

Well Name:
REEMAN-8X-HC-04-06-65

Project Name:
Sec. 5-T6N-R65W

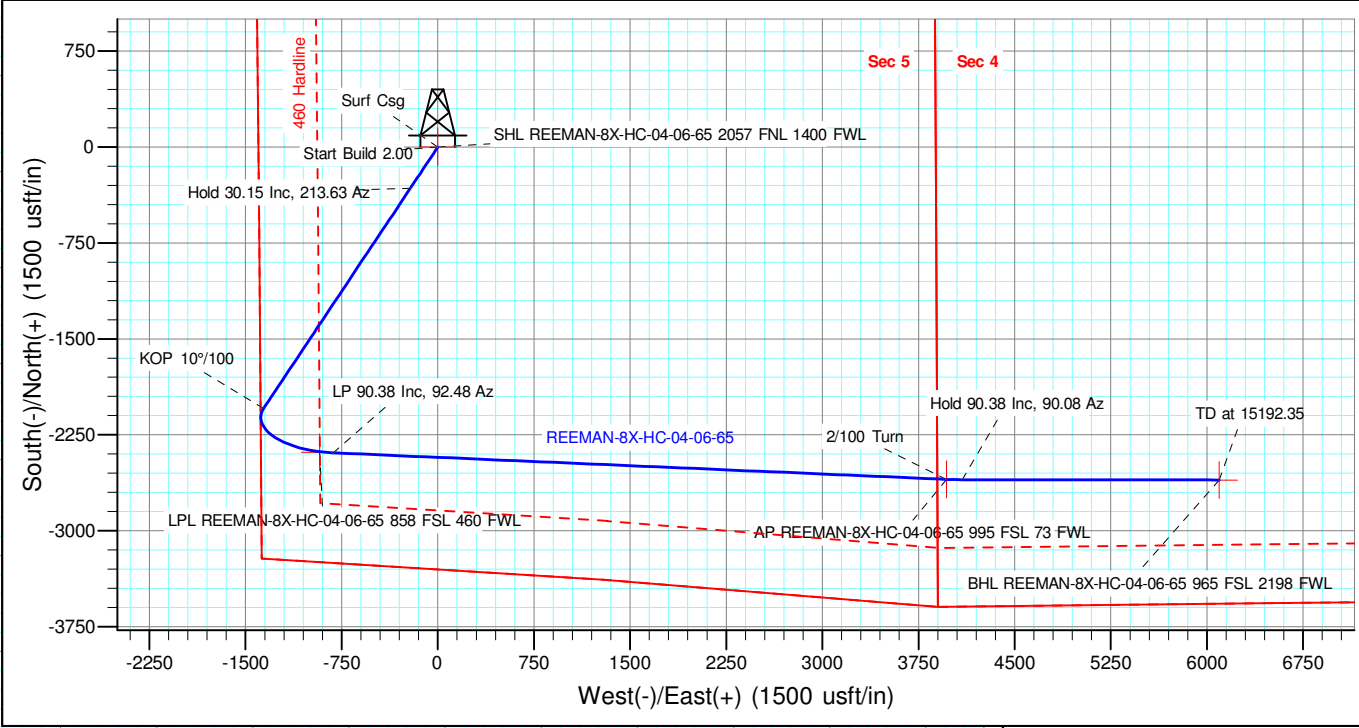
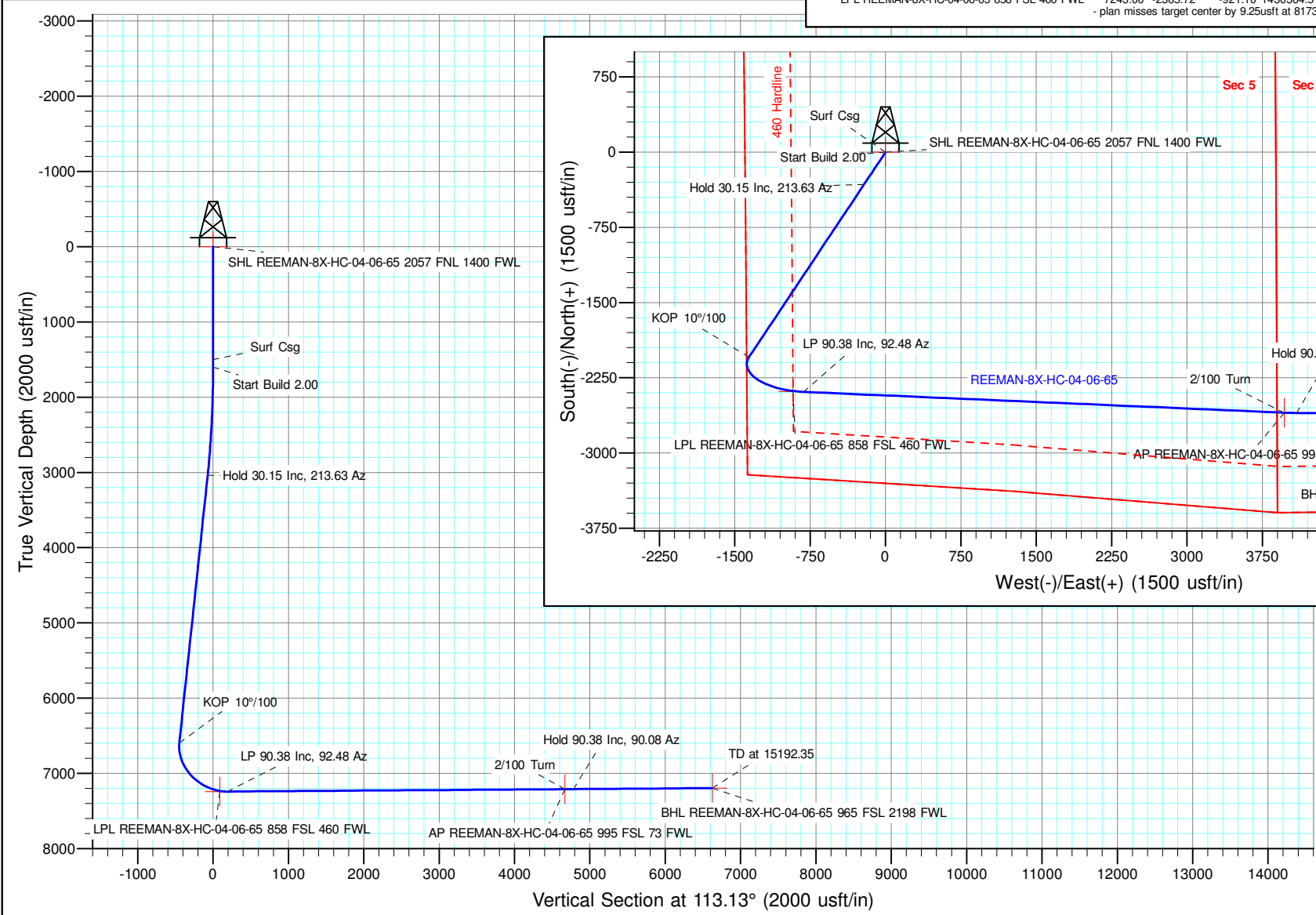
Pad Name:
REEMAN PAD

