



No.	Depth (ft)	Type	(ppg)	(cP)	Loss (cm3)	Water	Chlorides (ppm)	(%)			
2018-06-17 17:00	1	2220.00	Oil Based Mud	10.2	19	N/A	N/A	59.5/40.5	Active Pit	65000	0.00
2018-06-18 05:00	1	2328.45	Oil Based Mud	10.0	19	N/A	N/A	60.7/39.3	Active Pit	61000	0.00
2018-06-18 17:00	1	4514.00	Oil Based Mud	10.0	20	N/A	N/A	60.2/39.8	Active Pit	67000	0.00
2018-06-19 05:00	1	6350.00	Oil Based Mud	10.1	23	N/A	N/A	59.6/40.4	Active Pit	66000	0.00
2018-06-19 17:00	1	7860.00	Oil Based Mud	10.0	22	N/A	N/A	59.1/40.9	Active Pit	68500	0.00
2018-06-20 05:00	1	9460.00	Oil Based Mud	9.9	19	N/A	N/A	59.4/40.6	Active Pit	63500	0.00
2018-06-20 17:00	1	10800.00	Oil Based Mud	10.0	15	N/A	N/A	60/40	Active Pit	67000	0.00
2018-06-21 05:00	1	12640.00	Oil Based Mud	10.2	18	N/A	N/A	60.1/39.9	Active Pit	61000	0.00
2018-06-21 17:00	1	14858.00	Oil Based Mud	10.1	18	N/A	N/A	62/38	Active Pit	65000	0.00
2018-06-22 05:00	1	16070.00	Oil Based Mud	10.1	20	N/A	N/A	61.5/38.5	Active Pit	58000	0.00
2018-06-22 11:27	2	16070.00	Oil Based Mud	10.1	18	N/A	N/A	62/38	Active Pit	65000	0.00
2018-06-23 05:00	2	16670.00	Oil Based Mud	10.1	19	N/A	N/A	60.5/39.5	Active Pit	64000	0.00

**Mud Resistivity Record**

Date / Time	Run No.	Measured Depth (ft)	Surface Temp (degF)	Surface			BHCT (degF)	Downhole		
				Rm (ohm.m)	Rmf (ohm.m)	Rmc (ohm.m)		Rm @ BHCT (ohm.m)	Rmf @ BHCT (ohm.m)	Rmc @ BHCT (ohm.m)
2018-06-20 05:00	1	9460.00	146.0	100.000	N/A	N/A	217.0	100.000	N/A	N/A
2018-06-20 17:00	1	10800.00	150.0	100.000	N/A	N/A	240.0	100.000	N/A	N/A
2018-06-21 05:00	1	12640.00	152.0	100.000	N/A	N/A	241.0	100.000	N/A	N/A
2018-06-21 17:00	1	14858.00	148.0	100.000	N/A	N/A	241.0	100.000	N/A	N/A
2018-06-22 17:00	2	16070.00	145.0	100.000	N/A	N/A	250.0	100.000	N/A	N/A
2018-06-23 05:00	2	16670.00	134.0	100.000	N/A	N/A	250.0	100.000	N/A	N/A

**Equipment and Service Data**

Run No.	Tool	Serial Number	Measurement	Sensor Offset (ft)	Bit Offset (ft)	Max O.D. (in)	Min I.D. (in)
1	ATC_SU	11994997	Near Bit Inclination	5.93	6.93	7.000	4.330
1	ATC_SU	11994997	Near Bit VSS	5.93	6.93	7.000	4.330
1	ATC_MWD	12271546	Gamma (single)	2.66	13.00	7.000	3.250
1	ATC_MWD	12271546	Directional (mag)	12.28	22.62	7.000	3.250
1	OnTrak	12004344	Pressure	1.17	10788.82	6.750	2.875
1	OnTrak	12004344	Gamma (double)	2.06	10789.71	6.750	2.875
1	OnTrak	12004344	Resistivity (4tx)	6.10	10793.75	6.750	2.875
1	OnTrak	12004344	Directional (mag)	11.89	10799.54	6.750	2.875
2	ATC_SU	14306237	Near Bit Inclination	5.93	6.93	7.000	4.330
2	ATC_SU	14306237	Near Bit VSS	5.93	6.93	7.000	4.330
2	ATC_MWD	12661246	Gamma (single)	2.77	13.10	7.000	3.250
2	ATC_MWD	12661246	Directional (mag)	12.29	22.62	7.000	3.250
2	OnTrak	12004344	Pressure	1.17	10787.13	6.750	2.875
2	OnTrak	12004344	Gamma (double)	2.06	10788.02	6.750	2.875
2	OnTrak	12004344	Resistivity (4tx)	6.10	10792.06	6.750	2.875
2	OnTrak	12004344	Directional (mag)	11.89	10797.85	6.750	2.875

