Product	Previous	Sep 29, 2005		Sep 30, 2005		Oct 1, 2005		Oct 2, 2005		Oct 3, 2005		Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
CALCIUM CHLORIDE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
CITRIC ACID	0.00		0.00		0.00		0.00		0.00		0.00	0.00
SODA ASH	45.99		0.00		0.00		0.00		0.00		0.00	45.99
CAUSTIC SODA (DRY)	69.68	5	174.20		0.00	-3	-104.52	2	69.68		0.00	209.04
KWIK SEAL FINE	1553.80		0.00		0.00		0.00		0.00		0.00	1553.80
SODIUM BICARBONATE	305.46	1	16.97		0.00		0.00	1	16.97		0.00	339.40
M-I BAR	313.60	176	1379.84	104	815.36	98	768.32		0.00	87	682.08	3959.20
Trugel 13A	2006.40		0.00		0.00		0.00		0.00		0.00	2006.40
POTASSIUM CHLORIDE	18763.9	43	789.48	43	789.48		0.00	125	2295.00	14	257.04	22894.92
GLUTE 25	1032.00	1	103.20	4	412.80		0.00	2	206.40		0.00	1754.40
KWIK SEAL MEDIUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DEFOAM A	198.80		0.00		0.00		0.00		0.00		0.00	198.80
Polyplus Powder	6023.25	4	535.40	1	133.85		0.00	5	669.25	-1	-133.85	7227.90
Omnycarb40	0.00		0.00		0.00		0.00		0.00		0.00	0.00
DUOTEC	11104.0	3	812.49	2	541.66		0.00	5	1354.15	2	541.66	14353.99
POLYPAC UL	18275.6		0.00		0.00		0.00	15	1958.10	1	130.54	20364.24
KWIK SEAL COARSE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
MIX II MEDIUM	0.00		0.00		0.00		0.00		0.00		0.00	0.00
MIX II FINE	0.00		0.00		0.00		0.00		0.00		0.00	0.00
OS-1	704.34		0.00	2	108.36	2	108.36	4	216.72		0.00	1137.78
CONQOR 303A	0.00		0.00		0.00		0.00		0.00		0.00	0.00
PIPE-LAX W	0.00		0.00		0.00		0.00		0.00		0.00	0.00
Cumulative Engineering			0.00		0.00		0.00		0.00		0.00	0.00
Daily Product			3811.58		2801.51		772.16		6786.27		1477.47	76045.86
Daily Sales Tax			0		0		0		0		0	0.00
Cumulative Product			64208.45		67009.96		67782.12		74568.39		76045.86	76045.86
Cumulative Cost			64208.45		67009.96		67782.12		74568.39		76045.86	76045.86

Product Consumption

Operator : Origin Energy
Well Name : Childer's Cove-1
Location : Onshore Otway Basin
Field/Area: PEP 154

Contractor: Century Drilling Ltd.
M-I Engineer: Mike McKay
Rig Name: Century Rig #7
Stock Point: Adelaide

	DATES											
Product	Previous	Oct 4, 2005		Oct 5, 2005								Page
Name	Page	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Totals
CALCIUM CHLORIDE	0.00		0.00		0.00							0.00
CITRIC ACID	0.00		0.00		0.00							0.00
SODA ASH	45.99		0.00		0.00							45.99
CAUSTIC SODA (DRY)	209.04		0.00		0.00							209.04
KWIK SEAL FINE	1553.80		0.00		0.00							1553.80
SODIUM BICARBONATE	339.40		0.00		0.00							339.40
M-I BAR	3959.20		0.00	13	101.92							4061.12
Trugel 13A	2006.40		0.00		0.00							2006.40
POTASSIUM CHLORIDE	22894.9		0.00		0.00							22894.92
GLUTE 25	1754.40		0.00		0.00							1754.40
KWIK SEAL MEDIUM	0.00		0.00		0.00							0.00
DEFOAM A	198.80		0.00		0.00							198.80
Polyplus Powder	7227.90		0.00		0.00							7227.90
Omnycarb40	0.00		0.00		0.00							0.00
DUOTEC	14353.9		0.00		0.00							14353.99
POLYPAC UL	20364.2		0.00		0.00							20364.24
KWIK SEAL COARSE	0.00		0.00		0.00							0.00
MIX II MEDIUM	0.00		0.00		0.00							0.00
MIX II FINE	0.00		0.00		0.00							0.00
OS-1	1137.78		0.00		0.00							1137.78
CONQOR 303A	0.00		0.00		0.00							0.00
PIPE-LAX W	0.00		0.00		0.00							0.00
Cumulative Engineering			0.00		0.00							0.00
Daily Product			0.00		101.92							76147.78
Daily Sales Tax			0		0							0.00
Cumulative Product			76045.86		76147.78							76147.78
Cumulative Cost			76045.86		76147.78							76147.78

DRILLING FLUIDS RECAP FOR ORIGIN ENERGY
CHILDER'S COVE-1

DAILY
MUD
REPORTS

WATER-BASED MUD REPORT No. 1

Date	19/09/2005	**Depth/TVD**	84 m / 84 m
Spud Date	19/09/2005	**Mud Type**	Spud mud
Water Depth		**Activity**	Drill 12-1/4" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in Varel CH1GMS		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 3x16 / 1/32"		20in @16m (16TVD)	42.9	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
6.25 in	84 m	9.625in @545m (545TVD)	318.1	Pump stk/min	110@97%	110@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	666 gal/min	
in	m		361	Bottoms Up	2.6 min	565 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	22.8 min	5008 stk
6.25 in	84 m		147	Circulating Pressure	1400 psi	

MUD PROPERTIES

Sample From		Pit@23:30	
Flow Line Temp	°C	19	
Depth/TVD	m	84/84	
Mud Weight	sp.gr.	1.05@19°C	
Funnel Viscosity	s/qt	42	
Rheology Temp	°C	19	
R600/R300		39/29	
R200/R100		20/13	
R6/R3		7/5	
PV	cP	10	
YP	lb/100ft²	19	
10s/10m/30m Gel	lb/100ft²	6/12/18	
API Fluid Loss	cc/30 min	n/c	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol	2	
Oil/Water	%Vol	/98	
Sand	%Vol	0.25	
MBT	lb/bbl	20	
pH		9.5	
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	%		
PHPA	ppb.		
Sulphite	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODA ASH	25 KG BG	3.00
CAUSTIC SODA (DRY)	25 KG DM	2.00
Trugel 13A	25 KG BG	225.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	110/110/110	0
DFE Shaker 2	110/110/110	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	alap
Viscosity	40 - 50
Filtrate	n/c

REMARKS AND TREATMENT

Mix spud mud. Install 110-mesh shale shaker screens. Initial sub-surface losses at 6-10 bbls per joint drilled in Port Campbell Limestone.

REMARKS

Rig-up. Drill rat / mouse holes. Spud at 18:00 hours. Drill ahead.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	18	Oil Added	0	NaCl	./.	np/na Values	0.427/0.272
Drilling	6	Water Added	564	KCl	./.	kp/ka (lb•s^n/100ft²)	2.152/3.421
Tripping		Mud Received	0	Low Gravity	3.6/ 32.5	Bit Loss (psi / %)	1032 / 73.7
Non-Productive Tim		Dumped	0	Bentonite	2./ 18.5	Bit HHP (hhp / HSI)	401 / 3.4
		Shakers	0	Drill Solids	1.6/ 13.8	Bit Jet Vel (m/s)	111
		Evaporation	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	15.23
		Centrifuge	0	Chemical Conc	- / .2	Ann. Vel DC (m/min)	44.82
		Formation	50	Inert/React	.615	Crit Vel DP (m/min)	69
		Left in Hole	0	Average SG	2.4	Crit Vel DC (m/min)	78
		Desilter	20	Carb/BiCarb (m mole/L)	./ -.1	ECD @ 84 (sp.gr.)	1.07

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 1,996.67	A$ 1,996.67

WATER-BASED MUD REPORT No. 2

Date	20/09/2005	**Depth/TVD**	543 m / 543 m
Spud Date	19/09/2005	**Mud Type**	Spud mud
Water Depth		**Activity**	Drill 12-1/4"hole

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY

Bit Size 12.25 in Varel CH1GMS		
Nozzles 3x16 / 1/32"		
Drill Pipe Size	Length	
4.5 in	352 m	
Drill Pipe Size	Length	
4.5 in	38 m	
Drill Collar Size	Length	
6.25 in	154 m	

CASING

Surface	
20in @16m (16TVD)	
Intermediate	
9.625in @545m (545TVD)	
Intermediate	
Production or Liner	

MUD VOLUME (bbl)

Hole	
322.5	
Active Pits	
309.5	
Total Circulating Vol	
632	
In Storage	
216	

CIRCULATION DATA

Pump Make	National 8P-80	National 8P-80
Pump Size	6 X 8.5in	6 X 8.5in
Pump Cap	3.027 gal/stk	3.027 gal/stk
Pump stk/min	93@97%	96@97%
Flow Rate	572 gal/min	
Bottoms Up	22.1 min	4181 stk
Total Circ Time	46.4 min	8771 stk
Circulating Pressure	1470 psi	

MUD PROPERTIES

Sample From		Pit@18:30	Pit@12:30
Flow Line Temp	°C	34	28
Depth/TVD	m	430/430	311/311
Mud Weight	sp.gr.	1.09@33°C	1.05@28°C
Funnel Viscosity	s/qt	65	45
Rheology Temp	°C	30	28
R600/R300		58/48	34/26
R200/R100		39/27	17/15
R6/R3		15/13	11/8
PV	cP	10	8
YP	lb/100ft²	38	18
10s/10m/30m Gel	lb/100ft²	18/37/54	10/24/38
API Fluid Loss	cc/30 min	n/c	n/c
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol	4	2
Oil/Water	%Vol	/96	/98
Sand	%Vol	0.5	0.25
MBT	lb/bbl	32	24
pH		8.5	8.5
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	%	2.0	2.5
PHPA	ppb.		
Sulphite	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
Trugel 13A	25 KG BG	15.00
POTASSIUM CHLORIDE	25 KG BG	203.00

SOLIDS EQUIP

	Size	Hr
DFE Shaker 1	110/110/110	24
DFE Shaker 2	110/110/110	24
D-Sander		20
D-Silter		20

MUD PROPERTY SPECIFICATIONS

Weight	alap
Viscosity	40 - 50
Filtrate	n/c

REMARKS AND TREATMENT

Add 2% KCl to active at 140 m. prior to entering the top of the Gellibrand Marl prognosed at 145 m. (actual 213 m.). Viscosity and density controlled by dump and dilute with KCl brine. Minor sub-surface losses apparent. Excellent hole cleaning and cuttings integrity. Minor slough returns.

REMARKS

Drill ahead.

