



Company: Lamont-Doherty Borehole Research

Well: IODP Expedition 311 CAS-01B

Field: Cascadia Margin

Rig: JOIDES Resolution State: Pacific Ocean

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

Total depth:	1633 m	K.B.	10.06 m
Spud date:	23-Sep-2005	G.L.	-1323 m
Runs:	1 To 1	D.F.	9.60 m

Permanent datum: MEAN SEA LEVEL Elev.: 0 m
 Log measured from: Kelly Bushing 10.06 m above Perm. datum
 Depth reference: Driller's Depth

Location
 Service Order no. NAD 27 Longitude Latitude
 40012416 UTM Zone 10 N W 126.86540 N 48.69806

Rig: JOIDES Resolution
 Field: Cascadia Margin
 Location: Vancouver Island
 Well: IODP Expedition 311 CAS-01B
 Company: Lamont-Doherty Borehole Research

Depth logged: 1333 m To 1627 m Mag decl: 18.83 deg. Other services:
 Date logged: 23-Sep-05 To 24-Sep-05 Mag dip: 69.24 deg. geoVISION, provISION

Hole size	from	to	Size	Density	from	to
9.875 in.	1333 m	1633 m				

Type	Mud record from	to	Min	Max	Borehole deviation record from	to
Seawater	1333 m	1633 m				

Unit	TWIS	IDEAL Wis	ID10_2C_01
Depth system	Geolograph	SPM	hspm10_1c_05
		LWD	See Remarks
		MWD	9.0_C03

DISCLAIMER

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.

OTHER SERVICES FOR RUN 1
Real Time STC Projection
Annular Pressure While Drilling

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER 1
Run Objective: Drill and log sites CAS-01B to select the coring point.
Source of data: Recorded Mode
Reason POOH: Move to next drill site.

EcoScope gamma ray is not environmentally corrected.
EcoScope resistivity is borehole compensated and is environmentally corrected for bit size and mud resistivity.
Barite was not present in the mud.
sonicVISION Delta T is borehole compensated.
Delta T data is processed and labeled based on fluid arrival.

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

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

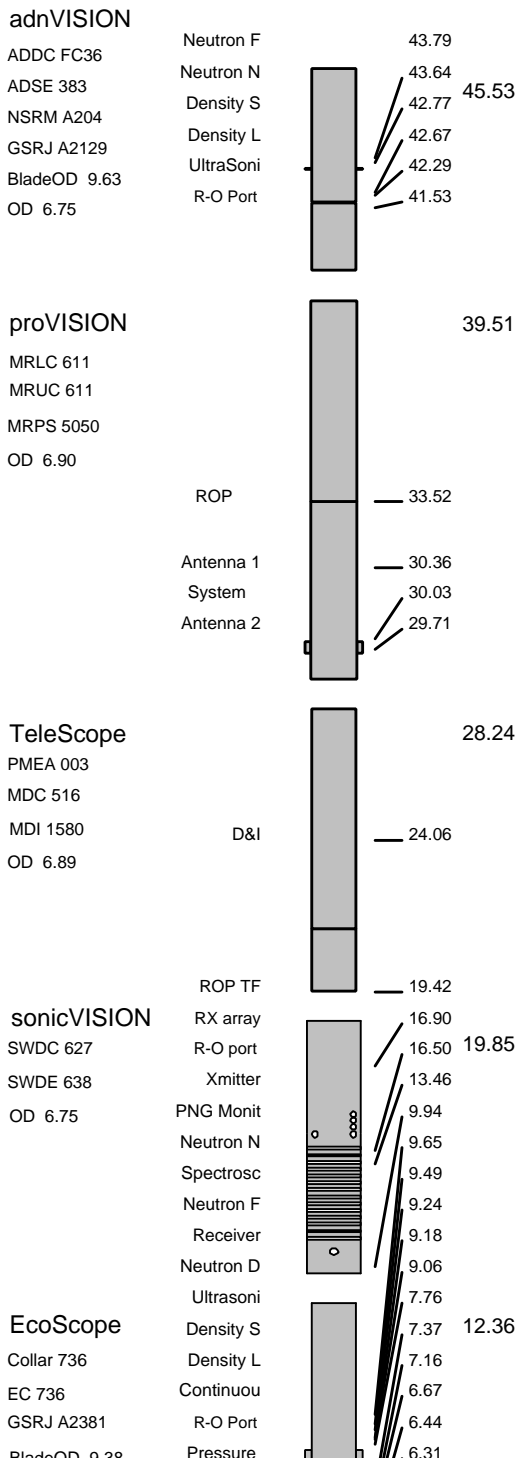
EQUIPMENT DESCRIPTION

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)	39.200001
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)	5357.600098
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 Bias 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 5357.600098
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

