

Drilling Mechanics Log

DML

C0002R Run1, Measured Depth 1:500

Company: JAMSTEC

Well: C0002R

Field: C0002

Rig Name: D/V Chiky

Prefecture: Wakayama

Country: Japan

Latitude: 33° 18' 3.042" N

Longitude: 136° 38' 12.174" E

Block: Pacific Ocean UVID: D/V Chiky

FL1: X = 652,382.39 m

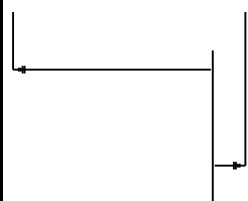
FL2: Y = 3,685,834.62 m

Rig Name: D/V Chiky

Drill ship

Log Measured From: - Drill Floor: 28.50 m
Permanent Datum: - Mean Sea Level

Ground Level: 1939.00 m



Acquisition Dates: 22-Dec-2018 -- 30-Dec-2018

Other Services:

Log Interval: 4772.00(m)MD - 4963.00(m)MD

Direction and Inclination

Index Types: Measured Depth

Index Scales: 1:500

Depth Source: Driller's Depth

Depth Sensor: DES

Print Type: Final

Spud Date: 26-Oct-2018

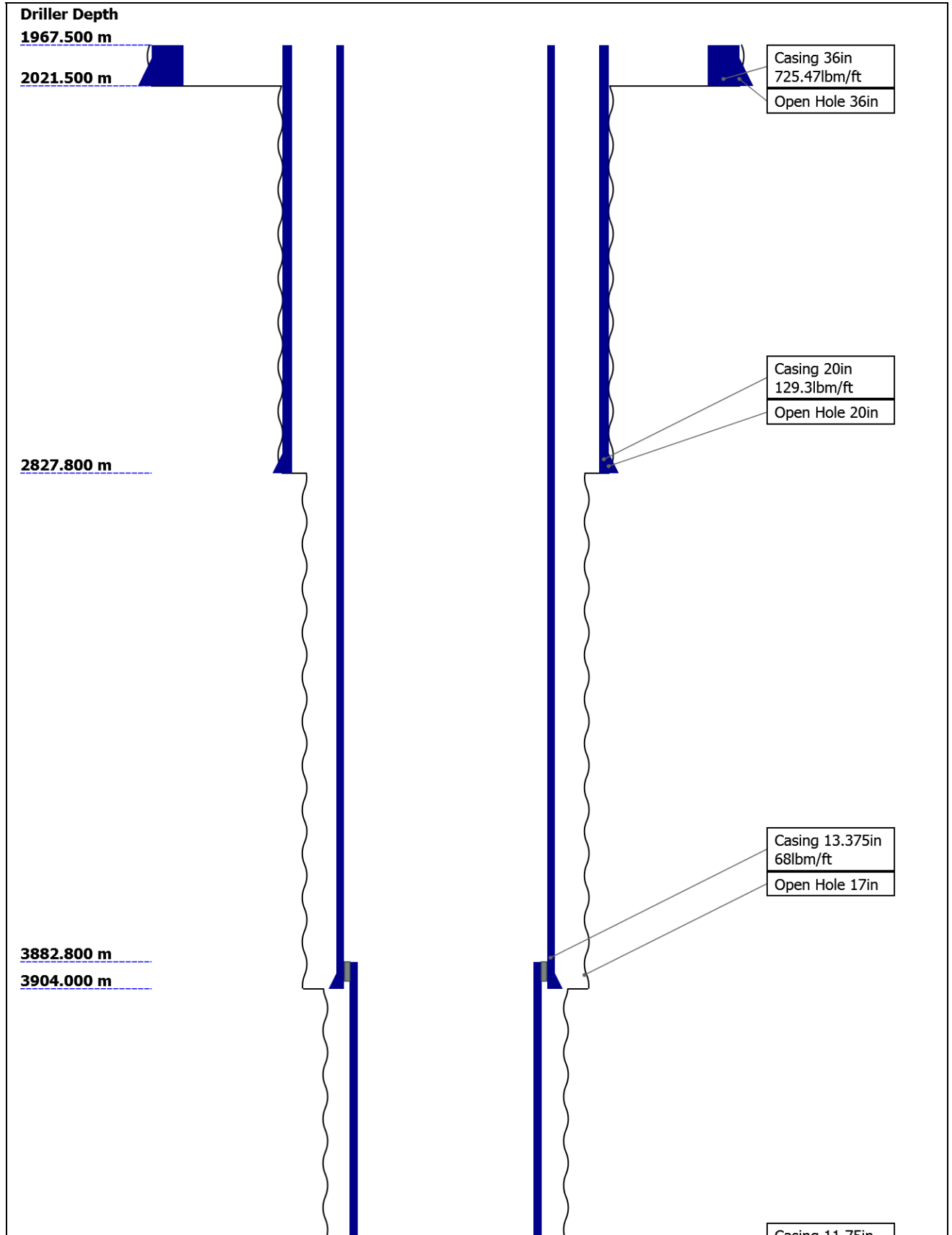
Disclaimer

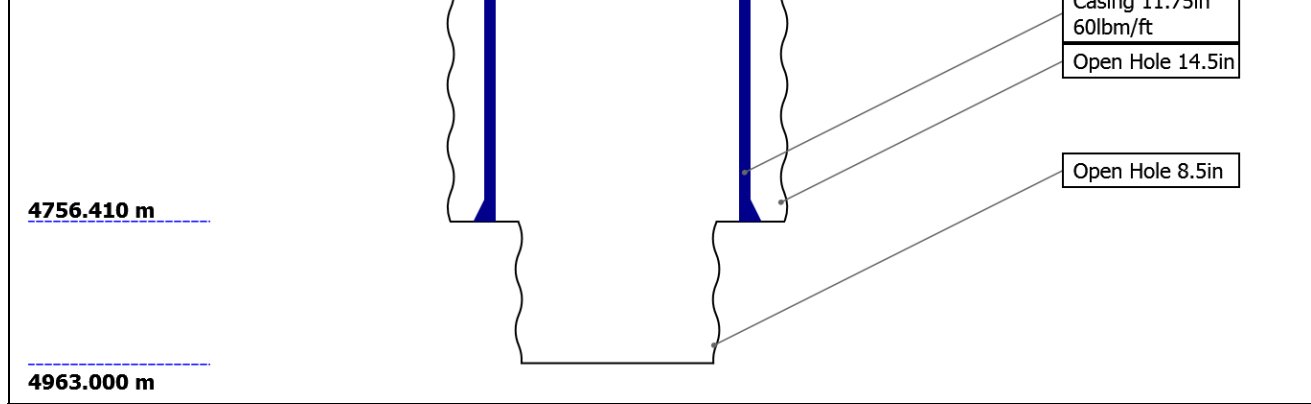
THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE 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.

Contents

1. Header
2. Disclaimer
3. Contents
4. Well Sketch
5. Borehole Size/Casing/Tubing Record
6. Operational Run Summary
7. Borehole Fluids
8. Remarks and Equipment Summary
9. Survey Record
10. Run1 Run1_DML