**Service and Tool Mnemonics**

Mnemonic	Name	Description
ATC_SU	ATC_SU	Auto Trak Curve Steering Unit
ATC_MWD	ATC_MWD	Auto Trak Curve MWD
ATC_LCPM	ATC_LCPM	Auto Trak Curve LCPM
OTK	OnTrak	Sensor Sub (Inc, Azi, Temp, Azimuthal GR, Res, AP, VSS), OnTrak Platform
BCPM	BCPM	Bi-Directional Communication and Power Module, OnTrak Platform

**Comments**

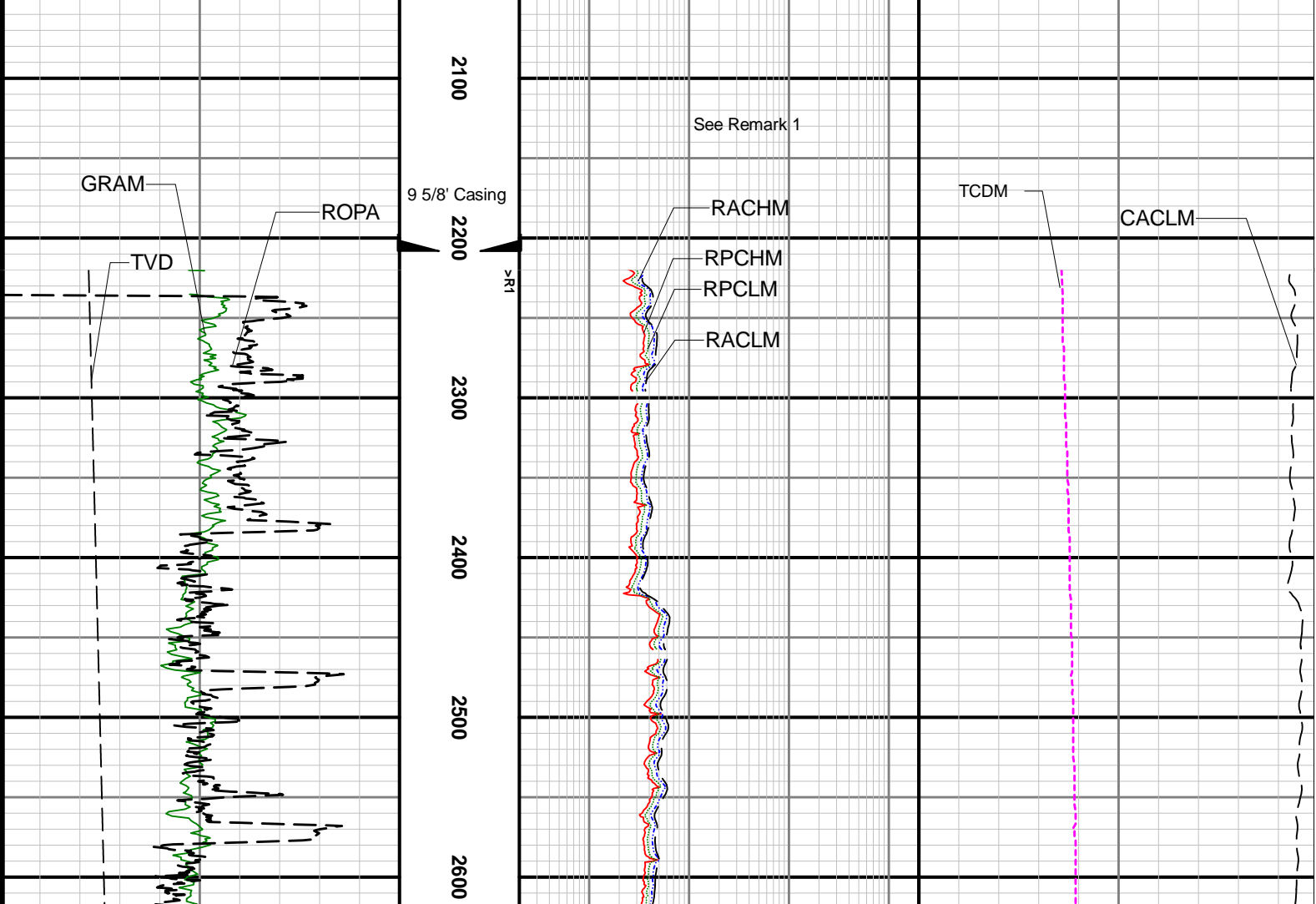
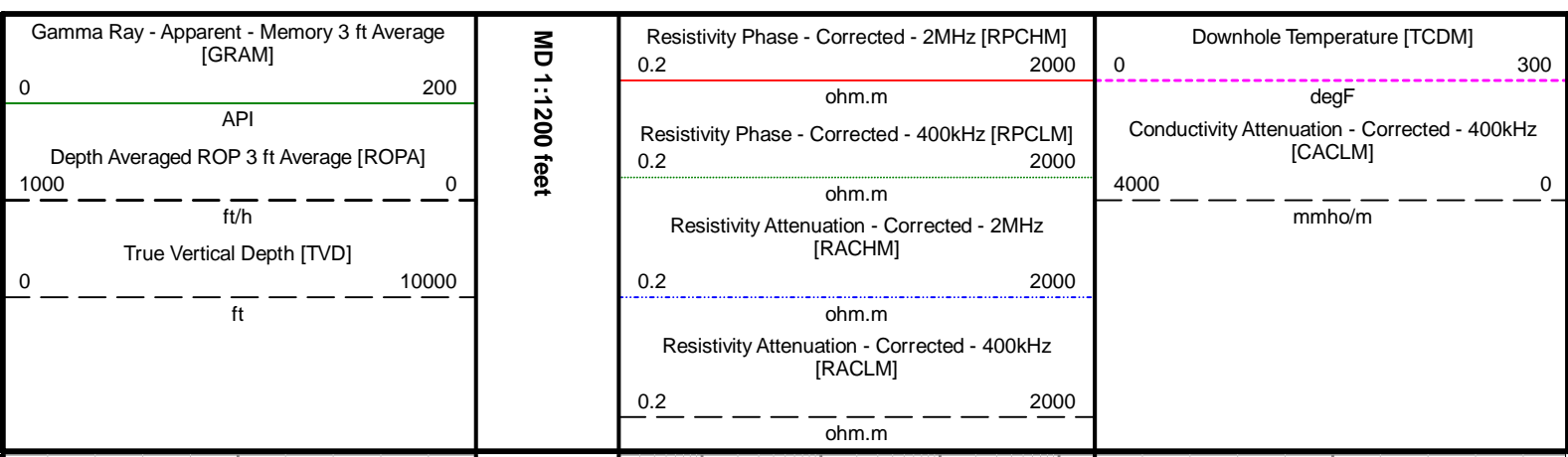
- Depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes, a GE Company (BHGE). Due to the lack of control by BHGE logging engineers, depth calibrations and measurements could not be independently verified.
- BHGE LWD runs 1 and 2 utilized 6.75 inch NaviGamma Services (Gamma Ray and Directional) and Ontrak Services (Multiple Propagation Resistivity) behind a 8.5 inch bit and Rotary steerable assembly from 2220 to 18011 feet MD (2220 to 7729 feet TVD).

