

# Reeves

## DUAL LATEROLOG - GR DENSITY - NEUTRON

1:500 MD

COMPANY		ESSO AUSTRALIA PTY. LTD.			
WELL		FLOUNDER A-17a			
FIELD		GIPPSLAND BASIN			
PROVINCE/COUNTY		BASS STRAIT			
COUNTRY/STATE		AUSTRALIA			
LOCATION		5758711.37 m N, 625853.66 m E 38°18'39.158" S, 148°26'22.270" E			
LSD	SEC	TWP	RGE	Other Services COMPENSATED SONIC	
API Number					
Permit Number					
Permanent Datum MSL		, Elevation 0		metres	
Log Measured From RT@33.85 metres above Permanent Datum					
Drilling Measured From RT					
Date	17-Aug-2003				
Run Number	2				
Depth Driller	3660.00			metres	
Depth Logger	3646.00			metres	
First Reading	3639.70			metres	
Last Reading	2892.30			metres	
Casing Driller	2904.00			metres	
Casing Logger	2892.30			metres	
Bit Size	6.00			inches	
Hole Fluid Type	KCl/PHPA/GLY				
Density / Viscosity	9.20 lb/USg		70.00	sec/qt	
PH / Fluid Loss	9.30		3.10	ml/30Min	
Sample Source	FLOWLINE				
Rm @ Measured Temp	0.101 @ 25.0			ohm-m	
Rmf @ Measured Temp	0.083 @ 25.0			ohm-m	
Rmc @ Measured Temp	0.146 @ 25.0			ohm-m	
Source Rmf / Rmc	PRESS			PRESS	
Rm @ BHT	0.036 @ 111.0			ohm-m	
Time Since Circulation	30 HRS				
Max Recorded Temp	111.00			deg C	
Equipment Name	COMPACT				
Equipment / Base	1			SALE	
Recorded By	G. McManus, R. Tench			S. Mooney, B. Arnold	
Witnessed By	E.Espiritu				
Circ. Stopped	23:15 15-AUG				

### BOREHOLE RECORD

Bit Size inches	Depth From metres	Depth To metres
8.500	1500.00	2800.00
6.000	2800.00	3660.00

### CASING RECORD

Type	Size inches	Depth From metres	Shoe Depth metres	Weight pounds/ft
K55 BTC	10.750	0.00	1256.00	40.50
	7.625	1256.00	2896.00	27.00

### REMARKS

DRILLING RIG: NABORS (ISDL) 453.

REEVES COMPACT TOOLS RAN WITH 3½" WELL SHUTTLE.

MAX DEVIATION: 43.3° @ 3283 m.

GRONINGEN LATEROLOG PRESENTED WITH ORIGINAL LOGGING CONSTANT.  
ENHANCED MODEL PROCESSING USED FOR INDUCTION DATA (NOT PRESENTED).

REEVES CREW: R.TENCH, G.MCMANUS, S.MOONEY AND BILL ARNOLD

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

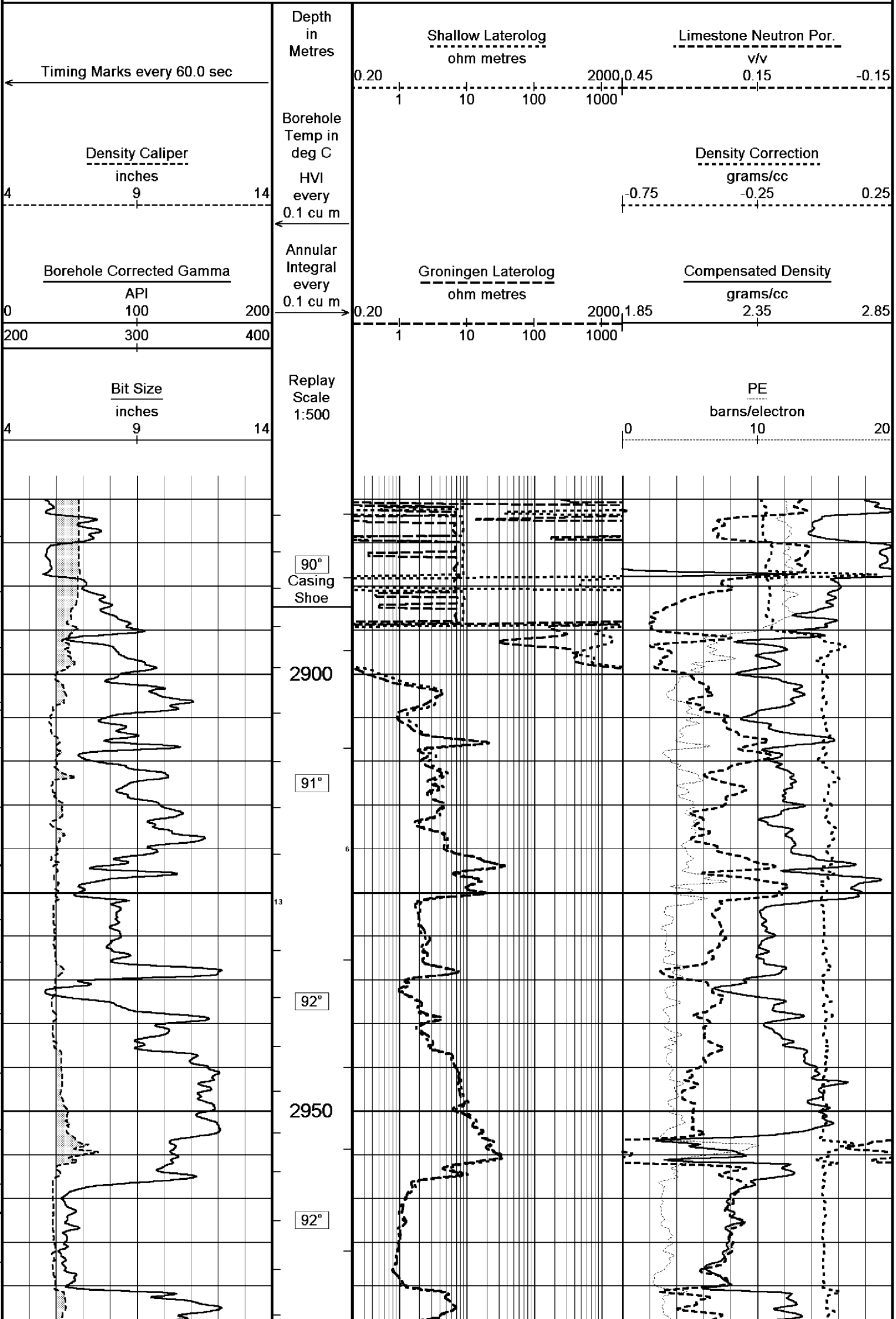
Depth Based Data - Maximum Sampling Increment 10.0cm