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	
3107.26	30.15	213.63	3038.67	-322.59	-214.59	-70.64	387.45	Hold 30.15 Inc, 213.63 Az	
7222.22	30.15	213.63	6597.12	-2043.19	-1359.13	-447.42	2453.95	KOP 10°/100	
8276.15	90.38	92.48	7242.50	-2390.20	-817.00	187.43	3202.92	LP 90.38 Inc, 92.48 Az	
13067.23	90.38	92.48	7210.93	-2597.70	3969.48	4670.77	7993.90	2/100 Turn	
13187.53	90.38	90.08	7210.14	-2600.38	4089.74	4782.42	8114.20	Hold 90.38 Inc, 90.08 Az	
15192.35	90.38	90.08	7197.01	-2603.03	6093.51	6626.21	10117.97	TD at 15192.35	

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	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL REEMAN-8X-HC-04-06-65 2057 FNL 1400 FWL		0.00	0.00	0.00	1432750.240	3224692.690	40.518489	-104.691810	Point
BHL REEMAN-8X-HC-04-06-65 965 FSL 2198 FWL	7197.00	-2603.03	6094.51	1430147.206	3230787.199	40.511190	-104.669978	Point	
AP REEMAN-8X-HC-04-06-65 995 FSL 73 FWL	7210.93	-2597.70	3969.48	1430152.544	3228662.173	40.511259	-104.677620	Point	
LPL REEMAN-8X-HC-04-06-65 858 FSL 460 FWL	7243.00	-2385.72	-921.10	1430364.519	3223771.593	40.511964	-104.695201	Point	
- plan misses target center by 9.25usft at 8173.03usft MD (7234.89 TVD, -2381.63 N, -919.35 E)									