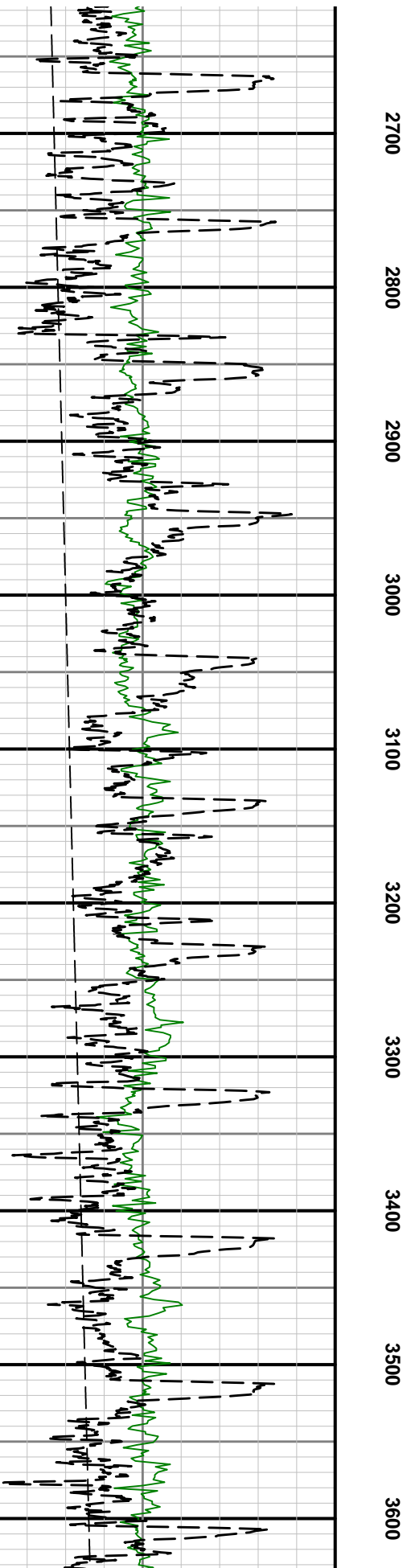
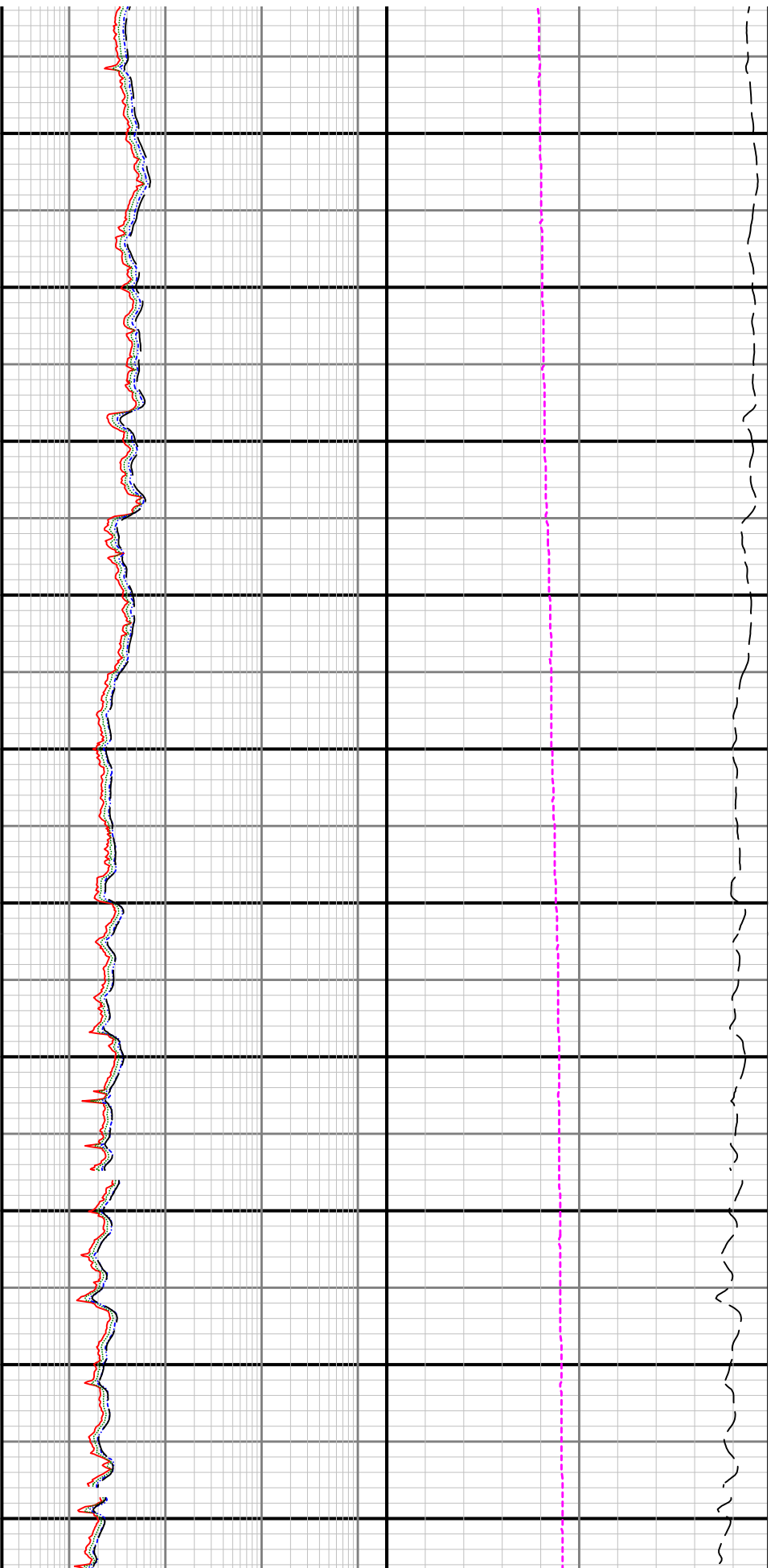
**Remarks**

