

Tool Record Rates:
 EcoScope Res, Density & Neutron @ 2 sec
 sonicVISION Delta T @ 10 sec

Tool Software Version:
 TeleScope: 9.0_C03 EcoScope: 11
 sonicVISION: 6.4_B10
 Crew: L. Loh and D. Buster

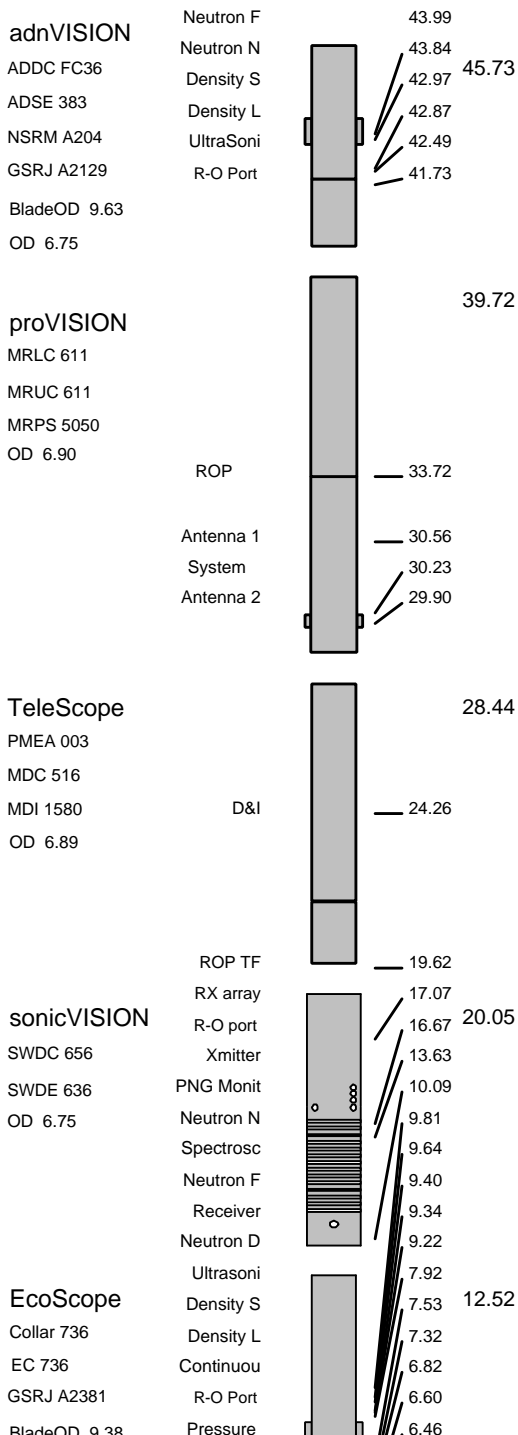
EQUIPMENT DESCRIPTION

RUN1

RUN

RUN

DOWNHOLE EQUIPMENT



Variable Name	Variable Description	Run Name & Value
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Run Number

1

General Information

BHT_RM	Bottom Hole Temperature (RM)	41.000000
BSAL_RM	Mud Salinity (RM)	0.000000
BS_RM	Bit Size (RM)	9.875000
COEF_M	User Defined FEXP in Clean Sand	1.650000
C_WS	Overpressure correction to Sw and M	1.000000
FEXP	Formation Factor Exponent(RM)	2.000000
FNUM	Formation Factor Enumerator(RM)	1.000000
FPHI_RM	Formation Factor Porosity Source (RM)	XPLOT
MST_RM	Mud Sample temperature (RM)	75.000000
MW_RM	Mud Weight (RM)	8.500000
OBMF_RM	Oil Based Mud (RM)	NO
RHOF_RM	Mud Filtrate Density (RM)	1.000000
RHOM_RM	Matrix density (RM)	2.650000
RMS_RM	Resistivity of Mud Sample (RM)	1.000000
RWA_COMP_M	Rwa computation model	BASIC
RWA_DEN_AD	Rwa Density Input ADN	RHOB
RWA_DEN_CD	Rwa Density Input CDN	RHOB
RWA_DEN_IN	Rwa Density Input	RHOB
RWA_FORM_M	Rwa computation formation model	CLASTIC
RWA_RES_IN	Rwa computation resistivity input	RT
RWS_RM	Resistivity of Connate Water (RM)	1.000000
SHT_RM	Surface Hole Temperature (RM)	15.000000
TD_RM	Total Measured Depth (RM)	8405.509766
TWS_RM	Temperature of Connate Water (RM)	75.000000
VF_ILLI	Fraction of illite in shales	0.500000
VF_KAOL	Fraction of kaolinite in shales	0.500000
VF_MONT	Fraction of montmorillonite in shales	0.000000
XPDM_RM	Cross plot density porosity multiplier	0.675000
XPNM_RM	Cross plot neutron porosity multiplier	0.325000

ISONIC

FP_SD	First Sample delay	600.00
STC_CF	Center frequency of Filter	13.00
STC_BW	Bandwidth (kHz)	3.125 kHz
STC_RWI	Receiver waveform ignored	None
PM_TOFF	Tool Time offset from surface system	0.00
DT_COH	Delta-T Coherence Cutoff Value	0.70
PPC_PF	Porosity Formula	Raymer-Hunt
PPC_PS	Sonic Porosity Source	DTRA
PPC_MDT	Matrix Delta-T	55.50
PPC_FDT	Fluid Delta-T	189.00

