

MicroScope HD Resistivity Image

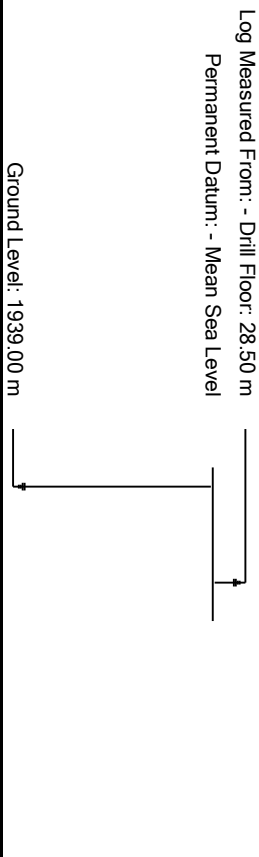
Gamma Ray - Resistivity - HD Resistivity Image

Recorded Mode Log, TVDSS 1:200



Company:	JAMSTEC	UWID:	
Well:	C0002S	Rig Name:	D/V Chiky
Field:	C0002	Rig Type:	Drill ship
Rig Name:	D/V Chiky		
State:	Wakayama		
Country:	Japan		

Latitude:	33° 18' 3.042" N		
Longitude:	136° 38' 12.174" E		
Block:			
FL:	Pacific Ocean		
FL1:	X=652382.39		
FL2:	Y=3685843.62		



Acquisition Dates:	05-Feb-2019 -- 08-Feb-2019	Other Services:	
Log Interval:	4787.13(m)TVD - 4886.34(m)TVD	Direction and Inclination	
Index Types:	SSTVD	seismic/VISION	
Index Scales:	1:200	Vortex + Xceed	
Depth Source:	Driller's Depth		
Depth Sensor:	DES		
Print Type:	Final		
Spud Date:	26-Oct-2018		

