

# geoVISION - APWD

Gamma Ray - Resistivity - Image - APWD

12.25in Recorded Mode Log. Measured Depth 1:200

# Schlumberger

Company: JAMSTEC

Well: C0018B

Field: Nankai Trough - Kumano Basin

Rig Name: Chiky

Prefecture: Wakayama

Country: Japan

Latitude: 33° 9' 25.914" N

Custom:

12JAP0020

Longitude: 136° 40' 52.956" E

Rig Name:

Chiky

Block:

Rig Type:

Drill Vessel

FL: Philippine Sea

FL1: X = 655 167.7158m

FL2: Y = 3 669 972.9081m

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



Ground Level: 3084.50 m

Acquisition Dates: 26-Dec-2012

Other Services:

Log Interval: 3:105.00(m) -- 3:463.19(m)

DWOB, DTOR

Index Types: Measured Depth

Direction and Inclination

Index Scales: 1:200

Drilling Mechanics

Depth Source: Driller's Depth

Depth Sensor: DES

Print Type: Final

Spud Date: 26-Dec-2012



## 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.

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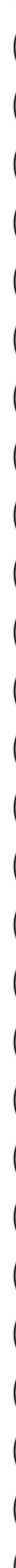
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## Well Sketch

**Driller Depth**

**3113.00 m**



3463.19 m

Open Hole 12.25in

### Borehole Size/Casing Record

Bit					
Bit Size ( in )	12.25				
Top Driller ( m )	3113				
Bottom Driller ( m )	3463.19				

### Operational Run Summary


Parameter ( unit )	Run 1				
Date Log Started	25-Dec-2012				
Time Log Started	17:03:32				
Date Log Finished	26-Dec-2012				
Time Log Finished	19:56:41				
Bit Size ( in )	12.250				
Bit Start Depth ( m )	3113.00				
Bit Stop Depth ( m )	3463.20				
Top Log Interval ( m )	3113.00				
Bottom Log Interval ( m )	3462.94				
Max Hole Deviation ( deg )	1.60				
Azimuth of Max Deviation ( deg )	281.92				
Logging Unit Number	OLU-KC-0504				
Logging Unit Location	Comp Deck				
Recorded By	Wang Feng TomasCosendey				
Witnessed By	Yoshi Sanada				
Service Order Number	12JAP0020				

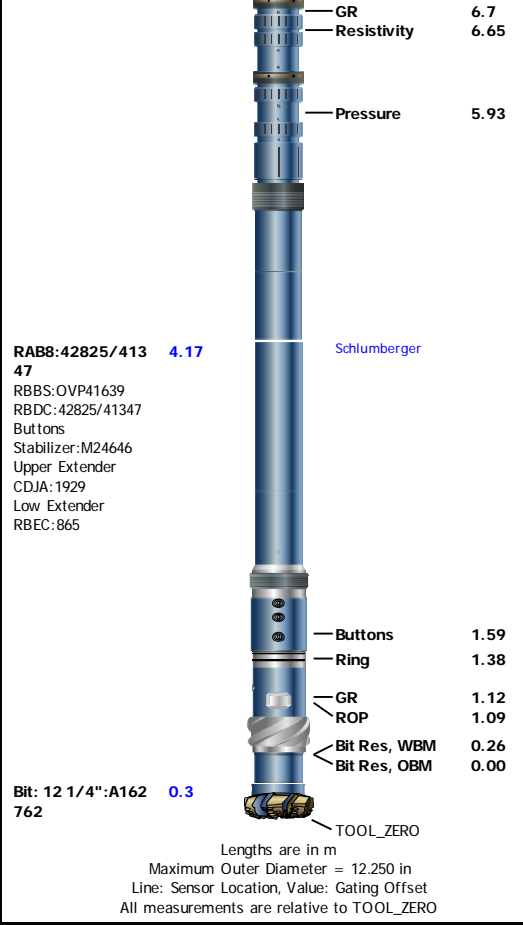
### Borehole Fluids

Parameter( unit )	Run 1				
Fluid Type	Water				
Fluid Name	Sea Water				
Max Recorded Temperatures ( degC )	5				
Source of Sample	Active Tank				
Salinity ( ppm )	30470.42				
Density ( g/cm3 )	1.04				
Funnel Viscosity ( s )					

Fluid Loss ( cm3 )						
PH	10.7					
Source RMF						
RMC	Pressed					
RM @ Meas Temp ( ohm.m@degC )	0.22 @ 20.3					
RMF @ Meas Temp ( ohm.m@degC )	0.15 @ 20					
RMC @ Meas Temp ( ohm.m@degC )						
RM @ BHT ( ohm.m@degC )	0.35 @ 5					
RMF @ BHT ( ohm.m@degC )						
RMC @ BHT ( ohm.m@degC )	NaN @ 5					
Total Solid ( % )						
High Gravity Solids ( % )						

## Remarks and Equipment Summary

Run1: Toolstring				Run1: Remarks	
<b>Equip name</b> TELE825-IWOB:G 0159	<b>Length</b> 18.99	<b>MP name</b> Schlumberger	<b>Offset</b>	Data presented is Recorded Mode data which was acquired while drilling.	
MSSU825-SBD5767 Upper Extender MDC825-IWOB:G015 9				Depth reference is driller's depth measured from Rotary Table.	
MMA:3632 MDI:3019 PMGR:889 PMEA:725 MTA:3627 MTK825-IWOB:3627 MWA MSSD825-SBD9890 Lower Extender:09-1 19					geoVISION record rate is 5s, APWD record rate is 5s.
					geoVISION GR is corrected for bit size, tool size and mud weight. No potassium concentration in mud.
					geoVISION resistivity is environmentally corrected for bit size and mud resistivity.
					Reason for POOH: Well TD.
					Drilling Time: 9.17 hrs
					Pumping Time: 13.26 hrs
					Warning in calibration list is due to MaxWell bug.
				D&I 14.21	
				GR 13.56	
			ROP 11.85		
			IWOB 10.84		
<b>ARCB:2791-SRPC</b> ARDC:2791-SRPC Upper Extender:08-2 30	<b>10.08</b>	Schlumberger			
CDJA:1934 AREA:1925F APWD:206082 ARSS:SBD8260 Lower Extender:901					
			ROP 7.76		



## 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 :	0.92 deg		

### Rig Location

Latitude :	33° 9' 25.914" N	Longitude :	136° 40' 52.956" E
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### Tie In Point

Measured Depth:	0.00 m	Inclination:	0.00 deg	Azimuth:	0.00 deg
True Vertical Depth:	0.00 m	North Displacement:	0.00 m	East Displacement:	0.00 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 :	BGGM 2011	Geomagnetic Date :	21-Dec-2012
Computed Location B :	45873.94 nT +/- 300.00nT	Used Location B :	45873.94 nT +/- 300.00nT
Computed Location G :	9.80 m/s2 +/- 0.02m/s2	Used Location G :	9.80 m/s2 +/- 0.02m/s2
Computed Magnetic Dip :	46.64 deg +/- 0.45deg	Used Magnetic Dip :	46.64 deg +/- 0.45deg
Computed Magnetic Dec :	-6.70 deg	Used Magnetic Dec :	-6.70 deg
Computed Total Correction :	-7.62 deg	Used Total Correction :	-7.62 deg

### Survey Quality Index

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

### Survey Correction Index

0 : No correction

### Survey Description Index

0 : Not Flagged Survey      11 : Secondary Tie-In Point

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	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0
2	3113.00	0.00	0.00	3113.00	3113.00	0.00	0.00	0.00	0.00	90.00	0.00	Other	9	0	11
3	3118.67	0.63	336.91	5.67	3118.67	0.03	0.03	-0.01	0.03	336.91	3.33	TeleScope	0	0	0
4	3158.72	1.60	281.92	40.06	3158.71	0.35	0.35	-0.65	0.73	298.21	1.01	TeleScope	0	0	0
5	3197.12	1.38	279.03	38.40	3197.10	0.53	0.53	-1.63	1.71	288.04	0.19	TeleScope	0	0	0
6	3234.92	0.88	280.72	37.79	3234.89	0.65	0.65	-2.36	2.45	285.51	0.39	TeleScope	0	0	0

7	3273.35	0.63	279.81	38.43	3273.32	0.75	0.75	-2.86	2.95	284.62	0.20	TeleScope	0	0	0
8	3311.73	0.39	288.97	38.39	3311.70	0.82	0.82	-3.19	3.30	284.49	0.20	TeleScope	0	0	0
9	3349.23	0.31	291.47	37.50	3349.20	0.90	0.90	-3.40	3.52	284.85	0.07	TeleScope	0	0	0
10	3387.87	0.18	281.45	38.63	3387.83	0.95	0.95	-3.56	3.69	284.98	0.10	TeleScope	0	0	0
11	3426.23	0.12	249.90	38.36	3426.19	0.95	0.95	-3.66	3.78	284.58	0.08	TeleScope	0	0	0

## Run1

### Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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### Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run1	Drilling	Down	3080.05 m	3463.19 m	26-Dec-2012 3:46:59 AM	26-Dec-2012 7:56:41 PM	

