

Well Name:
REEMAN-5X-HNA-04-06-65

Project Name:
Sec. 5-T6N-R65W

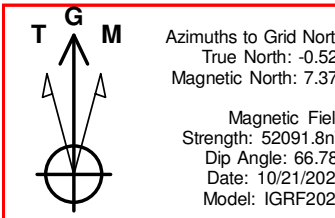
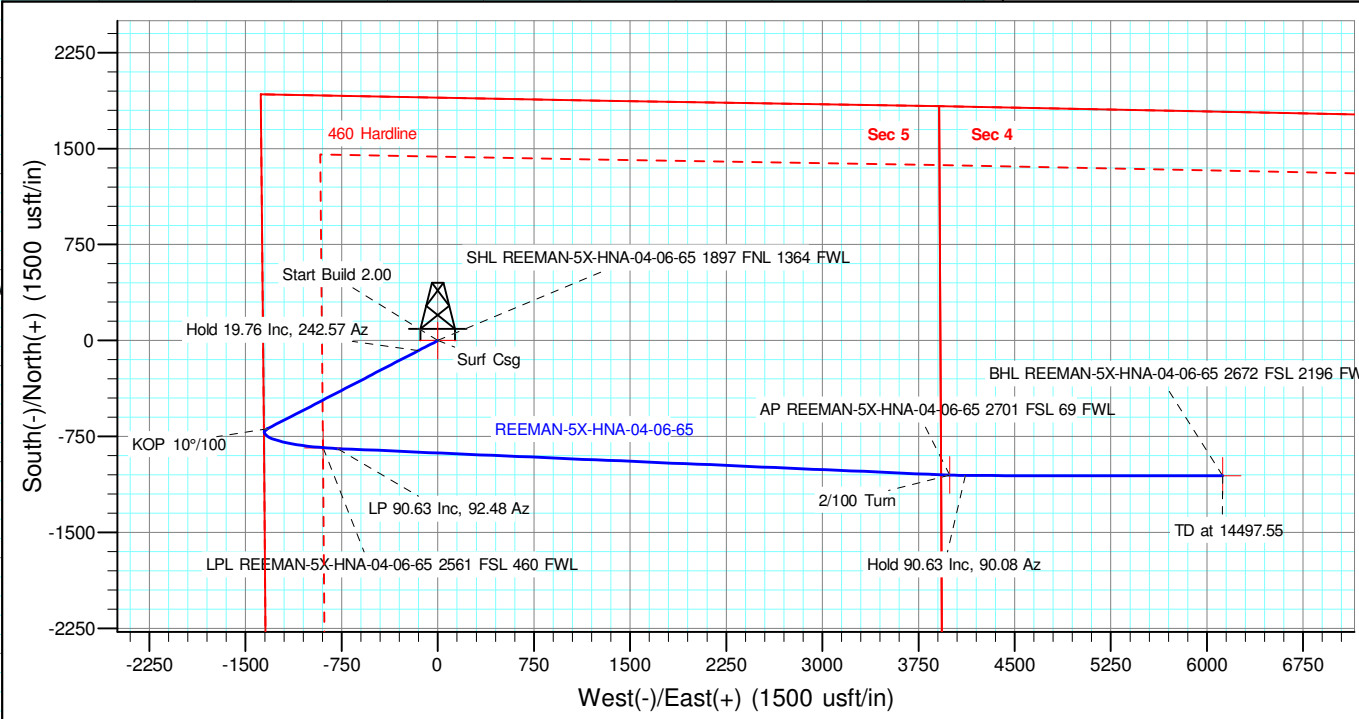
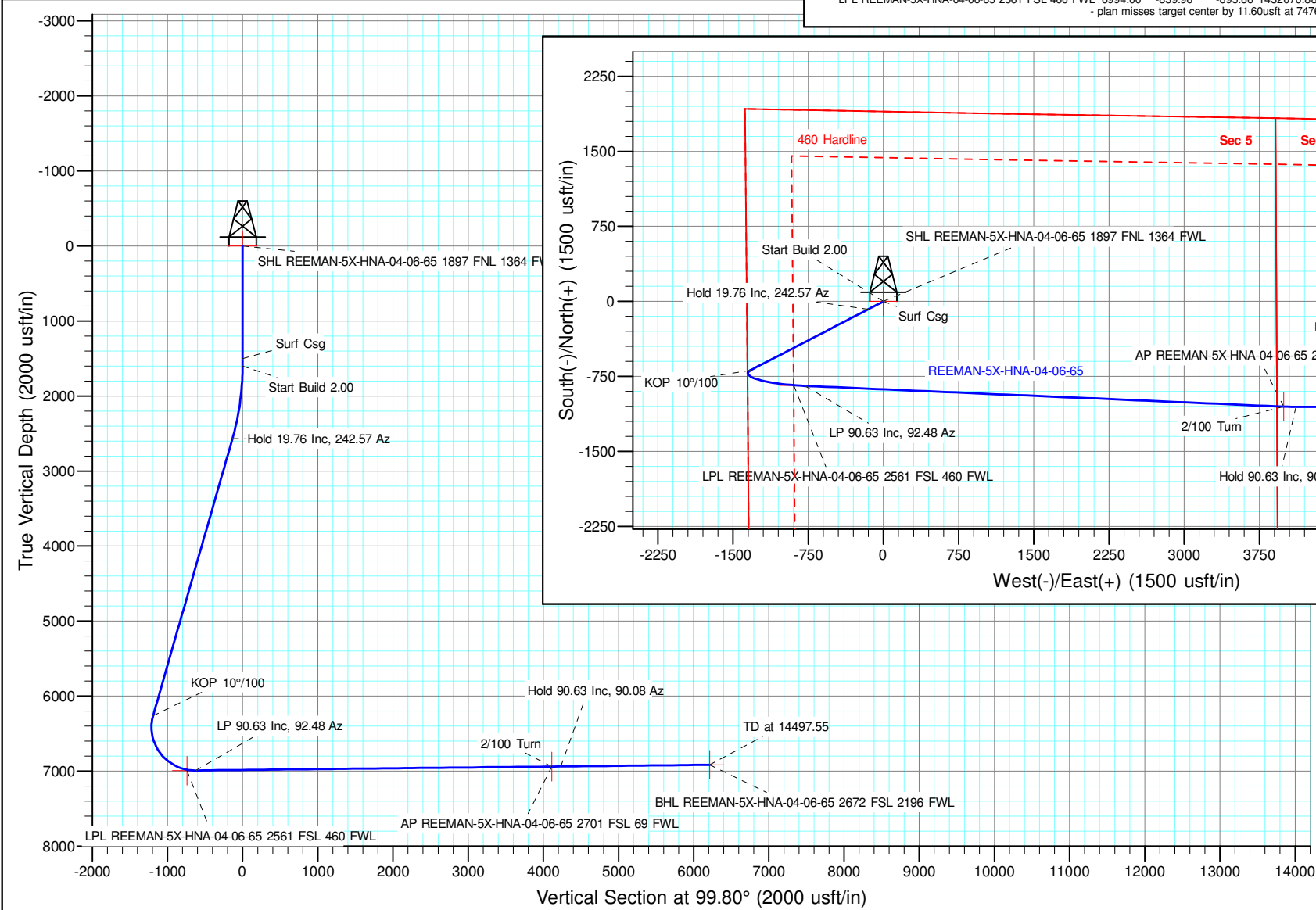
Pad Name:
REEMAN PAD

