

Well Name:
REEMAN-6X-HNB-04-06-65

Project Name:
Sec. 5-T6N-R65W

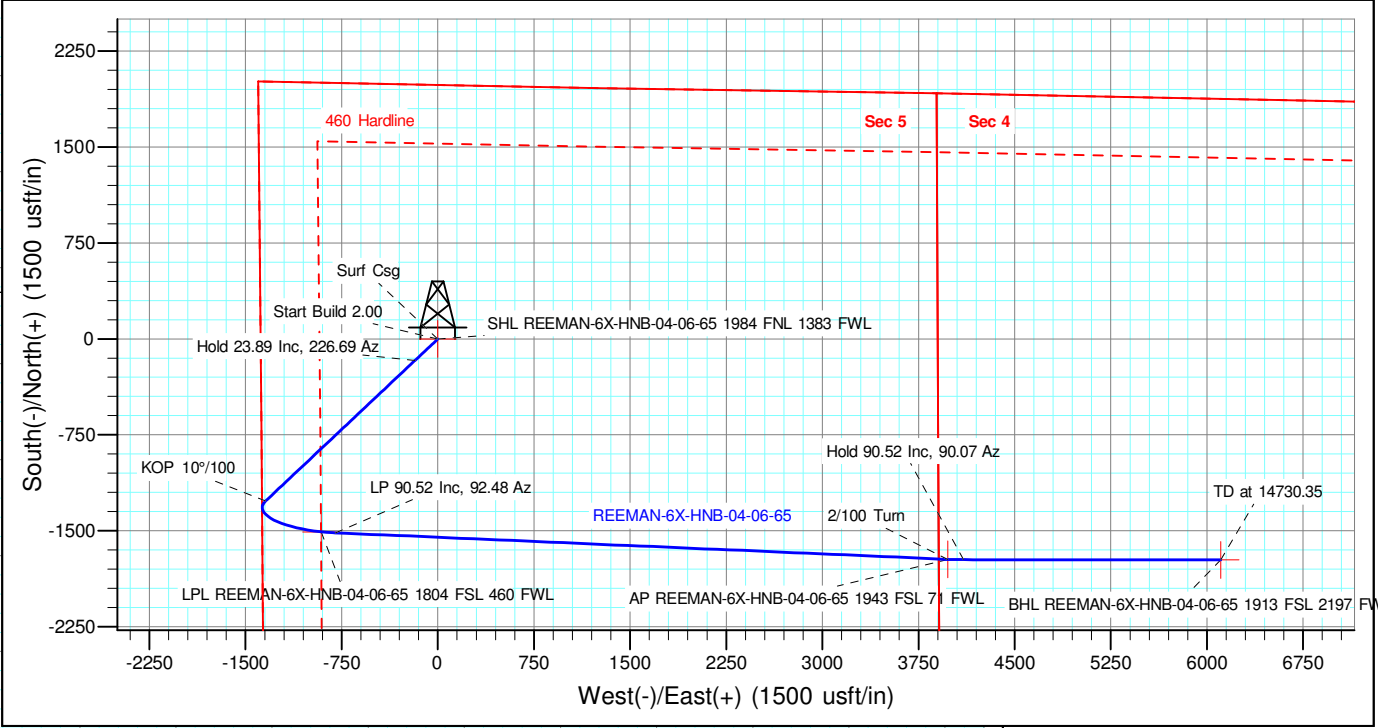
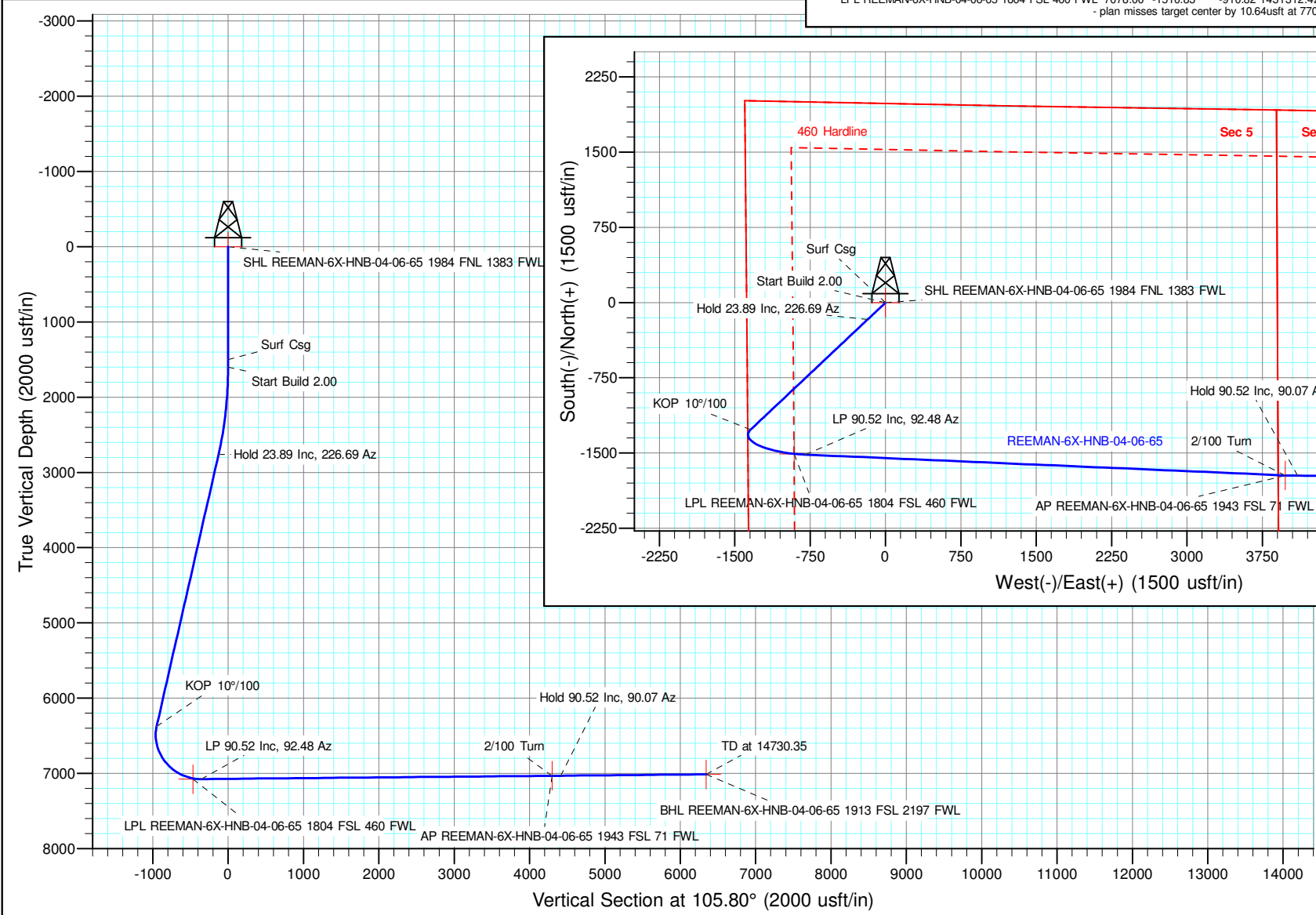
Pad Name:
REEMAN PAD

