Schlumberger

Company:

Japan Agency for Marine−Earth Science and Technology

Well: **C0003A** **8 1/2 in. LWD Hole**

Field: **Nankai−Kumano**

Rig: **Chikyu** Country: **Japan**

Rig: Chikyu
Field: Nankai−Kumano
Location: Philippines Sea
Well: C0003A
Company: JAMSTEC

Drilling Parameters

Real Time Log 1:500 Measured Depth

Location		Elevation	
	Philippines Sea N 33º 13.3982' E 136º 42.1382'		K.B. Top Drive G.L. −2453.0 mMSL D.F. 28.5 m

Permanent datum: Mean Sea Level Elev.: 0 m
Log measured from: Drill Floor 28.5 m above Perm. datum
Depth reference: Driller's Depth

Information updated on 21−Oct−07

Logging date			20−Oct−07		Downhole tool numbers	
Run number			1		GVR 188	SON 42250 PP V694
Bottom log interval			2987.0 m		SVWD 607	ADN FW52
Top log interval			2481.5 m			
Bit size/type			8.5/PDC			
Type fluid in hole			Seawater		Frame ID:	982/983/984
MUD	Density	Viscosity	1.05 SG	165 s		
	Fluid loss	PH	na	11.6	Time (seconds)	
	Source of sample		na		Curve	ScanRate Update
Rm @ measured temperature			0.08 Ohmm @ 23 ºC		APWD	n/a 22.7
Rmf @ measured temperature			na @		GVR GR	1.0 34.1
Rmc @ measured temperature			na @			
Source Rmf	Rmc		na	na		
Rm @ E.B.H.T.	Rmf @ E.B.H.T.		na @	na @		
Estimated B.H.T.			5º C			
Recorded by			Mario Jakulj / Chen Xi / QG Ming			
Witnessed by			Kaminishi / Yokoyama			

Do not cut this header. It contains important information

OTHER SERVICES FOR RUN1
Direction and Inclination
MWD APWD

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER 1
All data provided is from Real Time Acquistion

GR Measurement is corrected for bit size, hole size and mud weight.

ADN was IBS with 8−1/4" OD.Neutron porosity is calculated with sandstone matrix and is corrected for bit size,borehole salinity, temperature and mud hydrogen index.