DVD

LWD_RM/STATION_FILE/PARAMETER	Station Time-frame file name	Station
-----	Density Parameter-----	Density
-----	Neutron Parameter-----	Neutron
-----	Interpretation Parameter-----	Interpretation
-----	Sigma Parameter-----	Sigma
A12A	ARC Air Cal Attenuation From T1 at 2 MHz	8.096470
A14A	ARC Air Cal Attenuation From T1 at 400 KHz	8.154540
A22A	ARC Air Cal Attenuation From T2 at 2 MHz	6.357980
A24A	ARC Air Cal Attenuation From T2 at 400 KHz	6.313930
A32A	ARC Air Cal Attenuation From T3 at 2 MHz	4.697780
A34A	ARC Air Cal Attenuation From T3 at 400 KHz	4.754960
A42A	ARC Air Cal Attenuation From T4 at 2 MHz	4.759350
A44A	ARC Air Cal Attenuation From T4 at 400 KHz	4.713040
A52A	ARC Air Cal Attenuation From T5 at 2 MHz	3.258230
A54A	ARC Air Cal Attenuation From T5 at 400 KHz	3.315620
ABNT	Abnormal Transmitter Indicator	No_Tx_Failed
ALPHA_DEN	Density Enhanced Vertical Resolution Processing Switch	YES
ANISO_COMP	Anisotropy Computation Option	YES
ATMP_ARC	ARC Select Temperature Channel	Annulus_Temp
AZMF	Formation DIP Azimuth	0.000000
BH_COMPUTE	Borehole Inversion Computation Option	YES
CALG	DVDM Gamma Ray Cal Gain Factor	-1.000000
CDPTH_ARC	Process Start Depth	100.000000
DEVI	Well Section Deviation	0.100000
DIELEC_COM	Dielectric Computation Option	YES
DIPF	Formation DIP Angle	0.000000
DVDM DHS	DVDM Down Hole Software Version	0.000000
DYN_IMAGE	Generate Dynamic Normalized Image?	YES
EDPTH	Wizard Process Stop Depth	50000
EN_WIZARD	Enable ARC Wizard Processing	NO
ERRCT	Percentage Error Cutoff	4.500000
EVRL	EVR Process averaging number of samples (RM)	49
FWVN	Firmware Version Number	1.100000
GCSE	Generalized Caliper Selection	BS
GRBC	RM: DVDM Gamma Ray Blanket (CPS)	75.000000
GRSH	GR Shale (Invasion Computation Cutoff)	1000.000000
GR_CF	Gamma Ray Correction Factor	2.250000
HIGH_BLEND	High Resistivity Threshold for Blending	2.000000
IDQT	Image Derived Quality Threshold	1.000000
IMAGE_MAX	Image Density Caliper Right Scale	8.000000
IMAGE_MAX	Image Density Quality Right Scale	1.000000
IMAGE_MAX	Image PEF(Segment) Right Scale	6.000000
IMAGE_MAX	Image RHOB(Segment) Right Scale	2.650000
IMAGE_MIN	Image Density Caliper Left Scale	2.000000

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IMAGE_MIN_ Image Density Quality Left Scale 0.000000
IMAGE_MIN_ Image PEF(Segment) Left Scale 2.000000
IMAGE_MIN_ Image RHOB(Segment) Left Scale 2.050000
IMAGE_ORIE Image Orientation Options, e.g. Top of Hole or True North NORTH
INCLIN_B0 ARC Bias Constant (mg) 0.000000
INCLIN_B1 ARC Bias First-order Coefficient (mg/degC) 0.000000
INCLIN_B2 ARC Bias Secod-order Coeeficient (mg/degC) 0.000000
INCLIN_B3 ARC Bias Third-order Coeeficient (mg/degC) 0.000000
INCLIN_C0 ARC Current Scale Factor Constant (mA/g) 1.000000
INCLIN_C1 ARC Scale First-order Coeeficient (mA/g/degC) 0.000000
INCLIN_C2 ARC Scale Second-order Coeeficient (mA/g/degC) 0.000000
INCLIN_C3 ARC Scale Third-order Coeeficient (mA/g/degC) 0.000000
INVAS_COMP Invasion Computation Option YES
JSD Acquisition start date YES
JSD_ARC ARC Acquisition start date YES
LOW_BLEND Low Resistivity Threshold for Blending 1.000000
MATR Rock Matrix for Neutron Porosity Corrections SANDSTONE
MSWS ARC Wizard Model Switch Window 5.000000
MULTIEFFEC Multi Effect Option YES
NEU_DCOR_O Density Correction Source for Neutron Processing Average
NEU_FTUBE_ Far Thermal Tube Selection Both
NTIK_SEL Neutron Tick Channel Name FAZ1
OACF O2 Activation Correction Factor (RM) 0.000000
P12A ARC Air Cal Phase-Shift From T1 at 2 MHz 1.143270
P14A ARC Air Cal Phase-Shift From T1 at 400 KHz 1.838910
P22A ARC Air Cal Phase-Shift From T2 at 2 MHz -1.152680
P24A ARC Air Cal Phase-Shift From T2 at 400 KHz -1.826430
P32A ARC Air Cal Phase-Shift From T3 at 2 MHz 1.064520
P34A ARC Air Cal Phase-Shift From T3 at 400 KHz 1.835500
P42A ARC Air Cal Phase-Shift From T4 at 2 MHz -1.202580
P44A ARC Air Cal Phase-Shift From T4 at 400 KHz -1.845070
P52A ARC Air Cal Phase-Shift From T5 at 2 MHz 1.092880
P54A ARC Air Cal Phase-Shift From T5 at 400 KHz 1.844270
PMUD Potassium Concentration in Mud 0.000000
POFFSET Pressure Offset 0.000000
PRTD Preferred Resistivity Log for Rt Display while Multi-Effects P34B
PSOF_ADJ_T ARC: User Input Phase offset 0.000000
RESTIK ARC resistivity tick source Phase
SDPTH Wizard Process Start Depth 100
SIG_PCOR_O Porosity Correction Source for Sigma Processing Best
SPEC_CSG_D Casing Depth for Spectroscopy Processing 100.000000
SPL_CLAY_M SpectroLith Clay Model ARENITE
SPL_COAL_O SpectroLith Coal Processing Option NONE
SPL_SULFUR SpectroLith Sulfur Mineral Option ANHYDRITE
STAB_SIZE Stabilizer Size 9.375000
STOH Density Top of Hole Sector (Left Boundary) SECTOR_0
TRNO Tool Run Number 8405.509766
TSIZ_ARC ARC Tool Size 6.900000
TSNO Tool Serial Number 6.900000
UNIFORM_CO Uniform Rock Option YES
VERS_ARC ARC Down hole software version Number 1.100000
WRK Way to Report Potassium Concentration K_by_Wgt_%
WSDI Window Size of Dynamic Normalization Image 50.000000

