



Gamma Ray

LWD REALTIME LOG

Scale:

1:1200
Measured Depth

Company: KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Well: Nelson 35-19HZ

Field: Wattenberg

County: Weld County Country: United States

State: Colorado

Driller's Depth

Status:

Final Print

Surface Location:
Latitude: 40° 06' 04.878" N
Longitude: 104° 58' 20.788" W

Other Services:

API No: 05-123-51242

Job ID: 110760651

SEC: 35 TMN: 2N RGE: 68W

Permanent Datum (P.D.): Mean Sea Level

Elevation:

Log Measured From: Rig Floor

Above P.D.:

Elev. KB:

Elev. DF:

Elev. GL:

0.00 ft

4975.00 ft

4955.00 ft

N/A

Magnetic Field Reference

Dates

From: 2021-02-25

To: 2021-02-28

Sput: 2021-02-25

Drilled (ft)

Top: 1880.00

Bottom: 15780.00

Logged (ft)

Top: 1880.00

Bottom: 15734.00

Azi Reference North: True

Dip Angle: (deg)

Total Magnetic Field Strength: (nT)

Mag to Reference North Correction: (deg)

66.51

51976

8.12

Borehole Record

Casing Record

Hole Size (in)

12.500

7.875

From (ft)

20.00

1880.00

To (ft)

1880.00

15780.00

Size (in)

9.625

Weight (lb/ft)

36.00

From (ft)

20.00

To (ft)

1870.00

Mud Record

Deviation Record

Type

Diesel-Oil Based Mud

From (ft)

1880.00

To (ft)

15780.00

Hole Size (in)

7.875

Interval (ft)

13900.00

Inc | Az (Start)

2.87 | 177.58

Inc | Az (End)

90.70 | 359.50

Acquisition System

Software Version

Cadence

Plot Studio

Other

RT 5.9

5.9,9111.3

Rig:

Contractor:

District:

Precision 461

Precision Drilling

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
						Top (ft)	Bottom (ft)	From (ft)	To (ft)	Start Logging	End Logging	
1	1	7.875	PDC	2.50	Steerable	1880.00	15734.00	1880.00	15780.00	2021-02-25 14:00	2021-02-28 01:45	53.86

Crew

Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite	Name	Arrive Wellsite	Depart Wellsite
David Browning	2021-02-25	2021-02-28	John Moisan	2021-02-25	2021-02-28			

Mud Properties Record

Date / Time	Run No.	Depth (ft)	Mud Type	Density (g/cc)	Viscosity (cP)	pH	Fluid Loss (cc)	Oil / Water	Source	Total Chlorides (ppm)	K+ (ppm)
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			(tt)			(ppg)	(cP)		(cm3)			(ppm)	(%)
2021-02-25 03:15	1	1880.00	Diesel-Oil Based Mud	8.8	15	0	10.8	69/23	Active Pit	35475	0.00		
2021-02-25 16:00	1	2731.00	Diesel-Oil Based Mud	8.8	16	0	10.6	68/24	Active Pit	38351	0.00		
2021-02-26 06:00	1	7334.00	Diesel-Oil Based Mud	8.8	17	0	10.4	65/27	Active Pit	40952	0.00		
2021-02-26 16:00	1	8786.00	Diesel-Oil Based Mud	8.9	20	0	9.0	66/26	Active Pit	42857	0.00		
2021-02-27 06:00	1	10784.00	Diesel-Oil Based Mud	9.0	18	0	9.0	65/26	Active Pit	44762	0.00		
2021-02-27 16:00	1	13427.00	Diesel-Oil Based Mud	9.0	18	0	10.0	67/24	Active Pit	42857	0.00		

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	EvoOne	G650-0353 / 14984402	Gamma (single)	8.13	46.05	6.750	2.813
1	EvoOne	G650-0353 / 14984402	Directional (mag)	9.32	47.24	6.750	2.813

Service and Tool Mnemonics

Mnemonic	Name	Description
MWD	EvoOne - Dir Gamma	EvoOne

Comments

1

Depths and depth measurements were obtained from a depth control system not supplied or operated by Baker Hughes. Due to lack of control by Baker Hughes logging engineers, depth calibrations and measurements could not be independently verified. These unverified depths are being used to represent logging data.

2

Baker Hughes LWD Run 1 utilized 6 ½ Inch NaviGamma services (Gamma Ray and Directional) behind a 7 7/8 inch bit and steerable assembly from 1880 to 15780 feet MD (1870 to 7342 feet TVD).

3

Gamma Ray Apparent (GRAX) is presented 0 to 200 API per customer request.