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	
2794.51	23.89	226.69	2760.20	-168.37	-178.59	-126.01	245.45	Hold 23.89 Inc, 226.69 Az	
6750.64	23.89	226.69	6377.37	-1267.42	-1344.38	-948.56	1847.62	KOP 10°/100	
7819.63	90.52	92.48	7077.00	-1515.60	-800.00	-357.18	2538.39	LP 90.52 Inc, 92.48 Az	
12603.89	90.52	92.48	7033.39	-1722.81	3979.57	4298.27	7322.45	2/100 Turn	
12724.73	90.52	90.07	7032.28	-1725.49	4100.37	4415.24	7443.29	Hold 90.52 Inc, 90.07 Az	
14730.35	90.52	90.07	7014.00	-1727.77	6105.90	6345.64	9448.82	TD at 14730.35	

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 REEMAN-6X-HNB-04-06-65	1984 FNL 1383 FWL	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
BHL REEMAN-6X-HNB-04-06-65	1913 FSL 2197 FWL	7014.00	-1727.77	6105.90	1431095.483	3230781.381	40.513793	-104.669967	Point		
AP REEMAN-6X-HNB-04-06-65	1943 FSL 71 FWL	7033.39	-1722.81	3979.57	1431100.445	3228655.050	40.513861	-104.677614	Point		
LPL REEMAN-6X-HNB-04-06-65	1804 FSL 460 FWL	7078.00	-1510.83	-910.82	1431312.421	3223764.658	40.514566	-104.695195	Point		
- plan misses target center by 10.64usft at 7709.78usft MD (7067.99 TVD, -1507.69 N, -909.03 E)											