SONIC RT DTCU/DTCO Limits set at

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

120 us/f to 180 us/f

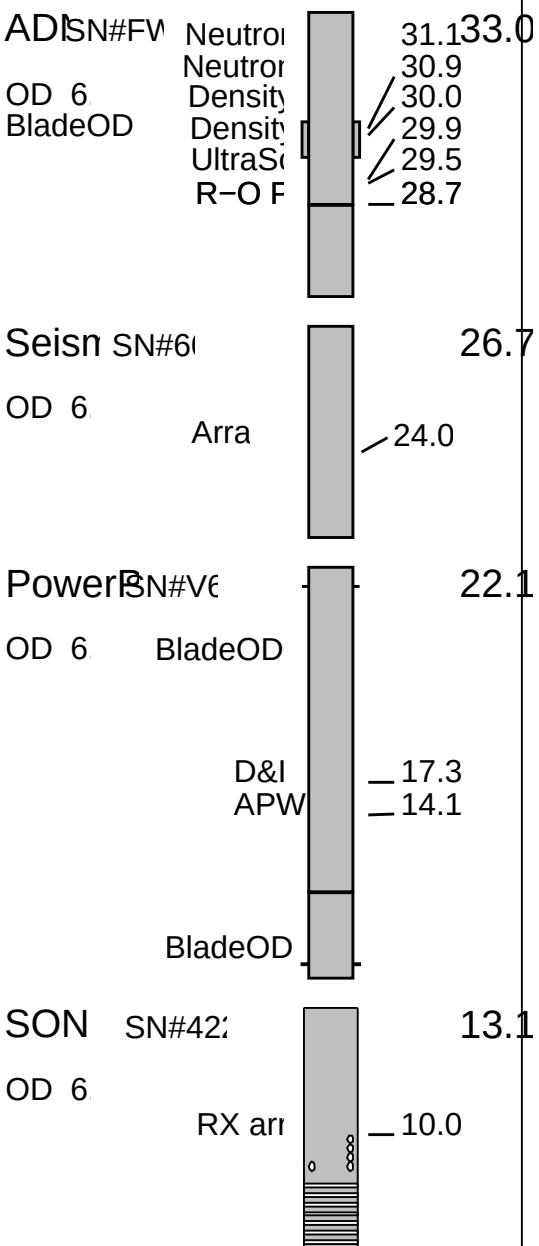
POOH due to back−off @ 3015.0mBRT

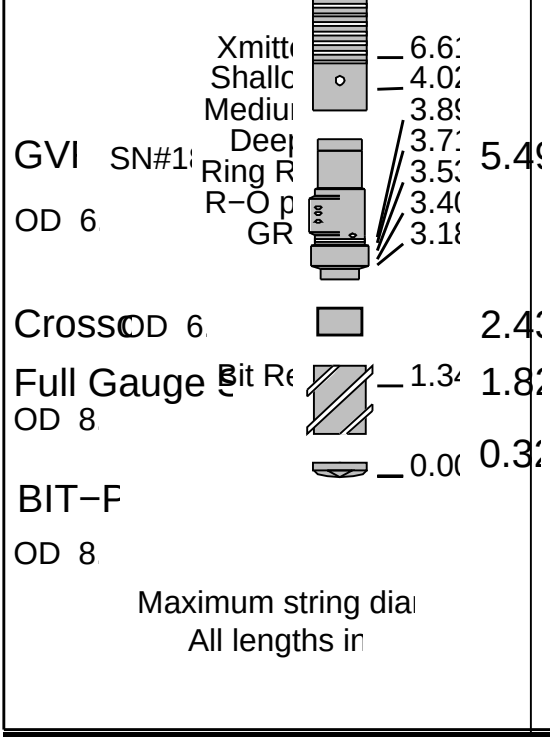
Pump time: 39.3 h
Drill time: 14.1 h

EQUIPMENT DESCRIPTION

RUN1	RUN	RUN

DOWNHOLE E





Bit Run Summary

Run number		1									
Bit size	in.	8.5									
Bit start depth	m	2481.5m									
Bit end depth	m	3015.0m									
Top interval logged	m	2481.5m									
Bottom interval logged	m	2987.5m									
Begin log: time		12:45									
Begin log: date		20−Oct−07									
End log: time		14:00									
End log: date		21−Oct−07									
Mud data											
Depth	m	2986.5m									
Type		Seawater									
Mud weight	SG	1.05									
Solids		na									
Chlorides		na									
Rm	Ohmm	0.08									
Rmf		na									
Rmc		na									
Potassium		na									
Environmental data											
GR											
Mud weight	SG	1.05									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size	in	8.5									
Mud weight	SG	1.05									
Temperature	ºC	23									
Mud salinity	ppm	18700									
Formation salinity		na									
Recording rate 1	SEC	5									
Recording rate 2	SEC	5									

Filtering GR	3									
Filtering density	3									
Filtering Neutron	3									
Company representative	I. Sawada									
Schlumberger D&M Personnel	M. Jakulj	Chen Xi	Q G Ming							

IDEAL Version: ID12_0C_12 <MD > Vertical Scale: 1:500 **Graphics File Created: 22−Oct−2007 15:36**