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	
2587.84	19.76	242.57	2568.38	-77.68	-149.68	-134.27	168.63	Hold 19.76 Inc, 242.57 Az	
6514.35	19.76	242.57	6263.76	-689.05	-1327.75	-1191.12	1495.90	KOP 10°/100	
7590.92	90.63	92.48	6992.70	-845.00	-780.00	-624.81	2140.12	LP 90.63 Inc, 92.48 Az	
12370.55	90.63	92.48	6940.33	-1051.94	3994.86	4115.61	6919.47	2/100 Turn	
12490.87	90.63	90.08	6939.01	-1054.62	4115.14	4234.59	7039.78	Hold 90.63 Inc, 90.08 Az	
14497.55	90.63	90.08	6917.01	-1057.26	6120.69	6211.34	9045.34	TD at 14497.55	

Geodetic Datum:
North American Datum 1983
US State Plane 1983Colorado Northern Zone

Elevation:
Ground Elevation: 4817.00
KB Elevation: WELL @ 4844.00usft (Original Well Elev)

DESIGN TARGET DETAILS									
Name	SHL	REEMAN-5X-HNA-04-06-65	1897 FNL	1364 FWL	TVD	+N/-S	+E/-W	Northing	Easting
SHL REEMAN-5X-HNA-04-06-65	1897 FNL	1364 FWL	TVD	0.00	+N/-S	0.00	+E/-W	0.00	1432910.850
BHL REEMAN-5X-HNA-04-06-65	2672 FSL	2196 FWL	6917.00	-1057.26	6121.69	1431853.593	3230776.509	40.515874	-104.669959
AP REEMAN-5X-HNA-04-06-65	2701 FSL	69 FWL	6940.33	-1051.94	3994.86	1431858.914	3228649.684	40.515943	-104.677608
LPL REEMAN-5X-HNA-04-06-65	2561 FSL	460 FWL	6994.00	-839.96	-895.66	1432070.889	3223759.164	40.516648	-104.695190
- plan misses target center by 11.60usft at 7476.72usft MD (6982.78 TVD, -838.08 N, -893.36 E)									



Azimuths to Grid North
True North: -0.52°
Magnetic North: 7.37°
Magnetic Field
Strength: 52091.8nT
Dip Angle: 66.78°
Date: 10/21/2020
Model: IGRF2020

NICKEL ROAD

O P E R A T I N G

Nickel Road Operating

Sec. 5-T6N-R65W

REEMAN PAD

REEMAN-5X-HNA-04-06-65

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

27 October, 2020

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-5X-HNA-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4844.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4844.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-5X-HNA-04-06-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Sec. 5-T6N-R65W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	REEMAN PAD				
Site Position:		Northing:	1,432,900.490 usft	Latitude:	40.518901
From:	Map	Easting:	3,224,708.630 usft	Longitude:	-104.691748
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.52 °

Well	REEMAN-5X-HNA-04-06-65					
Well Position	+N/-S	0.00 usft	Northing:	1,432,910.850 usft	Latitude:	40.518931
	+E/-W	0.00 usft	Easting:	3,224,654.820 usft	Longitude:	-104.691941
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,817.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	10/21/2020	7.89	66.78	52,091.83169892

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	99.80

Plan Survey Tool Program	Date	10/27/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	14,497.36 Design #1 (Wellbore #1)	MWD		
			OWSG MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
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	
2,587.84	19.76	242.57	2,568.38	-77.68	-149.68	2.00	2.00	0.00	242.57	
6,514.35	19.76	242.57	6,263.76	-689.05	-1,327.75	0.00	0.00	0.00	0.00	
7,590.92	90.63	92.48	6,992.70	-845.00	-780.00	10.00	6.58	-13.94	-148.45	
12,370.55	90.63	92.48	6,940.33	-1,051.94	3,994.86	0.00	0.00	0.00	0.00	
12,490.87	90.63	90.08	6,939.01	-1,054.62	4,115.14	2.00	0.00	-2.00	-89.99	
14,497.55	90.63	90.08	6,917.00	-1,057.26	6,121.69	0.00	0.00	0.00	0.00	BHL REEMAN-5X-HN

