

Company: **Japan Agency for Marine-Earth Science and Technology**
 Well: **C0003A**
 Field: **Nankai-Kumano**
 Rig: **Chikyu** Country: **Japan**

GeoVISION Service – SONIC
Real Time Log 1:500 Measured Depth

Rig: Chikyu		Location: Philippines Sea	
Field: Nankai-Kumano		Well: C0003A	
Company: JAMSTEC		Location	
Permanent datum: Philippines Sea		Elevation	
N 33° 13.3982'		K.B. Top Drive	
E 136° 42.1382'		G.L. -2453.0 mMSL	
Mean Sea Level		D.F. 28.5 m	
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
Density	1.05 SG	Viscosity	165 s
Fluid loss	na	PH	11.5
Source of sample	na	Curve	Time (seconds)
Rm @ measured temperature	0.08 Ohmm	APWD	n/a
Rmf @ measured temperature	na	GVR GR	1.0
Rmc @ measured temperature	na	GVR Res	5.0
Source Rmf	Rmc	SON Dt	10.0
Rm @ E.B.H.T.	na	Density	1.0
Estimated B.H.T.	na	Porosity	1.0
Recorded by	Mario Jakuji / Chen Xi / QG Ming	Caliper	1.0
Witnessed by	Kaminishi / Yokoyama		

Do not cut this header. It contains important information

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 OF 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.

OTHER SERVICES FOR RUN 1 Direction and Inclination MWD APWD	OTHER SERVICES FOR RUN	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 1 All data provided is from Real Time Acquisition 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