PIP SUMMARY

GRRA_R PIP

RAB Gamma Ray, Real−Time (GR_RAB_RT)
0 (GAPI) 150

Average Borehole Diameter, Real−Time (ADIA_ADN_RT)
7 (IN) 12

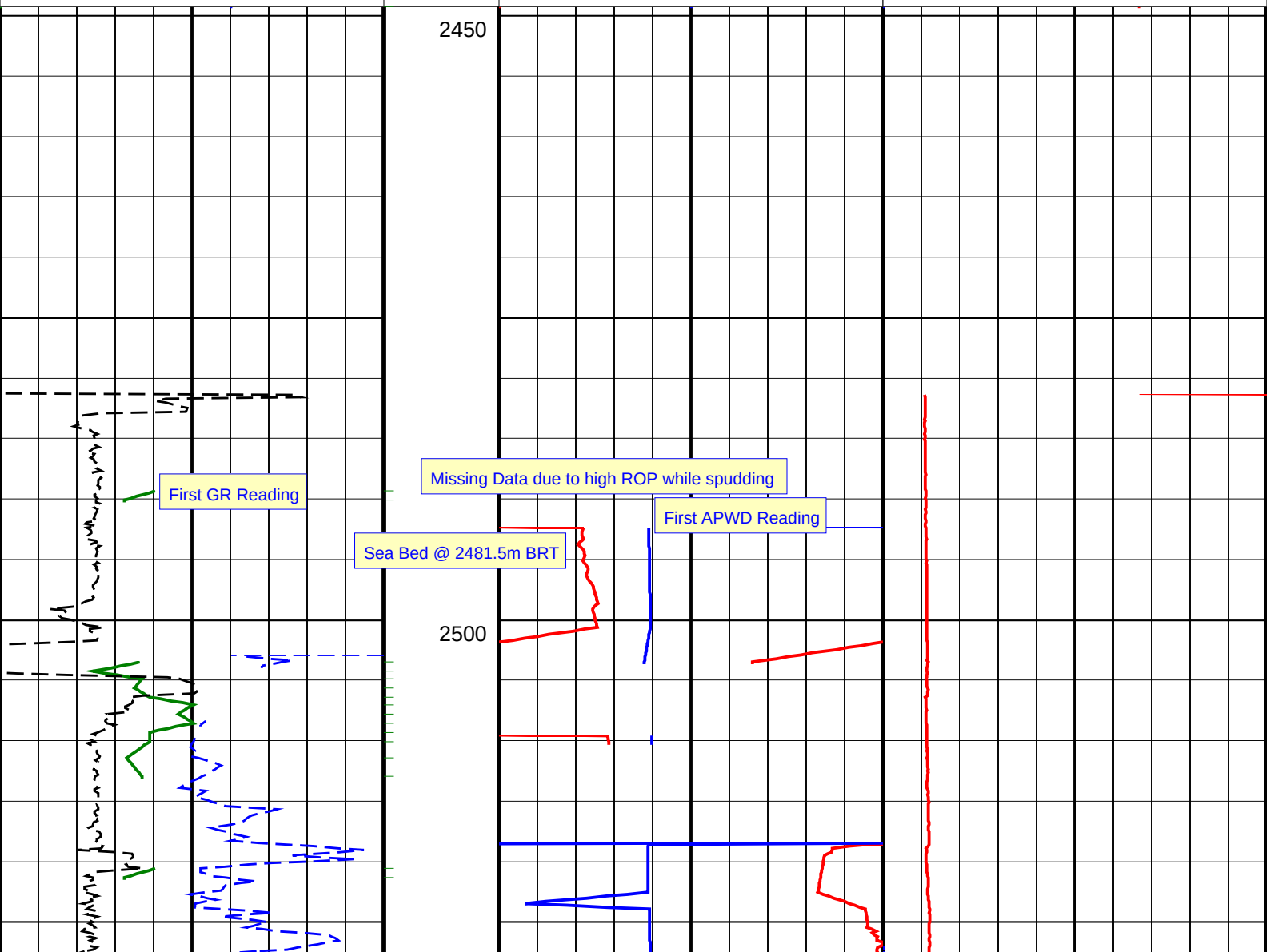
ROP*5 (ROP5)
100 (M/HR) 0

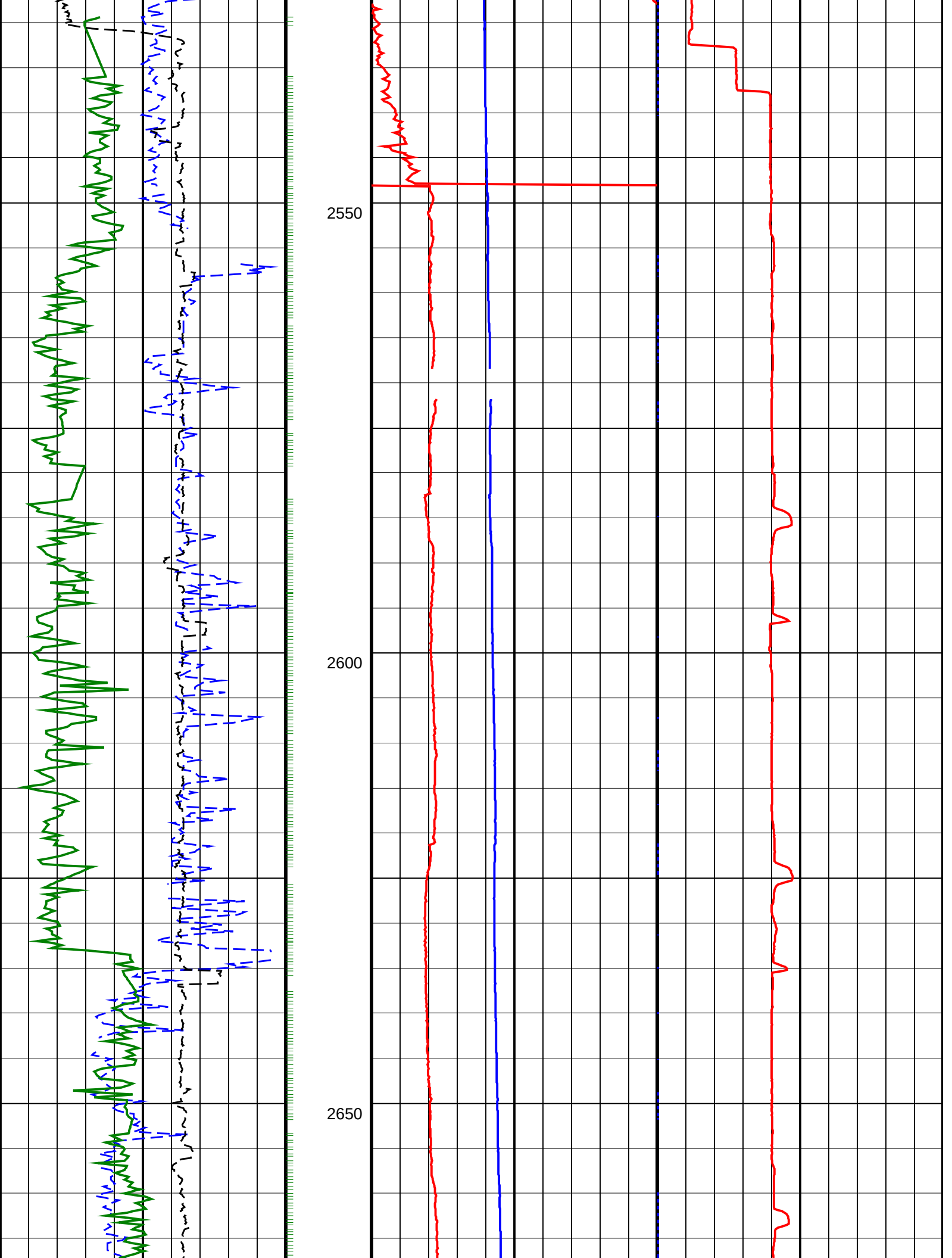
MWD Equivalent Circulating density (ECD_MWD)
8 (LB/G) 10