Azimuths to Grid North
True North: -0.52°
Magnetic North: 7.37°

Magnetic Field
Strength: 52091.7nT
Dip Angle: 66.78°
Date: 10/21/2020
Model: IGRF2020



Nickel Road Operating

Sec. 5-T6N-R65W

REEMAN PAD

REEMAN-6X-HNB-04-06-65

Wellbore #1

Plan: Design #1

Standard Planning Report - Geographic

28 October, 2020

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-6X-HNB-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4843.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4843.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-6X-HNB-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-6X-HNB-04-06-65					
Well Position	+N/-S	0.00 usft	Northing:	1,432,823.250 usft	Latitude:	40.518690
	+E/-W	0.00 usft	Easting:	3,224,675.480 usft	Longitude:	-104.691870
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,816.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	10/21/2020	7.89	66.78	52,091.72180692

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	105.80

Plan Survey Tool Program	Date	10/26/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	14,730.35 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	
2,794.51	23.89	226.69	2,760.20	-168.37	-178.59	2.00	2.00	0.00	226.69	
6,750.64	23.89	226.69	6,377.37	-1,267.42	-1,344.38	0.00	0.00	0.00	0.00	
7,819.63	90.52	92.48	7,077.00	-1,515.60	-800.00	10.00	6.23	-12.55	-131.48	
12,603.89	90.52	92.48	7,033.39	-1,722.81	3,979.57	0.00	0.00	0.00	0.00	
12,724.73	90.52	90.07	7,032.28	-1,725.49	4,100.37	2.00	0.00	-2.00	-89.99	
14,730.35	90.52	90.07	7,014.00	-1,727.77	6,105.90	0.00	0.00	0.00	0.00	BHL REEMAN-6X-HN