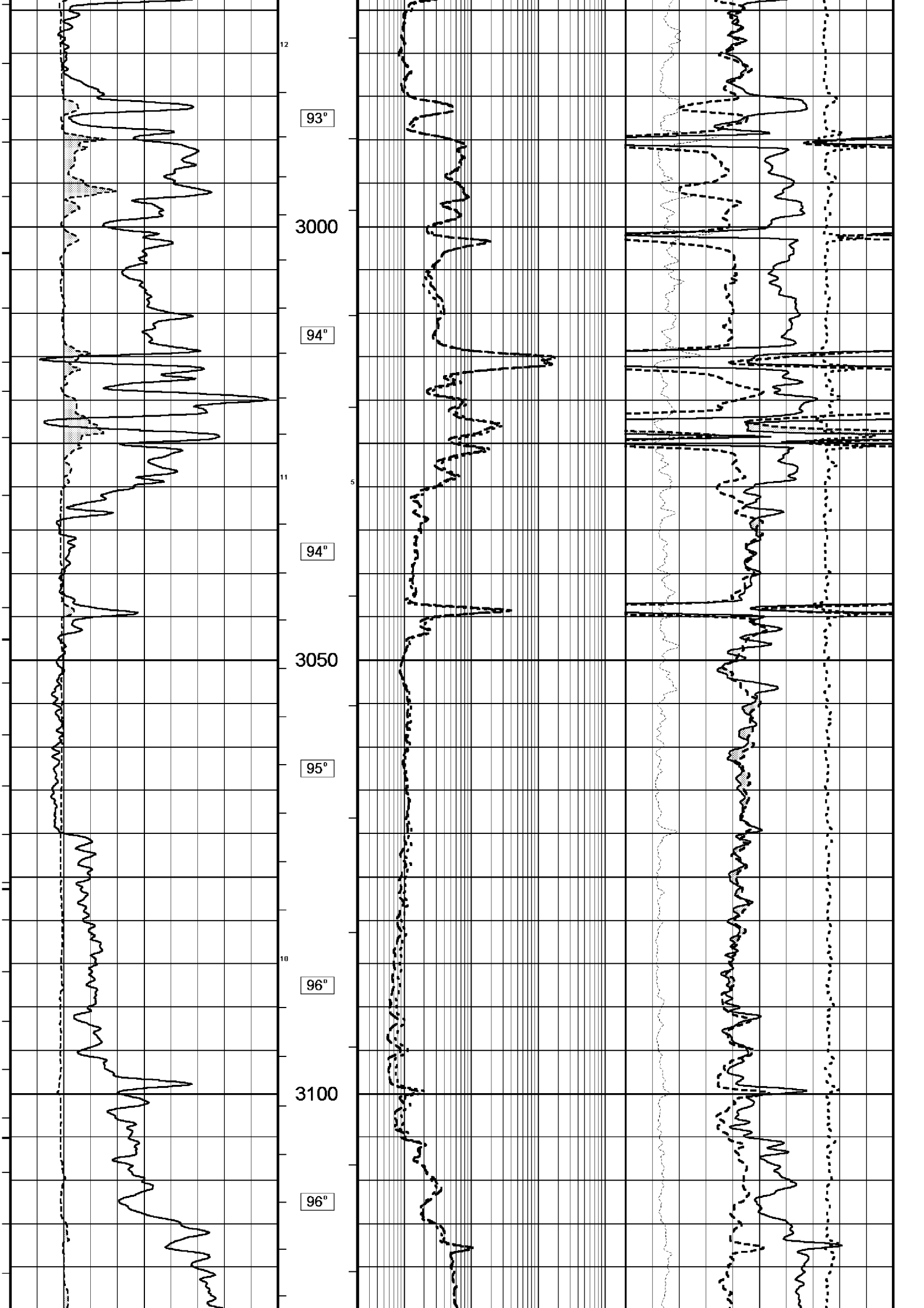
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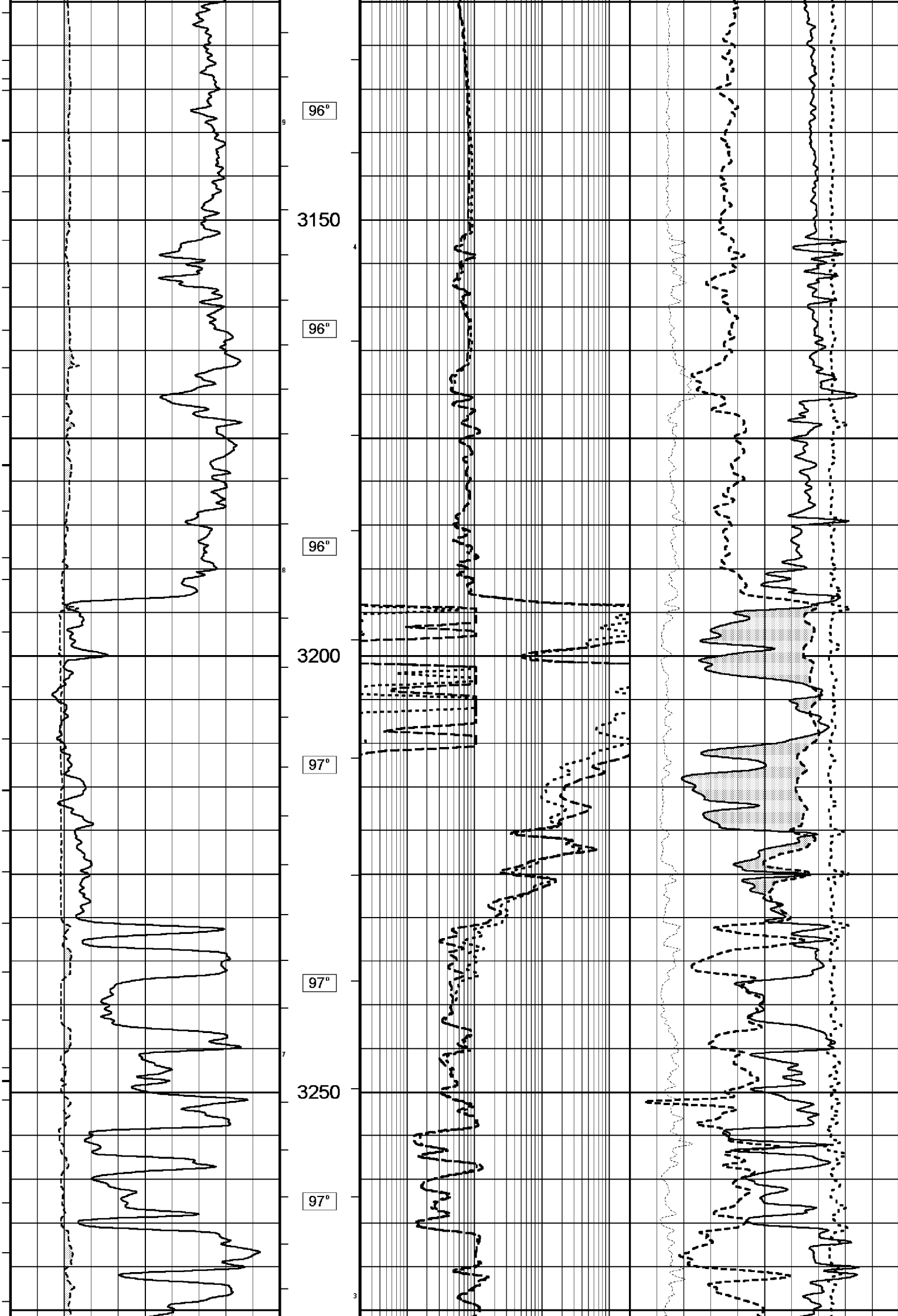