Format: 5 MD ARC/SONIC

Vertical Scale: 1:240

Graphics File Created: 05-Oct-2005 14:36

PIP SUMMARY

Density Ticks, 0.1-ft

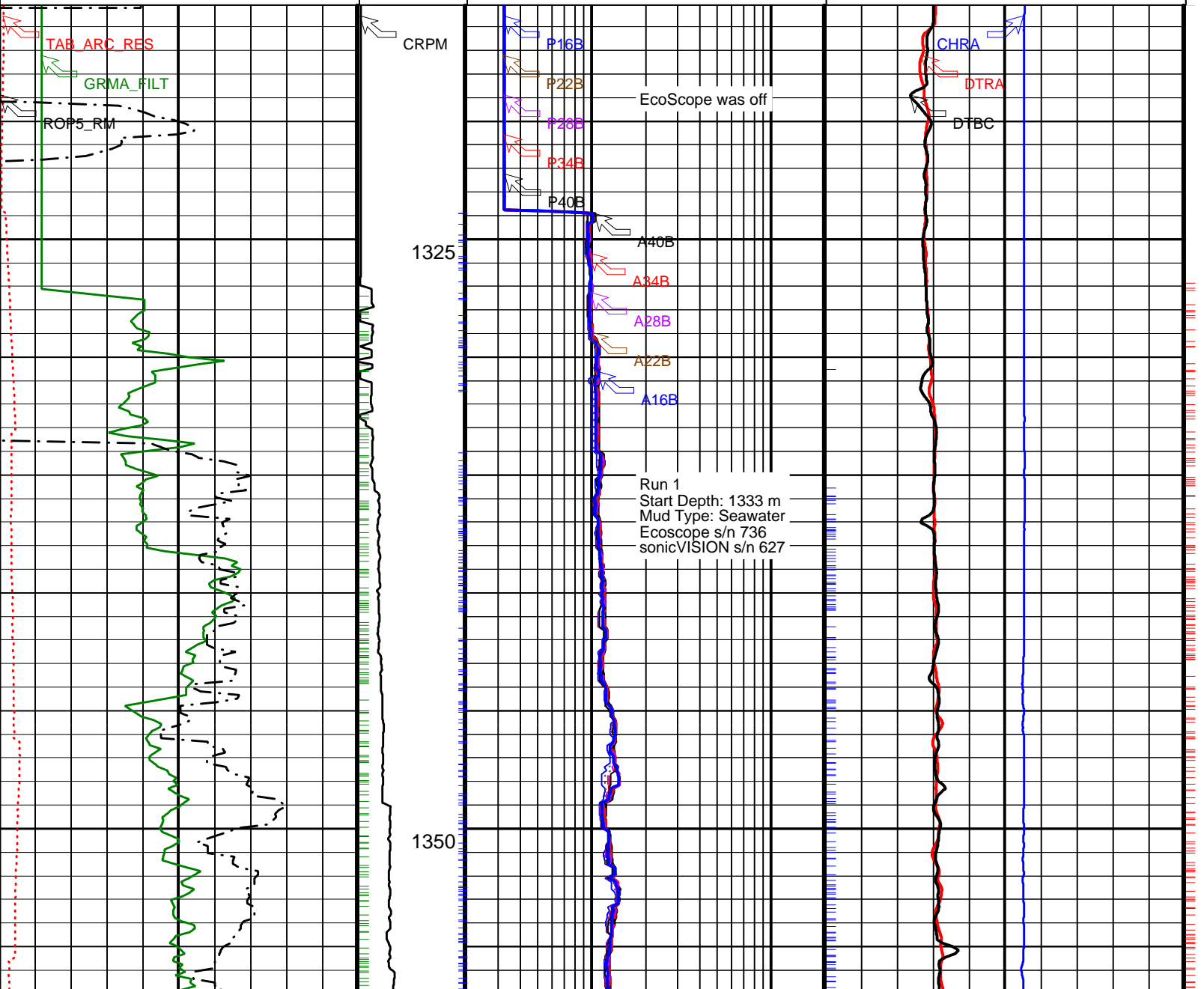