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-6X-HNB-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4843.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4843.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-6X-HNB-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	1,432,823.250	3,224,675.480	40.518690	-104.691870
SHL REEMAN-6X-HNB-04-06-65 1984 FNL 1383 FWL									
100.00	0.00	0.00	100.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
200.00	0.00	0.00	200.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
300.00	0.00	0.00	300.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
400.00	0.00	0.00	400.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
500.00	0.00	0.00	500.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
600.00	0.00	0.00	600.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
700.00	0.00	0.00	700.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
800.00	0.00	0.00	800.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
900.00	0.00	0.00	900.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
Surf Csg									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
Start Build 2.00									
1,700.00	2.00	226.69	1,699.98	-1.20	-1.27	1,432,822.053	3,224,674.210	40.518687	-104.691875
1,800.00	4.00	226.69	1,799.84	-4.79	-5.08	1,432,818.463	3,224,670.402	40.518677	-104.691888
1,900.00	6.00	226.69	1,899.45	-10.77	-11.42	1,432,812.485	3,224,664.061	40.518661	-104.691911
2,000.00	8.00	226.69	1,998.70	-19.12	-20.29	1,432,804.125	3,224,655.194	40.518638	-104.691944
2,100.00	10.00	226.69	2,097.47	-29.86	-31.67	1,432,793.395	3,224,643.812	40.518609	-104.691985
2,200.00	12.00	226.69	2,195.62	-42.94	-45.55	1,432,780.306	3,224,629.929	40.518574	-104.692035
2,300.00	14.00	226.69	2,293.06	-58.37	-61.92	1,432,764.876	3,224,613.561	40.518532	-104.692095
2,400.00	16.00	226.69	2,389.64	-76.13	-80.75	1,432,747.123	3,224,594.730	40.518483	-104.692163
2,500.00	18.00	226.69	2,485.27	-96.18	-102.02	1,432,727.068	3,224,573.457	40.518429	-104.692240
2,600.00	20.00	226.69	2,579.82	-118.51	-125.71	1,432,704.736	3,224,549.769	40.518368	-104.692326
2,700.00	22.00	226.69	2,673.17	-143.10	-151.79	1,432,680.154	3,224,523.695	40.518301	-104.692421
2,794.51	23.89	226.69	2,760.20	-168.37	-178.59	1,432,654.881	3,224,496.886	40.518233	-104.692518
Hold 23.89 Inc, 226.69 Az									
2,800.00	23.89	226.69	2,765.22	-169.89	-180.21	1,432,653.356	3,224,495.269	40.518228	-104.692524
2,900.00	23.89	226.69	2,856.65	-197.68	-209.68	1,432,625.575	3,224,465.801	40.518153	-104.692631
3,000.00	23.89	226.69	2,948.08	-225.46	-239.15	1,432,597.794	3,224,436.333	40.518077	-104.692738
3,100.00	23.89	226.69	3,039.51	-253.24	-268.61	1,432,570.013	3,224,406.865	40.518002	-104.692844
3,200.00	23.89	226.69	3,130.95	-281.02	-298.08	1,432,542.232	3,224,377.397	40.517926	-104.692951
3,300.00	23.89	226.69	3,222.38	-308.80	-327.55	1,432,514.451	3,224,347.930	40.517851	-104.693058
3,400.00	23.89	226.69	3,313.81	-336.58	-357.02	1,432,486.670	3,224,318.462	40.517775	-104.693165
3,500.00	23.89	226.69	3,405.24	-364.36	-386.49	1,432,458.890	3,224,288.994	40.517700	-104.693272
3,600.00	23.89	226.69	3,496.68	-392.14	-415.95	1,432,431.109	3,224,259.526	40.517624	-104.693379
3,700.00	23.89	226.69	3,588.11	-419.92	-445.42	1,432,403.328	3,224,230.058	40.517549	-104.693486
3,800.00	23.89	226.69	3,679.54	-447.70	-474.89	1,432,375.547	3,224,200.590	40.517473	-104.693593
3,900.00	23.89	226.69	3,770.97	-475.48	-504.36	1,432,347.766	3,224,171.122	40.517398	-104.693700
4,000.00	23.89	226.69	3,862.40	-503.26	-533.83	1,432,319.985	3,224,141.654	40.517322	-104.693806
4,100.00	23.89	226.69	3,953.84	-531.05	-563.29	1,432,292.204	3,224,112.187	40.517247	-104.693913
4,200.00	23.89	226.69	4,045.27	-558.83	-592.76	1,432,264.423	3,224,082.719	40.517171	-104.694020
4,300.00	23.89	226.69	4,136.70	-586.61	-622.23	1,432,236.643	3,224,053.251	40.517096	-104.694127
4,400.00	23.89	226.69	4,228.13	-614.39	-651.70	1,432,208.862	3,224,023.783	40.517020	-104.694234
4,500.00	23.89	226.69	4,319.57	-642.17	-681.16	1,432,181.081	3,223,994.315	40.516945	-104.694341
4,600.00	23.89	226.69	4,411.00	-669.95	-710.63	1,432,153.300	3,223,964.847	40.516869	-104.694448
4,700.00	23.89	226.69	4,502.43	-697.73	-740.10	1,432,125.519	3,223,935.379	40.516794	-104.694555
4,800.00	23.89	226.69	4,593.86	-725.51	-769.57	1,432,097.738	3,223,905.912	40.516718	-104.694662

