

6.75" LWD Service

Density / Porosity / Induction Resistivity

Recorded Mode Data

Schlumberger

Company: IODP
Lamont - Doherty Earth Observatory

Well: U1379A

Field: Expedition 334

Rig Name: JOIDES Resolution

State: Puntarenas

Country: Costa Rica

Latitude: 8.59 degrees

Longitude: -84.08 degrees

Block: Expedition 334

FL: CRISP

FL1: n/a

FL2: n/a

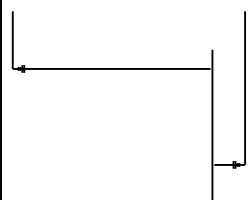
Custom: U1379A

Rig Name: JOIDES Resolution

Rig Type: Drill Ship

Log Measured From - Drill Floor: 9.8 m
Permanent Datum - Mean Sea Level

Ground Level: 137.0 m



Acquisition Dates: 20 Mar 11 to 23 Mar 11

Log Interval: 130.0(m) to 1099.0(m)

Index Types: Measured Depth

Index Scales: 1:500

Depth Source: Driller's Depth

Depth Sensor: DES

Conveyance: Drill Pipe

Print Type: Final

Spud Date: 19-Mar-2011

Other Services:
adnVISION
Telescope
arcVISION
geoVISION

**Disclaimer**

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Borehole Size/Casing Record

Bit					
Bit Size (in)	8.5				
Bottom Driller (m)	1098.42				

Operational Run Summary


Parameter (unit)	Run 01				
Date Log Started	20-Mar-2011				
Time Log Started	03:15:21				
Date Log Finished	23-Mar-2011				
Time Log Finished	15:22:35				
Bit Size (in)	8.500				
Bit Start Depth (m)	49.81				
Bit Stop Depth (m)	1098.42				
Top Log Interval (m)	137.00				
Bottom Log Interval (m)	1099.00				
Max Hole Deviation (deg)	1.64				
Azimuth of Max Deviation (deg)	218.55				
Logging Unit Number	n/a				
Logging Unit Location	n/a				
Recorded By	Carrillo/Garcia				
Witnessed By	Alberto Malinverno				
Service Order Number	11MED0004				

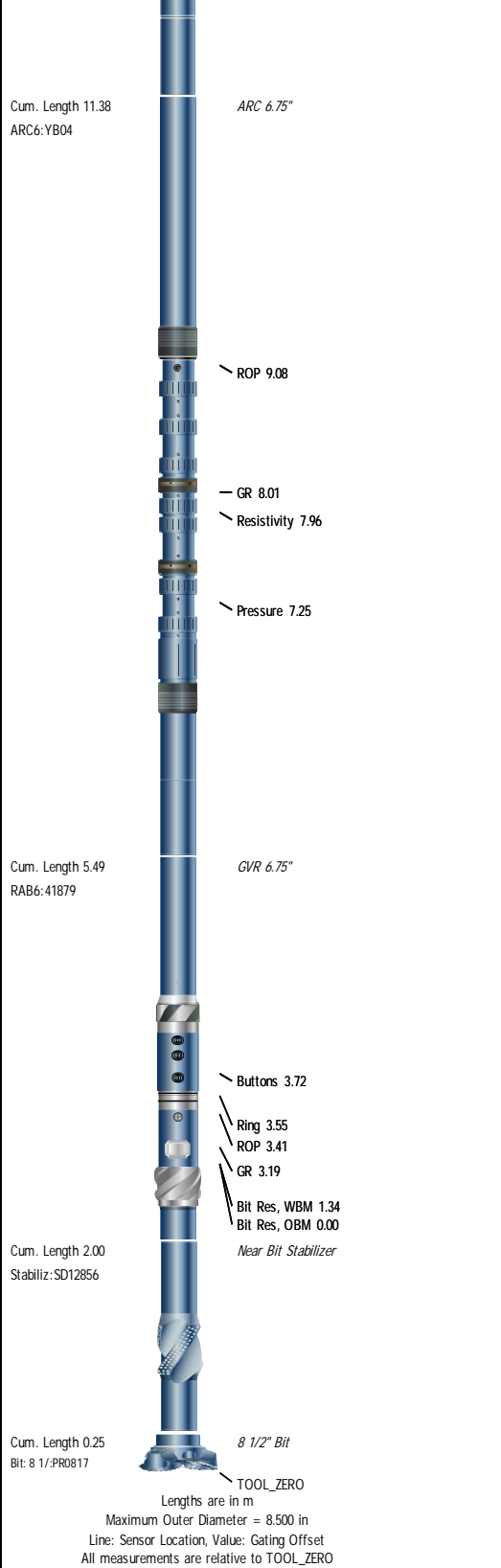
Borehole Fluids

Parameter (unit)	Run 01				
Type Fluid	Water				
Max Recorded Temperature (degC)	NaN				
Source of Sample	Active Tank				
Salinity (ppm)	31737.15				
Density (g/cm3)	1.03				
Viscosity (s)					
Fluid Loss (cm3)					
pH					
Source Rmf					
Source Rmc	Pressed				
Rm @ Meas Temp (ohm.m@degC)	0.2 @ 23.89				
Rmf @ Meas Temp (ohm.m@degC)	0.15 @ 20				
Rmc @ Meas Temp (ohm.m@degC)					

Rm @ BHT (ohm.m@degC)	0.07 @ 100				
Rmf @ BHT (ohm.m@degC)	0.05 @ 100				
Rmc @ BHT (ohm.m@degC)	NaN @ 100				

Remarks and Equipment Summary

Run 01: Toolstring	Run 01: Remarks	
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Cum. Length 25.69 ADN6C:YJ56</p>  <p style="margin-left: 20px;">Neutron 23.63</p> <p style="margin-left: 20px;">Density 22.59</p> <p style="margin-left: 20px;">UltraSonic 22.20</p> <p style="margin-left: 20px;">ROP 21.44</p> </div> <div style="width: 45%;"> <p>MWD Telescope 6.75"</p> <p style="margin-left: 20px;">D&I 15.23</p> <p style="margin-left: 20px;">Vibration 14.23</p> <p style="margin-left: 20px;">ROP 12.88</p> </div> </div>	Gamma Ray corrected for Bit Size, Tool Diameter and Mud Weight.	
	Density processed on a Sandstone (2.65 g/cm3) matrix.	
	Neutron Source: A2145, Gamma Source: A01	



Run 01

U1379A

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
Software Version				
Acquisition System			Version	
MaxWell			2.1.6903.0	
Application Patch			SP-20110302-2.1.6903.1130	
Computation	Description			Version

ULTRASON_PROC	Ultrasonic Processing, ADN	2.1.6903.1067	
ARC6GammaRay	ARC6 Gamma Ray Computation Package for both Real-time and Recorded Mode	2.1.6903.0	
NEUTRON_PROC	Neutron Processing, ADN	2.1.6903.1067	
DENSITY_PROC	Density Processing, ADN	2.1.6903.1067	
ARCResistivity	ARC Resistivity Computation Package for ARC Tool Family	2.1.6903.0	
Tool Interface	System Version	Loaded Version	
HSPM	hspm15_1c_03	2.1.6903.1130	
Tool Elements	Description	Software Version	Firmware Version
ADSE	Azimuthal Density Sensor Electronics, Vision ADN 6-3/4 Inch	2.1.6903.1067	V8.4A
ARDC	ARC 6.75 Inch Tool Drill Collar	2.1.6903.0	V9.4B
DRILLING_SURFACE	DRILLING_SURFACE	2.1.6903.1067	

Pass Summary

Run Name	Objective	Direction	Top	Bottom	Start Time	Stop Time
Run 01	Drilling	Down	49.81 m	1098.42 m	20-Mar-2011 03:15:21	23-Mar-2011 15:22:35
All depths are referenced to toolstring zero						