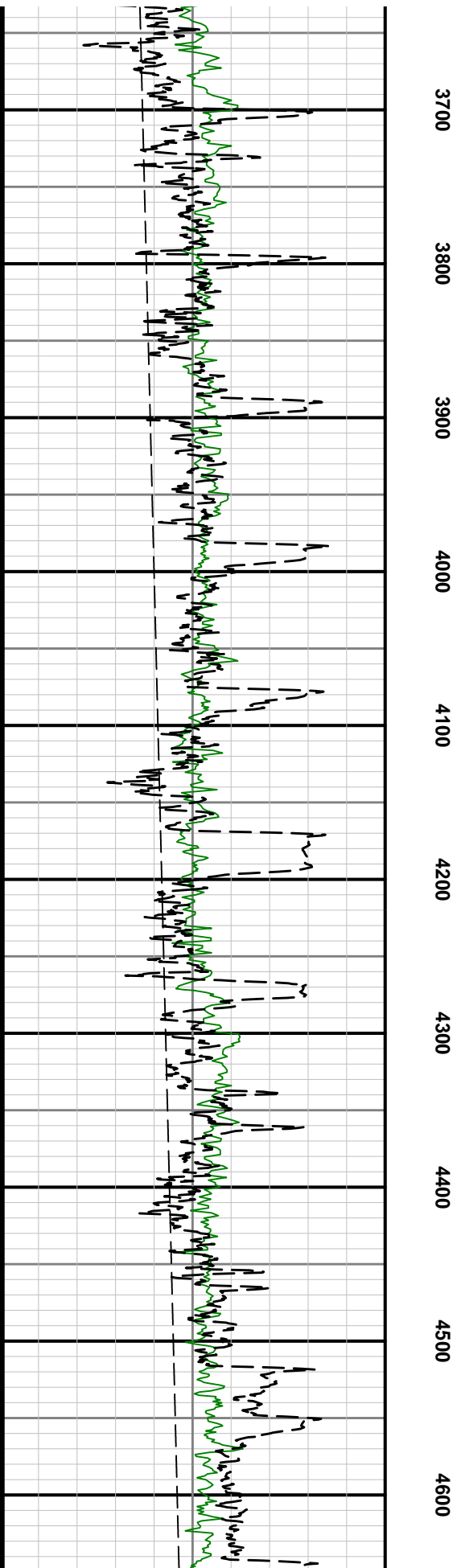
Number	Measured Depth (ft)	Hole Section (in)	Run No.	Remark
1	2220.00	8.500	1	BHGE logging services began at 2220 feet MD (2220 feet TVD) per customer request.