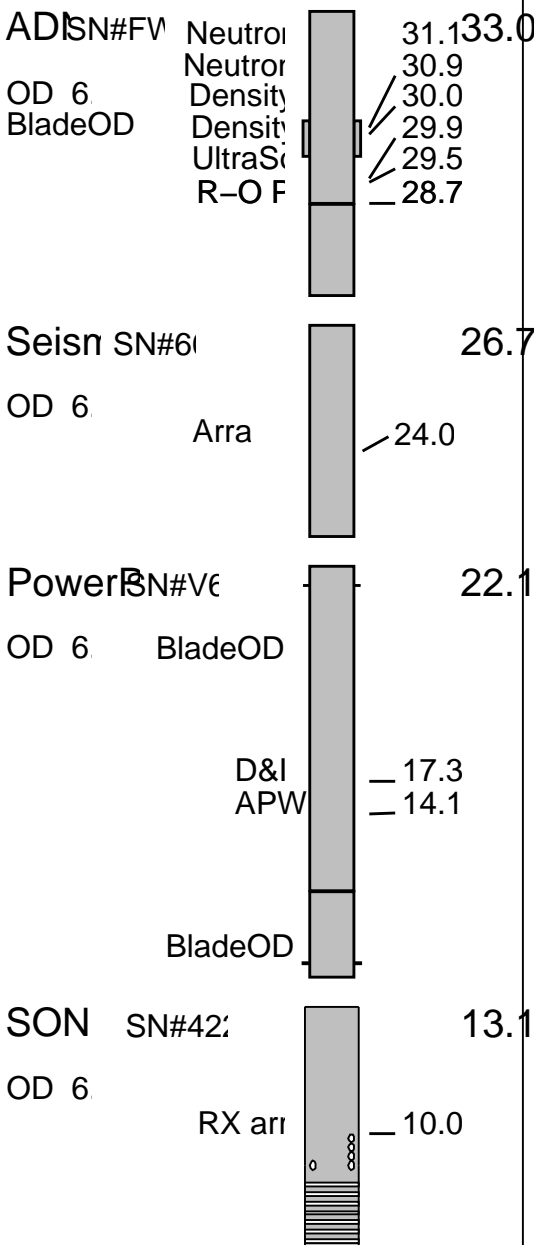
EQUIPMENT DESCRIPTION

RUN1

RUN

RUN

DOWNHOLE E



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