 - 10.1 Integration Summary
 - 10.2 Software Version
 - 10.3 Composite Summary
 - 10.4 Log (Drilling Mechanics Log 675 RM MD)
 - 10.5 Parameter Listing
11. Tail

Well Sketch





Borehole Size/Casing Record

Bit						
Bit Size (in)	36	20	17	14.5	8.5	
Top Driller (m)	1967.5	2021.5	2827.8	3904	4756.41	
Bottom Driller (m)	2021.5	2827.8	3904	4756.41	4963	
Casing						
Size (in)	36	20	13.375	11.75		
Weight (lbm/ft)	725.47	129.3	68	60		
Inner Diameter (in)	32.099	18.779	12.415	10.772		
Grade	X56	X56	N/A	N/A		
Top Driller (m)	1967.5	1967.5	1967.5	3882.8		
Bottom Driller (m)	2021.5	2827.8	3904	4756.41		

Operational Run Summary

Parameter (unit)	Run1					
Date Log Started	22-Dec-2018					
Time Log Started	22:23:55					
Date Log Finished	30-Dec-2018					
Time Log Finished	01:09:10					
Bit Size (in)	8.500					
Bit Start Depth (m)	4772.00					
Bit Stop Depth (m)	4963.00					
Top Log Interval (m)	4772.00					
Bottom Log Interval (m)	4963.00					
Max Hole Deviation (deg)	1.44					
Azimuth of Max Deviation (deg)	140.07					
Logging Unit Number	OLU-MB 8054					
Logging Unit Location	Zone2					
Recorded By	SMoriyama/Bian KangLei					
Witnessed By	YSanada/YKido					
Service Order Number	18JAP0007					