+ ARC Resistivity Samples

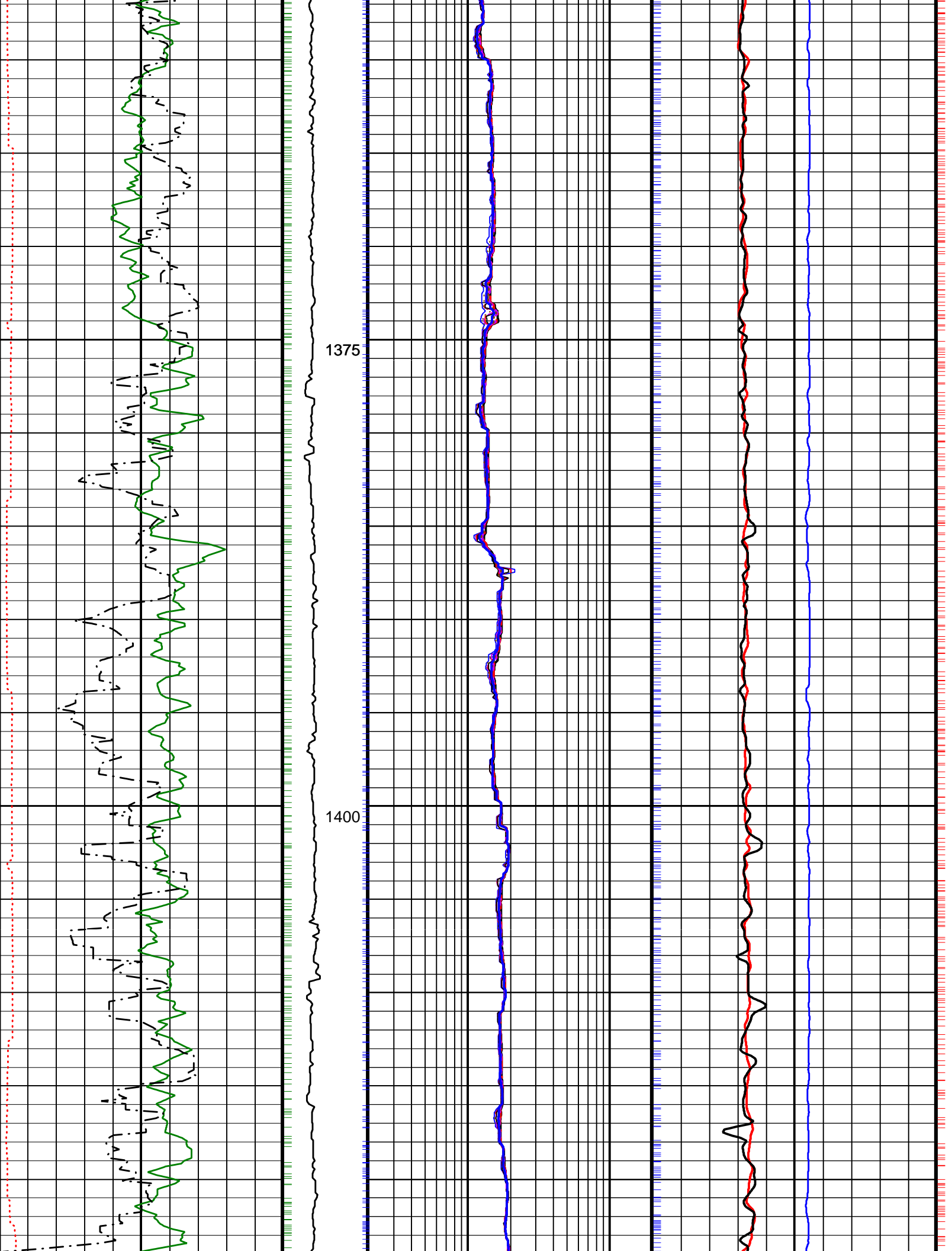
Neutron Ticks, 0.1 ft +

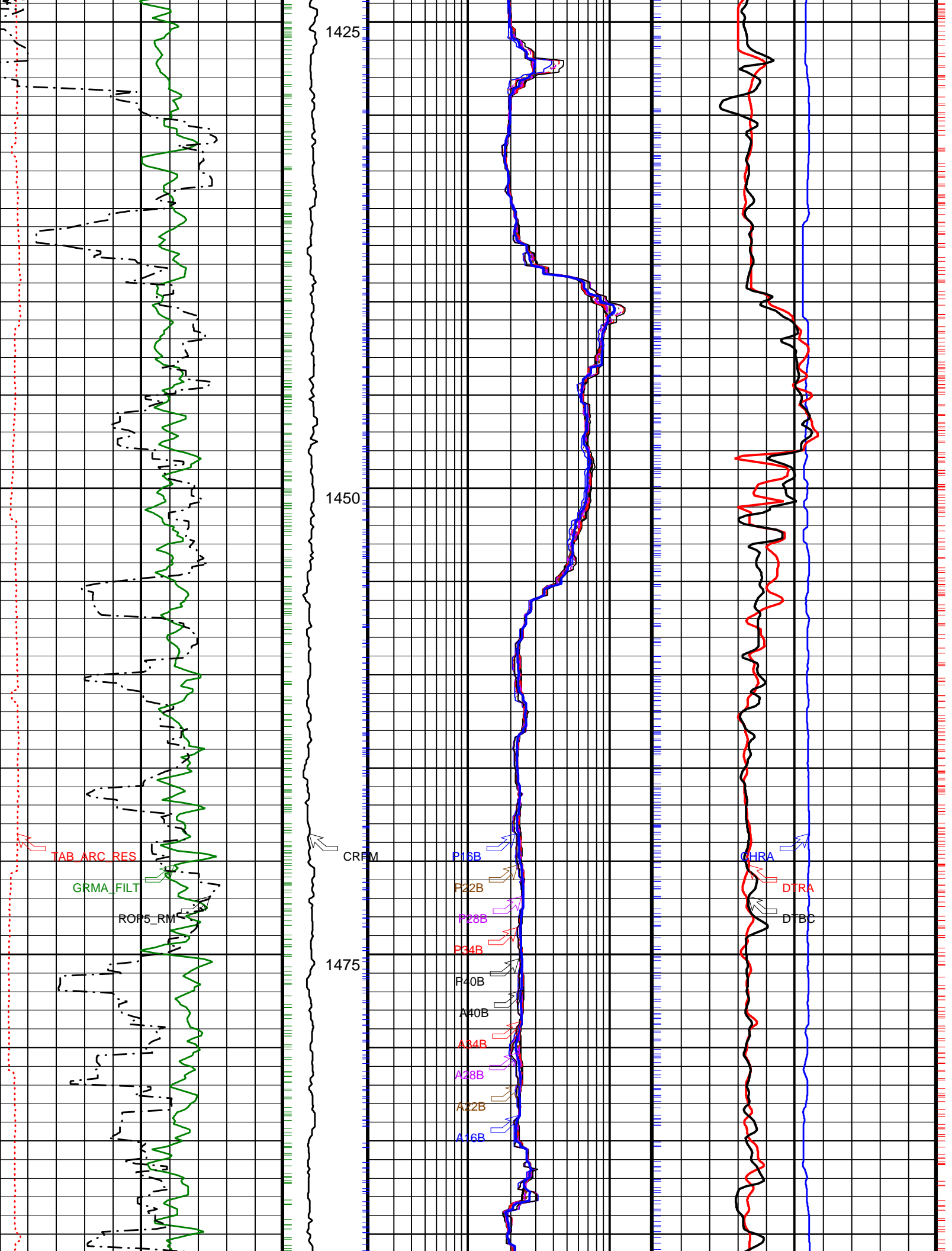
+ DVDM Gamma Ray Samples