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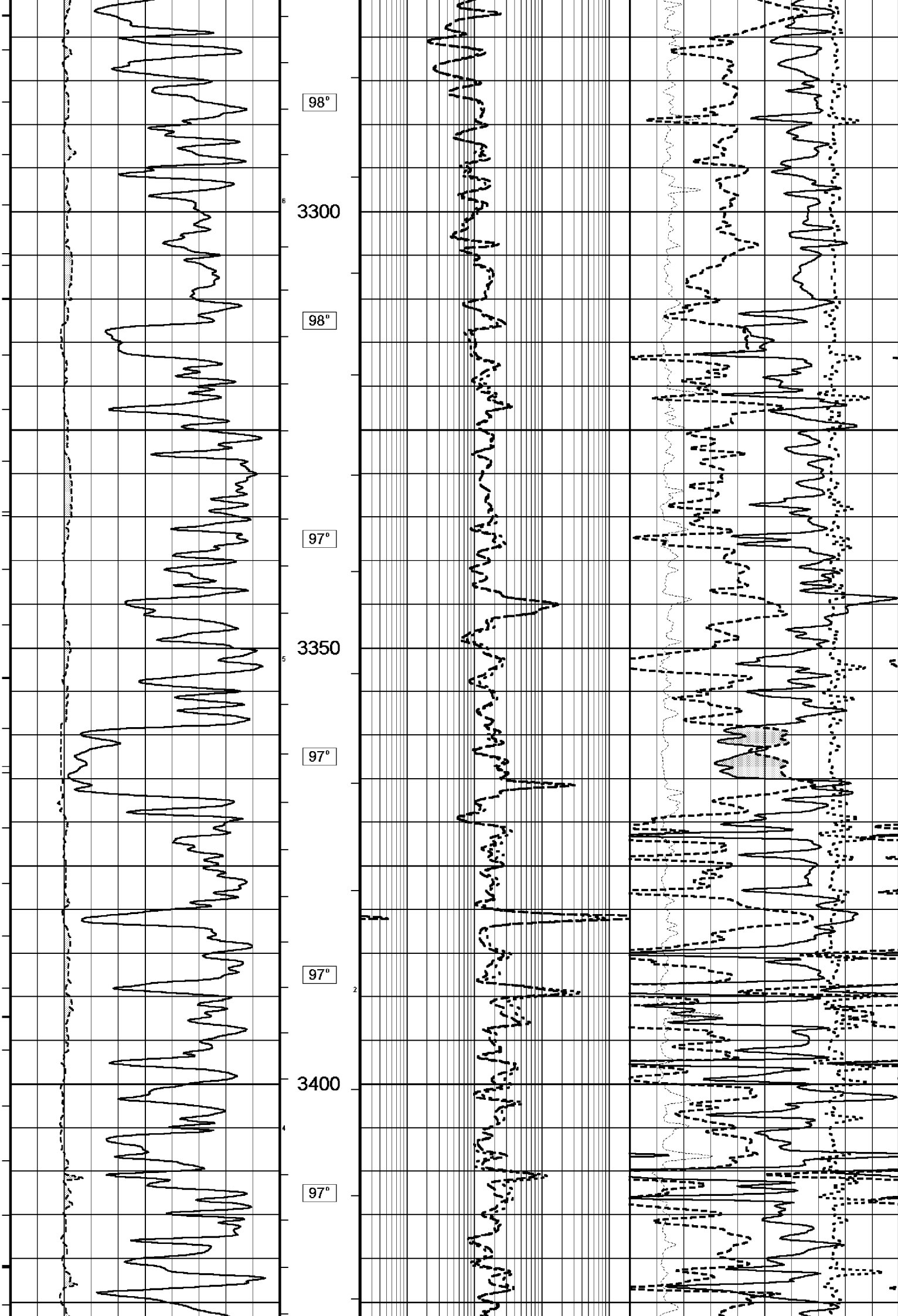
Recorded on 17-AUG-2003 18:09