Borehole Fluids




Parameter(unit)	Run1				
Fluid Type	Water				
Max Recorded Temperatures (degC)	32.16				
Source of Sample	Active Tank				
Salinity (ppm)	34972.18				
Density (g/cm3)	Zoned				
Funnel Viscosity (s)	63				
Fluid Loss (cm3)	5.4				
PH	9.8				
Source RMF	Pressed				
RMC	Pressed				
RM @ Meas Temp (ohm.m@degC)	0.2 @ 20				
RMF @ Meas Temp (ohm.m@degC)	0.15 @ 20				
RMC @ Meas Temp (ohm.m@degC)					
RM @ BHT (ohm.m@degC)	0.12 @ 50				
RMF @ BHT (ohm.m@degC)	0.09 @ 50				
RMC @ BHT (ohm.m@degC)	NaN @ 50				
Total Solid (%)	18				
High Gravity Solids (%)					

Zoned Borehole Fluids

Run1

Parameter	Value	Start
Density	1.37	12/22/2018 10:23:55 PM
Density	1.39	12/25/2018 1:45:00 AM

Remarks and Equipment Summary

Run1: Toolstring	Run1: Remarks																				
<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">Equip name NMDC: 6 3/4"[2] :KSBD14857</td> <td style="width: 10%;">Length 32.58</td> <td style="width: 5%;"></td> <td style="width: 10%;">MP name Schlumberger</td> <td style="width: 5%;">Offset</td> </tr> <tr> <td colspan="5" style="text-align: center;"></td> </tr> <tr> <td>X/O: 6 3/4"[2]:J N75</td> <td>23.17</td> <td></td> <td>Schlumberger</td> <td></td> </tr> <tr> <td>TELE675:B0540</td> <td>22.68</td> <td></td> <td>Schlumberger</td> <td></td> </tr> </table>	Equip name NMDC: 6 3/4"[2] :KSBD14857	Length 32.58		MP name Schlumberger	Offset						X/O: 6 3/4"[2]:J N75	23.17		Schlumberger		TELE675: B0540	22.68		Schlumberger		Depth Reference is driller's depth measured from Rotary Table.
	Equip name NMDC: 6 3/4"[2] :KSBD14857	Length 32.58		MP name Schlumberger	Offset																
																					
	X/O: 6 3/4"[2]:J N75	23.17		Schlumberger																	
	TELE675: B0540	22.68		Schlumberger																	
		Data presented is Recorded Mode data which was acquired while drilling.																			
	Reason of POOH: Change BHA																				
	Drilling Time: 62.05 hrs																				
	Pumping Time: 133.32 hrs																				

D&I 18.37

GR 17.72

ROP 16.02

X/O: 6 3/4"[1]:O 14.22
SSTJ1407002E

Schlumberger

NMDC: 6 3/4"[1] 13.75
:YD08070141-1

Schlumberger

Fit Sub: 6 3/4":T 10.91
H0915936-2

Schlumberger

Stab: 6 3/4":THD 10.13
0812973-3

Schlumberger

Motor: 6 3/4":59 8.47
25593

Schlumberger

Bit: 8 1/2":RG20 0.25
23

Smith

TOOL_ZERO

Lengths are in m
Maximum Outer Diameter = 8,500 in

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: 4724.76 m Inclination: 1.62 deg Azimuth: 93.01 deg
 True Vertical Depth: 4722.98 m North Displacement: 3.97 m East Displacement: 46.10 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 - Run1

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 22-Dec-2018
 Computed Location B : 46168.20 nT +/- 300.00nT Used Location B : 46168.20 nT +/- 300.00nT
 Computed Location G : 998.92 mgn +/- 2.50mgn Used Location G : 998.92 mgn +/- 2.50mgn
 Computed Magnetic Dip : 47.02 deg +/- 0.45deg Used Magnetic Dip : 47.02 deg +/- 0.45deg
 Computed Magnetic Dec : -7.16 deg Used Magnetic Dec : -7.16 deg
 Computed Total Correction : -8.06 deg Used Total Correction : -8.06 deg

