

Bit Run Summary

Run number		5	6	7	8						
Bit size	in.	8.5	8.5	8.5	8.5						
Bit start depth	m	2532.0	2688.0	2866.0	3024.0						
Bit end depth	m	2688.0	2866.0	3024.0	3369.0						
Top interval logged	m	2527.0	2660.4	2832.8	2990.8						
Bottom interval logged	m	2681.9	2859.9	3015.2	3360.2						
Begin log: time		21:00	01:25	02:43	07:48						
Begin log: date		26-Jan-05	30-Jan-05	02-Feb-05	04-Feb-05						
End log: time		02:03	06:58	12:49	18:50						
End log: date		29-Jan-05	01-Feb-05	03-Feb-05	05-Feb-05						
Mud data											
Depth	m	2676.0	2838.0	2957.0	3226.0						

Type		KCL/PHPA/Glycol	KCL/PHPA/Glycol	KCL/PHPA/Glycol	KCL/PHPA/Glycol						
Mud weight	ppg	10.1	10.0	10.2	10.2						
Solids	%	8.9	8.9	9.1	9.2						
Chlorides	mg/L	40000	40000	40000	39000						
Rm	ohm.m@°C	0.11 @25.2	0.11 @24.7	0.11 @22.9	0.11 @23.4						
Rmf	ohm.m@°C	0.09 @24.6	0.09 @24.1	0.09 @22.3	0.09 @23.3						
Rmc	ohm.m@°C	0.18 @25.8	0.14 @25.3	0.15 @23.8	0.16 @23.6						
Potassium	%	6.0	7.0	6.0	6.0						
Environmental data											
GR											
Mud weight	ppg	10.1	10.0	10.2	10.2						
Bit size	in.	8.5	8.5	8.5	8.5						
Resistivity											
Neutron porosity											
Hole Size	in.	8.5	8.5	8.5	8.5						
Mud weight	ppg	10.1	10.0	10.2	10.2						
Temperature	°C	86.3	84.7	85.5	97.3						
Mud salinity	ppm	63487	69810	62996	64793						
Formation salinity											
Recording rate 1	SEC	10 sec.	10 sec.	10 sec.	10 sec.						
Recording rate 2	SEC	10 sec.	10 sec.	10 sec.	10 sec.						
Filtering GR		3 pt.	3 pt.	3 pt.	3 pt.						
Filtering density		3 pt.	3 pt.	3 pt.	3 pt.						
Filtering Neutron		3 pt.	3 pt.	3 pt.	3 pt.						
Company representative		B. Steel	R. Bain	R. Morris							
Anadrill personnel		J. Dolan	K. Handley	M. Y. Tan	C. Soper	D. Hay					

DISCLAIMER

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OTHER SERVICES FOR RUN5 Directional Drilling D&I Survey	OTHER SERVICES FOR RUN6 Directional Drilling D&I Survey	OTHER SERVICES FOR RUN7 Directional Drilling D&I Survey
REMARKS: RUN NUMBER 5 8-1/2 in. hole section was drilled from 2532.0 m to 2688.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. GR corrected for Mud Weight, Tool and Bit Size. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for the bit size, borehole salinity, temperature and mud hydrogen index. PEF readings were affected by the presence of Barite in the mud system. Mud type is KCL/PHPA/Glycol. POOH for bit change.	REMARKS: RUN NUMBER 6 8-1/2 in. hole section was drilled from 2688.0 m to 2866.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. GR corrected for Mud Weight, Tool and Bit Size. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for the bit size, borehole salinity, temperature and mud hydrogen index. PEF reading were affected by the presence of Barite in the mud system. Mud type is KCL/PHPA/Glycol. POOH for bit change.	REMARKS: RUN NUMBER 7 8-1/2 in. hole section was drilled from 2866.0 m to 3024.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. GR corrected for Mud Weight, Tool and Bit Size. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for the bit size, borehole salinity, temperature and mud hydrogen index. Ultrasonic Caliper not available during sliding intervals. PEF readings were affected by the presence of Barite in the mud system.

Mud type is KCL/PHPA/Glycol.

POOH for bit change.

EQUIPMENT DESCRIPTION

RUN5

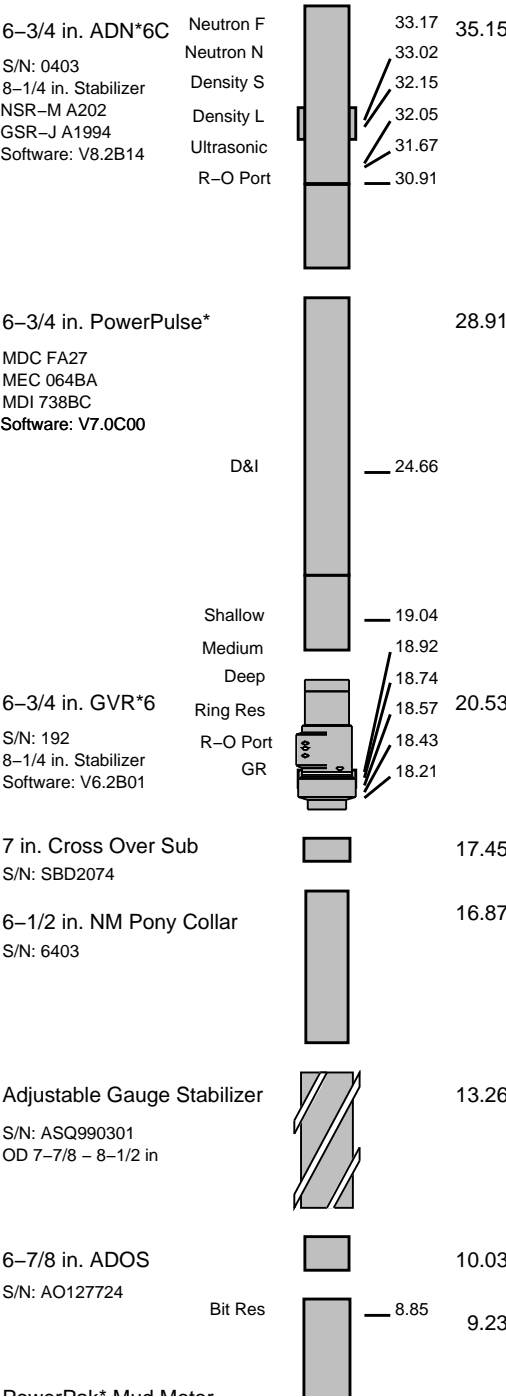
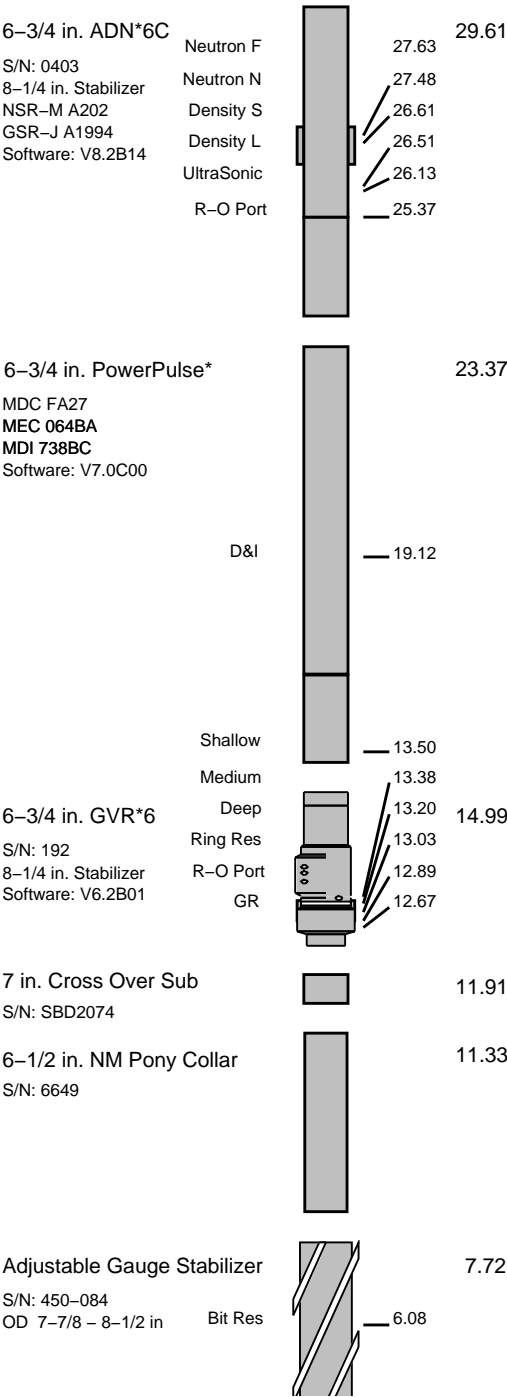
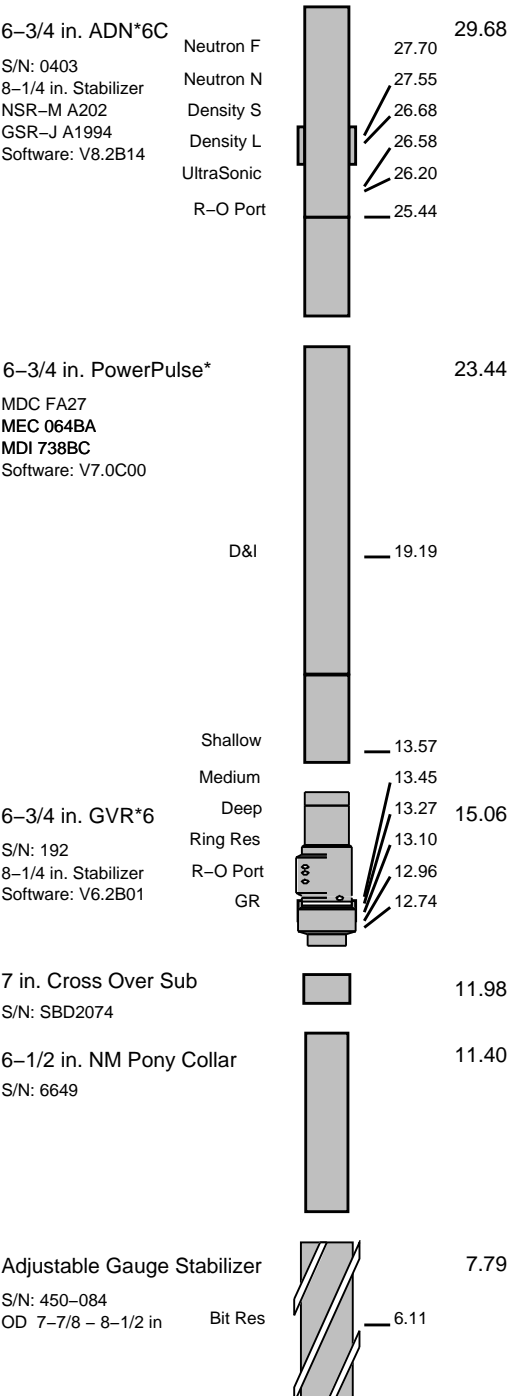
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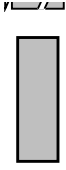