All depths are referenced to toolstring zero

### Log

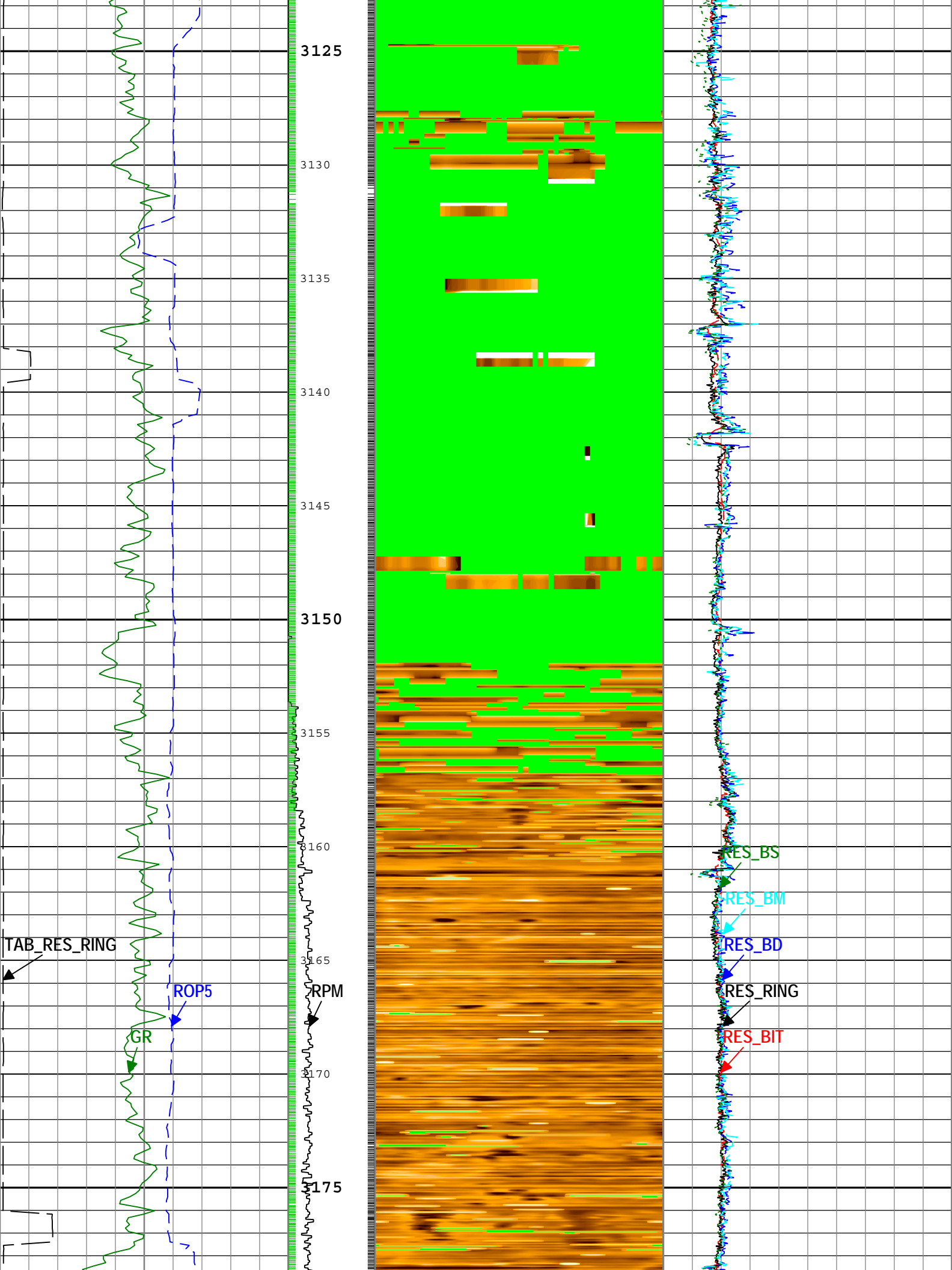
Run1: Drilling

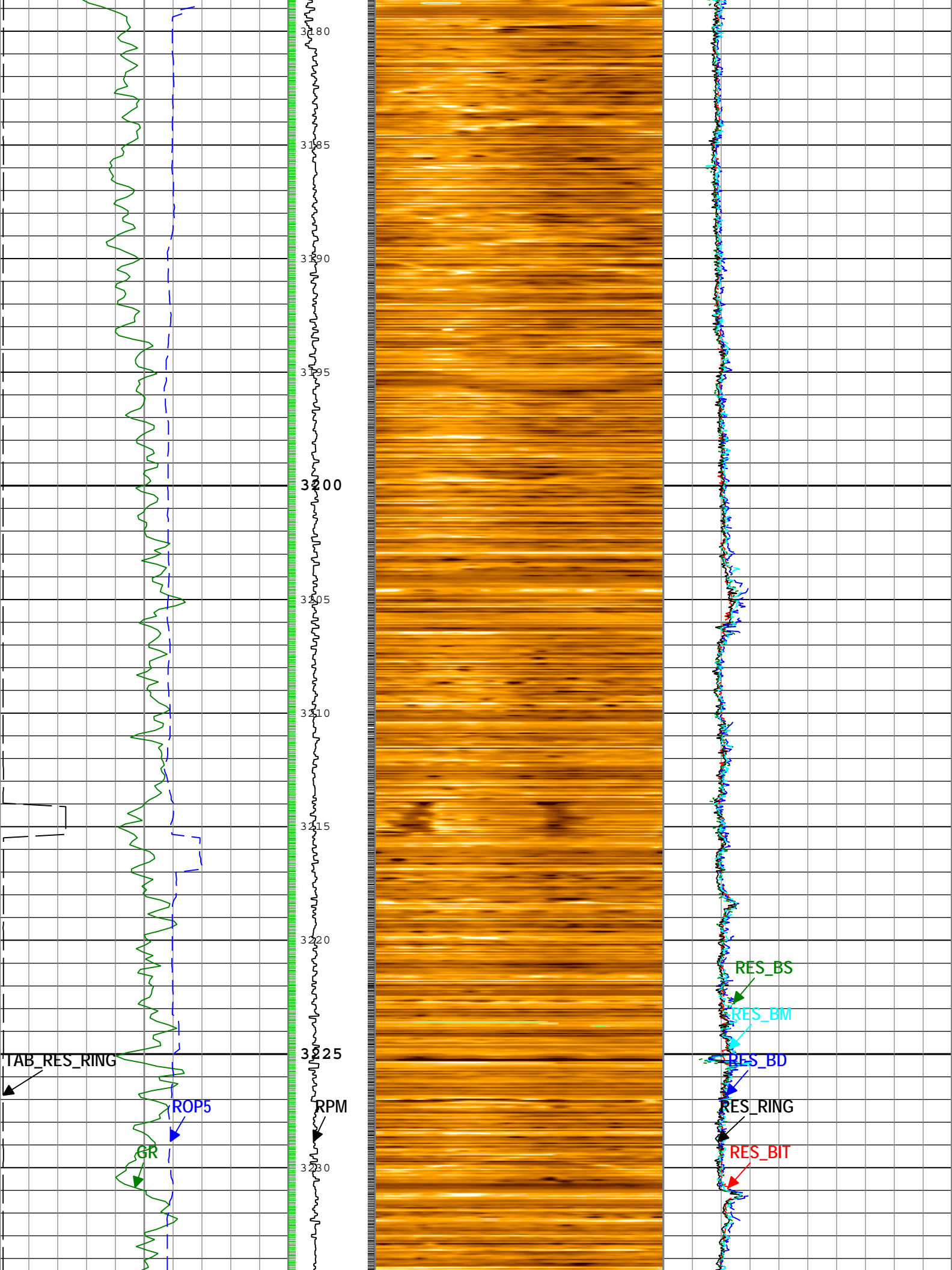
Description: GVR Resistivity, Deep Button Image Format: Log ( GVR Image-APWD Depth RM ) Index Scale: 1:200 Index Unit: m Index Type: Measured  
 Depth Creation Date: 10-Jan-2013 17:07:23