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M

Azimuths to Grid North
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

O P E R A T I N G

Nickel Road Operating

Sec. 5-T6N-R65W

REEMAN PAD

REEMAN-8X-HC-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-8X-HC-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-8X-HC-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-8X-HC-04-06-65					
Well Position	+N/-S	0.00 usft	Northing:	1,432,750.240 usft	Latitude:	40.518489
	+E/-W	0.00 usft	Easting:	3,224,692.690 usft	Longitude:	-104.691811
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	52,091.62353210

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	113.13

Plan Survey Tool Program	Date	10/26/2020			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	15,191.91 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	
3,107.26	30.15	213.63	3,038.67	-322.59	-214.59	2.00	2.00	0.00	213.63	
7,222.22	30.15	213.63	6,597.12	-2,043.19	-1,359.13	0.00	0.00	0.00	0.00	
8,276.15	90.38	92.48	7,242.50	-2,390.20	-817.00	10.00	5.71	-11.50	-117.42	
13,067.23	90.38	92.48	7,210.93	-2,597.70	3,969.48	0.00	0.00	0.00	0.00	
13,187.53	90.38	90.08	7,210.14	-2,600.38	4,089.74	2.00	0.00	-2.00	-89.99	
15,192.35	90.38	90.08	7,197.00	-2,603.03	6,094.51	0.00	0.00	0.00	0.00	BHL REEMAN-8X-HC