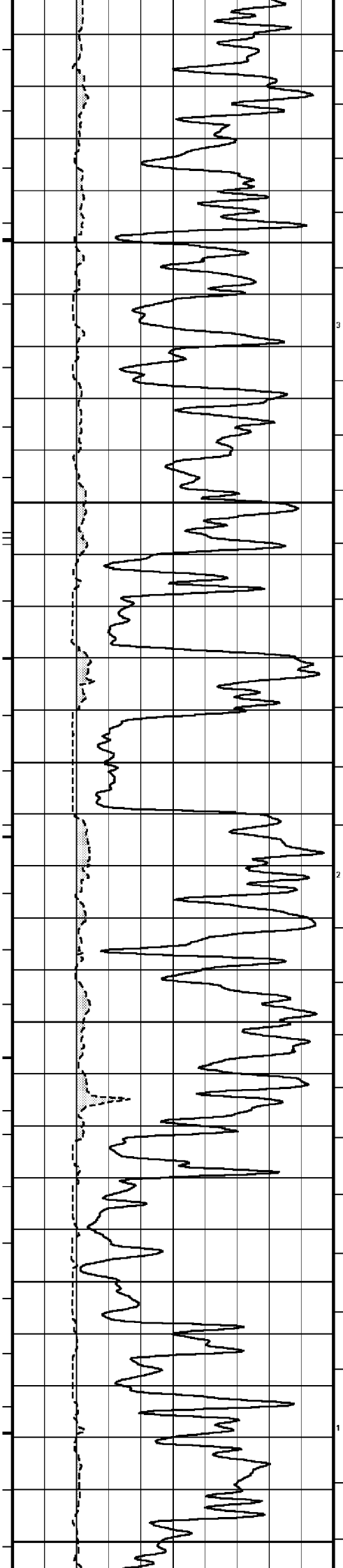
System Configuration Dates: Logged 23-OCT-2002: Processed 23-OCT-2002: Plotted 23-OCT-2002:











98°

3450

97°

97°

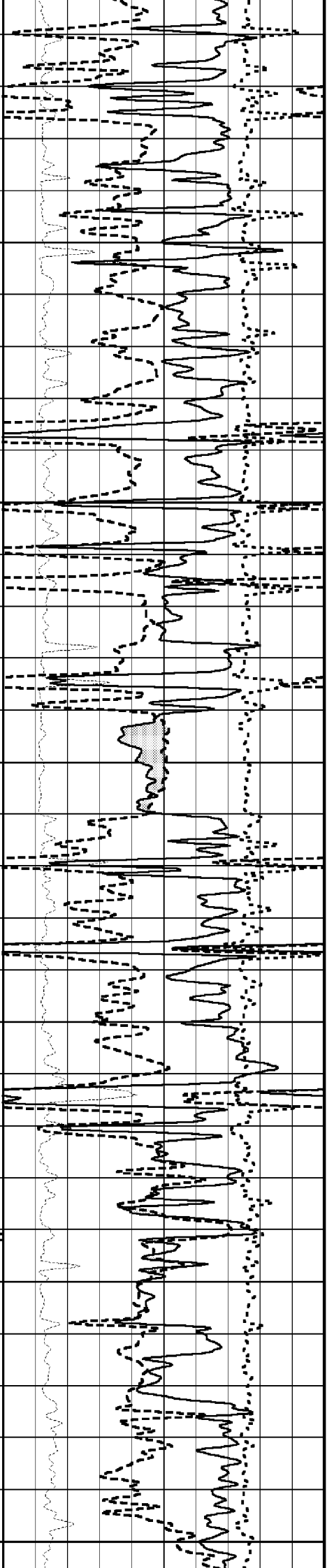
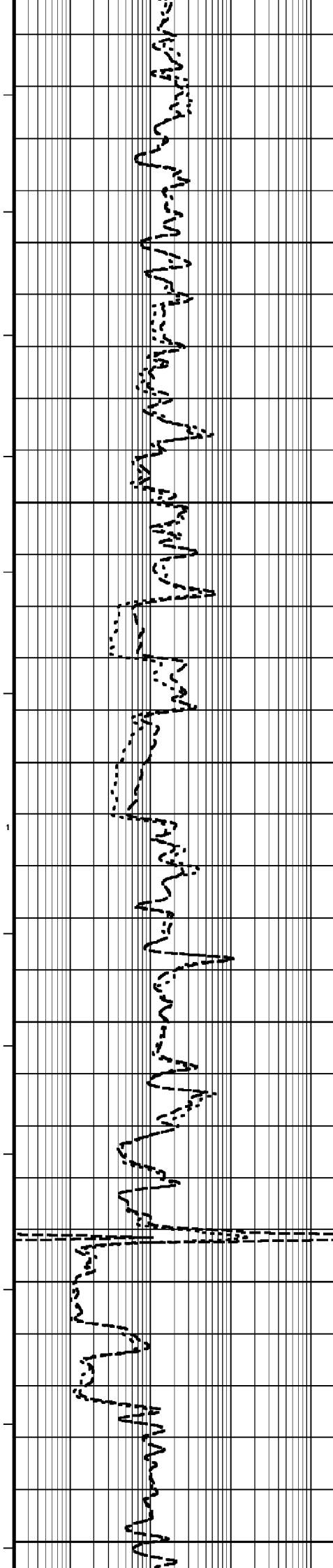
3500

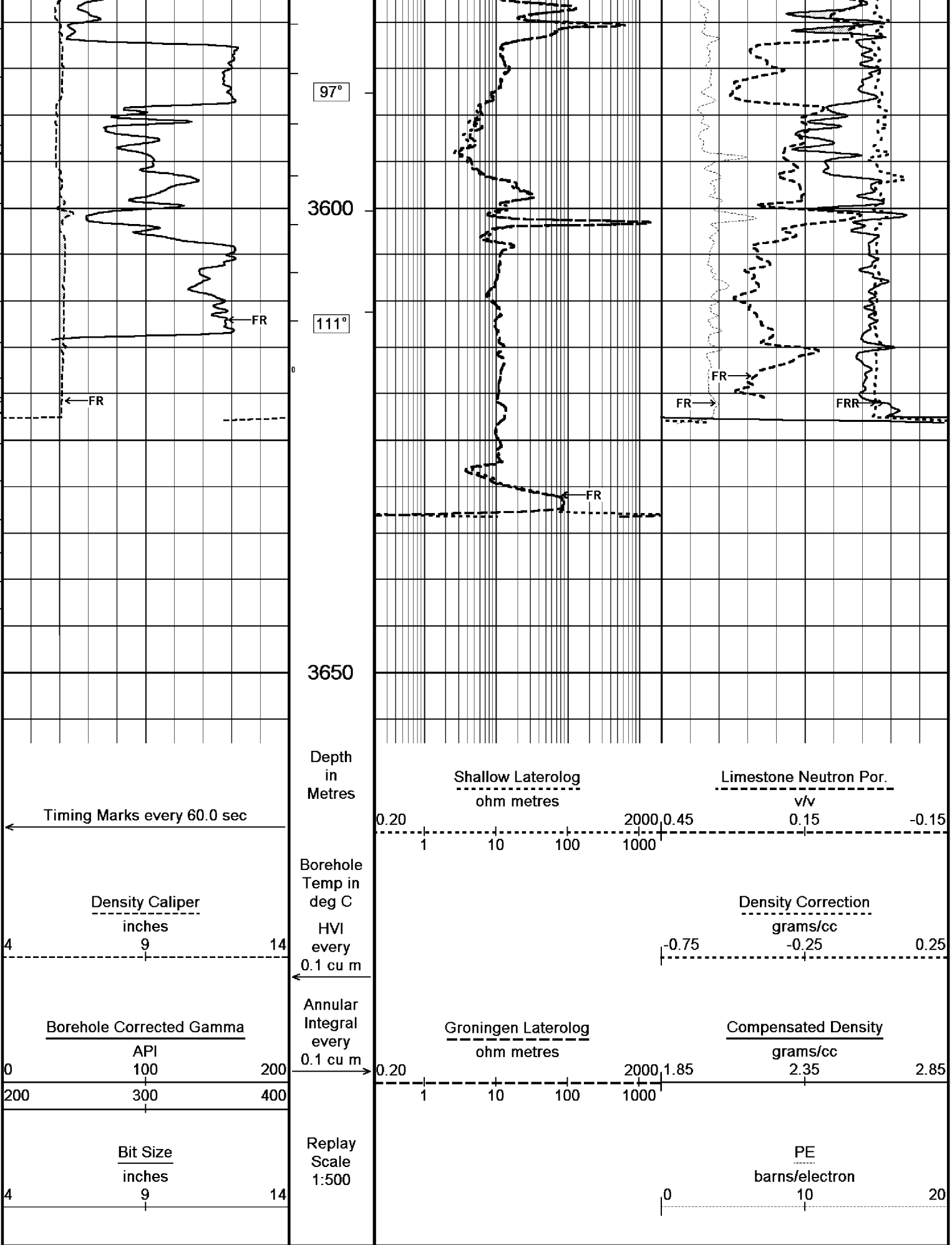
96°

97°

3550

97°





## General Constants All 000

## General Parameters

Mud Resistivity	0.10	ohm-metres
Mud Resistivity Temperature	25.00	degrees C
Water Level	0.00	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	4.50	inches
Caliper for Differential Caliper	Density Caliper	