┆TICKS\_GR - Gamma Ray Tick Marks RAB8 RM

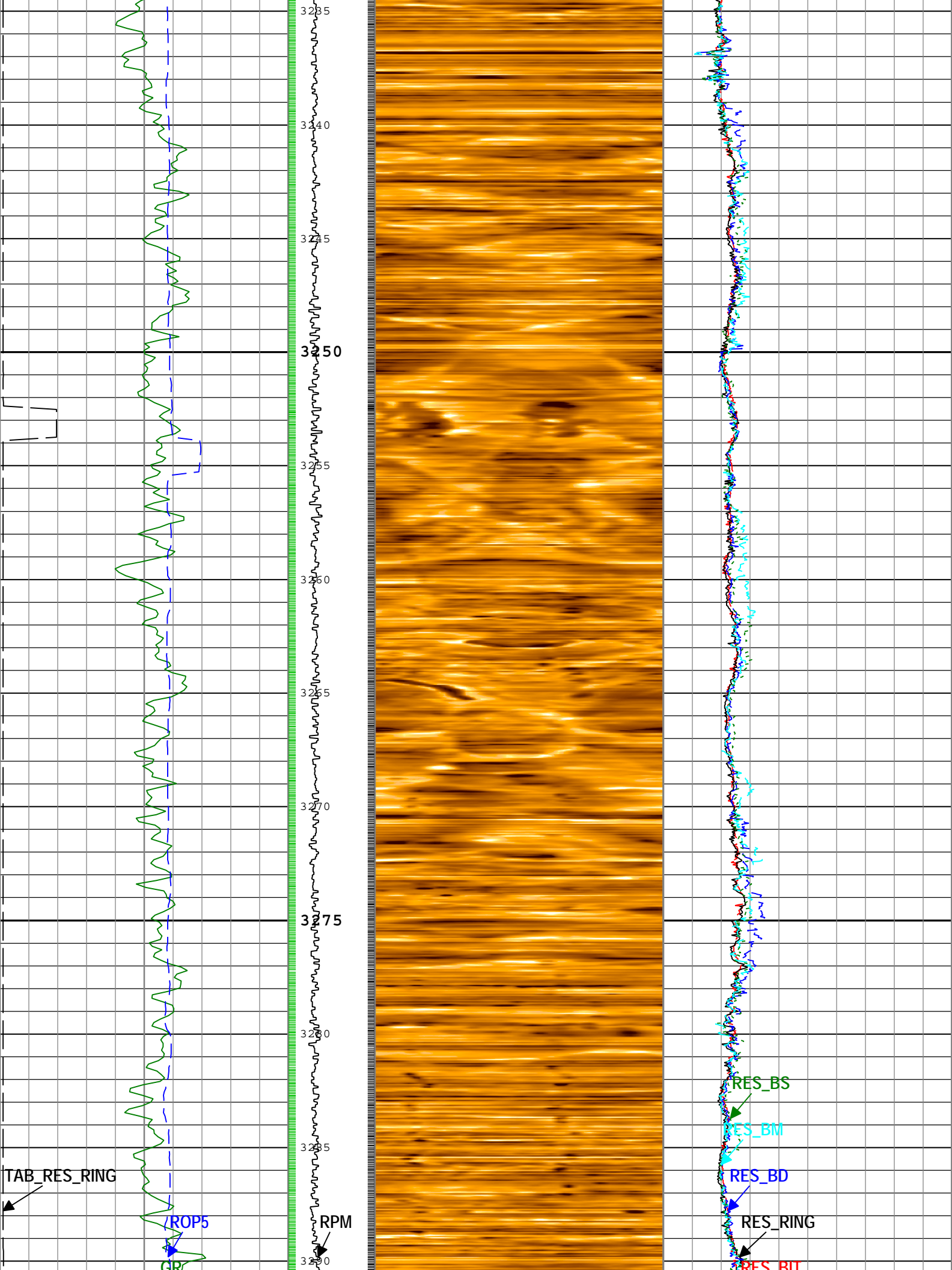
┆TICKS\_RING - Ring Sample Tick Marks RAB8 RM