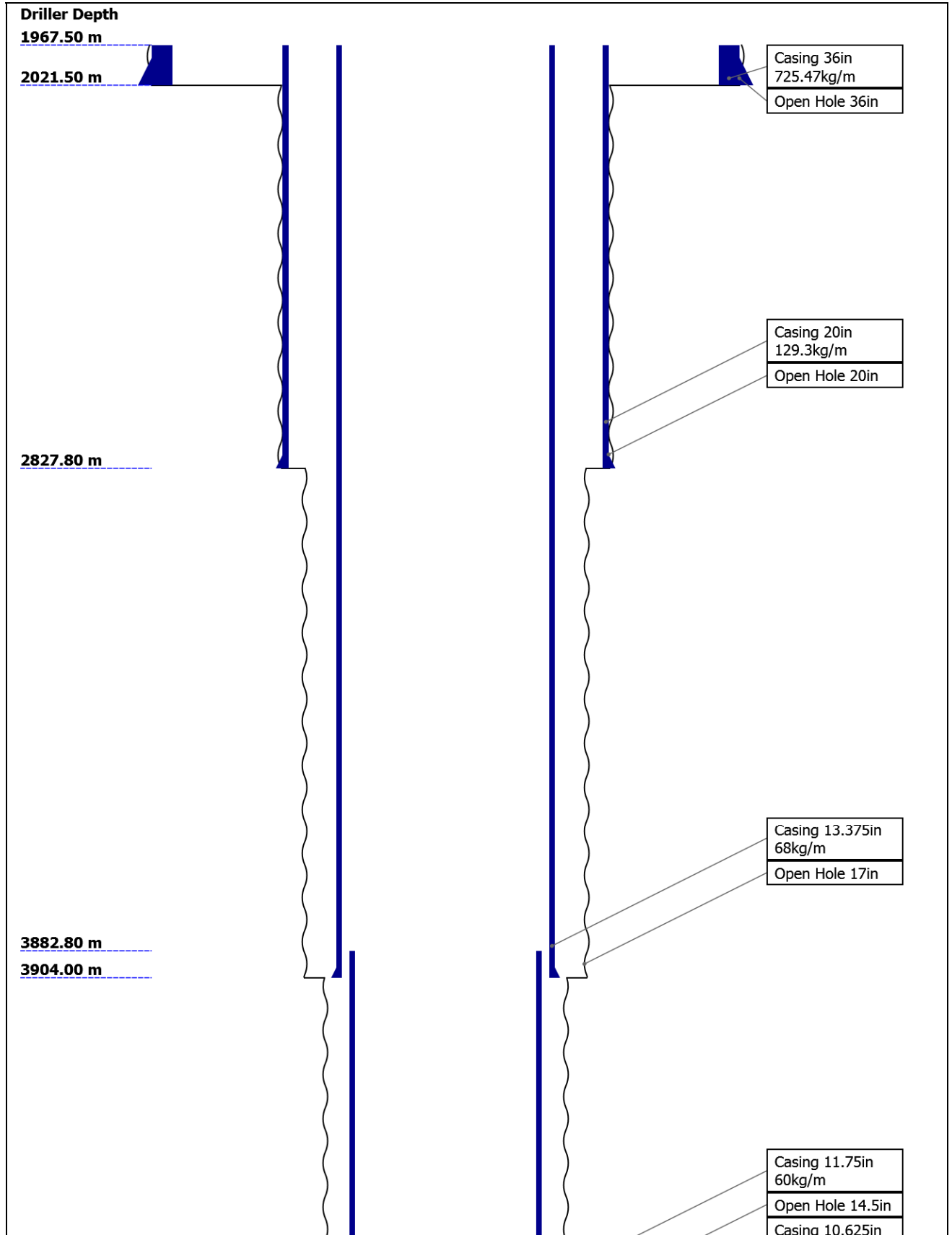
Disclaimer

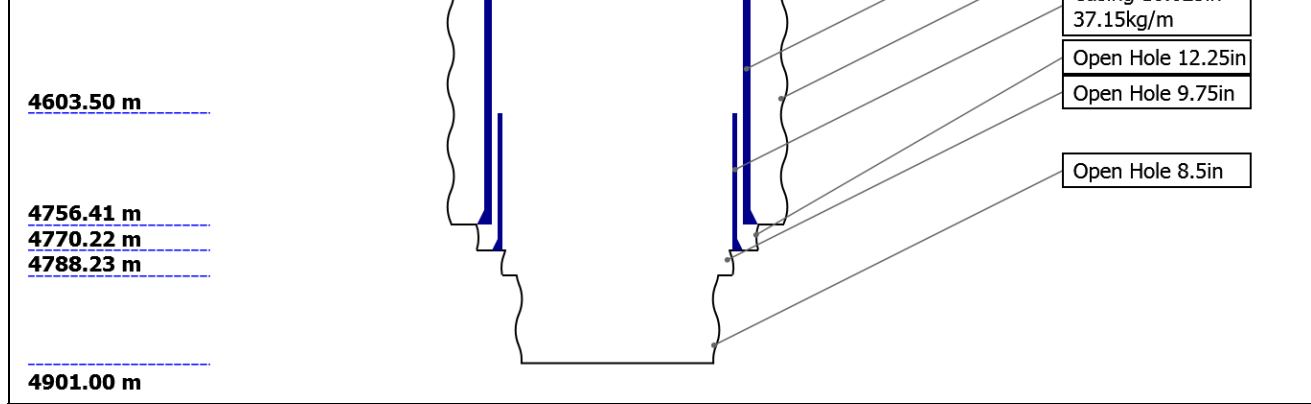
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Well Sketch





Borehole Size/Casing Record

Bit						
Bit Size (in)	36	20	17	14.5	12.25	9.75
Top Driller (m)	1967.5	2021.5	2827.8	3904	4756.41	4770.22
Bottom Driller (m)	2021.5	2827.8	3904	4756.41	4770.22	4788.23
Casing						
Size (in)	36	20	13.375	11.75	10.625	
Weight (kg/m)	725.47	129.3	68	60	37.15	
Inner Diameter (in)	33.429	19.188	12.734	11.104	10.186	
Grade	N/A	N/A	N/A	N/A	N/A	
Top Driller (m)	1967.5	1967.5	1967.5	3882.8	4603.5	
Bottom Driller (m)	2021.5	2827.8	3904	4756.41	4770.22	
Bit						
Bit Size (in)	8.5					
Top Driller (m)	4788.23					
Bottom Driller (m)	4901					
Casing						
Size						
Weight						
Inner Diameter						
Grade						
Top Driller						
Bottom Driller						

Operational Run Summary

Parameter (unit)	Run 2				
Date Log Started	05-Feb-2019				
Time Log Started	08:18:26				
Date Log Finished	08-Feb-2019				
Time Log Finished	23:31:48				
Bit Size (in)	8.500				
Bit Start Depth (m)	4788.92				
Bit Stop Depth (m)	4901.00				
Top Log Interval (m)	4788.92				