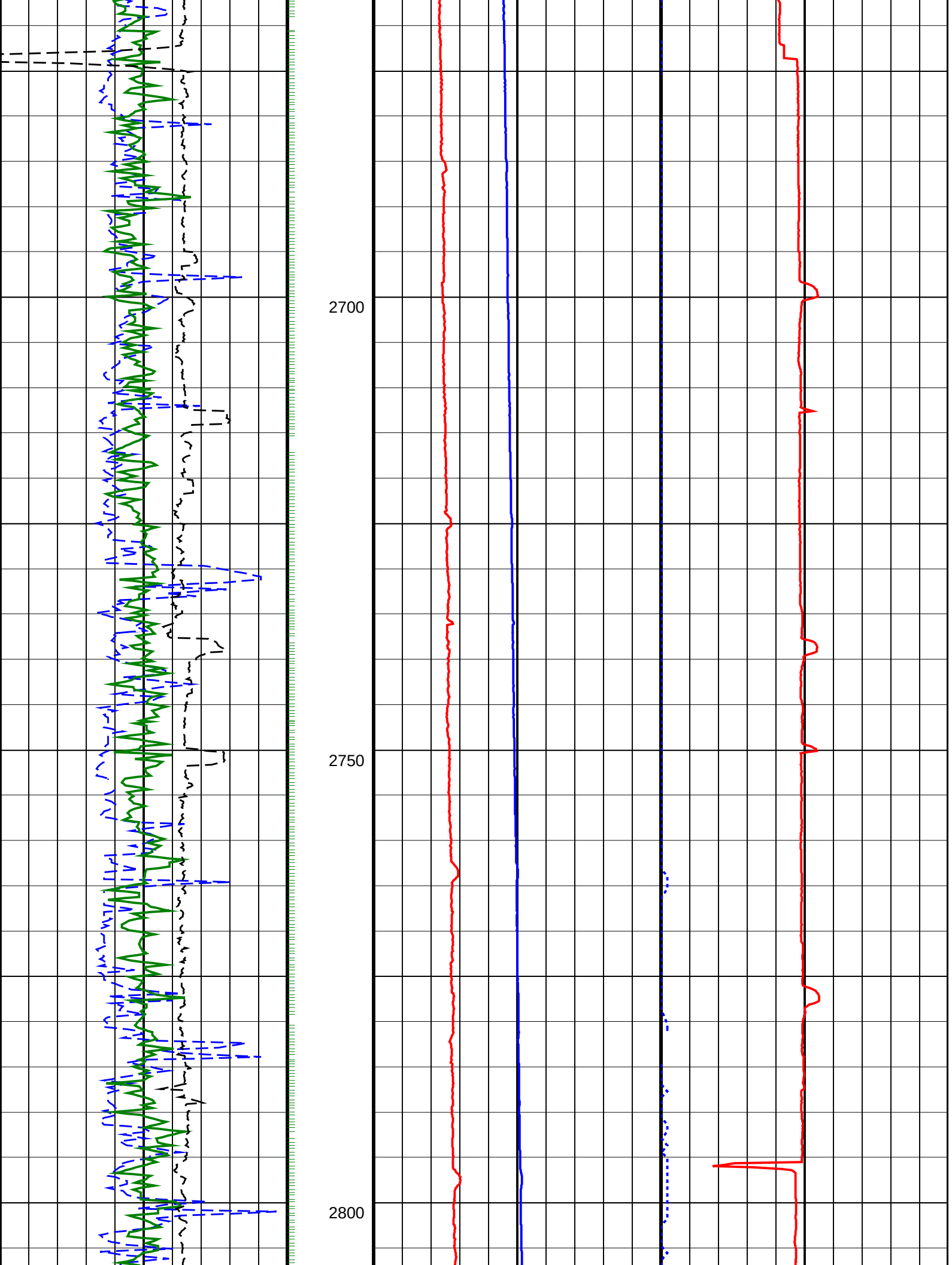
MWD Annulus Pressure (APRS_MWD)
2000 (PSI) 6000

