

<div><div><div>Baker Hughes</div></div></div>		<div>LWD MEMORY LOG</div>									
Scale:		Gamma Ray									
1:1200		Company: KERR-MCGEE OIL & GAS ONSHORE LP (WA)									
Measured Depth		Well: Nelson 35-5HZ									
		Field: Wattenberg									
Depth Reference:		Country: Weld County Country: United States									
Driller's Depth		State: Colorado									
Status:		Surface Location:					Other Services:				
Final Print		Latitude: 40° 06' 04.874" N					Directional				
API No: 05-123-51249		Longitude: 104° 58' 20.208" W									
Job ID: 110760665		SEC: 35		TWN: 2N		RGE: 68W					
Permanent Datum (P.D.):		Mean Sea Level		Elevation:		0.00 ft		Elev. KB:		N/A	
Log Measured From:		Rig Floor		Above P.D.:		4975.00 ft		Elev. DF:		4975.00 ft	
								Elev. GL:		4955.00 ft	
Dates		Interval				Magnetic Field Reference					
From: 2021-03-13		Drilled (ft)		Logged (ft)		Azi Reference North:		True Dip Angle: (deg)		66.44	
To: 2021-03-17		Top: 1920.00		Top: 1920.00		Total Magnetic Field Strength: (nT)				51917	
Spud: 2021-03-13		Bottom: 21569.00		Bottom: 21556.00		Mag to Reference North Correction: (deg)				8.06	
Borehole Record											
Casing Record											
Hole Size (in)		From (ft)		To (ft)		Size (in)		Weight (lb/ft)		From (ft)	
										To (ft)	
12.500		20.00		1920.00		9.625		36.00		20.00	
8.500		1920.00		21569.00						1910.00	
Mud Record											
Deviation Record											
Type		From (ft)		To (ft)		Hole Size (in)		Interval (ft)		Inc   Az (Start)   Inc   Az (End)	
Diesel-Oil Based Mud		1920.00		21569.00		8.500		19649.00		17.83   334.33   89.48   180.17	
Acquisition System											
Software Version		Other									
Cadence		RT 5.9		Precision 461							
Plot Studio		5.9.9111.3		Contractor: Precision 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	Bottom	From	To	Start Logging	End Logging	
						(ft)	(ft)	(ft)	(ft)			
1	1	8.500	PDC	3.00	Rotary Steerable	1920.00	21556.00	1920.00	21569.00	2021-03-13 09:00	2021-03-17 05:25	90.33

Crew								
Name		Arrive Wellsite	Depart Wellsite	Name		Arrive Wellsite	Depart Wellsite	
Adam Schlenz		2021-03-13	2021-03-15	John Moisan		2021-03-13	2021-03-17	Matt Leopold

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+ (%)
2021-03-13 06:00	1	1920.00	Diesel-Oil Based Mud	8.9	15	0	13.0	70/22	Active Pit	31853	0.00
2021-03-13 16:00	1	4654.00	Diesel-Oil Based Mud	8.9	16	0	11.2	68/24	Active Pit	33557	0.00
2021-03-14 06:00	1	7377.00	Diesel-Oil Based Mud	9.0	15	0	10.0	66.5/24.5	Active Pit	36433	0.00
2021-03-14 16:00	1	9380.00	Diesel-Oil Based Mud	9.0	15	0	10.0	67/27	Active Pit	35954	0.00
2021-03-15 06:00	1	13263.00	Diesel-Oil Based Mud	9.1	15	0	10.8	68/22	Active Pit	34036	0.00
2021-03-15 15:00	1	15200.00	Diesel-Oil Based Mud	9.1	16	0	10.0	67.5/23	Active Pit	35475	0.00
2021-03-16 06:00	1	17957.00	Diesel-Oil Based Mud	9.2	17	0	10.4	66.3/24	Active Pit	35475	0.00
2021-03-16 16:00	1	19293.00	Diesel-Oil Based Mud	9.2	18	0	10.0	66.3/24.3	Active Pit	36433	0.00
2021-03-17 06:00	1	21569.00	Diesel-Oil Based Mud	9.3	19	0	10.4	63/26	Active Pit	37392	0.00

Equipment and Service Data							
Run No.	Tool		Serial Number		Measurement		Sensor Offset (ft)
1	AutoTrak Curve Steering Unit		14949257		Near Bit Inclination		5.93
1	AutoTrak Curve Steering Unit		14949257		Near Bit VSS		5.93
1	AutoTrak Curve MWD		14179566		Gamma (single)		2.75
1	AutoTrak Curve MWD		14179566		Directional (mag)		12.27

Service and Tool Mnemonics		
Mnemonic	Name	Description
ATC SU	AutoTrak Curve SU	Auto Trak Curve Steering Unit
ATC MWD	AutoTrak Curve MWD	Auto Trak Curve MWD
ATC LCPM	AutoTrak Curve LCPM	Auto Trak Curve LCPM

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 ¾ inch NaviGamma services (Gamma Ray and Directional) behind 8 ½ inch bit and rotary steerable assembly from 1920 to 21569 feet MD (1879 to 7589 feet TVD).
- 3
- Gamma Ray Apparent (GRAM) is presented 0 to 200 API per customer request.

Remarks

Number	Depth (ft)	Hole Section (in)	Run No.	Remark
1	1921.00	8.500	1	BHI Logging services began at 1920 feet MD (1879 feet TVD).
2	21563.00	8.500	1	The interval from 21542 to 21569 feet MD (7589 feet TVD) was not logged due to sensor to bit offset at well TD.

Curve Mnemonics

Presented Curves	Description	Units
ROPA	Depth Averaged ROP 3 ft Average	ft/h
TVD	Bit Vertical Depth - Projected	ft
WOBA	Weight on Bit - Average 1 ft Average	klb
GRAM	Gamma Ray - Apparent - Memory 3 ft Average	API
TCDM	Directional Real-Time Survey Temperature	degF



Company

Well

Interval

Created

KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Nelson 35-5HZ

Date From: 2021-03-13 09:00  
Date To: 2021-03-17 05:25  
2021-03-18 13:37:35

Interval Drilled: (ft) 1920.00 - 21569.00  
Interval Logged: (ft) 1920.00 - 21556.00