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IDEAL Version: ID10_2B_08

IDF

ADN id10_2c_01

Format: 5 MD ARC/SONIC Vertical Scale: 1:240

Graphics File Created: 05-Oct-2005 12:53

PIP SUMMARY

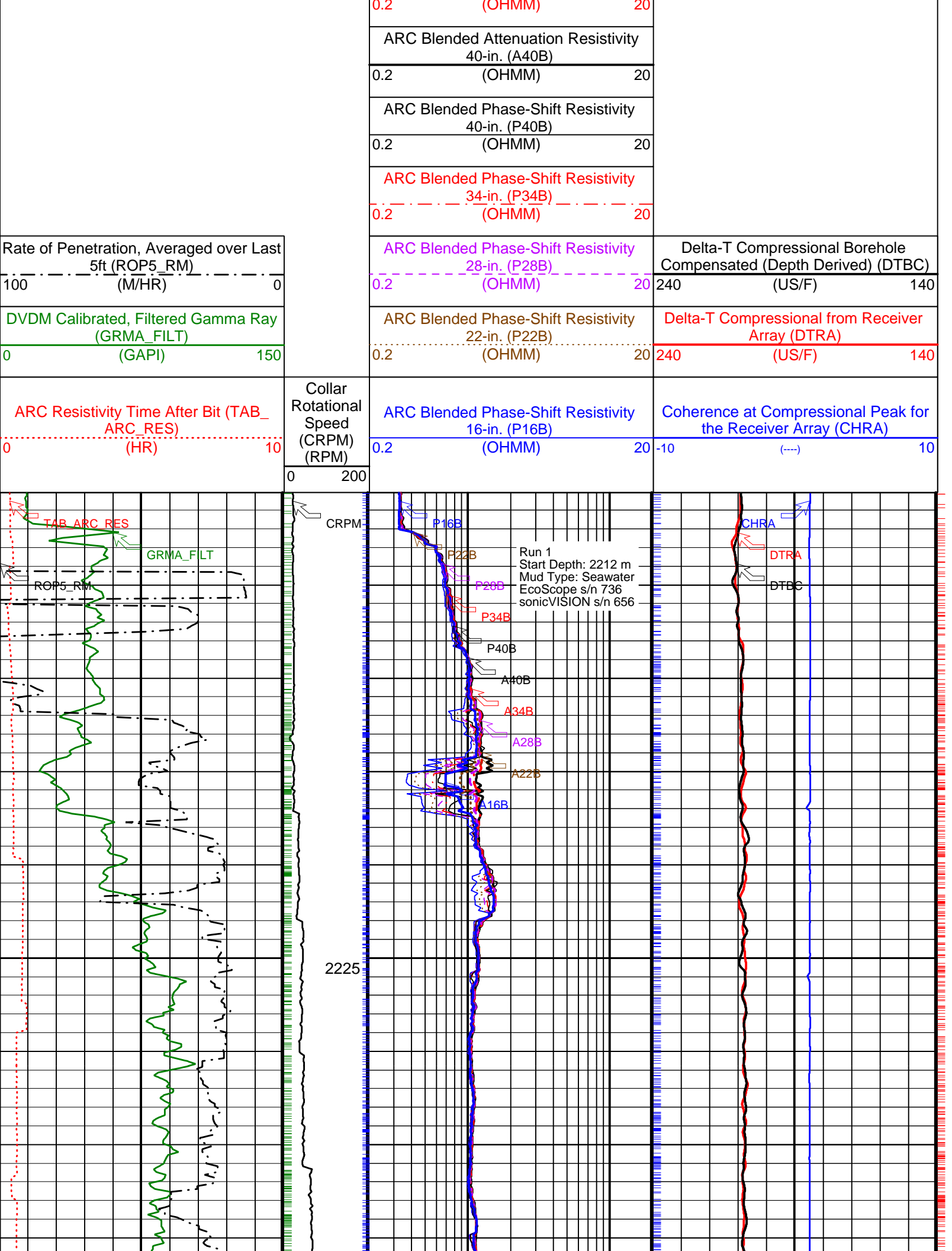