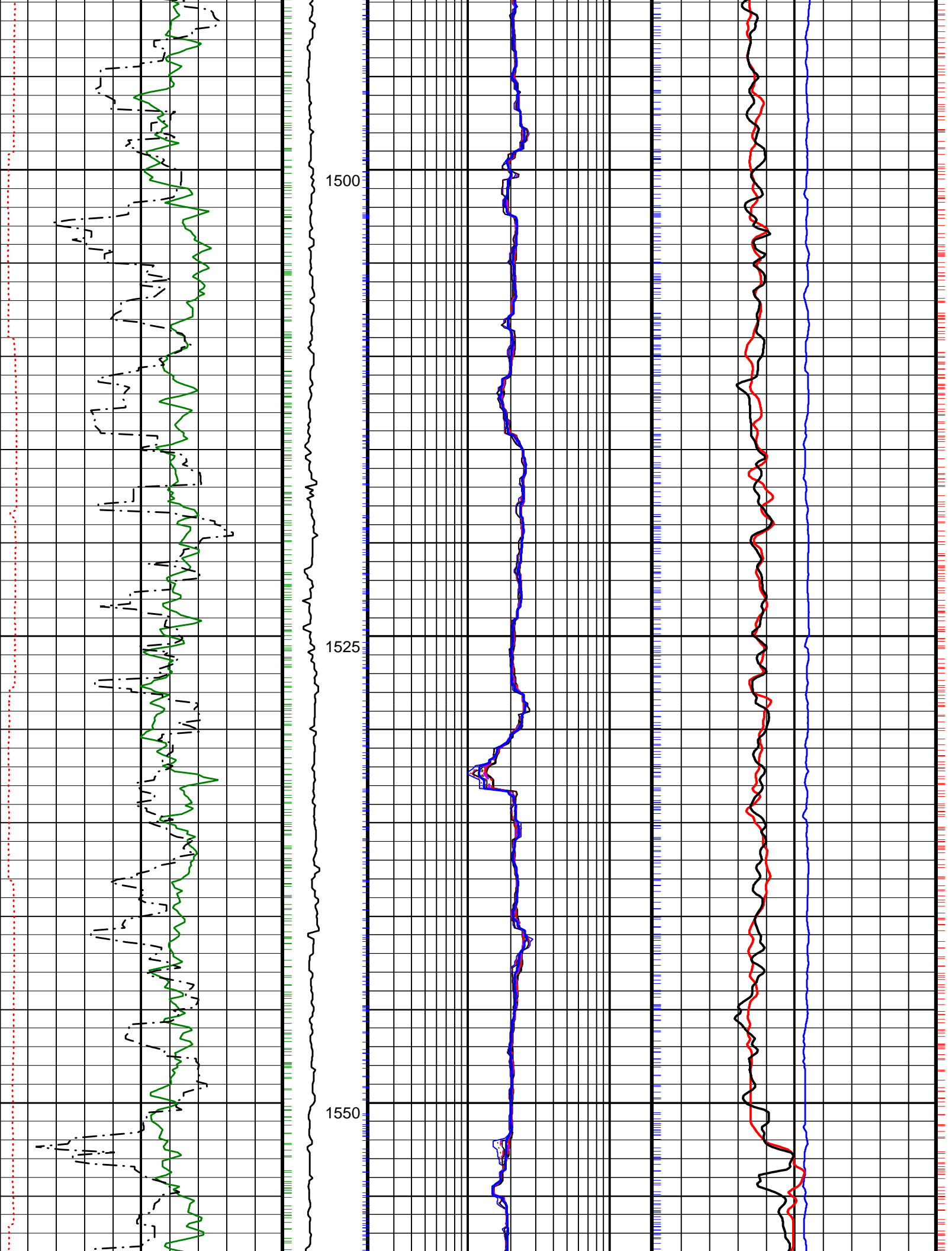
ARC Blended Attenuation Resistivity		
16-in. (A16B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
22-in. (A22B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
28-in. (A28B)		
0.2	(OHMM)	20
ARC Blended Attenuation Resistivity		
34-in. (A34B)		
0.2	(OHMM)	20