## Rwa Parameters

Porosity used	Base Density Porosity	
Resistivity used	Deep Laterolog	
RWA Constant A	0.61	
RWA Constant M	2.15	

## High Resolution Temperature Calibration MCG 043

Field Calibration on 9-AUG-2002,07:03

	Measured	Calibrated(Deg C)
Lower	20.50	20.00
Upper	51.00	50.00

## High Resolution Temperature Constants MCG 043

Pre-filter Length	11
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## Gamma Calibration MCG 043

Field Calibration on 15-AUG-2003 19:05

	Measured	Calibrated (API)
Background	16	11
Calibrator (Gross)	1419	920
Calibrator (Net)	1403	909

## Gamma Constants MCG 043

Gamma Calibrator Number	60	
Mud Density	1.15	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

## Neutron Calibration MDN 042

Base Calibration on 2-AUG-2003 10:04

Field Check on 15-AUG-2003 20:39

## Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
Ratio	3104	98	3714	110
	31.769		33.764	

## Field Calibrator at Base

	Calibrated (cps)	
Ratio	1679	2371
	0.708	

## Field Check

	Calibrated (cps)	
Ratio	1692	2398
	0.706	

## Neutron Constants MDN 042

Neutron Source Id	NSN-E-739	
Neutron Jig Number	NE-C-052	
Epithermal Neutron	No	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches
Mud Density	1.15	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	MCG External Temperature	
Temperature	20.00	degrees C
Mud Salinity	42.30	kppm



Formation Fluid Salinity Source	None	
Formation Fluid Salinity	N/A	kppm
Barite Mud Correction	Not Applied	

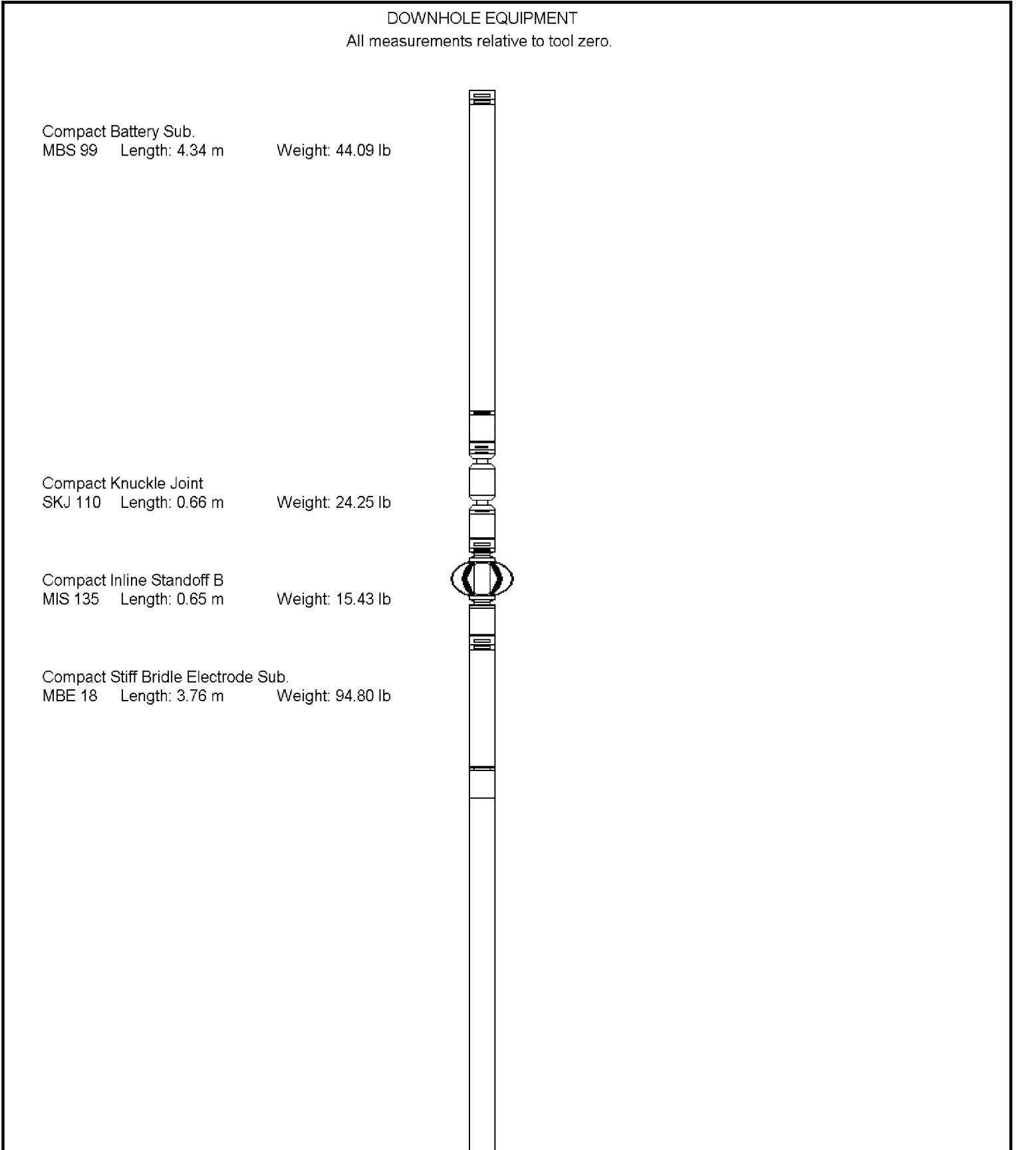
Caliper Calibration MPD 066			Base Calibration on 22-OCT-2003,14:18	
			Field Calibration on 22-OCT-2003,14:18	
Base Calibration				
Reading No		Measured	Calibrator Size (in)	
1		12128	4.58	
2		20304	6.56	
3		28752	8.56	
4		37248	10.52	
5		46672	12.58	
6		N/A	N/A	
Field Calibration				
		Measured Caliper (in)	Actual Caliper (in)	
		6.00	6.00	

