

Well Name:  
**REEMAN-4X-HNB-04-06-65**

Project Name:  
**Sec. 5-T6N-R65W**

Pad Name:  
**REEMAN PAD**

ANNOTATIONS

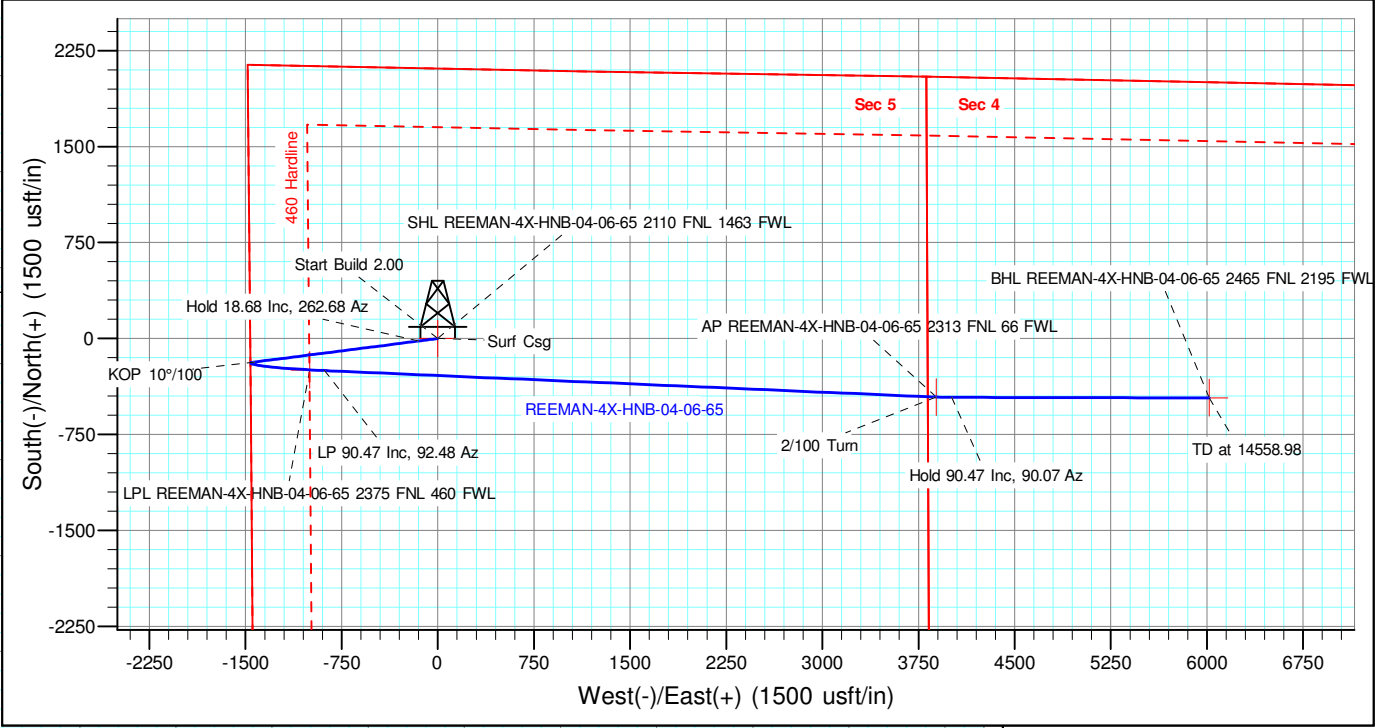
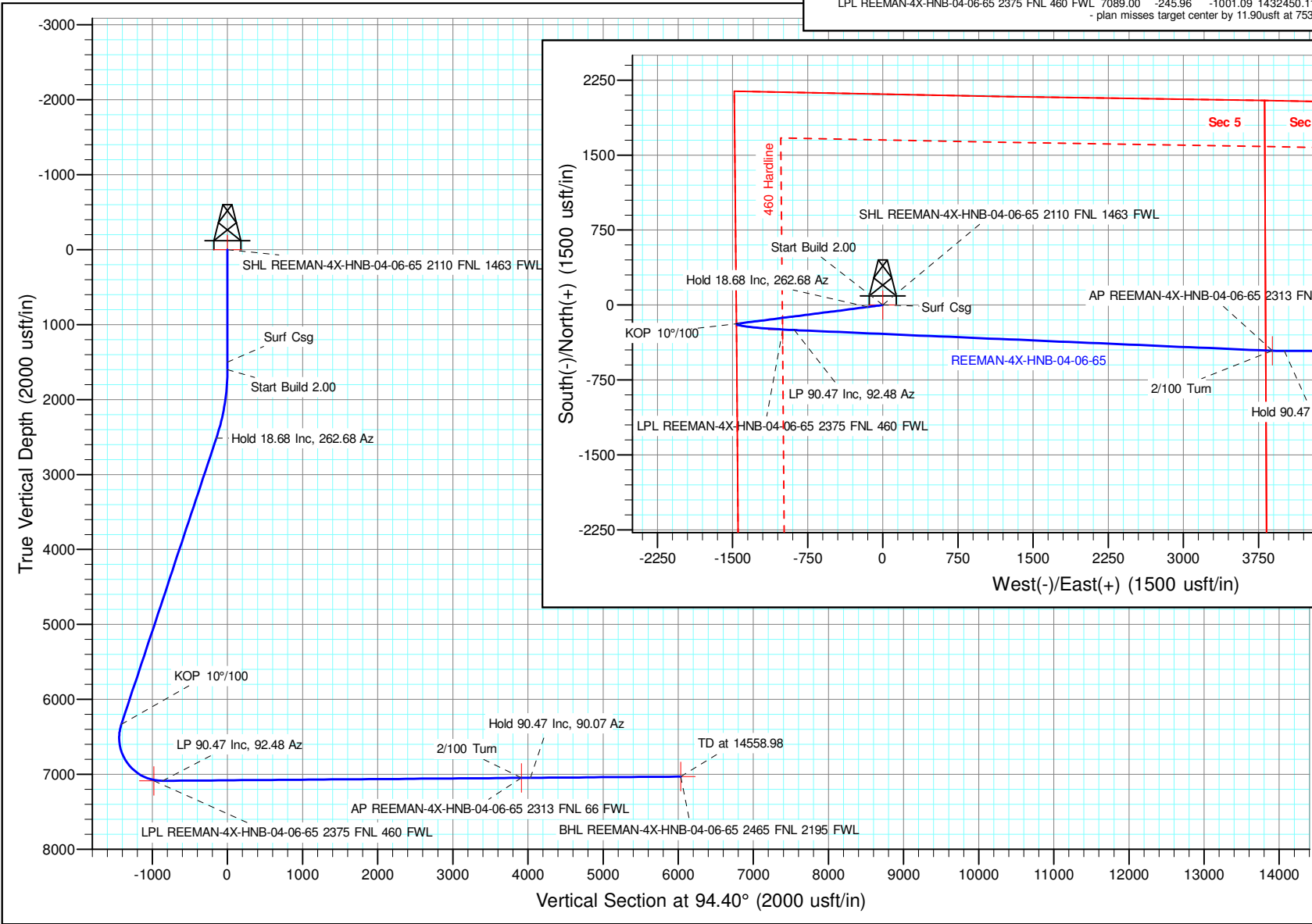
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	Surf Csg
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	Start Build 2.00
2534.00	18.68	262.68	2517.54	-19.22	-149.68	-147.77	150.91	Hold 18.68 Inc, 262.68 Az
6564.26	18.68	262.68	6335.50	-183.61	-1429.99	-1411.68	1441.73	KOP 10°/100
7652.96	90.47	92.48	7088.00	-251.00	-884.00	-862.13	2055.70	LP 90.47 Inc, 92.48 Az
12430.97	90.47	92.48	7048.58	-457.94	-3889.36	-3913.03	6833.54	2/100 Turn
12551.31	90.47	90.07	7047.58	-460.62	-4009.66	-4033.18	6953.88	Hold 90.47 Inc, 90.07 Az
14558.98	90.47	90.07	7031.00	-463.25	-6017.26	-6035.07	8961.48	TD at 14558.98