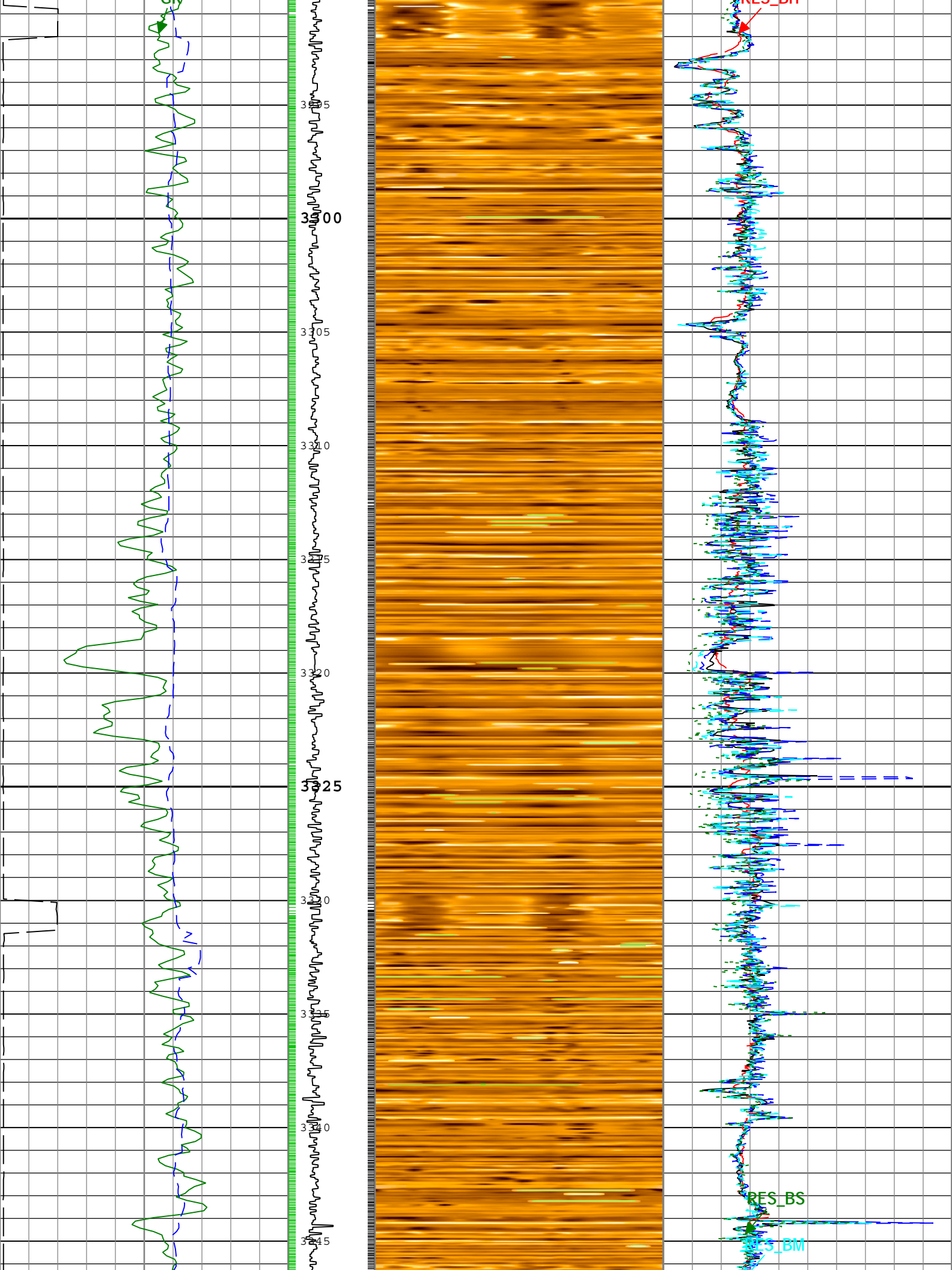






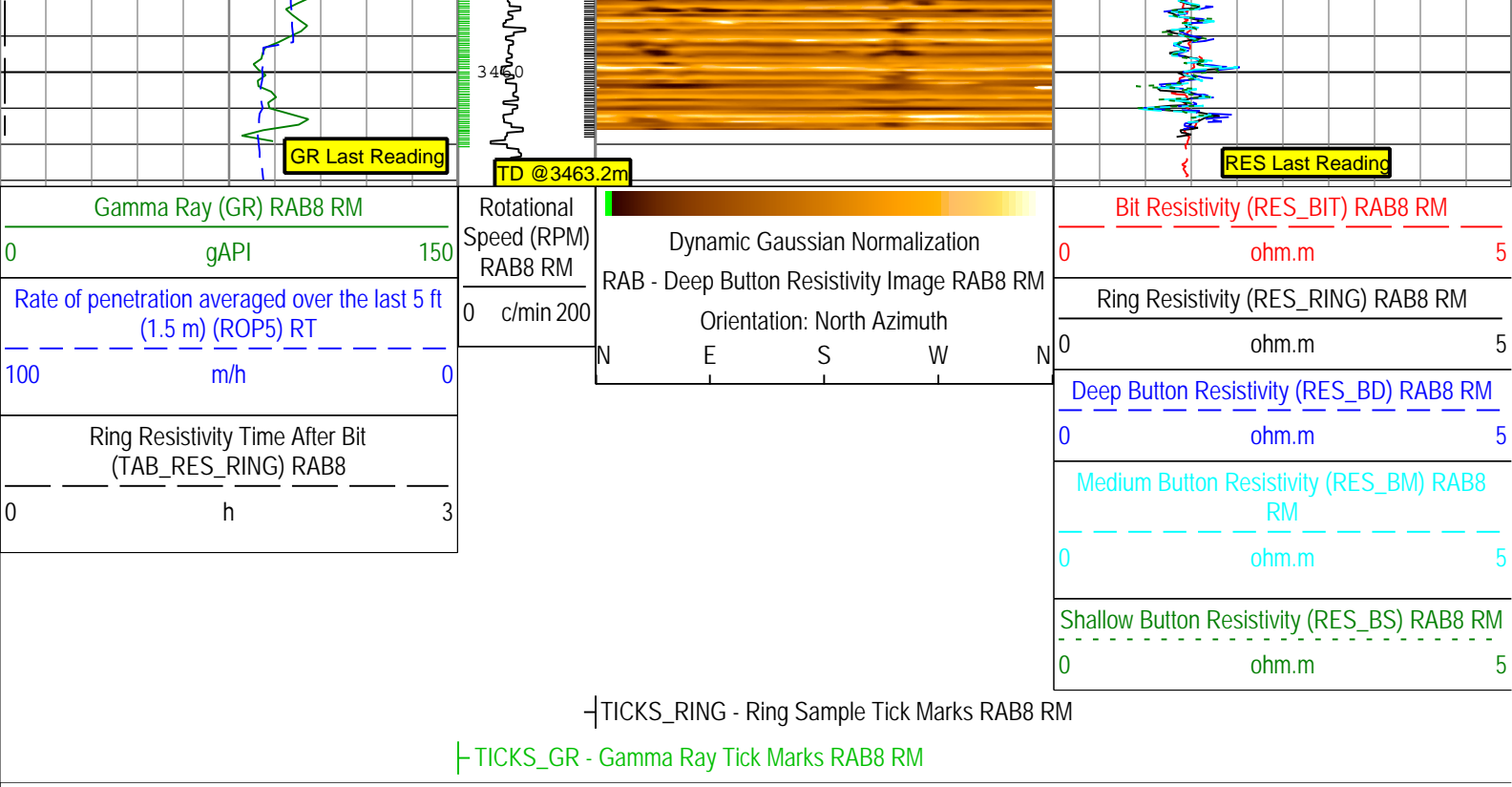












Description: GVR Resistivity, Deep Button Image Format: Log ( GVR Image-APWD Depth RM ) Index Scale: 1:200 Index Unit: m Index Type: Measured  
 Depth Creation Date: 10-Jan-2013 17:07:23

### Channel Processing Parameters

Parameter	Description	Tool	Value	Unit
BHK	Drilling Fluid Potassium Concentration	Borehole	0	%
BHT	Bottom Hole Temperature	Borehole	5	degC
BS	Bit Size	DNMSESSION	Depth Zoned	in
DEPTH_SEL	Depth Selection Parameter	DNMSESSION	Driller's Depth	
DFD	Drilling Fluid Density	Borehole	1.04	g/cm3
DFT	Drilling Fluid Type	Borehole	Water	
GGRD	Geothermal Gradient	Borehole	18.23	degC/km
GRSE_RM	Generalized Mud Resistivity Selection for Recorded Mode	Borehole	REMS	
GTSE_RT	Generalized Temperature Selection for Realtime Mode	Borehole	GTEM_LINEST(RT)	
MST	Mud Sample Temperature	Borehole	20.3	degC
RES_BD_IMG_SEL	GVR Output Resistivity Image Selection, Deep Button	RAB8	Compensated Uphole	
RMS	Resistivity of Mud Sample	Borehole	0.22	ohm.m
SHT	Surface Hole Temperature	Borehole	1.5	degC
TD	Total Measured Depth	Borehole	3463.2	m
TEMP_SEL_RAB	RAB Temperature Selection	RAB8	Tool	

### Depth Zone Parameters

Parameter	Value	Start ( m )	Stop ( m )
BS	0	3105	3113
BS	12.25	3113	3463.17

All depth are actual.

### Tool Control Parameters

Parameter	Description	Tool	Value	Unit
OFFBTM_TH	Threshold for deciding whether the bit is off bottom	DNMSESSION	0.6	m

Run 1

# Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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## Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Include Parallel Data
Run1	Drilling	Down	3080.05 m	3463.19 m	26-Dec-2012 3:46:59 AM	26-Dec-2012 7:56:41 PM	

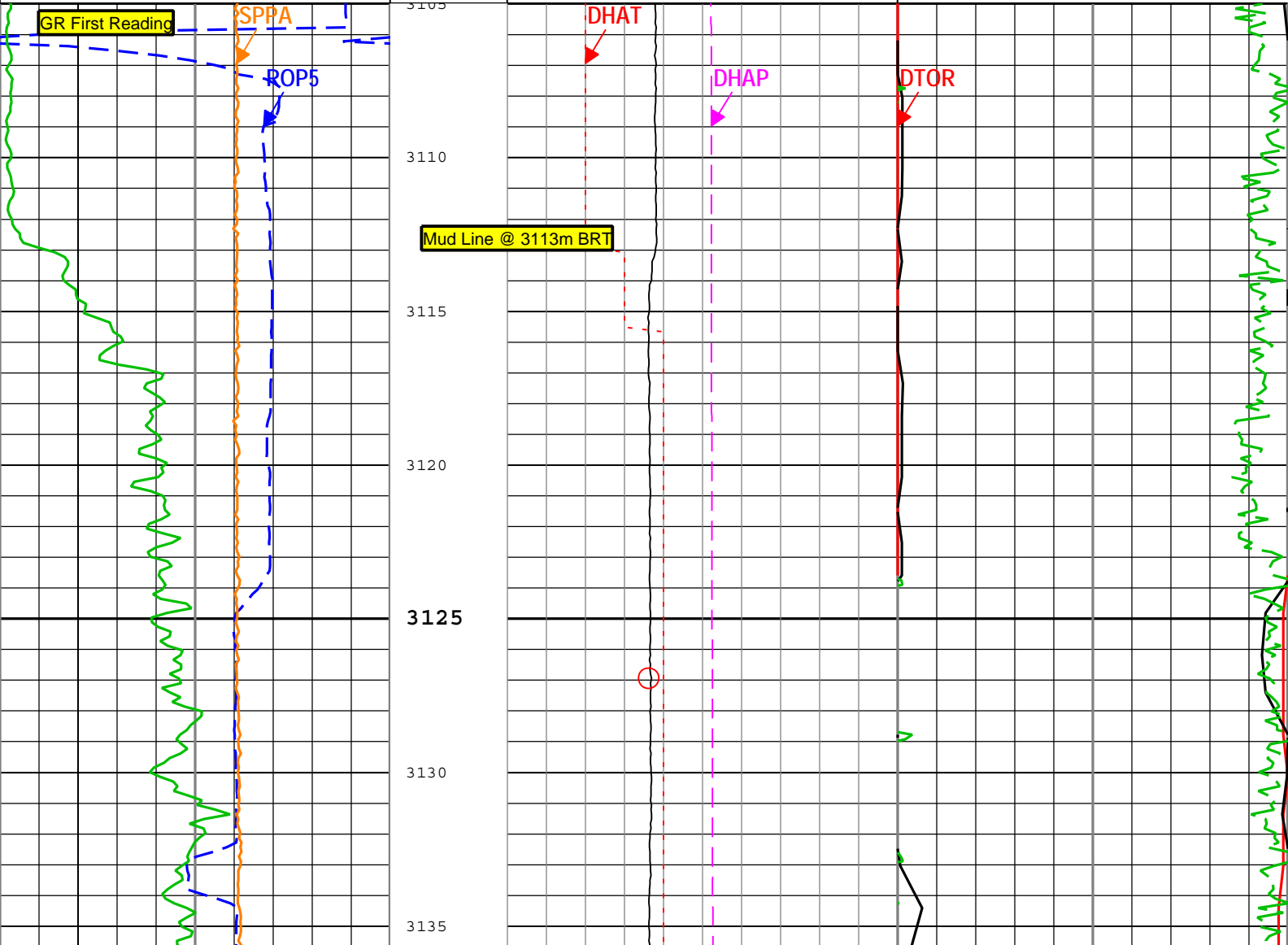
All depths are referenced to toolstring zero