Photo Density Calibration MPD 066					Base Calibration on 2-AUG-2003 14:56	
					Field Check on 15-AUG-2003 20:32	
Density Calibration						
Base Calibration		Measured		Calibrated (sdu)		
		Near	Far	Near	Far	
	Reference 1	53064	18614	53282	19349	
	Reference 2	24973	2526	25298	2555	
Field Check at Base						
		980.9	1146.2			
Field Check						
		969.2	1145.5			
PE Calibration						
Base Calibration		Measured		Calibrated		
	WS	WH	Ratio	Ratio		
	Background	188	856			
	Reference 1	16447	52883	0.313	0.318	
	Reference 2	6593	24840	0.267	0.273	
Field Check at Base						
		187.7	855.8			
Field Check						
		188.0	845.9			

Density Constants MPD 066				
Density Source Id	242			
Nylon Calibrator Number	517			
Aluminium/Fe Calibrator Number	517			
Density Shoe Profile	4 inch			
Caliper Source for Processing	Density Caliper			
PE Correction to Density	Not Applied			
Mud Density	1.15	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	0.00			

Laterolog Calibration MLE 005				Base Calibration on 6-MAY-2003 14:51	
				Field Check on 15-AUG-2003,18:58	
Base Calibration					
		Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2	
Shallow	0.0	981.5	0.0	1327.3	
Deep	0.0	980.6	0.0	852.7	

Groningen	0.0	981.8	0.0	852.7
Channel	Base Check (ohm-m)		Field Check (ohm-m)	
Shallow	48.6		48.6	
Deep	31.3		31.3	
Groningen	249.9		249.9	
Laterolog Constants MLE 005				
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	Groningen Electrode			



[illegible]

1000

Compact Swivel Head Adaptor  
SHA 27    Length: 0.83 m    Weight: 26.46 lb

Compact Inline Bowspring A  
MIS 24    Length: 1.74 m    Weight: 33.07 lb

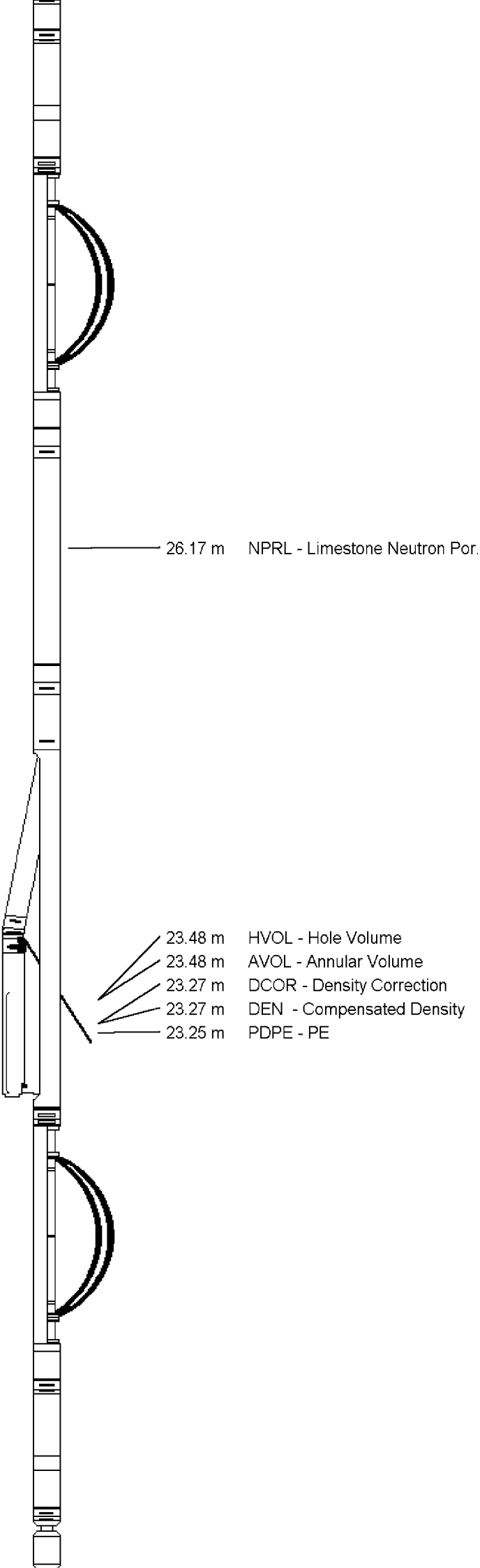
Compact Neutron  
MDN 42    Length: 1.53 m    Weight: 50.71 lb