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-8X-HC-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-8X-HC-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	1,432,750.240	3,224,692.690	40.518489	-104.691811
SHL REEMAN-8X-HC-04-06-65 2057 FNL 1400 FWL									
100.00	0.00	0.00	100.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
200.00	0.00	0.00	200.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
300.00	0.00	0.00	300.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
400.00	0.00	0.00	400.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
500.00	0.00	0.00	500.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
600.00	0.00	0.00	600.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
700.00	0.00	0.00	700.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
800.00	0.00	0.00	800.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
900.00	0.00	0.00	900.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
Surf Csg									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
Start Build 2.00									
1,700.00	2.00	213.63	1,699.98	-1.45	-0.97	1,432,748.787	3,224,691.723	40.518486	-104.691814
1,800.00	4.00	213.63	1,799.84	-5.81	-3.87	1,432,744.430	3,224,688.825	40.518474	-104.691825
1,900.00	6.00	213.63	1,899.45	-13.07	-8.69	1,432,737.173	3,224,683.998	40.518454	-104.691842
2,000.00	8.00	213.63	1,998.70	-23.21	-15.44	1,432,727.027	3,224,677.248	40.518426	-104.691867
2,100.00	10.00	213.63	2,097.47	-36.24	-24.11	1,432,714.002	3,224,668.585	40.518391	-104.691898
2,200.00	12.00	213.63	2,195.62	-52.12	-34.67	1,432,698.116	3,224,658.017	40.518347	-104.691937
2,300.00	14.00	213.63	2,293.06	-70.85	-47.13	1,432,679.387	3,224,645.559	40.518296	-104.691982
2,400.00	16.00	213.63	2,389.64	-92.40	-61.47	1,432,657.839	3,224,631.225	40.518237	-104.692035
2,500.00	18.00	213.63	2,485.27	-116.74	-77.66	1,432,633.497	3,224,615.033	40.518171	-104.692094
2,600.00	20.00	213.63	2,579.82	-143.85	-95.69	1,432,606.391	3,224,597.002	40.518097	-104.692159
2,700.00	22.00	213.63	2,673.17	-173.69	-115.54	1,432,576.554	3,224,577.154	40.518016	-104.692232
2,800.00	24.00	213.63	2,765.21	-206.22	-137.18	1,432,544.023	3,224,555.515	40.517927	-104.692311
2,900.00	26.00	213.63	2,855.84	-241.40	-160.58	1,432,508.837	3,224,532.109	40.517831	-104.692396
3,000.00	28.00	213.63	2,944.94	-279.20	-185.72	1,432,471.039	3,224,506.966	40.517728	-104.692488
3,100.00	30.00	213.63	3,032.39	-319.56	-212.57	1,432,430.675	3,224,480.116	40.517618	-104.692586
3,107.26	30.15	213.63	3,038.67	-322.59	-214.59	1,432,427.647	3,224,478.102	40.517609	-104.692593
Hold 30.15 Inc, 213.63 Az									
3,200.00	30.15	213.63	3,118.87	-361.37	-240.38	1,432,388.869	3,224,452.306	40.517504	-104.692687
3,300.00	30.15	213.63	3,205.35	-403.18	-268.20	1,432,347.055	3,224,424.492	40.517390	-104.692788
3,400.00	30.15	213.63	3,291.83	-445.00	-296.01	1,432,305.242	3,224,396.678	40.517275	-104.692890
3,500.00	30.15	213.63	3,378.30	-486.81	-323.83	1,432,263.429	3,224,368.864	40.517161	-104.692991
3,600.00	30.15	213.63	3,464.78	-528.62	-351.64	1,432,221.616	3,224,341.050	40.517047	-104.693093
3,700.00	30.15	213.63	3,551.25	-570.44	-379.45	1,432,179.802	3,224,313.236	40.516933	-104.693194
3,800.00	30.15	213.63	3,637.73	-612.25	-407.27	1,432,137.989	3,224,285.422	40.516819	-104.693295
3,900.00	30.15	213.63	3,724.20	-654.06	-435.08	1,432,096.176	3,224,257.608	40.516705	-104.693397
4,000.00	30.15	213.63	3,810.68	-695.88	-462.90	1,432,054.363	3,224,229.794	40.516591	-104.693498
4,100.00	30.15	213.63	3,897.16	-737.69	-490.71	1,432,012.549	3,224,201.979	40.516477	-104.693600
4,200.00	30.15	213.63	3,983.63	-779.50	-518.52	1,431,970.736	3,224,174.165	40.516363	-104.693701
4,300.00	30.15	213.63	4,070.11	-821.32	-546.34	1,431,928.923	3,224,146.351	40.516249	-104.693802
4,400.00	30.15	213.63	4,156.58	-863.13	-574.15	1,431,887.110	3,224,118.537	40.516135	-104.693904
4,500.00	30.15	213.63	4,243.06	-904.94	-601.97	1,431,845.296	3,224,090.723	40.516021	-104.694005
4,600.00	30.15	213.63	4,329.53	-946.76	-629.78	1,431,803.483	3,224,062.909	40.515907	-104.694107
4,700.00	30.15	213.63	4,416.01	-988.57	-657.59	1,431,761.670	3,224,035.095	40.515792	-104.694208
4,800.00	30.15	213.63	4,502.48	-1,030.38	-685.41	1,431,719.857	3,224,007.281	40.515678	-104.694309