TIME DISTR

	Last 24 Hrs
Rig Up/Service	
Drilling	24
Tripping	
Non-Productive Tim	

MUD VOL ACCTG (bbl)

Oil Added	0
Water Added	1055
Mud Received	0
Dumped	459
Shakers	35
Formation	150
Desilter	54
Desander	34

SOLIDS ANALYSIS (%/lb/bbl)

NaCl	./.
KCl	./.
Low Gravity	6.4/ 58.5
Bentonite	3.2/ 28.7
Drill Solids	3.5/ 29.6
Weight Material	NA/ NA
Chemical Conc	- / .2
Inert/React	.8219
Average SG	2.4
Carb/BiCarb (m mole/L)	./ -.1

MUD RHEOLOGY & HYDRAULICS

np/na Values	0.273/0.208
kp/ka (lb•s^n/100ft²)	9.332/9.873
Bit Loss (psi / %)	790 / 53.7
Bit HHP (hhp / HSI)	264 / 2.2
Bit Jet Vel (m/s)	95
Ann. Vel DP (m/min)	24.43
Ann. Vel DC (m/min)	27.37
Crit Vel DP (m/min)	112
Crit Vel DC (m/min)	115
ECD @ 543 (sp.gr.)	1.11

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 3,852.48	A$ 5,849.15

WATER-BASED MUD REPORT No. 3

Date	21/09/2005	**Depth/TVD**	550 m / 550 m
Spud Date	19/09/2005	**Mud Type**	Spud mud
Water Depth		**Activity**	Nipple-up

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 12.25 in		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 1/32"		20in @16m (16TVD)	134.2	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size in	Length m	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
		9.625in @545m (545TVD)	-.2	Pump stk/min		
Drill Pipe Size in	Length m	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
			-.2	Bottoms Up		
Drill Collar Size in	Length m	Production or Liner	In Storage	Total Circ Time		
				Circulating Pressure		

MUD PROPERTIES

Sample From		Pit@01:00	
Flow Line Temp	°C	37	
Depth/TVD	m	550/550	
Mud Weight	sp.gr.	1.06@35°C	
Funnel Viscosity	s/qt	43	
Rheology Temp	°C	35	
R600/R300		53/43	
R200/R100		32/21	
R6/R3		9/7	
PV	cP	10	
YP	lb/100ft²	33	
10s/10m/30m Gel	lb/100ft²	10/18/33	
API Fluid Loss	cc/30 min	n/c	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol	3	
Oil/Water	%Vol	/97	
Sand	%Vol	0.5	
MBT	lb/bbl		
pH		8.5	
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	%	2.2	
PHPA	ppb.		
Sulphite	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	110/110/110	24
DFE Shaker 2	110/110/110	24
D-Sander		2
D-Silter		2

MUD PROPERTY SPECIFICATIONS

Weight	alap
Viscosity	40 - 50
Filtrate	n/c

REMARKS AND TREATMENT

Prior to TD add brine dilution to moderate viscosities and gels strengths for tripping, casing run and cement job. Sub-surface loss while tripping - 42 bbls; running casing - 27 bbls. Cement returns to surface. Assume all mud as dumped for accounting purposes.

REMARKS

Drill to TD at 550 m. Circulate hole clean. Wiper trip. Fill 5 m. circulate with large blocky slough returns. POOH. Run and set 9-5/8" casing at 547 m. No fill. Work casing through tight hole from 203 - 239 m. (Gellibrand Marl top at 213 m.). Displace cement with drillwater.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	2	Oil Added	0	NaCl	./ .	np/na Values	
Drilling	0.5	Water Added	0	KCl	./ .	kp/ka (lb•s^n/100ft²)	
Tripping	7	Mud Received	0	Low Gravity	4.3/ 39.	Bit Loss (psi / %)	
Non-Productive Tim		Dumped	743	Bentonite	./ .	Bit HHP (hhp / HSI)	
Condition Hole	4.5	Shakers	10	Drill Solids	5.2/ 43.6	Bit Jet Vel (m/s)	
Running Casing	9	Formation	69	Weight Material	NA/ NA	Ann. Vel DP (m/min)	
Cementing	1	Desilter	18	Chemical Conc	- / .2	Ann. Vel DC (m/min)	
		Desander	8	Inert/React	-	Crit Vel DP (m/min)	
				Average SG	2.4	Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	./ -.1		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 0.00	A$ 5,849.15

WATER-BASED MUD REPORT No. 4

Date	22/09/2005	**Depth/TVD**	550 m / 550 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Nipple-up

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 1/32"		20in @16m (16TVD)	132	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size in	Length m	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
		9.625in @545m (545TVD)	396	Pump stk/min		
Drill Pipe Size in	Length m	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
			396	Bottoms Up		
Drill Collar Size in	Length m	Production or Liner	In Storage	Total Circ Time		
			4	Circulating Pressure		

MUD PROPERTIES

Sample From			
Flow Line Temp	°C		
Depth/TVD	m		
Mud Weight	sp.gr.		
Funnel Viscosity	s/qt		
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	lb/100ft²		
10s/10m/30m Gel	lb/100ft²		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	lb/bbl		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	%		
PHPA	ppb.		
Sulphite	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	2.00
POTASSIUM CHLORIDE	25 KG BG	100.00
GLUTE 25	25 LT CN	1.00
Polyplus Powder	25 KG BG	4.00
DUOTEC	25 KG BG	8.00
POLYPAC UL	25 KG BG	8.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	54/54/54	0
DFE Shaker 2	54/54/54	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Dump and clean pits. Install 54-mesh screens to shakers. Build new whole KCl / PHPA / polymer mud with 0.5 ppb PHPA. Received material as per M-I DT#43.

REMARKS

Nipple-up. Corrected shoe depth from 550 - 544.5 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./	np/na Values	
Drilling		Water Added	390	KCl	/	kp/ka (lb•s^n/100ft²)	
Tripping		Mud Received	0	Low Gravity	/	Bit Loss (psi / %)	
Non-Productive Tim		Dumped	0	Bentonite	/	Bit HHP (hhp / HSI)	
BOP NU	24	Shakers	0	Drill Solids	/	Bit Jet Vel (m/s)	
		Formation	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	
		Desilter	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Desander	0	Inert/React		Crit Vel DP (m/min)	
				Average SG		Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 5,719.50	A$ 11,568.65

WATER-BASED MUD REPORT No. 5

Date	**23/09/2005**	**Depth/TVD**	**550 m / 550 m**
Spud Date	**19/09/2005**	**Mud Type**	**KCl/PHPA/Polymer**
Water Depth		**Activity**	**Rig repair**

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 1/32"		20in @16m (16TVD)	132	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
in	m	9.625in @545m (545TVD)	333	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
in	m		333	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m		233	Circulating Pressure		

MUD PROPERTIES

Sample From		Pit@12:00	
Flow Line Temp	°C	n/a	
Depth/TVD	m	550/550	
Mud Weight	sp.gr.	1.03@20°C	
Funnel Viscosity	s/qt	54	
Rheology Temp	°C	20	
R600/R300		43/30	
R200/R100		25/20	
R6/R3		7/5	
PV	cP	13	
YP	lb/100ft²	17	
10s/10m/30m Gel	lb/100ft²	5/7/7	
API Fluid Loss	cc/30 min	10	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	5	
Oil/Water	%Vol	/95	
Sand	%Vol	0	
MBT	lb/bbl	0	
pH		8.4	
Alkal Mud (Pm)		0.2	
Pf/Mf		0.1/0.4	
Chlorides	mg/l	23000	
Hardness Ca	mg/l	100	
KCl	%	4	
PHPA	ppb.	0.5	
Sulphite	mg/l	nil	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	1.00
POTASSIUM CHLORIDE	25 KG BG	50.00
GLUTE 25	25 LT CN	1.00
DEFOAM A	25 LT CN	1.00
Polyplus Powder	25 KG BG	2.00
DUOTEC	25 KG BG	4.00
POLYPAC UL	25 KG BG	4.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	54/54/54	0
DFE Shaker 2	54/54/54	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build KCL / PHPA / polymer mud. Total built = 566 bbls.

REMARKS

Wait on pump module.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service	18	Oil Added	0	NaCl	1.1/ 13.2	np/na Values	
Drilling		Water Added	161	KCl	./ .	kp/ka (lb•s^n/100ft²)	
Tripping		Mud Received	0	Low Gravity	.3/ 2.4	Bit Loss (psi / %)	
Non-Productive Tim		Dumped	0	Bentonite	./ .	Bit HHP (hhp / HSI)	
BOP NU	6	Shakers	0	Drill Solids	-.2/ -1.8	Bit Jet Vel (m/s)	
		Formation	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	
		Desilter	0	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	
		Desander	0	Inert/React	-	Crit Vel DP (m/min)	
				Average SG	2.4	Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	2./ 39.9		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 3,010.75	A$ 14,579.40

WATER-BASED MUD REPORT No. 6

Date	24/09/2005	**Depth/TVD**	766 m / 766 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605s		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	151.5	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
4.5 in	557 m	9.625in @545m (545TVD)	253.5	Pump stk/min	102@97%	105@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	627 gal/min	
4.5 in	38 m	in @2545m (2545TVD)	405	Bottoms Up	8.1 min	1670 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	27.1 min	5616 stk
6.25 in	172 m		160	Circulating Pressure	1000 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@19:45
Flow Line Temp	°C	37	33
Depth/TVD	m	766/766	648/648
Mud Weight	sp.gr.	1.04@35°C	1.04@30°C
Funnel Viscosity	s/qt	47	52
Rheology Temp	°C	35	30
R600/R300		42/30	42/29
R200/R100		23/19	22/18
R6/R3		7/5	6/4
PV	cP	12	13
YP	lb/100ft²	18	16
10s/10m/30m Gel	lb/100ft²	7/9/11	5/7/8
API Fluid Loss	cc/30 min	7.0	7.5
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	6	4
Oil/Water	%Vol	/94	/96
Sand	%Vol	0.75	tr
MBT	lb/bbl	3	2
pH		9.5	9.7
Alkal Mud (Pm)		0.4	0.4
Pf/Mf		0.1/0.7	0.1/0.5
Chlorides	mg/l	22000	21000
Hardness Ca	mg/l	100	100
KCl	%	4.2	4
PHPA	ppb.	0.75	0.75
Sulphite	mg/l	0	0

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
KWIK SEAL FINE	40 LB BG	34.00
SODIUM BICARBONATE	25 KG BG	2.00
POTASSIUM CHLORIDE	25 KG BG	90.00
GLUTE 25	25 LT CN	1.00
DEFOAM A	25 LT CN	1.00
Polyplus Powder	25 KG BG	8.00
DUOTEC	25 KG BG	6.00
POLYPAC UL	25 KG BG	5.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	54/54/54	8
DFE Shaker 2	54/54/54	8
D-Sander		0
D-Silter		3

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Circulate through gun-lines to shear mud. Drill-out with drillwater in closed system on slug pit. Displace to KCl / PHPA mud in shoe track. Increase PHPA concentration. Lower fluid loss. Increase carrying capacity. Losses due to 'possum-belly blockage. Sub-surface losses add LCM directly to suction pit.

