



LWD MEMORY LOG

Azimuthal Gamma Ray

Scale:	Company: Confluence Resources
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1:1200  
Well: 70 RANCH 10-4-4L

Measured Depth  
Field: Weld

Depth Reference:	County: Weld	Country: United States
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Driller's Depth  
State: Colorado

Status:	Surface Location:	Other Services:
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Final Print

API No:	05123475920000	Latitude:	040° 20' 05.172" N	Longitude:	104° 25' 45.228" W	Directional
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Job ID:	109836668	SEC:	3	TWN:	4N	RGE:	63W
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Permanent Datum (P.D.):	Mean Sea Level	Elevation:	0.00 ft	Elev. KB:	N/A
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Log Measured From:	Rig Floor	Above P.D.:	4618.50 ft	Elev. DF:	4618.50 ft	Elev. GL:	4595.50 ft
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Dates		Interval		Magnetic Field Reference			
From: 2019-06-21	Drilled (ft)	23.00	Logged (ft)	1569.00	Azi Reference North:	True	Dip Angle: (deg)
To: 2019-06-20	Top:	23.00	Bottom:	16676.00	Total Magnetic Field Strength: (nT)	52208	
Spud: 2019-05-25	Bottom:	16676.00	Bottom:	16663.00	Mag to Reference North Correction: (deg)	8.00	

Borehole Record

Casing Record

Hole Size (in)	From (ft)	To (ft)	Size (in)	Weight (lb/ft)	From (ft)	To (ft)
13.500	23.00	1582.00	6.625	36.00	23.00	1572.00
8.500	1582.00	16676.00				

Mud Record

Deviation Record

Type	From (ft)	To (ft)	Hole Size (in)	Interval (ft)	Inc   Az (Start)	Inc   Az (End)
Water Based Mud	23.00	1584.00	13.500	1584.00	0.37   106.35	0.15   68.93
Diesel-Oil Based Mud	1582.00	16676.00	8.500	15096.00	0.15   68.93	89.82   179.41

Acquisition System

Software Version

Other

Cadence	RT 5.2	Rig:	Ensign 140
Plot Studio	5.2.8472.1	Contractor:	Ensign Drilling
		District:	RMD
		Unit:	D & E

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Log Run Summary

Run No	Bit Run No.	Bit Size (in)	Bit Type	Bit Gauge Length (in)	Assembly Type	Logged Interval		Bit Depth Interval		Date / Time		Circ. Hours (h)
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	13.500	PDC	6.00	Steerable	0.00	0.00	23.00	1582.00	N/A	N/A	6.63
2	2	8.500	PDC	3.00	AutoTrak Curve	1569.00	16663.00	1582.00	16676.00	2019-06-17 00:00	2019-06-20 00:00	70.45