Density Ticks, 0.1-ft

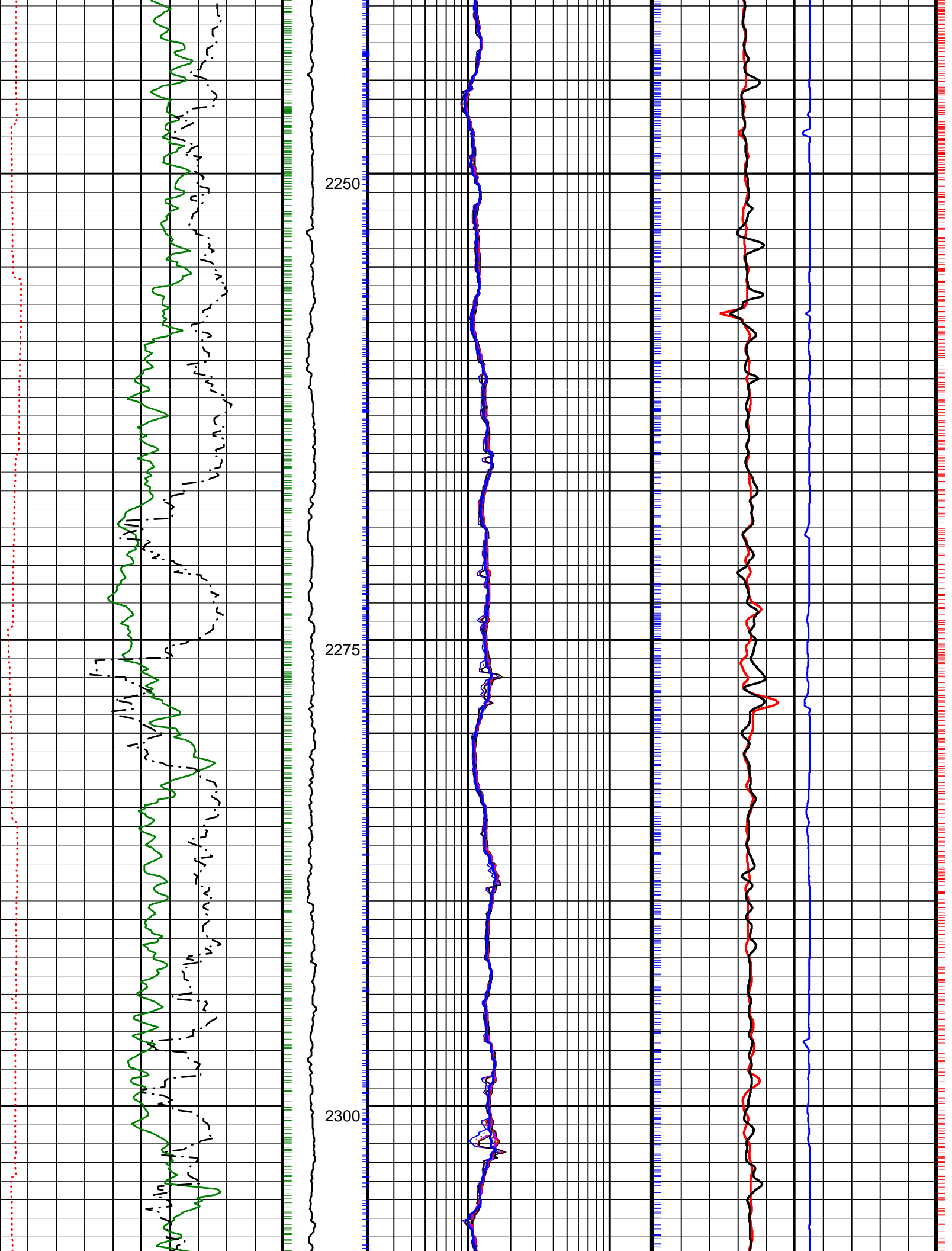
+ ARC Resistivity Samples

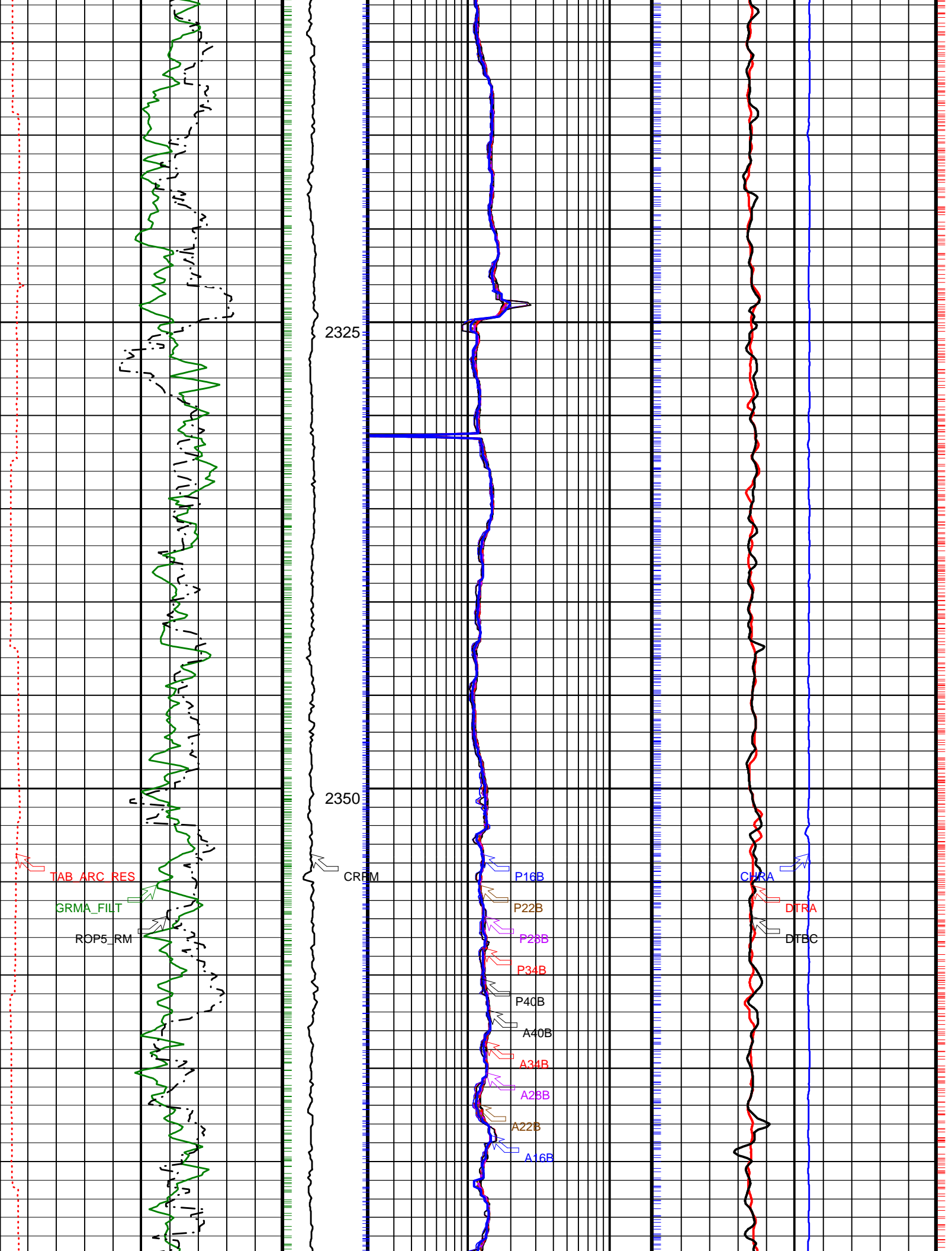
Neutron Ticks, 0.1 ft +

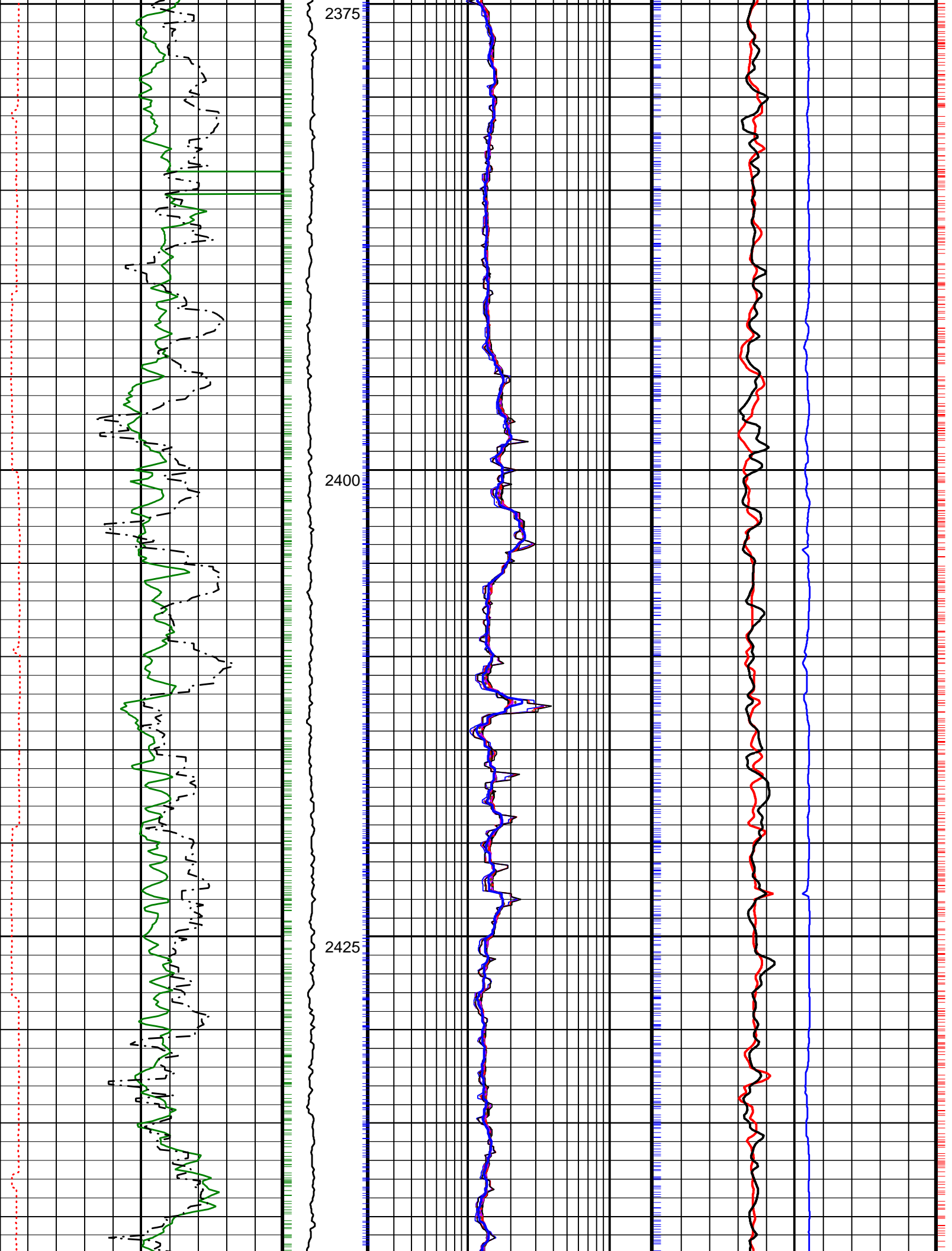
+ DVDM Gamma Ray Samples

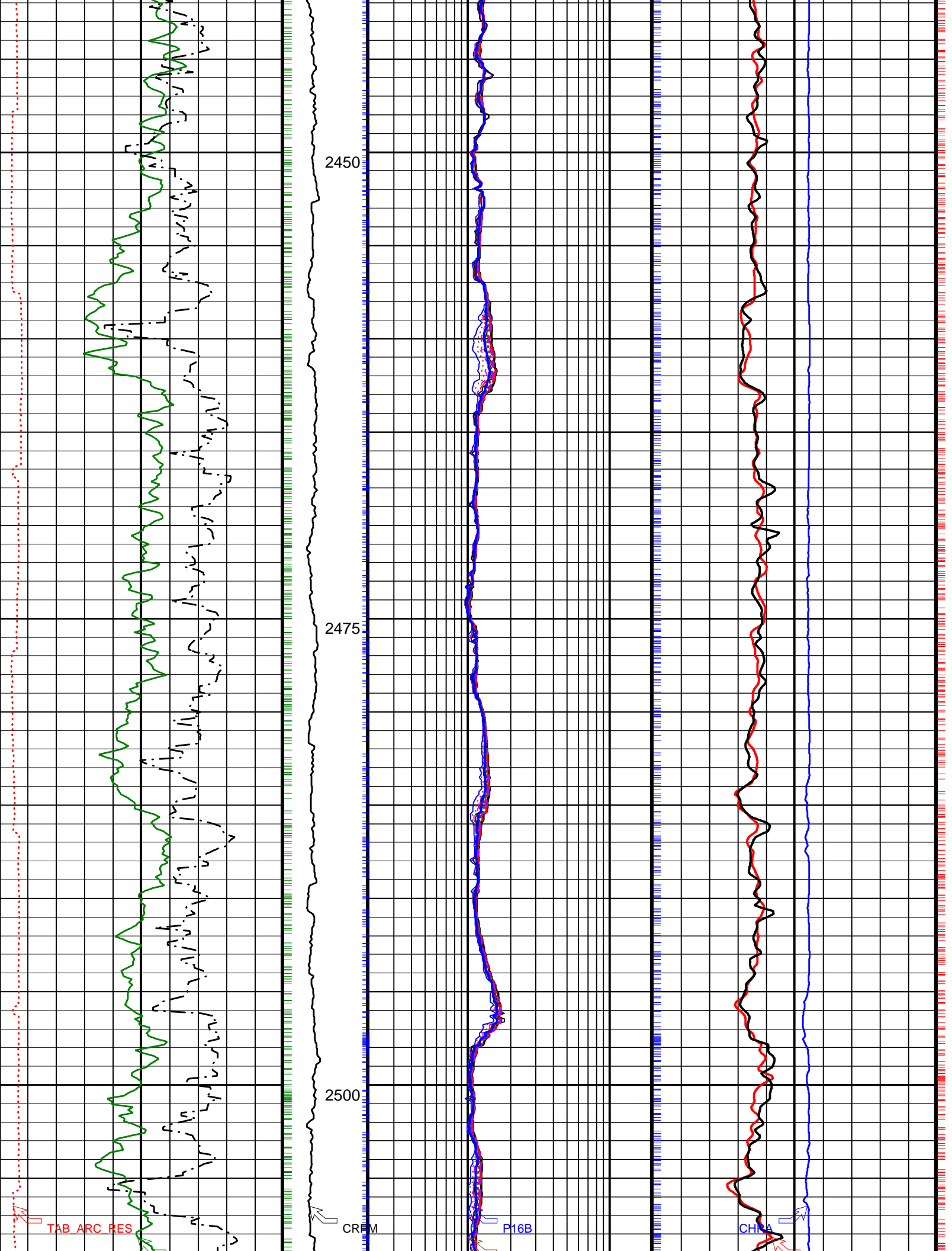
ARC Blended Attenuation Resistivity		
16-in. (A16B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
22-in. (A22B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
28-in. (A28B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
34-in. (A34B)		