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-8X-HC-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-8X-HC-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	30.15	213.63	4,588.96	-1,072.20	-713.22	1,431,678.044	3,223,979.467	40.515564	-104.694411
5,000.00	30.15	213.63	4,675.44	-1,114.01	-741.04	1,431,636.230	3,223,951.653	40.515450	-104.694512
5,100.00	30.15	213.63	4,761.91	-1,155.82	-768.85	1,431,594.417	3,223,923.839	40.515336	-104.694614
5,200.00	30.15	213.63	4,848.39	-1,197.64	-796.67	1,431,552.604	3,223,896.025	40.515222	-104.694715
5,300.00	30.15	213.63	4,934.86	-1,239.45	-824.48	1,431,510.791	3,223,868.210	40.515108	-104.694816
5,400.00	30.15	213.63	5,021.34	-1,281.26	-852.29	1,431,468.977	3,223,840.396	40.514994	-104.694918
5,500.00	30.15	213.63	5,107.81	-1,323.08	-880.11	1,431,427.164	3,223,812.582	40.514880	-104.695019
5,600.00	30.15	213.63	5,194.29	-1,364.89	-907.92	1,431,385.351	3,223,784.768	40.514766	-104.695121
5,700.00	30.15	213.63	5,280.76	-1,406.70	-935.74	1,431,343.538	3,223,756.954	40.514652	-104.695222
5,800.00	30.15	213.63	5,367.24	-1,448.52	-963.55	1,431,301.724	3,223,729.140	40.514538	-104.695323
5,900.00	30.15	213.63	5,453.72	-1,490.33	-991.36	1,431,259.911	3,223,701.326	40.514424	-104.695425
6,000.00	30.15	213.63	5,540.19	-1,532.14	-1,019.18	1,431,218.098	3,223,673.512	40.514309	-104.695526
6,100.00	30.15	213.63	5,626.67	-1,573.96	-1,046.99	1,431,176.285	3,223,645.698	40.514195	-104.695628
6,200.00	30.15	213.63	5,713.14	-1,615.77	-1,074.81	1,431,134.471	3,223,617.884	40.514081	-104.695729
6,300.00	30.15	213.63	5,799.62	-1,657.58	-1,102.62	1,431,092.658	3,223,590.070	40.513967	-104.695830
6,400.00	30.15	213.63	5,886.09	-1,699.40	-1,130.43	1,431,050.845	3,223,562.255	40.513853	-104.695932
6,500.00	30.15	213.63	5,972.57	-1,741.21	-1,158.25	1,431,009.032	3,223,534.441	40.513739	-104.696033
6,600.00	30.15	213.63	6,059.05	-1,783.02	-1,186.06	1,430,967.218	3,223,506.627	40.513625	-104.696135
6,700.00	30.15	213.63	6,145.52	-1,824.83	-1,213.88	1,430,925.405	3,223,478.813	40.513511	-104.696236
6,800.00	30.15	213.63	6,232.00	-1,866.65	-1,241.69	1,430,883.592	3,223,450.999	40.513397	-104.696337
6,900.00	30.15	213.63	6,318.47	-1,908.46	-1,269.50	1,430,841.779	3,223,423.185	40.513283	-104.696439
7,000.00	30.15	213.63	6,404.95	-1,950.27	-1,297.32	1,430,799.966	3,223,395.371	40.513169	-104.696540
7,100.00	30.15	213.63	6,491.42	-1,992.09	-1,325.13	1,430,758.152	3,223,367.557	40.513055	-104.696641
7,200.00	30.15	213.63	6,577.90	-2,033.90	-1,352.95	1,430,716.339	3,223,339.743	40.512941	-104.696743
7,222.22	30.15	213.63	6,597.12	-2,043.19	-1,359.13	1,430,707.046	3,223,333.561	40.512915	-104.696765
KOP 10°/100									
7,300.00	27.36	198.48	6,665.39	-2,076.46	-1,375.64	1,430,673.782	3,223,317.053	40.512824	-104.696826
7,400.00	26.61	176.40	6,754.72	-2,120.72	-1,381.53	1,430,629.521	3,223,311.159	40.512703	-104.696849
7,500.00	29.20	155.65	6,843.30	-2,165.41	-1,370.04	1,430,584.830	3,223,322.652	40.512580	-104.696809
7,600.00	34.39	139.34	6,928.42	-2,209.17	-1,341.51	1,430,541.066	3,223,351.183	40.512459	-104.696707
7,700.00	41.20	127.34	7,007.50	-2,250.68	-1,296.80	1,430,499.560	3,223,395.885	40.512344	-104.696548
7,800.00	48.95	118.37	7,078.13	-2,288.67	-1,237.29	1,430,461.572	3,223,455.399	40.512238	-104.696335
7,900.00	57.24	111.36	7,138.18	-2,321.98	-1,164.77	1,430,428.256	3,223,527.918	40.512145	-104.696076
8,000.00	65.85	105.57	7,185.81	-2,349.61	-1,081.45	1,430,400.626	3,223,611.238	40.512067	-104.695777
8,100.00	74.65	100.52	7,219.59	-2,370.72	-989.86	1,430,379.520	3,223,702.827	40.512007	-104.695448
8,173.45	81.19	97.09	7,234.95	-2,381.69	-918.93	1,430,368.554	3,223,773.762	40.511975	-104.695193
LPL REEMAN-8X-HC-04-06-65 858 FSL 460 FWL									
8,200.00	83.56	95.89	7,238.47	-2,384.66	-892.79	1,430,365.580	3,223,799.902	40.511966	-104.695099
8,276.15	90.38	92.48	7,242.50	-2,390.20	-817.00	1,430,360.040	3,223,875.690	40.511949	-104.694827
LP 90.38 Inc, 92.48 Az									
8,300.00	90.38	92.48	7,242.34	-2,391.23	-793.18	1,430,359.007	3,223,899.515	40.511946	-104.694741
8,400.00	90.38	92.48	7,241.69	-2,395.56	-693.27	1,430,354.677	3,223,999.419	40.511931	-104.694382
8,500.00	90.38	92.48	7,241.03	-2,399.89	-593.37	1,430,350.347	3,224,099.323	40.511917	-104.694023
8,600.00	90.38	92.48	7,240.38	-2,404.22	-493.46	1,430,346.017	3,224,199.227	40.511903	-104.693664
8,700.00	90.38	92.48	7,239.72	-2,408.55	-393.56	1,430,341.687	3,224,299.131	40.511888	-104.693305
8,800.00	90.38	92.48	7,239.07	-2,412.88	-293.66	1,430,337.356	3,224,399.035	40.511874	-104.692946
8,900.00	90.38	92.48	7,238.41	-2,417.21	-193.75	1,430,333.026	3,224,498.939	40.511860	-104.692587
9,000.00	90.38	92.48	7,237.76	-2,421.54	-93.85	1,430,328.696	3,224,598.843	40.511845	-104.692227
9,100.00	90.38	92.48	7,237.10	-2,425.87	6.06	1,430,324.366	3,224,698.747	40.511831	-104.691868
9,200.00	90.38	92.48	7,236.45	-2,430.20	105.96	1,430,320.036	3,224,798.651	40.511816	-104.691509
9,300.00	90.38	92.48	7,235.79	-2,434.53	205.87	1,430,315.706	3,224,898.555	40.511802	-104.691150
9,400.00	90.38	92.48	7,235.14	-2,438.86	305.77	1,430,311.375	3,224,998.459	40.511788	-104.690791
9,500.00	90.38	92.48	7,234.48	-2,443.19	405.67	1,430,307.045	3,225,098.363	40.511773	-104.690432
9,600.00	90.38	92.48	7,233.82	-2,447.53	505.58	1,430,302.715	3,225,198.267	40.511759	-104.690073