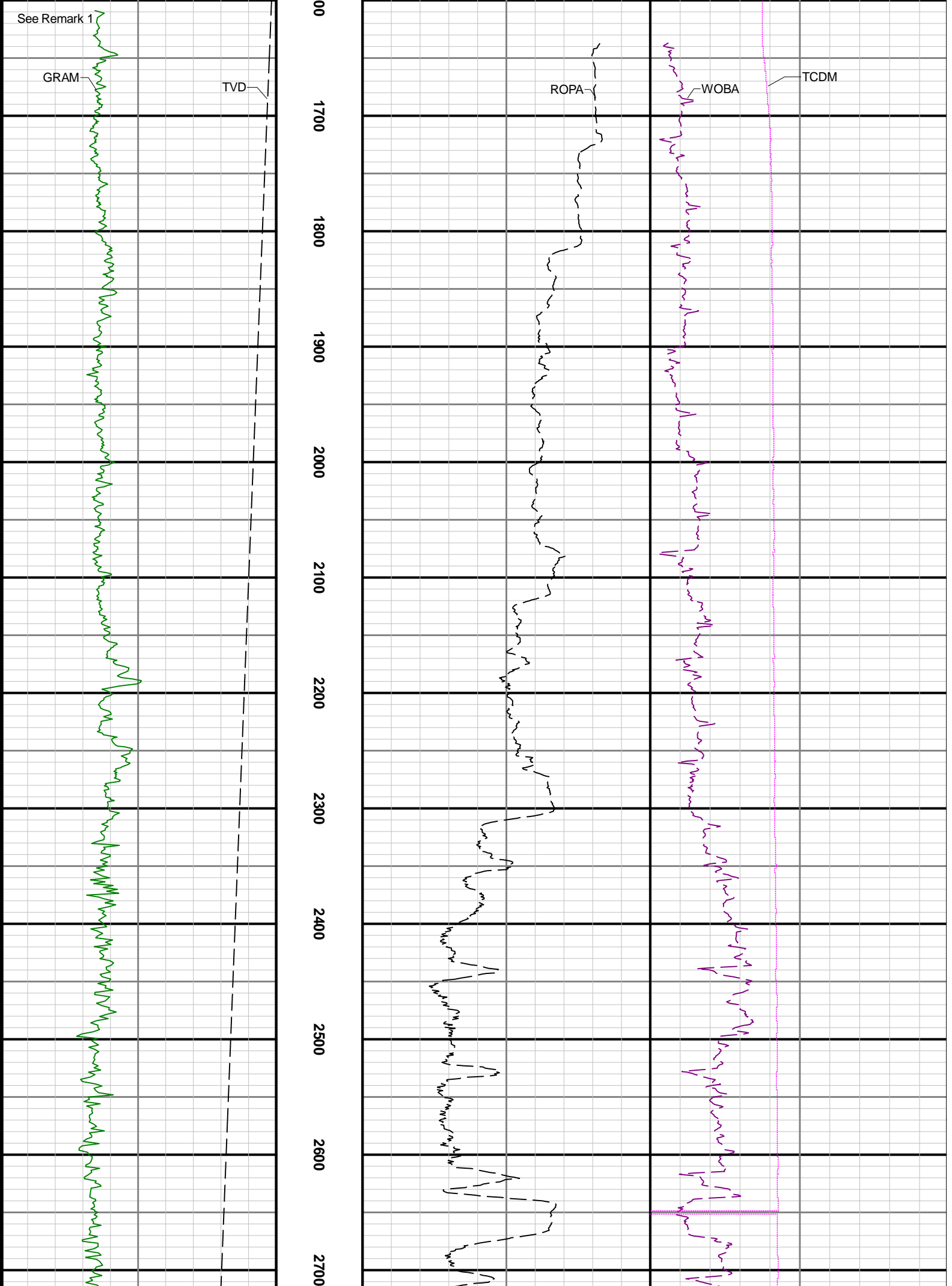
Crew

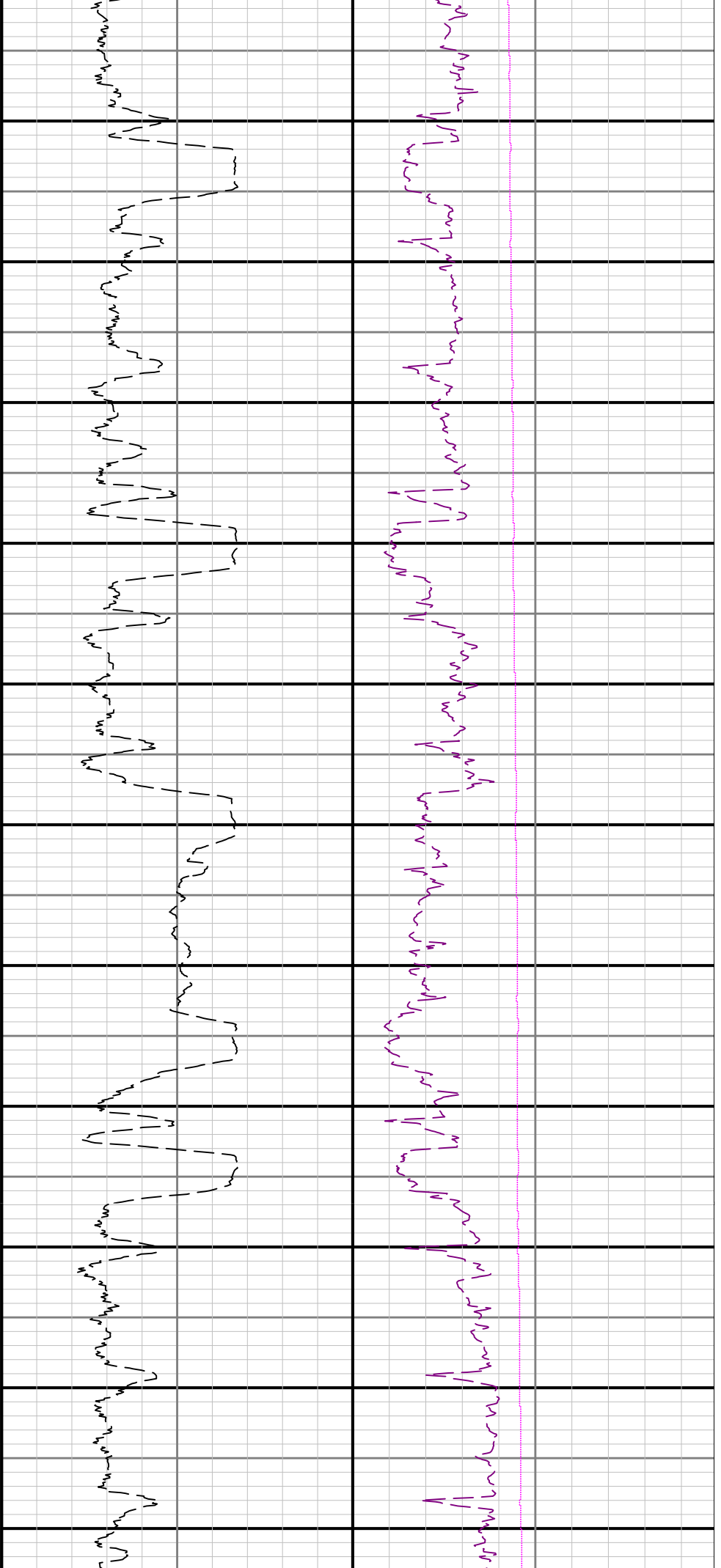
Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
Shawn McCaffrey	2019-06-17	2019-06-21						

Mud Properties Record

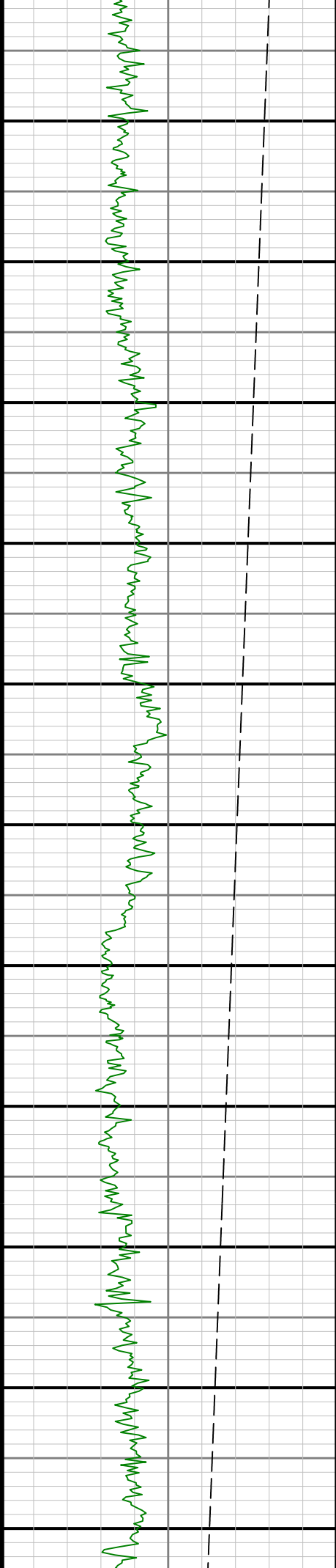
Date / Time	Run No.	Depth (ft)	Mud Type	Density (ppg)	Viscosity (cP)	pH	Fluid Loss (cm3)	Oil / Water	Source	Total Chlorides (ppm)	K+ (%)
2019-05-25 12:26	1	23.00	Water Based Mud	8.4	N/A	7.4	0.0	0/100	Active Pit	40000	0.00
2019-06-17 15:00	2	1582.00	Diesel-Oil Based Mud	9.7	18	N/A	N/A	82/18	Active Pit	24000	0.00
2019-06-18 03:00	2	4103.00	Diesel-Oil Based Mud	9.6	14	N/A	N/A	82/18	Active Pit	27000	0.00
2019-06-19 03:00	2	9001.00	Diesel-Oil Based Mud	9.7	15	N/A	N/A	82/18	Active Pit	28500	0.00
2019-06-20 03:00	2	13551.00	Diesel-Oil Based Mud	9.7	17	N/A	N/A	81/19	Active Pit	30500	0.00

