

Drilling Mechanics Log

DML

Schlumberger

Single Run Log, Measured Depth 1:200

Company: JAMSTEC

Well: C0002S

Field: C0002

Rig Name: D/V Chiky

Prefecture: Wakayama

Country: Japan

Latitude: 33° 18' 3.042" N

Longitude: 136° 38' 12.174" E

Block:

FL: Pacific Ocean

FL1: X = 652,382.39 m

FL2: Y = 3685,843.62 m

UWID:

Rig Name:

Rig Type:

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: 03-Feb-2019 -- 05-Feb-2019

Log Interval: 4779.00(m)MD - 4789.00(m)MD

Index Types: Measured Depth

Index Scales: 1:200

Depth Source: Driller's Depth

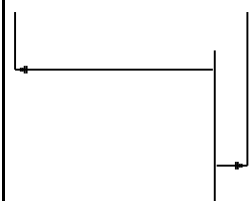
Depth Sensor: DES

Print Type: Final

Spud Date: 26-OCT-2018

Other Services:

Direction and Inclination



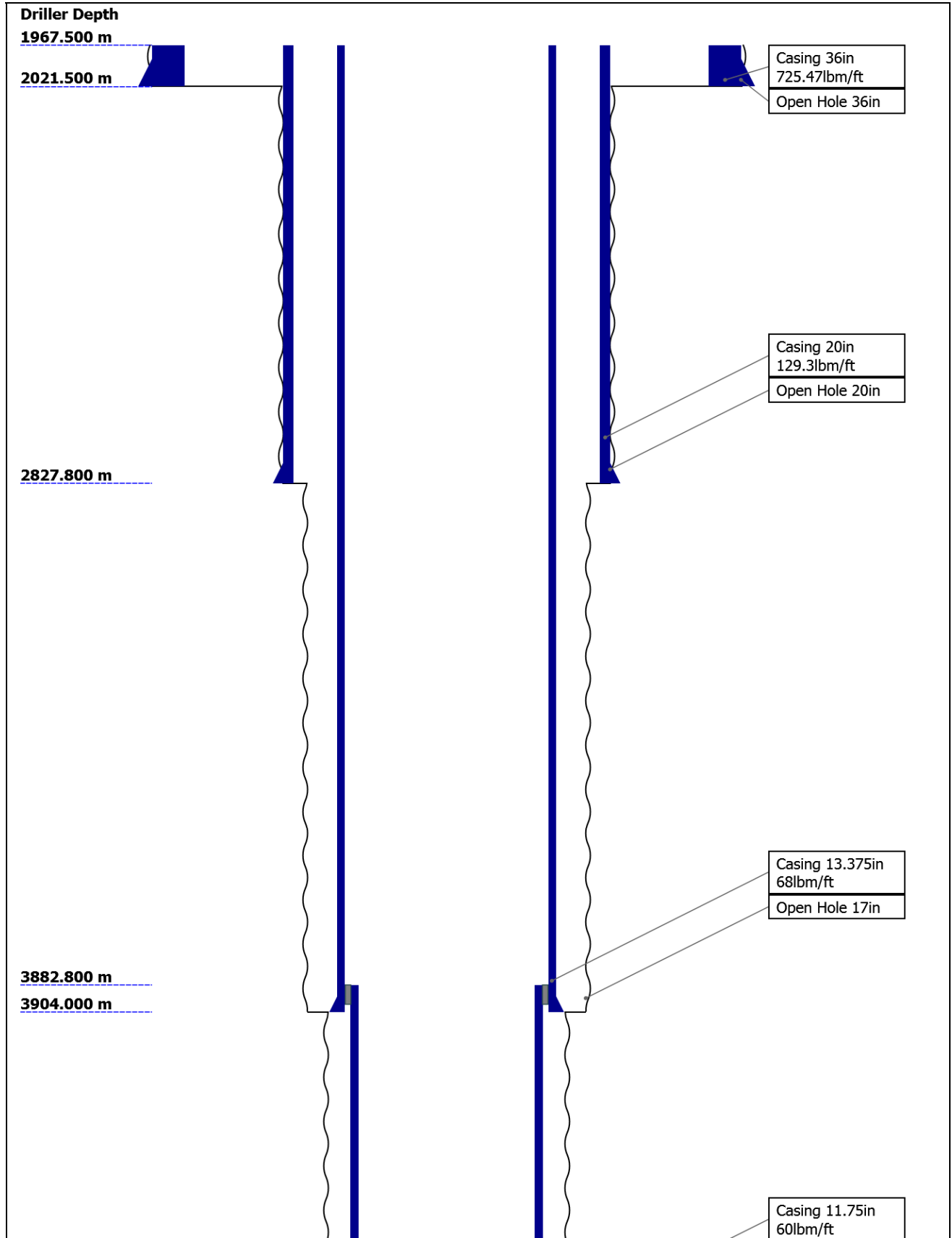
Disclaimer

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. Calibration Report
12. Tail

Well Sketch



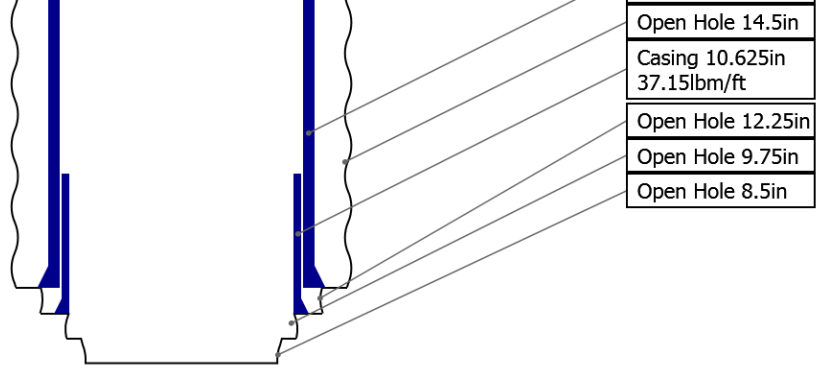
4603.500 m

4756.410 m

4770.220 m

4788.230 m

4789.000 m



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 (lbm/ft)	725.47	129.3	68	60	37.15	
Inner Diameter (in)	32	18.75	12.415	10.772	9.95	
Grade	X56	X56	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)	4789					
Casing						
Size						
Weight						
Inner Diameter						
Grade						
Top Driller						
Bottom Driller						

Operational Run Summary


Parameter (unit)	Run1				
Date Log Started	03-Feb-2019				
Time Log Started	01:19:12				
Date Log Finished	05-Feb-2019				
Time Log Finished	09:03:58				
Bit Size (in)	8.500				
Bit Start Depth (m)	4779.00				
Bit Stop Depth (m)	4789.00				