Bottom Log Interval (m)	4888.19				
Max Hole Deviation (deg)	2.89				
Azimuth of Max Deviation (deg)	257.63				
Logging Unit Number	OLU-MB8054				
Logging Unit Location	Zone2				
Recorded By	SMoriyama/Zhou Cai				
Witnessed By	Y.Sanada/Y.Kido				
Service Order Number	18JAP0007				

Borehole Fluids

Parameter(unit)	Run 2				
Fluid Type	Water				
Max Recorded Temperatures (degC)	37				
Source of Sample	Active Tank				
Salinity (ppm)	114670.1				
Density (g/cm3)	1.38				
Funnel Viscosity (s)	59				
Fluid Loss (cm3)	6.7				
PH	10.8				
Source RMF	Pressed				
RMC	Pressed				
RM @ Meas Temp (ohm.m@degC)	0.07 @ 21.2				
RMF @ Meas Temp (ohm.m@degC)	0.05 @ 21.5				
RMC @ Meas Temp (ohm.m@degC)	0.07 @ 21.4				
RM @ BHT (ohm.m@degC)	0.06 @ 30				
RMF @ BHT (ohm.m@degC)	0.04 @ 30				
RMC @ BHT (ohm.m@degC)	0.06 @ 30				
Total Solid (%)	18				
High Gravity Solids (%)					

Remarks and Equipment Summary

Run 2: Toolstring				Run 2: Remarks
Equip name X/O: 6 3/4"[2]:74 ET002-6/02	Length 58.69	MP name Schlumberger	Offset	Depth Reference is driller's depth measured from Rotary Table.
seismicVISION675 :42835	58.2	Schlumberger		Data presented is Recorded Mode data which was acquired while drilling.
				MicroScope record rate is depending on RPM.APWD record rate is 10s.
				arcVISION GR is environmentally corrected for bit size, mud weight, and potassium content in the mud (1.47% in Run3).
				Reason of POOH: BHA failure
			55.89	Drilling Time: 47.40 hrs
				Pumping Time: 57.34 hrs
			54.97	Connection in Lower CLink was twisted off and the lower part than this was left in hole.

SONICSCOPE6:H03 53.74
42

Schlumberger



— ROP 50.84

— Delta-T 49.63



TELE675-IWOB:B1 43.79
755

Schlumberger

— D&I 39.44

• — ROP 37.09

• — IWOB 36.07

ARC6:1805 35.24 Schlumberger

ROP 33.03

GR 31.96
Resistivity 31.91

Pressure 31.2

MI6:708 29.57 Schlumberger

ROP 27.65

Resistivity 26.71

UHRI_Bt1 25.82
UHRI_Bt2 25.81
UHRI_Bt3 25.8
UHRI_Bt4 25.79
NBI 25.79
UHRI 25.79
UHRI_Bt5 25.78
UHRI_Bt6 25.77
UHRI_Bt7 25.77
UHRI_Bt8 25.76
Bit Res, OBM 0.00
Bit Res, WBM 12.81

CLNK675:30228 24.41

Fit Sub: 6 3/4":TH0 21.87 Schlumberger
915936-1

Motor: 6 3/4":6150 21.16 Schlumberger
778



Filtr Sub: 6 3/4":US 12.8
KW867307-1

Schlumberger

X/O: 6 3/4"[1]:LT 11.59
GP622

Schlumberger

CLNKL675:33751 10.97

Schlumberger

PDXCEED_675:314 8.03
36

Schlumberger

D&I 4.16

ROP 3.37

Bit: 8 1/2" 0.26

Smith

TOOL_ZERO

Lengths are in m
Maximum Outer Diameter = 8.500 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Survey Record

Survey Calculation

Method : Minimum Radius of Curvature DLS Method : Lubinski
North Reference : Grid North Total Correction Formula : Magnetic Dec - Grid Convergence
Grid Convergence : 0.90 deg

Rig Location

Latitude : 33° 18' 3.042" N Longitude : 136° 38' 12.174" E

Tie In Point

Measured Depth: 4772.00 m Inclination: 1.23 deg Azimuth: 122.08 deg
True Vertical Depth: 4770.21 m North Displacement: 3.67 m East Displacement: 47.20 m
N-S VSec Origin: 3.67 m E/W VSec Origin: 47.20 m Vertical Section Azimuth: 160.00 deg