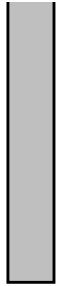





RUN7

DOWNHOLE EQUIPMENT

DOWNHOLE EQUIPMENT

DOWNHOLE EQUIPMENT



6-3/8 in. NM Pony Collar S/N: GS97-26  4.56	6-3/8 in. NM Pony Collar S/N: GS97-26  4.49	PowerPak Mud Motor A700GT S/N: N7310 1.15 deg Bend 8-3/8 in. Motor Sleeve 
6-1/2 in. NB Roller Reamer S/N: GU1490  2.07	8-1/2 in. NB Stabilizer S/N: DOTS3229  2.00	
Hughes Insert Bit MX30D S/N: 6023698 OD 8-1/2 in.  0.00 0.24	Hughes Insert Bit MX30DX S/N: 6025358 OD 8-1/2 in.  0.00 0.24	Smith Insert Bit GF11Y S/N: MX0600 OD 8-1/2 in.  0.00 0.25
Maximum string diameter 8.50 in. All lengths in Meters	Maximum string diameter 8.50 in. All lengths in Meters	Maximum string diameter 8.50 in. All lengths in Meters

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OTHER SERVICES FOR RUN8 Directional Drilling D&I Survey	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 8 8-1/2 in. hole section was drilled from 3024.0 m to 3369.0 m. Depth is referenced to Driller's Depth. All data presented is from tool memory. GR corrected for Mud Weight, Tool and Bit Size. GVR*6 resistivity is corrected for bit size, mud resistivity and borehole temperature. Neutron porosity is calculated with a limestone matrix and is corrected for the bit size, borehole salinity, temperature and mud hydrogen index. Ultrasonic Caliper not available during sliding intervals. PEF readings were affected by the presence of Barite in the mud system. Mud type is KCL/PHPA/Glycol. POOH due to well TD.	REMARKS: RUN NUMBER	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION		
RUN8	RUN	RUN

DOWNHOLE EQUIPMENT

6-3/4 in. ADN*6C Neutron F 33.17 35.15
 S/N: 0403 Neutron N 33.02
 8-1/4 in. Stabilizer Density S 32.15
 NSR-M A202 Density L 32.05
 GSR-J A1994 UltraSonic 31.67
 Software: V8.2B14 R-O Port 30.91

6-3/4 in. PowerPulse* 28.91
 MDC FA27
 MEC 064BA
 MDI 738BC
 Software: V7.0C00

D&I 24.66

Shallow 19.04

Medium 18.92

Deep 18.74

6-3/4 in. GVR*6 Ring Res 18.57 20.53
 S/N: 192 R-O Port 18.43
 8-1/4 in. Stabilizer GR 18.21
 Software: V6.2B01

7 in. Cross Over Sub 17.45
 S/N: SBD2074

6-1/2 in. NM Pony Collar 16.87
 S/N: 6403

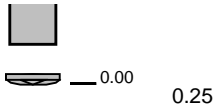
Adjustable Gauge Stabilizer 13.26
 S/N: ASQ990301
 OD 7-7/8 - 8-1/2 in

6-7/8 in. ADOS 10.03
 S/N: AO127724

Bit Res 8.85 9.23

PowerPak* Mud Motor
 A700GT S/N: N7310
 1.15 deg Bend
 8-3/8 in. Motor Sleeve

Reed Hycalog PDC Bit
DSX 173 S/N: 208594
OD 8-1/2 in.



Maximum string diameter 8.50 in.
All lengths in Meters

IDEAL Version: ID9_1C_01
IDF

RAB id9_1c_01 MWD_10 id9_1c_01
ADN id9_1c_01

Format: GeoVISION Quad Density Log Vertical Scale: 1:500 Graphics File Created: 08-Feb-2005 03:02

PIP SUMMARY

➤ Density Samples

Rate of Penetration, Averaged over Last
5ft (ROP5_RM)
100 (M/HR) 0

Photoelectric Factor, Right (PER)
0 (----) 10

Photoelectric Factor, Left (PEL)
0 (----) 10

Photoelectric Factor, Up (PEU)
0 (----) 10
Horizontal Hole Diameter (HORD)
6 (IN) 16

Photoelectric Factor, Bottom (PEB)
0 (----) 10
Vertical Hole Diameter (VERD)
6 (IN) 16

Photoelectric Factor (PEF)
0 (----) 10
Bit Size (BS)
6 (IN) 16

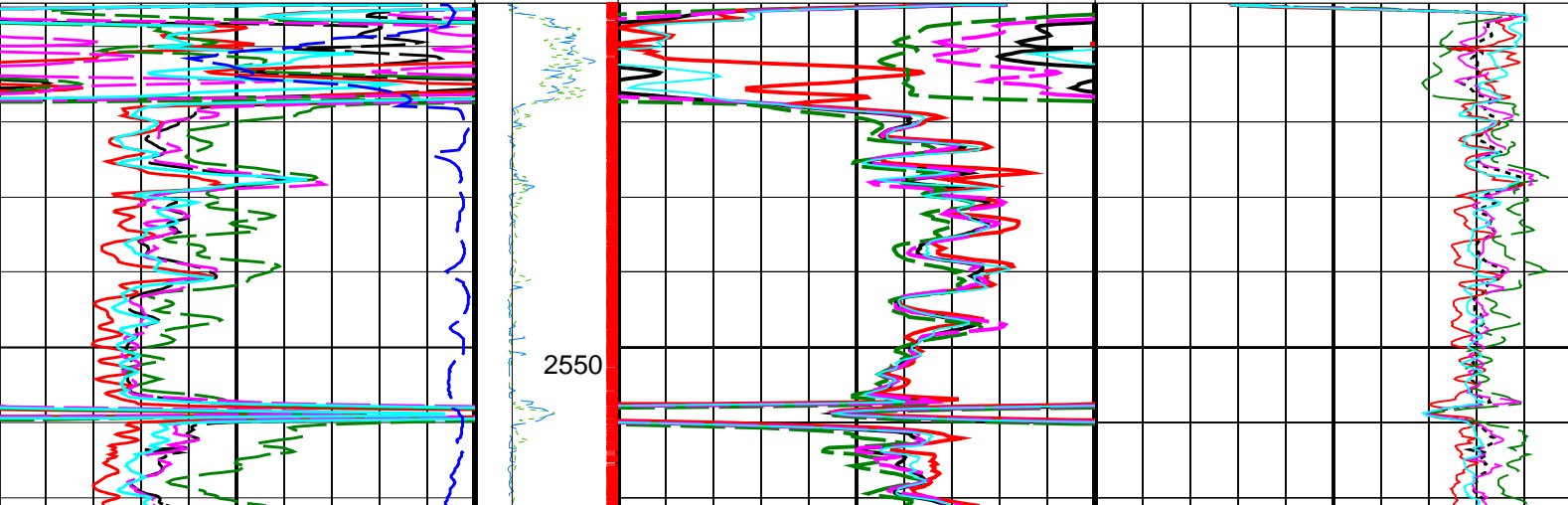
Bulk Density, Right (ROBR)
1.85 (G/C3) 2.85 Bulk Density Correction, Right (DRHR)
-0.75 (G/C3) 0.25

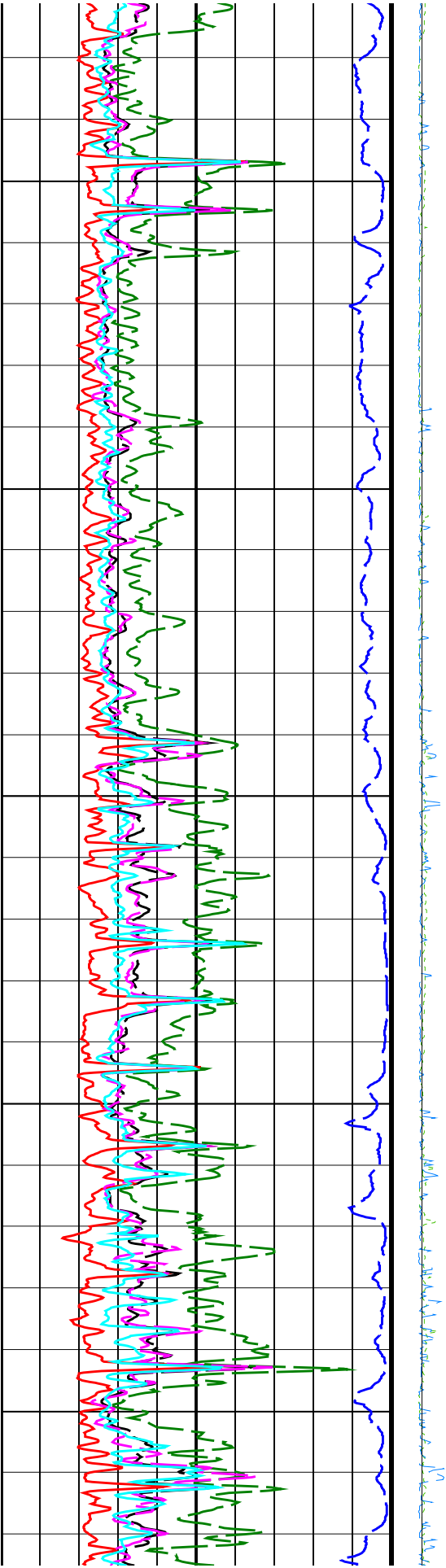
Bulk Density, Left (ROBL)
1.85 (G/C3) 2.85 Bulk Density Correction, Left (DRHL)
-0.75 (G/C3) 0.25