REMARKS

Pressure test BOPs. M/u BHA. Repace pump module. RIH. TOC at 523 m. Drill-out. Drill new hole. LOT to 1.63 sg. EMD. Drill ahead.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ .6	np/na Values	0.485/0.381
Drilling		Water Added	154	KCl	1.6/ 15.	kp/ka (lb•s^n/100ft²)	1.551/2.867
Tripping		Mud Received	0	Low Gravity	2.3/ 20.8	Bit Loss (psi / %)	493 / 49.3
Non-Productive Tim		Dumped	18	Bentonite	.1/ 1.3	Bit HHP (hhp / HSI)	180 / 3.2
BOP NU		Shakers	65	Drill Solids	1.9/ 15.5	Bit Jet Vel (m/s)	77
		Formation	81	Weight Material	NA/ NA	Ann. Vel DP (m/min)	90.08
		Desilter	5	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	141.14
		Desander	0	Inert/React	4.6069	Crit Vel DP (m/min)	102
				Average SG	2.4	Crit Vel DC (m/min)	116
				Carb/BiCarb (m mole/L)	2./ 3.1	ECD @ 766 (sp.gr.)	1.11

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 6,791.22	A$ 21,370.62

WATER-BASED MUD REPORT No. 7

Date	25/09/2005	**Depth/TVD**	1327 m / 1327 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605s		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	268.8	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
4.5 in	1118 m	9.625in @545m (545TVD)	358.2	Pump stk/min	105@97%	103@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	630 gal/min	
4.5 in	38 m	in @2545m (2545TVD)	627	Bottoms Up	14.1 min	2938 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	41.8 min	8694 stk
6.25 in	172 m		90	Circulating Pressure	1112 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@10:30
Flow Line Temp	°C	46	39
Depth/TVD	m	1327/1327	1032/1032
Mud Weight	sp.gr.	1.07@35°C	1.06@35°C
Funnel Viscosity	s/qt	52	58
Rheology Temp	°C	35	35
R600/R300		58/43	54/38
R200/R100		34/27	27/19
R6/R3		8/5	7/5
PV	cP	15	16
YP	lb/100ft²	28	22
10s/10m/30m Gel	lb/100ft²	6/8/9	7/10/12
API Fluid Loss	cc/30 min	5.8	6.5
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	7	6
Oil/Water	%Vol	/93	/94
Sand	%Vol	0.5	1.0
MBT	lb/bbl	4	3.75
pH		8.7	9.0
Alkal Mud (Pm)		0.3	0.3
Pf/Mf		0.1/0.45	0.1/0.6
Chlorides	mg/l	21000	22000
Hardness Ca	mg/l	180	100
KCl	%	4	4
PHPA	ppb.	1.0	1.1
Sulphite	mg/l	0	0

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	2.00
POTASSIUM CHLORIDE	25 KG BG	155.00
GLUTE 25	25 LT CN	2.00
Polyplus Powder	25 KG BG	3.00
DUOTEC	25 KG BG	10.00
POLYPAC UL	25 KG BG	24.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	110/110/110	24
DFE Shaker 2	110/110/110	24
D-Sander		0
D-Silter		18

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Sub-surface seepage losses continue through Dilwyn fmt (775 - 1191 m.). Build new volume. Increase carrying capacity. Change out shaker screens to 110-mesh. Decrease sand content. Dump sandtraps. Run desilter.

REMARKS

Drill ahead. Surveys = 0 deg.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ .1	np/na Values	0.432/0.481
Drilling	24	Water Added	446	KCl	1.6/ 14.9	kp/ka (lb•s^n/100ft²)	3.107/2.435
Tripping		Mud Received	0	Low Gravity	3.1/ 28.2	Bit Loss (psi / %)	512 / 46
Non-Productive Tim		Dumped	66	Bentonite	.2/ 1.5	Bit HHP (hhp / HSI)	188 / 3.3
		Shakers	115	Drill Solids	2.7/ 22.7	Bit Jet Vel (m/s)	77
		Formation	63	Weight Material	NA/ NA	Ann. Vel DP (m/min)	90.51
		Desilter	67	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	141.81
		Desander	0	Inert/React	5.0462	Crit Vel DP (m/min)	122
				Average SG	2.4	Crit Vel DC (m/min)	146
				Carb/BiCarb (m mole/L)	2./ 19.9	ECD @ 1327 (sp.gr.)	1.16

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 9,328.95	A$ 30,699.57

WATER-BASED MUD REPORT No. 8

Date	26/09/2005	**Depth/TVD**	1742 m / 1742 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY

Bit Size 8.5 in HC 605s			
Nozzles 14 /5x13 / 1/32"			
Drill Pipe Size	Length		
4.5 in	1533 m		
Drill Pipe Size	Length		
4.5 in	38 m		
Drill Collar Size	Length		
6.25 in	172 m		

CASING

Surface	
20in @16m (16TVD)	
Intermediate	
9.625in @545m (545TVD)	
Intermediate	
in @2545m (2545TVD)	
Production or Liner	

MUD VOLUME (bbl)

Hole	
355.5	
Active Pits	
439.5	
Total Circulating Vol	
795	
In Storage	
89	

CIRCULATION DATA

Pump Make	National 8P-80	National 8P-80
Pump Size	6 X 8.5in	6 X 8.5in
Pump Cap	3.027 gal/stk	3.027 gal/stk
Pump stk/min	105@97%	103@97%
Flow Rate	630 gal/min	
Bottoms Up	18.6 min	3876 stk
Total Circ Time	53 min	11024 stk
Circulating Pressure	1800 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@11:50
Flow Line Temp	°C	53	50
Depth/TVD	m	1742/1742	1568/1568
Mud Weight	sp.gr.	1.08@40°C	1.08@40°C
Funnel Viscosity	s/qt	61	52
Rheology Temp	°C	48	40
R600/R300		77/54	58/42
R200/R100		45/32	33/22
R6/R3		8/6	8/6
PV	cP	23	16
YP	lb/100ft²	31	26
10s/10m/30m Gel	lb/100ft²	9/13/15	7/10/12
API Fluid Loss	cc/30 min	5.5	6.2
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	8	8
Oil/Water	%Vol	/92	/92
Sand	%Vol	0.5	0.3
MBT	lb/bbl	5	5
pH		8.7	8.7
Alkal Mud (Pm)		0.22	0.2
Pf/Mf		0.1/0.4	0.1/0.3
Chlorides	mg/l	22000	21000
Hardness Ca	mg/l	200	180
KCl	%	4.2	4
PHPA	ppb.	1.4	0.6
Sulphite	mg/l	200	0

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	3.00
POTASSIUM CHLORIDE	25 KG BG	128.00
GLUTE 25	25 LT CN	1.00
Polyplus Powder	25 KG BG	13.00
DUOTEC	25 KG BG	2.00
POLYPAC UL	25 KG BG	35.00
OS-1	25 KG BG	4.00

SOLIDS EQUIP

	Size	Hr
DFE Shaker 1	110/110/110	24
DFE Shaker 2	110/110/110	24
D-Sander		0
D-Silter		24

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build replacement volume. Temperature increasing. Increase PHPA concentration. Adjust LCM inventory. Erroneous viscometer readings due to PHPA additions. Dump sandtrap.

REMARKS

Drill ahead.

TIME DISTR

	Last 24 Hrs
Rig Up/Service	
Drilling	24
Tripping	
Non-Productive Tim	

MUD VOL ACCTG (bbl)

Oil Added	0
Water Added	414
Mud Received	0
Dumped	55
Shakers	147
Formation	0
Desilter	60
Desander	0

SOLIDS ANALYSIS (%/lb/bbl)

NaCl	./ .6
KCl	1.6/ 14.8
Low Gravity	3.7/ 34.1
Bentonite	.2/ 1.9
Drill Solids	3.4/ 28.2
Weight Material	NA/ NA
Chemical Conc	- / 4.
Inert/React	5.0184
Average SG	2.4
Carb/BiCarb (m mole/L)	2./ 19.9

MUD RHEOLOGY & HYDRAULICS

np/na Values	0.512/0.477
kp/ka (lb•s^n/100ft²)	2.367/2.939
Bit Loss (psi / %)	517 / 28.7
Bit HHP (hhp / HSI)	190 / 3.3
Bit Jet Vel (m/s)	77
Ann. Vel DP (m/min)	90.51
Ann. Vel DC (m/min)	141.81
Crit Vel DP (m/min)	136
Crit Vel DC (m/min)	162
ECD @ 1742 (sp.gr.)	1.18

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 9,571.52	A$ 40,271.09

WATER-BASED MUD REPORT No. 9

Date	27/09/2005	**Depth/TVD**	2058 m / 2058 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY

Bit Size 8.5 in HC 605s			
Nozzles 14 /5x13 / 1/32"			
Drill Pipe Size	Length		
4.5 in	1849 m		
Drill Pipe Size	Length		
4.5 in	38 m		
Drill Collar Size	Length		
6.25 in	172 m		

CASING

Surface	
20in @16m (16TVD)	
Intermediate	
9.625in @545m (545TVD)	
Intermediate	
in @2545m (2545TVD)	
Production or Liner	

MUD VOLUME (bbl)

Hole	
421.6	
Active Pits	
454.4	
Total Circulating Vol	
876	
In Storage	
9	

CIRCULATION DATA

Pump Make	National 8P-80	National 8P-80
Pump Size	6 X 8.5in	6 X 8.5in
Pump Cap	3.027 gal/stk	3.027 gal/stk
Pump stk/min	91@97%	92@97%
Flow Rate	554 gal/min	
Bottoms Up	25.1 min	4592 stk
Total Circ Time	66.4 min	12153 stk
Circulating Pressure	2100 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@15:00
Flow Line Temp	°C	56	54
Depth/TVD	m	2058/2058	1943/1943
Mud Weight	sp.gr.	1.09@45°C	1.09@45°C
Funnel Viscosity	s/qt	65	77
Rheology Temp	°C	48	48
R600/R300		85/60	84/59
R200/R100		47/33	45/32
R6/R3		7/5	7/5
PV	cP	25	25
YP	lb/100ft²	35	34
10s/10m/30m Gel	lb/100ft²	7/10/13	7/10/12
API Fluid Loss	cc/30 min	5.1	5.5
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	10	10
Oil/Water	%Vol	/90	/90
Sand	%Vol	0.75	0.5
MBT	lb/bbl	7.5	7.5
pH		8.8	8.7
Alkal Mud (Pm)		0.3	0.2
Pf/Mf		0.1/0.4	0.1/0.4
Chlorides	mg/l	22000	22000
Hardness Ca	mg/l	420	400
KCl	%	4	4
PHPA	ppb.	1.5	1.5
Sulphite	mg/l	180	80

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	5.00
POTASSIUM CHLORIDE	25 KG BG	196.00
GLUTE 25	25 LT CN	1.00
Polyplus Powder	25 KG BG	15.00
DUOTEC	25 KG BG	7.00
POLYPAC UL	25 KG BG	43.00
OS-1	25 KG BG	5.00

SOLIDS EQUIP

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	24
DFE Shaker 2	140/140/110	24
D-Sander		2
D-Silter		15

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build replacement mud with recycled sump fluid. Increase PHPA concentration. Losses at shakers. Erroneous viscometer readings and funnel viscosity due to PHPA additions. Order material.

REMARKS

Drill ahead. Constantly change split shaker screens. Losses at shakers. Solids to mud pits - dump sandtrap regularly.

