

Well Name:
RUSCH 1X-HNC-04-07-65

Project Name:
Sec. 3-T7N-R65W

Pad Name:
Rusch Pad

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	Start Build 2.00
4515.76	40.32	12.09	4353.50	665.30	142.53	82.62	680.40	Hold 40.32 Inc, 12.09 Az
7612.07	40.32	12.09	6714.40	2624.16	562.20	325.89	2683.70	KOP 10°/100
8579.58	89.83	271.42	7208.00	3048.00	5.00	990.97	3473.50	LP 89.83 Inc, 271.42 Az
18084.53	89.83	271.42	7236.77	3282.69	-9496.01	10047.40	12977.40	TD at 18084.53

Geodetic Datum:

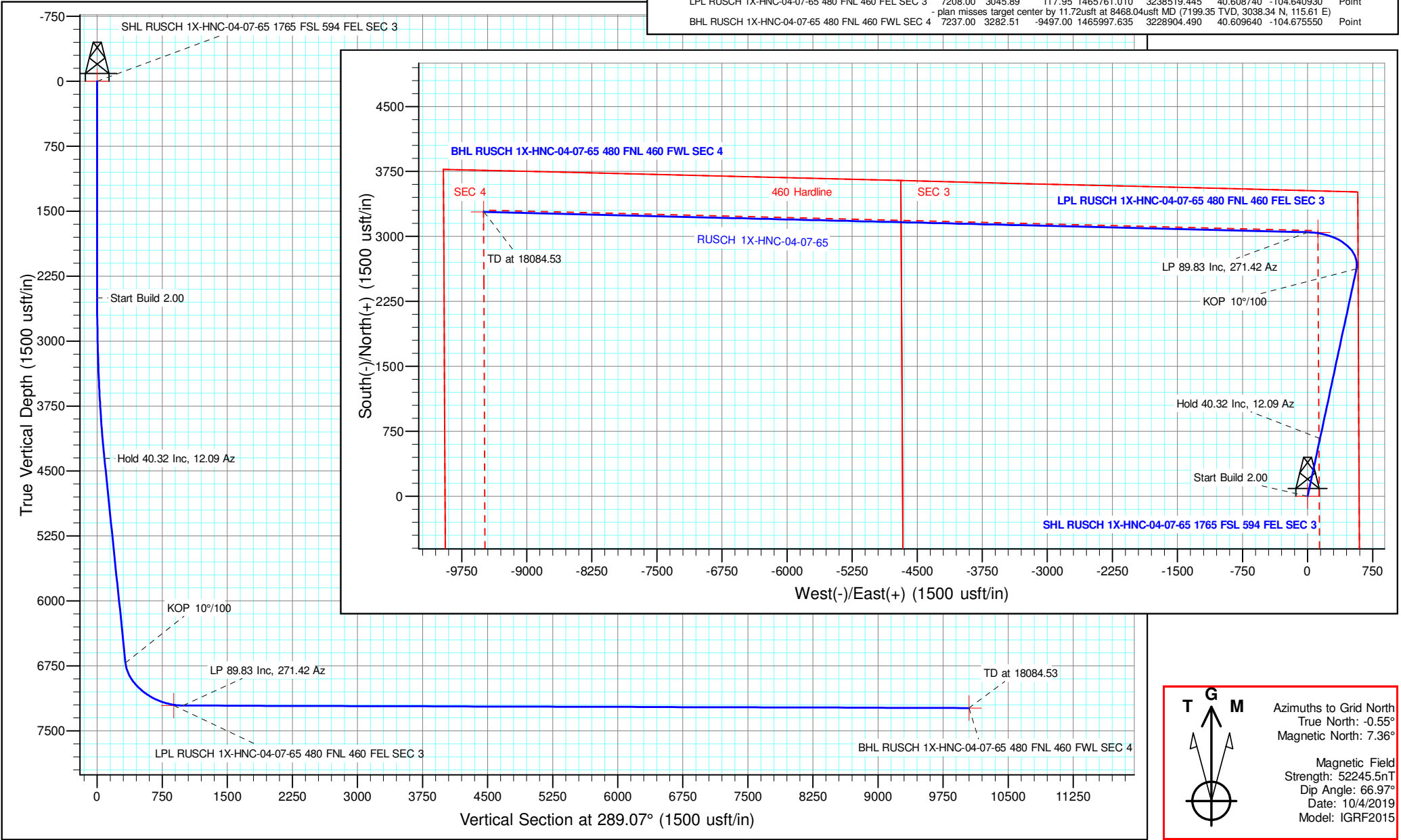
North American Datum 1983
US State Plane 1983, Colorado Northern Zone

Elevation:

Ground Elevation: 4886.00
KB Elevation: WELL @ 4909.00usft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL RUSCH 1X-HNC-04-07-65 1765 FSL 594 FEL SEC 3	0.00	0.00	0.00	1462715.124	3238401.495	40.600383	-104.641461	Point
LPL RUSCH 1X-HNC-04-07-65 480 FNL 460 FEL SEC 3	7208.00	3045.89	117.95	1465761.010	3238519.445	40.608740	-104.640930	Point
BHL RUSCH 1X-HNC-04-07-65 480 FNL 460 FWL SEC 4	7237.00	3282.51	-9497.00	1465997.635	3228904.490	40.609640	-104.675550	Point



T G M

Azimuths to Grid North
True North: -0.55°
Magnetic North: 7.36°

Magnetic Field
Strength: 52245.5nT
Dip Angle: 66.97°
Date: 10/4/2019
Model: IGRF2015

NICKEL ROAD

O P E R A T I N G

Nickel Road Operating

Sec. 3-T7N-R65W

Rusch Pad

RUSCH 1X-HNC-04-07-65

Wellbore #1

Plan: Design #2

Standard Planning Report - Geographic

18 October, 2019

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	Sec. 3-T7N-R65W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Rusch Pad				
Site Position:		Northing:	1,462,715.359 usft	Latitude:	40.600384
From:	Lat/Long	Easting:	3,238,386.497 usft	Longitude:	-104.641515
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.55 °

Well	RUSCH 1X-HNC-04-07-65					
Well Position	+N/-S	0.00 usft	Northing:	1,462,715.124 usft	Latitude:	40.600383
	+E/-W	0.00 usft	Easting:	3,238,401.495 usft	Longitude:	-104.641461
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,886.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/4/2019	7.92	66.97	52,245.49064504

Design	Design #2			
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	289.07

Plan Survey Tool Program	Date	10/18/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,084.51 Design #2 (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	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,515.78	40.32	12.09	4,353.51	665.32	142.54	2.00	2.00	0.00	12.09	
7,612.07	40.32	12.09	6,714.40	2,624.16	562.20	0.00	0.00	0.00	0.00	
8,579.58	89.83	271.42	7,208.00	3,048.00	5.00	10.00	5.12	-10.41	-98.29	
18,084.53	89.83	271.42	7,237.00	3,282.51	-9,497.01	0.00	0.00	0.00	0.00	BHL RUSCH 1X-HNC

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	1,462,715.124	3,238,401.495	40.600383	-104.641461
SHL RUSCH 1X-HNC-04-07-65 1765 FSL 594 FEL SEC 3									
100.00	0.00	0.00	100.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
200.00	0.00	0.00	200.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
300.00	0.00	0.00	300.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
400.00	0.00	0.00	400.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
500.00	0.00	0.00	500.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
600.00	0.00	0.00	600.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
700.00	0.00	0.00	700.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
800.00	0.00	0.00	800.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
900.00	0.00	0.00	900.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
2,500.00	0.00	0.00	2,500.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
Start Build 2.00									
2,600.00	2.00	12.09	2,599.98	1.71	0.37	1,462,716.830	3,238,401.861	40.600388	-104.641460
2,700.00	4.00	12.09	2,699.84	6.82	1.46	1,462,721.947	3,238,402.957	40.600402	-104.641456
2,800.00	6.00	12.09	2,799.45	15.35	3.29	1,462,730.469	3,238,404.783	40.600425	-104.641449
2,900.00	8.00	12.09	2,898.70	27.26	5.84	1,462,742.385	3,238,407.336	40.600458	-104.641439
3,000.00	10.00	12.09	2,997.47	42.56	9.12	1,462,757.681	3,238,410.613	40.600500	-104.641427
3,100.00	12.00	12.09	3,095.62	61.21	13.11	1,462,776.337	3,238,414.610	40.600551	-104.641412
3,200.00	14.00	12.09	3,193.06	83.21	17.83	1,462,798.332	3,238,419.322	40.600611	-104.641394
3,300.00	16.00	12.09	3,289.64	108.51	23.25	1,462,823.639	3,238,424.743	40.600680	-104.641374
3,400.00	18.00	12.09	3,385.27	137.10	29.37	1,462,852.226	3,238,430.868	40.600759	-104.641351
3,500.00	20.00	12.09	3,479.82	168.93	36.19	1,462,884.058	3,238,437.688	40.600846	-104.641325
3,600.00	22.00	12.09	3,573.17	203.97	43.70	1,462,919.098	3,238,445.195	40.600942	-104.641297
3,700.00	24.00	12.09	3,665.21	242.18	51.88	1,462,957.302	3,238,453.379	40.601046	-104.641266
3,800.00	26.00	12.09	3,755.84	283.50	60.74	1,462,998.624	3,238,462.232	40.601160	-104.641233
3,900.00	28.00	12.09	3,844.94	327.89	70.25	1,463,043.014	3,238,471.742	40.601281	-104.641197
4,000.00	30.00	12.09	3,932.39	375.29	80.40	1,463,090.417	3,238,481.898	40.601411	-104.641159
4,100.00	32.00	12.09	4,018.11	425.65	91.19	1,463,140.775	3,238,492.686	40.601549	-104.641118
4,200.00	34.00	12.09	4,101.97	478.90	102.60	1,463,194.028	3,238,504.095	40.601695	-104.641075
4,300.00	36.00	12.09	4,183.88	534.99	114.61	1,463,250.111	3,238,516.110	40.601848	-104.641030
4,400.00	38.00	12.09	4,263.74	593.83	127.22	1,463,308.954	3,238,528.717	40.602010	-104.640982
4,500.00	40.00	12.09	4,341.45	655.36	140.40	1,463,370.487	3,238,541.899	40.602178	-104.640933
4,515.77	40.32	12.09	4,353.50	665.30	142.53	1,463,380.428	3,238,544.029	40.602205	-104.640925
Hold 40.32 Inc, 12.09 Az									
4,515.78	40.32	12.09	4,353.51	665.32	142.54	1,463,380.441	3,238,544.032	40.602205	-104.640925
4,600.00	40.32	12.09	4,417.73	718.59	153.95	1,463,433.719	3,238,555.446	40.602351	-104.640882
4,700.00	40.32	12.09	4,493.98	781.86	167.50	1,463,496.983	3,238,569.000	40.602525	-104.640831
4,800.00	40.32	12.09	4,570.23	845.12	181.06	1,463,560.247	3,238,582.553	40.602698	-104.640780

