

Potassium	%	n/a	n/a								
Environmental data											
GR											
Mud weight	ppg	12.00	12.10								
Bit size	in.	9.50	9.50								
Resistivity											
Neutron porosity											
Hole Size	in.	9.50	9.50								
Mud weight	ppg	12.00	12.10								
Temperature	°C	90.55	86.0								
Mud salinity	ppk	63.38	63.38								
Formation salinity		n/a	n/a								
Recording rate 1	SEC	2 (GR, Res)	2 (GR, Res)								
Recording rate 2	SEC	4 (Den, Neu)	4 (Den, Neu)								
Filtering GR		3 pts	3 pts								
Filtering density		3 pts	3 pts								
Filtering Neutron		3 pts	3 pts								
Company representative	B. Openshaw	R. Rossouw									
Anadrill personnel	M.Kampen	M. Lu	S.T.D.Aung	P.Sellathurai	P.Dassens	J.Condon					

<p style="text-align: center;">DISCLAIMER</p> <p>THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.</p>											
OTHER SERVICES FOR RUN5 Directional Drilling Directional Surveys Annular Pressure & Temperature Shock & Vibrations			OTHER SERVICES FOR RUN6 Directional Surveys Annular Pressure & Temperature Shock & Vibrations								
REMARKS: RUN NUMBER 5 Depth is referenced to Driller's Depth Gamma Ray is corrected for mud weight,tool size and bit size Resistivity is borehole compensated and environmentally corrected Neutron porosity is corrected for the effects of borehole size(bit size),temperature,mud salinity,and much hydrogen index (a factor of mud weight,mud temperature and pressure). Neutron porosity is calculated using a limestone matrix density of 2.71 g/cm3. POOH due to reaching Coring Point .			REMARKS: RUN NUMBER 6 Depth is referenced to Driller's Depth Gamma Ray is corrected for mud weight,tool size and bit size Resistivity is borehole compensated and environmentally corrected Neutron porosity is corrected for the effects of borehole size(bit size),temperature,mud salinity,and much hydrogen index (a factor of mud weight,mud temperature and pressure). Neutron porosity is calculated using a limestone matrix density of 2.71 g/cm3. POOH due to reaching TD for this section.								

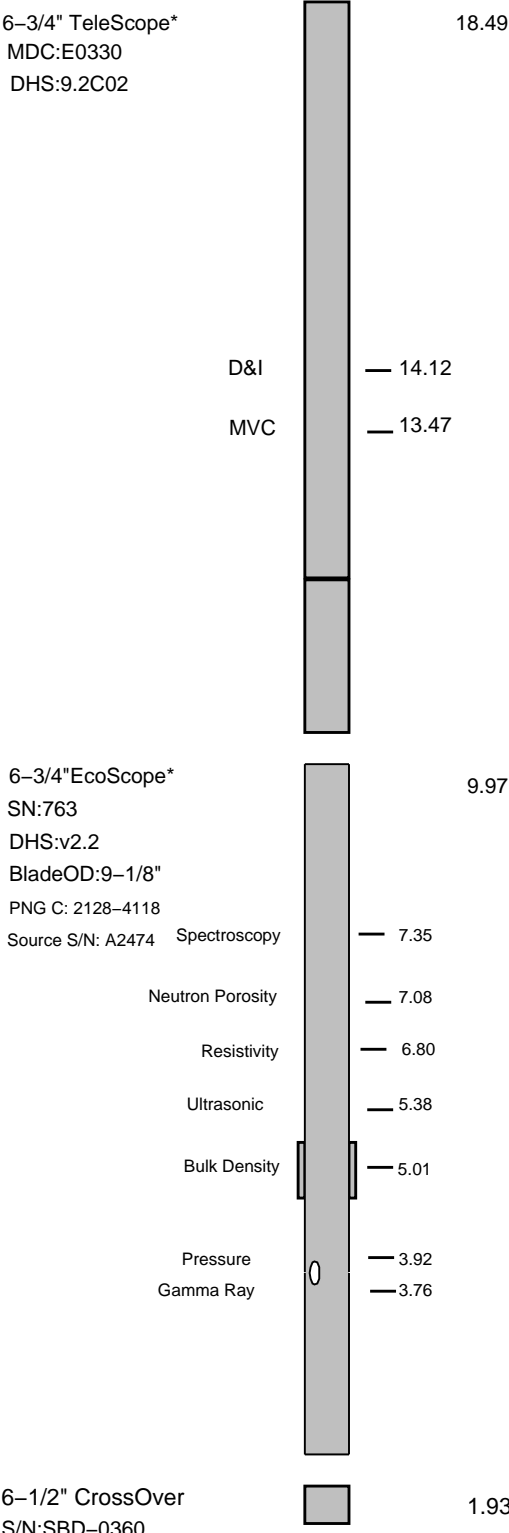
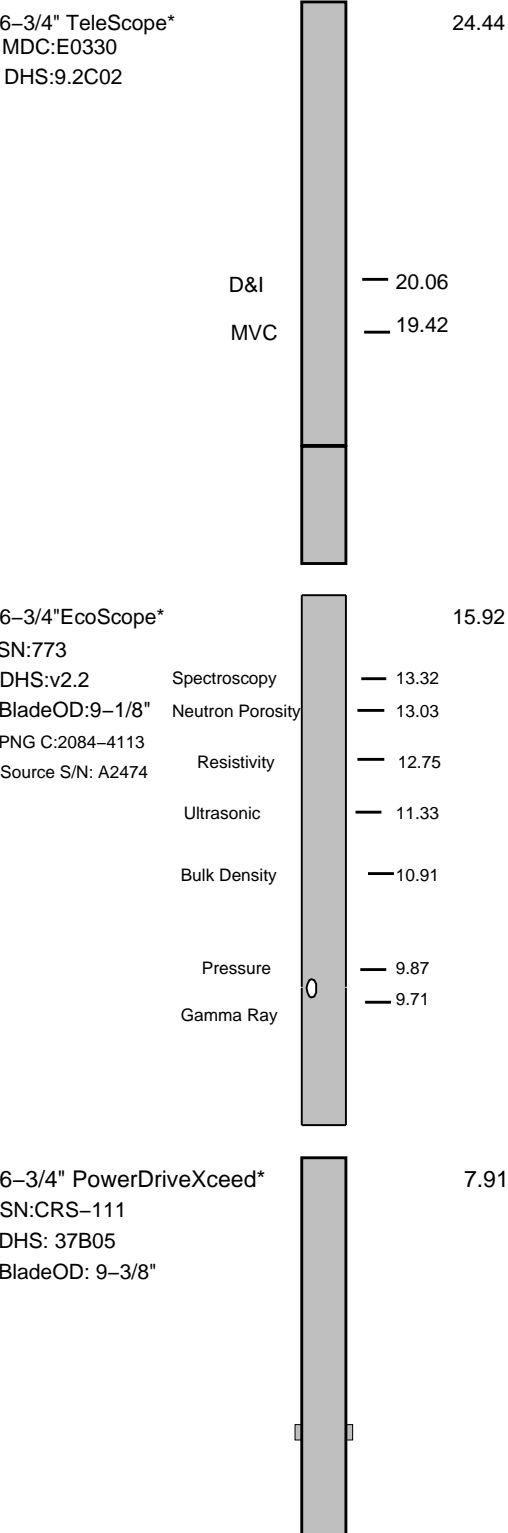
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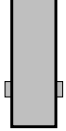
RUN5

RUN6

DOWNHOLE EQUIPMENT

DOWNHOLE EQUIPMENT





6-7/8" FloatSub
S/N: BXNC50B



1.47

OD 6.75

9-1/2" Reed Hycalog PDC Bit
S/N: JY2083

9-1/2" Reed Hycalog PDC Bit
SN:JY2802

Maximum string diameter 9.50 in.
All lengths in Meters

Maximum string diameter 9.50 in.
All lengths in Meters

Variable
Name

Variable
Description

Run Name
& Value

Run Number

5

6

General Information

BHT_RM	Bottom Hole Temperature (RM)	DEGC	90.550	86.000
BSAL_RM	Mud Salinity (RM)	PPK	63.38	63.38
BS_RM	Bit Size (RM)	IN	9.500	9.500
COEF_M	User Defined FEXP in Clean Sand	----	1.650	1.650
C_WS	Overpressure correction to Sw and M	----	1.000	1.000
FEXP	Formation Factor Exponent (RM)	----	2.000	2.000
FNUM	Formation Factor Enumerator (RM)	----	1.000	1.000
FPFI_RM	Formation Factor Porosity Source (RM)	----	XPLOT	XPLOT
MST_RM	Mud Sample temperature (RM)	DEGC	20.000	20.000
MW_RM	Mud Weight (RM)	LB/G	12.200	12.000
OBFM_RM	Oil Based Mud (RM)	----	YES	YES
RHOF_RM	Mud Filtrate Density (RM)	G/C3	1.000	1.000
RHOM_RM	Matrix density (RM)	G/C3	2.710	2.710
RMS_RM	Resistivity of Mud Sample (RM)	OHMM	1000.000	1000.000
RWA_COMP_M	Rwa computation model			
RWA_DEN_AD	Rwa Density Input ADN			
RWA_DEN_CD	Rwa Density Input CDN			
RWA_DEN_IN	Rwa Density Input			
RWA_FORM_M	Rwa computation formation model			
RWA_RES_IN	Rwa computation resistivity input			
RWS_RM	Resistivity of Connate Water (RM)	OHMM	1.000	1.000
SHT_RM	Ground Level Temperature (Mud-Line When Offshore) (RM)	DEGC	10.000	10.000
TD_RM	Total Measured Depth (RM)	M	2841.920	2987.000
TWS_RM	Temperature of Connate Water (RM)	DEGC	23.889	23.889
VF_ILLI	Fraction of illite in shales	----	0.500	0.500
VF_KAOL	Fraction of kaolinite in shales	----	0.500	0.500
VF_MONT	Fraction of montmorillonite in shales	----	0.000	0.000
XPDM_RM	Cross plot density porosity multiplier	----	0.675	0.675
XPNM_RM	Cross plot neutron porosity multiplier	----	0.325	0.325