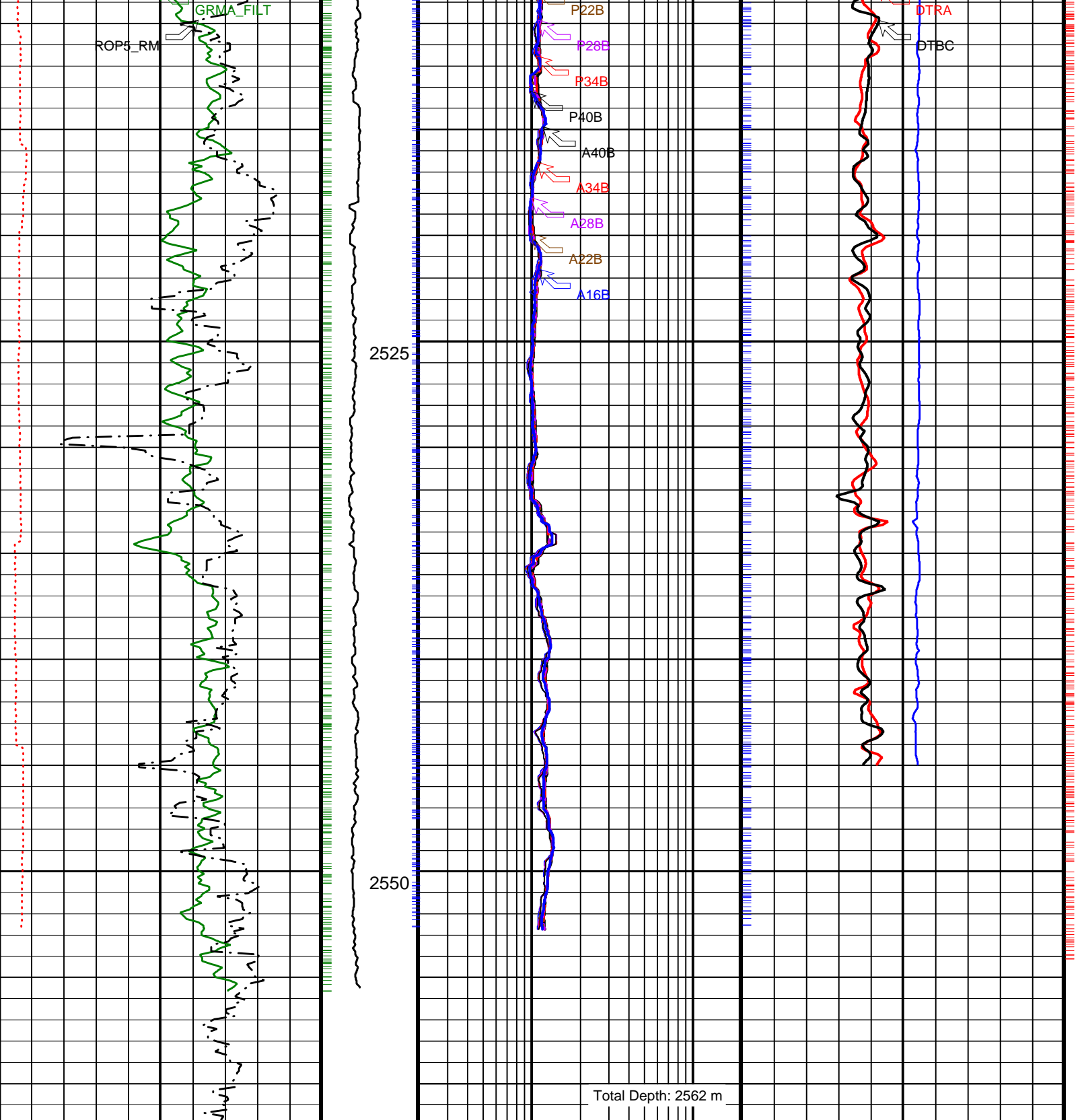












<p>ARC Resistivity Time After Bit (TAB_ ARC_RES) (HR)</p> <p>0 10</p>	<p>Collar Rotational Speed (CRPM) (RPM)</p> <p>0 200</p>	<p>ARC Blended Phase-Shift Resistivity 16-in. (P16B) (OHMM)</p> <p>0.2 20</p>	<p>Coherence at Compressional Peak for the Receiver Array (CHRA)</p> <p>-10 10</p>
<p>DVDM Calibrated, Filtered Gamma Ray (GRMA_FILT) (GAPI)</p> <p>0 150</p>	<p>ARC Blended Phase-Shift Resistivity 22-in. (P22B) (OHMM)</p> <p>0.2 20</p>	<p>Delta-T Compressional from Receiver Array (DTRA) (US/F)</p> <p>240 140</p>	
<p>Rate of Penetration, Averaged over Last 5ft (ROP5_RM) (M/HR)</p> <p>100 0</p>	<p>ARC Blended Phase-Shift Resistivity 28-in. (P28B) (OHMM)</p> <p>0.2 20</p>	<p>Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC) (US/F)</p> <p>240 140</p>	

ARC Blended Phase-Shift Resistivity		
0.2	34-in. (P34B) (OHMM)	20
ARC Blended Phase-Shift Resistivity		
0.2	40-in. (P40B) (OHMM)	20
ARC Blended Attenuation Resistivity		
0.2	40-in. (A40B) (OHMM)	20
ARC Blended Attenuation Resistivity		
0.2	34-in. (A34B) (OHMM)	20
ARC Blended Attenuation Resistivity		
0.2	28-in. (A28B) (OHMM)	20
ARC Blended Attenuation Resistivity		
0.2	22-in. (A22B) (OHMM)	20
ARC Blended Attenuation Resistivity		
0.2	16-in. (A16B) (OHMM)	20

PIP SUMMARY

Density Ticks, 0.1-ft

ARC Resistivity Samples

Neutron Ticks, 0.1 ft

DVDM Gamma Ray Samples

IDEAL Version: ID10_2B_08
IDF

ADN

id10_2c_01

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

Primary Equipment:	ECO - 675	736
Tool Name and Serial Number		
Calibration Status		
Collar Type and Serial Number	ADDC - AA	
Chassis Type and Serial Number	ADSE - EA	
Stabilizer Type and Serial Number	ADCS - CA	
Neutron Logging Source	NSR - M	
Density Logging Source	GSR - J/Z	
Stabilizer Size	9.38 - in.	

Master: 22-Jul-2005 12:37

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

SSn LSn : Water Tank

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

Master: 22-Jul-2005 12:37

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

Neutron: Water Tank

Phase	Far 2 Gain	Value	Phase	Far 2 Offset	Value
Master		1.056	Master		-0.7620
	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	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)	1.055	Master	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)	-0.4690
Phase	Thermal Near gain			Value	Phase	Thermal Near offset			Value
Master				1.155	Master				-137.6
Master	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		Master	-500.0 (Minimum)	0 (Nominal)	500.0 (Maximum)	