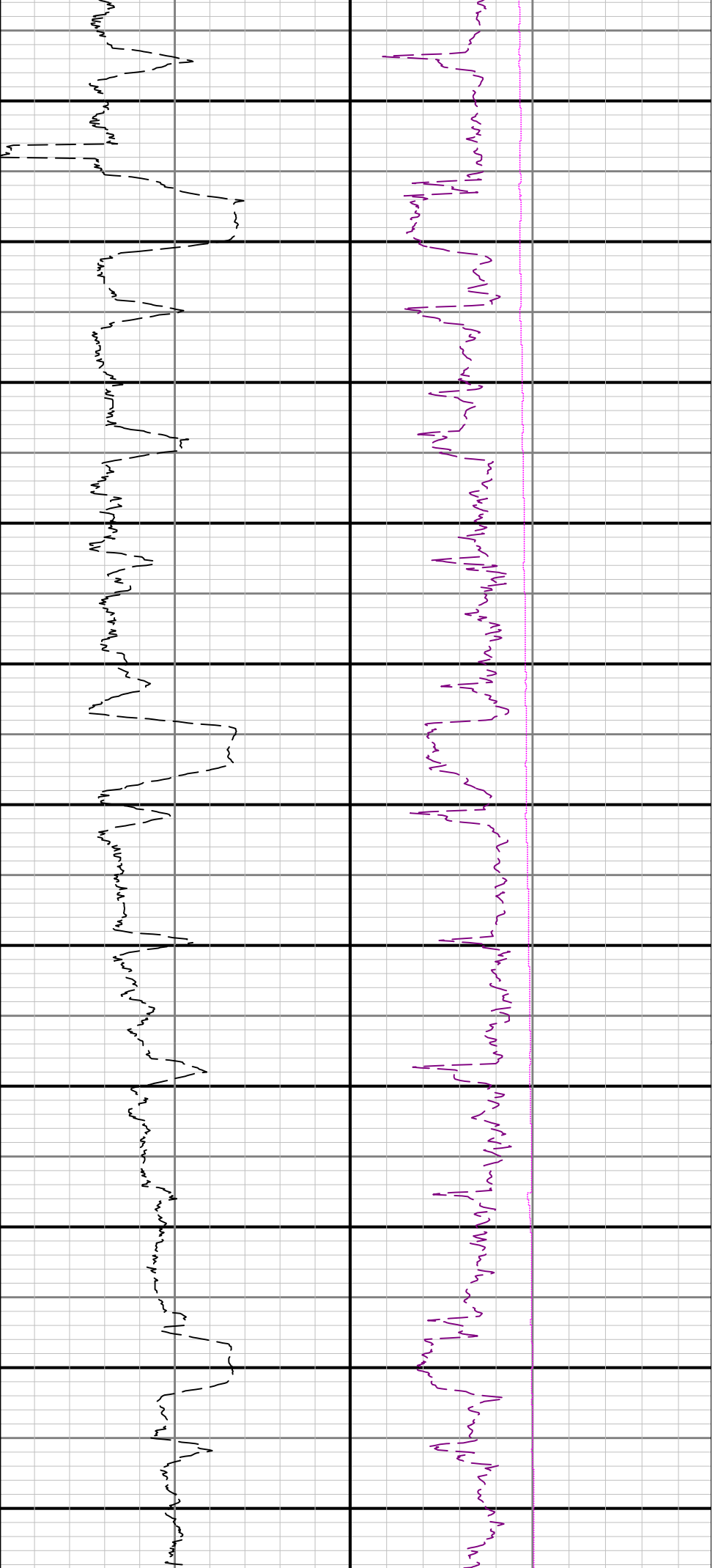






2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800





3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900