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-5X-HNA-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4844.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4844.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-5X-HNA-04-06-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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	1,432,910.850	3,224,654.820	40.518931	-104.691941
SHL REEMAN-5X-HNA-04-06-65 1897 FNL 1364 FWL									
100.00	0.00	0.00	100.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
200.00	0.00	0.00	200.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
300.00	0.00	0.00	300.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
400.00	0.00	0.00	400.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
500.00	0.00	0.00	500.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
600.00	0.00	0.00	600.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
700.00	0.00	0.00	700.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
800.00	0.00	0.00	800.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
900.00	0.00	0.00	900.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
Surf Csg									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
Start Build 2.00									
1,700.00	2.00	242.57	1,699.98	-0.80	-1.55	1,432,910.046	3,224,653.271	40.518929	-104.691947
1,800.00	4.00	242.57	1,799.84	-3.21	-6.19	1,432,907.635	3,224,648.626	40.518923	-104.691964
1,900.00	6.00	242.57	1,899.45	-7.23	-13.93	1,432,903.621	3,224,640.890	40.518912	-104.691992
2,000.00	8.00	242.57	1,998.70	-12.84	-24.75	1,432,898.008	3,224,630.074	40.518897	-104.692031
2,100.00	10.00	242.57	2,097.47	-20.05	-38.63	1,432,890.802	3,224,616.189	40.518877	-104.692081
2,200.00	12.00	242.57	2,195.62	-28.84	-55.57	1,432,882.014	3,224,599.254	40.518854	-104.692142
2,300.00	14.00	242.57	2,293.06	-39.20	-75.53	1,432,871.652	3,224,579.289	40.518826	-104.692214
2,400.00	16.00	242.57	2,389.64	-51.12	-98.50	1,432,859.731	3,224,556.317	40.518793	-104.692297
2,500.00	18.00	242.57	2,485.27	-64.59	-124.45	1,432,846.265	3,224,530.368	40.518757	-104.692391
2,587.84	19.76	242.57	2,568.38	-77.68	-149.68	1,432,833.174	3,224,505.143	40.518722	-104.692482
Hold 19.76 Inc, 242.57 Az									
2,600.00	19.76	242.57	2,579.82	-79.57	-153.33	1,432,831.280	3,224,501.493	40.518717	-104.692496
2,700.00	19.76	242.57	2,673.94	-95.14	-183.33	1,432,815.710	3,224,471.490	40.518675	-104.692604
2,800.00	19.76	242.57	2,768.05	-110.71	-213.33	1,432,800.139	3,224,441.487	40.518633	-104.692712
2,900.00	19.76	242.57	2,862.17	-126.28	-243.34	1,432,784.569	3,224,411.484	40.518591	-104.692821
3,000.00	19.76	242.57	2,956.28	-141.85	-273.34	1,432,768.999	3,224,381.481	40.518549	-104.692929
3,100.00	19.76	242.57	3,050.39	-157.42	-303.34	1,432,753.428	3,224,351.478	40.518507	-104.693038
3,200.00	19.76	242.57	3,144.51	-172.99	-333.35	1,432,737.858	3,224,321.475	40.518465	-104.693146
3,300.00	19.76	242.57	3,238.62	-188.56	-363.35	1,432,722.288	3,224,291.472	40.518423	-104.693254
3,400.00	19.76	242.57	3,332.73	-204.13	-393.35	1,432,706.717	3,224,261.468	40.518381	-104.693363
3,500.00	19.76	242.57	3,426.85	-219.70	-423.35	1,432,691.147	3,224,231.465	40.518339	-104.693471
3,600.00	19.76	242.57	3,520.96	-235.27	-453.36	1,432,675.577	3,224,201.462	40.518297	-104.693580
3,700.00	19.76	242.57	3,615.07	-250.84	-483.36	1,432,660.006	3,224,171.459	40.518255	-104.693688
3,800.00	19.76	242.57	3,709.19	-266.41	-513.36	1,432,644.436	3,224,141.456	40.518213	-104.693797
3,900.00	19.76	242.57	3,803.30	-281.98	-543.37	1,432,628.865	3,224,111.453	40.518171	-104.693905
4,000.00	19.76	242.57	3,897.42	-297.55	-573.37	1,432,613.295	3,224,081.450	40.518129	-104.694013
4,100.00	19.76	242.57	3,991.53	-313.13	-603.37	1,432,597.725	3,224,051.447	40.518087	-104.694122
4,200.00	19.76	242.57	4,085.64	-328.70	-633.38	1,432,582.154	3,224,021.443	40.518045	-104.694230
4,300.00	19.76	242.57	4,179.76	-344.27	-663.38	1,432,566.584	3,223,991.440	40.518003	-104.694339
4,400.00	19.76	242.57	4,273.87	-359.84	-693.38	1,432,551.014	3,223,961.437	40.517961	-104.694447
4,500.00	19.76	242.57	4,367.98	-375.41	-723.39	1,432,535.443	3,223,931.434	40.517919	-104.694556
4,600.00	19.76	242.57	4,462.10	-390.98	-753.39	1,432,519.873	3,223,901.431	40.517877	-104.694664
4,700.00	19.76	242.57	4,556.21	-406.55	-783.39	1,432,504.303	3,223,871.428	40.517835	-104.694772
4,800.00	19.76	242.57	4,650.32	-422.12	-813.40	1,432,488.732	3,223,841.425	40.517793	-104.694881