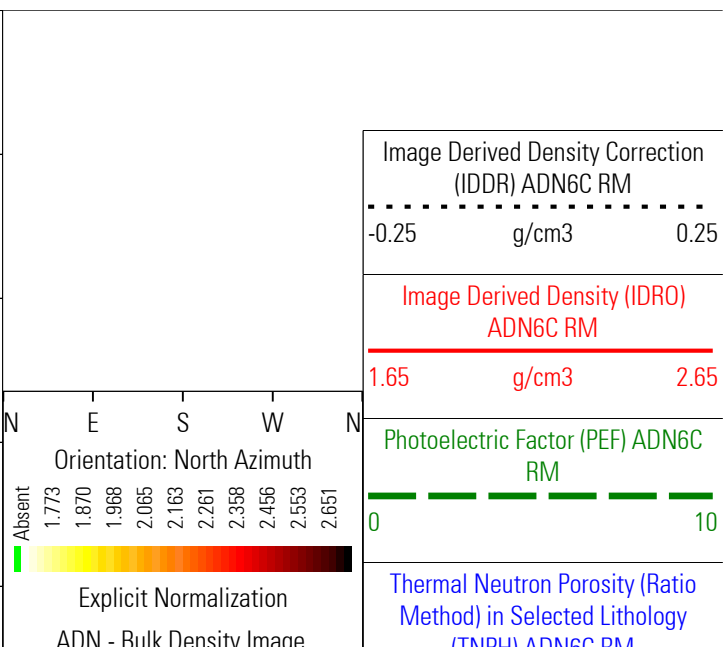
Log

Run 01: Drilling 950170E2-A9D5-4924-862A-7DF83A989827

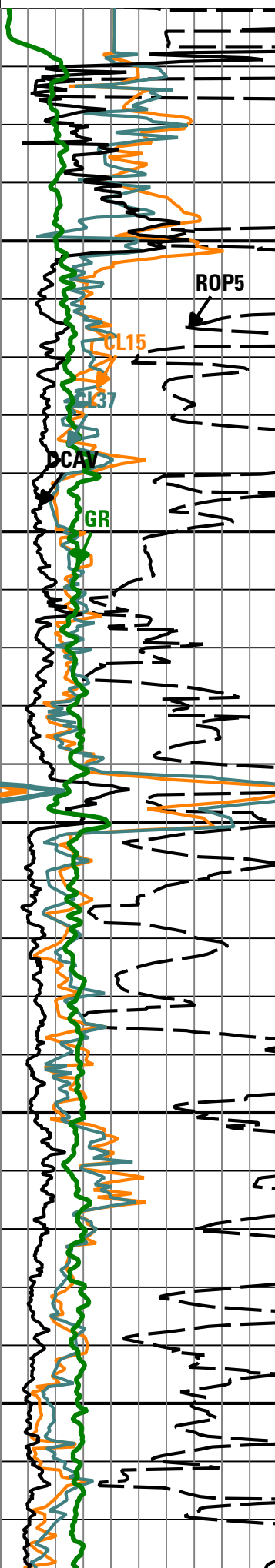
Description: VDN6 LOC Format: Log (ADN + ARC Log) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth Creation Date: 24-Mar-2011 06:56:44

Channel	Source	Sampling
A16B	ARC6:ARC6:ARDC	6in - RM
A22B	ARC6:ARC6:ARDC	6in - RM
A28B	ARC6:ARC6:ARDC	6in - RM
A34B	ARC6:ARC6:ARDC	6in - RM
A40B	ARC6:ARC6:ARDC	6in - RM
CL15	ADN6C:ADN6C:ADSE	6in - RM
CL37	ADN6C:ADN6C:ADSE	6in - RM
DCAV	ADN6C:ADN6C:ADSE	6in - RM
GR	ARC6:ARC6:ARDC	6in - RM
IDDR	ADN6C:ADN6C:ADSE	6in - RM
IDRO	ADN6C:ADN6C:ADSE	6in - RM
PEF	ADN6C:ADN6C:ADSE	6in - RM
ROP5	DRILLING_SURFACE	6in - RT
RPM	ADN6C:ADN6C	6in - RM
TNPH	ADN6C:ADN6C:ADSE	1.2in - RM

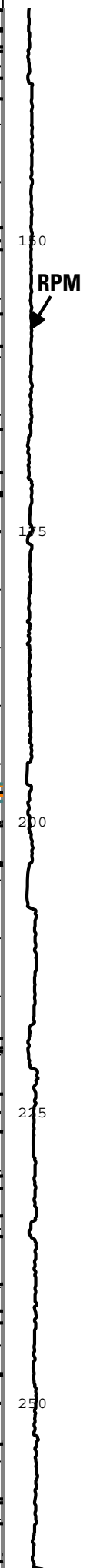
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT	Blended Attenuation Resistivity 40 inch (A40B) ARC6 RM
0 m/h 100	0.2 ohm.m 20
Ultrasonic Caliper Along Axis 1 and 5 (CL15) ADN6C RM	Blended Attenuation Resistivity 16 inch (A16B) ARC6 RM
8 in 13	0.2 ohm.m 20
Ultrasonic Caliper Along Axis 3 and 7 (CL37) ADN6C RM	Blended Attenuation Resistivity 22 inch (A22B) ARC6 RM
8 in 13	0.2 ohm.m 20
Density Caliper, Average (DCAV) ADN6C RM	Blended Attenuation Resistivity 28 inch (A28B) ARC6 RM
8 in 13	0.2 ohm.m 20
Rotational Speed (RPM) ADN6C RM	Blended Attenuation Resistivity 34 inch (A34B) ARC6 RM
	0.2 ohm.m 20



