

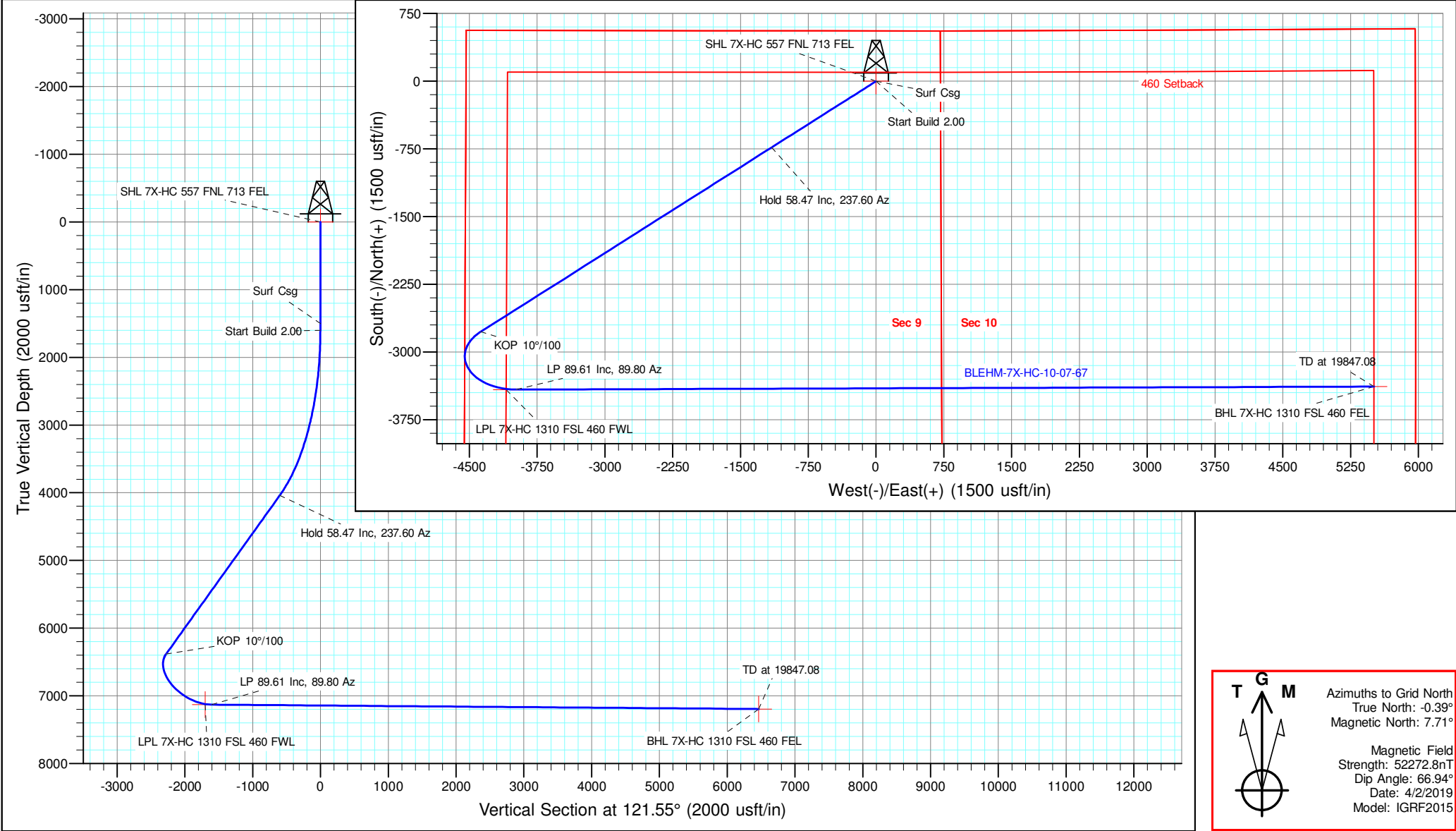
Well Name:  
**BLEHM-7X-HC-10-07-67**

Project Name:  
**Sec. 9-T7N-R67W**

Pad Name:  
**BLEHM Pad**

ANNOTATIONS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	Surf Csg	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	Start Build 2.00	
4523.32	58.47	237.60	4041.76	-732.13	-1153.83	-600.24	1366.51	Hold 58.47 Inc, 237.60 Az	
8999.38	58.47	237.60	6382.73	-2776.15	-4375.16	-2276.02	5181.61	KOP 10°/100	
10358.05	89.61	89.80	7131.50	-3416.61	-3979.00	-1603.32	6266.66	LP 89.61 Inc, 89.80 Az	
19847.08	89.61	89.80	7196.00	-3383.24	5509.76	6465.58	15755.48	TD at 19847.08	