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

Elevation:  
Ground Elevation: 4816.00  
KB Elevation: WELL @ 4843.00usft (Original Well Elev)

DESIGN TARGET DETAILS

Name	SHL	FNL	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL REEMAN-4X-HNB-04-06-65	2110	1463	FWL	0.00	0.00	1432696.080	3224756.810	40.518339	-104.691581	Point
BHL REEMAN-4X-HNB-04-06-65	2465	2195	FWL	-463.25	6017.26	1432232.830	3230774.071	40.516915	-104.669955	Point
AP REEMAN-4X-HNB-04-06-65	2313	66	FWL	7048.58	-457.94	3889.36	1432238.141	40.516984	-104.677608	Point
LPL REEMAN-4X-HNB-04-06-65	2375	460	FWL	7089.00	-245.96	-1001.09	1432450.117	40.517689	-104.695190	Point
- plan misses target center by 11.90usft at 7537.62usft MD (7077.40 TVD, -245.37 N, -998.52 E)										



T G M

True North: -0.52°  
Magnetic North: 7.37°

Magnetic Field  
Strength: 52091.6nT  
Dip Angle: 66.78°  
Date: 10/21/2020  
Model: IGRF2020



## **Nickel Road Operating**

**Sec. 5-T6N-R65W**

**REEMAN PAD**

**REEMAN-4X-HNB-04-06-65**

**Wellbore #1**

**Plan: Design #1**

## **Standard Planning Report - Geographic**

**27 October, 2020**

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well REEMAN-4X-HNB-04-06-65
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Project:</b>	Sec. 5-T6N-R65W	<b>MD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Site:</b>	REEMAN PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	REEMAN-4X-HNB-04-06-65	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	Sec. 5-T6N-R65W, 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	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-4X-HNB-04-06-65					
Well Position	+N/-S	0.00 usft	Northing:	1,432,696.080 usft	Latitude:	40.518339
	+E/-W	0.00 usft	Easting:	3,224,756.810 usft	Longitude:	-104.691582
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,816.00 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>
	IGRF2020	10/21/2020	7.89	66.78	52,091.56908019

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	94.40

<b>Plan Survey Tool Program</b>	<b>Date</b>	10/26/2020			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	14,558.98 Design #1 (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	
2,534.00	18.68	262.68	2,517.54	-19.22	-149.68	2.00	2.00	0.00	262.68	
6,564.26	18.68	262.68	6,335.50	-183.61	-1,429.99	0.00	0.00	0.00	0.00	
7,652.96	90.47	92.48	7,088.00	-251.00	-884.00	10.00	6.59	-15.63	-169.64	
12,430.97	90.47	92.48	7,048.58	-457.94	3,889.36	0.00	0.00	0.00	0.00	
12,551.31	90.47	90.07	7,047.58	-460.62	4,009.66	2.00	0.00	-2.00	-89.99	
14,558.98	90.47	90.07	7,031.00	-463.25	6,017.26	0.00	0.00	0.00	0.00	BHL REEMAN-4X-HN