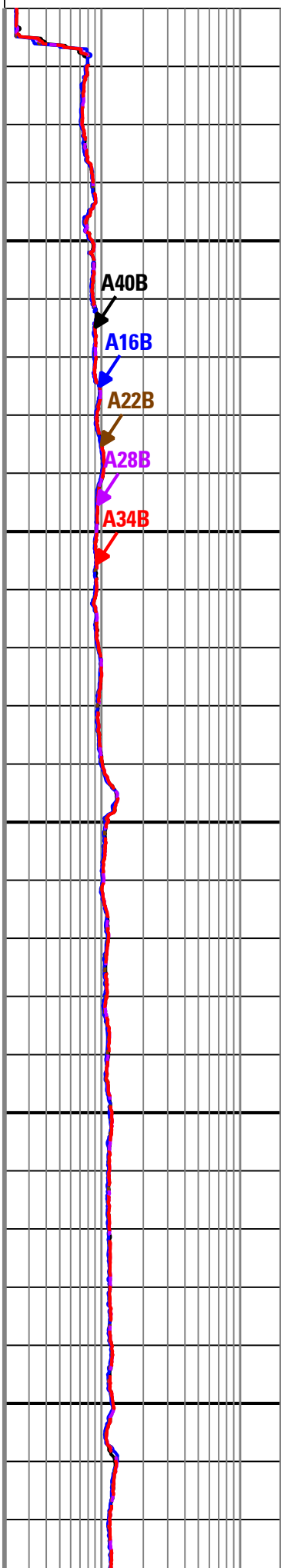
Gamma Ray (GR) ARC6 RM
0 gAPI 150



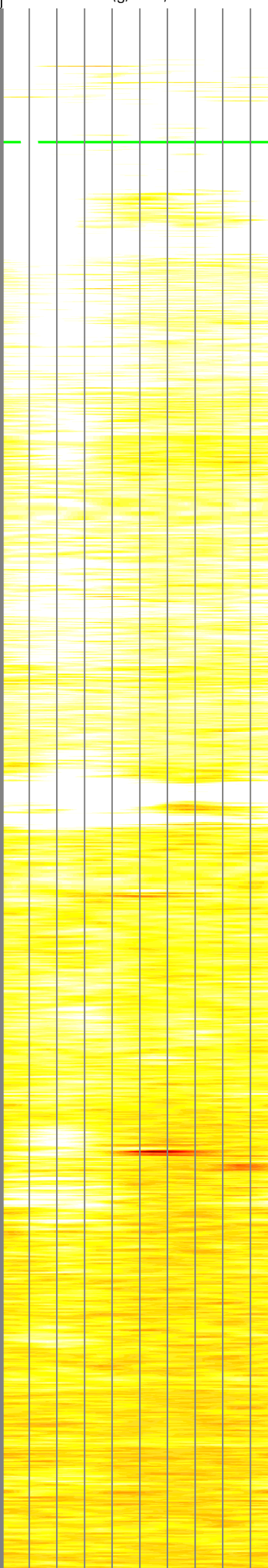
ADNOC RM
0 c/min 200



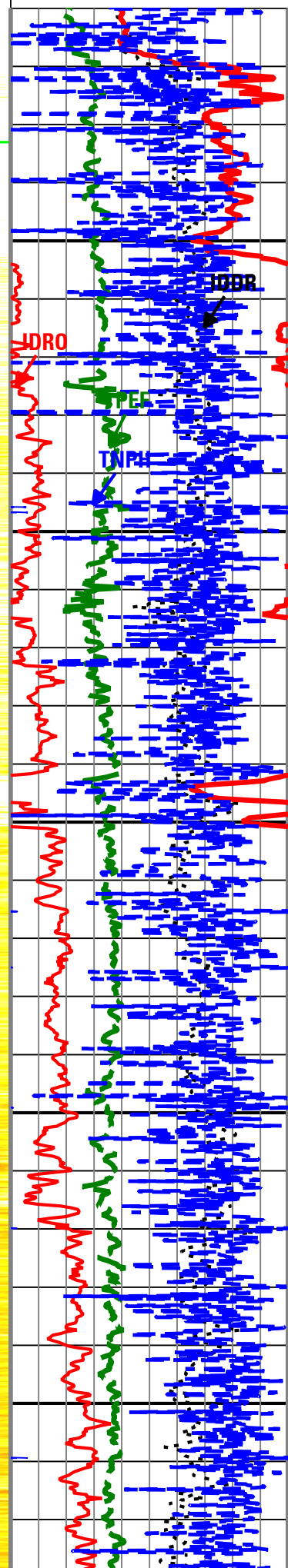
ohm.m 0.2 20

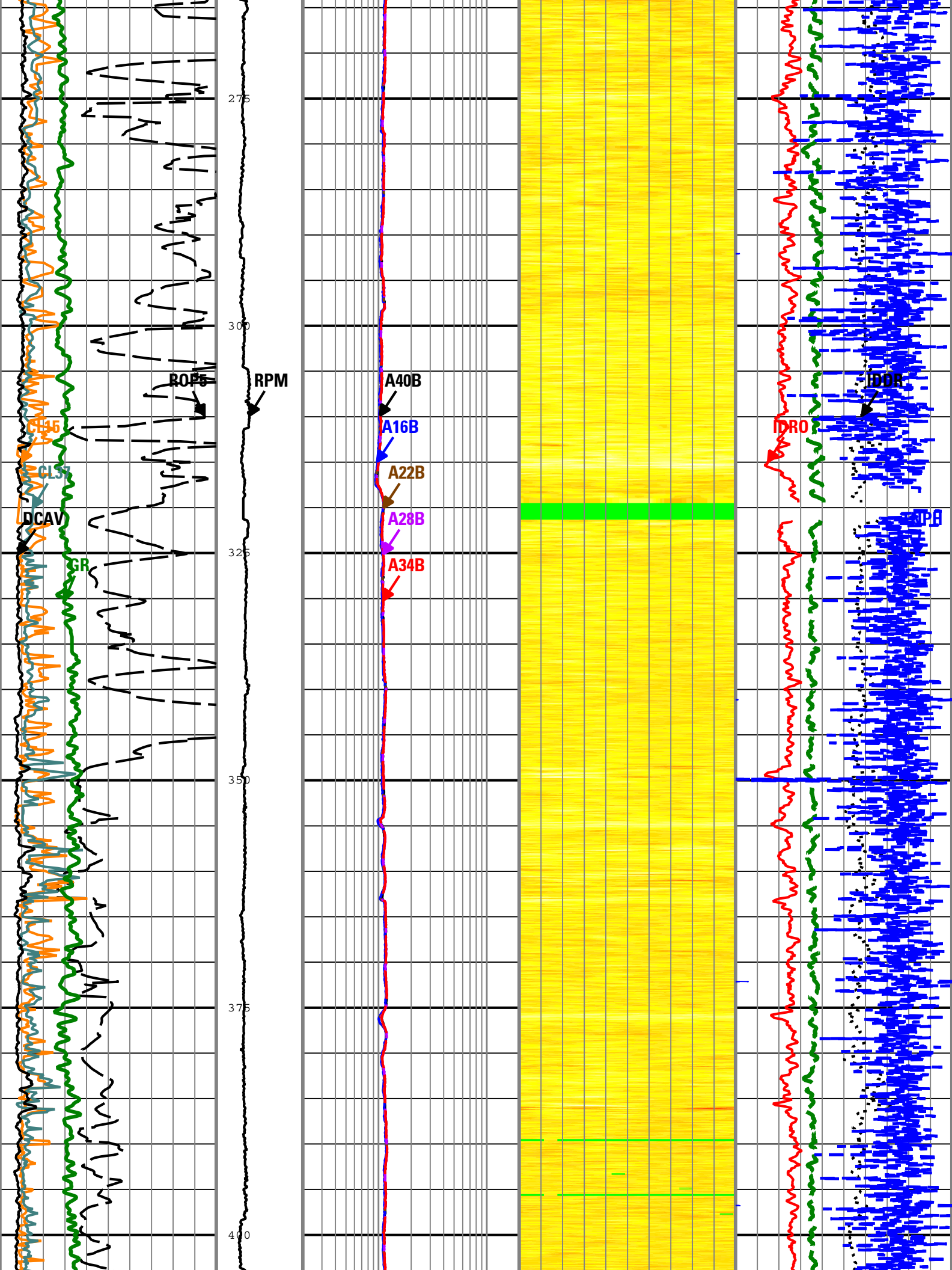


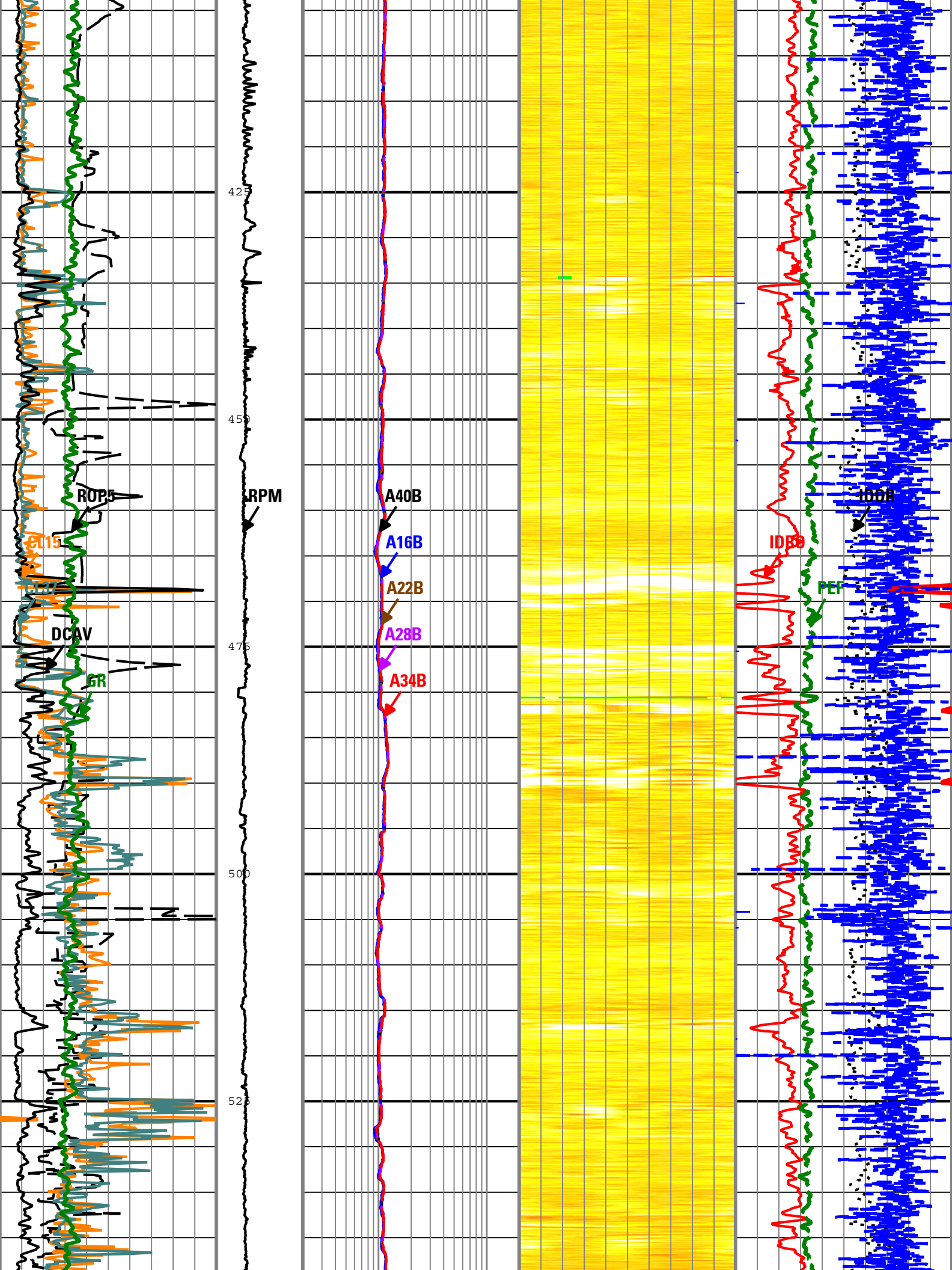
ADNOC Bulk Density Image,
16-Sector ADN6C RM
(g/cm3)