Geodetic Datum:				Elevation:				
North American Datum 1983 US State Plane 1983, Colorado Northern Zone				Ground Elevation: 5088.00 KB Elevation: KB @ 5115.00usft				
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL 7X-HC 557 FNL 713 FEL	0.00	0.00	0.00	1459971.892	3169070.039	40.594428	-104.891198	Point
LPL 7X-HC 1310 FSL 460 FWL	7131.00	-3417.01	-4092.61	1456554.884	3164977.428	40.585125	-104.906017	Point
- plan misses target center by 11.36usft at 10246.35usft MD (7122.52 TVD, -3409.92 N, -4089.96 E)								
BHL 7X-HC 1310 FSL 460 FEL	7196.00	-3383.24	5509.76	1456588.653	3174579.796	40.585036	-104.871445	Point





## **Nickel Road Operating**

**Sec. 9-T7N-R67W**

**BLEHM Pad**

**BLEHM-7X-HC-10-07-67**

**Wellbore #1**

**Plan: Plan #3**

## **Standard Planning Report - Geographic**

**11 March, 2021**

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

<b>Project</b>	Sec. 9-T7N-R67W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site	BLEHM Pad				
Site Position:		Northing:	1,458,460.008 usft	Latitude:	40.590318
From:	Lat/Long	Easting:	3,166,936.305 usft	Longitude:	-104.898918
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well	BLEHM-7X-HC-10-07-67					
Well Position	+N/-S	0.00 usft	Northing:	1,459,971.891 usft	Latitude:	40.594428
	+E/-W	0.00 usft	Easting:	3,169,070.040 usft	Longitude:	-104.891198
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,088.00 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	4/2/2019	8.10	66.94	52,272.78831268

<b>Design</b>	Plan #3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	121.55

<b>Plan Survey Tool Program</b>	<b>Date</b>	3/10/2021		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	19,847.09 Plan #3 (Wellbore #1)	MWD	
			OWSG MWD - Standard	

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,523.32	58.47	237.60	4,041.76	-732.13	-1,153.83	2.00	2.00	0.00	237.60	
8,999.38	58.47	237.60	6,382.73	-2,776.15	-4,375.16	0.00	0.00	0.00	0.00	
10,358.05	89.61	89.80	7,131.50	-3,416.61	-3,979.00	10.00	2.29	-10.88	-130.08	
19,847.09	89.61	89.80	7,196.00	-3,383.24	5,509.76	0.00	0.00	0.00	0.00	BHL 7X-HC 1310 FSL

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
Laramie-Fox Hills - SHL 7X-HC 557 FNL 713 FEL										
100.00	0.00	0.00	100.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
200.00	0.00	0.00	200.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
300.00	0.00	0.00	300.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
Upper Pierre										
400.00	0.00	0.00	400.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
500.00	0.00	0.00	500.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
600.00	0.00	0.00	600.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
700.00	0.00	0.00	700.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
800.00	0.00	0.00	800.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
900.00	0.00	0.00	900.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,314.00	0.00	0.00	1,314.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
Pierre Shale										
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
Surf Csg										
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198	
Start Build 2.00										
1,700.00	2.00	237.60	1,699.98	-0.93	-1.47	1,459,970.956	3,169,068.566	40.594425	-104.891204	
1,800.00	4.00	237.60	1,799.84	-3.74	-5.89	1,459,968.152	3,169,064.147	40.594418	-104.891220	
1,900.00	6.00	237.60	1,899.45	-8.41	-13.25	1,459,963.483	3,169,056.789	40.594405	-104.891246	
2,000.00	8.00	237.60	1,998.70	-14.94	-23.54	1,459,956.954	3,169,046.499	40.594387	-104.891283	
2,100.00	10.00	237.60	2,097.47	-23.32	-36.75	1,459,948.573	3,169,033.291	40.594365	-104.891331	
2,200.00	12.00	237.60	2,195.62	-33.54	-52.86	1,459,938.351	3,169,017.180	40.594337	-104.891389	
2,300.00	14.00	237.60	2,293.06	-45.59	-71.85	1,459,926.299	3,168,998.187	40.594304	-104.891458	
2,400.00	16.00	237.60	2,389.64	-59.46	-93.71	1,459,912.433	3,168,976.335	40.594267	-104.891537	
2,500.00	18.00	237.60	2,485.27	-75.12	-118.39	1,459,896.769	3,168,951.649	40.594224	-104.891626	
2,600.00	20.00	237.60	2,579.82	-92.56	-145.88	1,459,879.327	3,168,924.161	40.594177	-104.891726	
2,700.00	22.00	237.60	2,673.17	-111.76	-176.14	1,459,860.128	3,168,893.903	40.594125	-104.891835	
2,800.00	24.00	237.60	2,765.21	-132.70	-209.13	1,459,839.195	3,168,860.913	40.594068	-104.891955	
2,900.00	26.00	237.60	2,855.84	-155.34	-244.81	1,459,816.553	3,168,825.230	40.594006	-104.892084	
3,000.00	28.00	237.60	2,944.94	-179.66	-283.14	1,459,792.231	3,168,786.899	40.593940	-104.892222	
3,100.00	30.00	237.60	3,032.39	-205.63	-324.07	1,459,766.258	3,168,745.965	40.593870	-104.892370	
3,200.00	32.00	237.60	3,118.11	-233.23	-367.56	1,459,738.665	3,168,702.479	40.593795	-104.892528	
3,300.00	34.00	237.60	3,201.97	-262.40	-413.55	1,459,709.487	3,168,656.494	40.593716	-104.892694	
3,400.00	36.00	237.60	3,283.88	-293.13	-461.97	1,459,678.758	3,168,608.066	40.593632	-104.892869	
3,500.00	38.00	237.60	3,363.74	-325.38	-512.79	1,459,646.516	3,168,557.253	40.593545	-104.893053	
3,600.00	40.00	237.60	3,441.45	-359.09	-565.92	1,459,612.800	3,168,504.118	40.593453	-104.893245	
3,700.00	42.00	237.60	3,516.92	-394.24	-621.31	1,459,577.653	3,168,448.725	40.593358	-104.893445	
3,800.00	44.00	237.60	3,590.05	-430.78	-678.90	1,459,541.115	3,168,391.143	40.593258	-104.893653	
3,900.00	46.00	237.60	3,660.76	-468.66	-738.60	1,459,503.232	3,168,331.440	40.593155	-104.893869	
4,000.00	48.00	237.60	3,728.95	-507.84	-800.35	1,459,464.051	3,168,269.690	40.593049	-104.894093	
4,100.00	50.00	237.60	3,794.56	-548.27	-864.07	1,459,423.618	3,168,205.969	40.592939	-104.894323	
4,200.00	52.00	237.60	3,857.48	-589.91	-929.69	1,459,381.982	3,168,140.353	40.592826	-104.894560	
4,300.00	54.00	237.60	3,917.66	-632.70	-997.12	1,459,339.196	3,168,072.922	40.592710	-104.894804	
4,400.00	56.00	237.60	3,975.02	-676.58	-1,066.28	1,459,295.311	3,168,003.759	40.592591	-104.895054	
4,500.00	58.00	237.60	4,029.48	-721.51	-1,137.09	1,459,250.380	3,167,932.949	40.592469	-104.895310	
4,523.32	58.47	237.60	4,041.76	-732.13	-1,153.83	1,459,239.757	3,167,916.209	40.592440	-104.895371	
Hold 58.47 Inc, 237.60 Az										