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-6X-HNB-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4843.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4843.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-6X-HNB-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	23.89	226.69	4,685.30	-753.29	-799.04	1,432,069.957	3,223,876.444	40.516643	-104.694768
5,000.00	23.89	226.69	4,776.73	-781.07	-828.50	1,432,042.176	3,223,846.976	40.516567	-104.694875
5,100.00	23.89	226.69	4,868.16	-808.85	-857.97	1,432,014.395	3,223,817.508	40.516492	-104.694982
5,200.00	23.89	226.69	4,959.59	-836.64	-887.44	1,431,986.615	3,223,788.040	40.516416	-104.695089
5,300.00	23.89	226.69	5,051.02	-864.42	-916.91	1,431,958.834	3,223,758.572	40.516341	-104.695196
5,400.00	23.89	226.69	5,142.46	-892.20	-946.38	1,431,931.053	3,223,729.104	40.516265	-104.695303
5,500.00	23.89	226.69	5,233.89	-919.98	-975.84	1,431,903.272	3,223,699.636	40.516189	-104.695410
5,600.00	23.89	226.69	5,325.32	-947.76	-1,005.31	1,431,875.491	3,223,670.169	40.516114	-104.695517
5,700.00	23.89	226.69	5,416.75	-975.54	-1,034.78	1,431,847.710	3,223,640.701	40.516038	-104.695624
5,800.00	23.89	226.69	5,508.19	-1,003.32	-1,064.25	1,431,819.929	3,223,611.233	40.515963	-104.695730
5,900.00	23.89	226.69	5,599.62	-1,031.10	-1,093.71	1,431,792.148	3,223,581.765	40.515887	-104.695837
6,000.00	23.89	226.69	5,691.05	-1,058.88	-1,123.18	1,431,764.368	3,223,552.297	40.515812	-104.695944
6,100.00	23.89	226.69	5,782.48	-1,086.66	-1,152.65	1,431,736.587	3,223,522.829	40.515736	-104.696051
6,200.00	23.89	226.69	5,873.92	-1,114.44	-1,182.12	1,431,708.806	3,223,493.361	40.515661	-104.696158
6,300.00	23.89	226.69	5,965.35	-1,142.23	-1,211.59	1,431,681.025	3,223,463.894	40.515585	-104.696265
6,400.00	23.89	226.69	6,056.78	-1,170.01	-1,241.05	1,431,653.244	3,223,434.426	40.515510	-104.696372
6,500.00	23.89	226.69	6,148.21	-1,197.79	-1,270.52	1,431,625.463	3,223,404.958	40.515434	-104.696479
6,600.00	23.89	226.69	6,239.64	-1,225.57	-1,299.99	1,431,597.682	3,223,375.490	40.515359	-104.696586
6,700.00	23.89	226.69	6,331.08	-1,253.35	-1,329.46	1,431,569.901	3,223,346.022	40.515283	-104.696692
6,750.64	23.89	226.69	6,377.37	-1,267.42	-1,344.38	1,431,555.834	3,223,331.101	40.515245	-104.696747
KOP 10°/100									
6,800.00	20.93	216.29	6,423.02	-1,281.39	-1,356.88	1,431,541.862	3,223,318.601	40.515207	-104.696792
6,900.00	17.72	187.30	6,517.59	-1,310.95	-1,369.42	1,431,512.298	3,223,306.063	40.515126	-104.696838
7,000.00	19.58	156.19	6,612.57	-1,341.45	-1,364.58	1,431,481.800	3,223,310.904	40.515042	-104.696822
7,100.00	25.42	134.71	6,705.08	-1,371.96	-1,342.50	1,431,451.293	3,223,332.977	40.514958	-104.696743
7,200.00	33.20	121.76	6,792.29	-1,401.54	-1,303.87	1,431,421.706	3,223,371.611	40.514876	-104.696605
7,300.00	41.85	113.47	6,871.57	-1,429.31	-1,249.85	1,431,393.938	3,223,425.633	40.514798	-104.696412
7,400.00	50.93	107.63	6,940.50	-1,454.42	-1,182.08	1,431,368.831	3,223,493.401	40.514728	-104.696169
7,500.00	60.22	103.15	6,997.00	-1,476.10	-1,102.62	1,431,347.149	3,223,572.856	40.514666	-104.695884
7,600.00	69.64	99.43	7,039.33	-1,493.70	-1,013.90	1,431,329.550	3,223,661.583	40.514616	-104.695565
7,700.00	79.13	96.15	7,066.23	-1,506.68	-918.59	1,431,316.570	3,223,756.888	40.514578	-104.695223
7,709.30	80.01	95.86	7,067.91	-1,507.64	-909.50	1,431,315.613	3,223,765.981	40.514575	-104.695190
LPL REEMAN-6X-HNB-04-06-65 1804 FSL 460 FWL									
7,800.00	88.65	93.08	7,076.86	-1,514.65	-819.61	1,431,308.602	3,223,855.873	40.514553	-104.694867
7,819.63	90.52	92.48	7,077.00	-1,515.60	-800.00	1,431,307.650	3,223,875.480	40.514550	-104.694797
LP 90.52 Inc, 92.48 Az									
7,900.00	90.52	92.48	7,076.27	-1,519.08	-719.71	1,431,304.170	3,223,955.770	40.514539	-104.694508
8,000.00	90.52	92.48	7,075.36	-1,523.41	-619.81	1,431,299.840	3,224,055.672	40.514524	-104.694149
8,100.00	90.52	92.48	7,074.44	-1,527.74	-519.91	1,431,295.509	3,224,155.574	40.514510	-104.693790
8,200.00	90.52	92.48	7,073.53	-1,532.07	-420.00	1,431,291.179	3,224,255.476	40.514496	-104.693431
8,300.00	90.52	92.48	7,072.62	-1,536.40	-320.10	1,431,286.849	3,224,355.378	40.514481	-104.693072
8,400.00	90.52	92.48	7,071.71	-1,540.73	-220.20	1,431,282.518	3,224,455.280	40.514467	-104.692712
8,500.00	90.52	92.48	7,070.80	-1,545.06	-120.30	1,431,278.188	3,224,555.182	40.514452	-104.692353
8,600.00	90.52	92.48	7,069.89	-1,549.39	-20.40	1,431,273.858	3,224,655.084	40.514438	-104.691994
8,700.00	90.52	92.48	7,068.97	-1,553.72	79.51	1,431,269.527	3,224,754.986	40.514424	-104.691635
8,800.00	90.52	92.48	7,068.06	-1,558.05	179.41	1,431,265.197	3,224,854.888	40.514409	-104.691276
8,900.00	90.52	92.48	7,067.15	-1,562.38	279.31	1,431,260.867	3,224,954.790	40.514395	-104.690917
9,000.00	90.52	92.48	7,066.24	-1,566.71	379.21	1,431,256.537	3,225,054.692	40.514380	-104.690558
9,100.00	90.52	92.48	7,065.33	-1,571.04	479.11	1,431,252.206	3,225,154.594	40.514366	-104.690198
9,200.00	90.52	92.48	7,064.42	-1,575.37	579.02	1,431,247.876	3,225,254.496	40.514352	-104.689839
9,300.00	90.52	92.48	7,063.50	-1,579.70	678.92	1,431,243.546	3,225,354.398	40.514337	-104.689480
9,400.00	90.52	92.48	7,062.59	-1,584.03	778.82	1,431,239.215	3,225,454.300	40.514323	-104.689121
9,500.00	90.52	92.48	7,061.68	-1,588.37	878.72	1,431,234.885	3,225,554.202	40.514309	-104.688762
9,600.00	90.52	92.48	7,060.77	-1,592.70	978.62	1,431,230.555	3,225,654.104	40.514294	-104.688403