DVD

-----	Parameters-----	Parameters-----	-----Sigma	-----Sigma
-----	Parameters-----	Parameters-----	-----Sigma	-----Sigma
A12A	ARC Air Cal Attenuation From T1 at 2 MHz	DB	8.531	8.649
A14A	ARC Air Cal Attenuation From T1 at 400 KHz	DB	8.520	8.670
A22A	ARC Air Cal Attenuation From T2 at 2 MHz	DB	5.907	5.776
A24A	ARC Air Cal Attenuation From T2 at 400 KHz	DB	5.924	5.766
A32A	ARC Air Cal Attenuation From T3 at 2 MHz	DB	5.130	5.248
A34A	ARC Air Cal Attenuation From T3 at 400 KHz	DB	5.109	5.273
A42A	ARC Air Cal Attenuation From T4 at 2 MHz	DB	4.305	4.175
A44A	ARC Air Cal Attenuation From T4 at 400 KHz	DB	4.317	4.159
A52A	ARC Air Cal Attenuation From T5 at 2 MHz	DB	3.684	3.810
A54A	ARC Air Cal Attenuation From T5 at 400 KHz	DB	3.683	3.831
ABNT	Abnormal Transmitter Indicator	----	No_Tx_Failed	No_Tx_Failed
ALPHA_DEN_OPT	Density Enhanced Vertical Resolution Processing Switch	----	NO	NO
AM2A	ARC Air Cal Amplitude Offset at 2 MHz	----	-50000.000	-50000.000
ANISO_COMPUTE	Anisotropy Computation Option	----	YES	YES
ATMP_ARC	ARC Select Temperature Channel	----	Annulus_Temp	Annulus_Temp
AZMF	Formation DIP Azimuth	DEG	0.000	0.000
BH_COMPUTE	Borehole Inversion Computation Option	----	YES	YES
CDPTH_ARC	Process Start Depth	M	30.480	30.480
CHI_RM	Caliper High Limit from BS (RM)	IN	10.000	10.000
CLO_RM	Caliper Low Limit from BS (RM)	IN	-5.000	-5.000
DIELEC_COMPUTE	Dielectric Computation Option	----	NO	NO
DIPF	Formation DIP Angle	DEG	0.000	0.000
DTMUD	Delta-T for Mud (RM)	US/F	204.102	206.800
DTMUD_DH	Delta-T for Mud Downhole (RT)	US/F	206.000	206.800
DVDMDS	DVDM Down Hole Software Version	----	Karl 2	Karl 2
DVDM_DATA_LTB	DVDM: Create An DVDM LTB Data File	----	NO	NO
DVD_DATA_FIX	DVDM: Create A Corrected DVDM Time Data File	----	NO	NO
DYN_IMAGE_OPT	Generate Dynamic Normalized Image?	----	NO	NO
EDPTH	Wizard Process Stop Depth	----	50000	50000
EN_WIZARD	Enable ARC Wizard Processing	----	NO	NO
ERRCT	Percentage Error Cutoff	----	4.500	4.500
EVRL	EVR Process averaging number of samples (RM)	----	49	49
FWVN	Firmware Version Number	----	2.200	2.200
GCSE	Generalized Caliper Selection	----	BS	BS

GRSH	GR Shale (Invasion Computation Cutoff)	GAPI	1000.000	1000.000
GR_CF	Gamma Ray Correction Factor	----	1.800	1.800
GR_O2COR_OPT	Enable Gamma Ray Oxygen Activation Correction	----	YES	YES
HIGH_BLEND	High Resistivity Threshold for Blending	OHMM	2.000	2.000
IDQT	Image Derived Quality Threshold	----	2.000	2.000
IMAGE_MAX_DCRA	Image Density Caliper Right Scale	IN	8.000	8.000
IMAGE_MAX_IDDQ	Image Density Quality Right Scale	----	1.000	1.000
IMAGE_MAX_SPEF	Image PEF(Segment) Right Scale	----	6.000	6.000
IMAGE_MAX_SRHOB	Image RHOB(Segment) Right Scale	G/C3	2.650	2.650
IMAGE_MIN_DCRA	Image Density Caliper Left Scale	IN	2.000	2.000
IMAGE_MIN_IDDQ	Image Density Quality Left Scale	----	0.000	0.000
IMAGE_MIN_SPEF	Image PEF(Segment) Left Scale	----	2.000	2.000
IMAGE_MIN_SRHOB	Image RHOB(Segment) Left Scale	G/C3	2.050	2.050
INCLIN_B0	ARC Bias Constant (mg)	----	0.000	0.000
INCLIN_B1	ARC Bias First-order Coefficient (mg/degC)	----	0.000	0.000
INCLIN_B2	ARC Bias Secod-order Coeeficient (mg/degC)	----	0.000	0.000
INCLIN_B3	ARC Bias Third-order Coeeficient (mg/degC)	----	0.000	0.000
INCLIN_C0	ARC Current Scale Factor Constant (mA/g)	----	1.000	1.000
INCLIN_C1	ARC Scale First-order Coeeficient (mA/g/degC)	----	0.000	0.000
INCLIN_C2	ARC Scale Second-order Coeeficient (mA/g/degC)	----	0.000	0.000
INCLIN_C3	ARC Scale Third-order Coeeficient (mA/g/degC)	----	0.000	0.000
INVAS_COMPUTE	Invasion Computation Option	----	YES	YES
JSD	Acquisition start date	----	25-Jul-08	28-Jul-08
JSD_ARC	ARC Acquisition start date	----	25-Jul-08	28-Jul-08
LOW_BLEND	Low Resistivity Threshold for Blending	OHMM	1.000	1.000
MATR	Rock Matrix for Neutron Porosity Corrections	----	LIMESTONE	LIMESTONE
MSWS	ARC Wizard Model Switch Window	M	1.524	1.524
MULTIEFFECT_COM	Multi Effect Option	----	YES	YES
NEU_DCOR_OPT	Density Correction Source for Neutron Processing	----	Bottom	Bottom
NEU_FTUBE_OPT	Far Thermal Tube Selection	----	Both	Both
NEU_PRESOR_OPT	Pressure Correction Source for Neutron Processing	----	Annulus_Press	Annulus_Press
NEU_TEMPCOR_OPT	Temperature Correction Source for Neutron Processing	----	Tool_Temp	Tool_Temp
NTIK_SEL	Neutron Tick Channel Name	----	FAZ1	FAZ1
OACF	Oxygen Activation Correction Factor (RM)	----	8.000	8.000
P11AC_RM	ARC: Air Calibration For Phase T1 to R1	DEG	-999.250	-999.250
P12A	ARC Air Cal Phase-Shift From T1 at 2 MHz	DEG	2.418	1.772
P14A	ARC Air Cal Phase-Shift From T1 at 400 KHz	DEG	-0.531	-0.307
P22A	ARC Air Cal Phase-Shift From T2 at 2 MHz	DEG	-2.506	-1.850
P24A	ARC Air Cal Phase-Shift From T2 at 400 KHz	DEG	0.588	0.296
P32A	ARC Air Cal Phase-Shift From T3 at 2 MHz	DEG	2.402	1.739
P34A	ARC Air Cal Phase-Shift From T3 at 400 KHz	DEG	-0.525	-0.429
P42A	ARC Air Cal Phase-Shift From T4 at 2 MHz	DEG	-2.492	-1.839
P44A	ARC Air Cal Phase-Shift From T4 at 400 KHz	DEG	0.709	0.278
P52A	ARC Air Cal Phase-Shift From T5 at 2 MHz	DEG	2.413	1.769
P54A	ARC Air Cal Phase-Shift From T5 at 400 KHz	DEG	-0.553	-0.256
PMUD	Potassium Concentration in Mud	----	0.000	0.000
PRTD	Preferred Resistivity Log for Rt Display while Multi-Effects	----	P34B	P34B
PSOF_ADJ_T1	ARC: User Input Phase offset	DEG	0.000	0.000
RESTIK	ARC resistivity tick source	----	Phase	Phase
RSD	LWD run start date dd-mmm-yy	----	25-Jul-08	28-Jul-08
RUN_DURATION_OP	Run Duration Type ?	----	Normal	Normal
RWA_COMP_MOD	Rwa computation model	----	BASIC	BASIC
RWA_DEN_ADN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_CDN	Rwa Density Input	----	RHOB	RHOB
RWA_DEN_INPUT	Rwa Density Input	----	RHOB	RHOB
RWA_FORM_MOD	Rwa computation formation model	----	CLASTIC	CLASTIC
RWA_RES_INPUT	Rwa computation resistivity input	----	RT	RT
SDPTH	Wizard Process Start Depth	----	100	100
SIG_PCOR_OPT	Porosity Correction Source for Sigma Processing	----	Best	Best
SPEC_CSG_DEPTH	Casing Depth for Spectroscopy Processing	M	30.480	30.480
SPEC_K_OPT	Potassium standard used during acquisition?	----	NO	YES
SPL_CLAY_MODEL	SpectroLith Clay Model	----	SUBARKOSE	SUBARKOSE
SPL_MG_OPT	Magnesium Flag Switch ?	----	OFF	OFF
SPL_SULFUR_MIN	SpectroLith Sulfur Mineral Option	----	PYRITE	PYRITE
STAB_SIZE	Stabilizer Size	IN	9.125	9.125
STOH	Top of Hole Sector	----	SECTOR_0	SECTOR_0
TRNO	Tool Run Number	----	5	6
TSIZ_ARC	ARC Tool Size	IN	6.750	6.750
TSNO	Tool Serial Number	----	773	763
UNIFORM_COMPUTE	Uniform Rock Option	----	YES	YES
VERS_ARC	ARC Down hole software version Number	----	2.200	2.200
WPPV	Water Phase as Percent of Total Volume in OBM	----	24.000	24.000
WPSL	Salinity of the Water Phase Emulsified within the OBM	PPK	63.380	63.380
WRK	to Report Potassium Concentration	----	K_by_Wgt_%	K_by_Wgt_%
WSDI	Window Size of Dynamic Normalization Image	M	4.572	4.572