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,600.00	58.47	237.60	4,081.86	-767.15	-1,209.02	1,459,204.741	3,167,861.023	40.592345	-104.895570
4,700.00	58.47	237.60	4,134.16	-812.82	-1,280.98	1,459,159.075	3,167,789.055	40.592221	-104.895831
4,800.00	58.47	237.60	4,186.46	-858.48	-1,352.95	1,459,113.410	3,167,717.087	40.592097	-104.896091
4,833.54	58.47	237.60	4,204.00	-873.80	-1,377.09	1,459,098.094	3,167,692.950	40.592055	-104.896178
<b>Sussex</b>									
4,900.00	58.47	237.60	4,238.76	-904.15	-1,424.92	1,459,067.744	3,167,645.119	40.591973	-104.896351
5,000.00	58.47	237.60	4,291.06	-949.81	-1,496.89	1,459,022.079	3,167,573.151	40.591849	-104.896611
5,100.00	58.47	237.60	4,343.36	-995.48	-1,568.86	1,458,976.413	3,167,501.183	40.591725	-104.896872
5,200.00	58.47	237.60	4,395.66	-1,041.14	-1,640.82	1,458,930.748	3,167,429.215	40.591601	-104.897132
5,300.00	58.47	237.60	4,447.96	-1,086.81	-1,712.79	1,458,885.083	3,167,357.247	40.591477	-104.897392
5,400.00	58.47	237.60	4,500.26	-1,132.47	-1,784.76	1,458,839.417	3,167,285.279	40.591353	-104.897652
5,500.00	58.47	237.60	4,552.56	-1,178.14	-1,856.73	1,458,793.752	3,167,213.311	40.591229	-104.897913
5,500.84	58.47	237.60	4,553.00	-1,178.53	-1,857.34	1,458,793.366	3,167,212.703	40.591228	-104.897915
<b>Shannon</b>									
5,556.29	58.47	237.60	4,582.00	-1,203.85	-1,897.24	1,458,768.045	3,167,172.797	40.591159	-104.898059
<b>Pierre Shale</b>									
5,600.00	58.47	237.60	4,604.86	-1,223.81	-1,928.70	1,458,748.086	3,167,141.343	40.591105	-104.898173
5,700.00	58.47	237.60	4,657.16	-1,269.47	-2,000.66	1,458,702.421	3,167,069.375	40.590981	-104.898433
5,800.00	58.47	237.60	4,709.46	-1,315.14	-2,072.63	1,458,656.755	3,166,997.407	40.590857	-104.898693
5,900.00	58.47	237.60	4,761.76	-1,360.80	-2,144.60	1,458,611.090	3,166,925.439	40.590733	-104.898954
6,000.00	58.47	237.60	4,814.06	-1,406.47	-2,216.57	1,458,565.424	3,166,853.471	40.590609	-104.899214
6,100.00	58.47	237.60	4,866.36	-1,452.13	-2,288.54	1,458,519.759	3,166,781.503	40.590485	-104.899474
6,200.00	58.47	237.60	4,918.66	-1,497.80	-2,360.50	1,458,474.093	3,166,709.535	40.590361	-104.899734
6,300.00	58.47	237.60	4,970.96	-1,543.46	-2,432.47	1,458,428.428	3,166,637.567	40.590237	-104.899995
6,400.00	58.47	237.60	5,023.26	-1,589.13	-2,504.44	1,458,382.763	3,166,565.599	40.590113	-104.900255
6,500.00	58.47	237.60	5,075.56	-1,634.79	-2,576.41	1,458,337.097	3,166,493.631	40.589989	-104.900515
6,600.00	58.47	237.60	5,127.86	-1,680.46	-2,648.38	1,458,291.432	3,166,421.663	40.589865	-104.900775
6,700.00	58.47	237.60	5,180.16	-1,726.13	-2,720.34	1,458,245.766	3,166,349.696	40.589741	-104.901036
6,800.00	58.47	237.60	5,232.46	-1,771.79	-2,792.31	1,458,200.101	3,166,277.728	40.589617	-104.901296
6,900.00	58.47	237.60	5,284.76	-1,817.46	-2,864.28	1,458,154.435	3,166,205.760	40.589493	-104.901556
7,000.00	58.47	237.60	5,337.06	-1,863.12	-2,936.25	1,458,108.770	3,166,133.792	40.589369	-104.901816
7,100.00	58.47	237.60	5,389.36	-1,908.79	-3,008.22	1,458,063.104	3,166,061.824	40.589245	-104.902077
7,200.00	58.47	237.60	5,441.66	-1,954.45	-3,080.18	1,458,017.439	3,165,989.856	40.589121	-104.902337
7,300.00	58.47	237.60	5,493.96	-2,000.12	-3,152.15	1,457,971.773	3,165,917.888	40.588997	-104.902597
7,400.00	58.47	237.60	5,546.26	-2,045.78	-3,224.12	1,457,926.108	3,165,845.920	40.588873	-104.902857
7,500.00	58.47	237.60	5,598.56	-2,091.45	-3,296.09	1,457,880.443	3,165,773.952	40.588749	-104.903117
7,600.00	58.47	237.60	5,650.86	-2,137.11	-3,368.06	1,457,834.777	3,165,701.984	40.588625	-104.903378
7,700.00	58.47	237.60	5,703.16	-2,182.78	-3,440.02	1,457,789.112	3,165,630.016	40.588501	-104.903638
7,800.00	58.47	237.60	5,755.46	-2,228.45	-3,511.99	1,457,743.446	3,165,558.048	40.588377	-104.903898
7,900.00	58.47	237.60	5,807.76	-2,274.11	-3,583.96	1,457,697.781	3,165,486.080	40.588253	-104.904158
8,000.00	58.47	237.60	5,860.06	-2,319.78	-3,655.93	1,457,652.115	3,165,414.112	40.588129	-104.904419
8,100.00	58.47	237.60	5,912.36	-2,365.44	-3,727.89	1,457,606.450	3,165,342.144	40.588005	-104.904679
8,200.00	58.47	237.60	5,964.66	-2,411.11	-3,799.86	1,457,560.784	3,165,270.176	40.587881	-104.904939
8,300.00	58.47	237.60	6,016.95	-2,456.77	-3,871.83	1,457,515.119	3,165,198.208	40.587757	-104.905199
8,400.00	58.47	237.60	6,069.25	-2,502.44	-3,943.80	1,457,469.453	3,165,126.240	40.587633	-104.905459
8,500.00	58.47	237.60	6,121.55	-2,548.10	-4,015.77	1,457,423.788	3,165,054.272	40.587509	-104.905720
8,600.00	58.47	237.60	6,173.85	-2,593.77	-4,087.73	1,457,378.122	3,164,982.304	40.587385	-104.905980
8,700.00	58.47	237.60	6,226.15	-2,639.43	-4,159.70	1,457,332.457	3,164,910.336	40.587261	-104.906240
8,800.00	58.47	237.60	6,278.45	-2,685.10	-4,231.67	1,457,286.792	3,164,838.368	40.587137	-104.906500
8,900.00	58.47	237.60	6,330.75	-2,730.77	-4,303.64	1,457,241.126	3,164,766.400	40.587013	-104.906760
8,999.38	58.47	237.60	6,382.73	-2,776.15	-4,375.16	1,457,195.743	3,164,694.877	40.586889	-104.907019
<b>KOP 10°/100</b>									
9,000.00	58.43	237.55	6,383.05	-2,776.43	-4,375.61	1,457,195.460	3,164,694.432	40.586889	-104.907021
9,100.00	52.35	227.88	6,439.92	-2,825.96	-4,441.08	1,457,145.928	3,164,628.954	40.586754	-104.907258