Bulk Density, Up (ROBU)
1.85 (G/C3) 2.85 Bulk Density Correction, Up (DRHU)
-0.75 (G/C3) 0.25

Bulk Density, Bottom (ROBB)
1.85 (G/C3) 2.85 Bulk Density Correction, Bottom (DRHB)
-0.75 (G/C3) 0.25

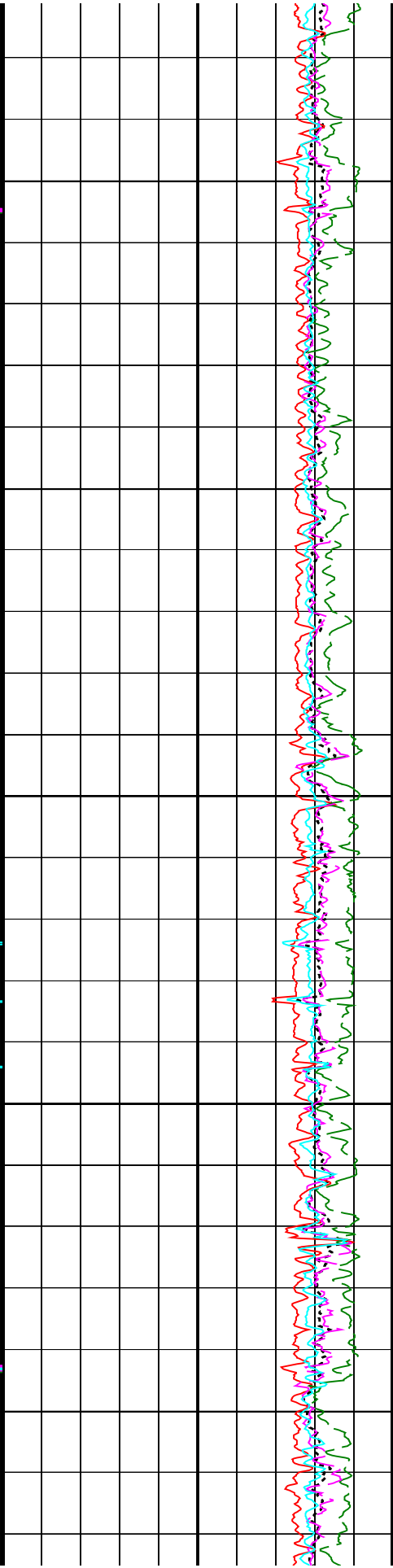
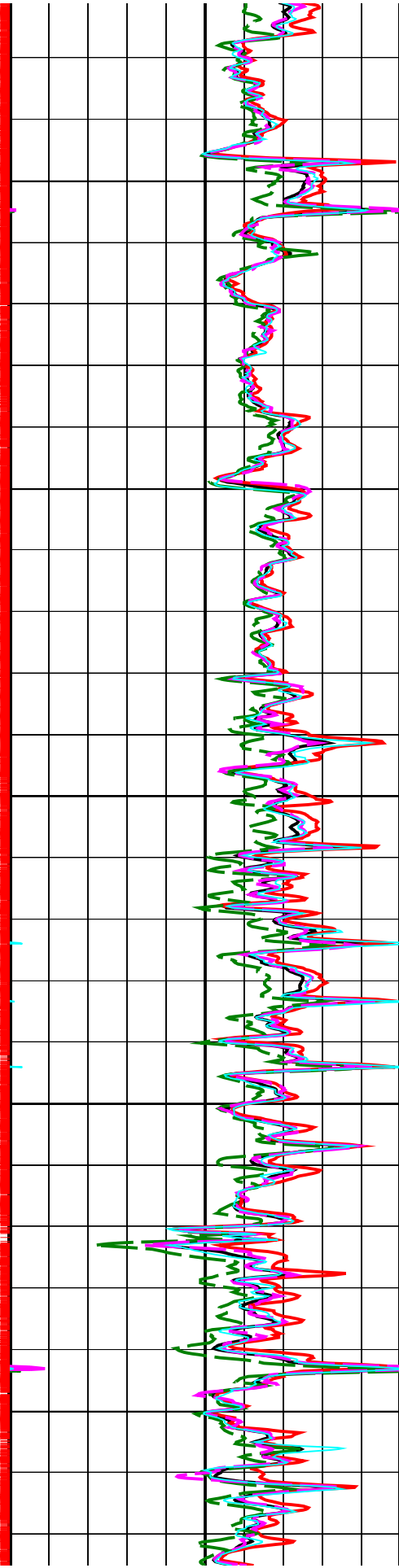
Bulk Density (RHOB)
1.85 (G/C3) 2.85 Bulk Density Correction (DRHO)
-0.75 (G/C3) 0.25