Schlumberger Drilling & Measurements

ID13 Parameter Insert Header Software version 3.0c

Longtom-4 P RM 200MD

ECO6 id13_0c_02

Format: EcoScope RM Log Vertical Scale: 1:200

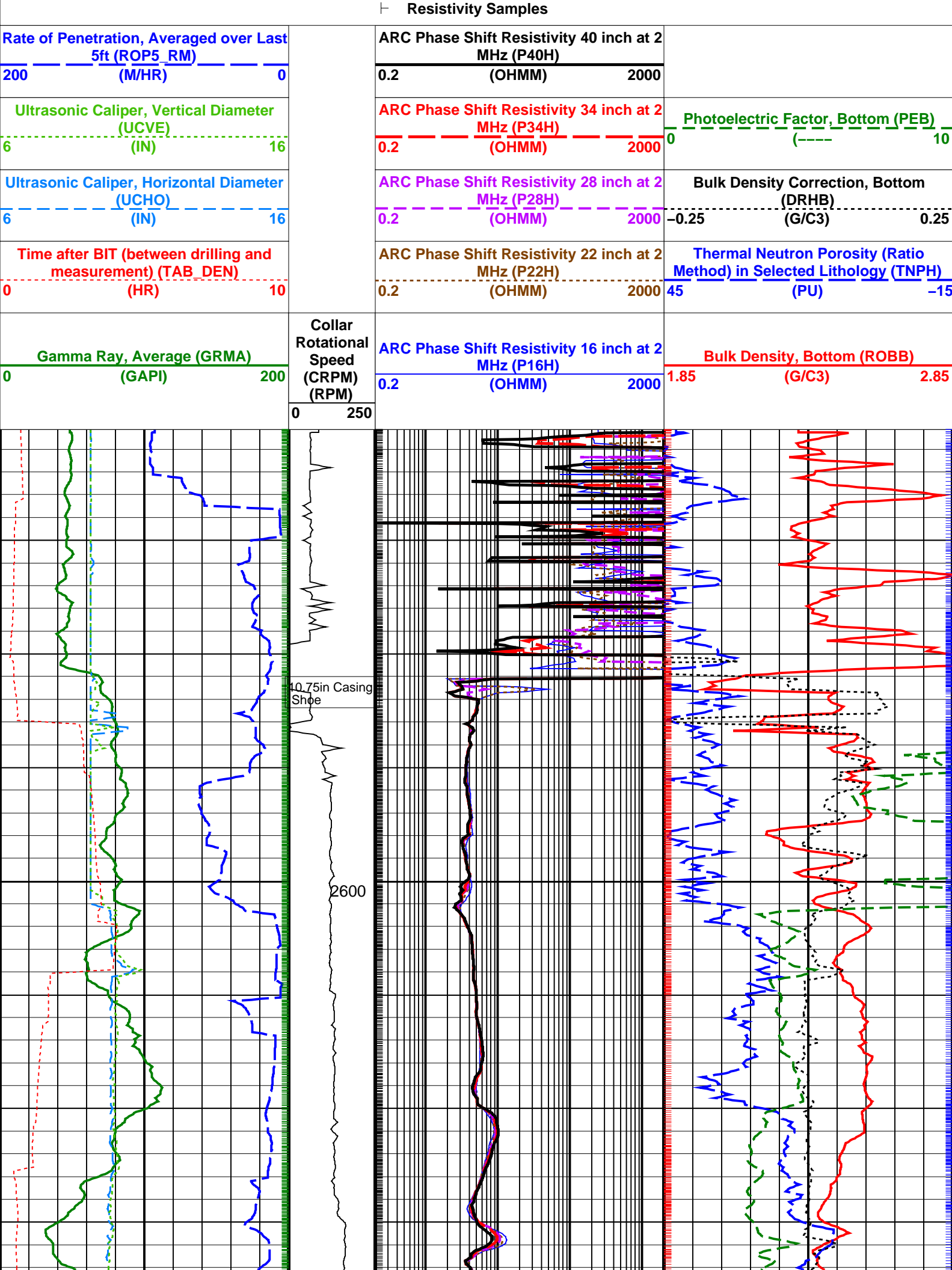
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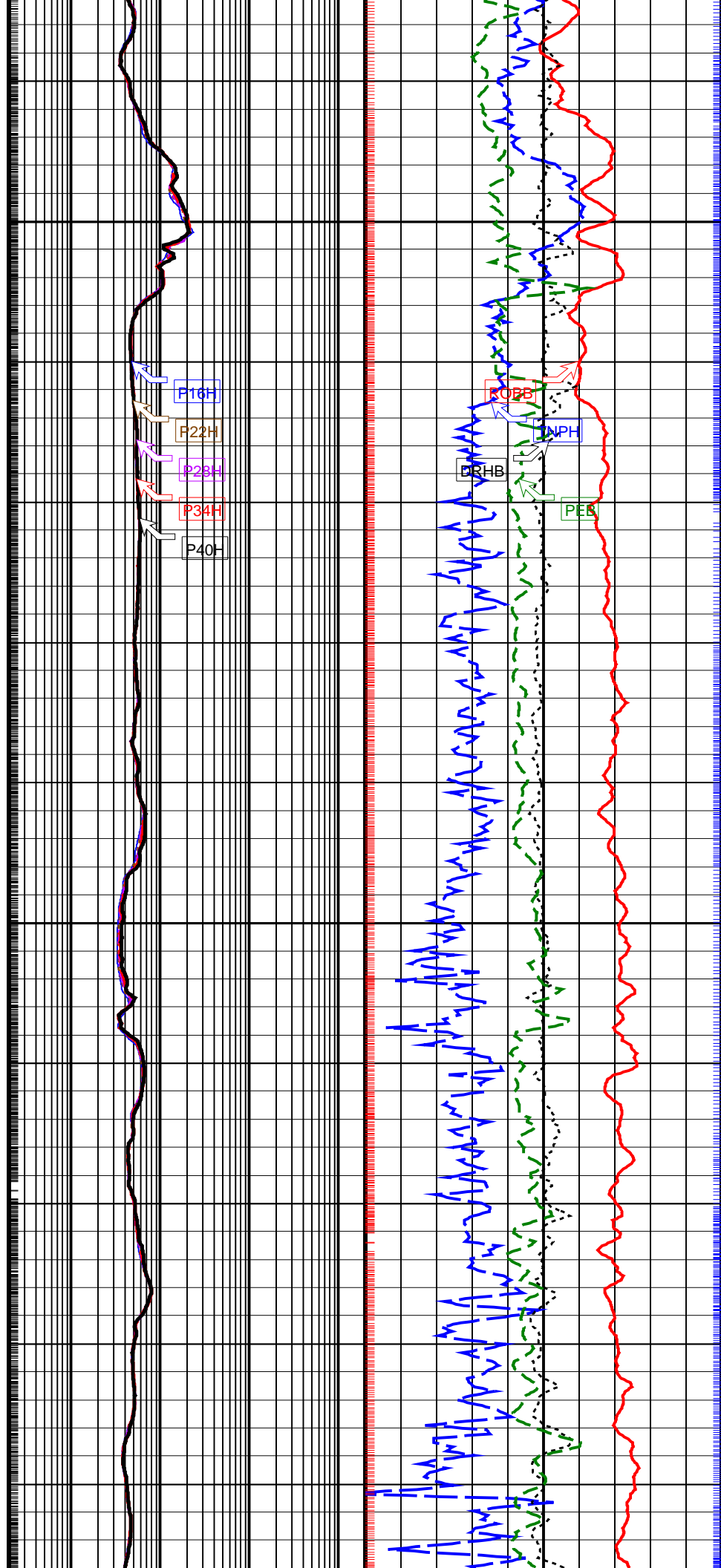
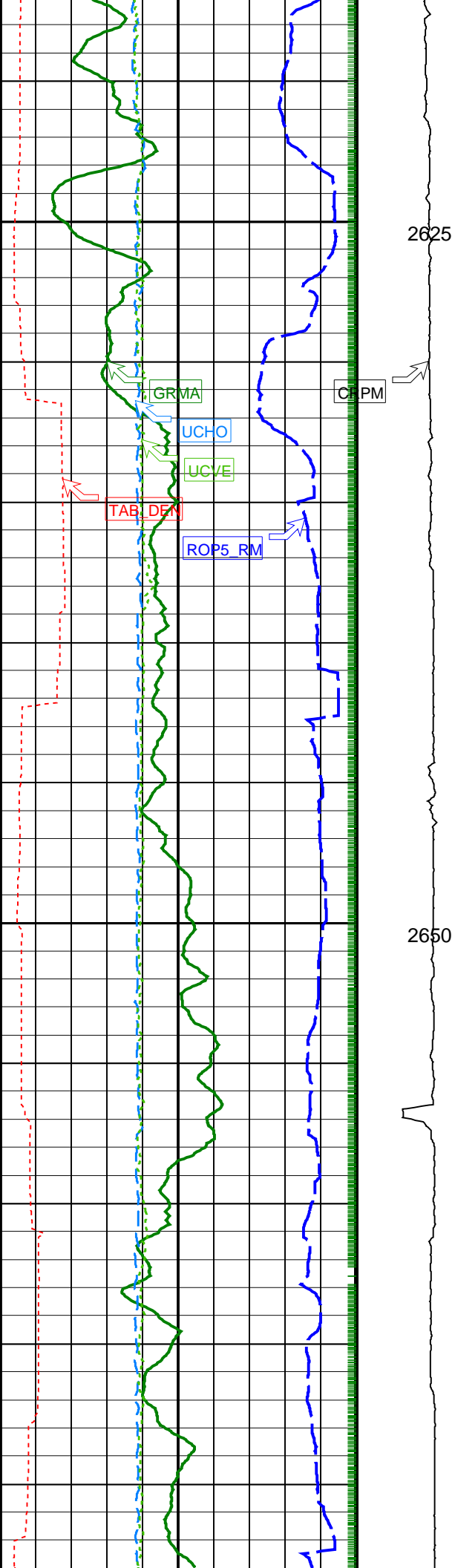
PIP SUMMARY