TIME DISTR

	Last 24 Hrs
Rig Up/Service	
Drilling	24
Tripping	
Non-Productive Tim	

MUD VOL ACCTG (bbl)

Oil Added	0
Water Added	600
Mud Received	0
Dumped	150
Shakers	387
Formation	0
Desilter	60
Desander	25

SOLIDS ANALYSIS (%/lb/bbl)

NaCl	./ .6
KCl	1.6/ 14.7
Low Gravity	4.5/ 40.7
Bentonite	.4/ 3.8
Drill Solids	3.9/ 32.9
Weight Material	NA/ NA
Chemical Conc	- / 4.
Inert/React	3.897
Average SG	2.4
Carb/BiCarb (m mole/L)	2./ 15.8

MUD RHEOLOGY & HYDRAULICS

np/na Values	0.503/0.538
kp/ka (lb•s^n/100ft²)	2.788/2.218
Bit Loss (psi / %)	403 / 19.2
Bit HHP (hhp / HSI)	130 / 2.3
Bit Jet Vel (m/s)	68
Ann. Vel DP (m/min)	79.59
Ann. Vel DC (m/min)	124.71
Crit Vel DP (m/min)	136
Crit Vel DC (m/min)	168
ECD @ 2058 (sp.gr.)	1.19

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 13,574.29	A$ 53,845.38

WATER-BASED MUD REPORT No. 10

Date	28/09/2005	**Depth/TVD**	2246 m / 2246 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Wiper trip.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605s		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	482(Tot)/253.1(Bit)	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
4.5 in	1043 m	9.625in @545m (545TVD)	346	Pump stk/min	91@97%	92@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	554 gal/min	
4.5 in	38 m	in @2545m (2545TVD)	599.1	Bottoms Up	15.1 min	2770 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	45.4 min	8312 stk
6.25 in	172 m		9	Circulating Pressure	2100 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@12:30
Flow Line Temp	°C	n/c	58
Depth/TVD	m	2246/2246	2246/2246
Mud Weight	sp.gr.	1.09@35°C	1.09@45°C
Funnel Viscosity	s/qt	60	55
Rheology Temp	°C	48	48
R600/R300		84/59	84/59
R200/R100		46/31	46/31
R6/R3		7/5	7/5
PV	cP	25	25
YP	lb/100ft²	34	34
10s/10m/30m Gel	lb/100ft²	6/11/13	5/10/12
API Fluid Loss	cc/30 min	4.8	4.8
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	11	11
Oil/Water	%Vol	/89	/89
Sand	%Vol	0.5	0.5
MBT	lb/bbl	10	10
pH		8.7	8.7
Alkal Mud (Pm)		0.3	0.3
Pf/Mf		0.1/0.4	0.1/0.4
Chlorides	mg/l	22000	22000
Hardness Ca	mg/l	520	520
KCl	%	4	4
PHPA	ppb.	1.25	1.3
Sulphite	mg/l	80	100

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
SODIUM BICARBONATE	25 KG BG	3.00
M-I BAR	25 KG BG	40.00
POTASSIUM CHLORIDE	25 KG BG	100.00
GLUTE 25	25 LT CN	3.00
DUOTEC	25 KG BG	4.00
POLYPAC UL	25 KG BG	21.00
OS-1	25 KG BG	4.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	13
DFE Shaker 2	140/140/110	13
D-Sander		0
D-Silter		13

MUD PROPERTY SPECIFICATIONS

Weight	1.08-1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build replacement volume with recycled sump fluid - increasing MBC / hardness. Increase carrying capacity. Build slug. Dump cuttings full sandtrap due to split screens.

REMARKS

Drill ahead to 2246 m. Circulate hole clean. Slug pipe. POOH for wiper trip.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ .6	np/na Values	0.510/0.520
Drilling	12	Water Added	319	KCl	1.6/ 14.7	kp/ka (lb•s^n/100ft²)	2.622/2.283
Tripping	11	Mud Received	0	Low Gravity	4.5/ 40.7	Bit Loss (psi / %)	403 / 19.2
Non-Productive Tim		Dumped	123	Bentonite	.7/ 6.7	Bit HHP (hhp / HSI)	130 / 2.3
Condition Hole	1	Shakers	205	Drill Solids	3.6/ 30.1	Bit Jet Vel (m/s)	68
		Formation	0	Weight Material	NA/ NA	Ann. Vel DP (m/min)	79.59
		Desilter	52	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	124.71
		Desander	0	Inert/React	2.6728	Crit Vel DP (m/min)	131
				Average SG	2.4	Crit Vel DC (m/min)	160
				Carb/BiCarb (m mole/L)	2./ 19.9	ECD @ 1252 (sp.gr.)	1.19

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 6,551.49	A$ 60,396.87

WATER-BASED MUD REPORT No. 11

Date	29/09/2005	**Depth/TVD**	2377 m / 2377 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY

Bit Size 8.5 in HC 605s			
Nozzles 14 /5x13 / 1/32"			
Drill Pipe Size	Length		
4.5 in	2168 m		
Drill Pipe Size	Length		
4.5 in	38 m		
Drill Collar Size	Length		
6.25 in	172 m		

CASING

Surface	
20in @16m (16TVD)	
Intermediate	
9.625in @545m (545TVD)	
Intermediate	
in @2545m (2545TVD)	
Production or Liner	

MUD VOLUME (bbl)

Hole	
488.3	
Active Pits	
379.7	
Total Circulating Vol	
868	
In Storage	
88	

CIRCULATION DATA

Pump Make	National 8P-80	National 8P-80
Pump Size	6 X 8.5in	6 X 8.5in
Pump Cap	3.027 gal/stk	3.027 gal/stk
Pump stk/min	88@97%	84@97%
Flow Rate	521 gal/min	
Bottoms Up	30.9 min	5311 stk
Total Circ Time	70 min	12035 stk
Circulating Pressure	1800 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@14:00
Flow Line Temp	°C	58	54
Depth/TVD	m	2377/2377	2285/2285
Mud Weight	sp.gr.	1.13@40°C	1.13@40°C
Funnel Viscosity	s/qt	66	62
Rheology Temp	°C	48	48
R600/R300		88/61	67/45
R200/R100		49/33	36/23
R6/R3		7/4	5/3
PV	cP	27	22
YP	lb/100ft²	34	23
10s/10m/30m Gel	lb/100ft²	6/10/11	6/9/11
API Fluid Loss	cc/30 min	5.0	5.3
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	8	8
Oil/Water	%Vol	/92	/92
Sand	%Vol	0.6	0.5
MBT	lb/bbl	10	10
pH		9.5	9.5
Alkal Mud (Pm)		0.6	0.5
Pf/Mf		0.2/1.1	0.2/0.8
Chlorides	mg/l	26000	24000
Hardness Ca	mg/l	100	100
KCl	%	4.3	4.2
PHPA	ppb.	1.0	0.9
Sulphite	mg/l	80	100

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CAUSTIC SODA (DRY)	25 KG DM	5.00
SODIUM BICARBONATE	25 KG BG	1.00
M-I BAR	25 KG BG	176.00
POTASSIUM CHLORIDE	25 KG BG	43.00
GLUTE 25	25 LT CN	1.00
Polyplus Powder	25 KG BG	4.00
DUOTEC	25 KG BG	3.00

SOLIDS EQUIP

	Size	Hr
DFE Shaker 1	140/140/110	18
DFE Shaker 2	175/175/175	18
D-Sander		0
D-Silter		14

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Increase mud density to 1.13 sg. Change shaker screens. Add caustic to assist alkalinity maker for possible CO2 from Waarre - see 14:00 hr mud check for base-line alkalinity.

REMARKS

Wiper trip to shoe. Drill ahead. Non-stressed caving returns from trip.

TIME DISTR

	Last 24 Hrs
Rig Up/Service	
Drilling	14
Tripping	10
Non-Productive Tim	

MUD VOL ACCTG (bbl)

Oil Added	0
Water Added	167
Mud Received	0
Dumped	0
Shakers	39
Formation	0
Desilter	20
Desander	0

SOLIDS ANALYSIS (%/lb/bbl)

NaCl	.1/ .8
KCl	1.8/ 16.9
Low Gravity	5.4/ 49.
Bentonite	.6/ 5.6
Drill Solids	4.7/ 39.4
Weight Material	.7/ 10.6
Chemical Conc	- / 4.
Inert/React	3.4981
Average SG	2.61
Carb/BiCarb (m mole/L)	4./ 6.3

MUD RHEOLOGY & HYDRAULICS

np/na Values	0.529/0.602
kp/ka (lb•s^n/100ft²)	2.408/1.599
Bit Loss (psi / %)	370 / 20.5
Bit HHP (hhp / HSI)	112 / 2
Bit Jet Vel (m/s)	64
Ann. Vel DP (m/min)	74.85
Ann. Vel DC (m/min)	117.28
Crit Vel DP (m/min)	131
Crit Vel DC (m/min)	168
ECD @ 2377 (sp.gr.)	1.22

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 3,811.58	A$ 64,208.45

WATER-BASED MUD REPORT No. 12

Date	30/09/2005	**Depth/TVD**	2545 m / 2545 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	TD wiper trip

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605S		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	523.4	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
4.5 in	2336 m	9.625in @545m (545TVD)	378.6	Pump stk/min	85@97%	80@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	500 gal/min	
4.5 in	38 m	in @2545m (2545TVD)	902	Bottoms Up	34.5 min	5688 stk
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	75.8 min	12502 stk
6.25 in	172 m		33	Circulating Pressure	1860 psi	

MUD PROPERTIES

Sample From		Pit@21:00	Pit@13:30
Flow Line Temp	°C	62	59
Depth/TVD	m	2545/2545	2506/2506
Mud Weight	sp.gr.	1.15@40°C	1.15@45°C
Funnel Viscosity	s/qt	59	60
Rheology Temp	°C	48	48
R600/R300		83/59	85/60
R200/R100		47/33	48/33
R6/R3		7/4	7/4
PV	cP	24	25
YP	lb/100ft²	35	35
10s/10m/30m Gel	lb/100ft²	5/11/13	5/11/13
API Fluid Loss	cc/30 min	4.0	4.2
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	8.6	8.6
Oil/Water	%Vol	/91.4	/91.4
Sand	%Vol	0.25	0.3
MBT	lb/bbl	7.5	7.5
pH		8.6	8.7
Alkal Mud (Pm)		0.4	0.35
Pf/Mf		0.05/0.9	0.05/0.8
Chlorides	mg/l	26000	26000
Hardness Ca	mg/l	280	280
KCl	%	4.2	4.3
PHPA	ppb.	0.7	0.8
Sulphite	mg/l	180	20

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
M-I BAR	25 KG BG	104.00
POTASSIUM CHLORIDE	25 KG BG	43.00
GLUTE 25	25 LT CN	4.00
Polyplus Powder	25 KG BG	1.00
DUOTEC	25 KG BG	2.00
OS-1	25 KG BG	2.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	21
DFE Shaker 2	175/175/175	21
D-Sander		0
D-Silter		21

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Add OS-1 for corrosion control. Add biocide prior yo wiper trip. Build slug.

REMARKS

Drill ahead to total depth at 2545 m.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	.1/ .8	np/na Values	0.492/0.602
Drilling	19.5	Water Added	160	KCl	1.8/ 16.8	kp/ka (lb•s^n/100ft²)	2.920/1.599
Tripping	3.5	Mud Received	0	Low Gravity	5.3/ 48.7	Bit Loss (psi / %)	347 / 18.6
Non-Productive Tim		Shakers	120	Bentonite	.3/ 2.9	Bit HHP (hhp / HSI)	101 / 1.8
Condition Hole	1	Formation	0	Drill Solids	5./ 41.8	Bit Jet Vel (m/s)	61
		Desilter	40	Weight Material	1.4/ 20.1	Ann. Vel DP (m/min)	71.83
		Desander	0	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	112.55
		Dumped	30	Inert/React	4.9563	Crit Vel DP (m/min)	129
				Average SG	2.77	Crit Vel DC (m/min)	166
				Carb/BiCarb (m mole/L)	1./ 12.5	ECD @ 2545 (sp.gr.)	1.24

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 2,801.51	A$ 67,009.96

WATER-BASED MUD REPORT No. 13

Date	1/10/2005	**Depth/TVD**	2545 m / 2545 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Electric logging

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 1/32"		20in @16m (16TVD)	591.4	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
4.5 in	m	9.625in @545m (545TVD)	231.6	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
in	m	in @2545m (2545TVD)	231.6	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
in	m		20	Circulating Pressure		

MUD PROPERTIES

Sample From		Pit@12:00	
Flow Line Temp	°C	n/a	
Depth/TVD	m	2545/2545	
Mud Weight	sp.gr.	1.15@40°C	
Funnel Viscosity	s/qt	60	
Rheology Temp	°C	48	
R600/R300		83/59	
R200/R100		47/33	
R6/R3		7/4	
PV	cP	24	
YP	lb/100ft²	35	
10s/10m/30m Gel	lb/100ft²	5/11/13	
API Fluid Loss	cc/30 min	4.0	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	8.6	
Oil/Water	%Vol	/91.4	
Sand	%Vol	0.25	
MBT	lb/bbl	7.5	
pH		8.6	
Alkal Mud (Pm)		0.4	
Pf/Mf		0.05/0.9	
Chlorides	mg/l	26000	
Hardness Ca	mg/l	280	
KCl	%	4.3	
PHPA	ppb.	0.8	
Sulphite	mg/l	80	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
M-I BAR	25 KG BG	98.00
OS-1	25 KG BG	2.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	0
DFE Shaker 2	175/175/175	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Unaccounted for losses - probable sub-surface losses while back-reaming swabbing hole. Credit for caustic soda x 3 drums. Barytes for slugs.