D&I Inits Computed and Values Used - Run2

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 22-Dec-2018
 Computed Location B : 46168.20 nT +/- 300.00nT Used Location B : 46168.20 nT +/- 300.00nT
 Computed Location G : 998.92 mgn +/- 2.50mgn Used Location G : 998.92 mgn +/- 2.50mgn
 Computed Magnetic Dip : 47.02 deg +/- 0.45deg Used Magnetic Dip : 47.02 deg +/- 0.45deg
 Computed Magnetic Dec : -7.16 deg Used Magnetic Dec : -7.16 deg
 Computed Total Correction : -8.06 deg Used Total Correction : -8.06 deg

D&I Inits Computed and Values Used - Run4

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 22-Dec-2018
 Computed Location B : 46168.20 nT +/- 300.00nT Used Location B : 46168.20 nT +/- 300.00nT
 Computed Location G : 998.92 mgn +/- 2.50mgn Used Location G : 998.92 mgn +/- 2.50mgn
 Computed Magnetic Dip : 47.02 deg +/- 0.45deg Used Magnetic Dip : 47.02 deg +/- 0.45deg
 Computed Magnetic Dec : -7.16 deg Used Magnetic Dec : -7.16 deg
 Computed Total Correction : -8.06 deg Used Total Correction : -8.06 deg

Survey Quality Index

0 : Long Survey passed all criteria 2 : Long Survey failed mag criteria 9 : Manual
 28 : Tie-In Point

Survey Correction Index

0 : No correction

Survey Description Index

0 : Not Flagged Survey

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	4724.76	1.62	93.01	----	4722.98	3.97	3.97	46.10	46.27	85.08	0.00	TIP	28	0	0
2	4771.81	1.92	149.07	47.05	4770.01	3.26	3.26	47.17	47.28	86.05	1.08	TeleScope	2	0	0
3	4787.76	1.44	113.28	15.94	4785.95	2.95	2.95	47.49	47.58	86.45	2.13	TeleScope	2	0	0
4	4794.24	1.20	140.07	6.48	4792.43	2.86	2.86	47.61	47.70	86.56	3.04	TeleScope	2	0	0
5	4805.24	1.38	175.82	11.00	4803.43	2.64	2.64	47.69	47.77	86.83	2.21	TeleScope	2	0	0
6	4823.24	1.20	110.59	18.00	4821.43	2.36	2.36	47.89	47.95	87.18	2.34	TeleScope	2	0	0
7	4836.64	5.20	78.51	13.40	4834.80	2.43	2.43	48.61	48.68	87.14	9.48	TeleScope	2	0	0
8	4844.04	5.77	85.98	7.40	4842.17	2.53	2.53	49.31	49.38	87.07	3.68	TeleScope	2	0	0
9	4866.97	6.61	84.22	22.93	4864.96	2.74	2.74	51.78	51.85	86.97	1.13	TeleScope	2	0	0
10	4901.84	7.21	75.01	34.87	4899.58	3.51	3.51	55.89	56.00	86.41	1.08	TeleScope	2	0	0
11	4933.34	7.79	80.99	31.50	4930.82	4.35	4.35	59.90	60.06	85.84	0.93	TeleScope	0	0	0
12	4942.30	8.07	85.26	8.95	4939.68	4.50	4.50	61.13	61.29	85.79	2.19	TeleScope	0	0	0

13	4960.04	7.46	91.57	17.74	4957.27	4.57	4.57	63.52	63.69	85.88	1.78	TeleScope	2	0	0
14	4975.81	5.38	98.09	15.77	4972.94	4.44	4.44	65.28	65.43	86.11	4.17	TeleScope	2	0	0
15	4985.09	4.13	100.43	9.28	4982.19	4.32	4.32	66.04	66.18	86.26	4.09	TeleScope	2	0	0
16	4993.35	2.82	103.77	8.25	4990.43	4.21	4.21	66.53	66.66	86.38	4.84	TeleScope	2	0	0
17	4998.02	2.44	104.21	4.68	4995.10	4.16	4.16	66.73	66.86	86.43	2.45	TeleScope	2	0	0
18	5003.13	2.20	106.33	5.11	5000.20	4.11	4.11	66.93	67.06	86.49	1.47	TeleScope	2	0	0
19	5008.87	1.87	111.82	5.73	5005.93	4.04	4.04	67.13	67.25	86.55	1.99	TeleScope	2	0	0
20	5020.15	1.03	141.28	11.29	5017.22	3.90	3.90	67.36	67.47	86.69	2.93	TeleScope	2	0	0
21	5031.07	0.85	223.25	10.92	5028.13	3.76	3.76	67.37	67.47	86.81	3.40	TeleScope	2	0	0
22	5052.00	0.85	223.25	20.93	5049.06	3.53	3.53	67.15	67.25	86.99	0.00	Other	9	0	0