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-6X-HNB-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4843.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4843.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-6X-HNB-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	90.52	92.48	7,059.86	-1,597.03	1,078.53	1,431,226.224	3,225,754.006	40.514280	-104.688043
9,800.00	90.52	92.48	7,058.95	-1,601.36	1,178.43	1,431,221.894	3,225,853.908	40.514265	-104.687684
9,900.00	90.52	92.48	7,058.03	-1,605.69	1,278.33	1,431,217.564	3,225,953.810	40.514251	-104.687325
10,000.00	90.52	92.48	7,057.12	-1,610.02	1,378.23	1,431,213.234	3,226,053.712	40.514237	-104.686966
10,100.00	90.52	92.48	7,056.21	-1,614.35	1,478.13	1,431,208.903	3,226,153.615	40.514222	-104.686607
10,200.00	90.52	92.48	7,055.30	-1,618.68	1,578.04	1,431,204.573	3,226,253.517	40.514208	-104.686248
10,300.00	90.52	92.48	7,054.39	-1,623.01	1,677.94	1,431,200.243	3,226,353.419	40.514193	-104.685889
10,400.00	90.52	92.48	7,053.48	-1,627.34	1,777.84	1,431,195.912	3,226,453.321	40.514179	-104.685529
10,500.00	90.52	92.48	7,052.57	-1,631.67	1,877.74	1,431,191.582	3,226,553.223	40.514165	-104.685170
10,600.00	90.52	92.48	7,051.65	-1,636.00	1,977.65	1,431,187.252	3,226,653.125	40.514150	-104.684811
10,700.00	90.52	92.48	7,050.74	-1,640.33	2,077.55	1,431,182.921	3,226,753.027	40.514136	-104.684452
10,800.00	90.52	92.48	7,049.83	-1,644.66	2,177.45	1,431,178.591	3,226,852.929	40.514121	-104.684093
10,900.00	90.52	92.48	7,048.92	-1,648.99	2,277.35	1,431,174.261	3,226,952.831	40.514107	-104.683734
11,000.00	90.52	92.48	7,048.01	-1,653.32	2,377.25	1,431,169.931	3,227,052.733	40.514092	-104.683375
11,100.00	90.52	92.48	7,047.10	-1,657.65	2,477.16	1,431,165.600	3,227,152.635	40.514078	-104.683015
11,200.00	90.52	92.48	7,046.18	-1,661.98	2,577.06	1,431,161.270	3,227,252.537	40.514064	-104.682656
11,300.00	90.52	92.48	7,045.27	-1,666.31	2,676.96	1,431,156.940	3,227,352.439	40.514049	-104.682297
11,400.00	90.52	92.48	7,044.36	-1,670.64	2,776.86	1,431,152.609	3,227,452.341	40.514035	-104.681938
11,500.00	90.52	92.48	7,043.45	-1,674.97	2,876.76	1,431,148.279	3,227,552.243	40.514020	-104.681579
11,600.00	90.52	92.48	7,042.54	-1,679.30	2,976.67	1,431,143.949	3,227,652.145	40.514006	-104.681220
11,700.00	90.52	92.48	7,041.63	-1,683.63	3,076.57	1,431,139.618	3,227,752.047	40.513992	-104.680861
11,800.00	90.52	92.48	7,040.71	-1,687.96	3,176.47	1,431,135.288	3,227,851.949	40.513977	-104.680501
11,900.00	90.52	92.48	7,039.80	-1,692.29	3,276.37	1,431,130.958	3,227,951.851	40.513963	-104.680142
12,000.00	90.52	92.48	7,038.89	-1,696.62	3,376.27	1,431,126.628	3,228,051.753	40.513948	-104.679783
12,100.00	90.52	92.48	7,037.98	-1,700.95	3,476.18	1,431,122.297	3,228,151.655	40.513934	-104.679424