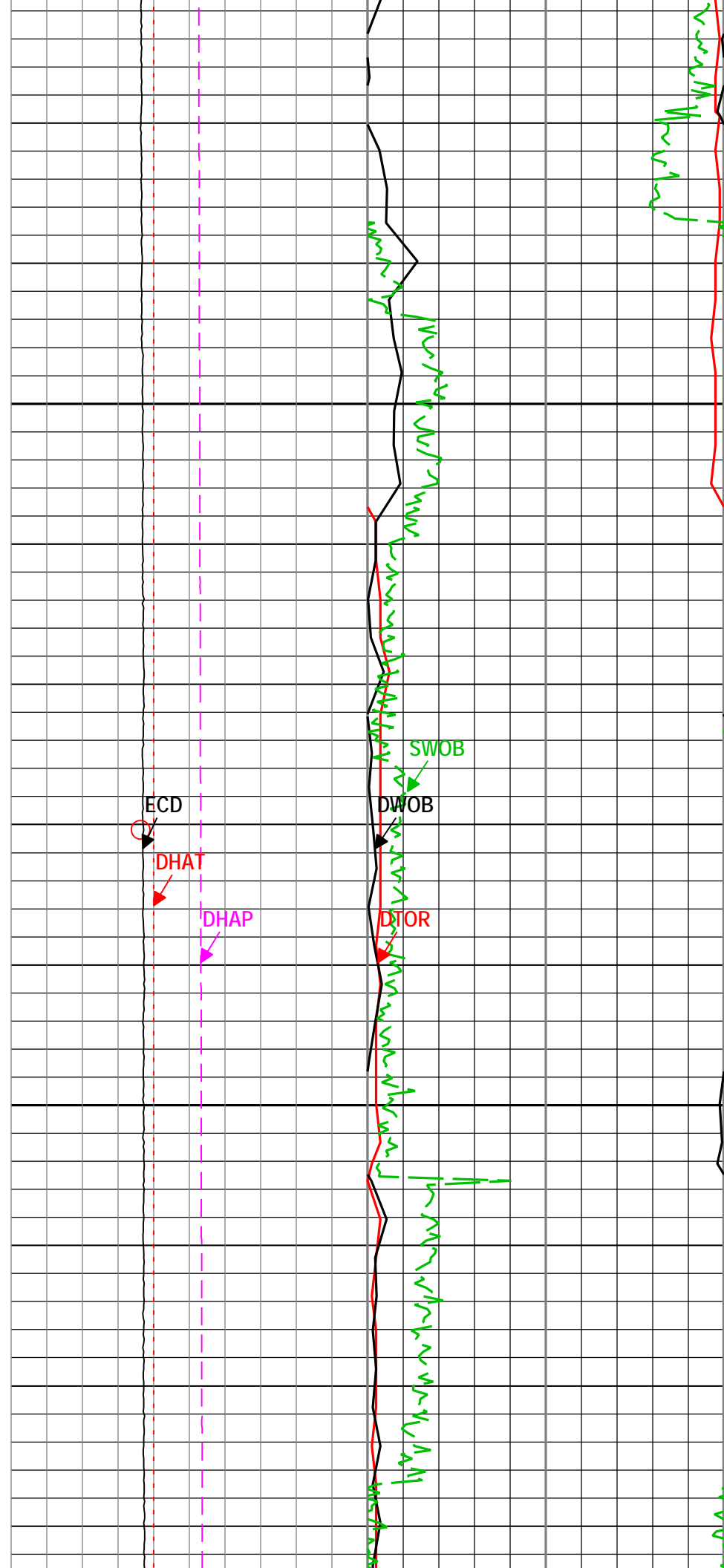
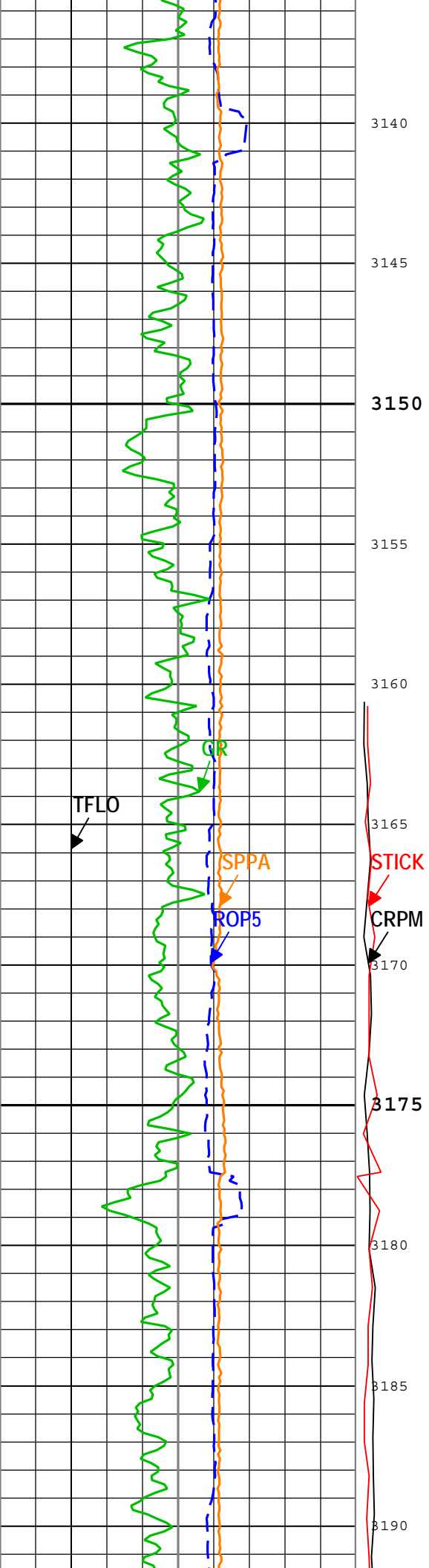
## Log

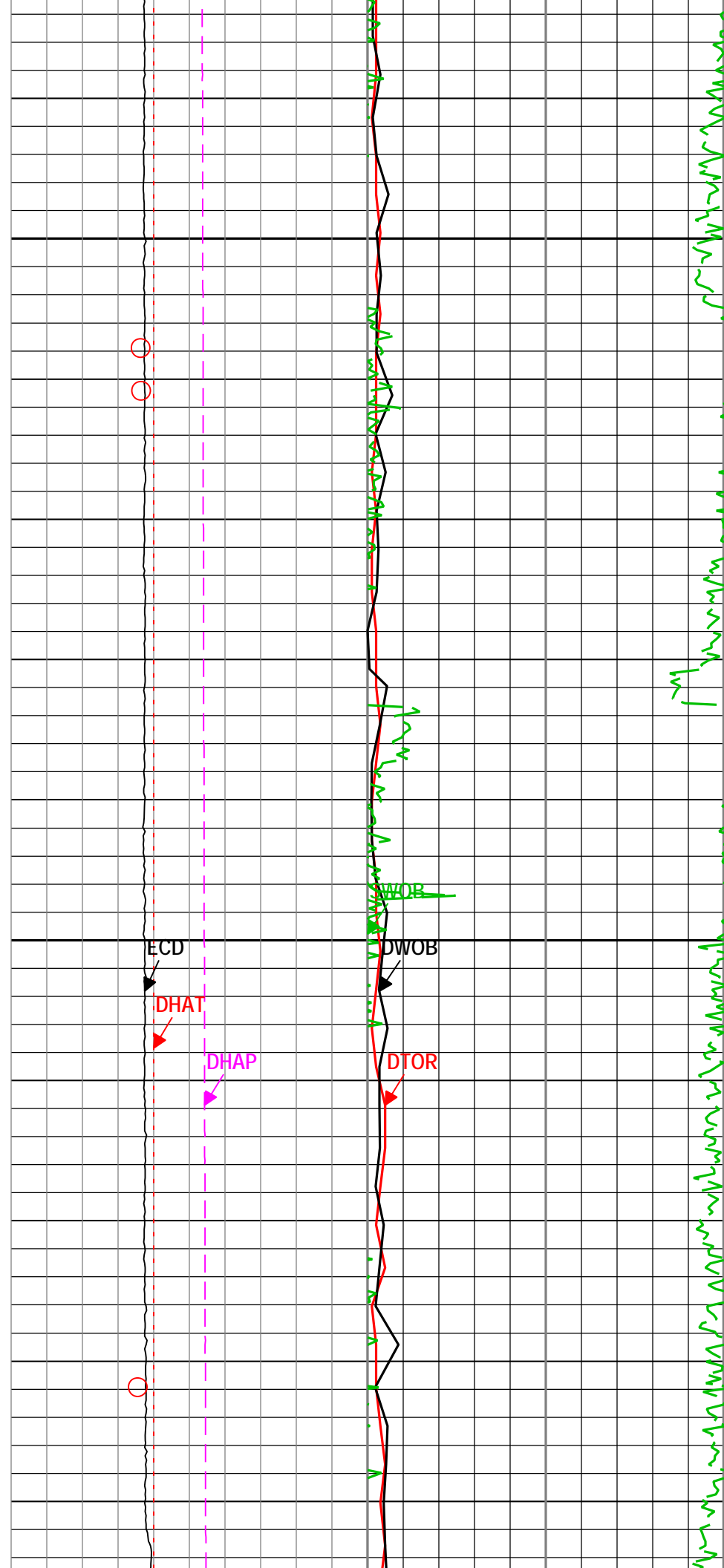
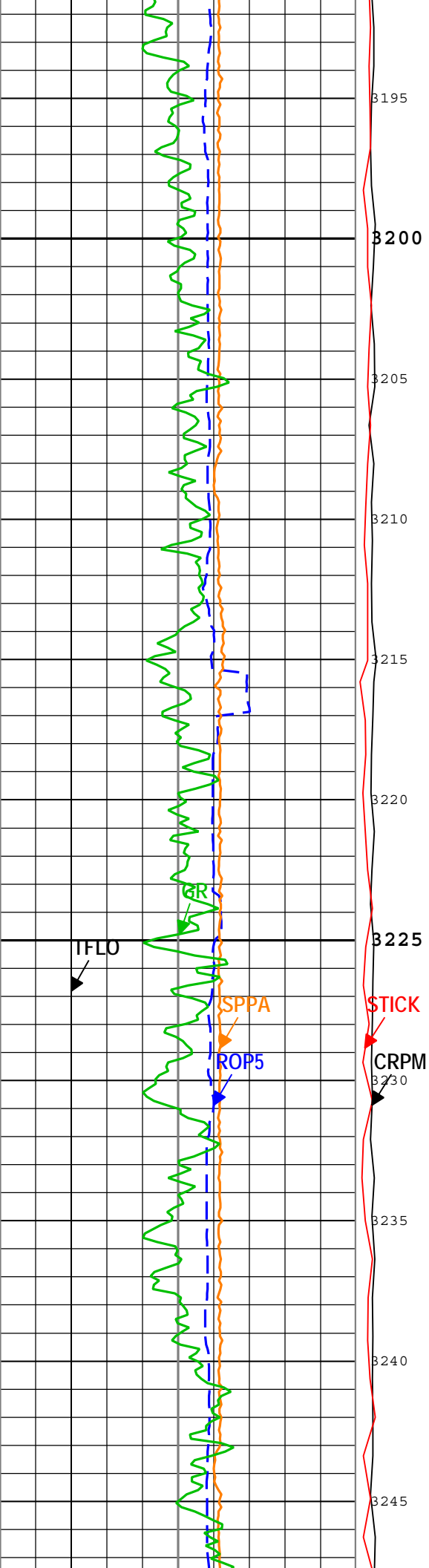
Run1: Drilling