D&I Inits Computed and Values Used - Run 2

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 05-Feb-2019
Computed Location B : 46172.51 nT +/- 300.00nT Used Location B : 46172.51 nT +/- 300.00nT
Computed Location G : 998.92 mgn +/- 2.50mgn Used Location G : 998.92 mgn +/- 2.50mgn
Computed Magnetic Dip : 47.03 deg +/- 0.45deg Used Magnetic Dip : 47.03 deg +/- 0.45deg
Computed Magnetic Dec : -7.17 deg Used Magnetic Dec : -7.17 deg
Computed Total Correction : -8.07 deg Used Total Correction : -8.07 deg

Survey Quality Index

9 : Manual 28 : Tie-In Point

Survey Correction Index

0 : No correction

Survey Description Index

0 : Not Flagged Survey 7 : Projection to Bit

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/30m	Tool Type	QI	CI	DI
1	4772.00	1.23	122.08	----	4770.21	0.00	3.67	47.20	47.34	85.55	0.00	TIP	28	0	0
2	4786.06	1.13	256.75	14.06	4784.27	0.10	3.56	47.19	47.33	85.69	4.65	SingleShot	9	0	0
3	4794.51	0.80	37.26	8.45	4792.72	0.06	3.59	47.15	47.28	85.65	6.46	SingleShot	9	0	0
4	4804.29	0.81	29.65	9.78	4802.50	-0.02	3.70	47.22	47.37	85.52	0.33	SingleShot	9	0	0
5	4809.68	1.10	31.96	5.39	4807.89	-0.08	3.78	47.27	47.42	85.43	1.63	SingleShot	9	0	0
6	4820.42	1.32	52.44	10.74	4818.62	-0.18	3.94	47.42	47.59	85.25	1.35	SingleShot	9	0	0
7	4829.98	1.42	56.81	9.56	4828.18	-0.24	4.07	47.61	47.78	85.11	0.45	SingleShot	9	0	0
8	4839.14	0.58	348.19	9.16	4837.34	-0.31	4.18	47.69	47.88	84.99	4.34	SingleShot	9	0	0
9	4846.61	1.57	281.65	7.47	4844.81	-0.40	4.24	47.59	47.77	84.91	5.79	SingleShot	9	0	0
10	4859.60	2.89	257.63	12.99	4857.79	-0.54	4.20	47.09	47.28	84.90	3.67	SingleShot	9	0	0
11	4901.00	2.89	257.63	41.40	4899.14	-0.82	3.76	45.05	45.21	85.23	0.00	Other	9	0	7

Run 2

Run2_LWD Log

Software Version

Acquisition System	Version
Maxwell 2018 SP2	8.2.104493.3100
Application Patch	DnM_TestKit-PD-DHS31-2018-2_8.2.104864

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run 2	Drilling	Down	59.99 m	4900.93 m	05-Feb-2019 8:18:26 AM	08-Feb-2019 11:31:48 PM	No