Run1

Run1_DML

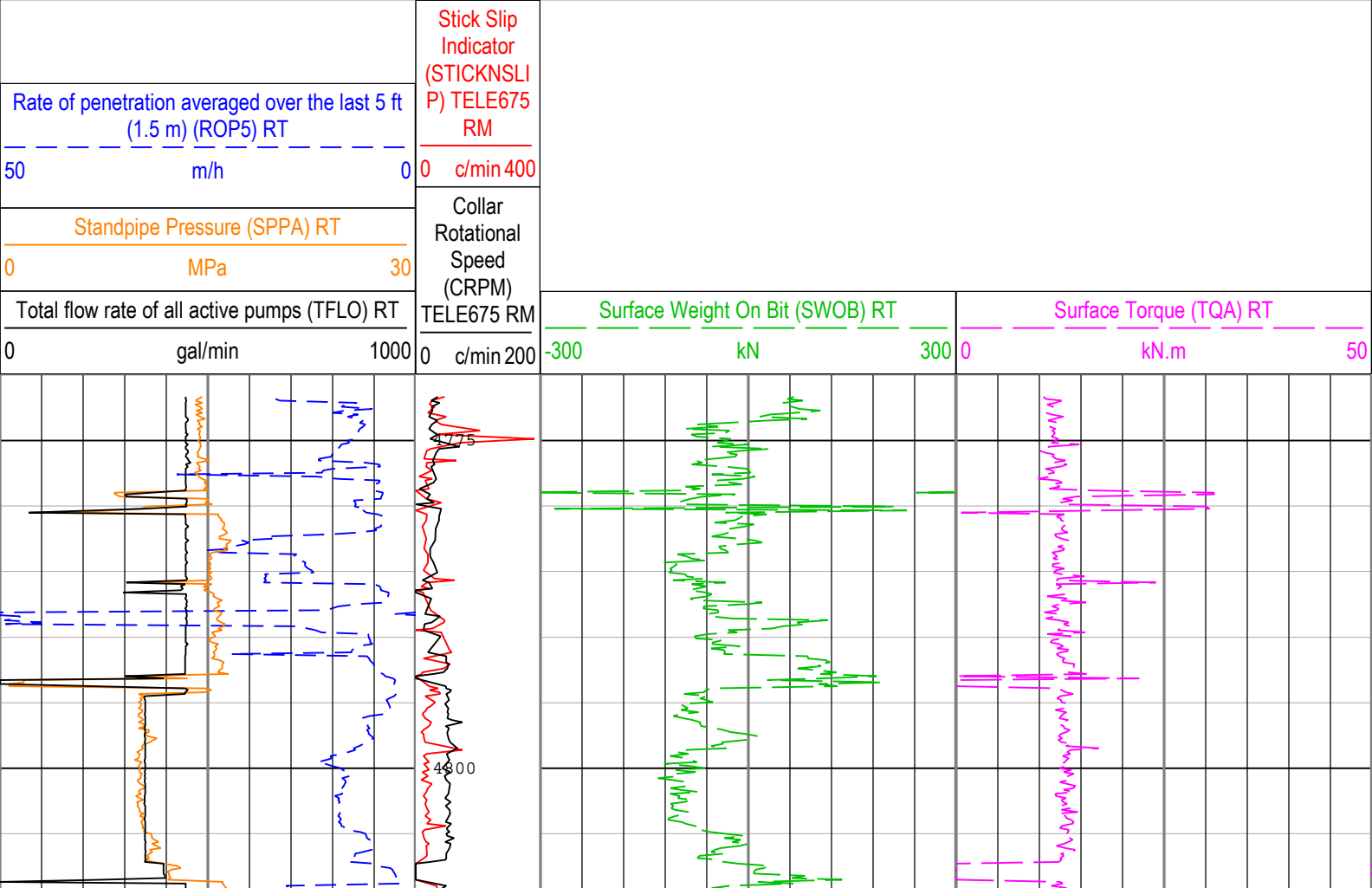
Software Version		
Acquisition System		Version
Maxwell 2018 SP2		8.2.104493.3100
Application Patch		DnM_TestKit-PD-DHS31-2018-2_8.2.104864

