Drilling Mechanics Log

DML

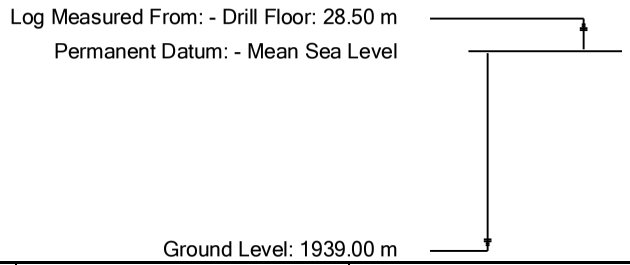
Schlumberger

C0002R Run2, True Vertical Depth Sub Sea 1:500

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

Latitude:	33° 18' 3.042" N	UWID:	
Longitude:	136° 38' 12.174" E	Rig Name:	D/V Chikyu
Block:		Rig Type:	Drill ship

FL:	Pacific Ocean
FL1:	X = 652,382.39 m
FL2:	Y = 3,685,834.62 m



Acquisition Dates:	30-Dec-2018 -- 05-Jan-2019
Log Interval:	4961.92(m)MD - 5051.00(m)MD
Index Types:	SSTVD
Index Scales:	1:500
Depth Source:	Driller's Depth
Depth Sensor:	DES
Print Type:	Final
Spud Date:	26-Oct-2018

Other Services:

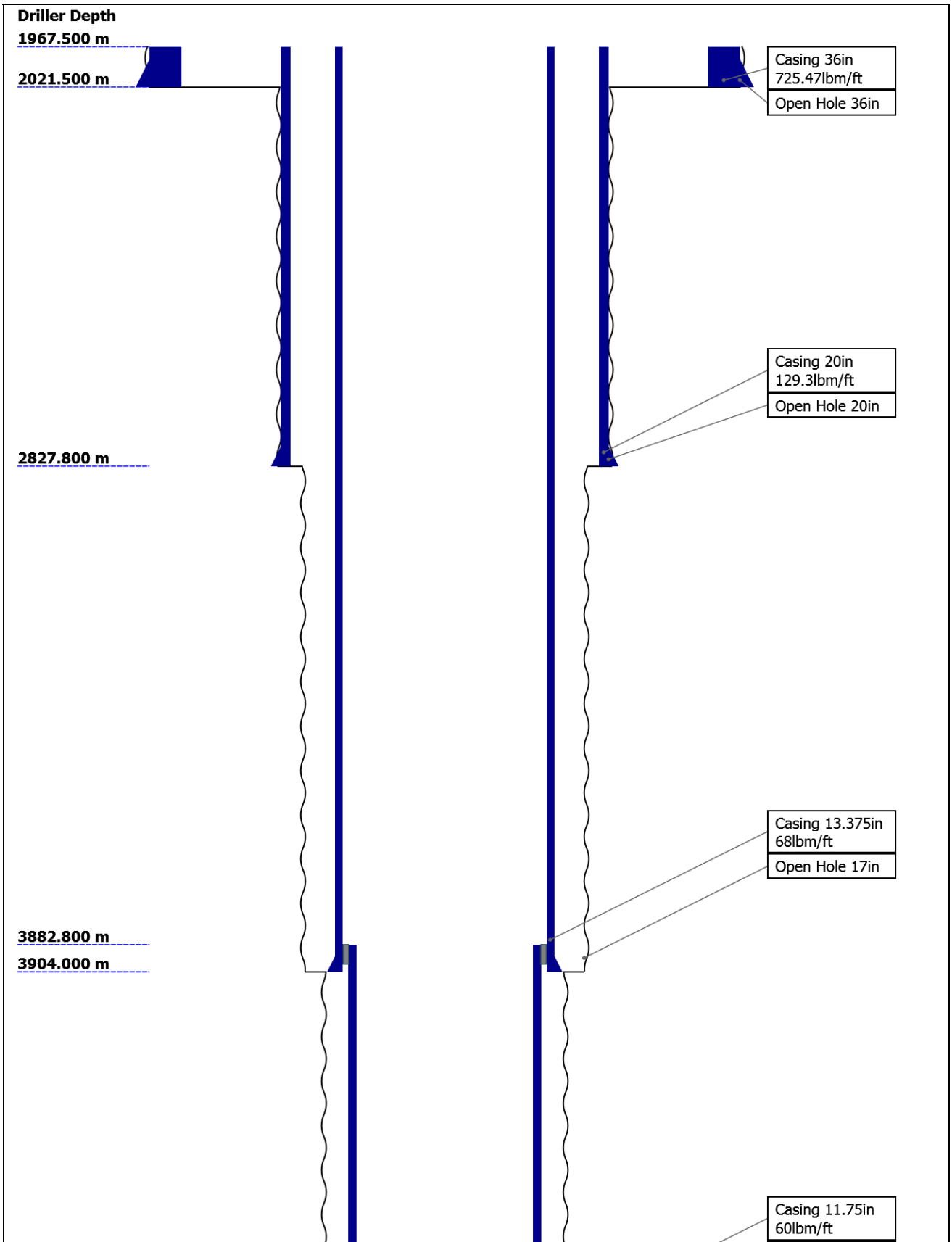
Direction and Inclination

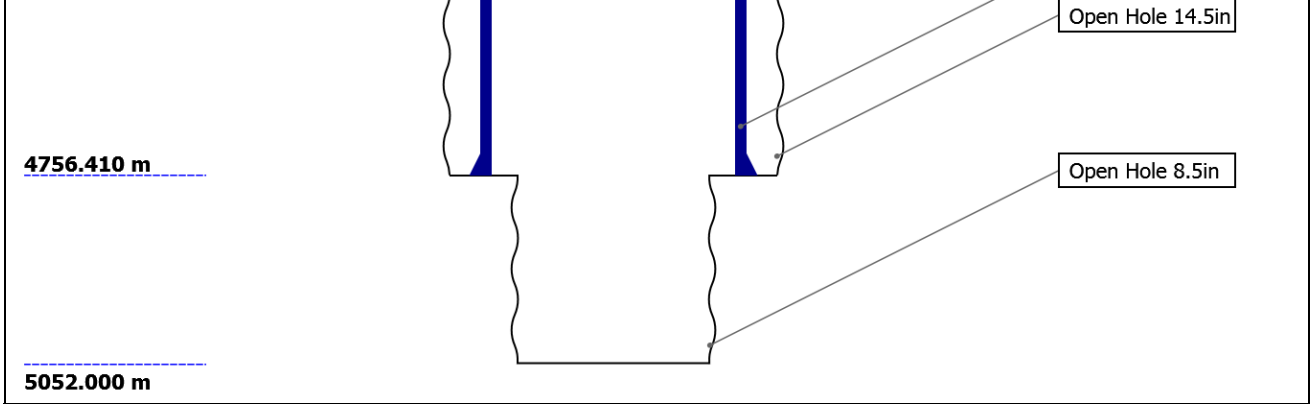
Country: Japan
Prefecture: Wakayama
Rig Name: D/V Chikyu
Field: C0002
Well: C0002R
Company: JAMSTEC

Disclaimer

Contents

Well Sketch


Driller Depth
1967.500 m
2021.500 m
2827.800 m
3882.800 m
3904.000 m
Casing 36in
725.47lbm/ft
Open Hole 36in
Casing 20in
129.3lbm/ft
Open Hole 20in
Casing 13.375in
68lbm/ft
Open Hole 17in
Casing 11.75in
60lbm/ft



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	5052	
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)	Run2					
Date Log Started	30-Dec-2018					
Time Log Started	05:10:16					
Date Log Finished	05-Jan-2019					
Time Log Finished	10:59:25					
Bit Size (in)	8.500					
Bit Start Depth (m)	4963.00					
Bit Stop Depth (m)	5052.00					
Top Log Interval (m)	4963.00					
Bottom Log Interval (m)	5052.00					
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/WangYong					
Witnessed By	YSanada/YKido					
Service Order Number	18JAP0007					

Borehole Fluids

Parameter(unit)	Run2					
Fluid Type	Water					
Max Recorded Temperatures (degC)	29.8					
Source of Sample	Active Tank					
Salinity (ppm)	34972.18					
Density (g/cm3)	1.39					
Funnel Viscosity (s)	67					
Fluid Loss (cm3)	7.4					
PH	9.7					
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 (%)						

Remarks and Equipment Summary

Run2: Toolstring

Equip name	Length	MP name	Offset
NMDC: 6 3/4"[2] :KSBD14857	32.21	Schlumberger	
X/O: 6 3/4"[2]:J N75	22.8	Schlumberger	
TELE675:B0540	22.31	Schlumberger	
D&I			18.00
GR			17.36