REMARKS

POOH. Swabbing. Back-ream swabbing hole. Tight hole 20-30 klbs over-pull from 1731 - 827 m. R/u and run electric logs. Prepare to plug and abandon.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	.1/ .8	np/na Values	
Drilling		Water Added	0	KCl	1.8/ 16.8	kp/ka (lb•s^n/100ft²)	
Tripping	14	Mud Received	0	Low Gravity	5.3/ 48.7	Bit Loss (psi / %)	
Non-Productive Tim		Shakers	26	Bentonite	.3/ 2.9	Bit HHP (hhp / HSI)	
Wireline Logs	7	Formation	70	Drill Solids	5./ 41.8	Bit Jet Vel (m/s)	
Plug and Abandon	3	Desilter	0	Weight Material	1.4/ 20.1	Ann. Vel DP (m/min)	
		Desander	0	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	
		Dumped	0	Inert/React	4.9563	Crit Vel DP (m/min)	
				Average SG	2.77	Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	1./ 12.5		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 772.16	A$ 67,782.12

WATER-BASED MUD REPORT No. 14

Date	2/10/2005	**Depth/TVD**	2616 m / 2616 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Drill 8-1/2" hole.

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY

Bit Size 8.5 in HC 605S			
Nozzles 14 /5x13 / 1/32"			
Drill Pipe Size	Length		
4.5 in	2407 m		
Drill Pipe Size	Length		
4.5 in	38 m		
Drill Collar Size	Length		
6.5 in	172 m		

CASING

Surface	
20in @16m (16TVD)	
Intermediate	
9.625in @545m (545TVD)	
Intermediate	
in @2545m (2545TVD)	
Production or Liner	

MUD VOLUME (bbl)

Hole	
536.5	
Active Pits	
409.5	
Total Circulating Vol	
946	
In Storage	
103	

CIRCULATION DATA

Pump Make	National 8P-80	National 8P-80
Pump Size	6 X 8.5in	6 X 8.5in
Pump Cap	3.027 gal/stk	3.027 gal/stk
Pump stk/min	82@97%	83@97%
Flow Rate	500 gal/min	
Bottoms Up	35.3 min	5824 stk
Total Circ Time	79.5 min	13112 stk
Circulating Pressure	1500 psi	

MUD PROPERTIES

Sample From		Pit@24:00	Pit@12:00
Flow Line Temp	°C	65	n/a
Depth/TVD	m	2616/2616	2454/2454
Mud Weight	sp.gr.	1.16@40°C	1.15@35°C
Funnel Viscosity	s/qt	62	78
Rheology Temp	°C	48	48
R600/R300		79/57	85/60
R200/R100		45/30	48/33
R6/R3		7/4	7/4
PV	cP	22	25
YP	lb/100ft²	35	35
10s/10m/30m Gel	lb/100ft²	6/10/12	6/12/14
API Fluid Loss	cc/30 min	4.2	4.0
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	9.5	8.9
Oil/Water	%Vol	/90.5	/91.1
Sand	%Vol	0.5	0.25
MBT	lb/bbl	10	7.5
pH		9.3	9.5
Alkal Mud (Pm)		0.5	0.4
Pf/Mf		0.1/1.1	0.05/1.0
Chlorides	mg/l	27000	26000
Hardness Ca	mg/l	200	280
KCl	%	5.3	4.7
PHPA	ppb.	0.9	0.75
Sulphite	mg/l	20	80

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
CAUSTIC SODA (DRY)	25 KG DM	2.00
SODIUM BICARBONATE	25 KG BG	1.00
POTASSIUM CHLORIDE	25 KG BG	125.00
GLUTE 25	25 LT CN	2.00
Polyplus Powder	25 KG BG	5.00
DUOTEC	25 KG BG	5.00
POLYPAC UL	25 KG BG	15.00
OS-1	25 KG BG	4.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	12
DFE Shaker 2	175/175/175	12
D-Sander		0
D-Silter		12

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build replacement volume. Costs for Defoam A added to cummulative costs. Maximum BHT from logs = 95.5 deg.C. Unaccounted for losses assumed sub-surface.

REMARKS

No primary objective seen on e-logs. RIH. Wash and ream. Slough returns. Drill ahead.

TIME DISTR	Last 24 Hrs
Rig Up/Service	
Drilling	12
Tripping	12
Non-Productive Tim	

MUD VOL ACCTG	(bbl)
Oil Added	0
Water Added	392
Mud Received	0
Shakers	80
Formation	102
Desilter	18
Desander	0
Dumped	0

SOLIDS ANALYSIS (%/lb/bbl)	
NaCl	./ -.1
KCl	2./ 18.5
Low Gravity	6.2/ 56.9
Bentonite	.5/ 4.6
Drill Solids	5.7/ 48.2
Weight Material	1.2/ 18.4
Chemical Conc	- / 4.
Inert/React	4.2856
Average SG	2.7
Carb/BiCarb (m mole/L)	2./ 5.

MUD RHEOLOGY & HYDRAULICS	
np/na Values	0.471/0.575
kp/ka (lb•s^n/100ft²)	3.226/1.672
Bit Loss (psi / %)	350 / 23.3
Bit HHP (hhp / HSI)	102 / 1.8
Bit Jet Vel (m/s)	61
Ann. Vel DP (m/min)	71.83
Ann. Vel DC (m/min)	124.51
Crit Vel DP (m/min)	121
Crit Vel DC (m/min)	160
ECD @ 2616 (sp.gr.)	1.24

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 6,786.27	A$ 74,568.39

WATER-BASED MUD REPORT No. 15

Date	3/10/2005	**Depth/TVD**	2658 m / 2658 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Electric logging

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605S		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	617.5	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	3.027 gal/stk	3.027 gal/stk
4.5 in	m	9.625in @545m (545TVD)	225.5	Pump stk/min	82@97%	82@97%
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	496 gal/min	
4.5 in	38 m	in @2545m (2545TVD)	225.5	Bottoms Up	min 0 stk	
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time	19.1 min 3132 stk	
6.5 in	172 m		31	Circulating Pressure	1950 psi	

MUD PROPERTIES

Sample From		Pit@21:00	Pit@08:00
Flow Line Temp	°C	n/a	63
Depth/TVD	m	2658/2658	2658/2658
Mud Weight	sp.gr.	1.16@35°C	1.16@35°C
Funnel Viscosity	s/qt	58	58
Rheology Temp	°C	48	48
R600/R300		83/58	83/58
R200/R100		46/32	46/32
R6/R3		7/4	7/4
PV	cP	25	25
YP	lb/100ft²	33	33
10s/10m/30m Gel	lb/100ft²	5/10/12	5/10/12
API Fluid Loss	cc/30 min	5.0	5.0
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	1/
Solids	%Vol	9.6	9.6
Oil/Water	%Vol	/90.4	/90.4
Sand	%Vol	0.5	0.5
MBT	lb/bbl	8	8
pH		9.1	9.1
Alkal Mud (Pm)		0.3	0.3
Pf/Mf		0.02/0.9	0.02/0.9
Chlorides	mg/l	28000	28000
Hardness Ca	mg/l	320	320
KCl	%	5.4	5.4
PHPA	ppb.	0.75	0.75
Sulphite	mg/l	80	80

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
M-I BAR	25 KG BG	87.00
POTASSIUM CHLORIDE	25 KG BG	14.00
DUOTEC	25 KG BG	2.00
POLYPAC UL	25 KG BG	1.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	9
DFE Shaker 2	175/175/175	9
D-Sander		0
D-Silter		9

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Build high viscosity pill. Build slug. KCl / Cl- increases from recycled sump water. Unaccounted for losses attributed to formation.
Inventory adjustment: credit - Polyplus x 1 sx. Cost correction for Defoamer x 2 debit = $198.80.

REMARKS

Drill to secondary TD at 2658 m. Circulate hole clean. Slug. Wiper trip to 2400 m. RIH. Circulate hole clean. Spot high viscosity pill. Slug. POOH for e-logs. Hole good.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ -.1	np/na Values	
Drilling	8	Water Added	0	KCl	2.1/ 19.1	kp/ka (lb•s^n/100ft²)	
Tripping	12	Mud Received	0	Low Gravity	7.2/ 65.1	Bit Loss (psi / %)	
Non-Productive Tim		Shakers	45	Bentonite	.1/ 1.4	Bit HHP (hhp / HSI)	
Condition Hole	2	Formation	78	Drill Solids	6.6/ 59.8	Bit Jet Vel (m/s)	
Wireline Logs	2	Desilter	12	Weight Material	.4/ 5.4	Ann. Vel DP (m/min)	
		Desander	0	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	
		Dumped	45	Inert/React	6.6397	Crit Vel DP (m/min)	
				Average SG	2.68	Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	.4/ 1.5		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 1,477.47	A$ 76,045.86

WATER-BASED MUD REPORT No. 16

Date	4/10/2005	**Depth/TVD**	2658 m / 2658 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	Electric logging

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in HC 605S		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 14 /5x13 / 1/32"		20in @16m (16TVD)	617.5	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size	Length	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
4.5 in	m	9.625in @545m (545TVD)	169.5	Pump stk/min		
Drill Pipe Size	Length	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
4.5 in	38 m	in @2545m (2545TVD)	169.5	Bottoms Up		
Drill Collar Size	Length	Production or Liner	In Storage	Total Circ Time		
6.5 in	172 m		37	Circulating Pressure		

MUD PROPERTIES

Sample From		Pit@21:00	
Flow Line Temp	°C	n/a	
Depth/TVD	m	2658/2658	
Mud Weight	sp.gr.	1.16@30°C	
Funnel Viscosity	s/qt	58	
Rheology Temp	°C	48	
R600/R300		83/57	
R200/R100		46/33	
R6/R3		7/4	
PV	cP	26	
YP	lb/100ft²	31	
10s/10m/30m Gel	lb/100ft²	5/10/12	
API Fluid Loss	cc/30 min	5.0	
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"	1/	
Solids	%Vol	9.2	
Oil/Water	%Vol	/90.8	
Sand	%Vol	0.5	
MBT	lb/bbl	8	
pH		9.0	
Alkal Mud (Pm)		0.4	
Pf/Mf		0.02/1.0	
Chlorides	mg/l	28000	
Hardness Ca	mg/l	320	
KCl	%	5.5	
PHPA	ppb.	0.75	
Sulphite	mg/l	20	

PRODUCTS USED LAST 24 HRS

Products	Size	Amt

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	0
DFE Shaker 2	175/175/175	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Mud losses.