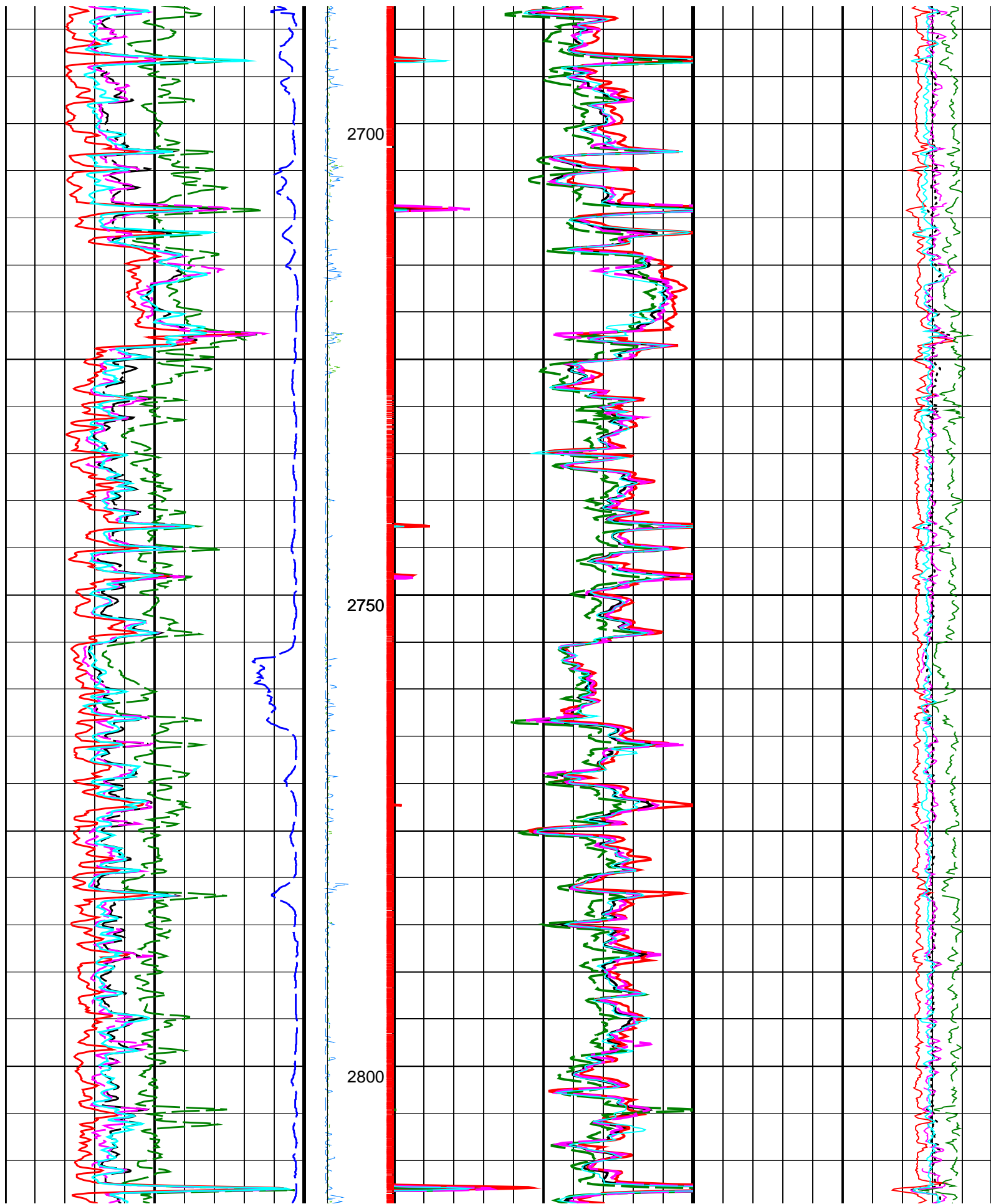


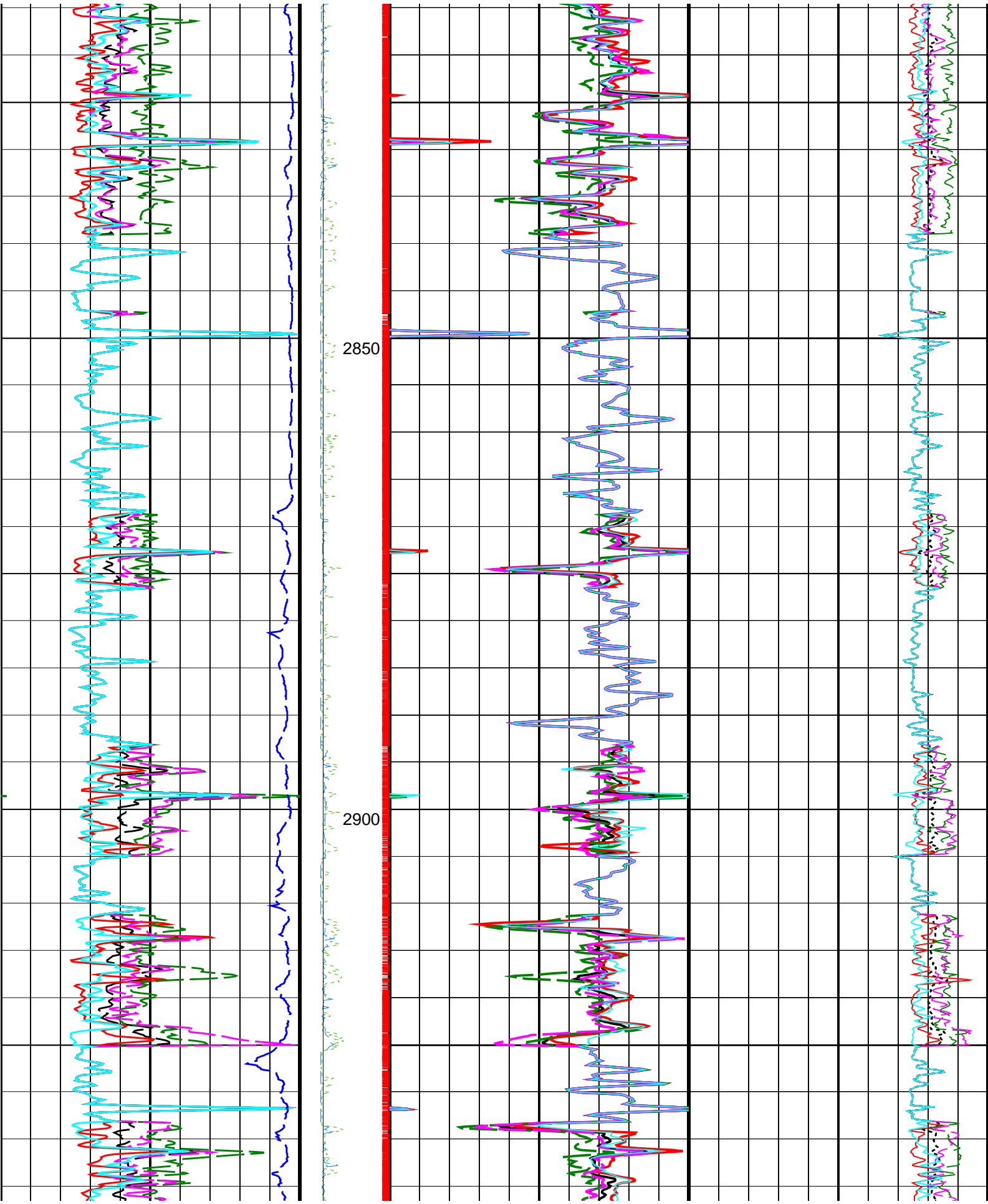


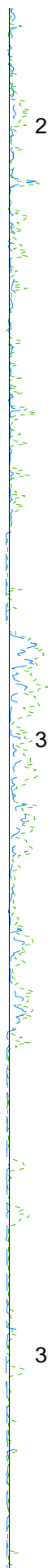
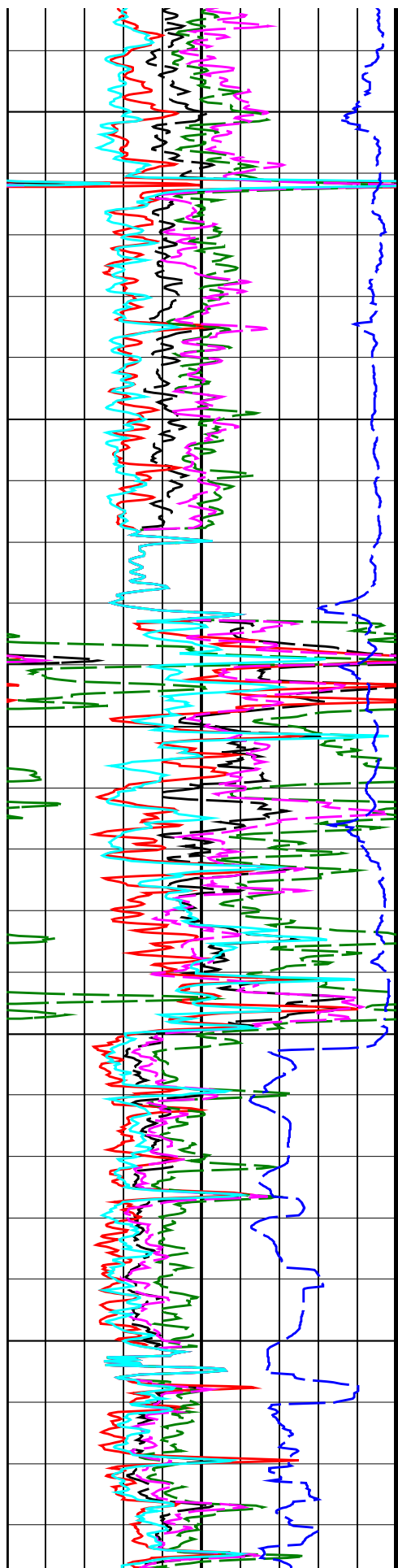
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2650





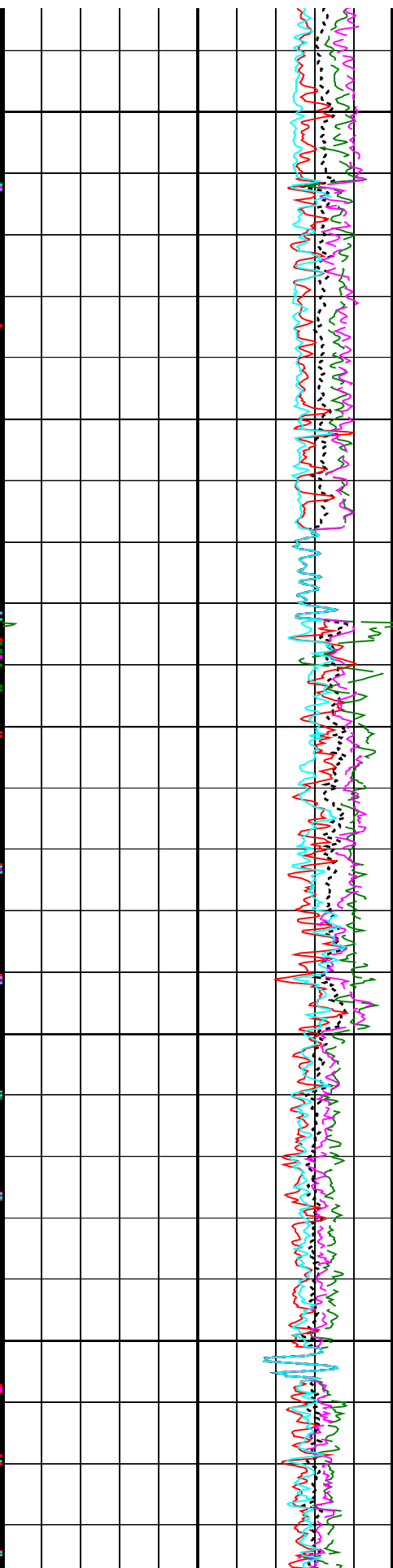
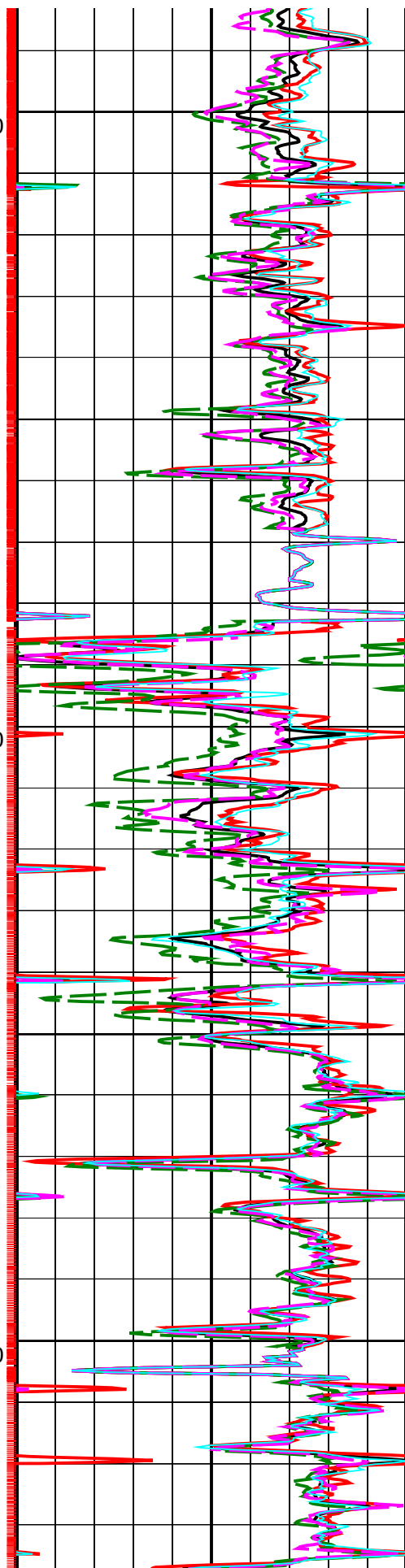