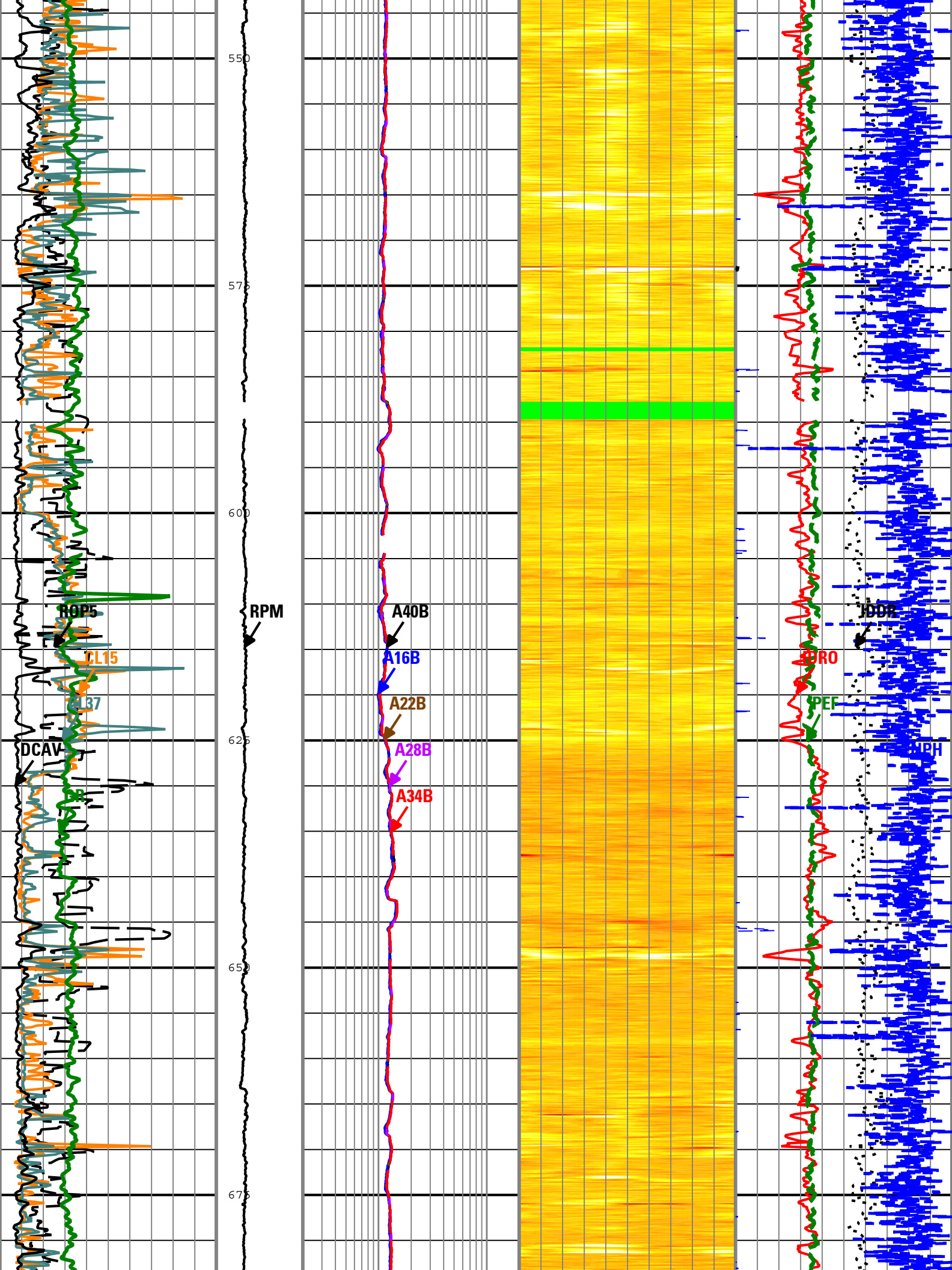


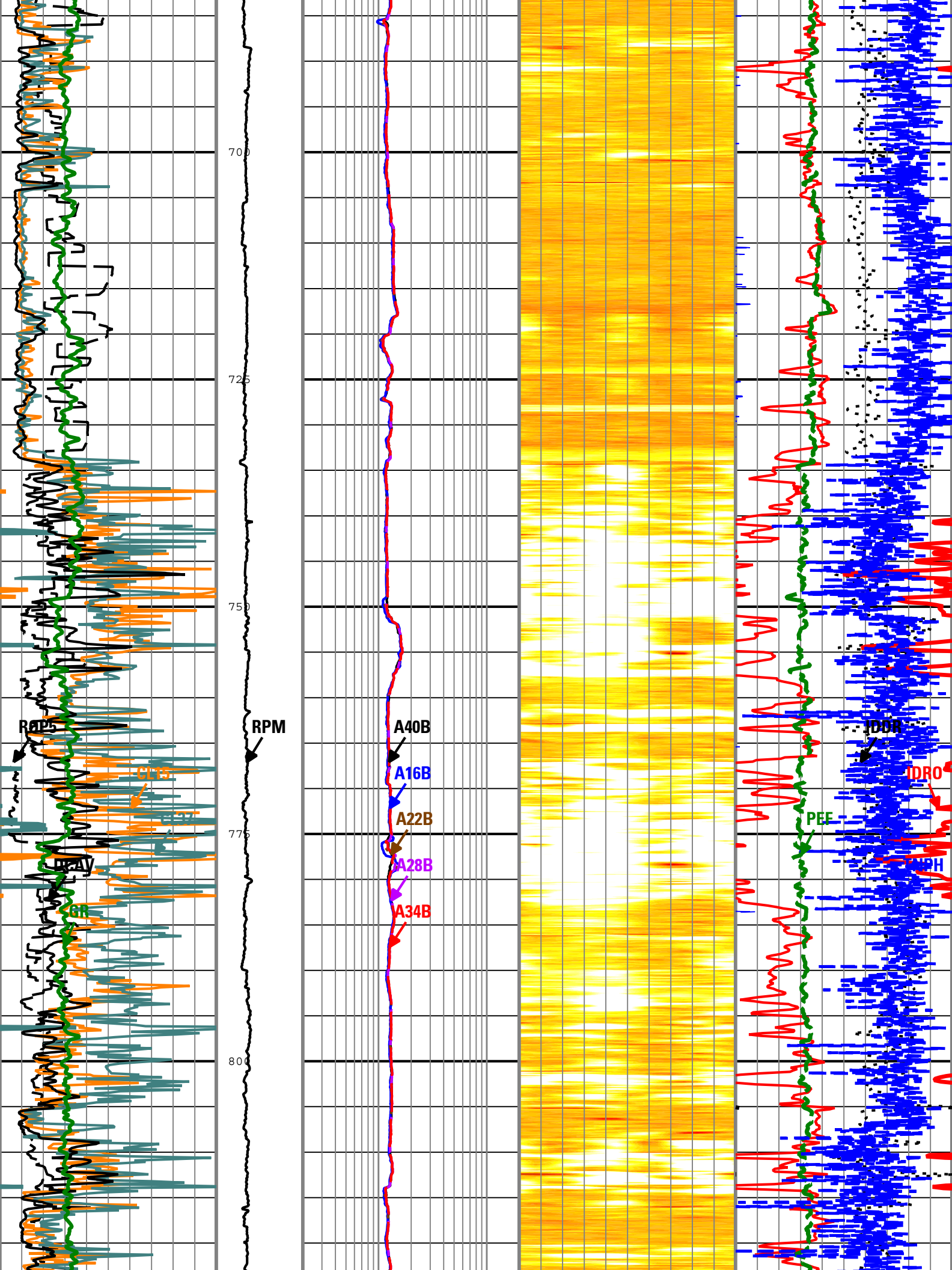
(TNHF) ADN6C RM
45 pu -15

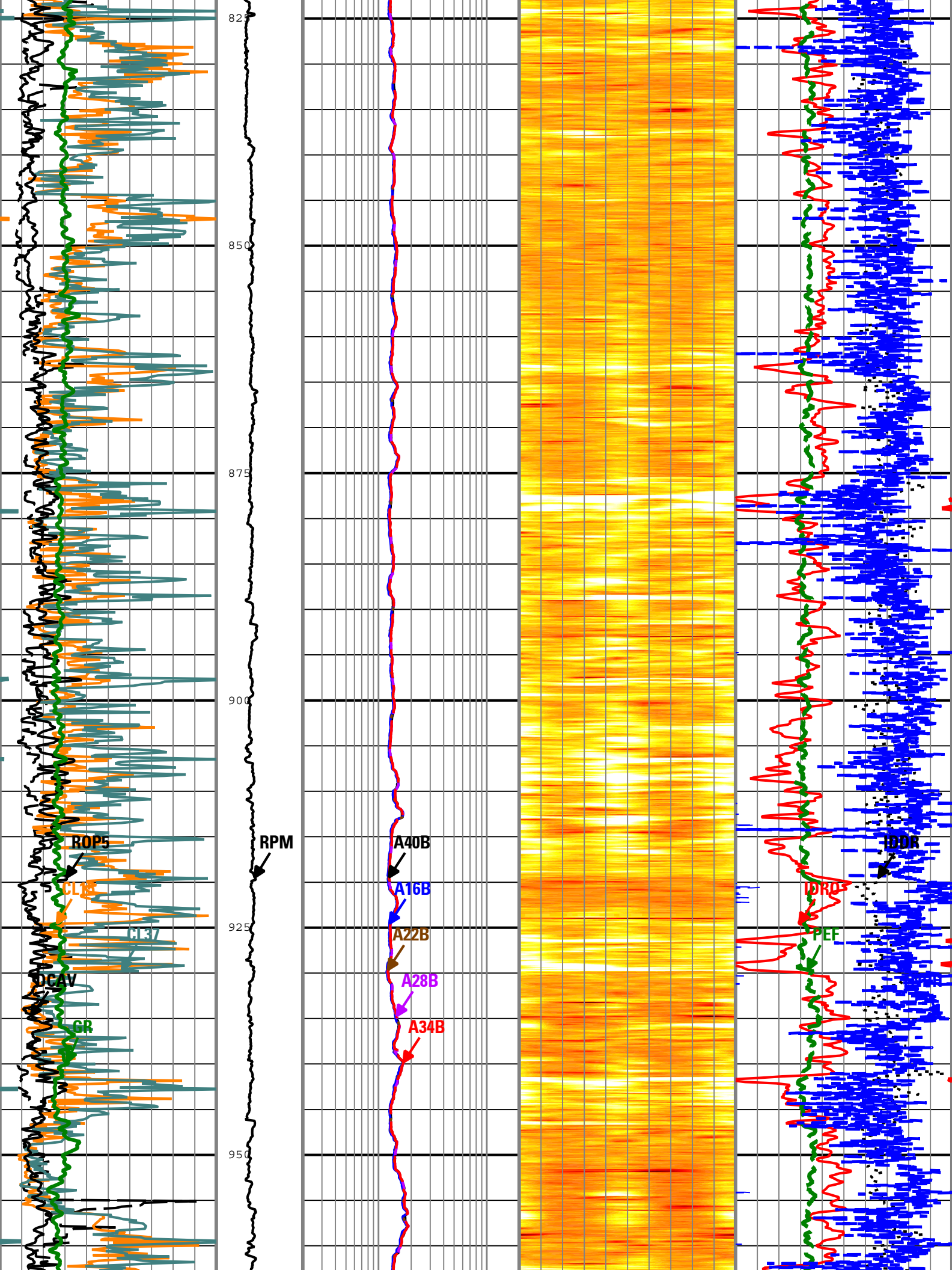


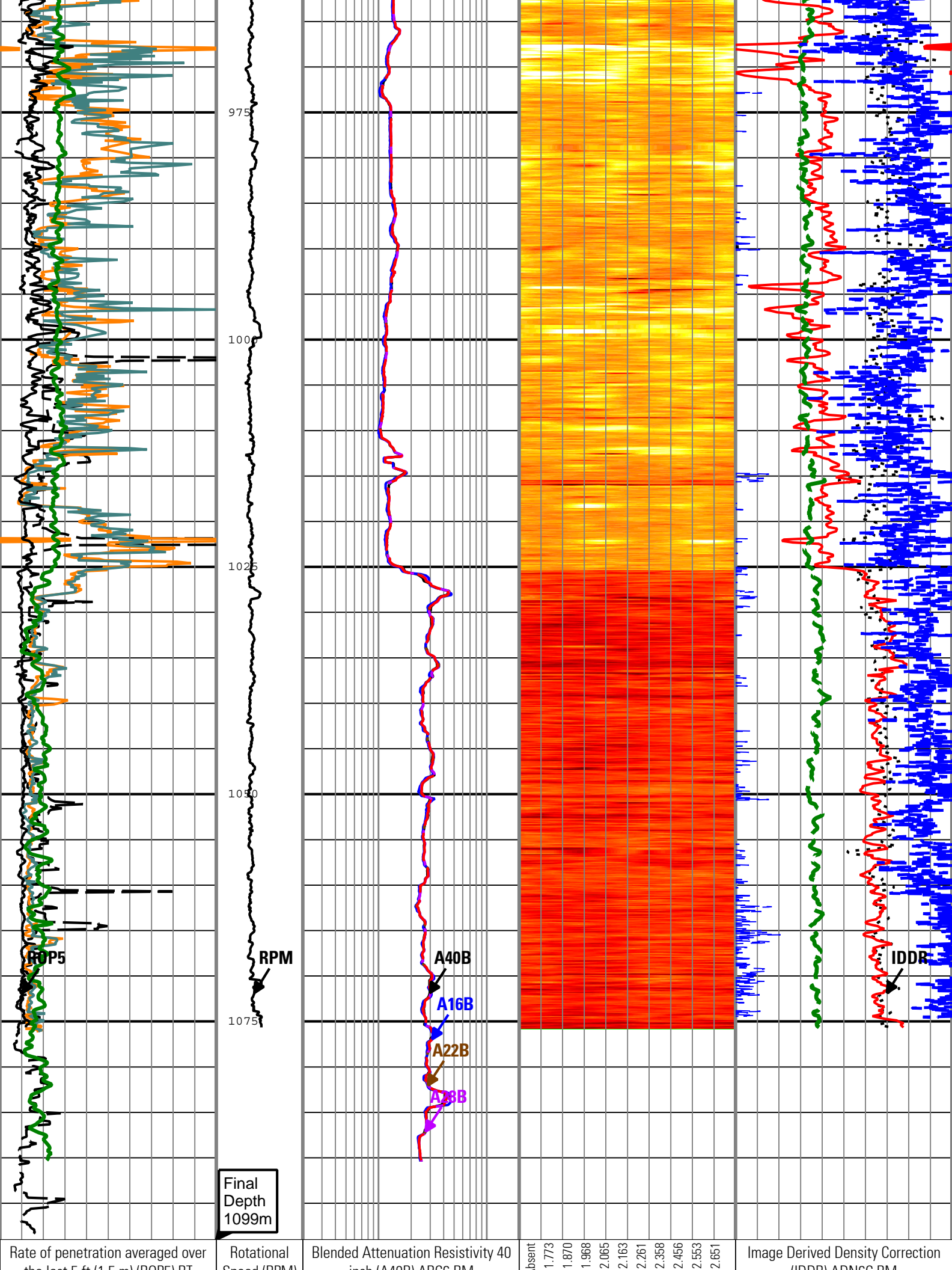












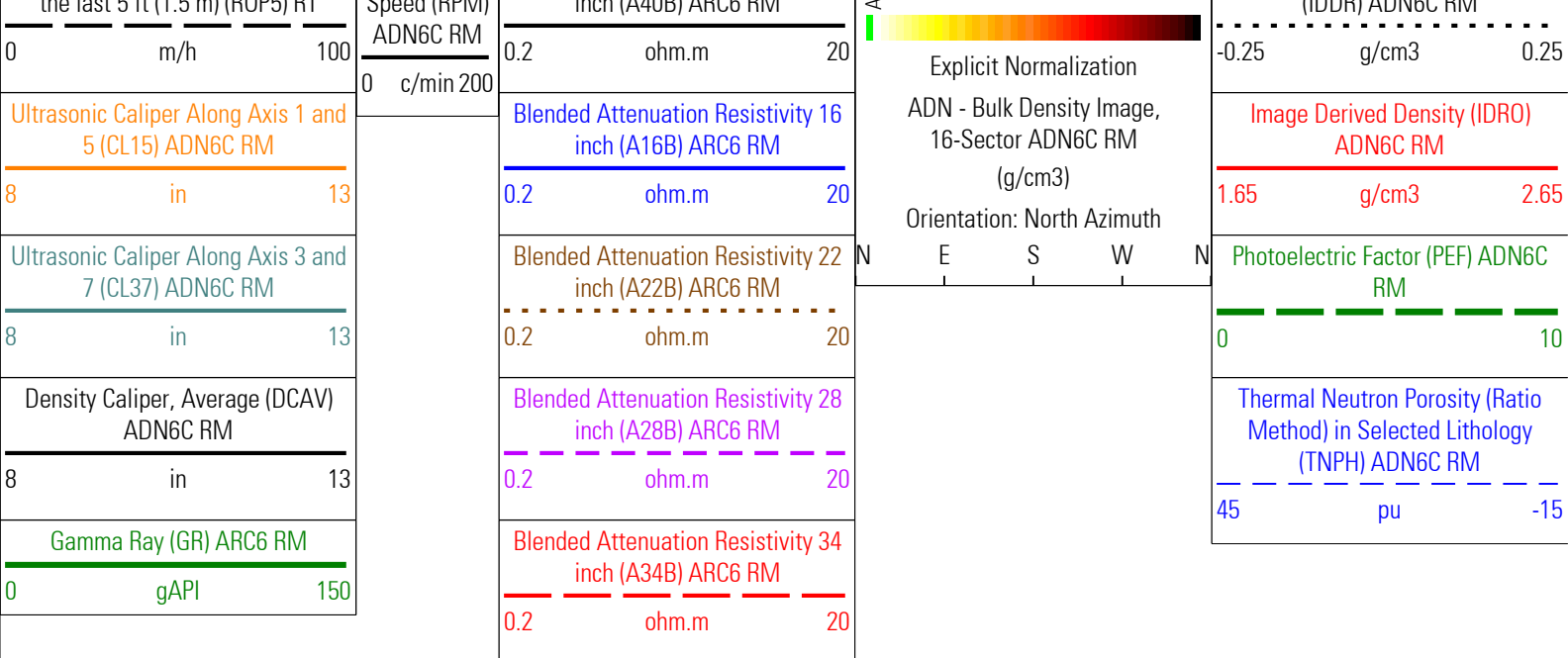
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT

Rotational Speed (RPM)

Blended Attenuation Resistivity 40 inch (A40B) ARCG-PM

absent
1.773
1.870
1.968
2.065
2.163
2.261
2.358
2.456
2.553
2.651

Image Derived Density Correction (IDDR) ARCG-PM



Description: VDN6 LQC Format: Log (ADN + ARC Log) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth Creation Date: 24-Mar-2011 06:56:44

Channel Processing Parameters

Parameter	Description	ToolPath	Value	Unit
ALPHA_DEN_OPT	Density Enhanced Vertical Resolution Processing Switch	ADN6C:ADN6C:ADSE	Yes	