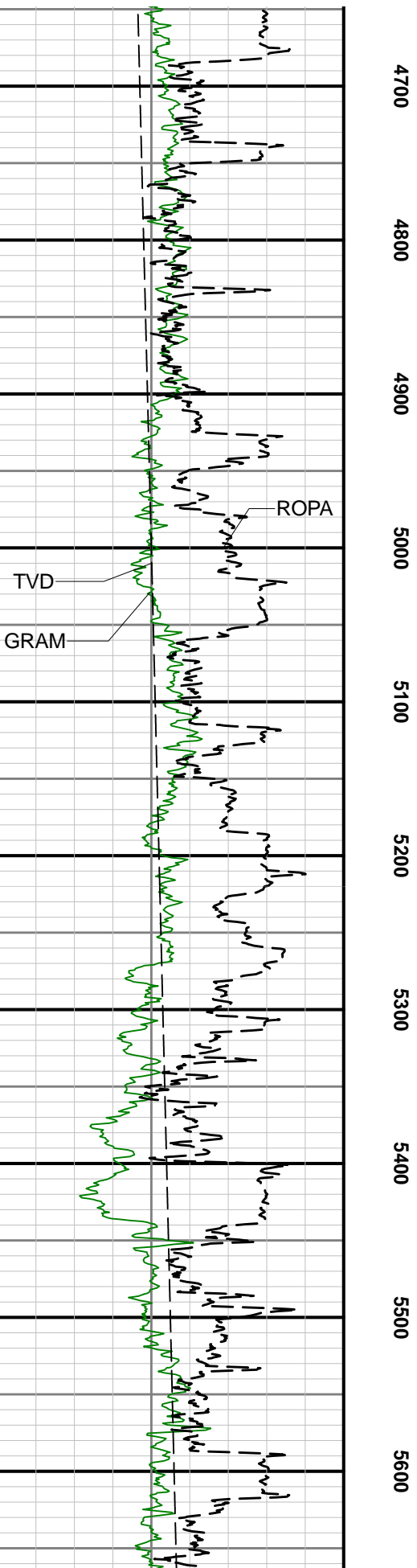
**Curve Mnemonics**

Presented Curves	Description	Units
CACLM	Conductivity Attenuation - Corrected - 400kHz	mmho/m
RACHM	Resistivity Attenuation - Corrected - 2MHz	ohm.m
RACLM	Resistivity Attenuation - Corrected - 400kHz	ohm.m
RPCHM	Resistivity Phase - Corrected - 2MHz	ohm.m
RPCLM	Resistivity Phase - Corrected - 400kHz	ohm.m
RPTHM	Resistivity Time Since Drilled	min
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	True Vertical Depth	ft
GRAM	Gamma Ray - Apparent - Memory 3 ft Average	API
TCDM	Directional Real-Time Survey Temperature	degF