REMARKS

E-log. M/u and RIH with stinger. Change of plans. POOH. Wait on e-log. E-log.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./ -.1	np/na Values	
Drilling		Water Added	0	KCl	2.1/ 19.2	kp/ka (lb•s^n/100ft²)	
Tripping		Mud Received	0	Low Gravity	6.3/ 57.8	Bit Loss (psi / %)	
Non-Productive Tim		Shakers	0	Bentonite	.3/ 2.3	Bit HHP (hhp / HSI)	
Condition Hole		Formation	25	Drill Solids	5.7/ 51.5	Bit Jet Vel (m/s)	
Wireline Logs		Desilter	0	Weight Material	.8/ 11.3	Ann. Vel DP (m/min)	
		Desander	0	Chemical Conc	- / 4.	Ann. Vel DC (m/min)	
		Dumped	25	Inert/React	5.7194	Crit Vel DP (m/min)	
				Average SG	2.77	Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	.4/ 2.		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 0.00	A$ 76,045.86

WATER-BASED MUD REPORT No. 17

Date	5/10/2005	**Depth/TVD**	2658 m / 2658 m
Spud Date	19/09/2005	**Mud Type**	KCl/PHPA/Polymer
Water Depth		**Activity**	P&A Final DMR

Operator : Origin Energy
Report For : Seton Porter / Bryan Webb
Well Name : Childer's Cove-1
Contractor : Century Drilling Ltd.
Report For : Ben Hale

Field/Area : PEP 154
Description : Vertical Exploration
Location : Onshore Otway Basin
M-I Well No. : 27393

DRILLING ASSEMBLY		CASING	MUD VOLUME (bbl)	CIRCULATION DATA		
Bit Size 8.5 in		Surface	Hole	Pump Make	National 8P-80	National 8P-80
Nozzles 1/32"		20in @16m (16TVD)	617.5	Pump Size	6 X 8.5in	6 X 8.5in
Drill Pipe Size in	Length m	Intermediate	Active Pits	Pump Cap	gal/stk	gal/stk
		9.625in @545m (545TVD)	-.5	Pump stk/min		
Drill Pipe Size in	Length m	Intermediate	Total Circulating Vol	Flow Rate	gal/min	
		in @2545m (2545TVD)	-.5	Bottoms Up		
Drill Collar Size in	Length m	Production or Liner	In Storage	Total Circ Time		
				Circulating Pressure		

MUD PROPERTIES

Sample From			
Flow Line Temp	°C		
Depth/TVD	m		
Mud Weight	sp.gr.		
Funnel Viscosity	s/qt		
Rheology Temp	°C		
R600/R300			
R200/R100			
R6/R3			
PV	cP		
YP	lb/100ft²		
10s/10m/30m Gel	lb/100ft²		
API Fluid Loss	cc/30 min		
HTHP FL Temp	cc/30 min		
Cake API/HTHP	1/32"		
Solids	%Vol		
Oil/Water	%Vol		
Sand	%Vol		
MBT	lb/bbl		
pH			
Alkal Mud (Pm)			
Pf/Mf			
Chlorides	mg/l		
Hardness Ca	mg/l		
KCl	%		
PHPA	ppb.		
Sulphite	mg/l		

PRODUCTS USED LAST 24 HRS

Products	Size	Amt
M-I BAR	25 KG BG	13.00

SOLIDS EQUIP	Size	Hr
DFE Shaker 1	140/140/110	0
DFE Shaker 2	175/175/175	0
D-Sander		0
D-Silter		0

MUD PROPERTY SPECIFICATIONS

Weight	1.08 -1.13
Viscosity	35 - 50
Filtrate	5.0 - 7.0

REMARKS AND TREATMENT

Assume all mud as dumped (317 bbls.) or left-in-hole (507 bbls.).

REMARKS

E-log. RIH with stinger. Circulate b/u - no caving returns. Plug and abandon.

TIME DISTR	Last 24 Hrs	MUD VOL ACCTG	(bbl)	SOLIDS ANALYSIS (%/lb/bbl)		MUD RHEOLOGY & HYDRAULICS	
Rig Up/Service		Oil Added	0	NaCl	./	np/na Values	
Drilling		Water Added	0	KCl	/	kp/ka (lb•s^n/100ft²)	
Tripping		Mud Received	0	Low Gravity	/	Bit Loss (psi / %)	
Non-Productive Tim		Shakers	0	Bentonite	/	Bit HHP (hhp / HSI)	
Condition Hole		Formation	0	Drill Solids	/	Bit Jet Vel (m/s)	
Wireline Logs	7	Desilter	0	Weight Material	/	Ann. Vel DP (m/min)	
Plug and Abandon	17	Desander	0	Chemical Conc	- /	Ann. Vel DC (m/min)	
		Dumped	317	Inert/React		Crit Vel DP (m/min)	
		Left in Hole	507	Average SG		Crit Vel DC (m/min)	
				Carb/BiCarb (m mole/L)	/		

M-I ENGR / PHONE	RIG PHONE	WAREHOUSE PHONE	DAILY COST	CUMULATIVE COST
Mike McKay	02-82118553		A$ 101.92	A$ 76,147.78

APPENDIX 14

COMPOSITE LOG

Childers Cove 1
Composite Well Log

Origin

Well Location

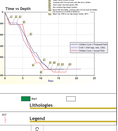
Well Data Card

Well Name:	Childers Cove 1	Progn:	1. 1535-1560m
Location:	Latitude: 38° 39'31.46"S		2. 1540-1580m
	Longitude: 146° 24'46.14"E		3. 1560-1600m
			4. 1580-1620m
	Datum: GDA 1994		5. 1600-1640m
	Loss: Hoistoholics @ 0 litre		6. 1615-1655m
	Gain: Hoistoholics @ 0 litre		
Elevation:	GL: 46.77 metres	Casing :	Size Shoe
	RT: 51.6 metres		
		20 Surface	1050m Tails Nil
Misc		20a Production	1650m n/a
Drill. Wtr/Mud:	Starting: 8.65/ 105.00		
	Ending: 8.65/ 105.00		
Date Spudded:	19-06-1995	56.00 hours	
Reached TD:	03-16-1995	58.00 hours	
Date rig released:	06-10-1995	60.00 hours	
Type Structure:	Low side fault block		
Status:	Plugged & Abandoned		
Rig:	Centurn Rig 7		
Total Depth:	Driller: 1656.0m Logger: 1656.0m		

Wireline Log Runs

Log	Int.	Interval	Bit / Tool Recorded
DLL-MSFL-GR-AMS-BHC-SP	1	1656 to 1050	311.1
HDAR-MD-CNS-AMS-BHC-GR	2	1649 to 1611 @ 0 m/hr	311.1
VSP-GR	3	1649 to 1050	

Time vs Depth



Formation Tops

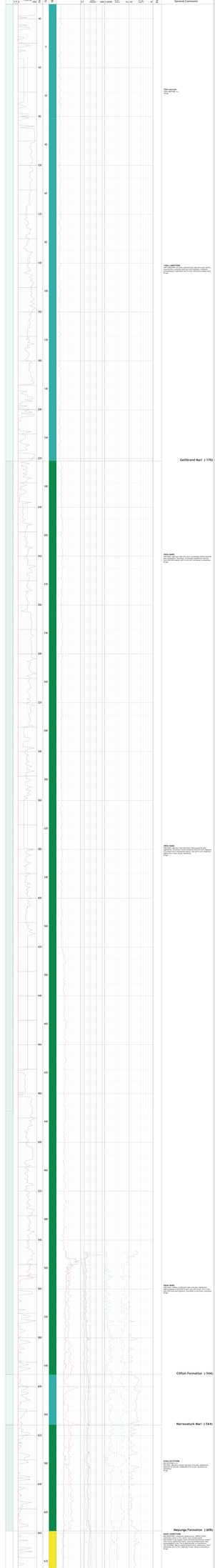
Age	Formation	Depth (mRT)	Thickness (m)
1. Pliocene	Gellibrand Limestone	0.0	220.0
2. Pliocene	Hammerhead	220.0	20.0
3. Pliocene	Childers Cove Sand	240.0	20.0
4. Pliocene	Hammerhead Marl	260.0	40.0
5. Pliocene	Childers Cove Sand	300.0	20.0
6. Pliocene	Hammerhead Marl	320.0	40.0
7. Pliocene	Childers Cove Sand	360.0	20.0
8. Pliocene	Hammerhead Marl	380.0	40.0
9. Pliocene	Burrows Sand	420.0	140.0
10. Pliocene	Narrawaturk Marl	560.0	80.0
11. Pliocene	Clifton Formation	640.0	20.0
12. Pliocene	Narrawaturk Marl	660.0	40.0
13. Pliocene	Clifton Formation	700.0	20.0
14. Pliocene	Narrawaturk Marl	720.0	40.0
15. Pliocene	Clifton Formation	760.0	20.0
16. Pliocene	Narrawaturk Marl	780.0	40.0
17. Pliocene	Clifton Formation	820.0	20.0
18. Pliocene	Narrawaturk Marl	840.0	40.0
19. Pliocene	Clifton Formation	880.0	20.0
20. Pliocene	Narrawaturk Marl	900.0	40.0
21. Pliocene	Clifton Formation	940.0	20.0
22. Pliocene	Narrawaturk Marl	960.0	40.0
23. Pliocene	Clifton Formation	1000.0	20.0
24. Pliocene	Narrawaturk Marl	1020.0	40.0
25. Pliocene	Clifton Formation	1060.0	20.0
26. Pliocene	Narrawaturk Marl	1080.0	40.0
27. Pliocene	Clifton Formation	1120.0	20.0
28. Pliocene	Narrawaturk Marl	1140.0	40.0
29. Pliocene	Clifton Formation	1180.0	20.0
30. Pliocene	Narrawaturk Marl	1200.0	40.0
31. Pliocene	Clifton Formation	1240.0	20.0
32. Pliocene	Narrawaturk Marl	1260.0	40.0
33. Pliocene	Clifton Formation	1300.0	20.0
34. Pliocene	Narrawaturk Marl	1320.0	40.0
35. Pliocene	Clifton Formation	1360.0	20.0
36. Pliocene	Narrawaturk Marl	1380.0	40.0
37. Pliocene	Clifton Formation	1420.0	20.0
38. Pliocene	Narrawaturk Marl	1440.0	40.0
39. Pliocene	Clifton Formation	1480.0	20.0
40. Pliocene	Narrawaturk Marl	1500.0	40.0
41. Pliocene	Clifton Formation	1540.0	20.0
42. Pliocene	Narrawaturk Marl	1560.0	40.0
43. Pliocene	Clifton Formation	1600.0	20.0
44. Pliocene	Narrawaturk Marl	1620.0	40.0
	Total Depth (TD)	1660.0	