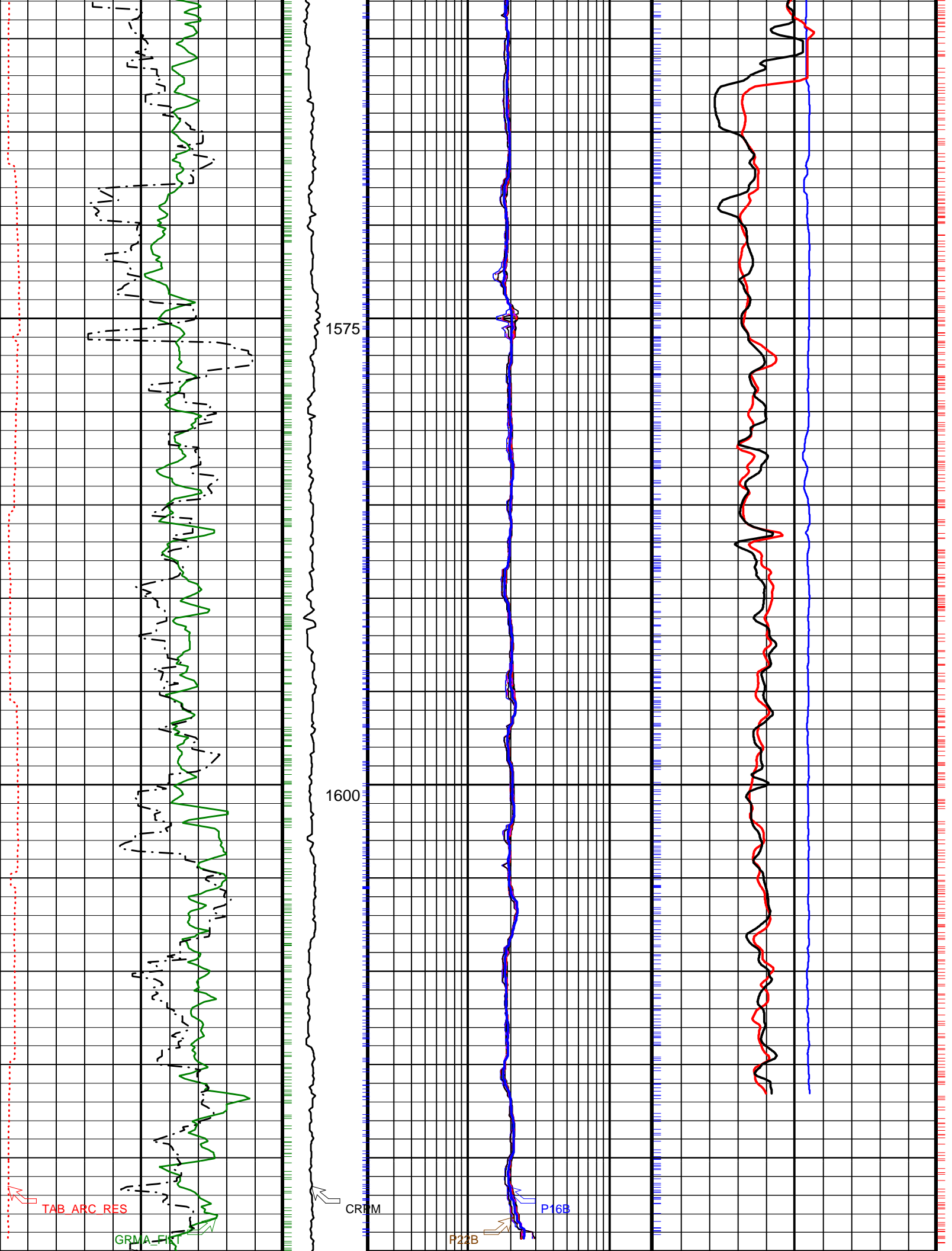
		ARC Blended Attenuation Resistivity 40-in. (A40B)						
		0.2	(OHMM)	20				
		ARC Blended Phase-Shift Resistivity 40-in. (P40B)						
		0.2	(OHMM)	20				
		ARC Blended Phase-Shift Resistivity 34-in. (P34B)						
		0.2	(OHMM)	20				
Rate of Penetration, Averaged over Last 5ft (ROP5_RM)		ARC Blended Phase-Shift Resistivity 28-in. (P28B)		Delta-T Compressional Borehole Compensated (Depth Derived) (DTBC)				
100	(M/HR)	0	0.2	(OHMM)	20	240	(US/F)	140
DVDM Calibrated, Filtered Gamma Ray (GRMA_FILT)		ARC Blended Phase-Shift Resistivity 22-in. (P22B)		Delta-T Compressional from Receiver Array (DTRA)				
0	(GAPI)	150	0.2	(OHMM)	20	240	(US/F)	140
ARC Resistivity Time After Bit (TAB_ ARC_RES)		ARC Blended Phase-Shift Resistivity 16-in. (P16B)		Coherence at Compressional Peak for the Receiver Array (CHRA)				
0	(HR)	10	0.2	(OHMM)	20	-10	(----	10
		0	Collar Rotational Speed (CRPM) (RPM)					
		200						