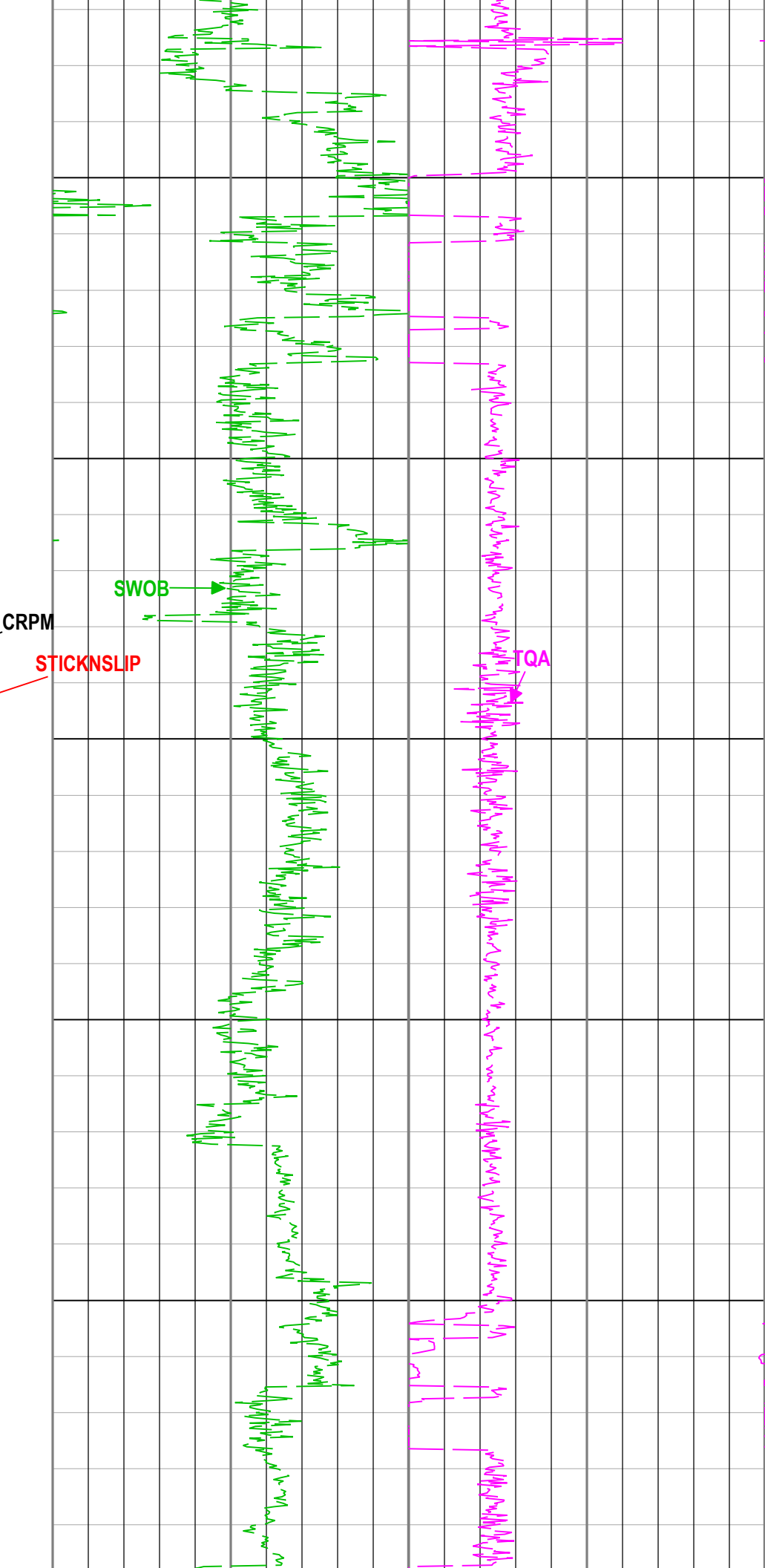
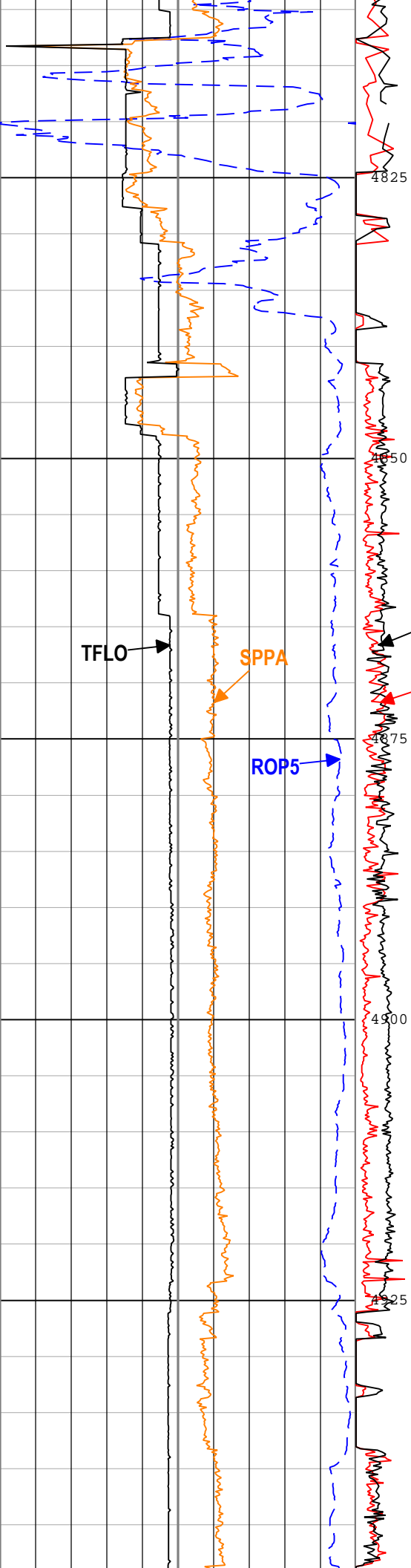
Pass Summary							
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run1	Drilling	Down	4771.62 m	4962.27 m	22-Dec-2018 10:23:55 PM	30-Dec-2018 1:09:10 AM	Yes