Run2: Remarks

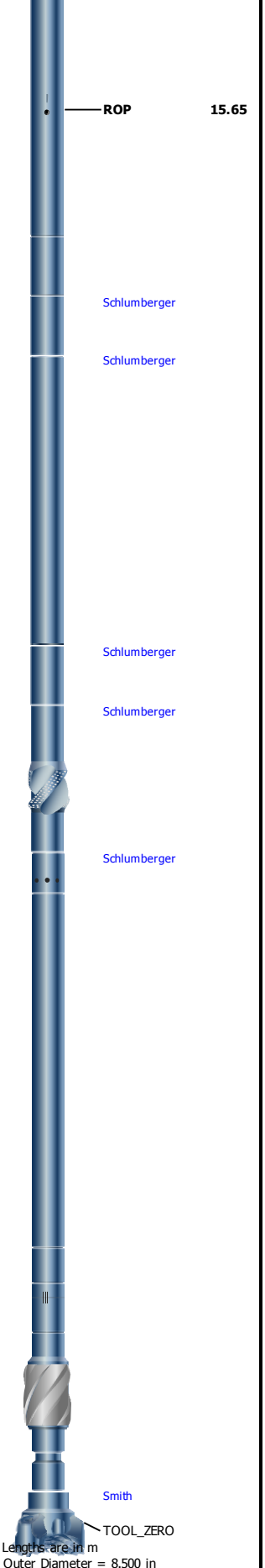
Depth Reference is driller's depth measured from Rotary Table.

Data presented is Recorded Mode data which was acquired while drilling.

Reason of POOH: Motor failure

Drilling Time: 43.67 hrs

Pumping Time: 113.04 hrs



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:	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

Run2

Run2_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
Run2	Drilling	Down	4961.92 m	5051.25 m	30-Dec-2018 5:10:16 AM	05-Jan-2019 10:59:25 AM	Yes

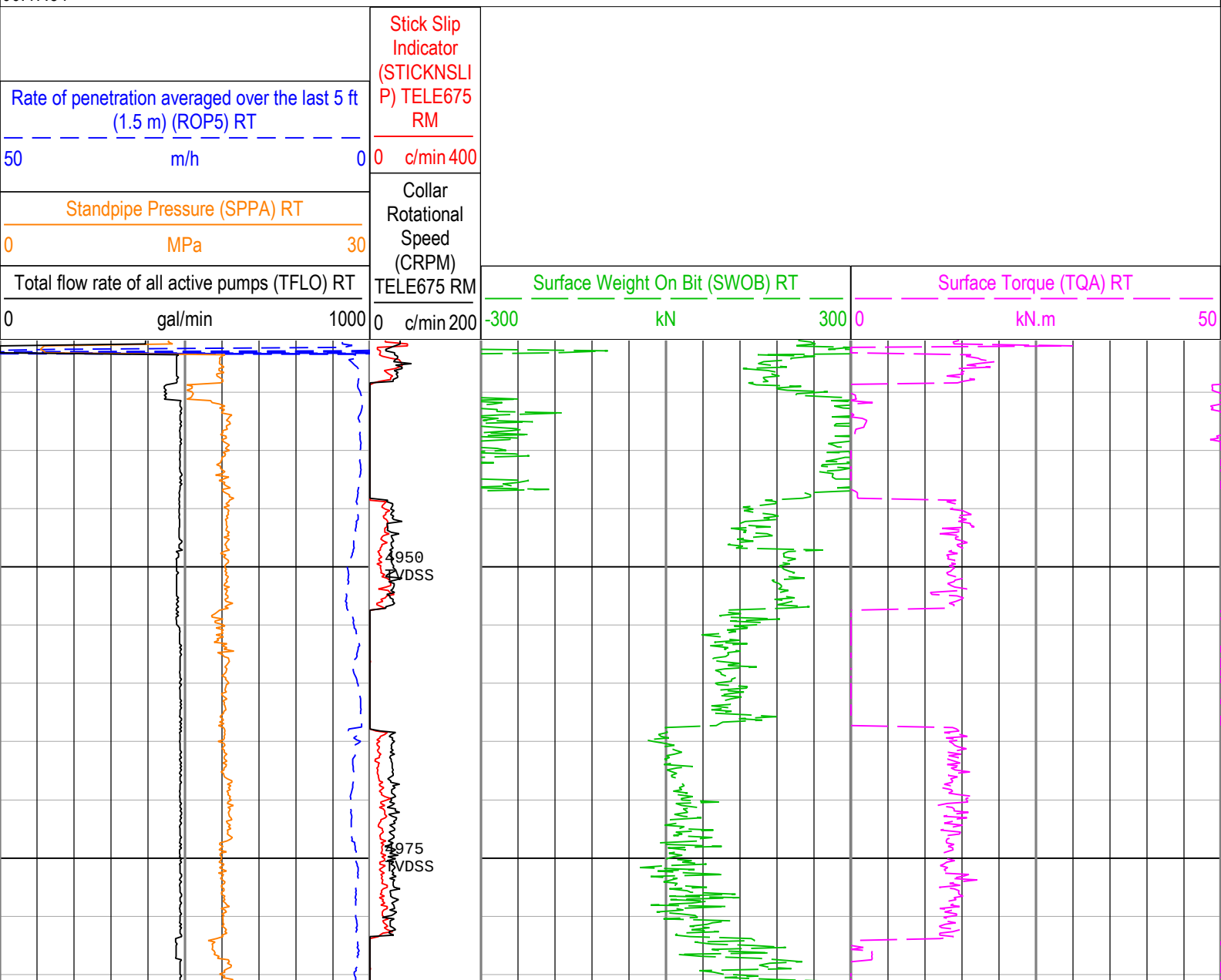
All depths are referenced to toolstring zero