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-5X-HNA-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4844.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4844.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-5X-HNA-04-06-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,900.00	19.76	242.57	4,744.44	-437.69	-843.40	1,432,473.162	3,223,811.422	40.517751	-104.694989
5,000.00	19.76	242.57	4,838.55	-453.26	-873.40	1,432,457.592	3,223,781.418	40.517709	-104.695098
5,100.00	19.76	242.57	4,932.67	-468.83	-903.40	1,432,442.021	3,223,751.415	40.517667	-104.695206
5,200.00	19.76	242.57	5,026.78	-484.40	-933.41	1,432,426.451	3,223,721.412	40.517625	-104.695314
5,300.00	19.76	242.57	5,120.89	-499.97	-963.41	1,432,410.881	3,223,691.409	40.517583	-104.695423
5,400.00	19.76	242.57	5,215.01	-515.54	-993.41	1,432,395.310	3,223,661.406	40.517541	-104.695531
5,500.00	19.76	242.57	5,309.12	-531.11	-1,023.42	1,432,379.740	3,223,631.403	40.517499	-104.695640
5,600.00	19.76	242.57	5,403.23	-546.68	-1,053.42	1,432,364.169	3,223,601.400	40.517457	-104.695748
5,700.00	19.76	242.57	5,497.35	-562.25	-1,083.42	1,432,348.599	3,223,571.397	40.517415	-104.695857
5,800.00	19.76	242.57	5,591.46	-577.82	-1,113.43	1,432,333.029	3,223,541.393	40.517373	-104.695965
5,900.00	19.76	242.57	5,685.57	-593.39	-1,143.43	1,432,317.458	3,223,511.390	40.517331	-104.696073
6,000.00	19.76	242.57	5,779.69	-608.96	-1,173.43	1,432,301.888	3,223,481.387	40.517289	-104.696182
6,100.00	19.76	242.57	5,873.80	-624.53	-1,203.44	1,432,286.318	3,223,451.384	40.517247	-104.696290
6,200.00	19.76	242.57	5,967.92	-640.10	-1,233.44	1,432,270.747	3,223,421.381	40.517205	-104.696399
6,300.00	19.76	242.57	6,062.03	-655.67	-1,263.44	1,432,255.177	3,223,391.378	40.517163	-104.696507
6,400.00	19.76	242.57	6,156.14	-671.24	-1,293.45	1,432,239.607	3,223,361.375	40.517121	-104.696615
6,500.00	19.76	242.57	6,250.26	-686.81	-1,323.45	1,432,224.036	3,223,331.372	40.517079	-104.696724
6,514.35	19.76	242.57	6,263.76	-689.05	-1,327.75	1,432,221.802	3,223,327.065	40.517073	-104.696739
KOP 10°/100									
6,600.00	13.21	222.63	6,345.91	-702.94	-1,347.27	1,432,207.909	3,223,307.552	40.517035	-104.696810
6,700.00	10.30	173.92	6,444.03	-720.28	-1,354.08	1,432,190.566	3,223,300.744	40.516988	-104.696835
6,800.00	15.35	133.48	6,541.69	-738.33	-1,343.50	1,432,172.519	3,223,311.325	40.516938	-104.696798
6,900.00	23.73	116.72	6,635.92	-756.53	-1,315.85	1,432,154.316	3,223,338.972	40.516888	-104.696699
7,000.00	32.99	108.67	6,723.85	-774.34	-1,271.97	1,432,136.509	3,223,382.847	40.516838	-104.696542
7,100.00	42.56	103.88	6,802.82	-791.21	-1,213.20	1,432,119.640	3,223,441.615	40.516790	-104.696331