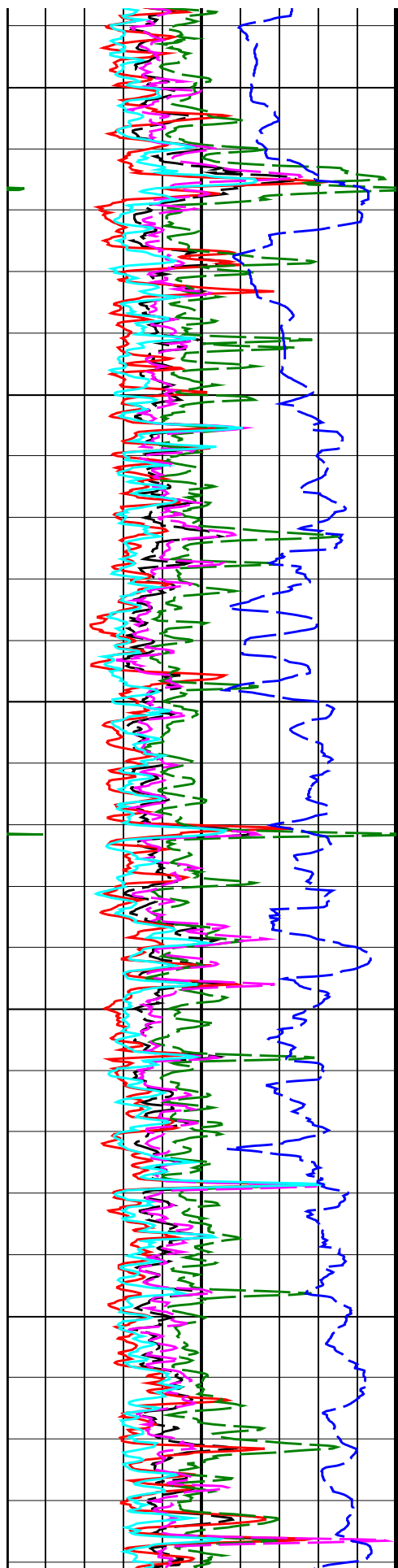


2950

3000

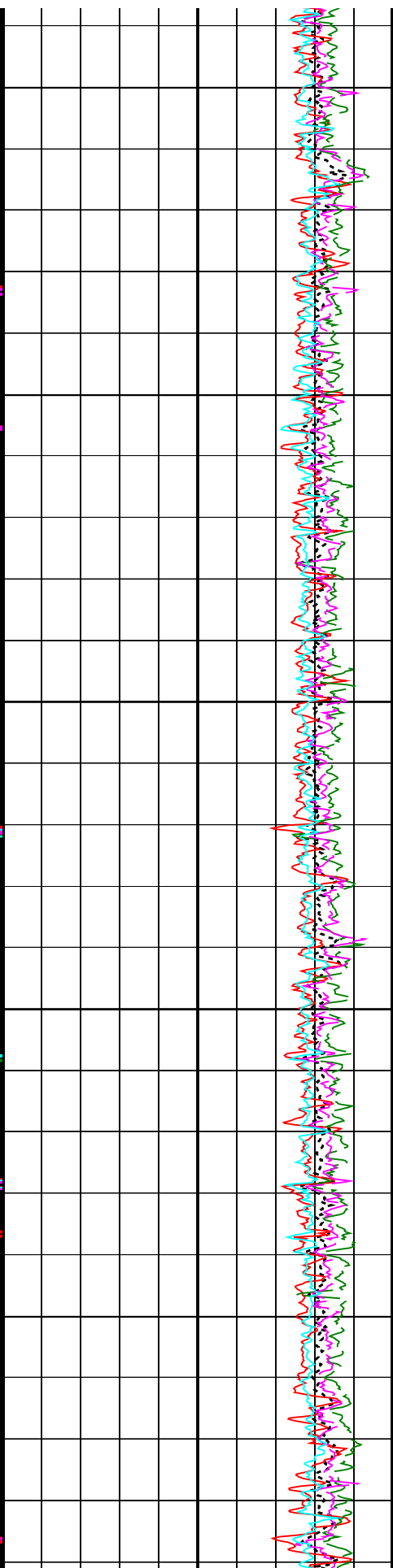
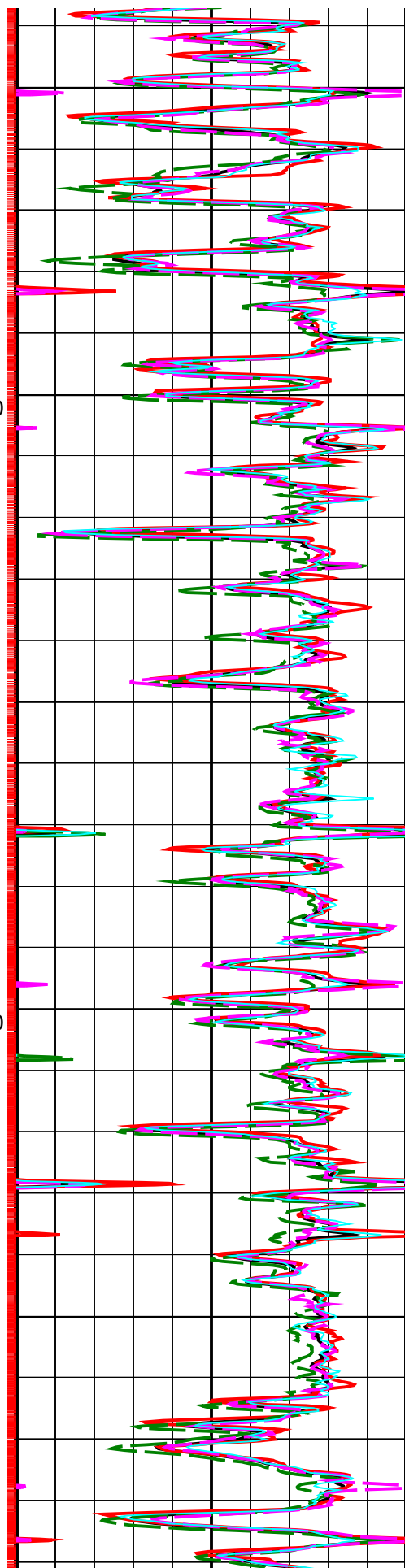
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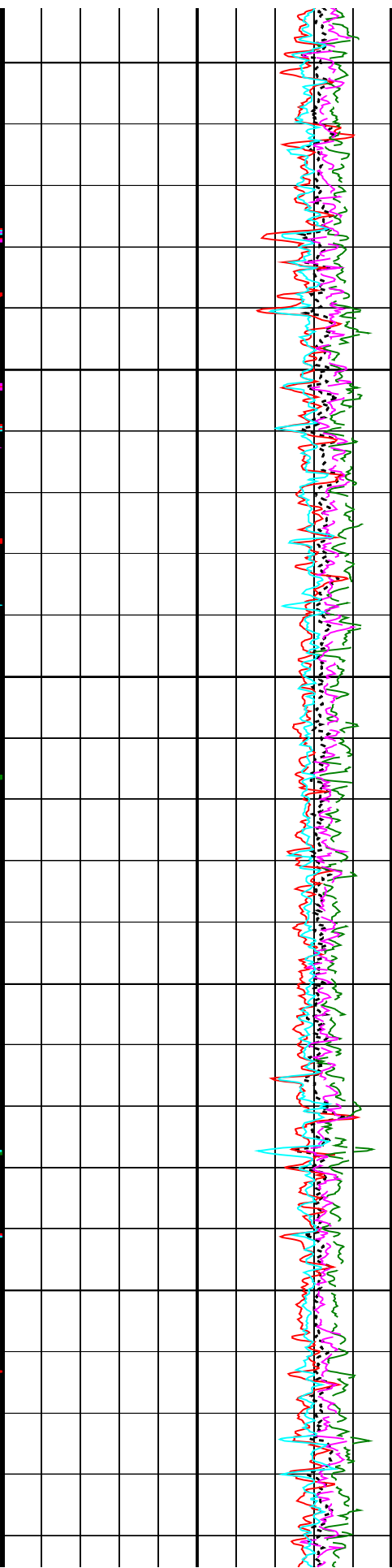
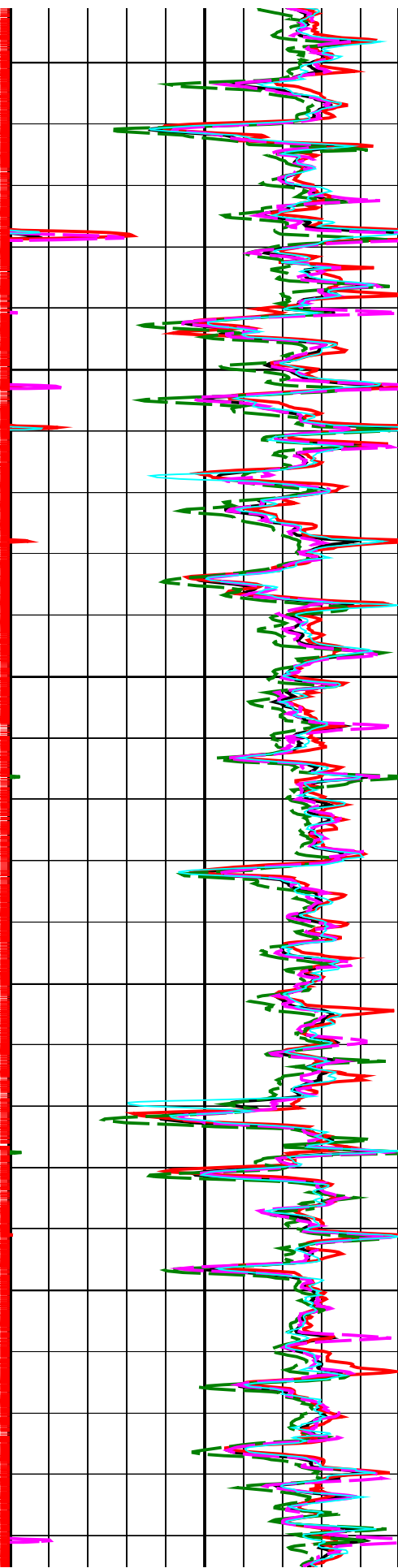
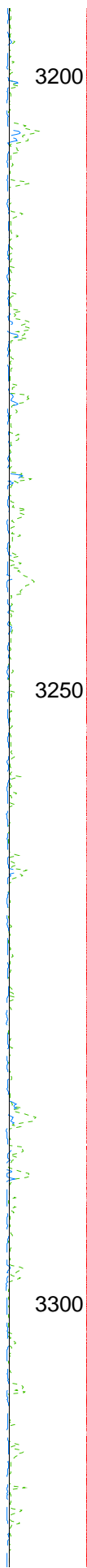
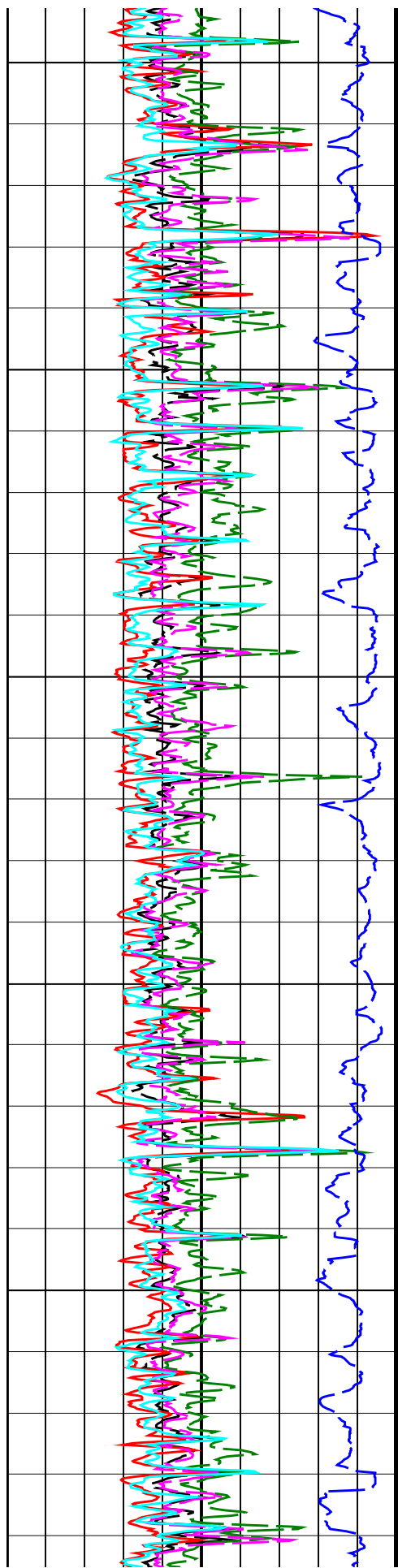