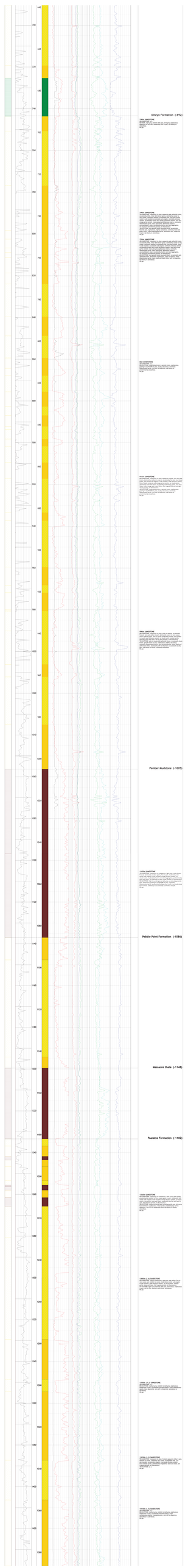
Lithologies

Limestone | Calcarenite | Sandstone | Mudstone | Marl

Legend

Cement plug | Casing shoe | Core recovered | MDT Seal: tested point, failed point | Side wall cores: ● - Recovered, ● - Recovered | MUT




640
700
660
720
680
740
Dilwyn Formation (-692)
700
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880
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1000
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1020
980
1040
1000
Pember Mudstone (-1005)
1060
1020
1080
1040
1100
1060
Pebble Point Formation (-1084)
1120
1080
1140
1100
1160
1120
Massacre Shale (-1148)
1180
1140
Pearatte Formation (-1182)
1200
1160
1220
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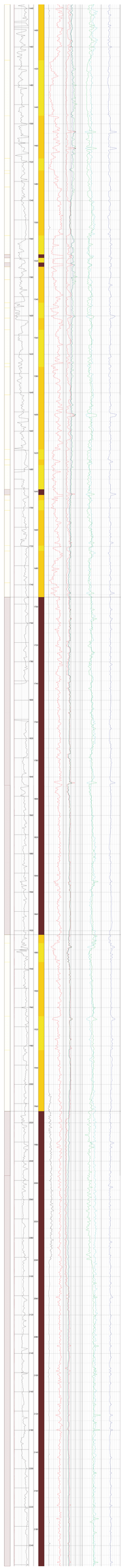
1380
Tilda SANDSTONE
MP-SANDSTONE, dk gy, laminar-wisp grdg, mdr grad, bioturbated, micaceous, slightly carbonaceous, firm to hard, rare coaly lams to 4mm
40 gAPI
TPAu SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
TPAu SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
Mid SANDSTONE
MP-SANDSTONE, vf-f gy, grdg fining-upward sequences, sharp-based, interbedded mudstone, dk gy-brn, firm, micaceous, coaly lams, bioturbated, rare pebble lags, micaceous, carbonaceous
40 gAPI
N Ma SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
PPAu SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, blocky to serrate, occasionally upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
Pember Mudstone (-1005)
Pebble Point Formation (-1084)
Massacre Shale (-1148)
Pearatte Formation (-1182)
Delta SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
CDMa -2.0_Q SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
CDMa -2.0_S SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, blocky to serrate, occasionally upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI
CDMa -2.0_Q SANDSTONE
MP-SANDSTONE, interbedded mdr-fine, blocky to serrate, occasionally upward-coarsening and upward-fining sequences, sharp-based, lenticular to tabular, rare to common carbonaceous and coaly lams, bioturbated, micaceous, slightly carbonaceous, firm, rare pebble lags, sandstone: medium grey, fine-grained, subangular-subrounded, moderately sorted, moderately cemented by clay matrix, rare calcareous cement, rare pebbles, mudstone: dark grey, micaceous, carbonaceous, firm to hard, rare coaly laminae, rare bioturbation, rare interbedded fine sandstone, coal: dark grey, lustrous, hard, rare carbonaceous mudstone interbeds
40 gAPI



1400m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts.

1420m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts.

1440m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone.

1460m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts.

1480m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1500m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1520m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1540m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1560m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1580m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1600m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1620m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1640m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1660m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1680m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1700m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

Skull Creek Mudstone (~1695)

1720m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

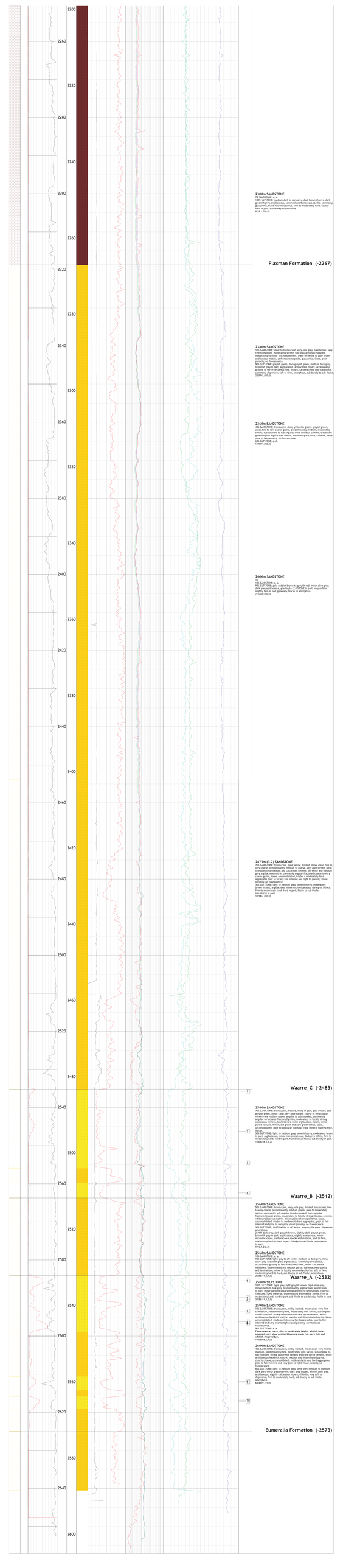
1740m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts.

1760m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1780m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1800m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts.

1820m, 21 SANDSTONE
Light grey, fine to medium grained, subangular to subrounded, moderately sorted, calcareous cement, poor visible porosity, no oil stain, no fluorescence, blocky to serrated gamma ray signature, sharp contacts. Interbedded with dark grey, soft, carbonaceous mudstone, laminated, non-calcareous, non-fissile, grades to silty mudstone in part, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace pyrite nodules in mudstone. Minor coal fragments, vitrinite, dull lustre, brittle, conchoidal fracture, non-calcareous, no visible porosity, no oil stain, no fluorescence, smooth gamma ray signature, sharp contacts. Trace glauconite, dark green, rounded grains, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace fossil fragments, bivalve shell debris, calcareous, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace siderite, brown, rhombohedral, cleavage, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace carbonaceous debris, plant fragments, woody texture, dull lustre, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace pyrite, brassy yellow, metallic lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace mica, muscovite, silvery, platy, elastic, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace chert, grey, conchoidal fracture, hard, no visible porosity, no oil stain, no fluorescence, blocky gamma ray signature, sharp contacts. Trace quartz, clear, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, irregular gamma ray signature, sharp contacts. Trace feldspar, pink, vitreous lustre, hard, no visible porosity, no oil stain, no fluorescence, blocky