Top Log Interval (m)	4779.00				

Bottom Log Interval (m)	4789.00					
Max Hole Deviation (deg)	1.23					
Azimuth of Max Deviation (deg)	122.08					
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)	Run1					
Fluid Type	Water					
Max Recorded Temperatures (degC)	41.57					
Source of Sample	Active Tank					
Salinity (ppm)	34972.18					
Density (g/cm3)	1.39					
Funnel Viscosity (s)	58					
Fluid Loss (cm3)	7.5					
PH	10.1					
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)	0.07 @ 100					
RMF @ BHT (ohm.m@degC)	0.05 @ 100					
RMC @ BHT (ohm.m@degC)	NaN @ 100					
Total Solid (%)	19					
High Gravity Solids (%)						

Remarks and Equipment Summary

Run1: Toolstring	Run1: Remarks
<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>Equip name UBHO: 6 3/4":SB D72254</p> <p>Length 33.5</p> <p>MP name Schlumberger</p> <p>Offset</p> </div> <div style="flex: 1; text-align: center;">  </div> <div style="flex: 1;"> <p>NMDC: 6 3/4"[2] :KSBD14859</p> <p>Schlumberger</p> </div> </div> <div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> <p>X/O: 6 3/4"[2]:7 4ET002-06/02</p> <p>Schlumberger</p> </div> <div style="flex: 1;"> <p>TELE675-1WOB:G 3917</p> <p>Schlumberger</p> </div> </div>	<p>Depth Reference is driller's depth measured from Rotary Table.</p> <p>Data presented is Recorded Mode data which was acquired while drilling.</p> <p>Reason of POOH: Pump pressure</p> <p>Drilling Time: 0.37 hrs</p> <p>Pumping Time: 12.84 hrs</p> <p>No DWOB&DTOR reading because no real time signal from downhole.</p>