12,200.00	90.52	92.48	7,037.07	-1,705.28	3,576.08	1,431,117.967	3,228,251.557	40.513919	-104.679065
12,300.00	90.52	92.48	7,036.16	-1,709.61	3,675.98	1,431,113.637	3,228,351.459	40.513905	-104.678706
12,400.00	90.52	92.48	7,035.24	-1,713.94	3,775.88	1,431,109.306	3,228,451.361	40.513891	-104.678347
12,500.00	90.52	92.48	7,034.33	-1,718.27	3,875.78	1,431,104.976	3,228,551.263	40.513876	-104.677987
12,600.00	90.52	92.48	7,033.42	-1,722.60	3,975.69	1,431,100.646	3,228,651.165	40.513862	-104.677628
12,603.89	90.52	92.48	7,033.39	-1,722.77	3,979.57	1,431,100.477	3,228,655.051	40.513861	-104.677614
2/100 Turn - AP REEMAN-6X-HNB-04-06-65 1943 FSL 71 FWL									
12,700.00	90.52	90.56	7,032.51	-1,725.36	4,075.64	1,431,097.894	3,228,751.118	40.513852	-104.677269
12,724.73	90.52	90.07	7,032.28	-1,725.49	4,100.37	1,431,097.759	3,228,775.847	40.513851	-104.677180
Hold 90.52 Inc, 90.07 Az									
12,800.00	90.52	90.07	7,031.60	-1,725.58	4,175.63	1,431,097.674	3,228,851.113	40.513848	-104.676909
12,900.00	90.52	90.07	7,030.69	-1,725.69	4,275.63	1,431,097.560	3,228,951.109	40.513846	-104.676550
13,000.00	90.52	90.07	7,029.77	-1,725.80	4,375.63	1,431,097.447	3,229,051.105	40.513843	-104.676190
13,100.00	90.52	90.07	7,028.86	-1,725.92	4,475.62	1,431,097.333	3,229,151.100	40.513840	-104.675830
13,200.00	90.52	90.07	7,027.95	-1,726.03	4,575.62	1,431,097.220	3,229,251.096	40.513837	-104.675471
13,300.00	90.52	90.07	7,027.04	-1,726.14	4,675.61	1,431,097.106	3,229,351.092	40.513834	-104.675111
13,400.00	90.52	90.07	7,026.13	-1,726.26	4,775.61	1,431,096.993	3,229,451.088	40.513831	-104.674751
13,500.00	90.52	90.07	7,025.22	-1,726.37	4,875.60	1,431,096.879	3,229,551.084	40.513828	-104.674392
13,600.00	90.52	90.07	7,024.30	-1,726.48	4,975.60	1,431,096.766	3,229,651.079	40.513826	-104.674032
13,700.00	90.52	90.07	7,023.39	-1,726.60	5,075.60	1,431,096.652	3,229,751.075	40.513823	-104.673673
13,800.00	90.52	90.07	7,022.48	-1,726.71	5,175.59	1,431,096.539	3,229,851.071	40.513820	-104.673313
13,900.00	90.52	90.07	7,021.57	-1,726.82	5,275.59	1,431,096.425	3,229,951.067	40.513817	-104.672953
14,000.00	90.52	90.07	7,020.66	-1,726.94	5,375.58	1,431,096.312	3,230,051.062	40.513814	-104.672594
14,100.00	90.52	90.07	7,019.75	-1,727.05	5,475.58	1,431,096.198	3,230,151.058	40.513811	-104.672234
14,200.00	90.52	90.07	7,018.83	-1,727.17	5,575.57	1,431,096.085	3,230,251.054	40.513808	-104.671875
14,300.00	90.52	90.07	7,017.92	-1,727.28	5,675.57	1,431,095.971	3,230,351.050	40.513805	-104.671515
14,400.00	90.52	90.07	7,017.01	-1,727.39	5,775.57	1,431,095.858	3,230,451.046	40.513803	-104.671155
14,500.00	90.52	90.07	7,016.10	-1,727.51	5,875.56	1,431,095.744	3,230,551.041	40.513800	-104.670796
14,600.00	90.52	90.07	7,015.19	-1,727.62	5,975.56	1,431,095.631	3,230,651.037	40.513797	-104.670436