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,200.00	47.19	216.64	6,504.60	-2,882.09	-4,492.47	1,457,089.802	3,164,577.565	40.586601	-104.907444
9,300.00	43.32	203.64	6,575.13	-2,943.10	-4,528.21	1,457,028.789	3,164,541.827	40.586434	-104.907574
9,400.00	41.11	189.10	6,649.38	-3,007.15	-4,547.21	1,456,964.743	3,164,522.826	40.586258	-104.907644
9,500.00	40.84	173.83	6,725.07	-3,072.28	-4,548.90	1,456,899.609	3,164,521.140	40.586080	-104.907652
9,600.00	42.56	158.99	6,799.91	-3,136.52	-4,533.22	1,456,835.367	3,164,536.819	40.585903	-104.907597
9,626.07	43.31	155.33	6,819.00	-3,152.88	-4,526.33	1,456,819.011	3,164,543.712	40.585858	-104.907572
<b>Niobrara</b>									
9,700.00	46.03	145.54	6,871.64	-3,197.92	-4,500.65	1,456,773.969	3,164,569.387	40.585734	-104.907481
9,800.00	50.89	133.84	6,938.06	-3,254.61	-4,452.18	1,456,717.279	3,164,617.854	40.585577	-104.907308
9,900.00	56.75	123.79	6,997.16	-3,304.87	-4,389.29	1,456,667.021	3,164,680.749	40.585438	-104.907083
10,000.00	63.32	115.08	7,047.15	-3,347.17	-4,313.88	1,456,624.722	3,164,756.159	40.585321	-104.906812
10,100.00	70.36	107.34	7,086.50	-3,380.22	-4,228.25	1,456,591.667	3,164,841.794	40.585229	-104.906505
10,110.61	71.13	106.57	7,090.00	-3,383.15	-4,218.66	1,456,588.745	3,164,851.378	40.585220	-104.906470
<b>Fort Hays</b>									
10,195.26	77.35	100.60	7,113.00	-3,402.19	-4,139.54	1,456,569.697	3,164,930.502	40.585167	-104.906186
<b>Codell</b>									
10,200.00	77.70	100.27	7,114.02	-3,403.03	-4,134.99	1,456,568.860	3,164,935.051	40.585164	-104.906169
10,245.85	81.13	97.18	7,122.44	-3,409.86	-4,090.46	1,456,562.032	3,164,979.584	40.585145	-104.906009
<b>LPL 7X-HC 1310 FSL 460 FWL</b>									
10,300.00	85.22	93.59	7,128.88	-3,414.90	-4,036.94	1,456,556.994	3,165,033.098	40.585130	-104.905817
10,358.05	89.61	89.80	7,131.50	-3,416.61	-3,979.00	1,456,555.281	3,165,091.039	40.585124	-104.905608
<b>LP 89.61 Inc, 89.80 Az</b>									
10,400.00	89.61	89.80	7,131.78	-3,416.46	-3,937.05	1,456,555.429	3,165,132.987	40.585124	-104.905457
10,500.00	89.61	89.80	7,132.46	-3,416.11	-3,837.05	1,456,555.781	3,165,232.984	40.585123	-104.905097
10,600.00	89.61	89.80	7,133.14	-3,415.76	-3,737.06	1,456,556.132	3,165,332.981	40.585122	-104.904737
10,700.00	89.61	89.80	7,133.81	-3,415.41	-3,637.06	1,456,556.484	3,165,432.978	40.585121	-104.904377
10,800.00	89.61	89.80	7,134.49	-3,415.06	-3,537.06	1,456,556.836	3,165,532.975	40.585120	-104.904017
10,900.00	89.61	89.80	7,135.17	-3,414.70	-3,437.07	1,456,557.187	3,165,632.972	40.585119	-104.903657
11,000.00	89.61	89.80	7,135.85	-3,414.35	-3,337.07	1,456,557.539	3,165,732.970	40.585118	-104.903297
11,100.00	89.61	89.80	7,136.52	-3,414.00	-3,237.07	1,456,557.891	3,165,832.967	40.585118	-104.902937
11,200.00	89.61	89.80	7,137.20	-3,413.65	-3,137.08	1,456,558.242	3,165,932.964	40.585117	-104.902577
11,300.00	89.61	89.80	7,137.88	-3,413.30	-3,037.08	1,456,558.594	3,166,032.961	40.585116	-104.902217
11,400.00	89.61	89.80	7,138.55	-3,412.95	-2,937.08	1,456,558.946	3,166,132.958	40.585115	-104.901857
11,500.00	89.61	89.80	7,139.23	-3,412.59	-2,837.08	1,456,559.297	3,166,232.955	40.585114	-104.901497
11,600.00	89.61	89.80	7,139.91	-3,412.24	-2,737.09	1,456,559.649	3,166,332.952	40.585113	-104.901137
11,700.00	89.61	89.80	7,140.58	-3,411.89	-2,637.09	1,456,560.001	3,166,432.949	40.585112	-104.900777
11,800.00	89.61	89.80	7,141.26	-3,411.54	-2,537.09	1,456,560.352	3,166,532.946	40.585111	-104.900417
11,900.00	89.61	89.80	7,141.94	-3,411.19	-2,437.10	1,456,560.704	3,166,632.943	40.585110	-104.900057
12,000.00	89.61	89.80	7,142.61	-3,410.84	-2,337.10	1,456,561.056	3,166,732.940	40.585110	-104.899697
12,100.00	89.61	89.80	7,143.29	-3,410.48	-2,237.10	1,456,561.407	3,166,832.937	40.585109	-104.899337
12,200.00	89.61	89.80	7,143.97	-3,410.13	-2,137.10	1,456,561.759	3,166,932.935	40.585108	-104.898977
12,300.00	89.61	89.80	7,144.65	-3,409.78	-2,037.11	1,456,562.111	3,167,032.932	40.585107	-104.898617
12,400.00	89.61	89.80	7,145.32	-3,409.43	-1,937.11	1,456,562.462	3,167,132.929	40.585106	-104.898257
12,500.00	89.61	89.80	7,146.00	-3,409.08	-1,837.11	1,456,562.814	3,167,232.926	40.585105	-104.897897
12,600.00	89.61	89.80	7,146.68	-3,408.73	-1,737.12	1,456,563.166	3,167,332.923	40.585104	-104.897537
12,700.00	89.61	89.80	7,147.35	-3,408.37	-1,637.12	1,456,563.517	3,167,432.920	40.585103	-104.897177
12,800.00	89.61	89.80	7,148.03	-3,408.02	-1,537.12	1,456,563.869	3,167,532.917	40.585102	-104.896817
12,900.00	89.61	89.80	7,148.71	-3,407.67	-1,437.12	1,456,564.221	3,167,632.914	40.585102	-104.896457
13,000.00	89.61	89.80	7,149.38	-3,407.32	-1,337.13	1,456,564.572	3,167,732.911	40.585101	-104.896097
13,100.00	89.61	89.80	7,150.06	-3,406.97	-1,237.13	1,456,564.924	3,167,832.908	40.585100	-104.895736
13,200.00	89.61	89.80	7,150.74	-3,406.62	-1,137.13	1,456,565.276	3,167,932.905	40.585099	-104.895376
13,300.00	89.61	89.80	7,151.41	-3,406.26	-1,037.14	1,456,565.627	3,168,032.903	40.585098	-104.895016
13,400.00	89.61	89.80	7,152.09	-3,405.91	-937.14	1,456,565.979	3,168,132.900	40.585097	-104.894656
13,500.00	89.61	89.80	7,152.77	-3,405.56	-837.14	1,456,566.331	3,168,232.897	40.585096	-104.894296