Description: Format: Log ( DML Depth RM ) Index Scale: 1:200 Index Unit: m Index Type: Measured Depth Creation Date: 10-Jan-2013 17:07:29

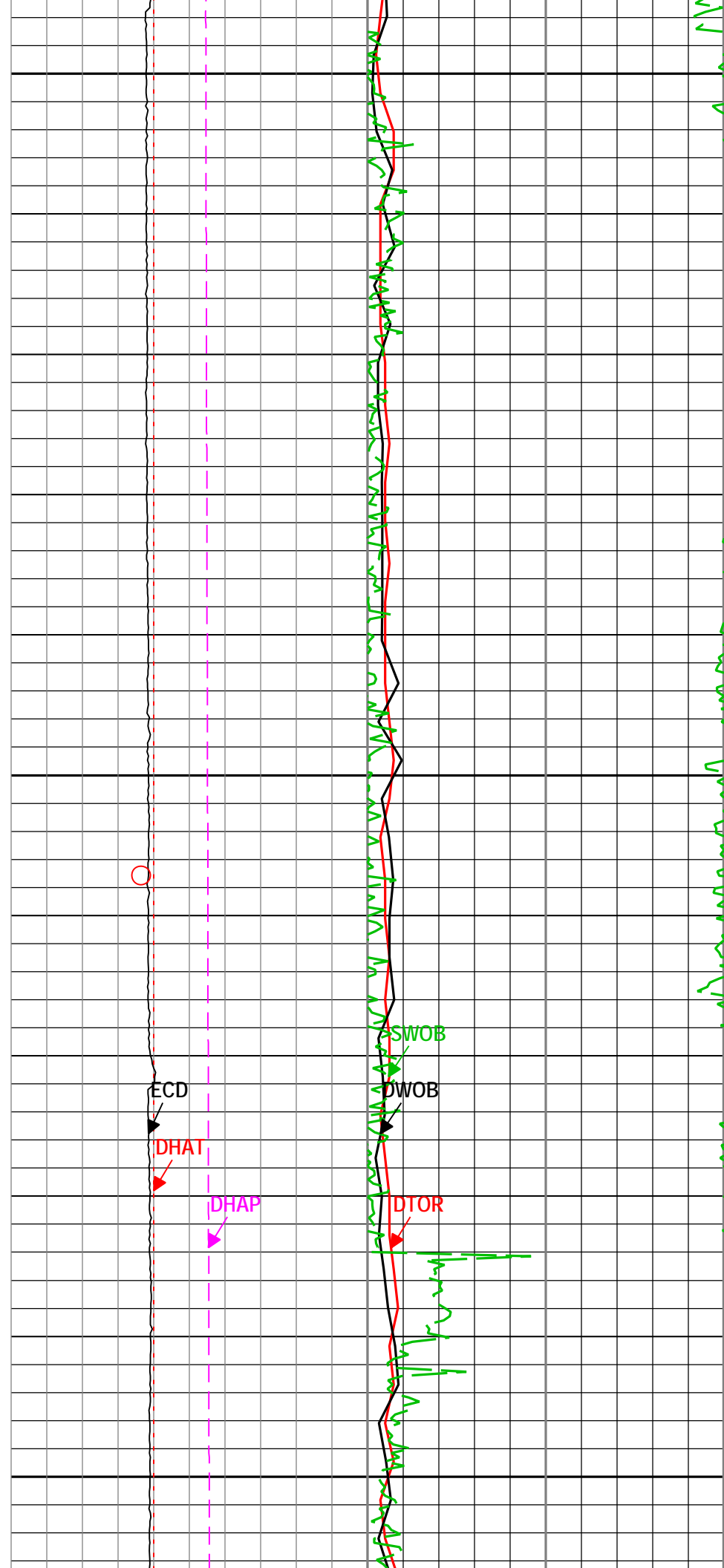
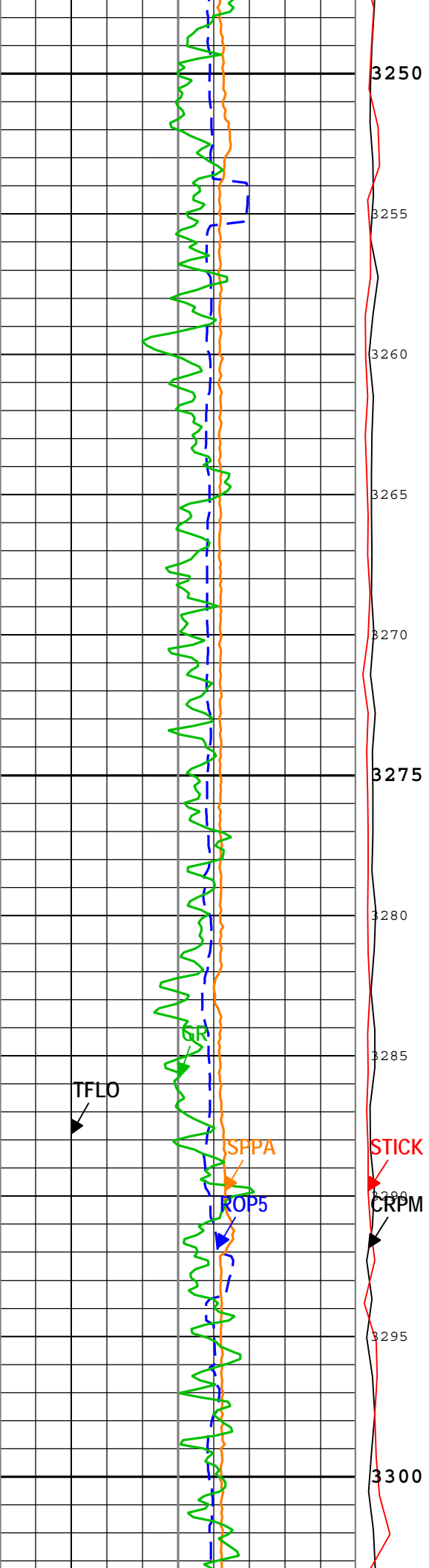
Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT 100 m/h 0	Collar Rotational Speed (CRPM) TELE825-IW OB RT 0 c/min 400	Downhole Annulus Pressure (DHAP) ARC8 RM 0 kPa 60000	Downhole Torque (MWD) (DTOR) TELE825-IWOB RT 0 kN.m 10
Standpipe Pressure (SPPA) RT 0 kPa 20000	Stick Slip Indicator (STICK) TELE825-IW OB RT 0 c/min 400	Downhole Annulus Temperature (DHAT) ARC8 RM 0 degC 10	Downhole Weight on Bit (DWOB) TELE825-IWOB RT 0 kN 200
Total flow rate of all active pumps (TFLO) RT 500 gal/min 1500	Equivalent Circulating Density (ECD) ARC8 RM 1 g/cm3 1.1	Equivalent Static Density (ESD) ARC8 RT 1 g/cm3 1.1	Surface Weight On Bit (SWOB) RT 0 kN 200
Gamma Ray (GR) RAB8 RM 0 gAPI 150			