ALPHA_NEU_OPT	Neutron Enhanced Vertical Resolution Processing Switch	ADN6C:ADN6C:ADSE	Yes	
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHT	Bottom Hole Temperature	Borehole	100	degC
BS	Bit Size	COMPLETION	8.5	in
BSAL	Borehole Salinity	Borehole	31737.15	ppm
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	1.03	g/cm3
DFT	Drilling Fluid Type	Borehole	Water	
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
FSAL	Formation Salinity	Borehole	6126.75	ppm
GCSE_RM	Generalized Caliper Selection for DnM recorded mode	Borehole	BS	
GGRD	Geothermal Gradient	Borehole	1	0.01 degF/ft
GRSE_RM	Generalized Mud Resistivity Selection for Recorded Mode	Borehole	REMS	
GTSE_RM	Generalized Temperature Selection for Recorded Mode	Borehole	GTEM_GRDSURF	
GTSE_RT	Generalized Temperature Selection for Realtime Mode	Borehole	GTEM_GRDSURF	
HIGH_BLEND	High Resistivity Threshold for Blending	ARC6:ARC6:ARDC	2	ohm.m
IDQT	Image Derived Quality Threshold	ADN6C:ADN6C:ADSE	2	
KF11	Far Bank 1 Tube 1 Processing Switch	ADN6C:ADN6C:ADSE	On	
KF12	Far Bank 1 Tube 2 Processing Switch	ADN6C:ADN6C:ADSE	On	
KF13	Far Bank 1 Tube 3 Processing Switch	ADN6C:ADN6C:ADSE	On	
KF21	Far Bank 2 Tube 1 Processing Switch	ADN6C:ADN6C:ADSE	On	
KF22	Far Bank 2 Tube 2 Processing Switch	ADN6C:ADN6C:ADSE	On	
KF23	Far Bank 2 Tube 3 Processing Switch	ADN6C:ADN6C:ADSE	On	
KN11	Near Bank 1 Tube 1 Processing Switch	ADN6C:ADN6C:ADSE	On	
KN21	Near Bank 2 Tube 1 Processing Switch	ADN6C:ADN6C:ADSE	On	
LOW_BLEND	Low Resistivity Threshold for Blending	ARC6:ARC6:ARDC	1	ohm.m
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
MST	Mud Sample Temperature	Borehole	23.89	degC
RMS	Resistivity of Mud Sample	Borehole	0.2	ohm.m
SHT	Surface Hole Temperature	Borehole	20	degC