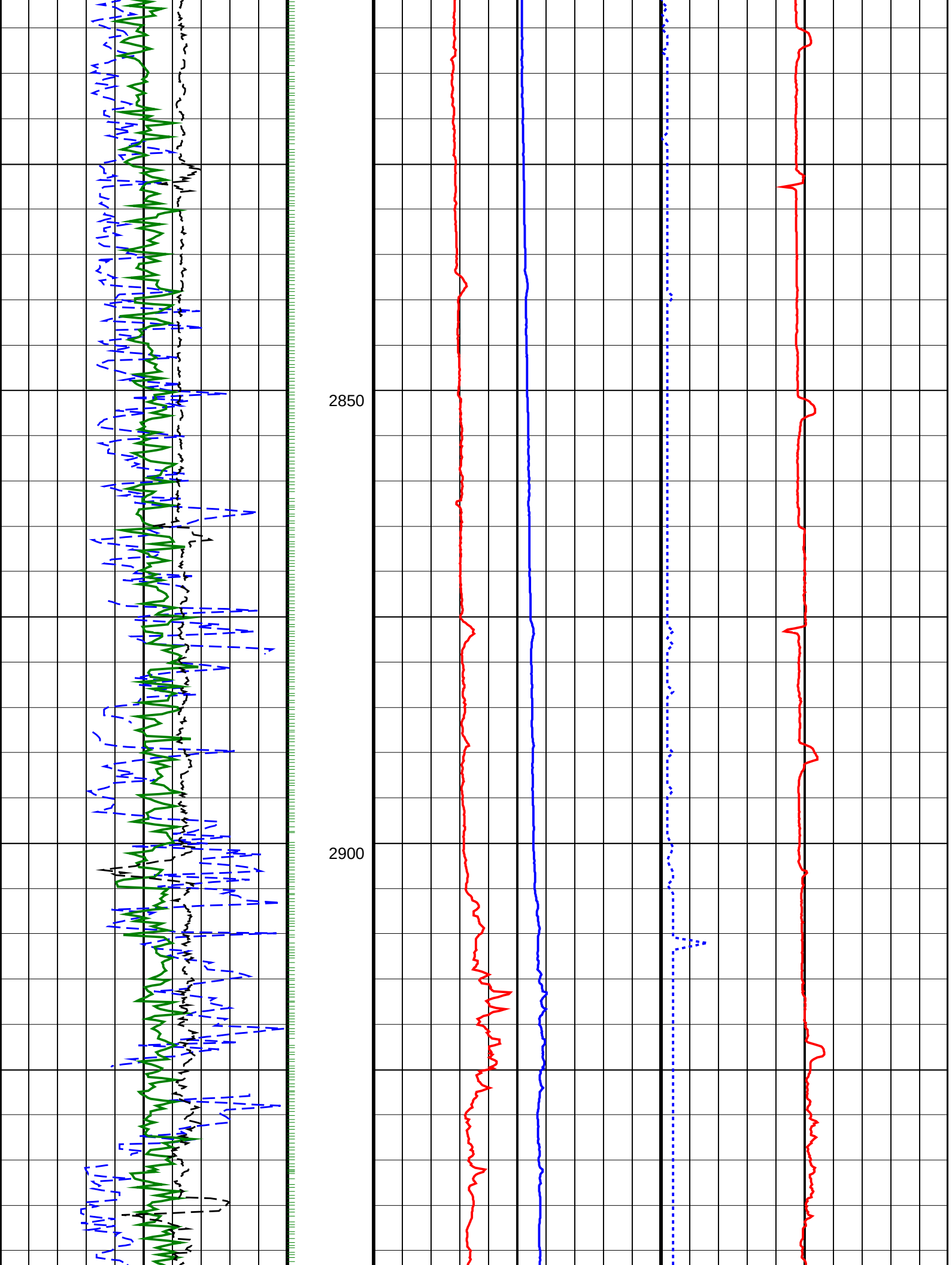
Standpipe Pressure (SPPA)
1000 (PSI) 4000