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well REEMAN-4X-HNB-04-06-65
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Project:</b>	Sec. 5-T6N-R65W	<b>MD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Site:</b>	REEMAN PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	REEMAN-4X-HNB-04-06-65	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	1,432,696.080	3,224,756.810	40.518339	-104.691582
<b>SHL REEMAN-4X-HNB-04-06-65 2110 FNL 1463 FWL</b>									
100.00	0.00	0.00	100.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
200.00	0.00	0.00	200.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
300.00	0.00	0.00	300.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
400.00	0.00	0.00	400.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
500.00	0.00	0.00	500.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
600.00	0.00	0.00	600.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
700.00	0.00	0.00	700.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
800.00	0.00	0.00	800.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
900.00	0.00	0.00	900.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
<b>Surf Csg</b>									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
<b>Start Build 2.00</b>									
1,700.00	2.00	262.68	1,699.98	-0.22	-1.73	1,432,695.858	3,224,755.079	40.518339	-104.691588
1,800.00	4.00	262.68	1,799.84	-0.89	-6.92	1,432,695.191	3,224,749.888	40.518337	-104.691607
1,900.00	6.00	262.68	1,899.45	-2.00	-15.57	1,432,694.081	3,224,741.244	40.518334	-104.691638
2,000.00	8.00	262.68	1,998.70	-3.55	-27.65	1,432,692.529	3,224,729.157	40.518330	-104.691681
2,100.00	10.00	262.68	2,097.47	-5.54	-43.17	1,432,690.537	3,224,713.642	40.518325	-104.691737
2,200.00	12.00	262.68	2,195.62	-7.97	-62.09	1,432,688.107	3,224,694.717	40.518319	-104.691805
2,300.00	14.00	262.68	2,293.06	-10.84	-84.40	1,432,685.242	3,224,672.406	40.518312	-104.691886
2,400.00	16.00	262.68	2,389.64	-14.13	-110.07	1,432,681.946	3,224,646.736	40.518303	-104.691978
2,500.00	18.00	262.68	2,485.27	-17.86	-139.07	1,432,678.223	3,224,617.739	40.518294	-104.692082
2,534.00	18.68	262.68	2,517.54	-19.22	-149.68	1,432,676.861	3,224,607.128	40.518290	-104.692121
<b>Hold 18.68 Inc, 262.68 Az</b>									
2,600.00	18.68	262.68	2,580.06	-21.91	-170.65	1,432,674.168	3,224,586.161	40.518283	-104.692196
2,700.00	18.68	262.68	2,674.80	-25.99	-202.42	1,432,670.089	3,224,554.394	40.518273	-104.692311
2,800.00	18.68	262.68	2,769.53	-30.07	-234.18	1,432,666.010	3,224,522.626	40.518263	-104.692425
2,900.00	18.68	262.68	2,864.26	-34.15	-265.95	1,432,661.931	3,224,490.859	40.518252	-104.692539
3,000.00	18.68	262.68	2,958.99	-38.23	-297.72	1,432,657.852	3,224,459.092	40.518242	-104.692654
3,100.00	18.68	262.68	3,053.73	-42.31	-329.49	1,432,653.773	3,224,427.324	40.518231	-104.692768
3,200.00	18.68	262.68	3,148.46	-46.39	-361.25	1,432,649.694	3,224,395.557	40.518221	-104.692882
3,300.00	18.68	262.68	3,243.19	-50.46	-393.02	1,432,645.615	3,224,363.789	40.518211	-104.692997
3,400.00	18.68	262.68	3,337.92	-54.54	-424.79	1,432,641.536	3,224,332.022	40.518200	-104.693111
3,500.00	18.68	262.68	3,432.65	-58.62	-456.56	1,432,637.457	3,224,300.255	40.518190	-104.693226
3,600.00	18.68	262.68	3,527.39	-62.70	-488.32	1,432,633.378	3,224,268.487	40.518179	-104.693340
3,700.00	18.68	262.68	3,622.12	-66.78	-520.09	1,432,629.299	3,224,236.720	40.518169	-104.693454
3,800.00	18.68	262.68	3,716.85	-70.86	-551.86	1,432,625.220	3,224,204.952	40.518159	-104.693569
3,900.00	18.68	262.68	3,811.58	-74.94	-583.63	1,432,621.141	3,224,173.185	40.518148	-104.693683
4,000.00	18.68	262.68	3,906.32	-79.02	-615.39	1,432,617.062	3,224,141.417	40.518138	-104.693798
4,100.00	18.68	262.68	4,001.05	-83.10	-647.16	1,432,612.983	3,224,109.650	40.518127	-104.693912
4,200.00	18.68	262.68	4,095.78	-87.18	-678.93	1,432,608.904	3,224,077.883	40.518117	-104.694026
4,300.00	18.68	262.68	4,190.51	-91.25	-710.69	1,432,604.825	3,224,046.115	40.518106	-104.694141
4,400.00	18.68	262.68	4,285.24	-95.33	-742.46	1,432,600.746	3,224,014.348	40.518096	-104.694255
4,500.00	18.68	262.68	4,379.98	-99.41	-774.23	1,432,596.667	3,223,982.580	40.518086	-104.694370
4,600.00	18.68	262.68	4,474.71	-103.49	-806.00	1,432,592.588	3,223,950.813	40.518075	-104.694484
4,700.00	18.68	262.68	4,569.44	-107.57	-837.76	1,432,588.509	3,223,919.046	40.518065	-104.694598
4,800.00	18.68	262.68	4,664.17	-111.65	-869.53	1,432,584.430	3,223,887.278	40.518054	-104.694713