2200
2260
2220
2280
2240
2300
2260
2300m SANDSTONE
TR SANDSTONE: a. a.
Fluorescence, trace dull orange dark to dark grey, dark brownish grey, dark greenish grey, argillaceous, commonly carbonaceous specks, commonly glauconitic, trace microcrystalline, firm to moderately hard, locally very hard, blocky to sub-blocky to sub-fissile.
ADM:1,0,0,0.
Flaxman Formation (-2267)
2320
2280
2340
2300
2360
2320
2380
2340
2400
2360
2420
2380
2440
2400
2460
2420
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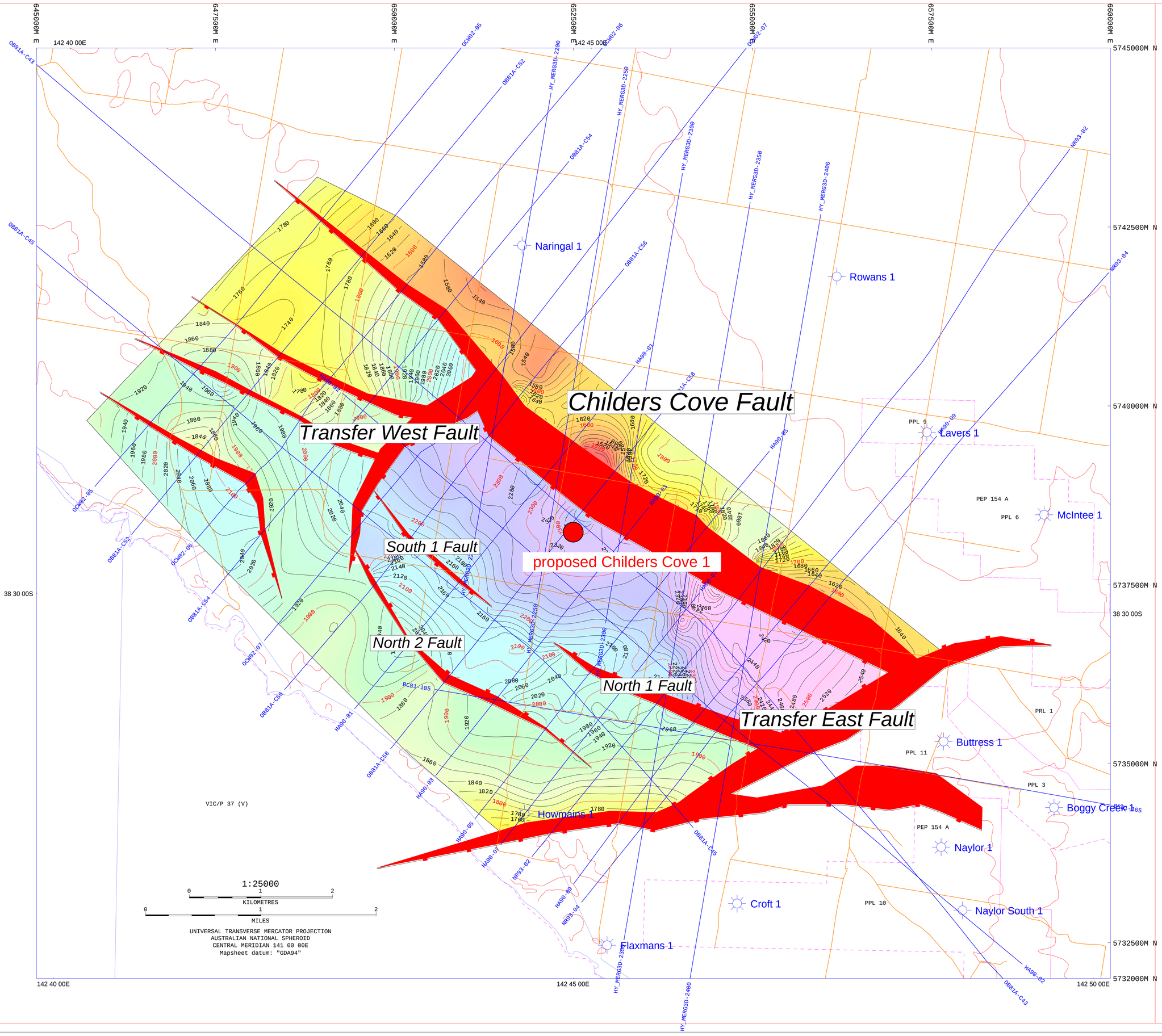
2580
2540
2600
2560
2620
2580
2640
2600
2340m SANDSTONE
10% SANDSTONE: clear to translucent, very pale grey, pale brown, very fine to very coarse, predominantly fine to medium, very poorly sorted, moderately to minor siliceous cement, trace off white to pale brown argillaceous matrix, carbonaceous specks, glauconite, loose, poor visible porosity.
90% SILTSTONE: greyish green, dark greyish green, medium dark grey, brownish grey in part, argillaceous, arenaceous in part, occasionally very sandy, locally calcareous, locally carbonaceous, commonly glauconitic, commonly dispersive, soft to firm, amorphous, sub-blocky to sub-fissile.
2GVM:1,0,0,0
2360m SANDSTONE
40% SANDSTONE: translucent dusky yellowish green, greyish green, colourless, very fine to medium, predominantly very fine to fine, poorly sorted, sub-rounded to sub-angular, weak siliceous cement, trace dark greenish grey argillaceous matrix, abundant glauconite, chlorite, loose, poor to fair visible porosity, no fluorescence.
60% SILTSTONE: a. a.
1VVM:1,0,0,0
2400m SANDSTONE
10% SANDSTONE: a. a.
90% SILTSTONE: pale reddish brown to greyish red, minor olive grey, dark grey argillaceous, grading to CLAYSTONE in part, very soft to firm, blocky in part, part generally blocky to amorphous.
1CMG:0,0,0,0
2475m (3.2) SANDSTONE
100% SANDSTONE: translucent, frosted, yellow, frosted, minor clear, fine to very coarse, predominantly medium to coarse, very poor sorted, weak to moderately siliceous and calcareous cement, off white and medium grey argillaceous matrix, abundant chlorite, loose, rare to minor very coarse grains, loose, unconsolidated, friable / moderately hard aggregates,poor to locally fair inferred and tight to porosity visual porosity, no fluorescence.
30% SILTSTONE: light to medium grey, brownish grey, moderately brown in part, argillaceous, minor micromicaceous, dark grey ithics, soft to moderately hard, hard in part, fissile to sub-fissile, sub-blocky in part.
1GVM:2,0,0,0
2540m SANDSTONE
70% SANDSTONE: translucent, frosted, milky in part, pale yellow, pale greyish green, minor clear, very poor sorted, coarse to very coarse, minor trace medium grains, angular to sub-rounded, dominantly angular, strong calcareous and rare pyrite cement, white to off white calcareous cement, trace to rare white argillaceous matrix, minor pyrite nodules, minor pale green and dark green ithics, loose, unconsolidated, poor to visually gf porosity, trace mineral fluorescence, no cut.
30% SILTSTONE: light to medium grey, brownish grey, moderately brown in part, argillaceous, minor micromicaceous, dark grey ithics, soft to moderately hard, hard in part, fissile to sub-fissile, sub-blocky in part.
1GNSC,0,5,1,2)
Waarre_C (-2483)
Waarre_B (-2512)
2560m SANDSTONE
50% SANDSTONE: translucent, very pale grey, frosted, trace clear, fine to very coarse, predominantly medium grain, poor to moderately sorted, sub-angular to sub-rounded, strong siliceous and fractured coarse grains, moderately to locally strong siliceous cement, white argillaceous matrix, minor yellowish orange ithics, loose, unconsolidated, friable / moderately hard aggregates, poor to fair inferred and poor to very poor visual porosity, no fluorescence
50% SILTSTONE: 1) 60% white to off white, very argillaceous, dispersive, amorphous.
2) 40% dark grey, dark greyish brown, slightly dark greyish green, brownish grey in part, argillaceous, slightly arenaceous in part, commonly micromicaceous, soft to firm, blocky to sub-blocky, soft to firm, moderately hard to hard in part, blocky to sub-fissile, amorphous to sub-fissile.
N/A:5,3,2,0,0)
2568m SANDSTONE
100% SANDSTONE: light grey to off white, medium to dark grey, minor olive grey, brownish grey, argillaceous, commonly arenaceous, commonly micromicaceous, soft to firm, blocky to sub-blocky, inclusions, disseminated and nodular pyrite, carbonaceous specks and laminations, minor to locally commonly chlorite, soft to firm, moderately hard to hard, sub-blocky to sub-fissile, amorphous.
2SSM:1,4,4,1,0)
Waarre_A (-2532)
2580m SILTSTONE
100% SILTSTONE: light grey, light greyish brown, light olive grey, minor medium dark grey, predominantly argillaceous, arenaceous in part, commonly micromicaceous, commonly carbonaceous specks, rare LIMESTONE material, disseminated and nodular pyrite, firm to moderately hard, hard in part, sub-fissile to sub-blocky, fissile in part, blocky.
2GMLT:1,2,2,0)
2590m SANDSTONE
70% SANDSTONE: translucent, milky, frosted, minor clear, very fine to medium, predominantly fine, moderately well sorted, sub-angular to sub-rounded, strong calcareous and rare pyrite cement, white argillaceous matrix, minor yellowish orange ithics, loose, unconsolidated, moderately to very hard aggregates, poor to fair inferred and very poor to tight visual porosity, rare to trace disseminated pyrite.
30% SILTSTONE: a. a.
Fluorescence, trace, dim to moderately bright, whitish blue, occasionally dull yellowish, whitish blowning crush cut, very thin dull whitish ring residue.
1TVAM:8,2,1,2)
2600m SANDSTONE
40% SANDSTONE: translucent, milky, frosted, minor clear, very fine to very coarse, predominantly very fine to fine, moderately sorted, sub-rounded to sub-angular, strong calcareous and rare pyrite, occasionally siliceous/kaolinitic matrix, nodular and disseminated pyrite, minor yellowish orange ithics, loose, unconsolidated, friable aggregates, poor to fair inferred and very poor to tight visual porosity, no fluorescence.
60% SILTSTONE: light to medium grey, olive grey, medium to medium dark grey, minor greenish grey, dark grey in part, whitish, dark grey, argillaceous, slightly calcareous in part, chlorite, very soft to firm, moderately to moderately hard, sub-blocky to sub-fissile, amorphous.
4MVM:9,2,1,0)
Eumeralla Formation (-2573)
1
2
3
4
5
6
7
8
9
10

APPENDIX 15

DEPTH STRUCTURE MAP

Childers Cove Prospect
Base Belfast Mudstone
Depth Structure Map



Depth [TVDSS]
1470
1600
1700
1800
1900
2000
2100
2200
2300
2400
2500
2546

TRUE NORTH IS SHOWN
FOR THE CENTRE OF THE MAP

1:25000
0 1 2
KILOMETRES

1:25000
0 1 2
KILOMETRES
0 1 2
MILES

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
AUSTRALIAN NATIONAL SPHEROID
CENTRAL MERIDIAN 141 00 00E
Mapsheet datum: "GDA94"

Origin energy

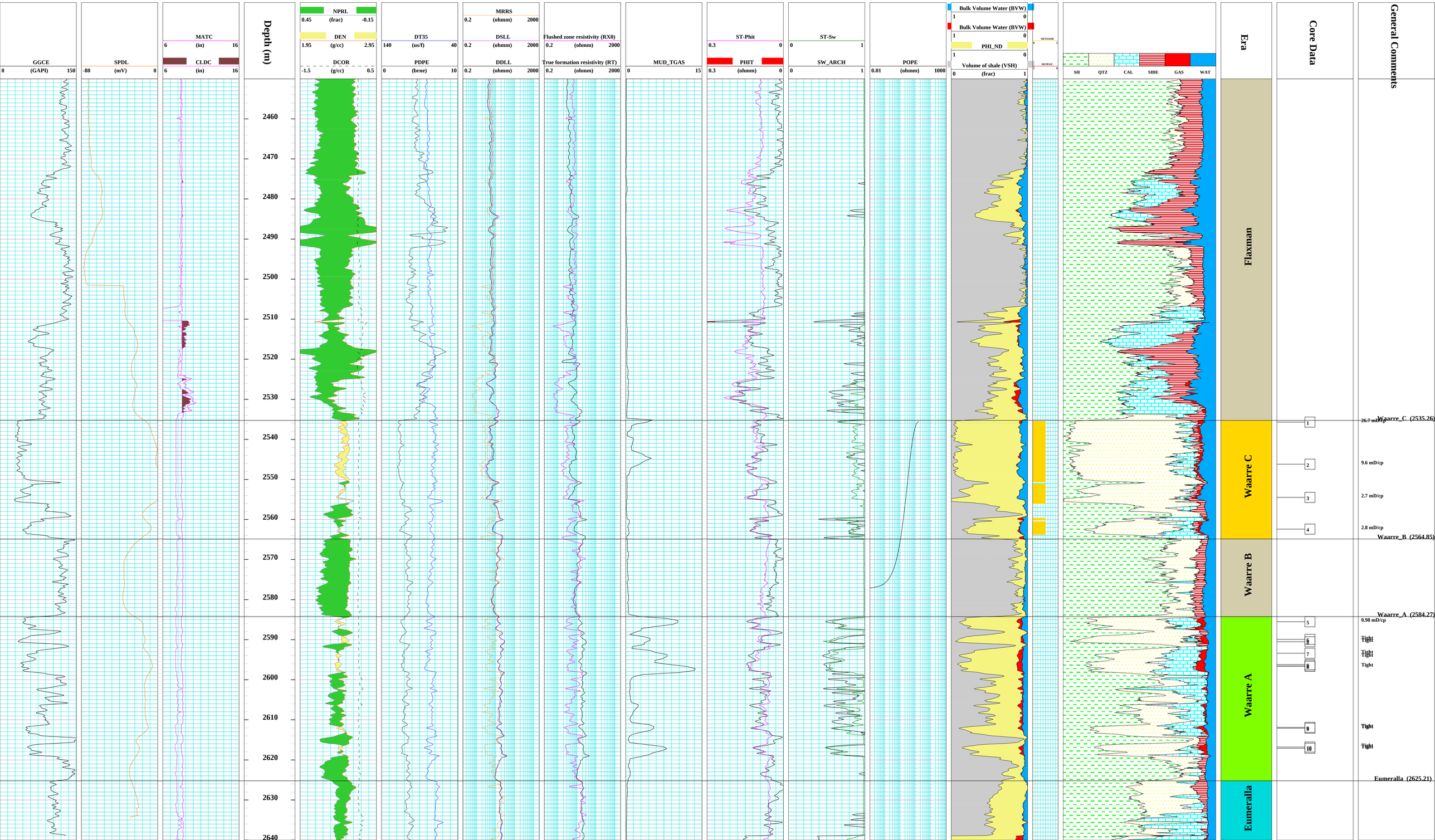
Childers Cove 1

Depth Structural Map
Base Belfast Mudstone

Author: Kay Bierbrauer	Datum:	Encl No:
Date: 23/12/04	Contour Interval: 20m	1
Map File: Childers Cove Depth		
Map Sheet: CHILDERS COVE		

APPENDIX 16

PETROPHYSICAL PLOT

CHILDERS COVE 1

Permit: ONSHORE OTWAY BASIN	**RTE:** 51.5 m	**TD (logs):** 2657.1 m
Latitude :	**Bit Size:** 8.5 in	**BHT:** 95.5 degF
Longtitude :	**Rm:** 0.650 ohmm at: 13.9 degC	**Vertical Scale** 1:500 m
Easting :	**Rmf:** 1.060 ohmm at: 13.9 degC	**Interpreter :** Andy Hall
Northing :	**Rmc:** 0.530 ohmm at: 14.1 degC	
Datum :	**Plot created on:** 10/Oct/05 **at:** 14:39:34