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
13,600.00	89.61	89.80	7,153.44	-3,405.21	-737.14	1,456,566.682	3,168,332.894	40.585095	-104.893936	
13,700.00	89.61	89.80	7,154.12	-3,404.86	-637.15	1,456,567.034	3,168,432.891	40.585094	-104.893576	
13,800.00	89.61	89.80	7,154.80	-3,404.51	-537.15	1,456,567.386	3,168,532.888	40.585093	-104.893216	
13,900.00	89.61	89.80	7,155.48	-3,404.15	-437.15	1,456,567.737	3,168,632.886	40.585092	-104.892856	
14,000.00	89.61	89.80	7,156.15	-3,403.80	-337.16	1,456,568.089	3,168,732.883	40.585092	-104.892496	
14,100.00	89.61	89.80	7,156.83	-3,403.45	-237.16	1,456,568.441	3,168,832.880	40.585091	-104.892136	
14,200.00	89.61	89.80	7,157.51	-3,403.10	-137.16	1,456,568.792	3,168,932.877	40.585090	-104.891776	
14,300.00	89.61	89.80	7,158.18	-3,402.75	-37.17	1,456,569.144	3,169,032.874	40.585089	-104.891416	
14,400.00	89.61	89.80	7,158.86	-3,402.40	62.83	1,456,569.495	3,169,132.871	40.585088	-104.891056	
14,500.00	89.61	89.80	7,159.54	-3,402.04	162.83	1,456,569.847	3,169,232.869	40.585087	-104.890696	
14,600.00	89.61	89.80	7,160.21	-3,401.69	262.83	1,456,570.199	3,169,332.866	40.585086	-104.890336	
14,700.00	89.61	89.80	7,160.89	-3,401.34	362.82	1,456,570.550	3,169,432.863	40.585085	-104.889976	
14,800.00	89.61	89.80	7,161.57	-3,400.99	462.82	1,456,570.902	3,169,532.860	40.585084	-104.889616	
14,900.00	89.61	89.80	7,162.24	-3,400.64	562.82	1,456,571.254	3,169,632.857	40.585083	-104.889256	
15,000.00	89.61	89.80	7,162.92	-3,400.29	662.81	1,456,571.605	3,169,732.854	40.585082	-104.888896	
15,100.00	89.61	89.80	7,163.60	-3,399.93	762.81	1,456,571.957	3,169,832.851	40.585081	-104.888536	
15,200.00	89.61	89.80	7,164.28	-3,399.58	862.81	1,456,572.309	3,169,932.848	40.585080	-104.888176	
15,300.00	89.61	89.80	7,164.95	-3,399.23	962.81	1,456,572.660	3,170,032.845	40.585080	-104.887816	
15,400.00	89.61	89.80	7,165.63	-3,398.88	1,062.80	1,456,573.012	3,170,132.842	40.585079	-104.887456	
15,500.00	89.61	89.80	7,166.31	-3,398.53	1,162.80	1,456,573.364	3,170,232.839	40.585078	-104.887096	
15,600.00	89.61	89.80	7,166.98	-3,398.18	1,262.80	1,456,573.715	3,170,332.837	40.585077	-104.886736	
15,700.00	89.61	89.80	7,167.66	-3,397.82	1,362.79	1,456,574.067	3,170,432.834	40.585076	-104.886376	
15,800.00	89.61	89.80	7,168.34	-3,397.47	1,462.79	1,456,574.419	3,170,532.831	40.585075	-104.886016	
15,900.00	89.61	89.80	7,169.01	-3,397.12	1,562.79	1,456,574.770	3,170,632.828	40.585074	-104.885656	
16,000.00	89.61	89.80	7,169.69	-3,396.77	1,662.79	1,456,575.122	3,170,732.825	40.585073	-104.885296	
16,100.00	89.61	89.80	7,170.37	-3,396.42	1,762.78	1,456,575.474	3,170,832.822	40.585072	-104.884936	
16,200.00	89.61	89.80	7,171.04	-3,396.07	1,862.78	1,456,575.825	3,170,932.819	40.585071	-104.884576	