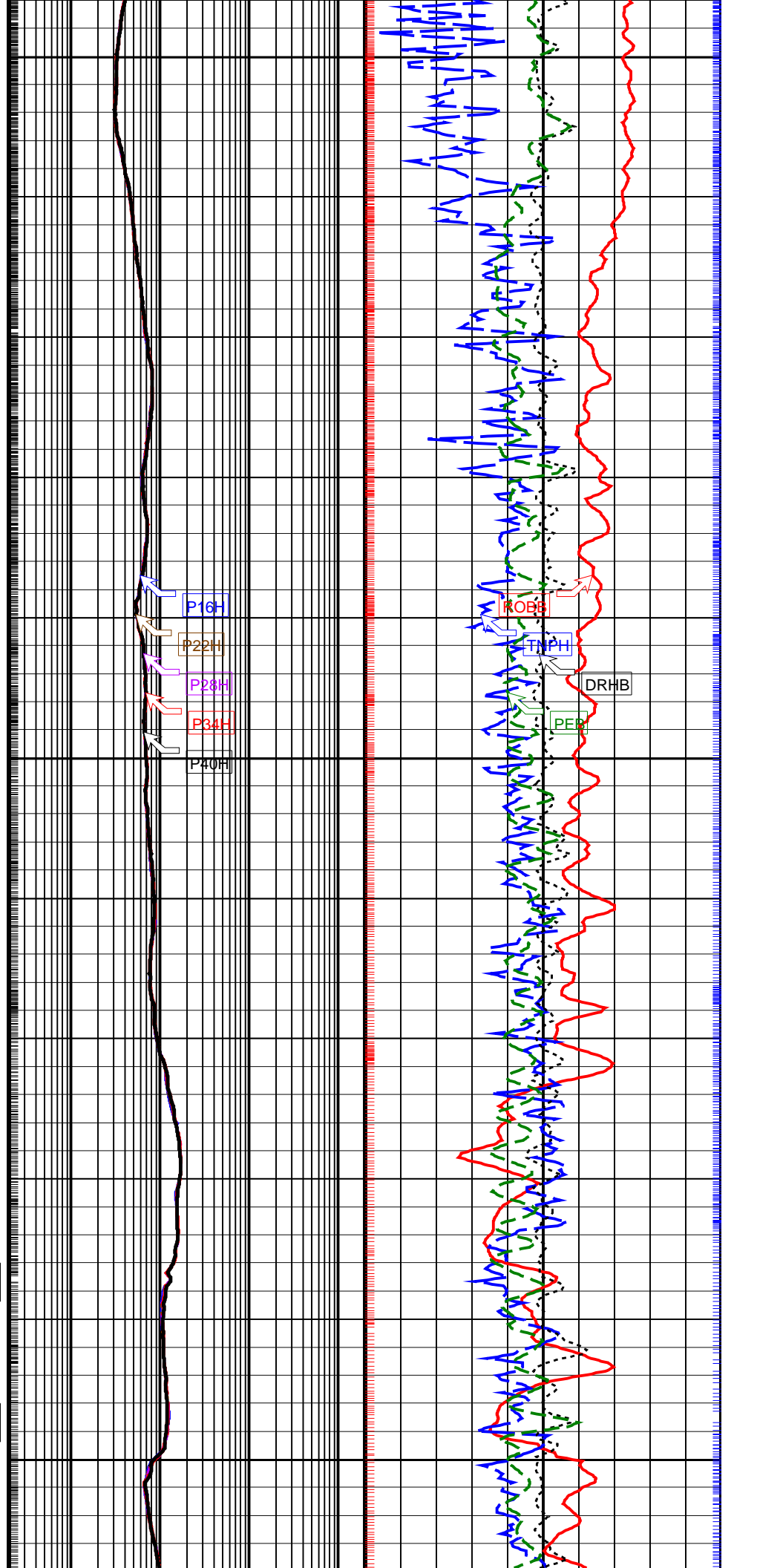
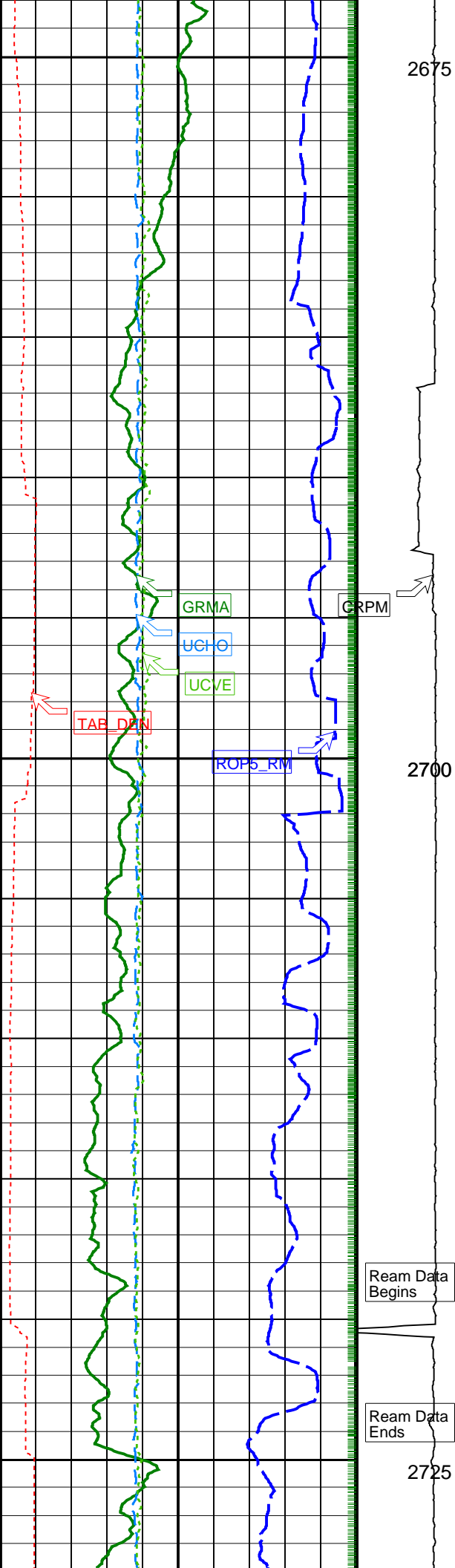
Density Samples ▮

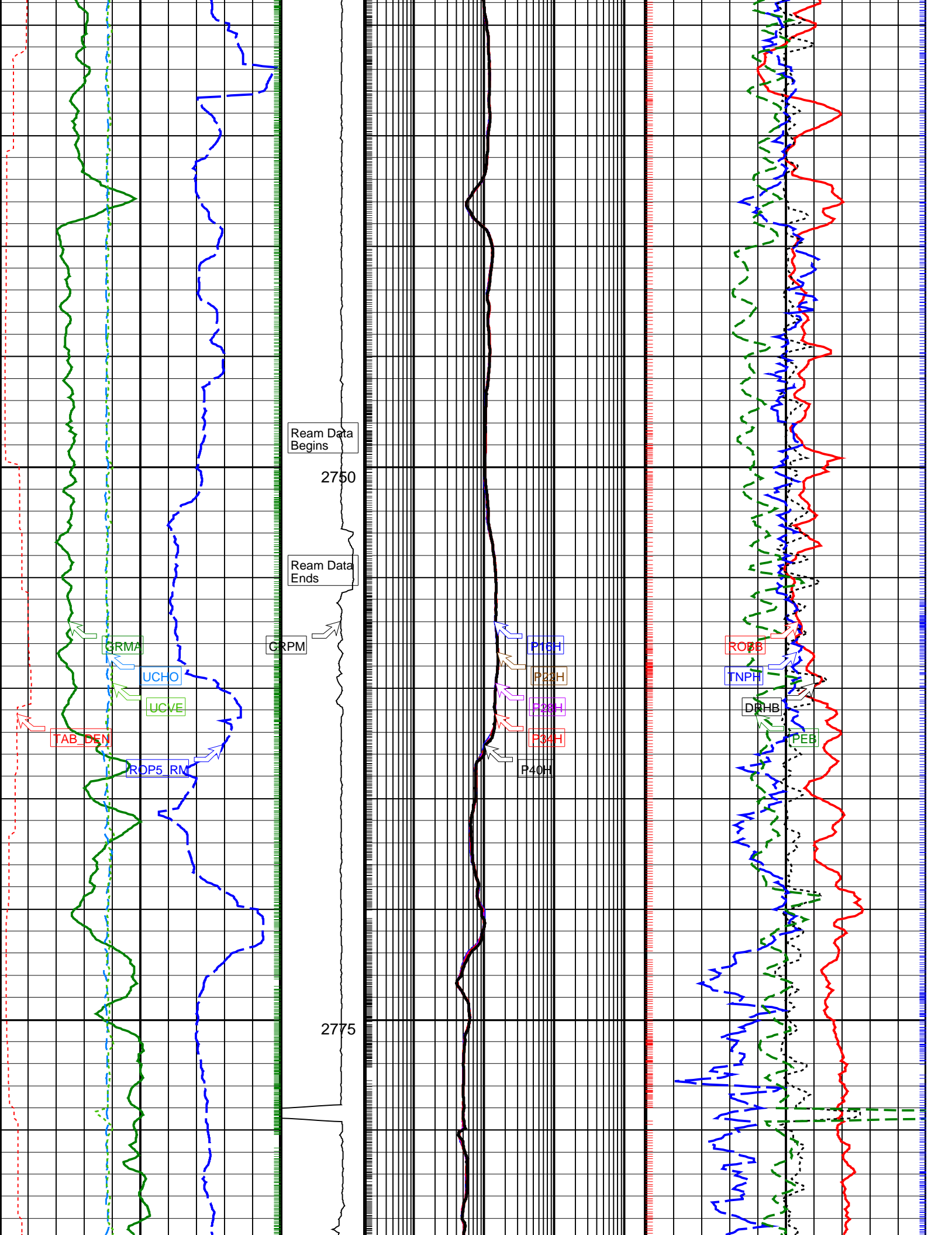
Neutron Samples ▮

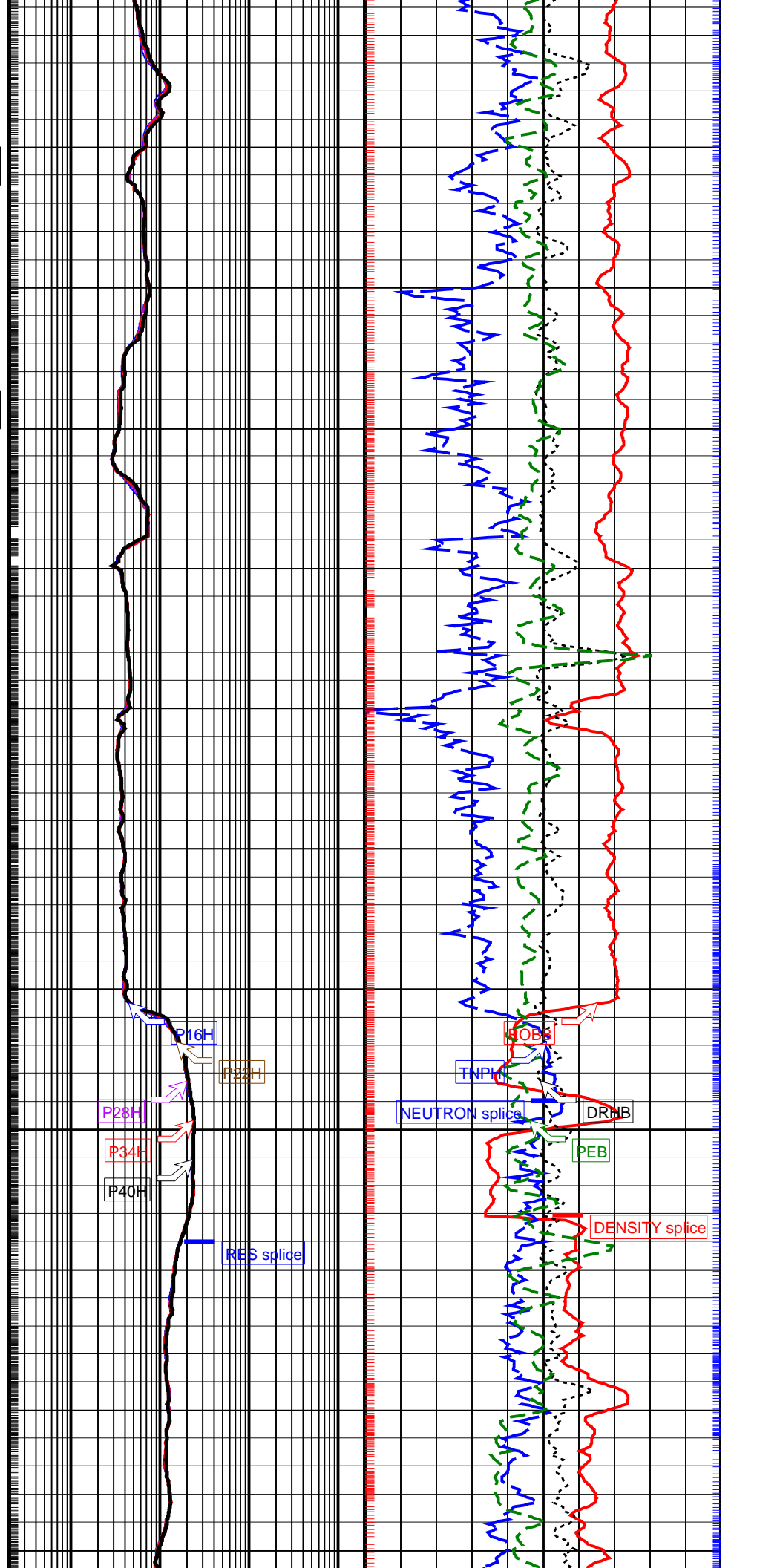
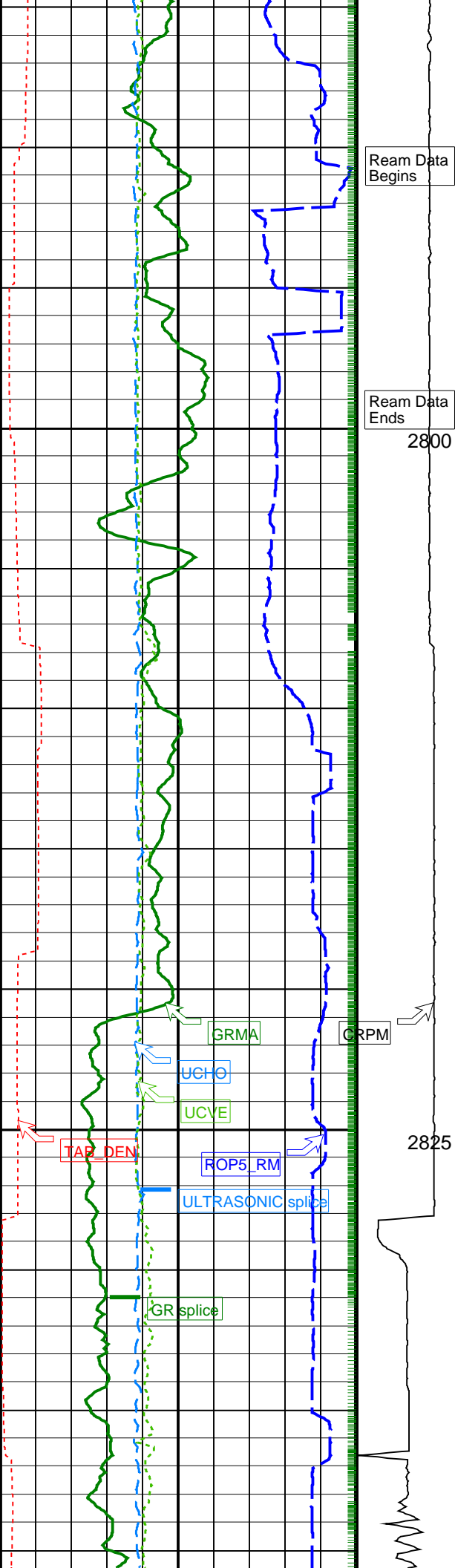
▮ Gamma Ray Samples