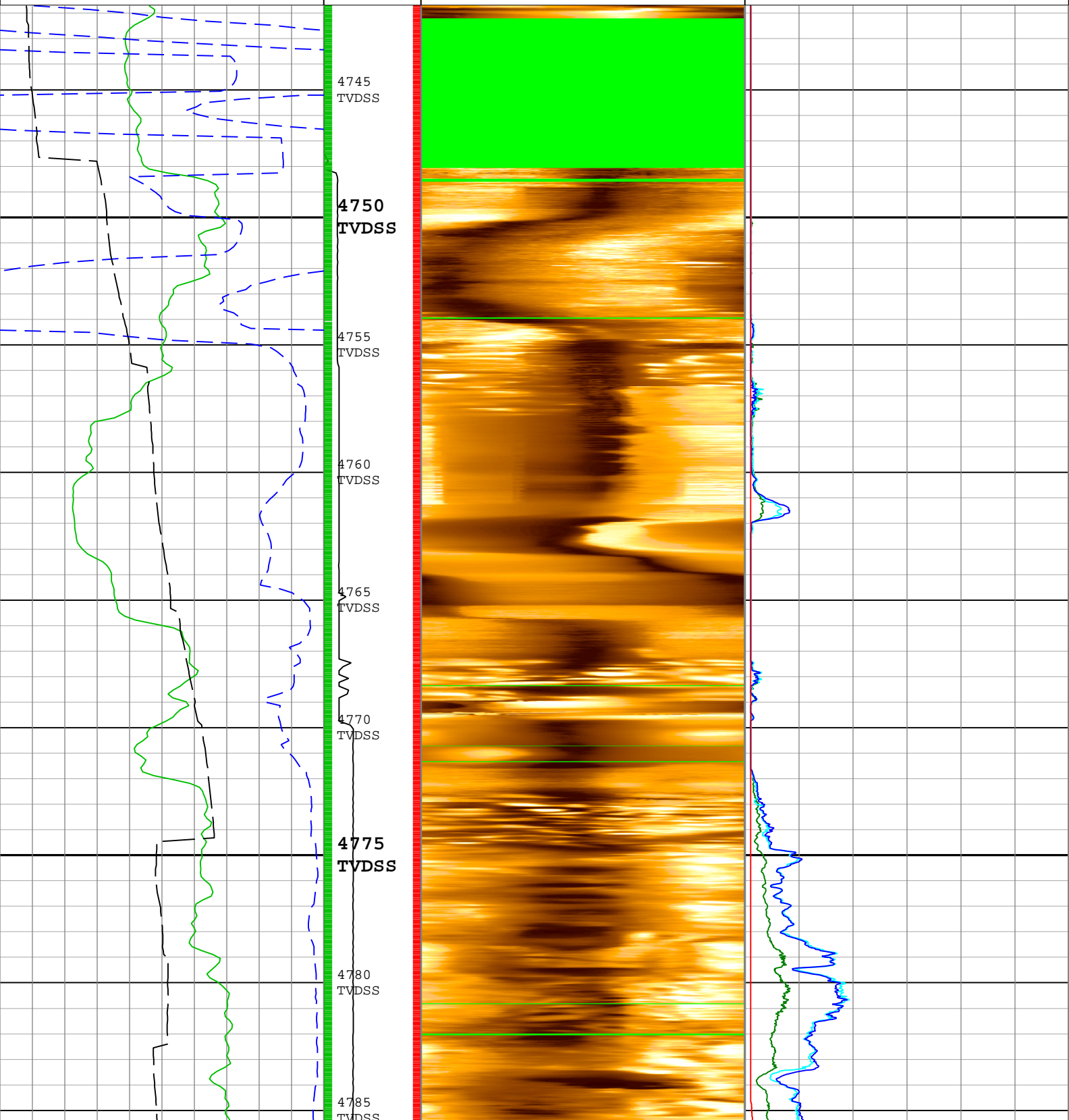
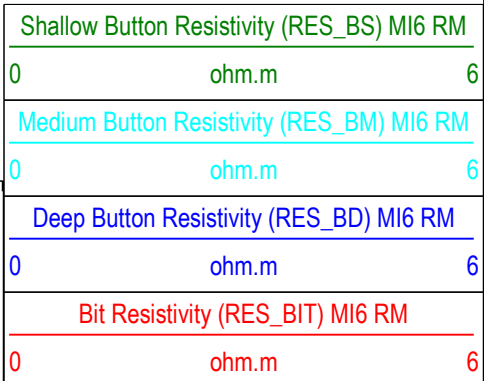
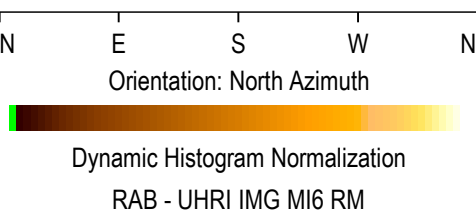
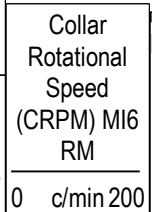
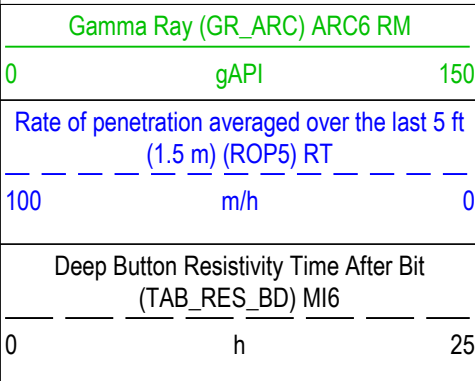
All depths are referenced to toolstring zero