314 C0003A VISION LWD RT MD500

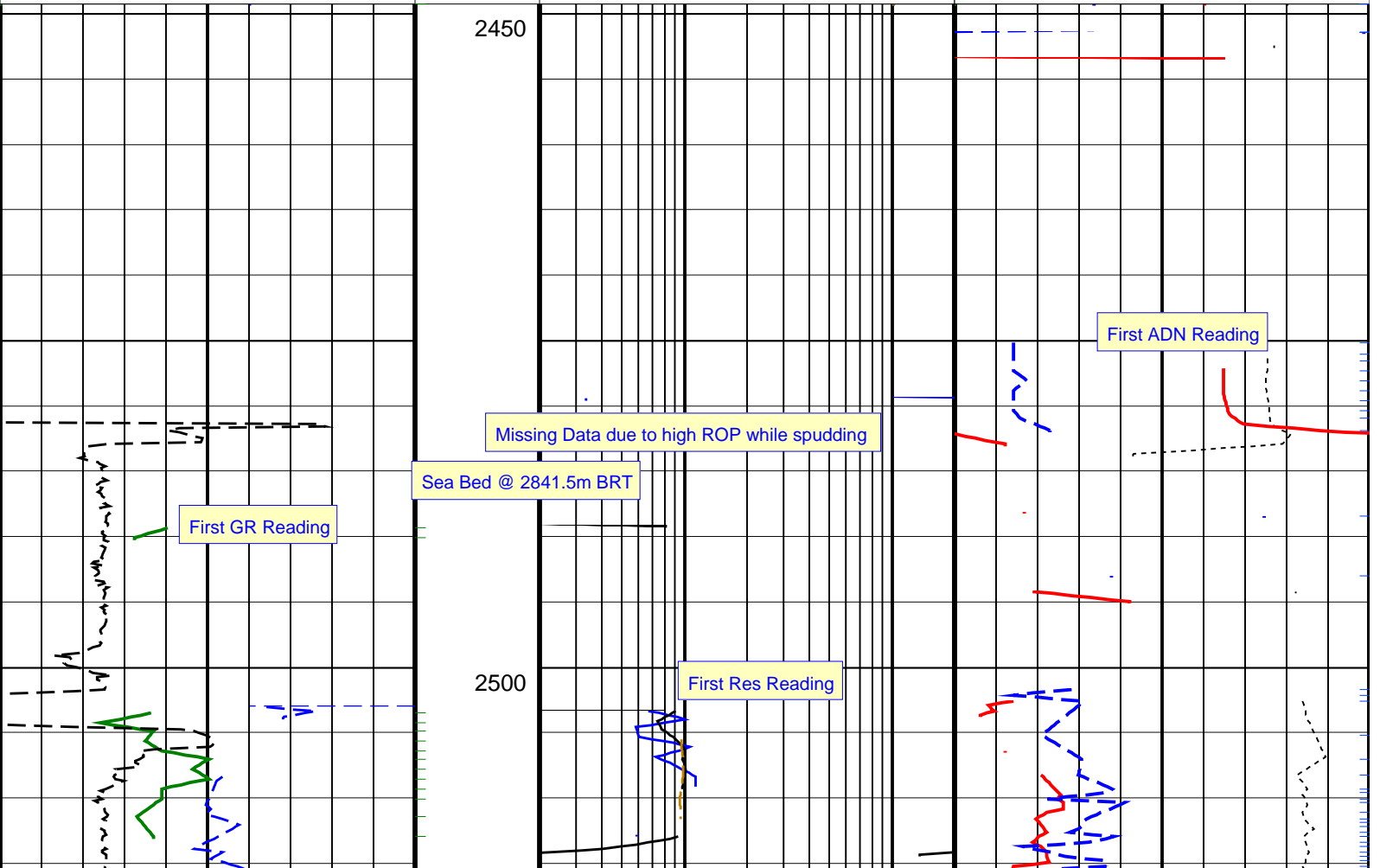
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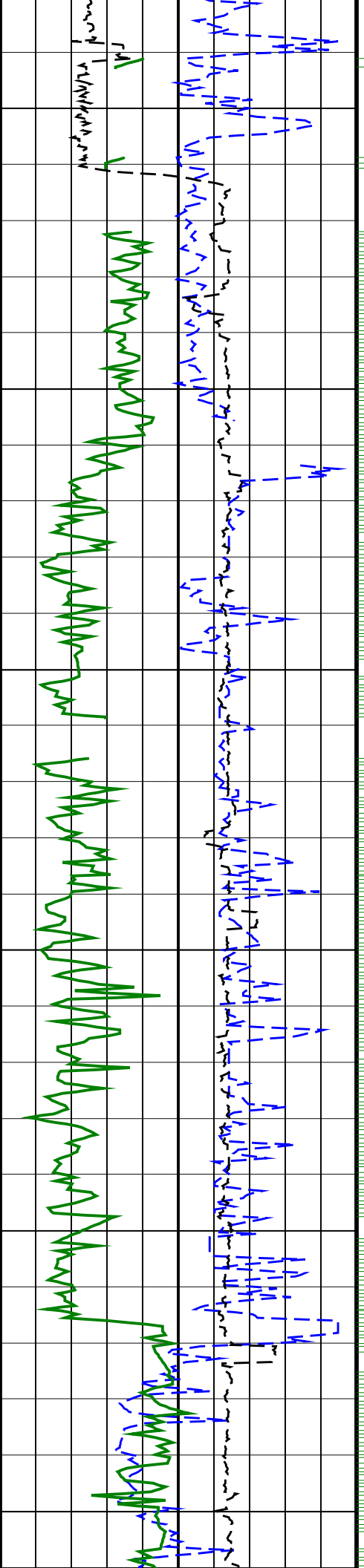
PIP SUMMARY