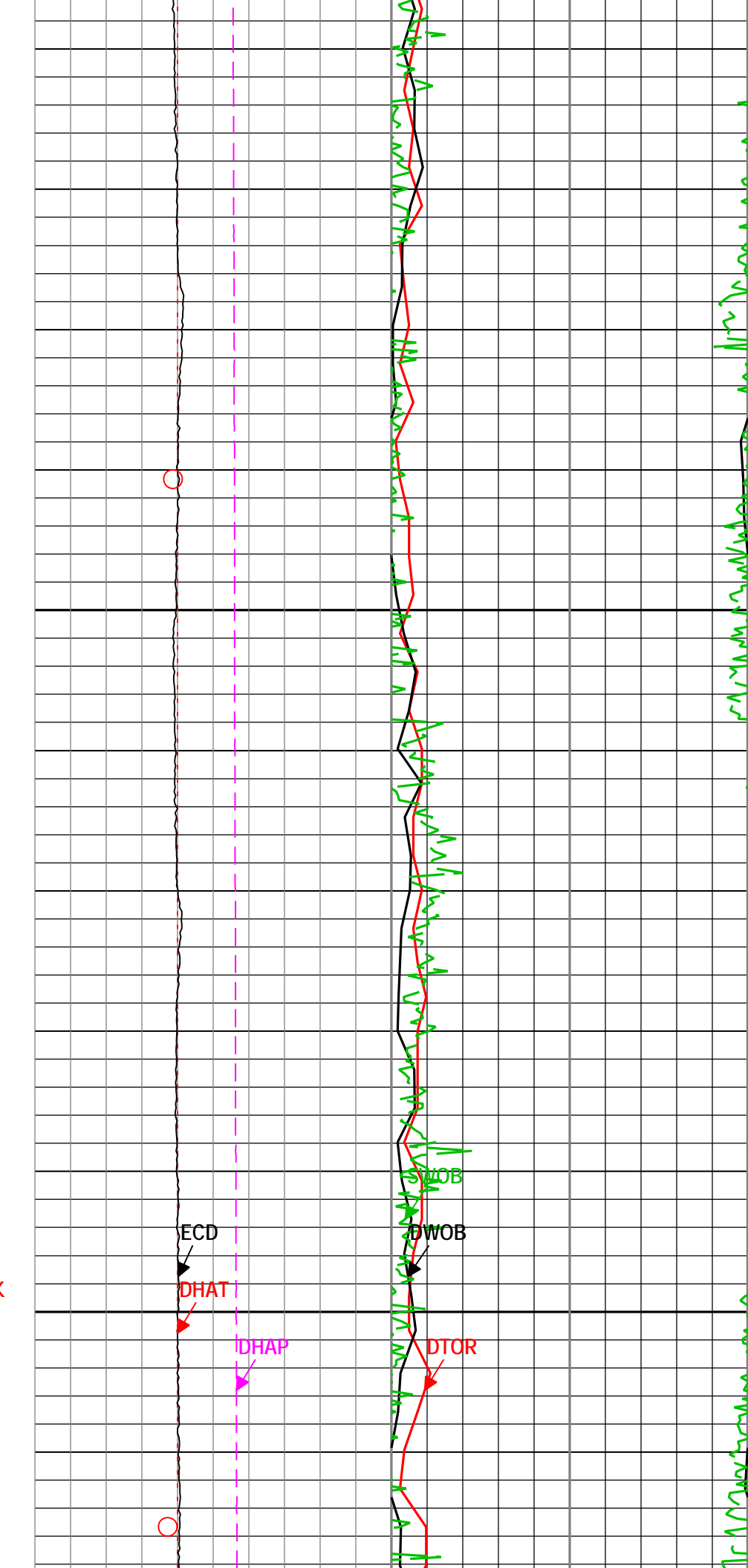
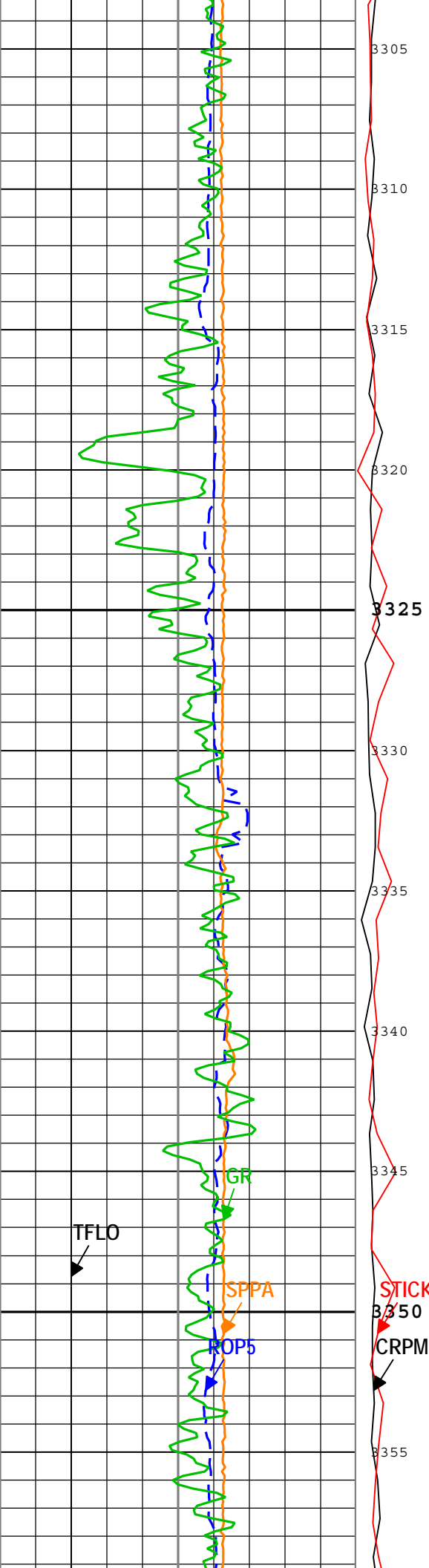


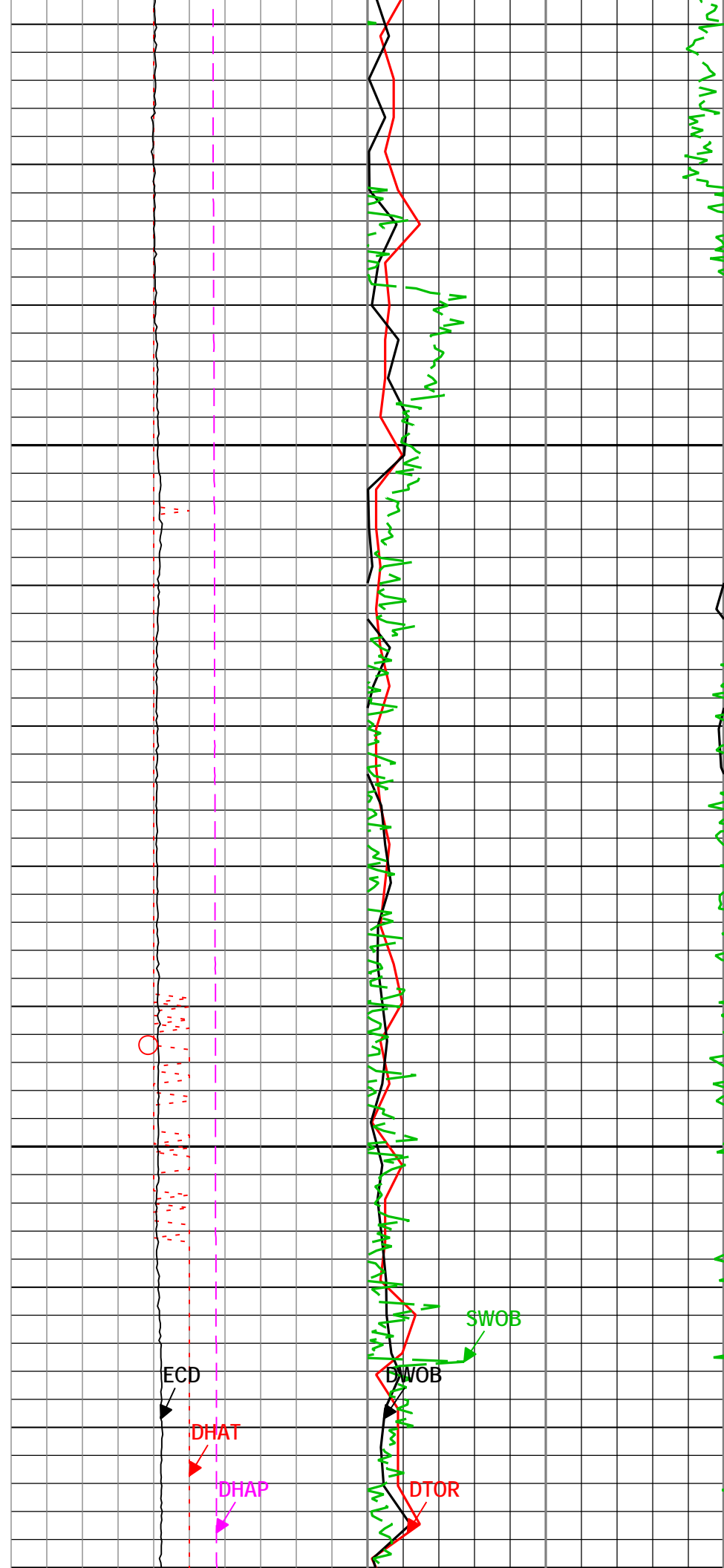
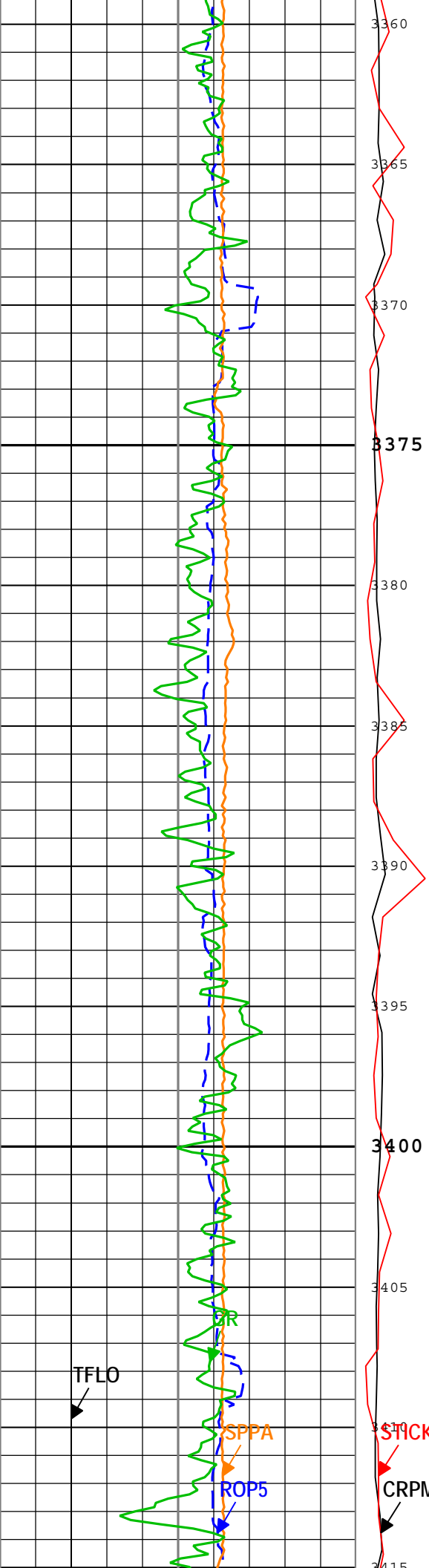