7,200.00	52.26	100.59	6,870.43	-806.63	-1,141.33	1,432,104.220	3,223,513.492	40.516746	-104.696073
7,300.00	62.03	98.07	6,924.62	-820.13	-1,058.53	1,432,090.720	3,223,596.293	40.516707	-104.695775
7,400.00	71.85	95.97	6,963.74	-831.30	-967.32	1,432,079.549	3,223,687.503	40.516674	-104.695448
7,477.25	79.44	94.51	6,982.88	-838.12	-892.84	1,432,072.731	3,223,761.977	40.516653	-104.695180
LPL REEMAN-5X-HNA-04-06-65 2561 FSL 460 FWL									
7,500.00	81.68	94.10	6,986.61	-839.80	-870.47	1,432,071.046	3,223,784.350	40.516648	-104.695100
7,590.92	90.63	92.48	6,992.70	-845.00	-780.00	1,432,065.850	3,223,874.820	40.516631	-104.694774
LP 90.63 Inc, 92.48 Az									
7,600.00	90.63	92.48	6,992.60	-845.39	-770.93	1,432,065.457	3,223,883.892	40.516630	-104.694742
7,700.00	90.63	92.48	6,991.50	-849.72	-671.03	1,432,061.127	3,223,983.792	40.516616	-104.694383
7,800.00	90.63	92.48	6,990.41	-854.05	-571.13	1,432,056.797	3,224,083.692	40.516601	-104.694024
7,900.00	90.63	92.48	6,989.31	-858.38	-471.23	1,432,052.467	3,224,183.593	40.516587	-104.693664
8,000.00	90.63	92.48	6,988.21	-862.71	-371.33	1,432,048.136	3,224,283.493	40.516573	-104.693305
8,100.00	90.63	92.48	6,987.12	-867.04	-271.43	1,432,043.806	3,224,383.393	40.516558	-104.692946
8,200.00	90.63	92.48	6,986.02	-871.37	-171.53	1,432,039.476	3,224,483.293	40.516544	-104.692587
8,300.00	90.63	92.48	6,984.92	-875.70	-71.63	1,432,035.146	3,224,583.193	40.516529	-104.692228
8,400.00	90.63	92.48	6,983.83	-880.03	28.27	1,432,030.816	3,224,683.094	40.516515	-104.691869
8,500.00	90.63	92.48	6,982.73	-884.36	128.17	1,432,026.486	3,224,782.994	40.516501	-104.691509
8,600.00	90.63	92.48	6,981.63	-888.69	228.07	1,432,022.156	3,224,882.894	40.516486	-104.691150
8,700.00	90.63	92.48	6,980.54	-893.02	327.97	1,432,017.826	3,224,982.794	40.516472	-104.690791
8,800.00	90.63	92.48	6,979.44	-897.35	427.87	1,432,013.496	3,225,082.694	40.516457	-104.690432
8,900.00	90.63	92.48	6,978.34	-901.68	527.77	1,432,009.166	3,225,182.594	40.516443	-104.690073
9,000.00	90.63	92.48	6,977.25	-906.01	627.67	1,432,004.836	3,225,282.495	40.516429	-104.689714
9,100.00	90.63	92.48	6,976.15	-910.34	727.58	1,432,000.506	3,225,382.395	40.516414	-104.689355
9,200.00	90.63	92.48	6,975.05	-914.67	827.48	1,431,996.176	3,225,482.295	40.516400	-104.688995
9,300.00	90.63	92.48	6,973.96	-919.00	927.38	1,431,991.845	3,225,582.195	40.516386	-104.688636
9,400.00	90.63	92.48	6,972.86	-923.33	1,027.28	1,431,987.515	3,225,682.095	40.516371	-104.688277
9,500.00	90.63	92.48	6,971.76	-927.66	1,127.18	1,431,983.185	3,225,781.996	40.516357	-104.687918
9,600.00	90.63	92.48	6,970.67	-931.99	1,227.08	1,431,978.855	3,225,881.896	40.516342	-104.687559