GRRR_R PIP

TNPH_TA PIP

		Delta-T Compressional (Computed Uphole), Real-Time (DTCU_RT)			
		200	(US/F)	0	
RAB Gamma Ray, Real-Time (GR_RAB_RT)		Bit Resistivity, Real-Time (RES_BIT_RT)		Bulk Density Correction, Real-Time Computed Downhole (DRHO_DH_ADN_RT)	
0	(GAPI) 150	0.2	(OHMM) 20	-0.8	(G/C3) 0.2
Average Borehole Diameter, Real-Time (ADIA_ADN_RT)		Ring Resistivity, Real-Time (RES_RING_RT)		Thermal Neutron Porosity, Real-Time (TNPH_ADN_RT)	
7	(IN) 12	0.2	(OHMM) 20	80	(PU) 20
ROP*5 (ROP5)		Deep Button Resistivity, Real-Time (RES_BD_RT)		Bulk Density, Real-Time Computed Downhole (RHOB_DH_ADN_RT)	
100	(M/HR) 0	0.2	(OHMM) 20	1.4	(G/C3) 2.4

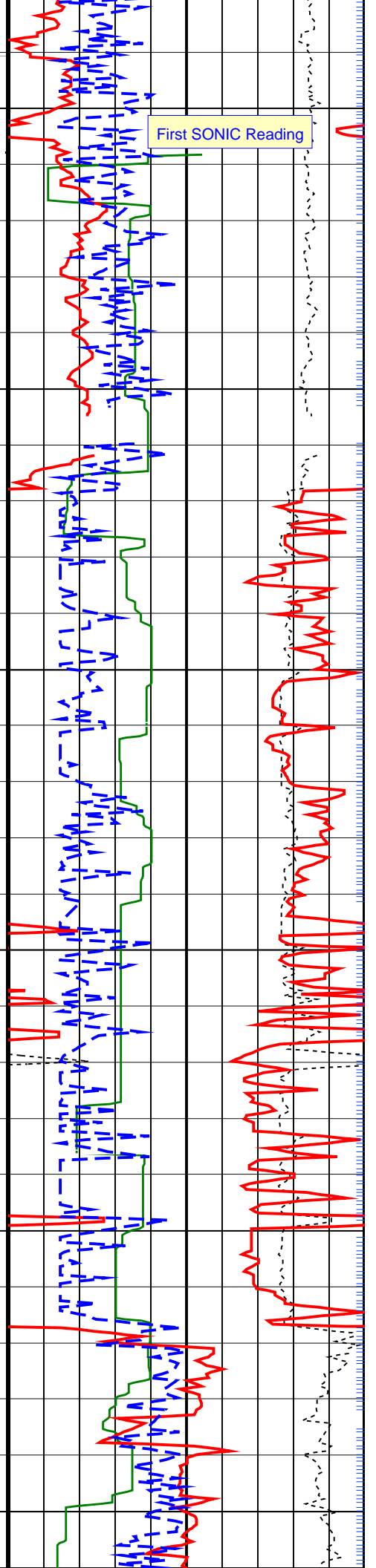
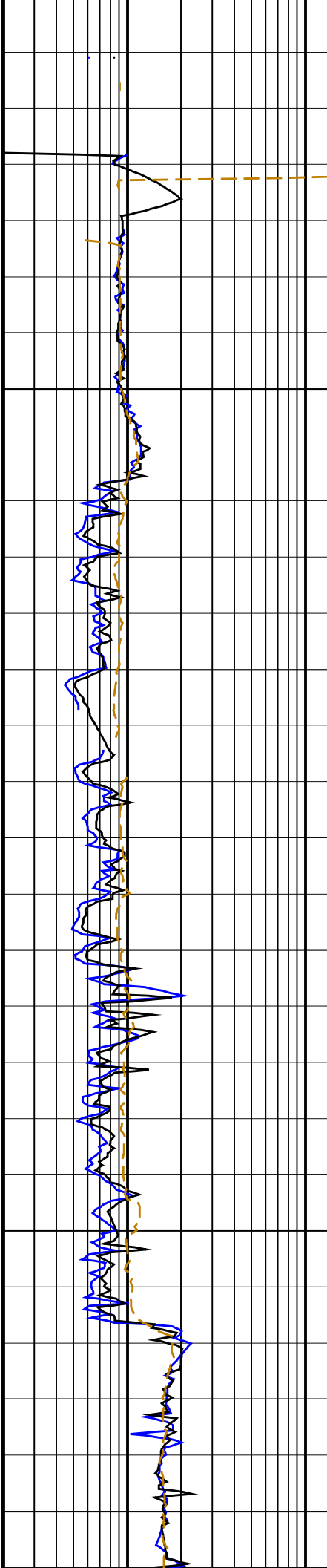