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-8X-HC-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-8X-HC-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	90.38	92.48	7,233.17	-2,451.86	605.48	1,430,298.385	3,225,298.171	40.511744	-104.689713
9,800.00	90.38	92.48	7,232.51	-2,456.19	705.39	1,430,294.055	3,225,398.075	40.511730	-104.689354
9,900.00	90.38	92.48	7,231.86	-2,460.52	805.29	1,430,289.724	3,225,497.979	40.511716	-104.688995
10,000.00	90.38	92.48	7,231.20	-2,464.85	905.19	1,430,285.394	3,225,597.883	40.511701	-104.688636
10,100.00	90.38	92.48	7,230.55	-2,469.18	1,005.10	1,430,281.064	3,225,697.787	40.511687	-104.688277
10,200.00	90.38	92.48	7,229.89	-2,473.51	1,105.00	1,430,276.734	3,225,797.691	40.511672	-104.687918
10,300.00	90.38	92.48	7,229.24	-2,477.84	1,204.91	1,430,272.404	3,225,897.596	40.511658	-104.687559
10,400.00	90.38	92.48	7,228.58	-2,482.17	1,304.81	1,430,268.073	3,225,997.500	40.511644	-104.687199
10,500.00	90.38	92.48	7,227.93	-2,486.50	1,404.71	1,430,263.743	3,226,097.404	40.511629	-104.686840
10,600.00	90.38	92.48	7,227.27	-2,490.83	1,504.62	1,430,259.413	3,226,197.308	40.511615	-104.686481
10,700.00	90.38	92.48	7,226.62	-2,495.16	1,604.52	1,430,255.083	3,226,297.212	40.511600	-104.686122
10,800.00	90.38	92.48	7,225.96	-2,499.49	1,704.43	1,430,250.753	3,226,397.116	40.511586	-104.685763
10,900.00	90.38	92.48	7,225.30	-2,503.82	1,804.33	1,430,246.423	3,226,497.020	40.511572	-104.685404
11,000.00	90.38	92.48	7,224.65	-2,508.15	1,904.23	1,430,242.092	3,226,596.924	40.511557	-104.685045
11,100.00	90.38	92.48	7,223.99	-2,512.48	2,004.14	1,430,237.762	3,226,696.828	40.511543	-104.684685
11,200.00	90.38	92.48	7,223.34	-2,516.81	2,104.04	1,430,233.432	3,226,796.732	40.511528	-104.684326
11,300.00	90.38	92.48	7,222.68	-2,521.14	2,203.95	1,430,229.102	3,226,896.636	40.511514	-104.683967
11,400.00	90.38	92.48	7,222.03	-2,525.47	2,303.85	1,430,224.772	3,226,996.540	40.511500	-104.683608
11,500.00	90.38	92.48	7,221.37	-2,529.80	2,403.75	1,430,220.441	3,227,096.444	40.511485	-104.683249
11,600.00	90.38	92.48	7,220.72	-2,534.13	2,503.66	1,430,216.111	3,227,196.348	40.511471	-104.682890
11,700.00	90.38	92.48	7,220.06	-2,538.46	2,603.56	1,430,211.781	3,227,296.252	40.511456	-104.682531
11,800.00	90.38	92.48	7,219.41	-2,542.79	2,703.47	1,430,207.451	3,227,396.156	40.511442	-104.682171
11,900.00	90.38	92.48	7,218.75	-2,547.12	2,803.37	1,430,203.121	3,227,496.060	40.511428	-104.681812
12,000.00	90.38	92.48	7,218.10	-2,551.45	2,903.27	1,430,198.790	3,227,595.964	40.511413	-104.681453
12,100.00	90.38	92.48	7,217.44	-2,555.78	3,003.18	1,430,194.460	3,227,695.868	40.511399	-104.681094
12,200.00	90.38	92.48	7,216.79	-2,560.11	3,103.08	1,430,190.130	3,227,795.772	40.511384	-104.680735