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well REEMAN-4X-HNB-04-06-65
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Project:</b>	Sec. 5-T6N-R65W	<b>MD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Site:</b>	REEMAN PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	REEMAN-4X-HNB-04-06-65	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	18.68	262.68	4,758.91	-115.73	-901.30	1,432,580.351	3,223,855.511	40.518044	-104.694827
5,000.00	18.68	262.68	4,853.64	-119.81	-933.07	1,432,576.272	3,223,823.743	40.518034	-104.694941
5,100.00	18.68	262.68	4,948.37	-123.89	-964.83	1,432,572.193	3,223,791.976	40.518023	-104.695056
5,200.00	18.68	262.68	5,043.10	-127.97	-996.60	1,432,568.114	3,223,760.208	40.518013	-104.695170
5,300.00	18.68	262.68	5,137.83	-132.04	-1,028.37	1,432,564.035	3,223,728.441	40.518002	-104.695285
5,400.00	18.68	262.68	5,232.57	-136.12	-1,060.14	1,432,559.956	3,223,696.674	40.517992	-104.695399
5,500.00	18.68	262.68	5,327.30	-140.20	-1,091.90	1,432,555.877	3,223,664.906	40.517982	-104.695513
5,600.00	18.68	262.68	5,422.03	-144.28	-1,123.67	1,432,551.798	3,223,633.139	40.517971	-104.695628
5,700.00	18.68	262.68	5,516.76	-148.36	-1,155.44	1,432,547.719	3,223,601.371	40.517961	-104.695742
5,800.00	18.68	262.68	5,611.50	-152.44	-1,187.21	1,432,543.640	3,223,569.604	40.517950	-104.695857
5,900.00	18.68	262.68	5,706.23	-156.52	-1,218.97	1,432,539.561	3,223,537.837	40.517940	-104.695971
6,000.00	18.68	262.68	5,800.96	-160.60	-1,250.74	1,432,535.482	3,223,506.069	40.517930	-104.696085
6,100.00	18.68	262.68	5,895.69	-164.68	-1,282.51	1,432,531.404	3,223,474.302	40.517919	-104.696200
6,200.00	18.68	262.68	5,990.42	-168.76	-1,314.28	1,432,527.325	3,223,442.534	40.517909	-104.696314
6,300.00	18.68	262.68	6,085.16	-172.83	-1,346.04	1,432,523.246	3,223,410.767	40.517898	-104.696429
6,400.00	18.68	262.68	6,179.89	-176.91	-1,377.81	1,432,519.167	3,223,378.999	40.517888	-104.696543
6,500.00	18.68	262.68	6,274.62	-180.99	-1,409.58	1,432,515.088	3,223,347.232	40.517878	-104.696657
6,564.26	18.68	262.68	6,335.50	-183.61	-1,429.99	1,432,512.466	3,223,326.818	40.517871	-104.696731
<b>KOP 10°/100</b>									
6,600.00	15.18	260.23	6,369.68	-185.14	-1,440.28	1,432,510.943	3,223,316.527	40.517867	-104.696768
6,700.00	5.84	238.18	6,467.93	-190.05	-1,457.55	1,432,506.026	3,223,299.258	40.517854	-104.696830
6,800.00	6.14	124.95	6,567.64	-195.82	-1,457.49	1,432,500.265	3,223,299.316	40.517838	-104.696830
6,900.00	15.52	104.50	6,665.77	-202.24	-1,440.11	1,432,493.835	3,223,316.699	40.517820	-104.696768
7,000.00	25.38	99.50	6,759.36	-209.15	-1,405.93	1,432,486.932	3,223,350.879	40.517800	-104.696645
7,100.00	35.31	97.18	6,845.56	-216.31	-1,355.99	1,432,479.766	3,223,400.818	40.517779	-104.696466
7,200.00	45.27	95.79	6,921.74	-223.53	-1,291.81	1,432,472.554	3,223,464.998	40.517758	-104.696235
7,300.00	55.24	94.80	6,985.59	-230.57	-1,215.34	1,432,465.515	3,223,541.469	40.517737	-104.695960
7,400.00	65.22	94.04	7,035.17	-237.22	-1,128.90	1,432,458.863	3,223,627.908	40.517716	-104.695650
7,500.00	75.20	93.38	7,068.99	-243.28	-1,035.12	1,432,452.801	3,223,721.688	40.517697	-104.695313
7,537.09	78.91	93.16	7,077.29	-245.34	-999.04	1,432,450.740	3,223,757.766	40.517691	-104.695183
<b>LPL REEMAN-4X-HNB-04-06-65 2375 FNL 460 FWL</b>									
7,600.00	85.19	92.79	7,086.00	-248.57	-936.85	1,432,447.512	3,223,819.960	40.517680	-104.694959
7,652.96	90.47	92.48	7,088.00	-251.00	-884.00	1,432,445.080	3,223,872.810	40.517672	-104.694769
<b>LP 90.47 Inc, 92.48 Az</b>									
7,700.00	90.47	92.48	7,087.61	-253.04	-837.01	1,432,443.043	3,223,919.802	40.517666	-104.694600
7,800.00	90.47	92.48	7,086.79	-257.37	-737.11	1,432,438.713	3,224,019.705	40.517651	-104.694241
7,900.00	90.47	92.48	7,085.96	-261.70	-637.20	1,432,434.383	3,224,119.607	40.517637	-104.693882
8,000.00	90.47	92.48	7,085.13	-266.03	-537.30	1,432,430.052	3,224,219.510	40.517622	-104.693523
8,100.00	90.47	92.48	7,084.31	-270.36	-437.40	1,432,425.722	3,224,319.413	40.517608	-104.693164
8,200.00	90.47	92.48	7,083.48	-274.69	-337.49	1,432,421.392	3,224,419.316	40.517594	-104.692805
8,300.00	90.47	92.48	7,082.66	-279.02	-237.59	1,432,417.061	3,224,519.218	40.517579	-104.692445
8,400.00	90.47	92.48	7,081.83	-283.35	-137.69	1,432,412.731	3,224,619.121	40.517565	-104.692086
8,500.00	90.47	92.48	7,081.00	-287.68	-37.79	1,432,408.401	3,224,719.024	40.517551	-104.691727
8,600.00	90.47	92.48	7,080.18	-292.01	62.12	1,432,404.071	3,224,818.927	40.517536	-104.691368
8,700.00	90.47	92.48	7,079.35	-296.34	162.02	1,432,399.740	3,224,918.830	40.517522	-104.691009
8,800.00	90.47	92.48	7,078.53	-300.67	261.92	1,432,395.410	3,225,018.732	40.517507	-104.690649
8,900.00	90.47	92.48	7,077.70	-305.00	361.83	1,432,391.080	3,225,118.635	40.517493	-104.690290
9,000.00	90.47	92.48	7,076.87	-309.33	461.73	1,432,386.750	3,225,218.538	40.517479	-104.689931
9,100.00	90.47	92.48	7,076.05	-313.66	561.63	1,432,382.419	3,225,318.441	40.517464	-104.689572
9,200.00	90.47	92.48	7,075.22	-317.99	661.53	1,432,378.089	3,225,418.343	40.517450	-104.689213
9,300.00	90.47	92.48	7,074.40	-322.32	761.44	1,432,373.759	3,225,518.246	40.517435	-104.688854
9,400.00	90.47	92.48	7,073.57	-326.65	861.34	1,432,369.428	3,225,618.149	40.517421	-104.688494
9,500.00	90.47	92.48	7,072.74	-330.98	961.24	1,432,365.098	3,225,718.052	40.517407	-104.688135
9,600.00	90.47	92.48	7,071.92	-335.31	1,061.14	1,432,360.768	3,225,817.955	40.517392	-104.687776