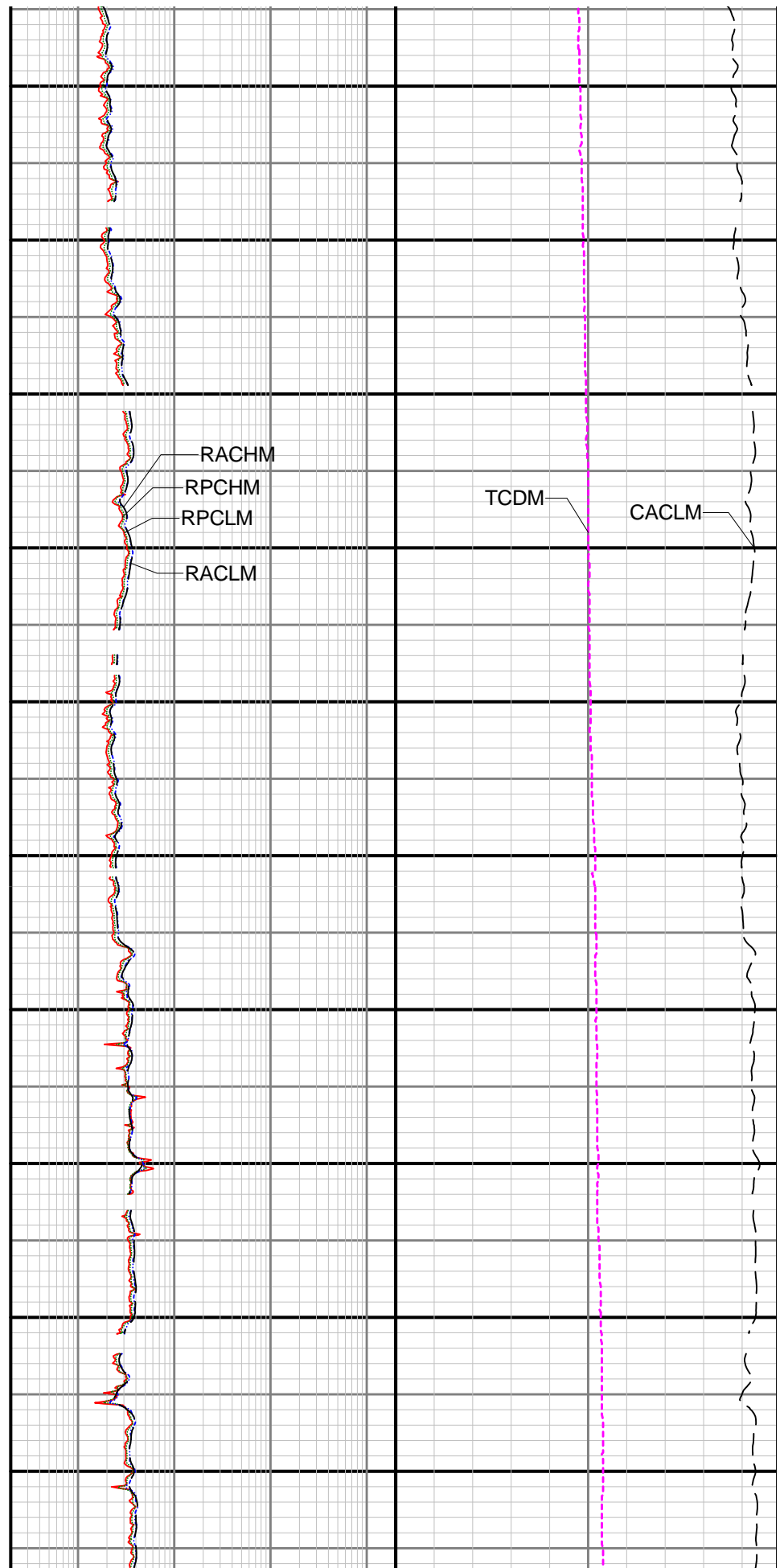






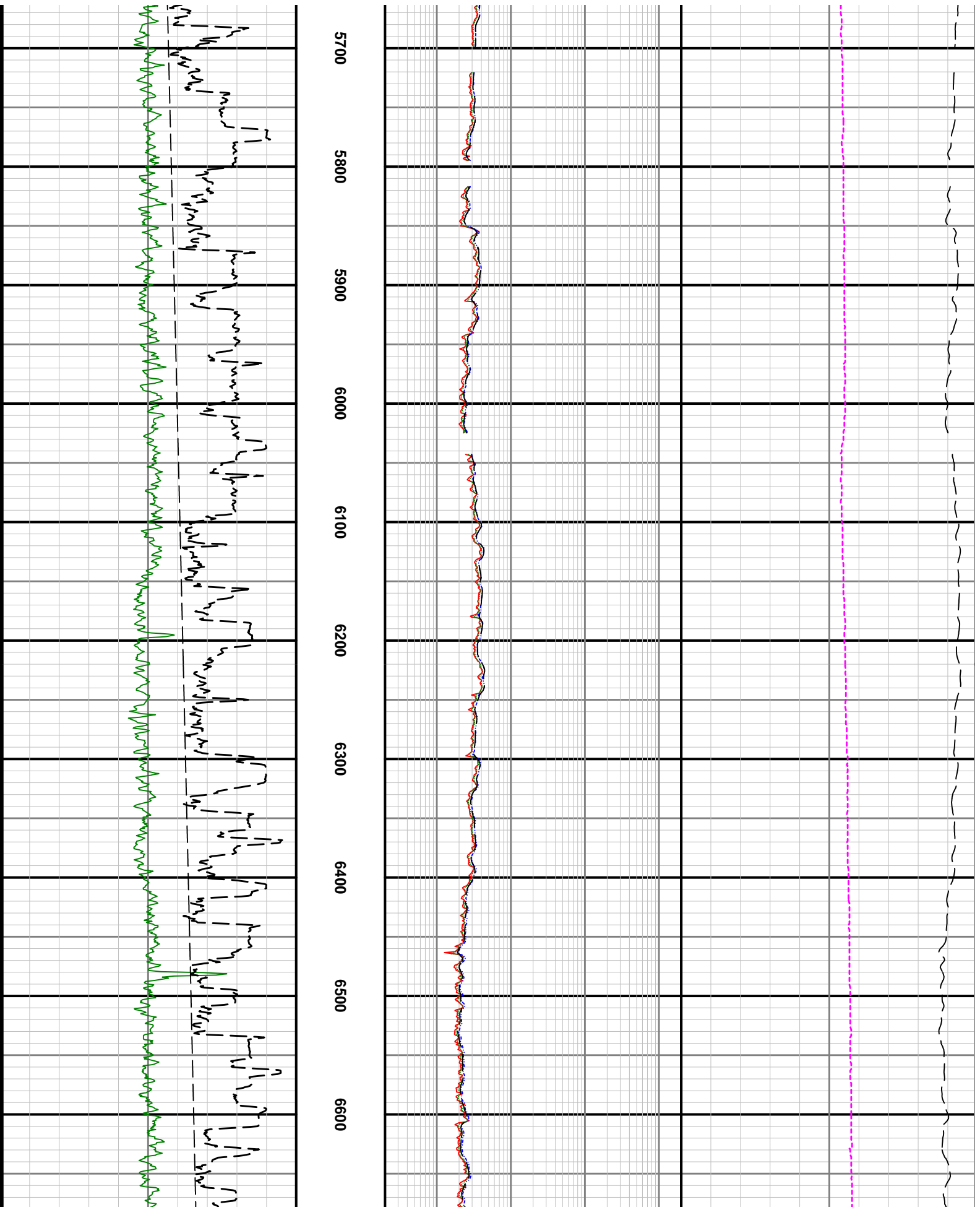


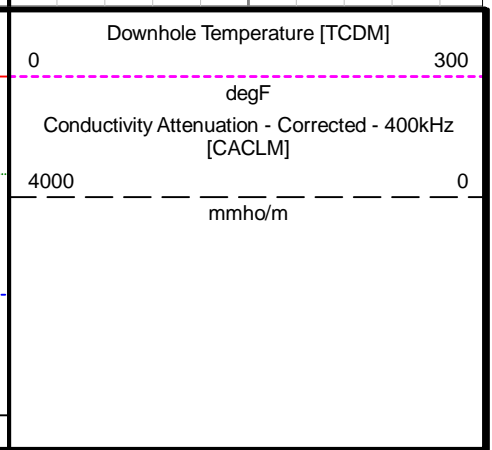