Remarks

Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	1880.00	7.875	1	BHI Logging services began at 1880 feet MD (1870 feet TVD).
2	15734.00	7.875	1	The interval from 15734 to 15780 feet MD (7342 feet TVD) was not logged due to sensor to bit offset at well TD.

Baker Hughes

Company

Well

Interval

Created

KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Nelson 35-19HZ

Date From:

2021-02-25 14:00

Interval Drilled: (ft)

1880.00 - 15780.00

Date To:

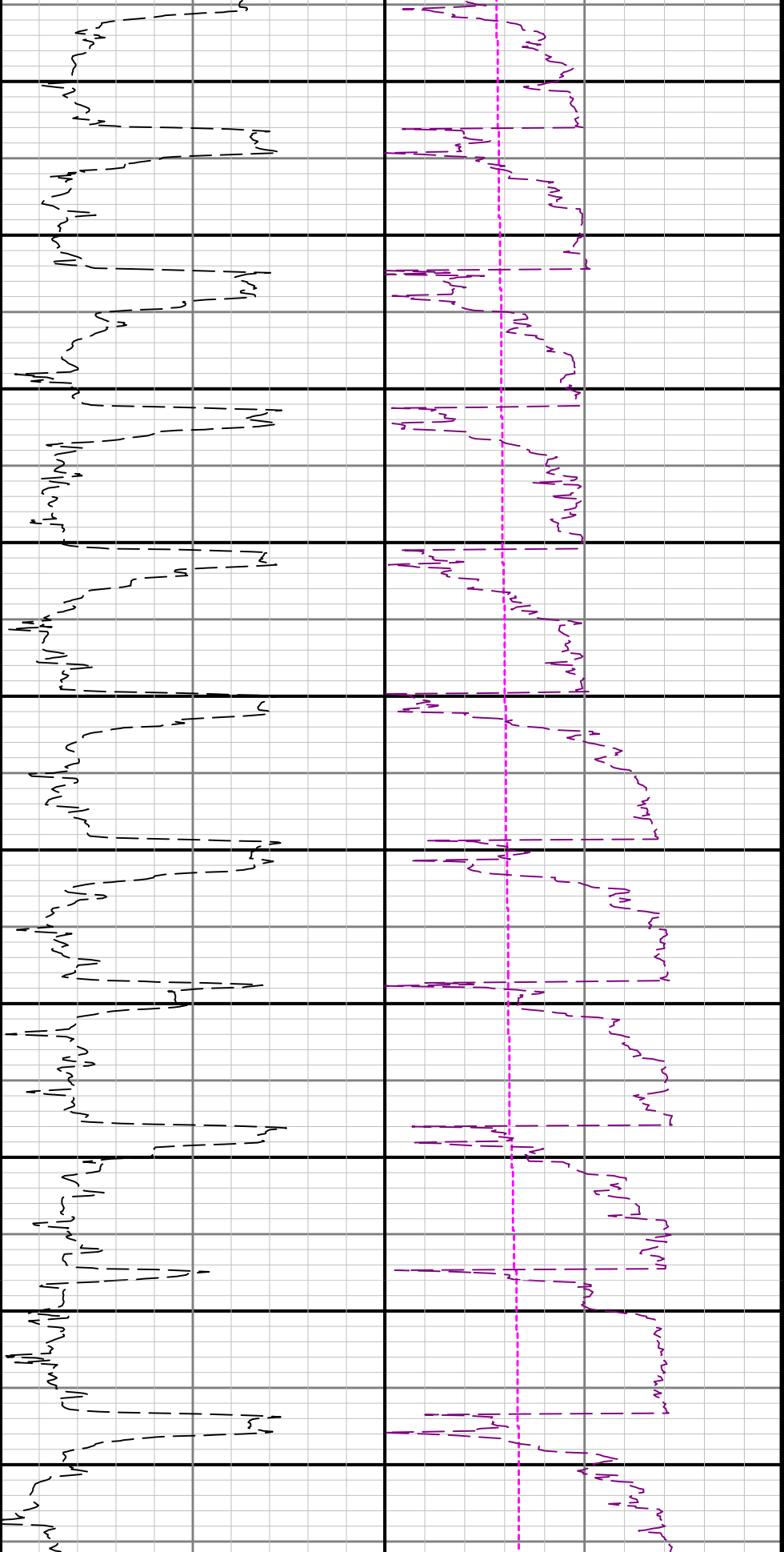
2021-02-28 01:45

Interval Logged: (ft)