1575

1600

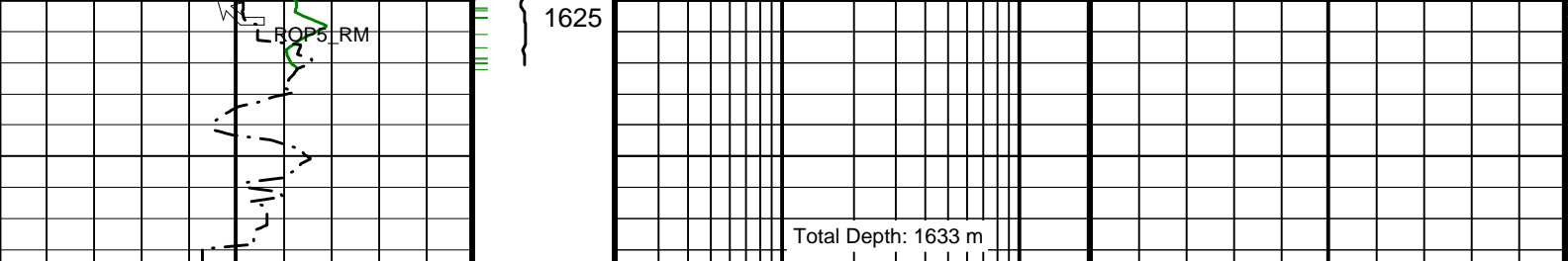
CRFM

P22B

P16B

TAB ARC_RES

GRMA F1



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

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

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

Primary Equipment:
 Tool Name and Serial Number
 Calibration Status
 Collar Type and Serial Number
 Chassis Type and Serial Number
 Stabilizer Type and Serial Number
 Neutron Logging Source
 Density Logging Source
 Stabilizer Size

ECO - 675 736
 ADDC - AA
 ADSE - EA
 ADCS - CA
 NSR - M
 GSR - J/Z
 9.38 - in.

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) 1.4000 (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) 1.4000 (Maximum)			-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)	

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) 1.3000 (Maximum)			-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)	
Phase	Far 1 Gain	Value	Phase	Far 1 Offset	Value
Master		1.055	Master		-0.4690
	0.7000 (Minimum) 1.000 (Nominal) 1.3000 (Maximum)			-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)	
Phase	Thermal Near gain	Value	Phase	Thermal Near offset	Value
Master		1.155	Master		-137.6
	0.7000 (Minimum) 1.000 (Nominal) 1.3000 (Maximum)			-500.0 (Minimum) 0 (Nominal) 500.0 (Maximum)	
Phase	Epithermal Near gain	Value	Phase	Eptithermal Near offset	Value
Master		1.221	Master		-13.57
	0.7000 (Minimum) 1.000 (Nominal) 1.3000 (Maximum)			-300.0 (Minimum) 0 (Nominal) 300.0 (Maximum)	

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
	1000 (Minimum) 2000 (Nominal) 3000 (Maximum)			2500 (Minimum) 5250 (Nominal) 8000 (Maximum)			6000 (Minimum) 12000 (Nominal) 18000 (Maximum)	

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
	200.0 (Minimum) 400.0 (Nominal) 600.0 (Maximum)			1500 (Minimum) 3000 (Nominal) 4500 (Maximum)			4000 (Minimum) 8500 (Nominal) 13000 (Maximum)	