Phase	Epithermal Near gain			Value	Phase	Epithermal Near offset			Value
Master				1.221	Master				-13.57
Master	0.7000 (Minimum)	1.000 (Nominal)	1.300 (Maximum)		Master	-300.0 (Minimum)	0 (Nominal)	300.0 (Maximum)	

Master: Calibration out of date 11-Apr-2005 19:14														
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				2041	Master				5077	Master				11910
Master	1000 (Minimum)	2000 (Nominal)	3000 (Maximum)		Master	2500 (Minimum)	5250 (Nominal)	8000 (Maximum)		Master	6000 (Minimum)	12000 (Nominal)	18000 (Maximum)	

Master: Calibration out of date 11-Apr-2005 19:14														
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				372.3	Master				2692	Master				8750
Master	200.0 (Minimum)	400.0 (Nominal)	600.0 (Maximum)		Master	1500 (Minimum)	3000 (Nominal)	4500 (Maximum)		Master	4000 (Minimum)	8500 (Nominal)	13000 (Maximum)	

Master: Calibration date not found														
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				57.82	Master				85.68	Master				413.0
Master	50.00 (Minimum)	70.00 (Nominal)	90.00 (Maximum)		Master	50.00 (Minimum)	75.00 (Nominal)	100.0 (Maximum)		Master	270.0 (Minimum)	370.0 (Nominal)	470.0 (Maximum)	







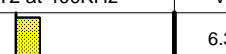
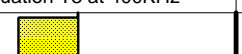
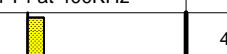
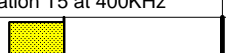
Master: Calibration date not found									
EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration									
Gamma Density: Water Block Check									
Phase	Long spacing water density G/C3			Value	Phase	Short spacing water density G/C3			Value
Master				1.047	Master				1.262
Master	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)		Master	0.9000 (Minimum)	1.150 (Nominal)	1.400 (Maximum)	

Master: Calibration date not found														
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				1.143	Master				-1.153	Master				1.065
Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-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				-1.203	Master				1.093	Master				1.839
Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-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				-1.826	Master				1.836	Master				-1.845
Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)		Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)	
Phase	Phase-Shift T5 at 400KHz			Value										
Master				1.844										
Master	-4.000 (Minimum)	0 (Nominal)	4.000 (Maximum)											