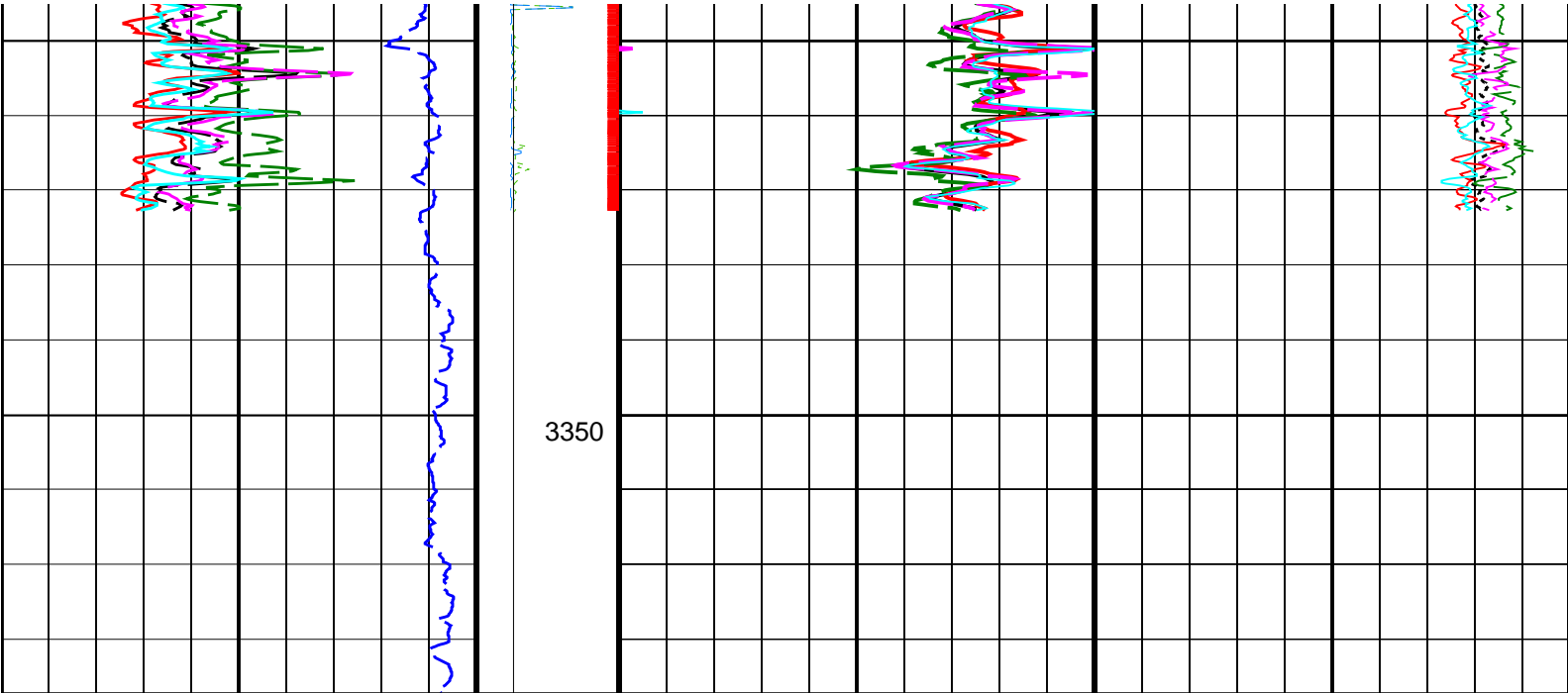


3100

3150







Photoelectric Factor (PEF)		Bit Size (BS) (IN)	Bulk Density (RHOB)		Bulk Density Correction (DRHO)				
0	(----		10	1.85	(G/C3)	2.85	-0.75	(G/C3)	0.25
Photoelectric Factor, Bottom (PEB)		Vertical Hole Diameter (VERD) (IN)	Bulk Density, Bottom (ROBB)		Bulk Density Correction, Bottom (DRHB)				
0	(----		10	1.85	(G/C3)	2.85	-0.75	(G/C3)	0.25
Photoelectric Factor, Up (PEU)		Horizontal Hole Diameter (HORD) (IN)	Bulk Density, Up (ROBU)		Bulk Density Correction, Up (DRHU)				
0	(----		10	1.85	(G/C3)	2.85	-0.75	(G/C3)	0.25
Photoelectric Factor, Left (PEL)			Bulk Density, Left (ROBL)		Bulk Density Correction, Left (DRHL)				
0	(----		10	1.85	(G/C3)	2.85	-0.75	(G/C3)	0.25
Photoelectric Factor, Right (PER)			Bulk Density, Right (ROBR)		Bulk Density Correction, Right (DRHR)				
0	(----	10	1.85	(G/C3)	2.85	-0.75	(G/C3)	0.25	
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)									
100	(M/HR)	0							


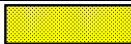
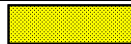
PIP SUMMARY			
+ Density Samples			
IDEAL Version: ID9_1C_01			
IDF			
RAB	id9_1c_01	MWD_10	id9_1c_01
ADN	id9_1c_01		

6.75-in. Azimuthal Density Neutron / Equipment Identification			
Primary Equipment:			
Tool Name and Serial Number		ADN6 - CA	0403
Collar Type and Serial Number		ADDC - AA	0403
Chassis Type and Serial Number		ADSE - EA	018
Neutron Loading Source		NSR - M	202

Master: 30–Nov–2004 12:45

6.75–in. Azimuthal Density Neutron Calibration




Density: Magnesium Block

Phase	LS window 3 – Mg CPS	Value	Phase	SS window 1 – Mg CPS	Value	Phase	SS window 3 – Mg CPS	Value
Master		1022	Master		2282	Master		5972
	250.0 (Minimum) 4125 (Nominal) 8000 (Maximum)			700.0 (Minimum) 9350 (Nominal) 18000 (Maximum)			2500 (Minimum) 23750 (Nominal) 45000 (Maximum)	

Master: 30–Nov–2004 12:45

6.75–in. Azimuthal Density Neutron Calibration

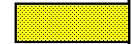
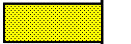
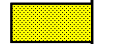
Density: Aluminum Block

Phase	LS window 3 – Al CPS	Value	Phase	SS window 1 – Al CPS	Value	Phase	SS window 3 – Al CPS	Value
Master		156.6	Master		1184	Master		3762
	50.00 (Minimum) 725.0 (Nominal) 1400 (Maximum)			500.0 (Minimum) 4250 (Nominal) 8000 (Maximum)			1500 (Minimum) 15750 (Nominal) 30000 (Maximum)	

Master: 30–Nov–2004 12:45

6.75–in. Azimuthal Density Neutron Calibration



Density: Background

Phase	LS window 3 – Background CPS	Value	Phase	SS window 1 – Background CPS	Value	Phase	SS window 3 – Background CPS	Value
Master		34.18	Master		108.6	Master		480.8
	15.00 (Minimum) 82.50 (Nominal) 150.0 (Maximum)			40.00 (Minimum) 220.0 (Nominal) 400.0 (Maximum)			150.0 (Minimum) 825.0 (Nominal) 1500 (Maximum)	

Master: 30–Nov–2004 12:45

6.75–in. Azimuthal Density Neutron Calibration









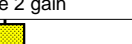
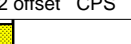
Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value
Master		1.030	Master		1.120
	1.024 (Minimum) 1.039 (Nominal) 1.054 (Maximum)			1.096 (Minimum) 1.126 (Nominal) 1.156 (Maximum)	

Master: 30–Nov–2004 12:45

6.75–in. Azimuthal Density Neutron Calibration

Neutron: Water Tank

Phase	Far 1 tube 1 gain	Value	Phase	Far 1 tube 1 offset CPS	Value
Master		1.133	Master		0.2488
	0.8000 (Minimum) 1.050 (Nominal) 1.300 (Maximum)			–1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)	
Phase	Far 1 tube 2 gain	Value	Phase	Far 1 tube 2 offset CPS	Value
Master		1.082	Master		0.2448
	0.8000 (Minimum) 1.050 (Nominal) 1.300 (Maximum)			–1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)	
Phase	Far 1 tube 3 gain	Value	Phase	Far 1 tube 3 offset CPS	Value
Master		1.120	Master		0.2026
	0.8000 (Minimum) 1.050 (Nominal) 1.300 (Maximum)			–1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)	
Phase	Far 2 tube 1 gain	Value	Phase	Far 2 tube 1 offset CPS	Value
Master		1.113	Master		0.3294
	0.8000 (Minimum) 1.050 (Nominal) 1.300 (Maximum)			–1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)	
Phase	Far 2 tube 2 gain	Value	Phase	Far 2 tube 2 offset CPS	Value
Master		1.060	Master		–0.1372
	0.8000 (Minimum) 1.050 (Nominal) 1.300 (Maximum)			–1.000 (Minimum) 0 (Nominal) 1.000 (Maximum)	
Phase	Far 2 tube 3 gain	Value	Phase	Far 2 tube 3 offset CPS	Value