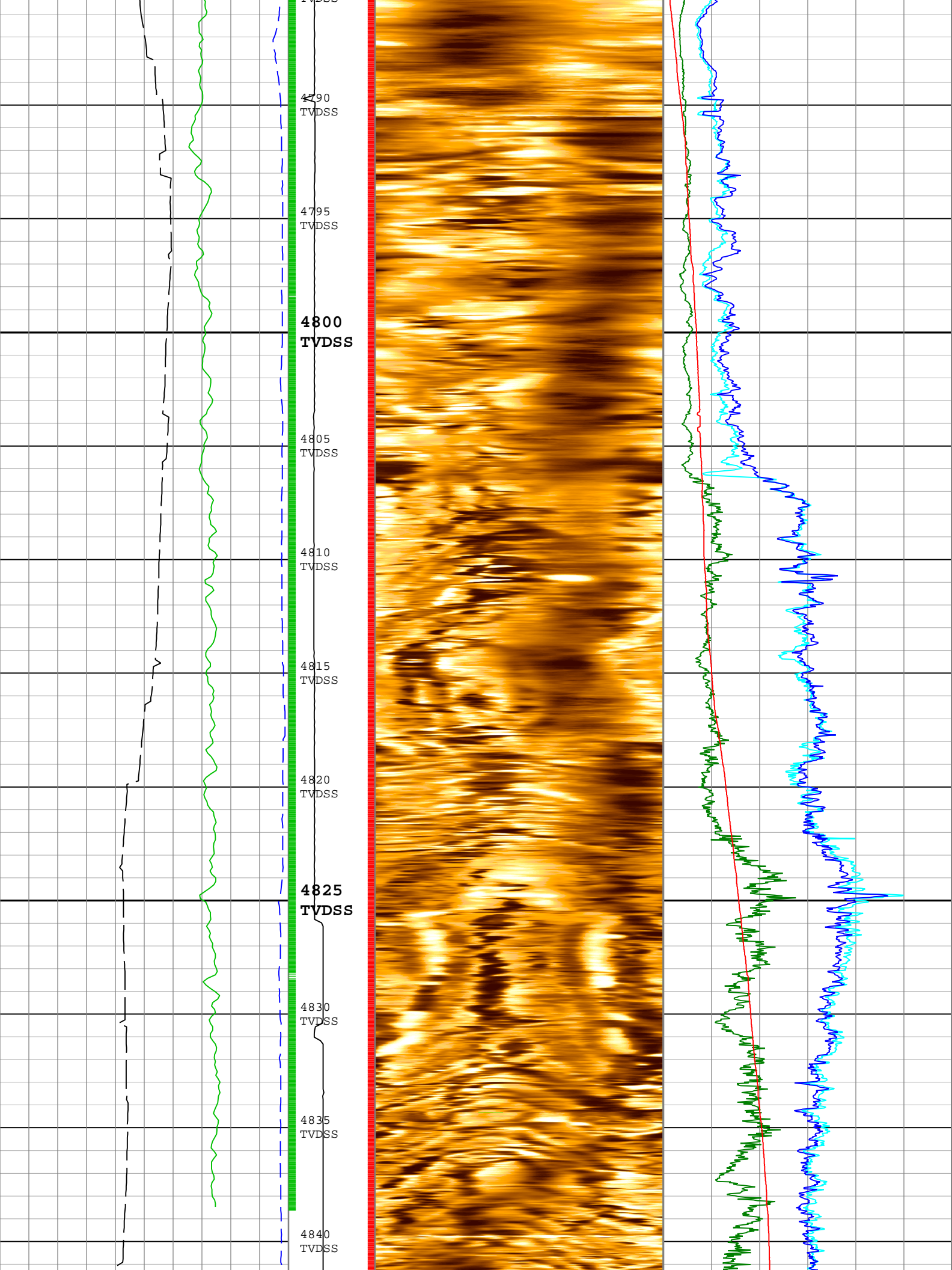
Log

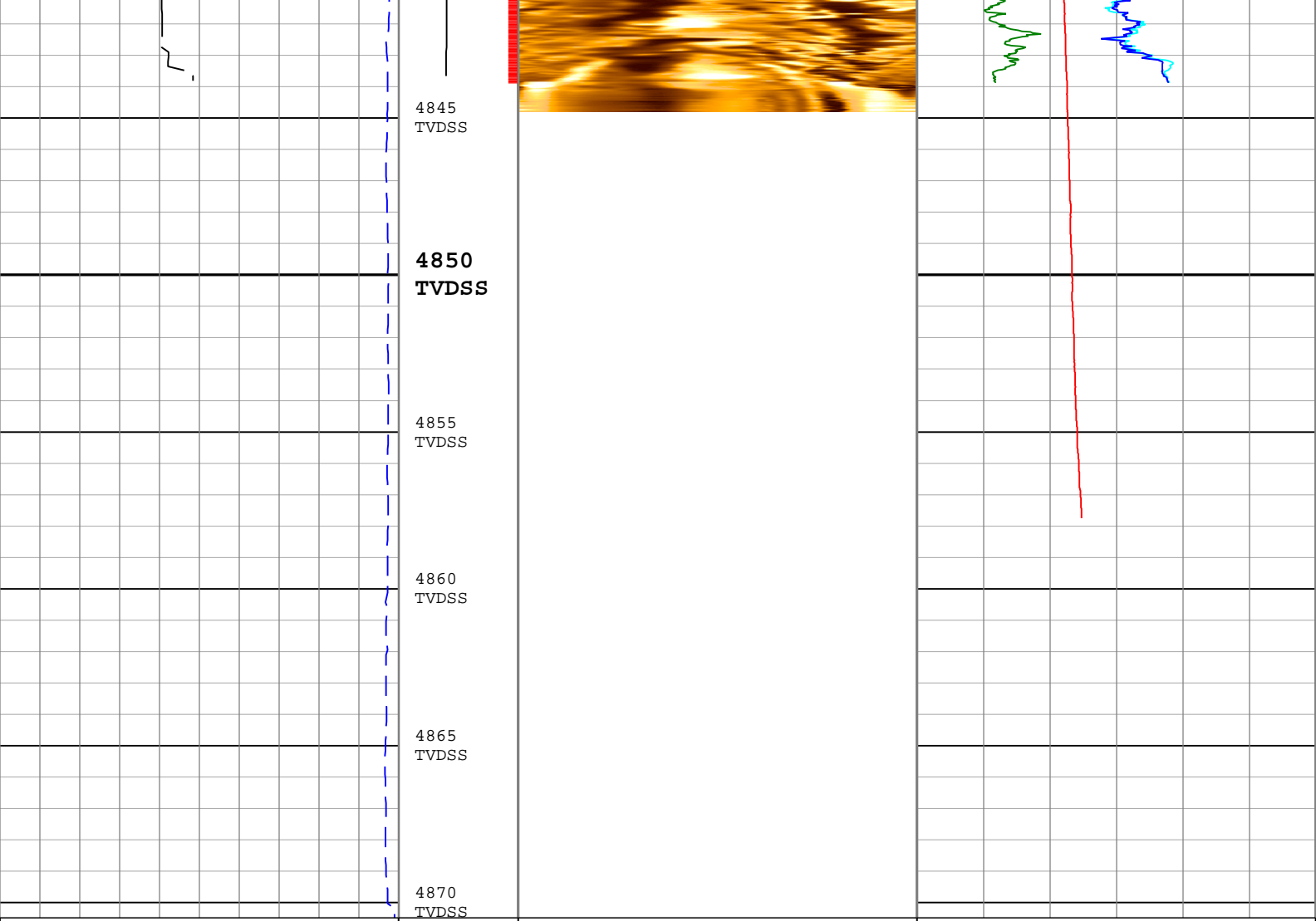
Company: JAMSTEC Well: C0002S

Run 2: Drilling: S005

Description: MI6 Resistivity RT Format: Log (UHRI_RM) Index Scale: 1:200 Index Unit: m Index Type: SSTVD Creation Date: 01-Mar-2019 13:51:11

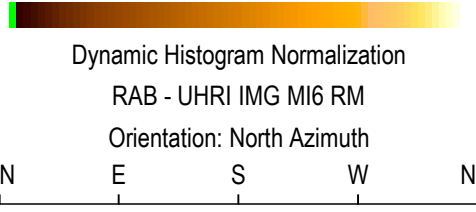






Gamma Ray (GR_ARC) ARC6 RM	
0	150
gAPI	
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT	
100	0
m/h	
Deep Button Resistivity Time After Bit (TAB_RES_BD) MI6	
0	25
h	

Collar Rotational Speed (CRPM) MI6 RM
0
c/min 200



Shallow Button Resistivity (RES_BS) MI6 RM	
0	6
ohm.m	
Medium Button Resistivity (RES_BM) MI6 RM	
0	6
ohm.m	
Deep Button Resistivity (RES_BD) MI6 RM	
0	6
ohm.m	
Bit Resistivity (RES_BIT) MI6 RM	
0	6
ohm.m	