16,300.00	89.61	89.80	7,171.72	-3,395.71	1,962.78	1,456,576.177	3,171,032.816	40.585070	-104.884216	
16,400.00	89.61	89.80	7,172.40	-3,395.36	2,062.77	1,456,576.529	3,171,132.813	40.585069	-104.883856	
16,500.00	89.61	89.80	7,173.07	-3,395.01	2,162.77	1,456,576.880	3,171,232.810	40.585068	-104.883496	
16,600.00	89.61	89.80	7,173.75	-3,394.66	2,262.77	1,456,577.232	3,171,332.807	40.585067	-104.883136	
16,700.00	89.61	89.80	7,174.43	-3,394.31	2,362.76	1,456,577.584	3,171,432.804	40.585066	-104.882776	
16,800.00	89.61	89.80	7,175.11	-3,393.96	2,462.76	1,456,577.935	3,171,532.802	40.585065	-104.882416	
16,900.00	89.61	89.80	7,175.78	-3,393.60	2,562.76	1,456,578.287	3,171,632.799	40.585064	-104.882056	
17,000.00	89.61	89.80	7,176.46	-3,393.25	2,662.76	1,456,578.639	3,171,732.796	40.585064	-104.881696	
17,100.00	89.61	89.80	7,177.14	-3,392.90	2,762.75	1,456,578.990	3,171,832.793	40.585063	-104.881336	
17,200.00	89.61	89.80	7,177.81	-3,392.55	2,862.75	1,456,579.342	3,171,932.790	40.585062	-104.880975	
17,300.00	89.61	89.80	7,178.49	-3,392.20	2,962.75	1,456,579.694	3,172,032.787	40.585061	-104.880615	
17,400.00	89.61	89.80	7,179.17	-3,391.85	3,062.74	1,456,580.045	3,172,132.784	40.585060	-104.880255	
17,500.00	89.61	89.80	7,179.84	-3,391.49	3,162.74	1,456,580.397	3,172,232.781	40.585059	-104.879895	
17,600.00	89.61	89.80	7,180.52	-3,391.14	3,262.74	1,456,580.749	3,172,332.778	40.585058	-104.879535	
17,700.00	89.61	89.80	7,181.20	-3,390.79	3,362.74	1,456,581.100	3,172,432.775	40.585057	-104.879175	
17,800.00	89.61	89.80	7,181.87	-3,390.44	3,462.73	1,456,581.452	3,172,532.772	40.585056	-104.878815	
17,900.00	89.61	89.80	7,182.55	-3,390.09	3,562.73	1,456,581.804	3,172,632.769	40.585055	-104.878455	
18,000.00	89.61	89.80	7,183.23	-3,389.74	3,662.73	1,456,582.155	3,172,732.767	40.585054	-104.878095	
18,100.00	89.61	89.80	7,183.91	-3,389.38	3,762.72	1,456,582.507	3,172,832.764	40.585053	-104.877735	
18,200.00	89.61	89.80	7,184.58	-3,389.03	3,862.72	1,456,582.859	3,172,932.761	40.585052	-104.877375	
18,300.00	89.61	89.80	7,185.26	-3,388.68	3,962.72	1,456,583.210	3,173,032.758	40.585051	-104.877015	
18,400.00	89.61	89.80	7,185.94	-3,388.33	4,062.72	1,456,583.562	3,173,132.755	40.585050	-104.876655	
18,500.00	89.61	89.80	7,186.61	-3,387.98	4,162.71	1,456,583.914	3,173,232.752	40.585049	-104.876295	
18,600.00	89.61	89.80	7,187.29	-3,387.63	4,262.71	1,456,584.265	3,173,332.749	40.585048	-104.875935	
18,700.00	89.61	89.80	7,187.97	-3,387.27	4,362.71	1,456,584.617	3,173,432.746	40.585047	-104.875575	
18,800.00	89.61	89.80	7,188.64	-3,386.92	4,462.70	1,456,584.969	3,173,532.743	40.585046	-104.875215	
18,900.00	89.61	89.80	7,189.32	-3,386.57	4,562.70	1,456,585.320	3,173,632.740	40.585045	-104.874855	
19,000.00	89.61	89.80	7,190.00	-3,386.22	4,662.70	1,456,585.672	3,173,732.737	40.585044	-104.874495	