Master		1.149	Master		0.5438		
0.8000 (Minimum)	1.050 (Nominal)	1.300 (Maximum)	-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)		
Phase	Near 1 tube 1 gain		Value	Phase	Near 1 tube 1 offset CPS		Value
Master		1.133	Master		30.21		
0.8000 (Minimum)	1.050 (Nominal)	1.300 (Maximum)	-100.0 (Minimum)	0 (Nominal)	100.0 (Maximum)		
Phase	Near 2 tube 1 gain		Value	Phase	Near 2 tube 1 offset CPS		Value
Master		1.111	Master		13.40		
0.8000 (Minimum)	1.050 (Nominal)	1.300 (Maximum)	-100.0 (Minimum)	0 (Nominal)	100.0 (Maximum)		

Master: 30-Nov-2004 12:45			
6.75-in. Azimuthal Density Neutron Calibration			
Neutron: Water Block Check			
Phase	Far Neutron water porosity PU		Value
Master		117.4	
90.00 (Minimum)	100.0 (Nominal)	125.0 (Maximum)	

6.75-in. Resistivity At-the-Bit / Equipment Identification			
Primary Equipment:			
Tool Name and Serial Number		RAB6 - CA	192
Calibration Status		Valid	

Master: 21-Dec-2004 11:22											
6.75-in. Resistivity At-the-Bit Calibration											
Resistivity: Fixture											
Phase	Ring/T1 factor		Value	Phase	Ring/T2 factor		Value	Phase	M0/T1 factor		Value
Master			0.9984	Master			1.002	Master			0.9909
	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	M0/T2 factor		Value	Phase	M2/T1 factor		Value	Phase	M2/T2 factor		Value
Master			0.9928	Master			0.9973	Master			1.000
	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN shallow/T1 factor		Value	Phase	BTN shallow/T2 factor		Value	Phase	BTN medium/T1 factor		Value
Master			0.9975	Master			1.000	Master			0.9935
	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)
Phase	BTN medium/T2 factor		Value	Phase	BTN deep/T1 factor		Value	Phase	BTN deep/T2 factor		Value
Master			0.9962	Master			1.005	Master			1.008
	0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)		0.9750 (Minimum)	1.000 (Nominal)	1.025 (Maximum)

Master: 21-Dec-2004 11:22			
6.75-in. Resistivity At-the-Bit Calibration			
Gamma Ray: Blanket			
Phase	Gamma ray factor		Value
Master		0.9227	

0.7500
(Minimum)

1.000
(Nominal)

1.250
(Maximum)

SCHLUMBERGER

Survey report

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Client..... ESSO Australia Pty. Ltd.
Field..... Moonfish

Well..... West Moonfish-1
API number.....
Engineer..... J.Dolan / K.Handley / M.Y.Tan
Rig..... ENSCO 102
STATE..... Victoria

Spud date..... 05-Jan-05
Last survey date..... 05-Feb-05
Total accepted surveys... 116
MD of first survey..... 0.00 m
MD of last survey..... 3369.00 m

----- Survey calculation methods-----
Method for positions..... Minimum curvature
Method for DLS..... Mason & Taylor

----- Depth reference -----
Permanent datum..... Mean Sea Level
Depth reference..... Driller's Depth
GL above permanent..... -52.12 m
KB above permanent..... Top Drive
DF above permanent..... 39.24 m

----- Vertical section origin-----
Latitude (+N/S-)..... 0.00 m
Departure (+E/W-)..... 0.00 m

----- Platform reference point-----
Latitude (+N/S-)..... 0.00 m
Departure (+E/W-)..... 0.00 m

Azimuth from Vsect Origin to target: 171.73 degrees

----- Geomagnetic data -----
Magnetic model..... BGGM version 2004
Magnetic date..... 08-Jan-2005
Magnetic field strength... 1199.31 HCONT
Magnetic dec (+E/W-)..... 13.04 degrees
Magnetic dip..... -68.70 degrees

----- MWD survey Reference Criteria -----
Reference G..... 1000.02 mGal
Reference H..... 1199.31 HCONT
Reference Dip..... -68.70 degrees
Tolerance of G..... (+/-) 2.50 mGal
Tolerance of H..... (+/-) 6.00 HCONT
Tolerance of Dip..... (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-)..... 13.04 degrees
Grid convergence (+E/W-).. -0.60 degrees
Total az corr (+E/W-)..... 13.64 degrees
(Total az corr = magnetic dec - grid conv)

Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

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SCHLUMBERGER Survey Report

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	91.00	0.00	0.00	91.00	91.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD_M	None
3	181.88	0.35	328.21	90.88	181.88	-0.25	0.24	-0.15	0.28	328.21	0.04	MWD	None
4	209.79	0.46	330.61	27.91	209.79	-0.44	0.41	-0.25	0.47	328.78	0.04	MWD	None
5	238.18	0.46	334.44	28.39	238.18	-0.65	0.61	-0.35	0.70	329.99	0.01	MWD	None
6	266.14	0.41	322.98	27.96	266.14	-0.85	0.79	-0.46	0.91	329.77	0.04	MWD	None
7	294.58	0.45	330.64	28.44	294.58	-1.04	0.97	-0.58	1.13	329.25	0.02	MWD	None
8	323.45	0.47	319.47	28.87	323.45	-1.25	1.16	-0.71	1.36	328.51	0.03	MWD	None
9	352.76	0.37	334.57	29.31	352.75	-1.44	1.33	-0.83	1.57	328.19	0.05	MWD	None
10	381.80	0.35	324.72	29.04	381.79	-1.61	1.49	-0.92	1.75	328.35	0.02	MWD	None
11	411.24	0.31	328.91	29.44	411.23	-1.76	1.63	-1.01	1.92	328.21	0.02	MWD	None
12	440.44	0.31	306.16	29.20	440.43	-1.89	1.75	-1.12	2.07	327.41	0.04	MWD	None
13	469.19	0.35	319.12	28.75	469.18	-2.02	1.86	-1.24	2.23	326.36	0.03	MWD	None
14	498.06	0.33	320.27	28.87	498.05	-2.16	1.99	-1.35	2.40	325.89	0.01	MWD	None
15	526.97	0.37	310.22	28.91	526.96	-2.30	2.11	-1.47	2.58	325.15	0.03	MWD	None
16	555.67	0.28	328.64	28.70	555.66	-2.44	2.23	-1.58	2.74	324.74	0.05	MWD	None
17	584.65	0.30	319.14	28.98	584.64	-2.57	2.35	-1.67	2.88	324.69	0.02	MWD	None
18	613.64	0.26	310.54	28.99	613.63	-2.68	2.45	-1.77	3.02	324.24	0.02	MWD	None
19	642.62	0.21	308.91	28.98	642.61	-2.77	2.53	-1.86	3.14	323.70	0.02	MWD	None
20	671.64	0.18	340.56	29.02	671.63	-2.85	2.60	-1.91	3.23	323.69	0.04	MWD	None
21	700.59	0.24	324.48	28.95	700.58	-2.95	2.70	-1.96	3.34	323.93	0.03	MWD	None
22	716.66	0.28	343.92	16.07	716.65	-3.02	2.76	-1.99	3.41	324.17	0.06	MWD	None
23	760.72	0.35	341.43	44.06	760.71	-3.26	2.99	-2.07	3.64	325.37	0.02	MWD	None
24	789.81	0.37	350.28	29.09	789.80	-3.44	3.17	-2.11	3.81	326.33	0.02	MWD	None
25	818.90	0.39	345.99	29.09	818.89	-3.63	3.36	-2.15	3.99	327.36	0.01	MWD	None
26	848.10	0.45	351.62	29.20	848.09	-3.85	3.57	-2.19	4.19	328.44	0.02	MWD	None
27	877.05	0.38	344.38	28.95	877.04	-4.05	3.77	-2.23	4.38	329.37	0.03	MWD	None
28	906.37	0.28	0.58	29.32	906.36	-4.22	3.94	-2.26	4.54	330.16	0.05	MWD	None
29	935.33	0.35	12.98	28.96	935.32	-4.37	4.09	-2.24	4.67	331.33	0.03	MWD	None
30	964.33	0.27	17.88	29.00	964.31	-4.52	4.25	-2.20	4.78	332.63	0.03	MWD	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/10m)	Srvy tool type	Tool Corr (deg)
31	992.58	0.29	13.91	28.25	992.56	-4.64	4.38	-2.16	4.88	333.74	0.01	MWD	None
32	1021.76	0.36	9.73	29.18	1021.74	-4.80	4.54	-2.13	5.01	334.90	0.03	MWD	None
33	1050.63	0.30	18.15	28.87	1050.61	-4.95	4.70	-2.09	5.14	336.06	0.03	MWD	None
34	1079.82	0.33	13.33	29.19	1079.80	-5.10	4.86	-2.04	5.27	337.17	0.01	MWD	None
35	1108.59	0.28	27.98	28.77	1108.57	-5.23	5.00	-1.99	5.38	338.27	0.03	MWD	None
36	1137.86	0.28	33.98	29.27	1137.84	-5.34	5.12	-1.92	5.47	339.46	0.01	MWD	None
37	1166.83	0.29	28.94	28.97	1166.81	-5.46	5.24	-1.84	5.56	340.63	0.01	MWD	None
38	1195.74	0.29	56.71	28.91	1195.72	-5.54	5.35	-1.75	5.63	341.91	0.05	MWD	None
39	1224.73	0.34	48.47	28.99	1224.71	-5.62	5.45	-1.62	5.68	343.42	0.02	MWD	None
40	1253.76	0.28	53.99	29.03	1253.74	-5.70	5.54	-1.50	5.74	344.86	0.02	MWD	None
41	1282.95	0.28	76.24	29.19	1282.93	-5.74	5.60	-1.37	5.77	346.23	0.04	MWD	None
42	1312.43	0.35	69.81	29.48	1312.41	-5.77	5.65	-1.22	5.78	347.83	0.03	MWD	None
43	1341.45	0.49	75.67	29.02	1341.43	-5.80	5.71	-1.02	5.80	349.92	0.05	MWD	None
44	1370.44	0.54	77.71	28.99	1370.42	-5.82	5.77	-0.76	5.82	352.48	0.02	MWD	None
45	1399.38	0.57	80.90	28.94	1399.36	-5.83	5.82	-0.49	5.84	355.23	0.01	MWD	None
46	1428.34	0.57	72.23	28.96	1428.31	-5.86	5.89	-0.21	5.90	357.99	0.03	MWD	None
47	1457.45	0.71	75.91	29.11	1457.42	-5.90	5.98	0.11	5.98	1.02	0.05	MWD	None
48	1486.39	0.67	81.34	28.94	1486.36	-5.92	6.05	0.45	6.07	4.23	0.03	MWD	None
49	1515.33	0.64	84.68	28.94	1515.30	-5.91	6.09	0.78	6.14	7.26	0.02	MWD	None
50	1544.31	0.58	114.39	28.98	1544.28	-5.83	6.04	1.07	6.14	10.04	0.11	MWD	None
51	1573.33	0.68	130.93	29.02	1573.30	-5.62	5.87	1.33	6.02	12.80	0.07	MWD	None
52	1602.43	0.81	124.83	29.10	1602.39	-5.35	5.64	1.63	5.87	16.15	0.05	MWD	None
53	1630.64	0.88	126.64	28.21	1630.60	-5.06	5.40	1.97	5.74	20.06	0.03	MWD	None
54	1659.72	0.73	120.96	29.08	1659.68	-4.78	5.17	2.31	5.66	24.07	0.06	MWD	None
55	1688.54	0.77	115.92	28.82	1688.49	-4.56	4.99	2.64	5.64	27.89	0.03	MWD	None
56	1716.29	1.42	170.03	27.75	1716.24	-4.11	4.57	2.87	5.39	32.12	0.42	MWD	None
57	1747.14	3.39	168.14	30.85	1747.06	-2.82	3.30	3.12	4.54	43.41	0.64	MWD	None
58	1776.39	6.07	175.23	29.25	1776.21	-0.41	0.91	3.43	3.55	75.11	0.94	MWD	None
59	1803.97	9.73	177.60	27.58	1803.52	3.37	-2.87	3.65	4.64	128.22	1.33	MWD	None
60	1833.36	13.39	175.76	29.39	1832.31	9.23	-8.75	4.00	9.62	155.42	1.25	MWD	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/10m)	Srvy tool type	Tool Corr (deg)
61	1863.43	16.85	168.96	30.07	1861.34	17.06	-16.50	5.09	17.27	162.84	1.29	MWD	None
62	1892.32	20.05	169.00	28.89	1888.74	26.19	-25.47	6.84	26.38	164.97	1.11	MWD	None
63	1921.31	23.60	171.03	28.99	1915.65	36.96	-36.09	8.70	37.12	166.45	1.25	MWD	None
64	1950.39	26.42	171.08	29.08	1942.00	49.26	-48.23	10.61	49.38	167.60	0.97	MWD	None
65	1980.01	28.74	171.62	29.62	1968.25	62.97	-61.79	12.67	63.07	168.42	0.79	MWD	None
66	2008.88	30.11	172.21	28.87	1993.40	77.15	-75.83	14.66	77.24	169.06	0.49	MWD	None
67	2037.15	31.81	172.17	28.27	2017.64	91.69	-90.24	16.64	91.76	169.55	0.60	MWD	None
68	2051.91	33.50	172.13	14.76	2030.06	99.66	-98.13	17.72	99.72	169.76	1.15	MWD	None
69	2066.15	33.78	171.23	14.24	2041.92	107.55	-105.93	18.87	107.60	169.90	0.40	MWD	None
70	2095.12	33.12	171.96	28.97	2066.09	123.51	-121.73	21.20	123.56	170.12	0.27	MWD	None
71	2124.15	33.36	172.51	29.03	2090.37	139.43	-137.50	23.35	139.47	170.36	0.13	MWD	None
72	2153.24	33.01	172.88	29.09	2114.72	155.35	-153.29	25.38	155.38	170.60	0.14	MWD	None
73	2181.81	32.54	173.18	28.56	2138.73	170.80	-168.64	27.25	170.82	170.82	0.17	MWD	None
74	2210.92	31.59	173.23	29.12	2163.41	186.26	-183.99	29.08	186.27	171.02	0.33	MWD	None
75	2240.12	31.28	173.54	29.20	2188.32	201.48	-199.11	30.84	201.49	171.20	0.12	MWD	None
76	2268.93	31.04	173.24	28.81	2212.98	216.38	-213.92	32.55	216.38	171.35	0.10	MWD	None
77	2298.13	31.01	173.23	29.20	2238.00	231.42	-228.87	34.32	231.43	171.47	0.01	MWD	None
78	2327.14	30.80	172.89	29.01	2262.89	246.32	-243.66	36.12	246.32	171.57	0.09	MWD	None
79	2356.90	30.47	172.50	29.76	2288.50	261.48	-258.70	38.05	261.48	171.63	0.13	MWD	None
80	2385.70	30.69	172.74	28.80	2313.29	276.13	-273.23	39.93	276.13	171.68	0.09	MWD	None
81	2414.71	30.89	172.94	29.01	2338.21	290.98	-287.96	41.78	290.98	171.74	0.08	MWD	None
82	2443.86	30.53	172.62	29.15	2363.27	305.86	-302.73	43.66	305.86	171.79	0.14	MWD	None
83	2472.51	30.38	172.52	28.65	2387.97	320.38	-317.13	45.53	320.38	171.83	0.06	MWD	None
84	2500.10	30.49	173.16	27.59	2411.76	334.36	-331.00	47.28	334.36	171.87	0.12	MWD	None
85	2513.76	30.10	173.67	13.66	2423.55	341.24	-337.84	48.07	341.25	171.90	0.34	MWD	None
86	2534.52	28.77	174.36	20.76	2441.63	351.44	-347.99	49.13	351.44	171.96	0.66	MWD	None
87	2563.83	27.68	175.01	29.31	2467.46	365.28	-361.79	50.42	365.29	172.07	0.39	MWD	None
88	2591.89	27.75	175.43	28.06	2492.30	378.31	-374.80	51.50	378.32	172.18	0.07	MWD	None
89	2621.44	27.65	176.02	29.55	2518.46	392.01	-388.49	52.53	392.03	172.30	0.10	MWD	None
90	2649.26	26.55	176.15	27.82	2543.23	404.65	-401.14	53.39	404.68	172.42	0.40	MWD	None

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/10m)	Srvy tool type	Tool Corr (deg)
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seq # -	measured depth (m)	incl angle (deg)	Azimuth angle (deg)	course length (m)	TV depth (m)	vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	total displ (m)	At Azim (deg)	DLS (deg/ 10m)	SRVY tool type	Tool Corr (deg)
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
91	2679.64	25.96	176.64	30.38	2570.47	418.04	-414.55	54.24	418.08	172.55	0.21	MWD	None
92	2709.01	25.79	176.94	29.37	2596.90	430.81	-427.35	54.96	430.87	172.67	0.07	MWD	None
93	2738.14	25.73	177.20	29.13	2623.13	443.41	-439.99	55.60	443.49	172.80	0.04	MWD	None
94	2766.75	25.60	177.87	28.61	2648.92	455.74	-452.37	56.14	455.84	172.93	0.11	MWD	None
95	2795.87	25.09	178.27	29.12	2675.24	468.13	-464.83	56.56	468.26	173.06	0.18	MWD	None
96	2824.87	24.62	179.06	29.00	2701.55	480.23	-477.01	56.84	480.39	173.20	0.20	MWD	None
97	2844.77	24.22	179.64	19.90	2719.67	488.38	-485.24	56.94	488.57	173.31	0.23	MWD	None
98	2853.96	24.18	180.01	9.19	2728.05	492.11	-489.01	56.95	492.31	173.36	0.17	MWD	None
99	2882.63	27.57	178.74	28.67	2753.85	504.51	-501.52	57.09	504.76	173.51	1.20	MWD	None
100	2911.83	32.47	177.23	29.20	2779.12	519.03	-516.11	57.62	519.32	173.63	1.70	MWD	None
101	2940.58	35.22	173.63	28.75	2803.00	535.00	-532.06	58.91	535.31	173.68	1.18	MWD	None
102	2969.76	36.72	171.96	29.18	2826.62	552.14	-549.06	61.07	552.45	173.65	0.61	MWD	None
103	2998.29	36.71	172.92	28.53	2849.49	569.19	-565.97	63.31	569.50	173.62	0.20	MWD	None
104	3027.63	37.32	171.60	29.34	2872.91	586.85	-583.47	65.69	587.16	173.58	0.34	MWD	None
105	3056.67	37.50	171.93	29.04	2895.98	604.50	-600.93	68.22	604.79	173.52	0.09	MWD	None
106	3086.05	37.34	171.98	29.38	2919.31	622.35	-618.61	70.72	622.64	173.48	0.06	MWD	None
107	3115.20	36.75	171.59	29.15	2942.58	639.91	-635.99	73.22	640.19	173.43	0.22	MWD	None
108	3143.56	36.84	172.02	28.36	2965.29	656.90	-652.80	75.65	657.17	173.39	0.10	MWD	None
109	3173.28	36.36	171.83	29.72	2989.15	674.62	-670.35	78.13	674.89	173.35	0.17	MWD	None
110	3202.29	35.86	171.78	29.01	3012.59	691.71	-687.27	80.57	691.98	173.31	0.17	MWD	None
111	3231.67	35.66	172.64	29.38	3036.43	708.88	-704.28	82.90	709.14	173.29	0.18	MWD	None
112	3259.72	35.26	172.40	28.05	3059.28	725.15	-720.41	85.02	725.41	173.27	0.15	MWD	None
113	3289.09	34.82	172.26	29.37	3083.32	742.01	-737.13	87.27	742.27	173.25	0.15	MWD	None
114	3318.30	34.25	172.36	29.21	3107.39	758.57	-753.54	89.48	758.83	173.23	0.20	MWD	None
115	3343.24	33.90	172.67	24.94	3128.04	772.54	-767.39	91.30	772.80	173.21	0.16	MWD	None
116	3369.00	33.54	172.99	25.76	3149.47	786.84	-781.58	93.09	787.10	173.21	0.16	Projection To TD	

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Company: **ESSO Australia Pty. Ltd.**

Schlumberger

Well: **West Moonfish-1**

Field: **Moonfish**

Rig: **ENSCO 102**

8.5 in. Section

State: **Victoria**

**GeoVISION Density Neutron Quadrant
1:500 Measured Depth
Recorded Mode Log**