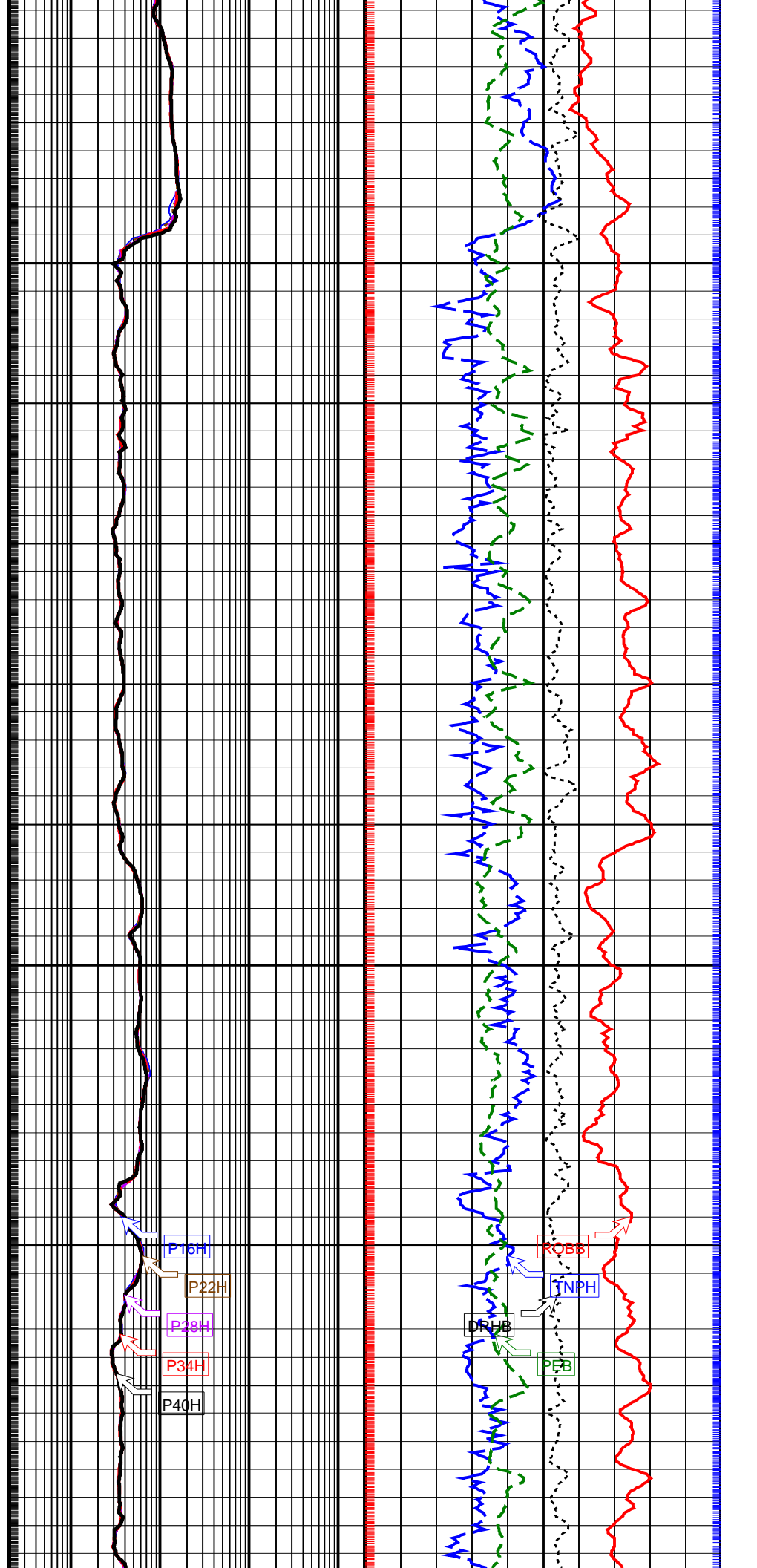
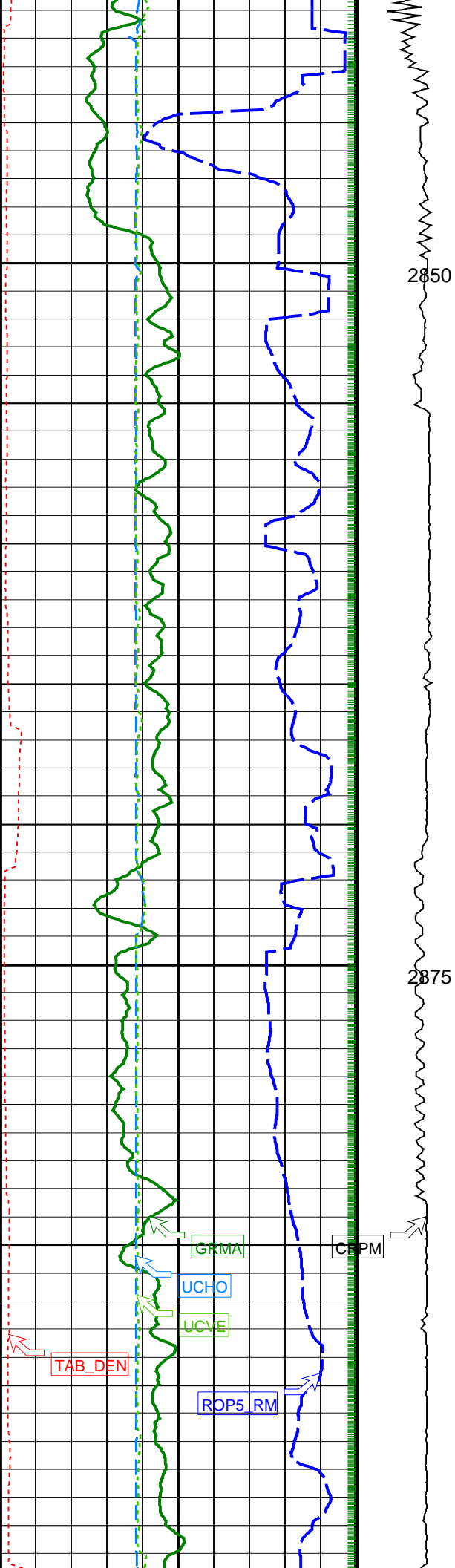