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well REEMAN-4X-HNB-04-06-65
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Project:</b>	Sec. 5-T6N-R65W	<b>MD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Site:</b>	REEMAN PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	REEMAN-4X-HNB-04-06-65	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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	90.47	92.48	7,071.09	-339.64	1,161.05	1,432,356.438	3,225,917.857	40.517378	-104.687417
9,800.00	90.47	92.48	7,070.27	-343.97	1,260.95	1,432,352.107	3,226,017.760	40.517363	-104.687058
9,900.00	90.47	92.48	7,069.44	-348.30	1,360.85	1,432,347.777	3,226,117.663	40.517349	-104.686699
10,000.00	90.47	92.48	7,068.61	-352.63	1,460.76	1,432,343.447	3,226,217.566	40.517335	-104.686339
10,100.00	90.47	92.48	7,067.79	-356.96	1,560.66	1,432,339.117	3,226,317.469	40.517320	-104.685980
10,200.00	90.47	92.48	7,066.96	-361.29	1,660.56	1,432,334.786	3,226,417.371	40.517306	-104.685621
10,300.00	90.47	92.48	7,066.14	-365.62	1,760.46	1,432,330.456	3,226,517.274	40.517291	-104.685262
10,400.00	90.47	92.48	7,065.31	-369.95	1,860.37	1,432,326.126	3,226,617.177	40.517277	-104.684903
10,500.00	90.47	92.48	7,064.48	-374.28	1,960.27	1,432,321.795	3,226,717.080	40.517263	-104.684544
10,600.00	90.47	92.48	7,063.66	-378.61	2,060.17	1,432,317.465	3,226,816.982	40.517248	-104.684184
10,700.00	90.47	92.48	7,062.83	-382.95	2,160.08	1,432,313.135	3,226,916.885	40.517234	-104.683825
10,800.00	90.47	92.48	7,062.01	-387.28	2,259.98	1,432,308.805	3,227,016.788	40.517219	-104.683466
10,900.00	90.47	92.48	7,061.18	-391.61	2,359.88	1,432,304.474	3,227,116.691	40.517205	-104.683107
11,000.00	90.47	92.48	7,060.35	-395.94	2,459.78	1,432,300.144	3,227,216.594	40.517191	-104.682748
11,100.00	90.47	92.48	7,059.53	-400.27	2,559.69	1,432,295.814	3,227,316.496	40.517176	-104.682389
11,200.00	90.47	92.48	7,058.70	-404.60	2,659.59	1,432,291.484	3,227,416.399	40.517162	-104.682029
11,300.00	90.47	92.48	7,057.88	-408.93	2,759.49	1,432,287.153	3,227,516.302	40.517147	-104.681670
11,400.00	90.47	92.48	7,057.05	-413.26	2,859.40	1,432,282.823	3,227,616.205	40.517133	-104.681311
11,500.00	90.47	92.48	7,056.22	-417.59	2,959.30	1,432,278.493	3,227,716.107	40.517118	-104.680952
11,600.00	90.47	92.48	7,055.40	-421.92	3,059.20	1,432,274.162	3,227,816.010	40.517104	-104.680593
11,700.00	90.47	92.48	7,054.57	-426.25	3,159.10	1,432,269.832	3,227,915.913	40.517090	-104.680234
11,800.00	90.47	92.48	7,053.75	-430.58	3,259.01	1,432,265.502	3,228,015.816	40.517075	-104.679874
11,900.00	90.47	92.48	7,052.92	-434.91	3,358.91	1,432,261.172	3,228,115.719	40.517061	-104.679515
12,000.00	90.47	92.48	7,052.09	-439.24	3,458.81	1,432,256.841	3,228,215.621	40.517046	-104.679156