12,300.00	90.38	92.48	7,216.13	-2,564.44	3,202.99	1,430,185.800	3,227,895.677	40.511370	-104.680376
12,400.00	90.38	92.48	7,215.47	-2,568.77	3,302.89	1,430,181.470	3,227,995.581	40.511355	-104.680017
12,500.00	90.38	92.48	7,214.82	-2,573.10	3,402.80	1,430,177.140	3,228,095.485	40.511341	-104.679657
12,600.00	90.38	92.48	7,214.16	-2,577.43	3,502.70	1,430,172.809	3,228,195.389	40.511327	-104.679298
12,700.00	90.38	92.48	7,213.51	-2,581.76	3,602.60	1,430,168.479	3,228,295.293	40.511312	-104.678939
12,800.00	90.38	92.48	7,212.85	-2,586.09	3,702.51	1,430,164.149	3,228,395.197	40.511298	-104.678580
12,900.00	90.38	92.48	7,212.20	-2,590.42	3,802.41	1,430,159.819	3,228,495.101	40.511283	-104.678221
13,000.00	90.38	92.48	7,211.54	-2,594.75	3,902.32	1,430,155.489	3,228,595.005	40.511269	-104.677862
13,067.23	90.38	92.48	7,211.10	-2,597.66	3,969.49	1,430,152.577	3,228,662.175	40.511259	-104.677620
2/100 Turn - AP REEMAN-8X-HC-04-06-65 995 FSL 73 FWL									
13,100.00	90.38	91.83	7,210.71	-2,598.93	4,002.22	1,430,151.313	3,228,694.914	40.511255	-104.677503
13,187.53	90.38	90.08	7,210.14	-2,600.38	4,089.74	1,430,149.860	3,228,782.428	40.511249	-104.677188
Hold 90.38 Inc, 90.08 Az									
13,200.00	90.38	90.08	7,210.06	-2,600.40	4,102.21	1,430,149.843	3,228,794.896	40.511248	-104.677143
13,300.00	90.38	90.08	7,209.40	-2,600.53	4,202.20	1,430,149.711	3,228,894.894	40.511245	-104.676783
13,400.00	90.38	90.08	7,208.75	-2,600.66	4,302.20	1,430,149.578	3,228,994.892	40.511242	-104.676424
13,500.00	90.38	90.08	7,208.09	-2,600.79	4,402.20	1,430,149.446	3,229,094.889	40.511240	-104.676064
13,600.00	90.38	90.08	7,207.44	-2,600.93	4,502.20	1,430,149.314	3,229,194.887	40.511237	-104.675705
13,700.00	90.38	90.08	7,206.78	-2,601.06	4,602.20	1,430,149.181	3,229,294.885	40.511234	-104.675345
13,800.00	90.38	90.08	7,206.12	-2,601.19	4,702.19	1,430,149.049	3,229,394.883	40.511231	-104.674985
13,900.00	90.38	90.08	7,205.47	-2,601.32	4,802.19	1,430,148.917	3,229,494.880	40.511228	-104.674626
14,000.00	90.38	90.08	7,204.81	-2,601.46	4,902.19	1,430,148.784	3,229,594.878	40.511225	-104.674266
14,100.00	90.38	90.08	7,204.16	-2,601.59	5,002.19	1,430,148.652	3,229,694.876	40.511222	-104.673907
14,200.00	90.38	90.08	7,203.50	-2,601.72	5,102.18	1,430,148.519	3,229,794.874	40.511219	-104.673547
14,300.00	90.38	90.08	7,202.85	-2,601.85	5,202.18	1,430,148.387	3,229,894.871	40.511216	-104.673187
14,400.00	90.38	90.08	7,202.19	-2,601.99	5,302.18	1,430,148.255	3,229,994.869	40.511213	-104.672828
14,500.00	90.38	90.08	7,201.54	-2,602.12	5,402.18	1,430,148.122	3,230,094.867	40.511210	-104.672468
14,600.00	90.38	90.08	7,200.88	-2,602.25	5,502.18	1,430,147.990	3,230,194.865	40.511207	-104.672108