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-5X-HNA-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4844.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4844.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-5X-HNA-04-06-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,700.00	90.63	92.48	6,969.57	-936.32	1,326.98	1,431,974.525	3,225,981.796	40.516328	-104.687200
9,800.00	90.63	92.48	6,968.47	-940.65	1,426.88	1,431,970.195	3,226,081.696	40.516314	-104.686840
9,900.00	90.63	92.48	6,967.38	-944.99	1,526.78	1,431,965.865	3,226,181.596	40.516299	-104.686481
10,000.00	90.63	92.48	6,966.28	-949.32	1,626.68	1,431,961.535	3,226,281.496	40.516285	-104.686122
10,100.00	90.63	92.48	6,965.18	-953.65	1,726.58	1,431,957.205	3,226,381.397	40.516270	-104.685763
10,200.00	90.63	92.48	6,964.09	-957.98	1,826.48	1,431,952.875	3,226,481.297	40.516256	-104.685404
10,300.00	90.63	92.48	6,962.99	-962.31	1,926.38	1,431,948.545	3,226,581.197	40.516242	-104.685045
10,400.00	90.63	92.48	6,961.89	-966.64	2,026.28	1,431,944.215	3,226,681.097	40.516227	-104.684686
10,500.00	90.63	92.48	6,960.80	-970.97	2,126.18	1,431,939.884	3,226,780.997	40.516213	-104.684326
10,600.00	90.63	92.48	6,959.70	-975.30	2,226.08	1,431,935.554	3,226,880.898	40.516198	-104.683967
10,700.00	90.63	92.48	6,958.60	-979.63	2,325.98	1,431,931.224	3,226,980.798	40.516184	-104.683608
10,800.00	90.63	92.48	6,957.51	-983.96	2,425.88	1,431,926.894	3,227,080.698	40.516169	-104.683249
10,900.00	90.63	92.48	6,956.41	-988.29	2,525.78	1,431,922.564	3,227,180.598	40.516155	-104.682890
11,000.00	90.63	92.48	6,955.31	-992.62	2,625.68	1,431,918.234	3,227,280.498	40.516141	-104.682531
11,100.00	90.63	92.48	6,954.22	-996.95	2,725.58	1,431,913.904	3,227,380.398	40.516126	-104.682171
11,200.00	90.63	92.48	6,953.12	-1,001.28	2,825.48	1,431,909.574	3,227,480.299	40.516112	-104.681812
11,300.00	90.63	92.48	6,952.02	-1,005.61	2,925.38	1,431,905.244	3,227,580.199	40.516097	-104.681453
11,400.00	90.63	92.48	6,950.93	-1,009.94	3,025.28	1,431,900.914	3,227,680.099	40.516083	-104.681094
11,500.00	90.63	92.48	6,949.83	-1,014.27	3,125.18	1,431,896.584	3,227,779.999	40.516069	-104.680735
11,600.00	90.63	92.48	6,948.73	-1,018.60	3,225.08	1,431,892.254	3,227,879.899	40.516054	-104.680376
11,700.00	90.63	92.48	6,947.64	-1,022.93	3,324.98	1,431,887.924	3,227,979.800	40.516040	-104.680017
11,800.00	90.63	92.48	6,946.54	-1,027.26	3,424.88	1,431,883.593	3,228,079.700	40.516025	-104.679657
11,900.00	90.63	92.48	6,945.44	-1,031.59	3,524.78	1,431,879.263	3,228,179.600	40.516011	-104.679298
12,000.00	90.63	92.48	6,944.35	-1,035.92	3,624.68	1,431,874.933	3,228,279.500	40.515996	-104.678939
12,100.00	90.63	92.48	6,943.25	-1,040.25	3,724.58	1,431,870.603	3,228,379.400	40.515982	-104.678580