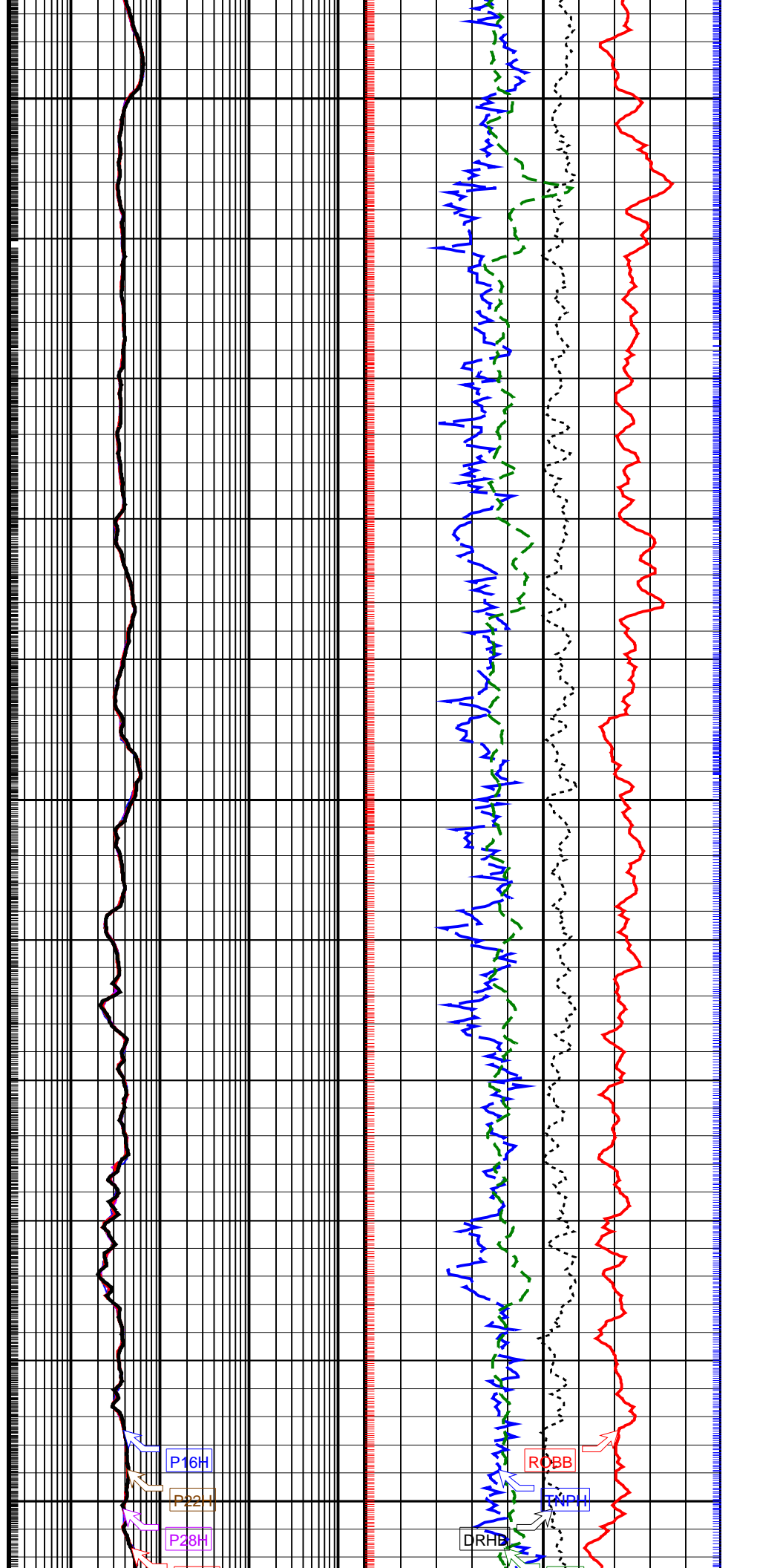
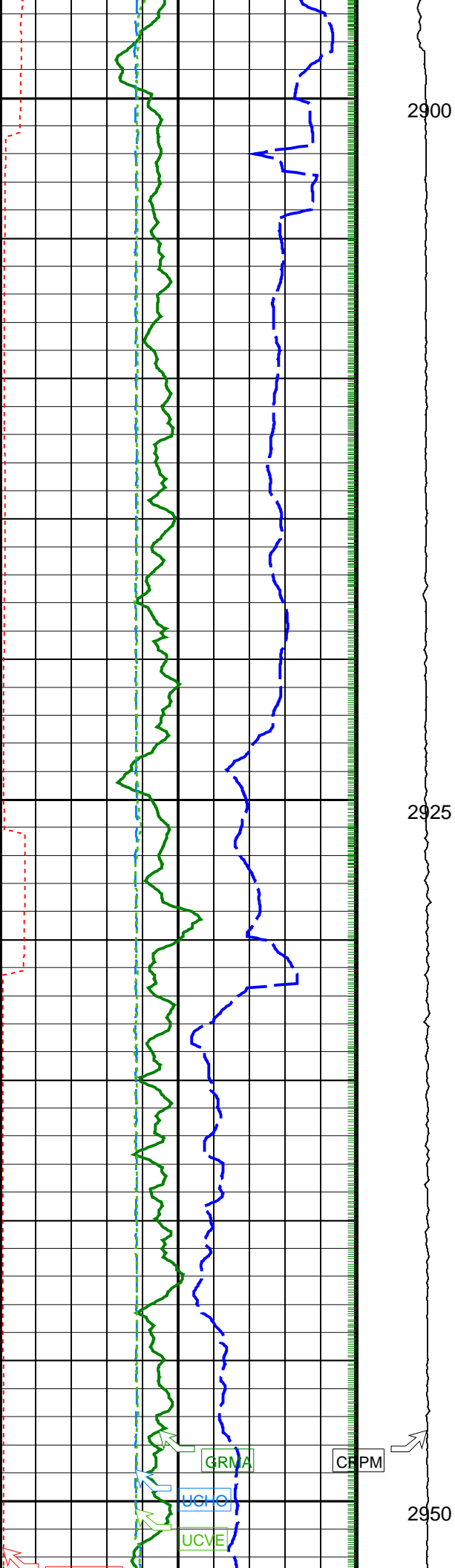


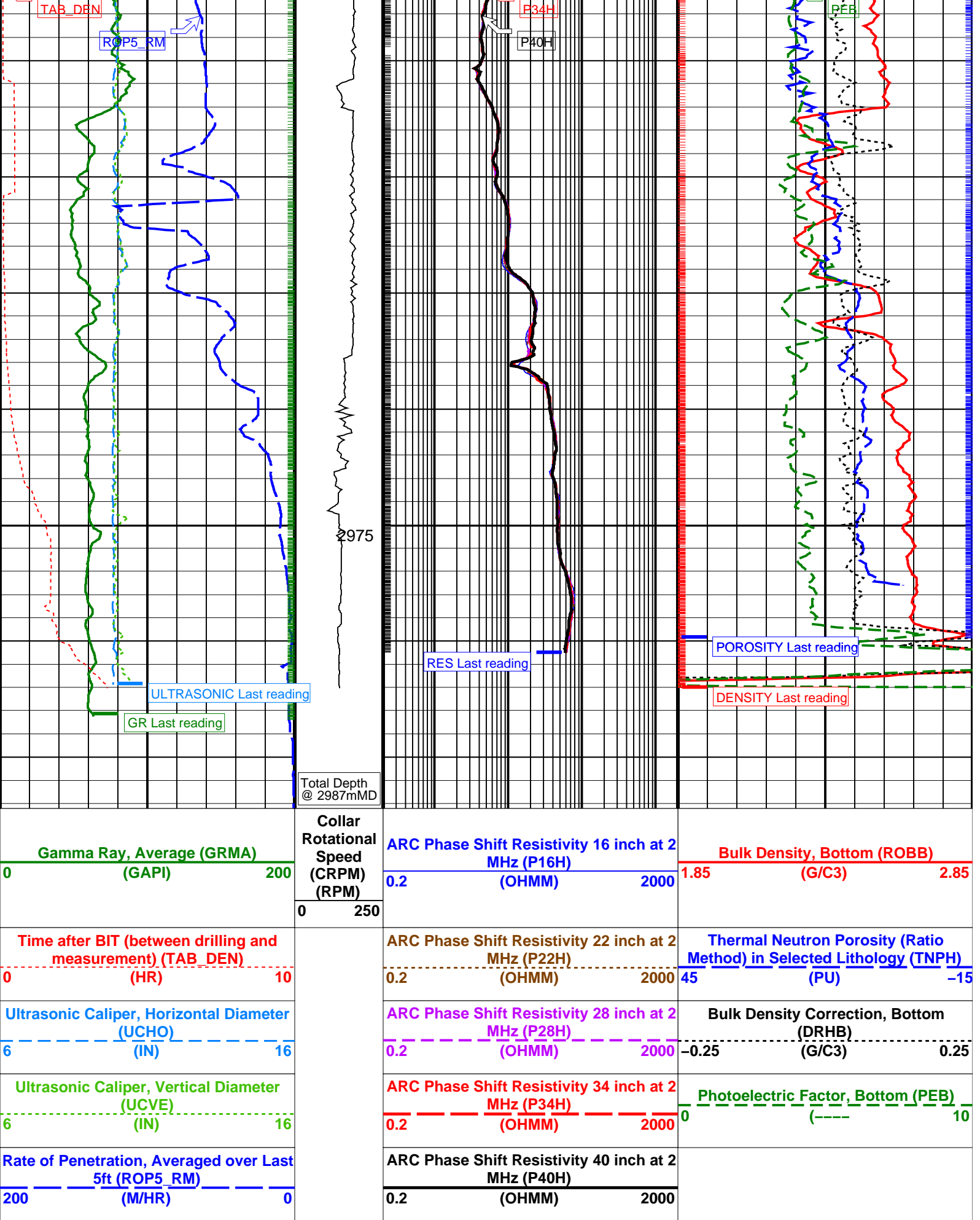












PIP SUMMARY

Density Samples +

Neutron Samples -

+ Gamma Ray Samples

IDEAL Version: ID13_0C_08

IDF

ECO6

id13_0c_02

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch / Equipment Identification

Primary Equipment:

Tool Name and Serial Number
Calibration Status
Neutron Logging Source
Density Logging Source
Stabilizer Size

ECO – 675

773

Valid

PNG – C

2084–4113

GSR – J/Z

A2474

9.13 – in.

Master: 4–Jul–2008 22:25

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration









SSn LSn : Water Tank

Phase	SSn Gain ----			Value	Phase	SSn Offset ----			Value
Master				1.066	Master				0
0.6000 (Minimum)		1.000 (Nominal)		1.400 (Maximum)	-3.000 (Minimum)		0 (Nominal)		3.000 (Maximum)
Phase	LSn Gain ----			Value	Phase	LSn Offset ----			Value
Master				1.031	Master				0
0.6000 (Minimum)		1.000 (Nominal)		1.400 (Maximum)	-3.000 (Minimum)		0 (Nominal)		3.000 (Maximum)

Master: 4–Jul–2008 22:25

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration




Neutron: Water Tank

Phase	Far 2 Gain ----		Value	Phase	Far 2 Offset ----		Value
Master			0.9366	Master			1.245
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Phase	Far 1 Gain ----		Value	Phase	Far 1 Offset ----		Value
Master			0.9181	Master			2.440
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Phase	Thermal Near gain ----		Value	Phase	Thermal Near offset ----		Value
Master			1.005	Master			121.4
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-500.0 (Minimum)	0 (Nominal)	500.0 (Maximum)
Phase	Epithermal Near gain ----		Value	Phase	Epithermal Near offset ----		Value
Master			1.048	Master			83.95
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-300.0 (Minimum)	0 (Nominal)	300.0 (Maximum)

Master: 5–Jul–2008 1:00

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration




Gamma 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				2473	Master				5964	Master				13600
	1000 (Minimum)	2000 (Nominal)	3000 (Maximum)			2500 (Minimum)	5250 (Nominal)	8000 (Maximum)			6000 (Minimum)	12000 (Nominal)	18000 (Maximum)	




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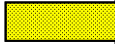
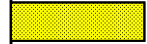
EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration


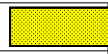
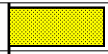