-TICKS_RES - Resistivity Tick Marks MI6 RM

-TICK_ARC_GR - Gamma Ray Tick Marks ARC6 RM

Description: MI6 Resistivity RT Format: Log (UHRI_RM) Index Scale: 1:200 Index Unit: m Index Type: SSTVD Creation Date: 01-Mar-2019 13:51:11

Channel Processing Parameters

Run 2: Parameters

Parameter	Description	Tool	Value	Unit
BHK	Drilling Fluid Potassium Concentration	Borehole	1.47	%
BHT	Bottom Hole Temperature	Borehole	30	degC
BS	Bit Size	DNMSESSION	Depth Zoned	in
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	1.38	g/cm3
DFT_CATEGORY	Drilling Fluid Type	Borehole	Water	
GCSE_RM	Generalized Caliper Selection for DnM recorded mode	Borehole	BS	
GGRD	Geothermal Gradient	Borehole	18.23	degC/km

GRSE_RM	Generalized Mud Resistivity Selection for Recorded Mode	Borehole	REMS(RM)	
GTSE_RM	Generalized Temperature Selection for Recorded Mode	Borehole	GTEM_GRDSURF	
JOBID	Job Identification	DNMSESSION	18JAP0007S-3	
MST	Mud Sample Temperature	Borehole	21.2	degC
RMS	Resistivity of Mud Sample	Borehole	0.07	ohm.m
SHT	Surface Hole Temperature	Borehole	20	degC
UHRI_IMG_T	UHRI Image Type	MI6	UHRI Raw	

Depth Zone Parameters

Parameter	Value	Start (m)	Stop (m)
BS	9.75	4757.04	4759.73
BS	8.5	4759.73	4872.5

All depth are actual.

Tool Control Parameters

Run 2: Parameters

Parameter	Description	Tool	Value	Unit
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Calibration Report

ARC6 (Array Resistivity Compensated 675) Calibration - Run 2

Primary Equipment :		Elec. Chassis HP with AIM Receiver	AREA	126
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RESAIRCAL - Resistivity: Air

Master (Time Frame File): 09:57:26 15-Nov-2018

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Attenuation T1 at 2 MHz	dB	Master	8.500	6.500	8.275	10.500	
Attenuation T2 at 2 MHz	dB	Master	6.500	4.500	6.730	8.500	
Attenuation T3 at 2 MHz	dB	Master	4.500	2.500	4.874	6.500	
Attenuation T4 at 2 MHz	dB	Master	4.600	2.600	4.625	6.600	
Attenuation T5 at 2 MHz	dB	Master	3.600	1.600	3.419	5.600	
Phase Shift T1 at 2 MHz	deg	Master	0.100	-3.900	1.048	4.100	
Phase Shift T2 at 2 MHz	deg	Master	0.100	-3.900	-1.065	4.100	
Phase Shift T3 at 2 MHz	deg	Master	0.100	-3.900	0.993	4.100	
Phase Shift T4 at 2 MHz	deg	Master	0.100	-3.900	-1.095	4.100	
Phase Shift T5 at 2 MHz	deg	Master	0.100	-3.900	1.001	4.100	
Attenuation T1 at 400 KHz	dB	Master	8.500	6.500	8.324	10.500	
Attenuation T2 at 400 KHz	dB	Master	6.500	4.500	6.691	8.500	
Attenuation T3 at 400 KHz	dB	Master	4.500	2.500	4.919	6.500	
Attenuation T4 at 400 KHz	dB	Master	4.600	2.600	4.580	6.600	
Attenuation T5 at 400 KHz	dB	Master	3.600	1.600	3.477	5.600	
Phase Shift T1 at 400 KHz	deg	Master	0.100	-3.900	0.501	4.100	
Phase Shift T2 at 400 KHz	deg	Master	0.100	-3.900	-0.470	4.100	
Phase Shift T3 at 400 KHz	deg	Master	0.100	-3.900	0.493	4.100	
Phase Shift T4 at 400 KHz	deg	Master	0.100	-3.900	-0.501	4.100	
Phase Shift T5 at 400 KHz	deg	Master	0.100	-3.900	0.480	4.100	

GRGAIN - Gamma Ray: Blanket

Master (Time Frame File): 15:06:52 14-Nov-2018

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Calibration Gain		Master	1.000	0.580	1.081	1.250	

Company: JAMSTEC
Well: C0002S
Field: C0002
Rig Name: D/V Chikyu
State: Wakayama
Country: Japan



MicroScope HD Resistivity Image

Gamma Ray - Resistivity - HD Resistivity Image

Recorded Mode Log, TVDSS 1:200