12,200.00	90.63	92.48	6,942.15	-1,044.58	3,824.48	1,431,866.273	3,228,479.300	40.515968	-104.678221
12,300.00	90.63	92.48	6,941.06	-1,048.91	3,924.38	1,431,861.943	3,228,579.201	40.515953	-104.677862
12,370.55	90.63	92.48	6,940.28	-1,051.96	3,994.86	1,431,858.888	3,228,649.682	40.515943	-104.677608
2/100 Turn - AP REEMAN-5X-HNA-04-06-65 2701 FSL 69 FWL									
12,400.00	90.63	91.89	6,940.00	-1,053.06	4,024.29	1,431,857.790	3,228,679.109	40.515939	-104.677502
12,490.87	90.63	90.08	6,939.01	-1,054.62	4,115.14	1,431,856.230	3,228,769.959	40.515933	-104.677176
Hold 90.63 Inc, 90.08 Az									
12,500.00	90.63	90.08	6,938.91	-1,054.63	4,124.27	1,431,856.218	3,228,779.085	40.515932	-104.677143
12,600.00	90.63	90.08	6,937.81	-1,054.76	4,224.26	1,431,856.086	3,228,879.079	40.515929	-104.676783
12,700.00	90.63	90.08	6,936.71	-1,054.90	4,324.25	1,431,855.955	3,228,979.073	40.515927	-104.676424
12,800.00	90.63	90.08	6,935.62	-1,055.03	4,424.25	1,431,855.823	3,229,079.067	40.515924	-104.676064
12,900.00	90.63	90.08	6,934.52	-1,055.16	4,524.24	1,431,855.692	3,229,179.061	40.515921	-104.675704
13,000.00	90.63	90.08	6,933.42	-1,055.29	4,624.24	1,431,855.561	3,229,279.055	40.515918	-104.675345
13,100.00	90.63	90.08	6,932.33	-1,055.42	4,724.23	1,431,855.429	3,229,379.049	40.515915	-104.674985
13,200.00	90.63	90.08	6,931.23	-1,055.55	4,824.22	1,431,855.298	3,229,479.043	40.515912	-104.674626
13,300.00	90.63	90.08	6,930.13	-1,055.68	4,924.22	1,431,855.166	3,229,579.036	40.515909	-104.674266
13,400.00	90.63	90.08	6,929.04	-1,055.81	5,024.21	1,431,855.035	3,229,679.030	40.515906	-104.673906
13,500.00	90.63	90.08	6,927.94	-1,055.95	5,124.20	1,431,854.904	3,229,779.024	40.515903	-104.673547
13,600.00	90.63	90.08	6,926.84	-1,056.08	5,224.20	1,431,854.772	3,229,879.018	40.515900	-104.673187
13,700.00	90.63	90.08	6,925.75	-1,056.21	5,324.19	1,431,854.641	3,229,979.012	40.515897	-104.672827
13,800.00	90.63	90.08	6,924.65	-1,056.34	5,424.19	1,431,854.509	3,230,079.006	40.515895	-104.672468
13,900.00	90.63	90.08	6,923.55	-1,056.47	5,524.18	1,431,854.378	3,230,179.000	40.515892	-104.672108
14,000.00	90.63	90.08	6,922.46	-1,056.60	5,624.17	1,431,854.247	3,230,278.994	40.515889	-104.671749
14,100.00	90.63	90.08	6,921.36	-1,056.73	5,724.17	1,431,854.115	3,230,378.988	40.515886	-104.671389
14,200.00	90.63	90.08	6,920.26	-1,056.87	5,824.16	1,431,853.984	3,230,478.981	40.515883	-104.671029
14,300.00	90.63	90.08	6,919.17	-1,057.00	5,924.16	1,431,853.852	3,230,578.975	40.515880	-104.670670
14,400.00	90.63	90.08	6,918.07	-1,057.13	6,024.15	1,431,853.721	3,230,678.969	40.515877	-104.670310
14,496.55	90.63	90.08	6,917.01	-1,057.26	6,120.69	1,431,853.594	3,230,775.513	40.515874	-104.669963
TD at 14497.55									