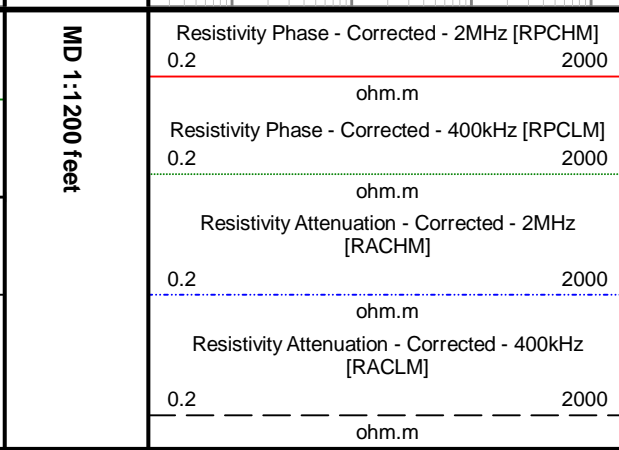
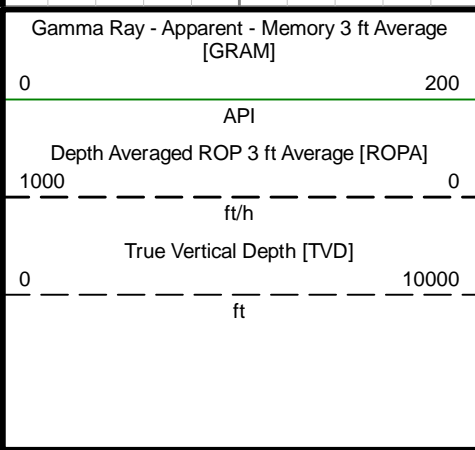
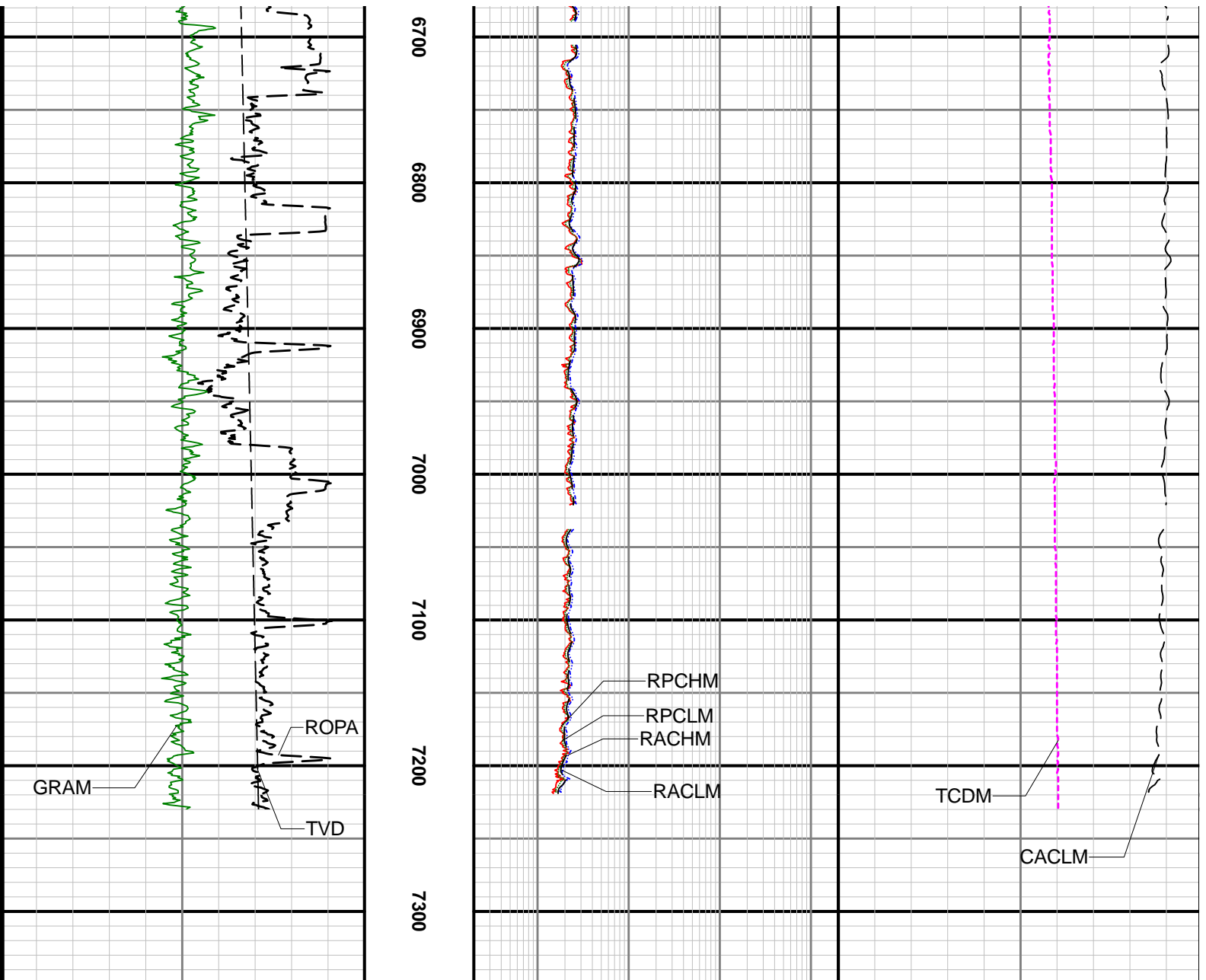
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4900  
5000  
5100  
5200  
5300  
5400  
5500  
5600



RACHM  
RPCHM  
RPCLM  
RACLM

TCDM  
CACLM





MD 1:1200 feet