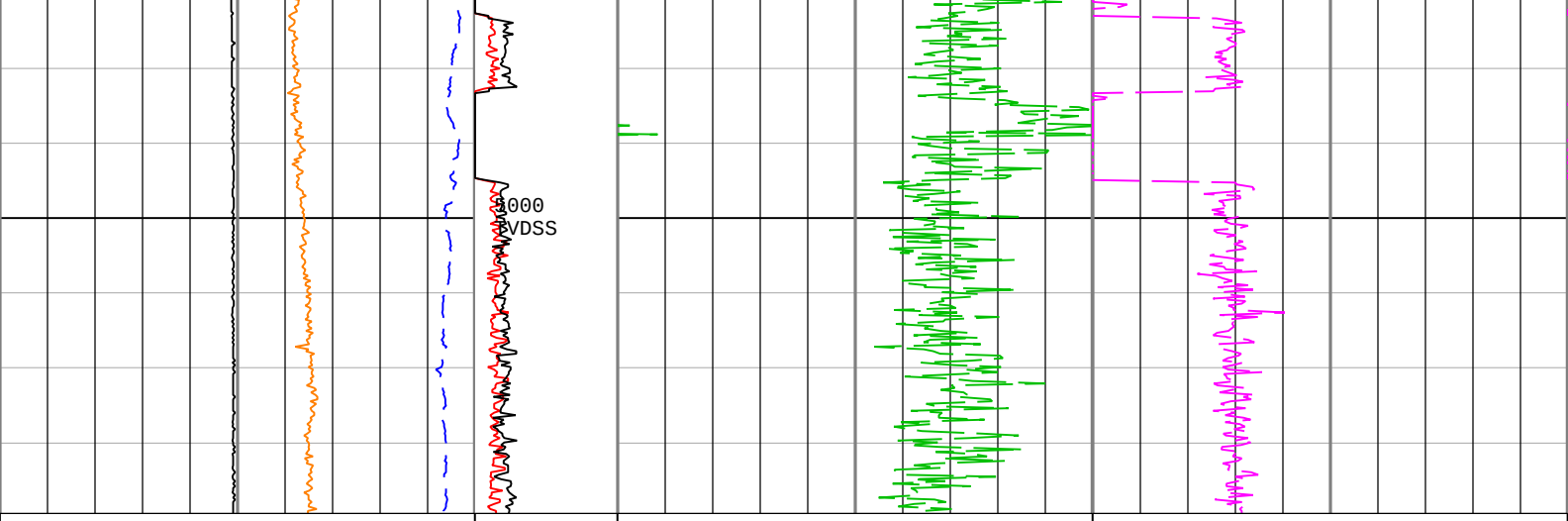
Log

Company:JAMSTEC Well:C0002R

Run2: Drilling:S072

Description: Format: Log (Drilling Mechanics Log 675 RM TVDSS) Index Scale: 1:500 Index Unit: m Index Type: SSTVD Creation Date: 04-Mar-2019 00:47:34





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

Description: Format: Log (Drilling Mechanics Log 675 RM TVDSS) Index Scale: 1:500 Index Unit: m Index Type: SSTVD Creation Date: 04-Mar-2019 00:47:34

Channel Processing Parameters

Tool Control Parameters

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

Schlumberger

Drilling Mechanics Log

DML

C0002R Run2, True Vertical Depth Sub Sea 1:500