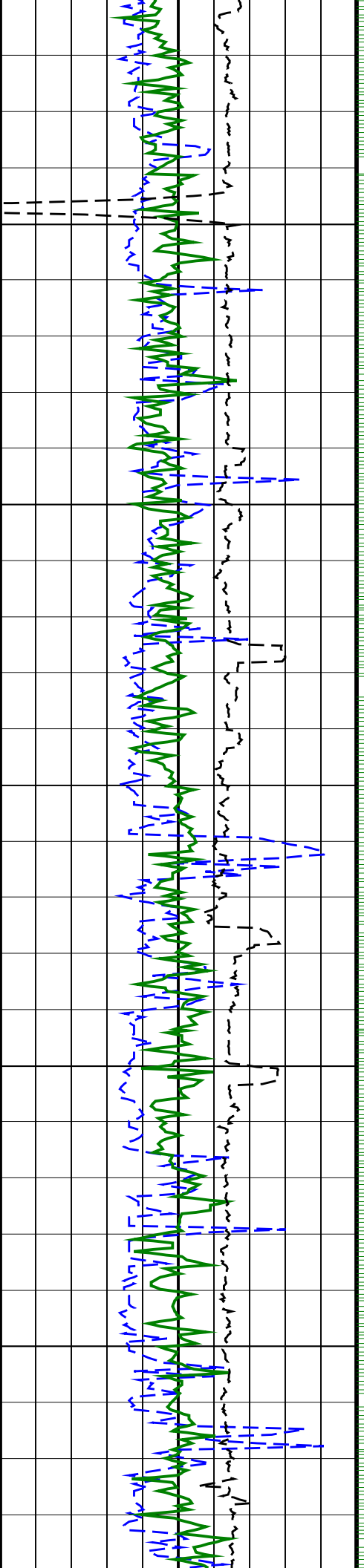


2550

2600

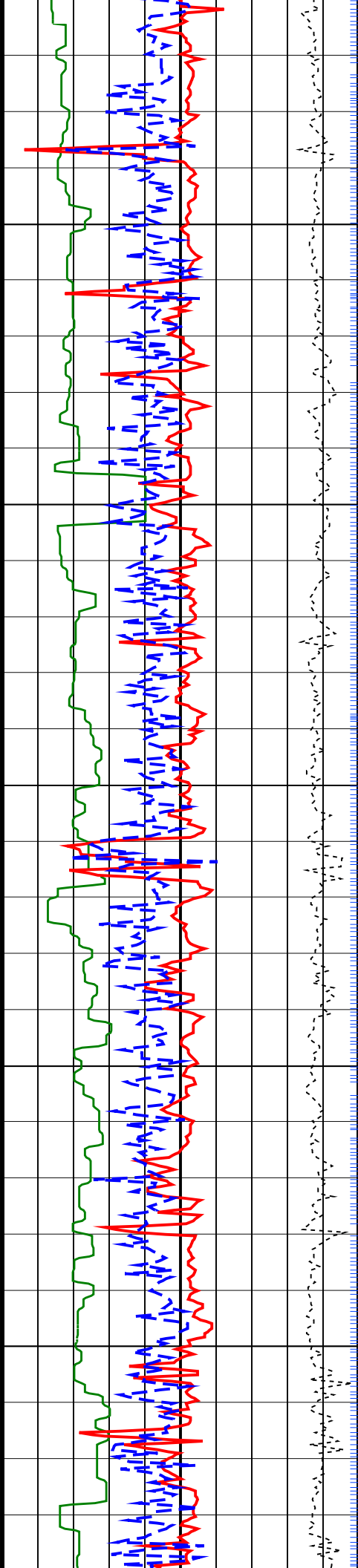
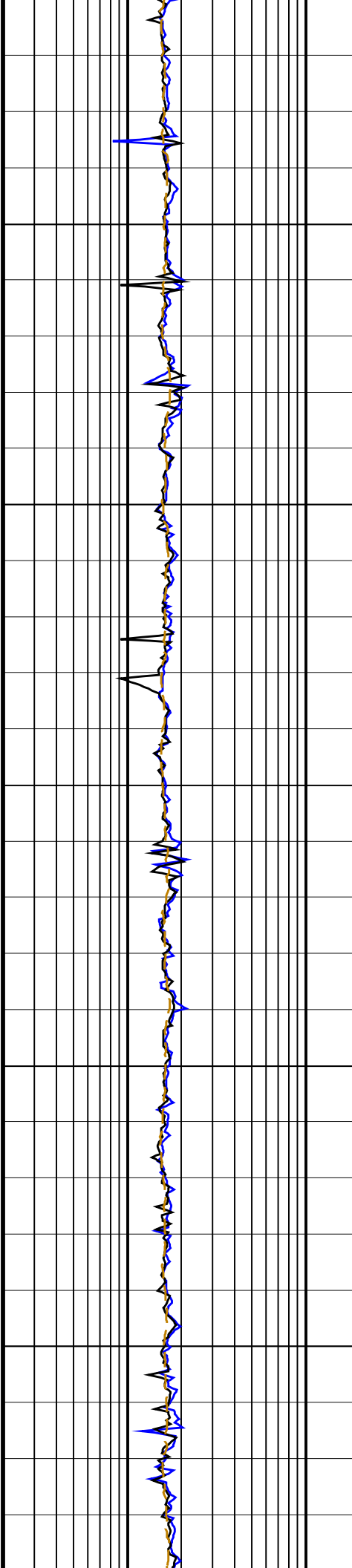
2650