Master: Calibration date not found									
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EcoScope Integrated Logging-While-Drilling Tool - 6.75 inch Calibration

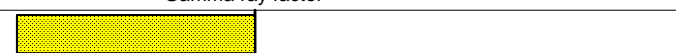
Resistivity: Air

Phase	Attenuation T1	Value	Phase	Attenuation T2	Value	Phase	Attenuation T3	Value
Master		8.096	Master		6.358	Master		4.698
	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		4.759	Master		3.258	Master		8.155
	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		6.314	Master		4.755	Master		4.713
	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		3.316						
	2.000 (Minimum) 4.000 (Nominal) 6.000 (Maximum)							

Master: Calibration date not found

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

Gamma Ray: Blanket

Phase	Gamma ray factor	Value
Master		2.250
	2.000 (Minimum) 2.500 (Nominal) 3.000 (Maximum)	

Company: Lamont-Doherty Borehole Research



Well: IODP Expedition 311 CAS-02C

Field: Cascadia Margin

Rig: JOIDES Resolution

State: Pacific Ocean

EcoScope Resistivity - sonicVISION (Fluid Arrival)
1:240 Measured Depth
Recorded Mode Log

Data Quality Report

Type of Measurement

Geomarket	NGC	Location	Vancouver Island
Job Date	20-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JOIDES Resolution	Field/Well	Cascadia Margin/CAS-02C
Engineer	Lake Loh	Job Number	40012416

Res	GR	Delta T		
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When data does not meet standards, put a number in the column corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks. Positive remarks are welcome, do not append them with a number.

Remarks

1. Correcting the resistivity data by assuming mud resistivity as 1 ohmm @ 75 degF.
2. Depth is not compensated for heave. The heave cause the spikes of ROP and this eventually cause the low data density and distortion on the image. The heave also cause the curves (gamma ray, resistivity, and delta T) do not correlate to each other very well and cause the resistivity curves blocky.

Operation

Description of Well - Names, Geometry, Services, Location and References; General Content Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded

Equipment and Software Description

Tool sketch, equipment numbers, software versions, data rates, filtering weights

Processing Traceability and Environment Description

Acquisition environment, parameters and key constants for each run or zone, complete and relevant remarks

Annotations, Presented Formats, QC Curves, Print Quality

Documented splice points, data gap explanations, mud changes, movement indicator, color selection

Calibration and Verifications

Calibration / Before survey verification / After survey verification

Validity, completeness (includes equipment number), timeliness, unedited, discrepancy explained

Operating Procedures

Depth Control

Comparison with driller's depth, other logs, other bit runs, between RT and RM, Depth summary listing

Logging speed and sampling rates

As recommended in reference manual or job planner. No loss of data or spatial resolution

Data Comparison

Between runs and passes, with data from nearby wells, other conveyance, mud log and markers

Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses

Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained.

Digital Delivery

Digital Products

Labeled, verification listing with complete digital record, backup for archival; record matches hard copy.

Job Quality Rating (JQR)
Number of boxes without number X 10

80	90	90		
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Environmental effects

Irregular Operation

Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions

Borehole Geometry

Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions

Borehole Fluid

Barite, KCl, salinity, additives, gas cut, unstable

Interferences

External noise, nearby casing or drillpipe, debris, unusual formation composition

Operation Outside Tool Specifications

Geomarket/temperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, ppm, solids value of parameter

Environmental Quality Rating (EQR)

Number of boxes without number X 20

1	1	1		
2			3	
60	80	60		

1. Excessive ROP is causing low data density.
2. Borehole washouts cause the resistivity curves separation.
3. Existing of gas in the borehole attenuate the sonic signal.

Cell Manager: Lake Loh

FSM:

Vijay Moras

Data Quality Report

Type of Measurement

Res	GR	Delta T		

When data does not meet standards, put a number in the column corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks
Positive remarks are welcome, do not append them with a number.

Remarks

Geomarket	NGC	Location	Vancouver Island
Job Date	20-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JOIDES Resolution	Field/Well	Cascadia Margin/CAS-02C
Engineer	Lake Loh	Job Number	40012416

Operation

Description of Well - Names, Geometry, Services, Location and References; General Content Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded	
Equipment and Software Description	
Tool sketch, equipment numbers, software versions, data rates, filtering weights	
Processing Traceability and Environment Description	
Acquisition environment, parameters and key constants for each run or zone, complete and relevant remarks	
Annotations, Presented Formats, QC Curves, Print Quality	
Documented splice points, data gap explanations, mud changes, movement indicator, color selection	

Calibration and Verifications

Calibration / Before survey verification / After survey verification	
Validity, completeness (includes equipment number), timeliness, unedited, discrepancy explained	

Operating Procedures

Depth Control	
Comparison with driller's depth, other logs, other bit runs, between RT and RM, Depth summary listing	
Logging speed and sampling rates	
As recommended in reference manual or job planner. No loss of data or spatial resolution	
Data Comparison	
Between runs and passes, with data from nearby wells, other conveyance, mud log and markers	
Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses	
Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained.	

Digital Delivery

Digital Products	
Labeled, verification listing with complete digital record, backup for archival, record matches hard copy.	

Job Quality Rating (JQR)

Number of boxes without number X 10

Environmental effects

Irregular Operation	
Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions	

Borehole Geometry	
Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions	

Borehole Fluid	
Barite, KCl, salinity, additives, gas cut, unstable	

Interferences	
External noise, nearby casing or drillpipe, debris, unusual formation composition	

Operation Outside Tool Specifications	
Geomarket/temperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, ppm, solids value or parameter	

Environmental Quality Rating (EQR)

Number of boxes without number X 20

Cell Manager:	Lake Loh	FSM:	Vijay Moras