<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
19,100.00	89.61	89.80	7,190.67	-3,385.87	4,762.70	1,456,586.024	3,173,832.735	40.585043	-104.874135
19,200.00	89.61	89.80	7,191.35	-3,385.52	4,862.69	1,456,586.375	3,173,932.732	40.585042	-104.873775
19,300.00	89.61	89.80	7,192.03	-3,385.16	4,962.69	1,456,586.727	3,174,032.729	40.585041	-104.873415
19,400.00	89.61	89.80	7,192.70	-3,384.81	5,062.69	1,456,587.079	3,174,132.726	40.585040	-104.873055
19,500.00	89.61	89.80	7,193.38	-3,384.46	5,162.68	1,456,587.430	3,174,232.723	40.585039	-104.872695
19,600.00	89.61	89.80	7,194.06	-3,384.11	5,262.68	1,456,587.782	3,174,332.720	40.585039	-104.872335
19,700.00	89.61	89.80	7,194.74	-3,383.76	5,362.68	1,456,588.134	3,174,432.717	40.585038	-104.871975
19,800.00	89.61	89.80	7,195.41	-3,383.41	5,462.67	1,456,588.485	3,174,532.714	40.585037	-104.871615
19,847.09	89.61	89.80	7,196.00	-3,383.24	5,509.76	1,456,588.653	3,174,579.796	40.585036	-104.871445
TD at 19847.08 - TD - BHL 7X-HC 1310 FSL 460 FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL 7X-HC 557 FNL 71: - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,459,971.891	3,169,070.040	40.594428	-104.891198
LPL 7X-HC 1310 FSL 46: - plan misses target center by 11.36usft at 10245.85usft MD (7122.44 TVD, -3409.86 N, -4090.45 E) - Point	0.00	0.00	7,131.00	-3,417.01	-4,092.61	1,456,554.884	3,164,977.428	40.585125	-104.906017
BHL 7X-HC 1310 FSL 46: - plan hits target center - Point	0.00	0.00	7,196.00	-3,383.24	5,509.76	1,456,588.653	3,174,579.796	40.585036	-104.871445