12,100.00	90.47	92.48	7,051.27	-443.57	3,558.71	1,432,252.511	3,228,315.524	40.517032	-104.678797
12,200.00	90.47	92.48	7,050.44	-447.90	3,658.62	1,432,248.181	3,228,415.427	40.517018	-104.678438
12,300.00	90.47	92.48	7,049.62	-452.23	3,758.52	1,432,243.851	3,228,515.330	40.517003	-104.678079
12,400.00	90.47	92.48	7,048.79	-456.56	3,858.42	1,432,239.520	3,228,615.232	40.516989	-104.677719
12,430.97	90.47	92.48	7,048.53	-457.90	3,889.36	1,432,238.179	3,228,646.168	40.516984	-104.677608
<b>2/100 Turn - AP REEMAN-4X-HNB-04-06-65 2313 FNL 66 FWL</b>									
12,500.00	90.47	91.10	7,048.01	-460.10	3,958.35	1,432,235.983	3,228,715.163	40.516976	-104.677360
12,551.31	90.47	90.07	7,047.58	-460.62	4,009.66	1,432,235.457	3,228,766.468	40.516974	-104.677176
<b>Hold 90.47 Inc, 90.07 Az</b>									
12,600.00	90.47	90.07	7,047.18	-460.69	4,058.35	1,432,235.393	3,228,815.156	40.516972	-104.677001
12,700.00	90.47	90.07	7,046.36	-460.82	4,158.34	1,432,235.262	3,228,915.153	40.516969	-104.676641
12,800.00	90.47	90.07	7,045.53	-460.95	4,258.34	1,432,235.131	3,229,015.149	40.516966	-104.676281
12,900.00	90.47	90.07	7,044.70	-461.08	4,358.34	1,432,235.000	3,229,115.146	40.516964	-104.675922
13,000.00	90.47	90.07	7,043.88	-461.21	4,458.33	1,432,234.870	3,229,215.142	40.516961	-104.675562
13,100.00	90.47	90.07	7,043.05	-461.34	4,558.33	1,432,234.739	3,229,315.139	40.516958	-104.675202
13,200.00	90.47	90.07	7,042.23	-461.47	4,658.33	1,432,234.608	3,229,415.135	40.516955	-104.674843
13,300.00	90.47	90.07	7,041.40	-461.60	4,758.32	1,432,234.477	3,229,515.132	40.516952	-104.674483
13,400.00	90.47	90.07	7,040.57	-461.73	4,858.32	1,432,234.346	3,229,615.128	40.516949	-104.674123
13,500.00	90.47	90.07	7,039.75	-461.86	4,958.32	1,432,234.215	3,229,715.125	40.516946	-104.673764
13,600.00	90.47	90.07	7,038.92	-462.00	5,058.31	1,432,234.085	3,229,815.121	40.516943	-104.673404
13,700.00	90.47	90.07	7,038.10	-462.13	5,158.31	1,432,233.954	3,229,915.118	40.516940	-104.673045
13,800.00	90.47	90.07	7,037.27	-462.26	5,258.30	1,432,233.823	3,230,015.114	40.516937	-104.672685
13,900.00	90.47	90.07	7,036.44	-462.39	5,358.30	1,432,233.692	3,230,115.111	40.516934	-104.672325
14,000.00	90.47	90.07	7,035.62	-462.52	5,458.30	1,432,233.561	3,230,215.107	40.516931	-104.671966
14,100.00	90.47	90.07	7,034.79	-462.65	5,558.29	1,432,233.431	3,230,315.104	40.516929	-104.671606
14,200.00	90.47	90.07	7,033.97	-462.78	5,658.29	1,432,233.300	3,230,415.100	40.516926	-104.671246
14,300.00	90.47	90.07	7,033.14	-462.91	5,758.29	1,432,233.169	3,230,515.097	40.516923	-104.670887
14,400.00	90.47	90.07	7,032.31	-463.04	5,858.28	1,432,233.038	3,230,615.093	40.516920	-104.670527
14,500.00	90.47	90.07	7,031.49	-463.17	5,958.28	1,432,232.907	3,230,715.090	40.516917	-104.670167