— D&I 18.39

— GR 17.74

! ● — ROP 16.04

● ● — IWOB 15.03

X/O: 6 3/4"[1]:B 14.25
T-2746-06

Schlumberger

NMDC: 6 3/4"[1] 13.77
:CNLK09012

Schlumberger

Fit Sub: 6 3/4":T 10.89
H0915936-2

Schlumberger

Stab: 6 3/4":THD 10.11
0812973-3

Schlumberger



Motor: 6 3/4":61 8.44
50778

Schlumberger



Bit: 8 1/2" 0.26 Smith
 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 - Run2

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 01-Feb-2019
 Computed Location B : 46172.13 nT +/- 300.00nT Used Location B : 46172.13 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 : -7.17 deg Used Magnetic Dec : -7.17 deg
 Computed Total Correction : -8.07 deg Used Total Correction : -8.07 deg

D&I Inits Computed and Values Used - Run 4

Geomagnetic Model : HDGM 2018 Geomagnetic Date : 01-Feb-2019
 Computed Location B : 46172.13 nT +/- 300.00nT Used Location B : 46172.13 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 : -7.17 deg Used Magnetic Dec : -7.17 deg
 Computed Total Correction : -8.07 deg Used Total Correction : -8.07 deg

Survey Quality Index

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 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	TeleScope	2	0	0
3	4794.51	0.80	37.26	8.44	4792.71	0.06	3.59	47.15	47.28	85.65	6.46	TeleScope	2	0	0
4	4804.29	0.81	29.65	9.79	4802.50	-0.02	3.70	47.22	47.37	85.52	0.33	TeleScope	2	0	0
5	4809.67	1.10	31.96	5.38	4807.88	-0.08	3.78	47.27	47.42	85.43	1.61	TeleScope	2	0	0
6	4820.42	1.32	52.44	10.75	4818.63	-0.18	3.94	47.42	47.58	85.25	1.35	TeleScope	2	0	0
7	4829.98	1.42	56.81	9.56	4828.18	-0.24	4.07	47.61	47.78	85.11	0.46	TeleScope	2	0	0
8	4839.14	0.58	348.19	9.16	4837.34	-0.31	4.18	47.69	47.88	84.99	4.35	TeleScope	2	0	0
9	4846.61	1.57	281.65	7.47	4844.81	-0.40	4.24	47.59	47.77	84.91	5.78	TeleScope	2	0	0
10	4859.59	2.89	257.63	12.98	4857.78	-0.54	4.20	47.09	47.28	84.90	3.67	TeleScope	2	0	0

Run1

Run1_DML

Software Version

Acquisition System	Version
Maxwell 2018 SP2	8.2.104493.3100

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run1	Drilling	Down	4769.64 m	4789.30 m	03-Feb-2019 1:19:12 AM	05-Feb-2019 9:03:58 AM	Yes