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well REEMAN-8X-HC-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-8X-HC-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	90.38	90.08	7,200.23	-2,602.38	5,602.17	1,430,147.858	3,230,294.862	40.511205	-104.671749
14,800.00	90.38	90.08	7,199.57	-2,602.51	5,702.17	1,430,147.725	3,230,394.860	40.511202	-104.671389
14,900.00	90.38	90.08	7,198.92	-2,602.65	5,802.17	1,430,147.593	3,230,494.858	40.511199	-104.671030
15,000.00	90.38	90.08	7,198.26	-2,602.78	5,902.17	1,430,147.460	3,230,594.856	40.511196	-104.670670
15,100.00	90.38	90.08	7,197.61	-2,602.91	6,002.16	1,430,147.328	3,230,694.854	40.511193	-104.670310
15,192.35	90.38	90.08	7,197.00	-2,603.03	6,094.51	1,430,147.206	3,230,787.198	40.511190	-104.669978
TD at 15192.35 - BHL REEMAN-8X-HC-04-06-65 965 FSL 2198 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-8X-HC-0- - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,432,750.240	3,224,692.690	40.518489	-104.691811
BHL REEMAN-8X-HC-0- - plan hits target center - Point	0.00	0.00	7,197.00	-2,603.03	6,094.51	1,430,147.206	3,230,787.198	40.511190	-104.669978
AP REEMAN-8X-HC-04 - plan misses target center by 0.17usft at 13067.24usft MD (7211.10 TVD, -2597.66 N, 3969.49 E) - Point	0.00	0.00	7,210.93	-2,597.70	3,969.48	1,430,152.544	3,228,662.172	40.511259	-104.677620
LPL REEMAN-8X-HC-04 - plan misses target center by 9.26usft at 8173.45usft MD (7234.95 TVD, -2381.69 N, -918.93 E) - Point	0.00	0.00	7,243.00	-2,385.72	-921.10	1,430,364.519	3,223,771.593	40.511964	-104.695201

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		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
3,107.26	3,038.67	-322.59	-214.59	Hold 30.15 Inc, 213.63 Az
7,222.22	6,597.12	-2,043.19	-1,359.13	KOP 10°/100
8,276.15	7,242.50	-2,390.20	-817.00	LP 90.38 Inc, 92.48 Az
13,067.23	7,210.93	-2,597.70	3,969.48	2/100 Turn
13,187.53	7,210.14	-2,600.38	4,089.74	Hold 90.38 Inc, 90.08 Az
15,192.35	7,197.00	-2,603.03	6,094.51	TD at 15192.35