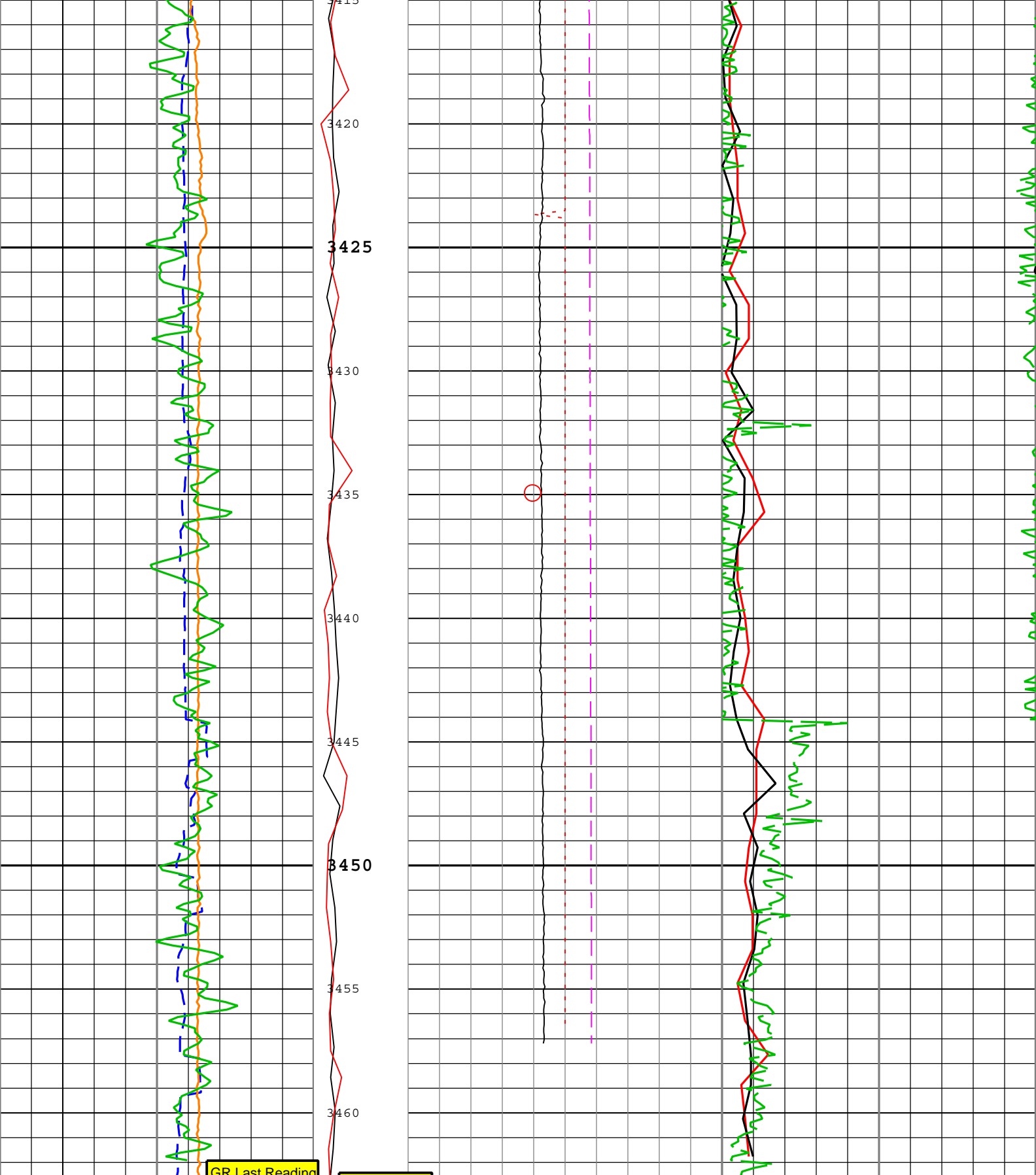












GR Last Reading

TD @ 3463.2m

Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) RT	0	100	m/h
Standpipe Pressure (SPPA) RT	0	20000	kPa
Total flow rate of all active pumps (TFLO) RT	0	40000	l/min

Collar Rotational Speed (CRPM) TELE825-IWOB RT	0	400	c/min
Stick Slip			

Downhole Annulus Pressure (DHAP) ARC8 RM	0	60000	kPa
Downhole Annulus Temperature (DHAT) ARC8 RM	0	10	degC
Equivalent Circulating Density (ECD) ARC8 RM	0	1.5	g/cm3

Downhole Torque (MWD) (DTOR) TELE825-IWOB RT	0	10	kN.m
Downhole Weight on Bit (DWOB) TELE825-IWOB RT	0	200	kN

000	gal/min	1500	Indicator (STICK) TELE825-IW OB RT	1	g/cm3	1.1	Surface Weight On Bit (SWOB) RT	0	kN	200
	Gamma Ray (GR) RAB8 RM			0	Equivalent Static Density (ESD) ARC8 RT	1				
	gAPI	150		0	g/cm3	1.1				
			0 c/min 400							

Description: Format: Log ( DML Depth RM ) Index Scale: 1:200 Index Unit: m Index Type: Measured Depth Creation Date: 10-Jan-2013 17:07:29

## Calibration Report

### RAB8 (GeoVision Resistivity 825) Calibration - Run Run1

Primary Equipment :  
 Electronics Chassis RBEC 865

#### M21V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Monitor 2 at T1 Calibration Coefficient		Master	1.00000	0.90000	1.02224	1.20000	

#### M22V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Monitor 2 at T2 Calibration Coefficient		Master	1.00000	0.90000	0.99342	1.20000	

#### M01V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Monitor 0 at T1 Calibration Coefficient		Master	1.00000	0.90000	1.05380	1.20000	

#### M02V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Monitor 0 at T2 Calibration Coefficient		Master	1.00000	0.90000	1.04467	1.20000	

#### R1V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Ring at T1 Calibration Coefficient		Master	0.01000	0.00950	0.01096	0.01250	

#### R2V - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Ring at T2 Calibration Coefficient		Master	0.01000	0.00950	0.01097	0.01250	

#### BDM1 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Button Deep at T1 Calibration Coefficient		Master	0.00067	0.00057	0.00066	0.00077	

#### BDM2 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Button Deep at T2 Calibration Coefficient		Master	0.00067	0.00057	0.00066	0.00077	

#### BMM1 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Button Medium at T1 Calibration Coefficient		Master	0.00067	0.00057	0.00069	0.00077	

#### BMM2 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Button Medium at T2 Calibration Coefficient		Master	0.00067	0.00057	0.00069	0.00077	

#### BSM1 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Button Shallow at T1 Calibration Coefficient		Master	0.00067	0.00057	0.00067	0.00077	

#### BSM2 - Resistivity

Master (Time Frame File): 04:11:41 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
⚠ Button Shallow at T2 Calibration Coefficient		Master	0.00067	0.00057	0.00067	0.00077	

**PGR - Gamma Ray: Blanket**

Master (Time Frame File): 02:46:22 23-Nov-2012

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
⚠ Gamma Ray API Conversion Factor		Master	8.5500	6.5000	10.2700	10.6000	

**Company:** JAMSTEC

**Well:** C0018B


**Field:** Nankai Trough - Kumano Basin

**Rig Name:** Chikyu

**Prefecture:** Wakayama

**Country:** Japan





**geoVISION - APWD**

Gamma Ray - Resistivity - Image - APWD

12.25in Recorded Mode Log. Measured Depth 1:200