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	40.32	12.09	4,646.48	908.39	194.61	1,463,623.512	3,238,596.107	40.602871	-104.640729
5,000.00	40.32	12.09	4,722.72	971.65	208.17	1,463,686.776	3,238,609.661	40.603044	-104.640678
5,100.00	40.32	12.09	4,798.97	1,034.92	221.72	1,463,750.040	3,238,623.214	40.603218	-104.640627
5,200.00	40.32	12.09	4,875.22	1,098.18	235.27	1,463,813.304	3,238,636.768	40.603391	-104.640576
5,300.00	40.32	12.09	4,951.47	1,161.44	248.83	1,463,876.569	3,238,650.322	40.603564	-104.640525
5,400.00	40.32	12.09	5,027.72	1,224.71	262.38	1,463,939.833	3,238,663.875	40.603738	-104.640474
5,500.00	40.32	12.09	5,103.97	1,287.97	275.93	1,464,003.097	3,238,677.429	40.603911	-104.640423
5,600.00	40.32	12.09	5,180.22	1,351.24	289.49	1,464,066.362	3,238,690.983	40.604084	-104.640372
5,700.00	40.32	12.09	5,256.47	1,414.50	303.04	1,464,129.626	3,238,704.536	40.604257	-104.640321
5,800.00	40.32	12.09	5,332.72	1,477.77	316.59	1,464,192.890	3,238,718.090	40.604431	-104.640270
5,900.00	40.32	12.09	5,408.97	1,541.03	330.15	1,464,256.154	3,238,731.644	40.604604	-104.640219
6,000.00	40.32	12.09	5,485.22	1,604.29	343.70	1,464,319.419	3,238,745.197	40.604777	-104.640168
6,100.00	40.32	12.09	5,561.46	1,667.56	357.26	1,464,382.683	3,238,758.751	40.604951	-104.640117
6,200.00	40.32	12.09	5,637.71	1,730.82	370.81	1,464,445.947	3,238,772.305	40.605124	-104.640066
6,300.00	40.32	12.09	5,713.96	1,794.09	384.36	1,464,509.212	3,238,785.858	40.605297	-104.640015
6,400.00	40.32	12.09	5,790.21	1,857.35	397.92	1,464,572.476	3,238,799.412	40.605470	-104.639963
6,500.00	40.32	12.09	5,866.46	1,920.62	411.47	1,464,635.740	3,238,812.966	40.605644	-104.639912
6,600.00	40.32	12.09	5,942.71	1,983.88	425.02	1,464,699.004	3,238,826.519	40.605817	-104.639861
6,700.00	40.32	12.09	6,018.96	2,047.14	438.58	1,464,762.269	3,238,840.073	40.605990	-104.639810
6,800.00	40.32	12.09	6,095.21	2,110.41	452.13	1,464,825.533	3,238,853.627	40.606164	-104.639759
6,900.00	40.32	12.09	6,171.46	2,173.67	465.69	1,464,888.797	3,238,867.180	40.606337	-104.639708
7,000.00	40.32	12.09	6,247.71	2,236.94	479.24	1,464,952.062	3,238,880.734	40.606510	-104.639657
7,100.00	40.32	12.09	6,323.96	2,300.20	492.79	1,465,015.326	3,238,894.288	40.606683	-104.639606
7,200.00	40.32	12.09	6,400.21	2,363.47	506.35	1,465,078.590	3,238,907.841	40.606857	-104.639555
7,300.00	40.32	12.09	6,476.45	2,426.73	519.90	1,465,141.855	3,238,921.395	40.607030	-104.639504
7,400.00	40.32	12.09	6,552.70	2,489.99	533.45	1,465,205.119	3,238,934.949	40.607203	-104.639453
7,500.00	40.32	12.09	6,628.95	2,553.26	547.01	1,465,268.383	3,238,948.502	40.607377	-104.639402