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
0.00	0.00	Laramie-Fox Hills				
300.00	300.00	Upper Pierre				
1,314.00	1,314.00	Pierre Shale				
4,833.54	4,204.00	Sussex				
5,500.84	4,553.00	Shannon				
5,556.29	4,582.00	Pierre Shale				
9,626.07	6,819.00	Niobrara				
10,110.61	7,090.00	Fort Hays				
10,195.26	7,113.00	Codell				
19,847.09	7,196.00	TD				



<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well BLEHM-7X-HC-10-07-67
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	KB @ 5115.00usft
<b>Project:</b>	Sec. 9-T7N-R67W	<b>MD Reference:</b>	KB @ 5115.00usft
<b>Site:</b>	BLEHM Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	BLEHM-7X-HC-10-07-67	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #3		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.00	1,500.00	0.00	0.00	Surf Csg
1,600.00	1,600.00	0.00	0.00	Start Build 2.00
4,523.32	4,041.76	-732.13	-1,153.83	Hold 58.47 Inc, 237.60 Az
8,999.38	6,382.73	-2,776.15	-4,375.16	KOP 10°/100
10,358.05	7,131.50	-3,416.61	-3,979.00	LP 89.61 Inc, 89.80 Az
19,847.09	7,196.00	-3,383.24	5,509.76	TD at 19847.08