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-5X-HNA-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4844.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4844.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-5X-HNA-04-06-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,497.55	90.63	90.08	6,917.00	-1,057.26	6,121.69	1,431,853.593	3,230,776.509	40.515874	-104.669959
BHL REEMAN-5X-HNA-04-06-65 2672 FSL 2196 FWL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL REEMAN-5X-HNA- - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,432,910.850	3,224,654.820	40.518931	-104.691941
BHL REEMAN-5X-HNA- - plan hits target center - Point	0.00	0.00	6,917.00	-1,057.26	6,121.69	1,431,853.593	3,230,776.509	40.515874	-104.669959
AP REEMAN-5X-HNA-0 - plan misses target center by 0.05usft at 12370.55usft MD (6940.28 TVD, -1051.96 N, 3994.86 E) - Point	0.00	0.00	6,940.33	-1,051.94	3,994.86	1,431,858.914	3,228,649.683	40.515943	-104.677608
LPL REEMAN-5X-HNA-I - plan misses target center by 11.62usft at 7477.25usft MD (6982.88 TVD, -838.12 N, -892.84 E) - Point	0.00	0.00	6,994.00	-839.96	-895.66	1,432,070.889	3,223,759.164	40.516648	-104.695190

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
2,587.84	2,568.38	-77.68	-149.68	Hold 19.76 Inc, 242.57 Az
6,514.35	6,263.76	-689.05	-1,327.75	KOP 10°/100
7,590.92	6,992.70	-845.00	-780.00	LP 90.63 Inc, 92.48 Az
12,370.55	6,940.33	-1,051.94	3,994.86	2/100 Turn
12,490.87	6,939.01	-1,054.62	4,115.14	Hold 90.63 Inc, 90.08 Az
14,496.55	6,917.01	-1,057.26	6,120.69	TD at 14497.55