<b>Database:</b>	EDM 5000.15 Single User Db	<b>Local Co-ordinate Reference:</b>	Well REEMAN-4X-HNB-04-06-65
<b>Company:</b>	Nickel Road Operating	<b>TVD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Project:</b>	Sec. 5-T6N-R65W	<b>MD Reference:</b>	WELL @ 4843.00usft (Original Well Elev)
<b>Site:</b>	REEMAN PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	REEMAN-4X-HNB-04-06-65	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
14,558.98	90.47	90.07	7,031.00	-463.25	6,017.26	1,432,232.830	3,230,774.071	40.516915	-104.669955
TD at 14558.98 - BHL REEMAN-4X-HNB-04-06-65 2465 FNL 2195 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-4X-HNB- - plan hits target center - Point	0.00	0.01	0.00	0.00	0.00	1,432,696.080	3,224,756.810	40.518339	-104.691582
BHL REEMAN-4X-HNB- - plan hits target center - Point	0.00	0.00	7,031.00	-463.25	6,017.26	1,432,232.830	3,230,774.071	40.516915	-104.669955
AP REEMAN-4X-HNB-0 - plan misses target center by 0.06usft at 12430.97usft MD (7048.53 TVD, -457.90 N, 3889.36 E) - Point	0.00	0.00	7,048.58	-457.94	3,889.36	1,432,238.141	3,228,646.166	40.516984	-104.677608
LPL REEMAN-4X-HNB-0 - plan misses target center by 11.90usft at 7537.09usft MD (7077.29 TVD, -245.34 N, -999.04 E) - Point	0.00	0.00	7,089.00	-245.96	-1,001.09	1,432,450.117	3,223,755.722	40.517689	-104.695190

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
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	
2,534.00	2,517.54	-19.22	-149.68	Hold 18.68 Inc, 262.68 Az	
6,564.26	6,335.50	-183.61	-1,429.99	KOP 10°/100	
7,652.96	7,088.00	-251.00	-884.00	LP 90.47 Inc, 92.48 Az	
12,430.97	7,048.58	-457.94	3,889.36	2/100 Turn	
12,551.31	7,047.58	-460.62	4,009.66	Hold 90.47 Inc, 90.07 Az	
14,558.98	7,031.00	-463.25	6,017.26	TD at 14558.98	