MWD Annular Temperature (ATMP_MWD)
0 (DEGC) 50




2550
2600
2650


2700
2750
2800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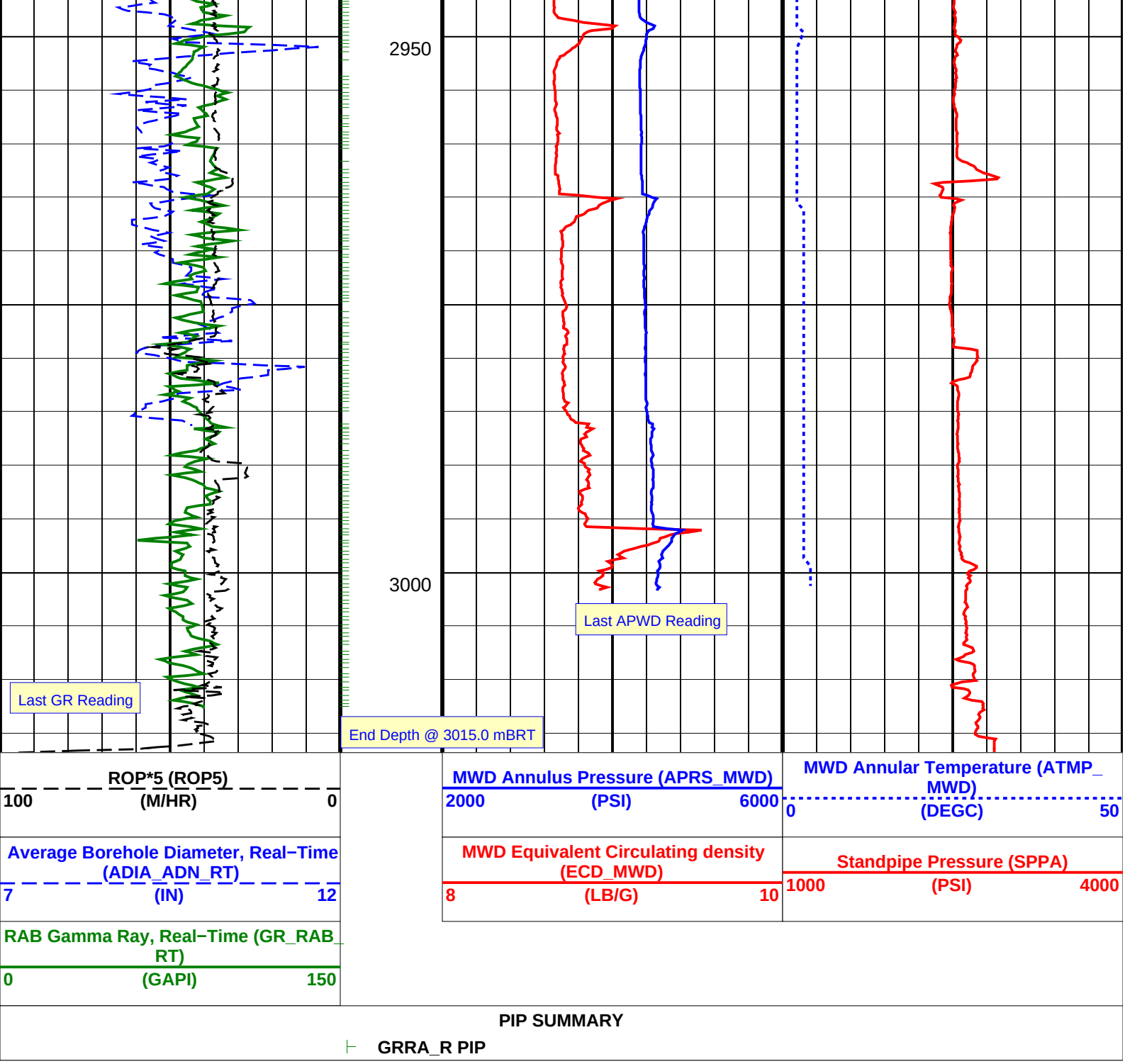

SCHLUMBERGER

Survey report 22-Oct-2007 11:35:51 Page 1 of 2

Client.....: Japan Agency for Marine-Earth Science and Technology
Field.....: Nankai-Kumano

Well.....: C0003A
API number.....: 07CHS0064
Engineer.....: Mario Jakulj / Chen Xi / QG Ming

Rig:.....: Chikyu
Country:.....: Japan

Spud date.....: 20-Oct-07
Last survey date.....: 21-Oct-07
Total accepted surveys...: 13
MD of first survey.....: 2481.50 m
MD of last survey.....: 2958.65 m

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent.....: -2453.00 m
KB above permanent.....: 28.50 m
DF above permanent.....: 28.50 m

----- Vertical section origin-----
Latitude (+N/S-) : 0.00 m

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2007
Magnetic date.....: 20-Oct-2007
Magnetic field strength..: 915.50 HCNT
Magnetic dec (+E/W-).....: -6.47 degrees
Magnetic dip.....: 46.53 degrees

----- MWD survey Reference Criteria ---
Reference G.....: 999.59 mGal
Reference H.....: 915.53 HCNT
Reference Dip.....: 46.54 degrees
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H : (+/-) 6.00 HCNT

Departure (+E/W-).....: 0.00 m

----- Platform reference point----------
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