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
	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)	

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

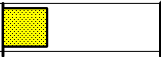
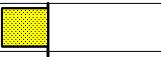
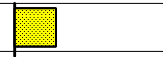



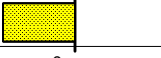
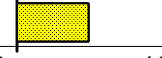

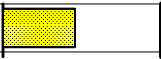
Gamma Density: Water Block Check

Phase	Long spacing water density G/C3	Value	Phase	Short spacing water density G/C3	Value
Master		1.047	Master		1.262
	0.9000 (Minimum) 1.150 (Nominal) 1.400 (Maximum)			0.9000 (Minimum) 1.150 (Nominal) 1.400 (Maximum)	

Master: Calibration date not found

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

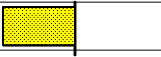

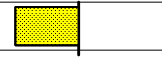

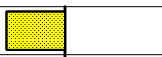
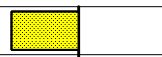
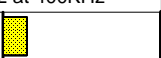

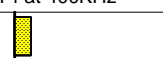
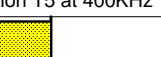
Resistivity: Air

Phase	Phase-Shift T1	Value	Phase	Phase-Shift T2	Value	Phase	Phase-Shift T3	Value
Master		1.143	Master		-1.153	Master		1.065
	-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		-1.203	Master		1.093	Master		1.839
	-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		-1.826	Master		1.836	Master		-1.845
	-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		1.844						
	-4.000 (Minimum) 0 (Nominal) 4.000 (Maximum)							

Master: Calibration date not found

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

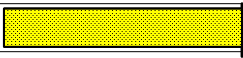
Resistivity: Air

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) 11.000 (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) 11.000 (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-01B

Field: Cascadia Margin

Rig: JOIDES Resolution

State: Pacific Ocean

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

Data Quality

Type of Measurement

Res	GR	Delta		
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When data does not meet standards, fill in a corresponding number and remarks. Positive remarks are welcome; do not

Geomarket	NGC	Location	Vancouver Island
Job Date	23-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JOIDES Resolution	Field/Well	Cascadia Margin/CAS-01B
Engineer	Lake Loh	Job Number	40012416

Operation

Description of Well - Names, Geometry, Services, Location and References, General Content Header, user or 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	1			
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	2	2	2	
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)	80	90	90	
Number of boxes without number X 10				

Environmental effects

Irregular Operation	1	1	1	
Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions				
Borehole Geometry	2			
Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions				
Borehole Fluid			3	
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, rpm, solids value or parameter				

Environmental Quality Rating (EQR)

Number of boxes without number X 20

60	80	60		
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Remarks

1. Correcting the resistivity data by assumption
2. Depth is not compensated for heave
- this eventually cause the low data d
- also cause the curves (gamma ray,
- other very well and cause the resist

1. Excessive ROP is causing low data
2. Borehole washouts cause the resist
3. Existing of gas in the borehole alter

Cell Manager: Lake Loh

Quality Report

Enter a number in the column corresponding to the measurement mark below. Use additional pages for remarks
 append them with a number.

Remarks

summing mud resistivity as 1 ohm @ 75 degF.
 The heave cause the spikes of ROP and
 resistivity, and Delta T) do not correlate to each
 resistivity curves blocky.

Geomarket	NGC	Location	Vancouver Island
Job Date	23-SEP-2005	Customer	Lamont-Doherty Borehole Research
Rig	JIDES Resolution	Field/Well	Cascadia Margin/CAS-01B
Engineer	Lake Loh	Job Number	40012416

Type of Measurement

Res	GR	Delta	T		
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Data Quality

When data does not meet standards, list with a corresponding number and remarks. Positive remarks are welcome; do not

Remarks

Operation						
Presentation						
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						
Geomark/Temperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter						
Environmental Quality Rating (EQR)						
Number of boxes without number X 20						

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						
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Geomark/Temperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter						
Environmental Quality Rating (EQR)						
Number of boxes without number X 20						

Quality Report

Put a number in the column corresponding to the measurement mark below. Use additional pages for remarks
append them with a number.

marks

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002

FSM:

Vijay Moras