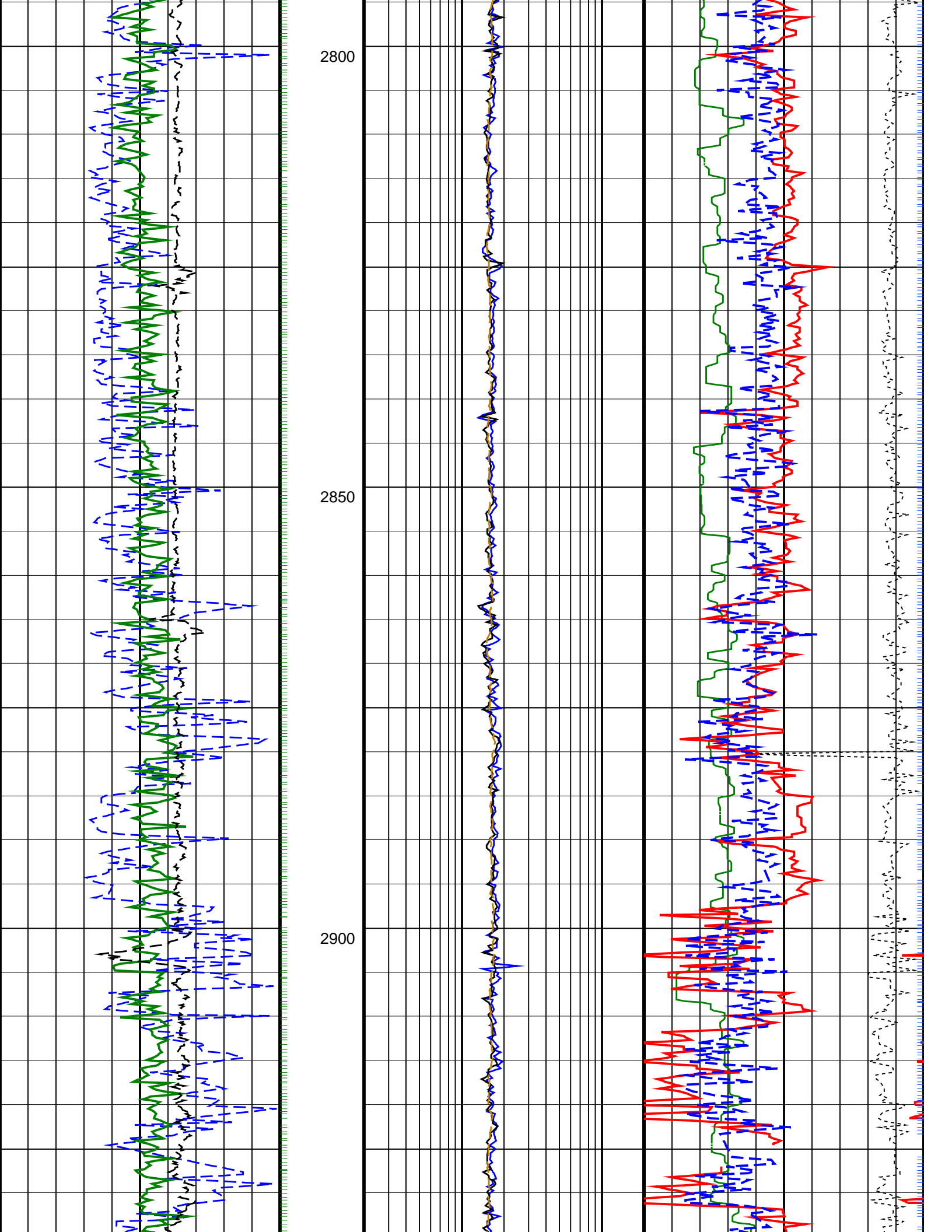


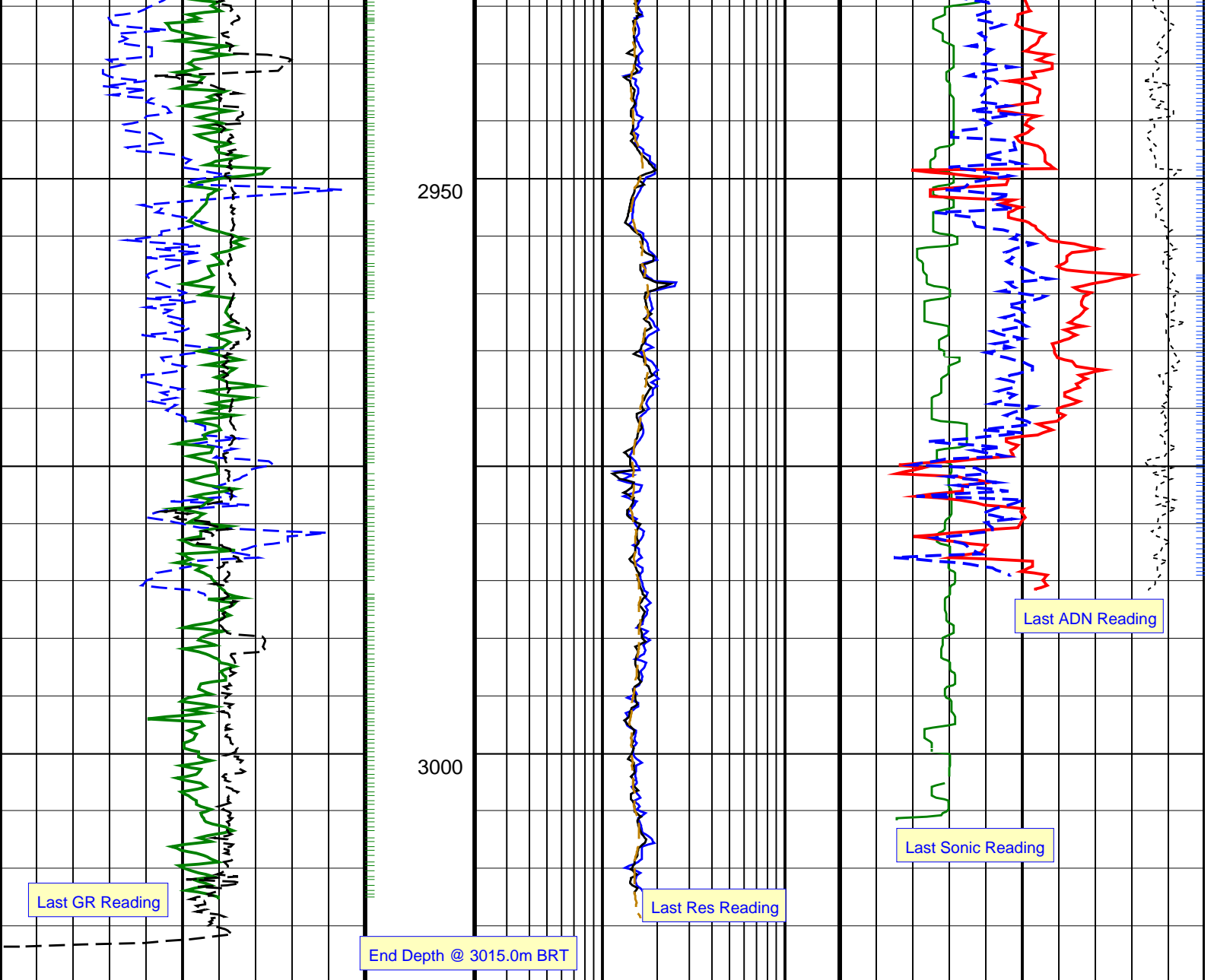


2700

2750







ROP*5 (ROP5) (M/HR)	0	100	0
Average Borehole Diameter, Real-Time (ADIA_ADN_RT) (IN)	12	7	12
RAB Gamma Ray, Real-Time (GR_RAB_RT) (GAPI)	150	0	150
Deep Button Resistivity, Real-Time (RES_BD_RT) (OHMM)	20	0.2	20
Ring Resistivity, Real-Time (RES_RING_RT) (OHMM)	20	0.2	20
Bit Resistivity, Real-Time (RES_BIT_RT) (OHMM)	20	0.2	20
Bulk Density, Real-Time Computed Downhole (RHOB_DH_ADN_RT) (G/C3)	2.4	1.4	2.4
Thermal Neutron Porosity, Real-Time (TNPH_ADN_RT) (PU)	20	80	20
Bulk Density Correction, Real-Time Computed Downhole (DRHO_DH_ADN_RT) (G/C3)	0.2	-0.8	0.2
Delta-T Compressional (Computed Uphole), Real-Time (DTCU_RT) (US/F)	0	200	0