STOH	Top of Hole Sector	ADN6C:ADN6C:ADSE	SECTOR_0	
TD	Total Measured Depth	Borehole	1099	m
TEMP_SEL_ARC	ARC Temperature Selection	ARC6:ARC6:ARDC	Annular	
USIN	Ultrasonic Sensor Inset	ADN6C:ADN6C:ADSE	0.18	in

Tool Control Parameters

Parameter	Description	ToolPath	Value	Unit
OFFBTM_TH	Threshold for deciding whether the bit is off bottom	DnMWorkflow	0	m

Detailed Calibration Record

RAB6 : 6.75-in. geoVISION resistivity tool Calibration M2 at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
C21M2T1 Monitor 2 at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	0.9990	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration M2 at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
C22M2T2 Monitor 2 at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0044	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration M0 at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
C01M0T1 Monitor 0 at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	0.9986	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration M0 at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
C02M0T2 Monitor 0 at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0041	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration Ring at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CR1RINGT1 Ring at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0029	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration Ring at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CR2RINGT2 Ring at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0091	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BD at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CD1BDT1 Button Deep at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0078	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BD at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CD2BDT2 Button Deep at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0137	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BM at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CM1BMT1 Button Medium at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0024	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BM at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		

Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CM2BMT2 Button Medium at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0084	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BS at T1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CS1BST1 Button Shallow at T1 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0064	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration BS at T2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 05:04:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity

Description	Min/Nominal/Max	Shop	Unit
CS2BST2 Button Shallow at T2 Calibration Coefficient	0.9750 / 1.0000 / 1.0250	1.0126	

RAB6 : 6.75-in. geoVISION resistivity tool Calibration Gamma Ray Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Electronics Chassis	RBEC	236

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	18-Feb-2011 04:26:29 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Gamma Ray: Blanket

Description	Min/Nominal/Max	Shop	Unit
GR_GAIN Gamma Ray Calibration Gain	0.7500 / 1.0000 / 1.2500	1.0259	

ARC6 : Calibration Resistivity - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Elec. Chassis HP w/o AIM Receiver	AREA	556

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	27-Feb-2011 04:01:10 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Resistivity: Air

Description	Min/Nominal/Max	Shop	Unit
ATT1F2AIR Attenuation T1 at 2 MHz	6.500 / 8.500 / 10.500	8.868	dB
ATT2F2AIR Attenuation T2 at 2 MHz	4.500 / 6.500 / 8.500	6.071	dB
ATT3F2AIR Attenuation T3 at 2 MHz	2.500 / 4.500 / 6.500	5.496	dB
ATT4F2AIR Attenuation T4 at 2 MHz	2.600 / 4.600 / 6.600	3.975	dB
ATT5F2AIR Attenuation T5 at 2 MHz	1.600 / 3.600 / 5.600	4.046	dB
PST1F2AIR	-3.900 / 0.100 / 4.100	-1.326	deg

Phase Shift T1 at 2 MHz			
PST2F2AIR Phase Shift T2 at 2 MHz	-3.900 / 0.100 / 4.100	1.331	deg
PST3F2AIR Phase Shift T3 at 2 MHz	-3.900 / 0.100 / 4.100	-1.391	deg
PST4F2AIR Phase Shift T4 at 2 MHz	-3.900 / 0.100 / 4.100	1.282	deg
PST5F2AIR Phase Shift T5 at 2 MHz	-3.900 / 0.100 / 4.100	-1.412	deg
ATT1F4AIR Attenuation T1 at 400 KHz	6.500 / 8.500 / 10.500	8.824	dB
ATT2F4AIR Attenuation T2 at 400 KHz	4.500 / 6.500 / 8.500	6.124	dB
ATT3F4AIR Attenuation T3 at 400 KHz	2.500 / 4.500 / 6.500	5.448	dB
ATT4F4AIR Attenuation T4 at 400 KHz	2.600 / 4.600 / 6.600	4.037	dB
ATT5F4AIR Attenuation T5 at 400 KHz	1.600 / 3.600 / 5.600	4.002	dB
PST1F4AIR Phase Shift T1 at 400 KHz	-3.900 / 0.100 / 4.100	1.374	deg
PST2F4AIR Phase Shift T2 at 400 KHz	-3.900 / 0.100 / 4.100	-1.379	deg
PST3F4AIR Phase Shift T3 at 400 KHz	-3.900 / 0.100 / 4.100	1.338	deg
PST4F4AIR Phase Shift T4 at 400 KHz	-3.900 / 0.100 / 4.100	-1.422	deg
PST5F4AIR Phase Shift T5 at 400 KHz	-3.900 / 0.100 / 4.100	1.389	deg

ARC6 : Calibration Gamma Ray - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Elec. Chassis HP w/o AIM Receiver	AREA	556
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	27-Feb-2011 10:57:06 PM - Valid		
Calibration Source	Time Frame File		
Calibration Type: Gamma Ray: Blanket			
Description	Min/Nominal/Max	Shop	Unit
GR_GAIN Gamma Ray Calibration Gain	0.580 / 1.000 / 1.250	1.130	

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Density LS Window 3 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
	Collar, IBS 8-1/4, P550	ADDC	YJ56
	Retrievable Neutron Gamma Src Plugless	RNGS	01-21
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		
Calibration Type: Density: LS Window 3			
Description	Min/Nominal/Max	Shop	Unit
LSW3_BG LS window 3 - Background	30.0 / 52.5 / 75.0	47.4	1/s
LSW3_AL LS window 3 - Al	75.0 / 537.5 / 1000.0	161.0	1/s
LSW3_MG LS window 3 - Mg	500.0 / 3000.0 / 5500.0	1093.7	1/s
RHOL_H2O Long spacing water density	1.024 / 1.039 / 1.054	1.049	g/cm3

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Density SS Window 1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		

Calibration Source	Time Frame File		
Calibration Type: Density: SS Window 1			
Description	Min/Nominal/Max	Shop	Unit
SSW1_BG SS window 1 - Background	75.0 / 125.0 / 175.0	104.0	1/s
SSW1_AL SS window 1 - Al	750.0 / 2625.0 / 4500.0	1377.6	1/s
SSW1_MG SS window 1 - Mg	1500.0 / 5750.0 / 10000.0	2693.7	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Density SS Window 3 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Density: SS Window 3

Description	Min/Nominal/Max	Shop	Unit
SSW3_BG SS window 3 - Background	350.0 / 550.0 / 750.0	445.6	1/s
SSW3_AL SS window 3 - Al	2000.0 / 8500.0 / 15000.0	4146.8	1/s
SSW3_MG SS window 3 - Mg	3500.0 / 14250.0 / 25000.0	6590.8	1/s
RHOS_H2O Short spacing water density	1.096 / 1.126 / 1.156	1.147	g/cm3

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 1 Tube 1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Far 1 Tube 1

Description	Min/Nominal/Max	Shop	Unit
FR11_AIR Far 1 tube 1 - Air	13.300 / 21.150 / 29.000	16.618	1/s
FR11_ROD Far 1 tube 1 - Rod	3.900 / 5.700 / 7.500	4.276	1/s
FR11_H2O Far 1 tube 1 - Water	1.900 / 2.800 / 3.700	2.099	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 1 Tube 2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Far 1 Tube 2