Compact Density/Caliper  
MPD 66    Length: 2.92 m    Weight: 90.39 lb

Compact Inline Bowspring A  
MIS 25    Length: 1.74 m    Weight: 33.07 lb

Compact Swivel Head Adaptor  
SHA 28    Length: 0.83 m    Weight: 26.46 lb

Compact Knuckle Joint  
SKJ 15    Length: 0.83 m    Weight: 26.46 lb



SKJ 45    Length: 0.66 m    Weight: 24.25 lb

Compact Inline Standoff B  
MIS 31    Length: 0.65 m    Weight: 15.43 lb

Compact Upper Guard Sub.  
MUG 16    Length: 2.74 m    Weight: 68.34 lb

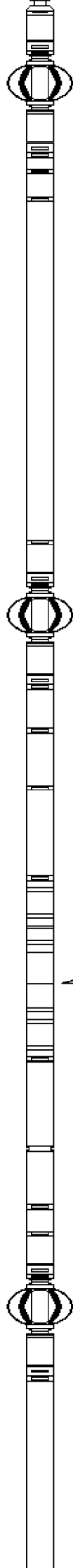
Compact Inline Standoff B  
MIS 73    Length: 0.65 m    Weight: 15.43 lb

Compact Laterolog Electrode Sub.  
MLE 5    Length: 3.76 m    Weight: 92.59 lb

13.35 m    DSL - Shallow Laterolog  
13.35 m    DLL - Deep Laterolog

Compact Inline Standoff B  
MIS 30    Length: 0.65 m    Weight: 15.43 lb

Compact Lower Guard Sub.  
MLG 9    Length: 2.44 m    Weight: 55.12 lb



Compact Inline Standoff B  
MIS 130 Length: 0.65 m Weight: 15.43 lb

Compact Sonic  
MSS 47 Length: 3.82 m Weight: 72.75 lb

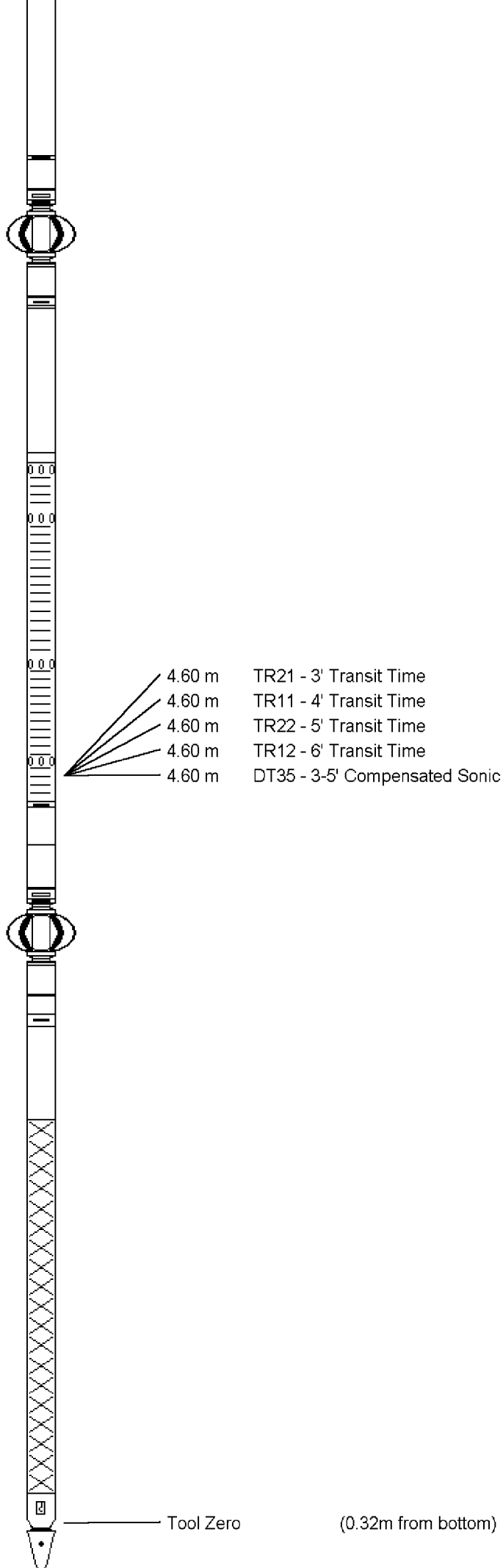
Compact Inline Standoff B  
MIS 128 Length: 0.65 m Weight: 15.43 lb


Compact Induction  
MAI 39 Length: 3.29 m Weight: 48.50 lb

Pressure Bung + Hole Finder  
HFS 3 Length: 0.28 m Weight: 6.61 lb

Total Length: 49.23 m

Total Weight: 1144.20 lb



COMPANY	ESSO AUSTRALIA PTY. LTD.				
WELL	FLOUNDER A-17a				
FIELD	GIPPSLAND BASIN				
PROVINCE/COUNTY	BASS STRAIT				
COUNTRY/STATE	AUSTRALIA				
Elevation Kelly Bushing		metres	First Reading	3639.70	metres
Elevation Drill Floor	33.85	metres	Depth Driller	3660.00	metres
Elevation Ground Level	-93.00	metres	Depth Logger	3646.00	metres
		DUAL LATEROLOG - GR			
		DENSITY - NEUTRON			
		1:500 MD			