PIP SUMMARY

← GRRA_R PIP

TNPH_TA PIP →

6.75-in. Azimuthal Density Neutron / Equipment Identification

Primary Equipment:
 Tool Name and Serial Number
 Collar Type and Serial Number
 Chassis Type and Serial Number
 Stabilizer Type and Serial Number
 Neutron Logging Source

ADN6 - CA	446
ADDC - AA	
ADSE - EA	
NSR - M	1
	245

345.0 (Minimum)	487.5 (Nominal)	595.0 (Maximum)	Phase Near 2 tube 1 Air Point Measure CPS	Value	533.9	535.0 (Minimum)	768.8 (Nominal)	925.0 (Maximum)	Phase Near 2 tube 1 Rod Point Measure CPS	Value	833.5	230.0 (Minimum)	343.7 (Nominal)	430.0 (Maximum)	Phase Near 2 tube 1 H2O Point Measure CPS	Value	377.9
Master						Master						Master					
345.0 (Minimum)	487.5 (Nominal)	595.0 (Maximum)				535.0 (Minimum)	768.8 (Nominal)	925.0 (Maximum)				230.0 (Minimum)	343.7 (Nominal)	430.0 (Maximum)			

Master: 15-Sep-2007 14:09																	
6.75-in. Azimuthal Density Neutron Calibration																	
Neutron: Water Block Check																	
Phase			Far Neutron water porosity PU												Value		
Master															99.82		
			90.00 (Minimum)			100.0 (Nominal)			125.0 (Maximum)								

6.75-in. Resistivity At-the-Bit / Equipment Identification																	
Primary Equipment:																	
Tool Name and Serial Number RAB6 - CA 273																	
Calibration Status -																	

Master: 4-Sep-2007 17:50																										
6.75-in. Resistivity At-the-Bit Calibration																										
Resistivity: Fixture																										
Phase			Ring/T1 factor			Value			Phase			Ring/T2 factor			Value			Phase			M0/T1 factor			Value		
Master						0.9900			Master						0.9969			Master						0.9964		
			0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)						0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)					
Phase			M0/T2 factor			Value			Phase			M2/T1 factor			Value			Phase			M2/T2 factor			Value		
Master						1.003			Master						0.9892			Master						0.9961		
			0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)						0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)					
Phase			BTN shallow/T1 factor			Value			Phase			BTN shallow/T2 factor			Value			Phase			BTN medium/T1 factor			Value		
Master						0.9922			Master						0.9987			Master						0.9973		
			0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)						0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)					
Phase			BTN medium/T2 factor			Value			Phase			BTN deep/T1 factor			Value			Phase			BTN deep/T2 factor			Value		
Master						1.004			Master						0.9892			Master						0.9956		
			0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)						0.9750 (Minimum)			1.000 (Nominal)			1.025 (Maximum)					

Master: 4-Sep-2007 17:50																	
6.75-in. Resistivity At-the-Bit Calibration																	
Gamma Ray: Blanket																	
Phase			Gamma ray factor												Value		
Master															1.075		
			0.7500 (Minimum)			1.000 (Nominal)			1.250 (Maximum)								

Engineer.....: Mario Jakulj / Chen Xi / QG Ming
 Rig:.....: Chikyu
 Country:.....: Japan

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

----- 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

----- 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

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

----- Vertical section origin-----
 Latitude (+N/S-).....: 0.00 m
 Departure (+E/W-).....: 0.00 m

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

----- 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

Azimuth from Vsect Origin to target: 0.00 degrees

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 SCHLUMBERGER Survey Report

22-Oct-2007 11:35:51

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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

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Company:
Japan Agency for Marine-Earth Science and Technology

Well: C0003A
Field: Nankai-Kumano
Rig: Chikyu
Country: Japan

**8 1/2 in
 GeoVISION Service - ISONIC**



Data Quality Report

Type of Measurement

Res	GR	APWD	Neu	Den

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

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

Operation

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

Equipment 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 relevant 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, discrepancy 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 (JAR)

Number of boxes without number X 10

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

Geomarker Temperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter

Environmental Quality Rating (EQAR)

Number of boxes without number X 20

Remarks

Cell Manager: Mario Jakui FSM: ND Maduemezia