Description	Min/Nominal/Max	Shop	Unit
FR12_AIR Far 1 tube 2 - Air	13.300 / 21.150 / 29.000	17.654	1/s
FR12_ROD Far 1 tube 2 - Rod	3.900 / 5.700 / 7.500	4.442	1/s
FR12_H2O Far 1 tube 2 - Water	1.900 / 2.800 / 3.700	2.180	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 1 Tube 3 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297
Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		

Calibration Source	Time Frame File		
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Calibration Type: Neutron: Far 1 Tube 3

Description	Min/Nominal/Max	Shop	Unit
FR13_AIR Far 1 tube 3 - Air	13.300 / 21.150 / 29.000	17.334	1/s
FR13_ROD Far 1 tube 3 - Rod	3.900 / 5.700 / 7.500	4.303	1/s
FR13_H2O Far 1 tube 3 - Water	1.900 / 2.800 / 3.700	2.085	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 2 Tube 1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Far 2 Tube 1

Description	Min/Nominal/Max	Shop	Unit
FR21_AIR Far 2 tube 1 - Air	13.300 / 21.150 / 29.000	17.545	1/s
FR21_ROD Far 2 tube 1 - Rod	3.900 / 5.700 / 7.500	4.402	1/s
FR21_H2O Far 2 tube 1 - Water	1.900 / 2.800 / 3.700	2.187	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 2 Tube 2 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Far 2 Tube 2

Description	Min/Nominal/Max	Shop	Unit
FR22_AIR Far 2 tube 2 - Air	13.300 / 21.150 / 29.000	17.396	1/s
FR22_ROD Far 2 tube 2 - Rod	3.900 / 5.700 / 7.500	4.234	1/s
FR22_H2O Far 2 tube 2 - Water	1.900 / 2.800 / 3.700	2.146	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Far 2 Tube 3 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297

Calibration Dates	Shop Calibration		
Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Far 2 Tube 3

Description	Min/Nominal/Max	Shop	Unit
FR23_AIR Far 2 tube 3 - Air	13.300 / 21.150 / 29.000	16.993	1/s
FR23_ROD Far 2 tube 3 - Rod	3.900 / 5.700 / 7.500	4.233	1/s
FR23_H2O Far 2 tube 3 - Water	1.900 / 2.800 / 3.700	2.091	1/s
NEUT_PORO_H2O_FAR Far Neutron Water Porosity	86.000 / 103.500 / 121.000	95.000	pu

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Near 1 Tube 1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297

Calibration Dates	Shop Calibration		
Date & Time / Date Validity			
Calibration Source			

Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
Calibration Source	Time Frame File		

Calibration Type: Neutron: Near 1 Tube 1

Description	Min/Nominal/Max	Shop	Unit
NR11_AIR Near 1 tube 1 - Air	400.000 / 575.000 / 750.000	444.159	1/s
NR11_ROD Near 1 tube 1 - Rod	640.000 / 895.000 / 1150.000	721.410	1/s
NR11_H2O Near 1 tube 1 - Water	275.000 / 412.500 / 550.000	318.322	1/s

ADN6C : 6.75-in. Azimuthal Density Neutron Calibration Neutron Near 2 Tube 1 Calibration - Run 01

Primary Set Components	Description	Tool Element	Serial Number
	Chassis, Hi-Pres, Non-Mag	ADSE	297

Calibration Dates Shop Calibration

Date & Time / Date Validity	23-Feb-2011 06:44:34 PM - Valid		
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Calibration Source	Time Frame File		
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Calibration Type: Neutron: Near 2 Tube 1

Description	Min/Nominal/Max	Shop	Unit
NR21_AIR Near 2 tube 1 - Air	400.000 / 575.000 / 750.000	446.312	1/s
NR21_ROD Near 2 tube 1 - Rod	640.000 / 895.000 / 1150.000	717.931	1/s
NR21_H2O Near 2 tube 1 - Water	275.000 / 412.500 / 550.000	316.561	1/s

Survey Record

Survey Calculation

Method :	Minimum Radius of Curvature	DLS Method :	Lubinski
North Reference :	True North	Total Correction Formula :	Magnetic Dec

Rig Location

Latitude :	8.59 degrees	Longitude :	-84.08 degrees
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Tie In Point

Measured Depth:	0.00 m	Inclination:	0.00 deg	Azimuth:	0.00 deg
True Vertical Depth:	0.00 m	North Displacement:	0.00 m	East Displacement:	0.00 m
N/-S VSec Origin:	0.00 m	E/-W VSec Origin:	0.00 m	Vertical Section Azimuth:	0.00 deg

D&I Inits Computed and Values Used - Run 01

Geomagnetic Model :	BGGM 2010	Geomagnetic Date :	19-Mar-2011
Computed Location B :	34288.69 nT +/- 300.00nT	Used Location B :	34288.69 nT +/- 300.00nT
Computed Location G :	32.09 ft/s2 +/- 0.08ft/s2	Used Location G :	32.09 ft/s2 +/- 0.08ft/s2
Computed Magnetic Dip :	35.35 deg +/- 0.45deg	Used Magnetic Dip :	35.35 deg +/- 0.45deg
Computed Magnetic Dec :	-0.61 deg	Used Magnetic Dec :	-0.61 deg
Computed Total Correction :	-0.61 deg	Used Total Correction :	-0.61 deg

Survey Quality Index

0 : Long, passed all criteria 2 : Long, failed mag criteria

Survey Correction Index

0 : No correction

Seq	MD (m)	Incl (deg)	Azim (deg)	Course (m)	TVD (m)	V Sec (m)	N/ -S (m)	E/ -W (m)	Closure (m)	at Azim (deg)	DLS deg/100ft	Tool Type	QI	CI
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP		
2	131.49	1.26	187.64	131.49	131.48	-1.43	-1.43	-0.19	1.45	187.64	0.29	TeleScope	2	0
3	151.61	1.64	218.55	20.12	151.60	-1.88	-1.88	-0.40	1.92	192.06	1.29	TeleScope	2	0
4	198.95	1.56	218.41	47.34	198.92	-2.91	-2.91	-1.22	3.16	202.78	0.05	TeleScope	0	0
5	227.11	1.46	217.88	28.16	227.07	-3.49	-3.49	-1.68	3.88	205.69	0.10	TeleScope	0	0

6	238.14	1.48	217.86	11.03	238.10	-3.72	-3.72	-1.85	4.15	206.51	0.04	TeleScope	0	0
7	738.55	1.07	230.42	500.40	738.37	-11.79	-11.79	-9.42	15.10	218.63	0.03	TeleScope	0	0
8	815.86	0.72	225.72	77.32	815.68	-12.60	-12.60	-10.33	16.29	219.36	0.14	TeleScope	2	0
9	958.01	0.79	181.29	142.15	957.82	-14.20	-14.20	-10.99	17.96	217.74	0.12	TeleScope	0	0
10	995.43	0.96	172.97	37.41	995.23	-14.77	-14.77	-10.96	18.39	216.58	0.17	TeleScope	0	0
11	1006.32	1.63	156.44	10.90	1006.12	-15.00	-15.00	-10.89	18.53	215.97	2.14	TeleScope	0	0
12	1044.81	1.08	151.02	38.49	1044.60	-15.82	-15.82	-10.49	18.98	213.55	0.45	TeleScope	2	0
13	1063.64	1.25	144.54	18.83	1063.43	-16.14	-16.14	-10.29	19.14	212.51	0.35	TeleScope	0	0

Company: IODP
Lamont - Doherty Earth Observatory

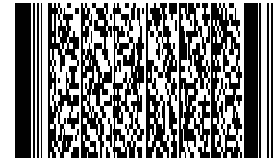
Well: U1379A

Field: Expedition 334

Rig Name: JOIDES Resolution

State: Puntarenas

Country: Costa Rica



Schlumberger

6.75" LWD Service

Density / Porosity / Induction Resistivity

Recorded Mode Data