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-6X-HNB-04-06-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4843.00usft (Original Well Elev)
Project:	Sec. 5-T6N-R65W	MD Reference:	WELL @ 4843.00usft (Original Well Elev)
Site:	REEMAN PAD	North Reference:	Grid
Well:	REEMAN-6X-HNB-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
14,700.00	90.52	90.07	7,014.28	-1,727.73	6,075.55	1,431,095.517	3,230,751.033	40.513794	-104.670076
14,730.35	90.52	90.07	7,014.00	-1,727.77	6,105.90	1,431,095.483	3,230,781.381	40.513793	-104.669967
TD at 14730.35 - BHL REEMAN-6X-HNB-04-06-65 1913 FSL 2197 FWL									

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 REEMAN-6X-HNB-	0.00	0.00	0.00	0.00	0.00	1,432,823.250	3,224,675.480	40.518690	-104.691870
- plan hits target center									
- Point									
BHL REEMAN-6X-HNB-	0.00	0.00	7,014.00	-1,727.77	6,105.90	1,431,095.483	3,230,781.381	40.513793	-104.669967
- plan hits target center									
- Point									
AP REEMAN-6X-HNB-0	0.00	0.00	7,033.39	-1,722.81	3,979.57	1,431,100.445	3,228,655.050	40.513861	-104.677614
- plan misses target center by 0.03usft at 12603.89usft MD (7033.39 TVD, -1722.77 N, 3979.57 E)									
- Point									
LPL REEMAN-6X-HNB-I	0.00	0.00	7,078.00	-1,510.83	-910.82	1,431,312.421	3,223,764.658	40.514566	-104.695195
- plan misses target center by 10.67usft at 7709.30usft MD (7067.91 TVD, -1507.64 N, -909.50 E)									
- Point									

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
2,794.51	2,760.20	-168.37	-178.59	Hold 23.89 Inc, 226.69 Az
6,750.64	6,377.37	-1,267.42	-1,344.38	KOP 10°/100
7,819.63	7,077.00	-1,515.60	-800.00	LP 90.52 Inc, 92.48 Az
12,603.89	7,033.39	-1,722.81	3,979.57	2/100 Turn
12,724.73	7,032.28	-1,725.49	4,100.37	Hold 90.52 Inc, 90.07 Az
14,730.35	7,014.00	-1,727.77	6,105.90	TD at 14730.35