Gamma Density: Aluminum Block











LS window 3 – AI CPS				SS window 1 – AI CPS				SS window 3 – AI CPS						
Phase	LS window 3 – AI CPS			Value	Phase	SS window 1 – AI CPS			Value	Phase	SS window 3 – AI CPS			Value
Master				459.0	Master				3188	Master				10170
	200.0 (Minimum)	400.0 (Nominal)	600.0 (Maximum)			1500 (Minimum)	3000 (Nominal)	4500 (Maximum)			4000 (Minimum)	8500 (Nominal)	13000 (Maximum)	

Master: 5–Jul–2008 1:00

Gamma Density: Background											
Phase	LS window 3 – Background CPS		Value	Phase	SS window 1 – Background CPS		Value	Phase	SS window 3 – Background CPS		Value
Master			59.59	Master			80.24	Master			383.2
	50.00 (Minimum)	70.00 (Nominal)	90.00 (Maximum)		50.00 (Minimum)	75.00 (Nominal)	100.0 (Maximum)		270.0 (Minimum)	370.0 (Nominal)	470.0 (Maximum)

Master: 5-Jul-2008 1:00											
EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration											
Gamma Density: Water Block Check											
Phase	Long spacing water density G/C3			Value	Phase	Short spacing water density G/C3			Value		
Master				1.030	Master				1.295		
	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)			0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)			

Master: 3-Jul-2008 12:01											
EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration											
Resistivity: Air											
Phase	Phase-Shift T1		Value	Phase	Phase-Shift T2		Value	Phase	Phase-Shift T3		Value
Master			2.418	Master			-2.506	Master			2.402
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)
Phase	Phase-Shift T4		Value	Phase	Phase-Shift T5		Value	Phase	Phase-Shift T1 at 400KHz		Value
Master			-2.492	Master			2.413	Master			-0.5313
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)
Phase	Phase-Shift T2 at 400KHz		Value	Phase	Phase-Shift T3 at 400KHz		Value	Phase	Phase-Shift T4 at 400KHz		Value
Master			0.5878	Master			-0.5255	Master			0.7088
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)
Phase	Phase-Shift T5 at 400KHz		Value								
Master			-0.5532								
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)								

Master: 3-Jul-2008 12:01											
EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration											
Resistivity: Air											
Phase	Attenuation T1		Value	Phase	Attenuation T2		Value	Phase	Attenuation T3		Value
Master			8.531	Master			5.907	Master			5.130
	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)		4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)		3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)
Phase	Attenuation T4		Value	Phase	Attenuation T5		Value	Phase	Attenuation T1 at 400KHz		Value
Master			4.305	Master			3.684	Master			8.520
	2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)		2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)		7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)
Phase	Attenuation T2 at 400KHz		Value	Phase	Attenuation T3 at 400KHz		Value	Phase	Attenuation T4 at 400KHz		Value
Master			5.924	Master			5.109	Master			4.317
	4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)		3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)		2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)
Phase	Attenuation T5 at 400KHz		Value								
Master			3.683								
	2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)								

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch / Equipment Identification

Primary Equipment:

Tool Name and Serial Number
Calibration Status
Neutron Logging Source
Density Logging Source
Stabilizer Size

ECO – 675
Valid
PNG – C
GSR – J/Z
9.13 – in.

763
2128-4118
A2382




Master: 5-Jul-2008 14:42

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration									
SSn LSn : Water Tank									
Phase	SSn Gain ----			Value	Phase	SSn Offset ----			Value
Master				1.131	Master				0
	0.6000 (Minimum)	1.000 (Nominal)	1.400 (Maximum)			-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	
Phase	LSn Gain ----			Value	Phase	LSn Offset ----			Value
Master				1.090	Master				0
	0.6000 (Minimum)	1.000 (Nominal)	1.400 (Maximum)			-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	




Master: 5-Jul-2008 14:42

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration							
Neutron: Water Tank							
Phase	Far 2 Gain -----		Value	Phase	Far 2 Offset -----		Value
Master			1.013	Master			1.077
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Phase	Far 1 Gain -----		Value	Phase	Far 1 Offset -----		Value
Master			1.017	Master			1.371
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
Phase	Thermal Near gain -----		Value	Phase	Thermal Near offset -----		Value
Master			1.061	Master			58.62
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-500.0 (Minimum)	0 (Nominal)	500.0 (Maximum)
Phase	Epithermal Near gain -----		Value	Phase	Epithermal Near offset -----		Value
Master			1.114	Master			68.37
	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		-300.0 (Minimum)	0 (Nominal)	300.0 (Maximum)




Master: 5-Jul-2008 16:42

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration														
Gamma 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				2359	Master				5337	Master				11930
	1000 (Minimum)	2000 (Nominal)	3000 (Maximum)			2500 (Minimum)	5250 (Nominal)	8000 (Maximum)			6000 (Minimum)	12000 (Nominal)	18000 (Maximum)	



Master: 5-Jul-2008 16:42

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration											
Gamma 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			446.9	Master			2824	Master			8854
	200.0 (Minimum)	400.0 (Nominal)	600.0 (Maximum)		1500 (Minimum)	3000 (Nominal)	4500 (Maximum)		4000 (Minimum)	8500 (Nominal)	13000 (Maximum)











Master: 5-Jul-2008 16:42











EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration														
Gamma Density: Background														
Phase	LS window 3 – Background		CPS	Value	Phase	SS window 1 – Background		CPS	Value	Phase	SS window 3 – Background		CPS	Value
Master				63.05	Master				76.04	Master				360.9
	50.00 (Minimum)	70.00 (Nominal)	90.00 (Maximum)			50.00 (Minimum)	75.00 (Nominal)	100.0 (Maximum)			270.0 (Minimum)	370.0 (Nominal)	470.0 (Maximum)	

Master: 5-Jul-2008 16:42

EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration									
Gamma Density: Water Block Check									
Phase	Long spacing water density G/C3			Value	Phase	Short spacing water density G/C3			Value
Master				1.024	Master				1.283
	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)			0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)	

Master: 1-Jul-2008 14:50

Resistivity: Air														
Phase	Phase-Shift T1			Value	Phase	Phase-Shift T2			Value	Phase	Phase-Shift T3			Value
Master				1.772	Master				-1.850	Master				1.739
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		
Phase	Phase-Shift T4			Value	Phase	Phase-Shift T5			Value	Phase	Phase-Shift T1 at 400KHz			Value
Master				-1.839	Master				1.769	Master				-0.3070
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		
Phase	Phase-Shift T2 at 400KHz			Value	Phase	Phase-Shift T3 at 400KHz			Value	Phase	Phase-Shift T4 at 400KHz			Value
Master				0.2960	Master				-0.4290	Master				0.2780
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)			-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		
Phase	Phase-Shift T5 at 400KHz			Value										
Master				-0.2560										
	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)											

Master: 1-Jul-2008 14:50											
EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration											
Resistivity: Air											
Phase	Attenuation T1		Value	Phase	Attenuation T2		Value	Phase	Attenuation T3		Value
Master			8.649	Master			5.776	Master			5.248
	7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)		4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)		3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)
Phase	Attenuation T4		Value	Phase	Attenuation T5		Value	Phase	Attenuation T1 at 400KHz		Value
Master			4.175	Master			3.810	Master			8.670
	2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)		2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)		7.000 (Minimum)	9.000 (Nominal)	11.00 (Maximum)
Phase	Attenuation T2 at 400KHz		Value	Phase	Attenuation T3 at 400KHz		Value	Phase	Attenuation T4 at 400KHz		Value
Master			5.766	Master			5.273	Master			4.159
	4.000 (Minimum)	6.000 (Nominal)	8.000 (Maximum)		3.500 (Minimum)	5.500 (Nominal)	7.500 (Maximum)		2.500 (Minimum)	4.500 (Nominal)	6.500 (Maximum)
Phase	Attenuation T5 at 400KHz		Value								
Master			3.831								
	2.000 (Minimum)	4.000 (Nominal)	6.000 (Maximum)								

SCHLUMBERGER

Survey report 31-Jul-2008 03:29:00

Client.....: Nexus Energy Ltd
Field.....: Longtom

Well.....: Longtom-4 P
Service Order number.....: 08ASQ0007
Engineer.....: MVK/MLU/STA

n/a.....: West Triton
n/a.....: Victoria

Spud date.....: 21-Jun-08
Last survey date.....: 31-Jul-08
Total accepted surveys...: 89
MD of first survey.....: 0.00 m
MD of last survey.....: 2987.00 m

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

----- Depth reference -----
Permanent datum.....: Least Astronomical Tide
Depth reference.....: Driller's Depth
GL above permanent.....: -55.96 m
KB above permanent.....: Top Drive
DF above permanent.....: 41.06 m

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

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

Azimuth from Vsect Origin to target: 183.55 degrees

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2007
Magnetic date.....: 29-Jun-2008
Magnetic field strength...: 1195.93 HCNT
Magnetic dec (+E/W-).....: 13.10 degrees
Magnetic dip.....: -68.59 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.02 mGal
Reference H.....: 1195.93 HCNT
Reference Dip.....: -68.59 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-).....: 13.10 degrees
Grid convergence (+E/W-)..: -0.82 degrees
Total az corr (+E/W-).....: 13.92 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction

[(c)2008 IDEAL ID13_OC_08]
SCHLUMBERGER Survey Report

31-Jul-2008 03:29:00

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/ D/M)	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	97.03	0.00	0.00	97.03	97.03	0.00	0.00	0.00	0.00	0.00	0.00	MWD	None
3	116.15	0.69	328.34	19.12	116.15	-0.09	0.10	-0.06	0.12	328.34	0.04	MWD	None
4	124.06	0.56	358.29	7.91	124.06	-0.17	0.18	-0.09	0.20	333.96	0.04	MWD	None
5	147.44	0.36	43.93	23.38	147.44	-0.34	0.34	-0.04	0.35	353.53	0.02	MWD	None
6	204.75	0.52	335.69	57.31	204.75	-0.71	0.71	-0.02	0.71	358.29	0.01	MWD	None
7	324.05	0.78	189.14	119.30	324.04	-0.38	0.40	-0.37	0.55	317.18	0.01	MWD	None
8	382.91	0.23	326.57	58.86	382.90	-0.07	0.11	-0.50	0.51	281.89	0.02	MWD	None
9	412.77	0.34	250.06	29.86	412.76	-0.09	0.13	-0.62	0.63	281.47	0.01	MWD	None
10	442.90	0.19	118.87	30.13	442.89	-0.03	0.07	-0.66	0.66	276.14	0.02	MWD	None
11	531.83	0.85	328.15	88.93	531.82	-0.50	0.56	-0.88	1.04	302.55	0.01	MWD	None
12	563.30	0.97	289.41	31.47	563.29	-0.77	0.85	-1.25	1.51	304.08	0.02	MWD	None
13	651.66	0.44	355.43	88.36	651.64	-1.31	1.43	-1.98	2.45	305.85	0.01	MWD	None
14	741.14	0.59	334.49	89.48	741.12	-2.05	2.19	-2.21	3.11	314.76	0.00	MWD	None
15	750.39	0.71	327.45	9.25	750.37	-2.14	2.28	-2.26	3.21	315.27	0.02	MWD	None
16	783.28	0.52	304.12	32.89	783.25	-2.38	2.54	-2.49	3.56	315.50	0.01	PUP	None
17	812.94	2.32	203.29	29.66	812.91	-1.88	2.06	-2.84	3.51	305.96	0.08	PUP	None
18	842.62	5.16	197.90	29.68	842.52	-0.02	0.24	-3.49	3.50	273.94	0.10	PUP	None
19	872.25	7.16	192.11	29.63	871.98	3.09	-2.83	-4.29	5.14	236.55	0.07	PUP	None
20	901.94	8.22	183.91	29.69	901.40	7.05	-6.76	-4.82	8.30	215.50	0.05	PUP	None
21	931.42	10.19	179.91	29.48	930.50	11.76	-11.47	-4.96	12.50	203.39	0.07	PUP	None
22	960.94	13.95	179.75	29.52	959.36	17.91	-17.64	-4.94	18.32	195.65	0.13	PUP	None
23	990.68	17.52	178.95	29.74	987.98	25.96	-25.71	-4.84	26.16	190.67	0.12	PUP	None
24	1020.40	20.88	177.48	29.72	1016.05	35.68	-35.47	-4.53	35.76	187.28	0.11	PUP	None
25	1050.08	24.28	176.64	29.68	1043.45	47.01	-46.85	-3.94	47.02	184.80	0.12	PUP	None
26	1078.64	25.70	178.42	28.56	1069.33	59.00	-58.90	-3.42	59.00	183.33	0.06	PUP	None
27	1108.28	26.85	180.79	29.64	1095.91	72.09	-72.02	-3.34	72.10	182.65	0.05	PUP	None
28	1137.39	27.64	182.43	29.11	1121.79	85.41	-85.34	-3.72	85.42	182.49	0.04	PUP	None
29	1166.97	28.48	183.83	29.58	1147.89	99.32	-99.23	-4.48	99.34	182.58	0.04	PUP	None
30	1196.40	29.46	184.58	29.43	1173.64	113.57	-113.45	-5.52	113.58	182.79	0.04	PUP	None

[(c)2008 IDEAL ID13_OC_08]
SCHLUMBERGER Survey Report

31-Jul-2008 03:29:00

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/ D/M)	Srvy tool type	Tool Corr (deg)
31	1225.95	30.16	185.46	29.55	1199.28	128.26	-128.08	-6.81	128.26	183.04	0.03	PUP	None
32	1255.99	29.83	185.82	30.04	1225.30	143.27	-143.03	-8.29	143.27	183.32	0.01	PUP	None
33	1285.37	30.03	186.70	29.38	1250.76	157.91	-157.60	-9.88	157.91	183.59	0.02	PUP	None
34	1315.16	31.09	187.90	29.79	1276.41	173.02	-172.62	-11.81	173.03	183.91	0.04	PUP	None
35	1344.99	31.21	187.53	29.83	1301.94	188.41	-187.91	-13.88	188.42	184.23	0.01	PUP	None
36	1374.68	30.42	184.92	29.69	1327.44	203.60	-203.03	-15.54	203.62	184.38	0.05	PUP	None
37	1404.59	30.04	183.00	29.91	1353.28	218.66	-218.05	-16.58	218.68	184.35	0.03	PUP	None
38	1433.94	31.67	182.29	29.35	1378.48	233.71	-233.09	-17.27	233.72	184.24	0.06	PUP	None
39	1463.79	30.65	181.20	29.85	1404.02	249.14	-248.52	-17.74	249.16	184.08	0.04	PUP	None
40	1493.62	30.04	180.72	29.83	1429.76	264.20	-263.59	-18.00	264.20	183.91	0.02	PUP	None
41	1523.35	30.08	180.58	29.73	1455.50	279.07	-278.48	-18.16	279.07	183.73	0.00	PUP	None
42	1553.11	30.38	181.81	29.76	1481.21	294.04	-293.46	-18.48	294.04	183.60	0.02	PUP	None
43	1583.05	30.31	183.44	29.94	1507.05	309.16	-308.57	-19.17	309.16	183.55	0.03	PUP	None
44	1612.84	30.34	184.08	29.79	1532.76	324.21	-323.58	-20.16	324.21	183.56	0.01	PUP	None
45	1642.12	30.48	183.53	29.28	1558.01	339.03	-338.37	-21.14	339.03	183.57	0.01	PUP	None
46	1671.81	30.16	182.75	29.69	1583.64	354.01	-353.33	-21.96	354.01	183.56	0.02	PUP	None
47	1701.38	29.96	181.97	29.57	1609.24	368.82	-368.13	-22.57	368.82	183.51	0.01	PUP	None
48	1730.84	30.49	182.20	29.46	1634.69	383.65	-382.95	-23.11	383.65	183.45	0.02	PUP	None
49	1760.64	30.44	183.16	29.80	1660.38	398.75	-398.04	-23.82	398.76	183.42	0.02	PUP	None
50	1790.34	29.76	183.49	29.70	1686.07	413.65	-412.91	-24.68	413.65	183.42	0.02	PUP	None
51	1820.04	29.12	183.26	29.70	1711.94	428.25	-427.49	-25.54	428.25	183.42	0.02	PUP	None
52	1849.86	28.05	182.80	29.82	1738.12	442.51	-441.73	-26.30	442.51	183.41	0.04	PUP	None
53	1879.39	28.44	182.54	29.53	1764.14	456.49	-455.69	-26.95	456.49	183.38	0.01	PUP	None
54	1909.08	29.18	181.91	29.69	1790.15	470.79	-469.99	-27.50	470.79	183.35	0.03	PUP	None
55	1938.97	29.25	182.37	29.89	1816.24	485.37	-484.57	-28.05	485.38	183.31	0.01	PUP	None
56	1968.51	27.81	181.63	29.54	1842.19	499.48	-498.67	-28.54	499.48	183.28	0.05	PUP	None
57	1998.05	27.26	181.66	29.54	1868.38	513.13	-512.32	-28.93	513.13	183.23	0.02	PUP	None
58	2028.03	26.98	181.70	29.98	1895.07	526.79	-525.98	-29.33	526.80	183.19	0.01	PUP	None
59	2057.68	29.01	184.81	29.65	1921.25	540.70	-539.87	-30.14	540.71	183.19	0.08	PUP	None
60	2087.27	29.58	188.03	29.59	1947.06	555.15	-554.25	-31.76	555.16	183.28	0.06	PUP	None

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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/ D/M)	Srvy tool type	Tool Corr (deg)
61	2116.78	29.55	188.02	29.51	1972.72	569.67	-568.67	-33.79	569.67	183.40	0.00	PUP	None
62	2146.82	30.97	187.12	30.04	1998.67	584.77	-583.67	-35.78	584.77	183.51	0.05	PUP	None

63	2176.36	31.76	185.57	29.54	2023.89	600.13	-598.95	-37.48	600.13	183.58	0.04	PUP	None
64	2206.21	31.48	183.82	29.85	2049.31	615.77	-614.55	-38.76	615.77	183.61	0.03	PUP	None
65	2235.88	31.35	183.41	29.67	2074.63	631.24	-629.98	-39.74	631.24	183.61	0.01	PUP	None
66	2265.38	32.11	184.62	29.50	2099.72	646.75	-645.46	-40.82	646.75	183.62	0.03	PUP	None
67	2295.13	31.69	185.04	29.75	2124.98	662.47	-661.12	-42.15	662.47	183.65	0.02	PUP	None
68	2325.11	33.21	184.84	29.98	2150.28	678.55	-677.15	-43.53	678.55	183.68	0.05	PUP	None
69	2355.31	35.92	185.28	30.20	2175.15	695.67	-694.22	-45.04	695.68	183.71	0.09	PUP	None
70	2385.09	36.82	184.07	29.78	2199.13	713.33	-711.82	-46.48	713.33	183.74	0.04	PUP	None
71	2413.59	37.70	183.21	28.50	2221.81	730.58	-729.03	-47.58	730.59	183.73	0.04	PUP	None
72	2472.44	42.55	182.99	58.85	2266.79	768.50	-766.89	-49.62	768.50	183.70	0.08	PUP	None
73	2502.19	45.34	182.77	29.75	2288.21	789.14	-787.51	-50.66	789.14	183.68	0.09	PUP	None
74	2531.76	48.61	183.24	29.57	2308.39	810.75	-809.10	-51.79	810.75	183.66	0.11	PUP	None
75	2561.19	50.89	182.57	29.43	2327.40	833.21	-831.53	-52.93	833.21	183.64	0.08	PUP	None
76	2578.22	52.52	183.03	17.03	2337.95	846.57	-844.88	-53.58	846.57	183.63	0.10	PUP	None
77	2621.57	53.72	182.84	43.35	2363.97	881.25	-879.51	-55.36	881.25	183.60	0.03	PUP	None
78	2651.30	53.37	183.55	29.73	2381.63	905.16	-903.38	-56.69	905.16	183.59	0.02	PUP	None
79	2681.00	52.50	184.22	29.70	2399.54	928.86	-927.03	-58.30	928.86	183.60	0.03	PUP	None
80	2711.02	51.43	184.51	30.02	2418.03	952.50	-950.60	-60.10	952.50	183.62	0.04	PUP	None
81	2740.27	50.60	184.48	29.25	2436.43	975.23	-973.27	-61.88	975.23	183.64	0.03	PUP	None
82	2770.05	50.01	184.85	29.78	2455.45	998.14	-996.11	-63.74	998.14	183.66	0.02	PUP	None
83	2798.55	47.70	183.57	28.50	2474.20	1019.60	-1017.51	-65.32	1019.60	183.67	0.09	PUP	None
84	2857.04	46.14	183.13	58.49	2514.15	1062.32	-1060.15	-67.82	1062.32	183.66	0.03	PUP	None
85	2886.94	46.56	182.91	29.90	2534.79	1083.95	-1081.76	-68.96	1083.95	183.65	0.02	PUP	None
86	2916.37	46.19	183.31	29.43	2555.10	1105.26	-1103.03	-70.11	1105.26	183.64	0.02	PUP	None
87	2946.06	45.04	184.18	29.69	2575.86	1126.47	-1124.20	-71.50	1126.47	183.64	0.04	PUP	None
88	2970.49	45.14	184.59	24.43	2593.11	1143.77	-1141.45	-72.82	1143.77	183.65	0.01	PUP	None
89	2987.00	45.14	184.59	16.51	2604.76	1155.47	-1153.12	-73.76	1155.48	183.66	0.00	Projection to TD	
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Company:

Well:

Field:

Rig:

State:

Nexus Energy Ltd

Longtom–4 P

Longtom

West Triton

Victoria

Schlumberger

9.5 in Section

EcoScope* Service

1:200 Measured Depth

Recorded Mode Log