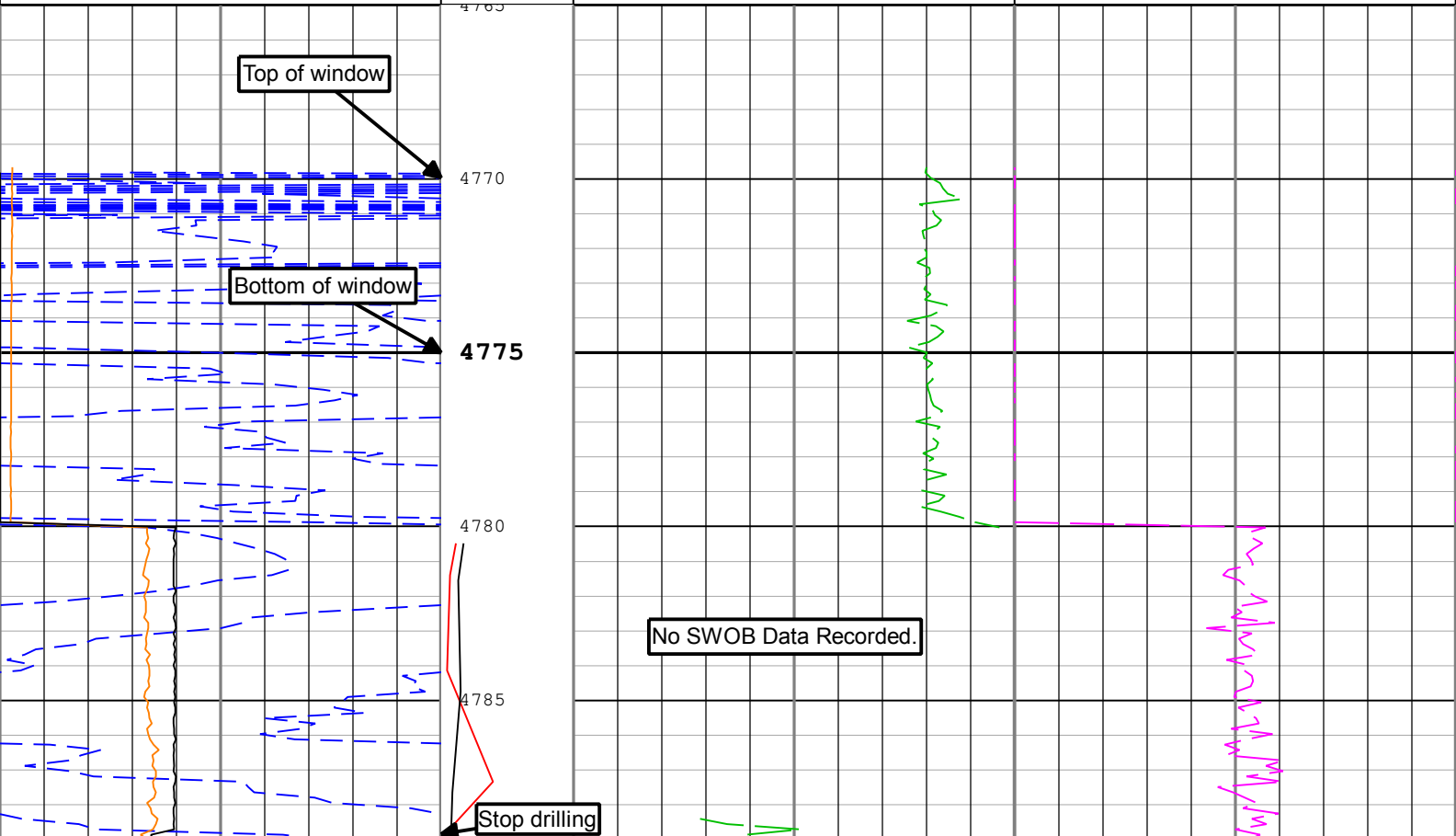
All depths are referenced to toolstring zero

Log

Company: JAMSTEC Well: C0002S
Run1: Drilling: S050

Description: Format: Log (Drilling Mechanics Log 675 RM MD) Index Scale: 1:200 Index Unit: m Index Type: Measured Depth Creation Date: 28-Feb-2019 15:36:49

	Stick Slip Indicator (STICKNSLI P) TELE675-IW OB RM	
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT	0 c/min 400	
50 m/h		
Standpipe Pressure (SPPA) RT		
0 MPa	30	
Total flow rate of all active pumps (TFLO) RT		
0 gal/min	1000	
	0 c/min 200	
	Surface Weight On Bit (SWOB) RT	Surface Torque (TQA) RT
	-300 kN 300	0 kN.m 20



Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT 50 m/h 0	Stick Slip Indicator (STICKNSLI P) TELE675-IW OB RM	Surface Weight On Bit (SWOB) RT -300 kN 300	Surface Torque (TQA) RT 0 kN.m 20
Standpipe Pressure (SPPA) RT 0 MPa 30	0 c/min 400		
Total flow rate of all active pumps (TFLO) RT 0 gal/min 1000	Collar Rotational Speed (CRPM) TELE675-IW OB RM		
	0 c/min 200		

Description: Format: Log (Drilling Mechanics Log 675 RM MD) Index Scale: 1:200 Index Unit: m Index Type: Measured Depth Creation Date: 28-Feb-2019 15:36:49

Channel Processing Parameters	
Tool Control Parameters	
Calibration Report	

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



Drilling Mechanics Log
Schlumberger DML
 Single Run Log, Measured Depth 1:200