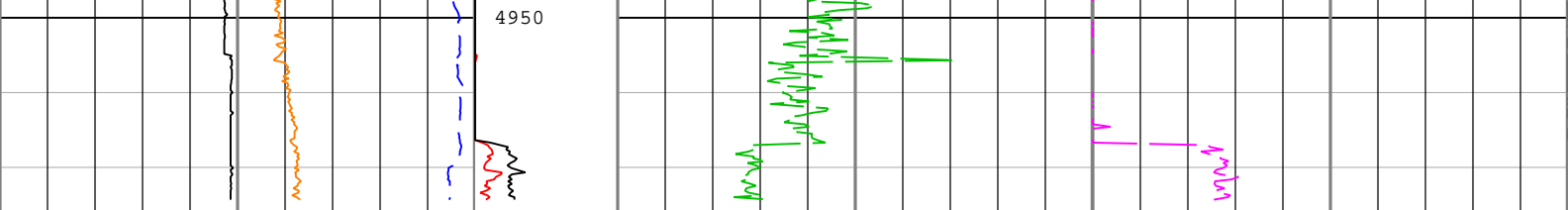
All depths are referenced to toolstring zero

Log Company: JAMSTEC Well: C0002R
Run1: Drilling: S072

Description: Format: Log (Drilling Mechanics Log 675 RM MD) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth Creation Date: 04-Mar-2019 00:34:48







Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT 50 m/h 0	Stick Slip Indicator (STICKNSLI) TELE675 RM 0 c/min 400	Surface Weight On Bit (SWOB) RT -300 kN 300	Surface Torque (TQA) RT 0 kN.m 50
Standpipe Pressure (SPPA) RT 0 MPa 30		Collar Rotational Speed (CRPM) TELE675 RM 0 c/min 200	
Total flow rate of all active pumps (TFLO) RT 0 gal/min 1000			

Description: Format: Log (Drilling Mechanics Log 675 RM MD) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth Creation Date: 04-Mar-2019 00:34:48

Channel Processing Parameters

Tool Control Parameters

Company: JAMSTEC
Well: C0002R
Field: C0002
Rig Name: D/V Chikyu
Prefecture: Wakayama
Country: Japan