Azimuth from Vsect Origin to target: 0.00 degrees

Tolerance of Dip.....: (+/-) 0.45 degrees

----- Corrections ----------
Magnetic dec (+E/W-).....: -6.47 degrees
Grid convergence (+E/W-).: 0.00 degrees
Total az corr (+E/W-).....: -6.47 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/ 10m)	Srvy tool type	Tool Corr (deg)
1	2481.50	0.00	0.00	0.00	2481.50	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	2486.70	0.28	114.34	5.20	2486.70	-0.01	-0.01	0.01	0.01	114.34	0.54	MWD	None
3	2534.06	1.39	34.83	47.36	2534.06	0.42	0.42	0.45	0.61	46.76	0.29	MWD	None
4	2572.62	0.71	17.82	38.56	2572.61	1.03	1.03	0.79	1.30	37.33	0.19	MWD	None
5	2610.72	0.86	24.16	38.10	2610.70	1.52	1.52	0.97	1.80	32.74	0.05	MWD	None
6	2649.68	0.59	7.96	38.96	2649.66	1.98	1.98	1.12	2.28	29.53	0.09	MWD	None
7	2687.89	0.80	4.01	38.21	2687.87	2.44	2.44	1.17	2.71	25.56	0.06	MWD	None
8	2725.49	0.79	0.19	37.60	2725.47	2.96	2.96	1.19	3.19	21.83	0.01	MWD	None
9	2767.24	0.89	359.80	41.75	2767.21	3.58	3.58	1.19	3.77	18.37	0.02	MWD	None
10	2807.09	0.99	1.82	39.85	2807.06	4.23	4.23	1.20	4.39	15.80	0.03	MWD	None
11	2842.20	1.21	4.11	35.11	2842.16	4.90	4.90	1.23	5.05	14.12	0.06	MWD	None
12	2879.94	1.29	7.02	37.74	2879.89	5.72	5.72	1.31	5.87	12.93	0.03	MWD	None
13	2958.65	1.39	6.45	78.71	2958.58	7.55	7.55	1.53	7.70	11.45	0.01	MWD	None

Company:

Schlumberger

Well: **C0003A**

Field: **Nankai−Kumano**

Rig: **Chikyu**

Country: **Japan**

8 1/2 in

Drilling Parameters

Real Time Log 1:500 Measured Depth

Data Quality Report

Geomarket	CHG	Location	Philippine Sea
Job Date	21−Oct−07	Customer	JAMSTEC
Rig	Chikyu	Field/Well	Nankai−Kumano/C0003A
Engineer	Mario/Cheng Xi/Q.G. Ming	Job Number	07CHS0064

Type of Measurement

When data does not meet standards, put a number in the colum corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks
Positive remarks are welcome; do not append them with a number.

Operation	Res	GR	APWD	Neu	Den	Remarks
Presentation						
Description of Well − Names, Geometry, Services, Location and References; General Content Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded						
Equiment and Software Description Tool sketch, equipment numbers, software versions, data rates, filtering weights						
Processing Traceability and Environment Description Acquisition environment, parameters and key constants for each run or zone, complete and relavant remarks						
Annotations, Presented Formats, QC Curves, Print Quality Documented splice points; data gap explanations, mud changes, movement indicator, color selection						
Calibration and Verifications						
Calibration / Before survey verification / After survey verification Validity, completeness (includes equipment number), timeliness, unedited, descrepency explained						
Operating Procedures						
Depth Control Comparison with driller's depth, other logs, other bit runs, between RT and RM. Depth summary listing						
Logging speed and sampling rates As recommended in reference manual or job planner. No loss of data or spatial resolution						
Data Comparison Between runs and passes, with data from nearby wells, other conveyance, mud log and markers						
Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained.						
Digital Delivery						
Digital Products Labeled, verification listing with complete digital record, backup for archival; record matches hard copy.						
Job Quality Rating (JQR) Number of boxes without number X 10	100	100	100	100	100	
Environmental effects						
Irregular Operation Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions						
Borehole Geometry Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions						
Borehole Fluid Barite, KCl, salinity, additives, gas cut, unstable						
Interferences External noise, nearby casing or drillpipe, debris, unusual formation composition						
Operation Outside Tool Specifications GeomarketTemperature, pressure, hole size, hole deviation, dog−leg severity, flow rate, rpm, solids value of parameter						
Environmental Quality Rating (EQR) Number of boxes without number X 20	100	100	100	100	100	

Cell Manager: Mario Jakulj FSM: ND Maduemezia

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002