1880.00 - 15734.00

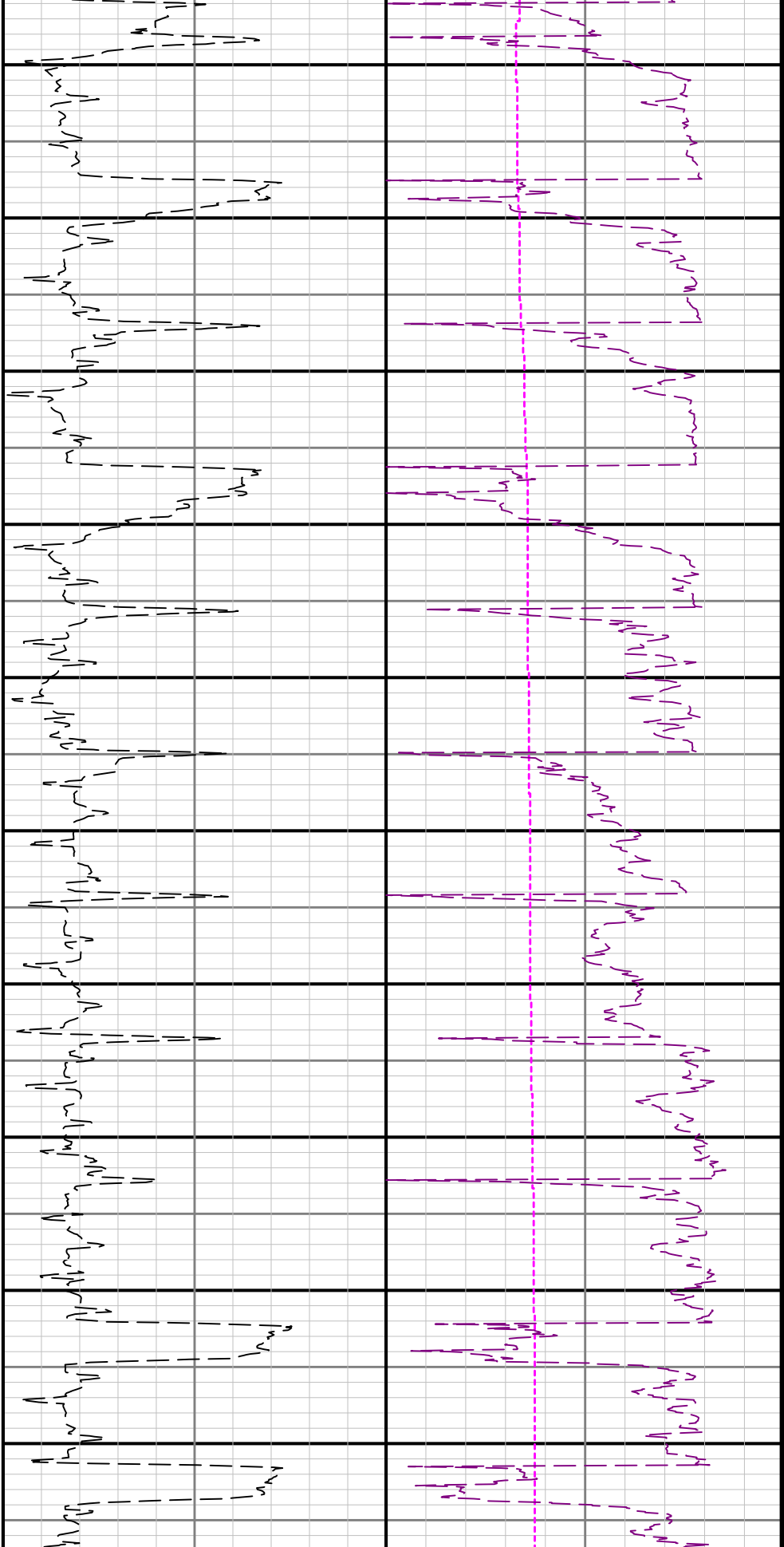
2021-02-28 01:52:34

<div>Gamma Ray - Apparent 3 ft Average GRAX</div> <div>0200</div> <div>API</div> <div>True Vertical Depth TVD</div> <div>80001000</div> <div>ft</div>	<div>MD 1:1200 feet</div> <div>1800</div> <div>9 5/8" Casing</div> <div>>R1</div> <div>1900</div> <div>2000</div>	<div>Depth Averaged ROP 3 ft Average ROPA</div> <div>12500</div> <div>ft/h</div>	<div>Downhole Temperature TCDX</div> <div>0300</div> <div>degF</div> <div>Weight On Bit - Average 1 ft Average WOBA</div> <div>050</div> <div>klb</div>
<div>GRAX</div> <div>See Remark 1</div> <div>TVD</div>		<div>ROPA</div>	<div>WOBA</div> <div>TCDX</div>



2100 2200 2300 2400 2500 2600 2700 2800 2900 3000





3100 3200 3300 3400 3500 3600 3700 3800 3900 4000