7,600.00	40.32	12.09	6,705.20	2,616.52	560.56	1,465,331.647	3,238,962.056	40.607550	-104.639351
7,612.07	40.32	12.09	6,714.40	2,624.16	562.20	1,465,339.282	3,238,963.692	40.607571	-104.639345
KOP 10°/100									
7,700.00	39.84	358.44	6,781.82	2,680.24	567.40	1,465,395.365	3,238,968.892	40.607725	-104.639324
7,800.00	41.24	343.18	6,857.99	2,743.98	556.95	1,465,459.103	3,238,958.449	40.607900	-104.639360
7,900.00	44.51	329.26	6,931.43	2,805.81	529.43	1,465,520.936	3,238,930.920	40.608070	-104.639457
8,000.00	49.25	317.17	6,999.90	2,863.86	485.65	1,465,578.987	3,238,887.141	40.608231	-104.639612
8,100.00	55.07	306.86	7,061.32	2,916.37	426.95	1,465,631.491	3,238,828.442	40.608376	-104.639822
8,200.00	61.65	298.00	7,113.83	2,961.73	355.11	1,465,676.854	3,238,756.607	40.608503	-104.640079
8,300.00	68.73	290.21	7,155.82	2,998.57	272.32	1,465,713.696	3,238,673.818	40.608606	-104.640376
8,400.00	76.13	283.15	7,186.02	3,025.77	181.10	1,465,740.898	3,238,582.591	40.608683	-104.640704
8,468.57	81.32	278.58	7,199.43	3,038.41	115.09	1,465,753.539	3,238,516.586	40.608720	-104.640941
LPL RUSCH 1X-HNC-04-07-65 480 FNL 460 FEL SEC 3									
8,500.00	83.72	276.53	7,203.52	3,042.51	84.20	1,465,757.634	3,238,485.698	40.608732	-104.641052
8,579.58	89.83	271.42	7,208.00	3,048.00	5.00	1,465,763.125	3,238,406.498	40.608749	-104.641337
LP 89.83 Inc, 271.42 Az									
8,600.00	89.83	271.42	7,208.06	3,048.50	-15.41	1,465,763.629	3,238,386.084	40.608751	-104.641410
8,700.00	89.83	271.42	7,208.36	3,050.97	-115.38	1,465,766.098	3,238,286.115	40.608760	-104.641770
8,800.00	89.83	271.42	7,208.67	3,053.44	-215.35	1,465,768.568	3,238,186.146	40.608770	-104.642130
8,900.00	89.83	271.42	7,208.97	3,055.91	-315.32	1,465,771.037	3,238,086.177	40.608779	-104.642490
9,000.00	89.83	271.42	7,209.27	3,058.38	-415.29	1,465,773.506	3,237,986.208	40.608789	-104.642850
9,100.00	89.83	271.42	7,209.58	3,060.85	-515.26	1,465,775.976	3,237,886.239	40.608798	-104.643210
9,200.00	89.83	271.42	7,209.88	3,063.32	-615.23	1,465,778.445	3,237,786.270	40.608807	-104.643570
9,300.00	89.83	271.42	7,210.18	3,065.79	-715.19	1,465,780.915	3,237,686.301	40.608817	-104.643930
9,400.00	89.83	271.42	7,210.48	3,068.26	-815.16	1,465,783.384	3,237,586.332	40.608826	-104.644290
9,500.00	89.83	271.42	7,210.79	3,070.73	-915.13	1,465,785.853	3,237,486.363	40.608836	-104.644650
9,600.00	89.83	271.42	7,211.09	3,073.20	-1,015.10	1,465,788.323	3,237,386.394	40.608845	-104.645010

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	89.83	271.42	7,211.39	3,075.67	-1,115.07	1,465,790.792	3,237,286.425	40.608855	-104.645370	
9,800.00	89.83	271.42	7,211.69	3,078.14	-1,215.04	1,465,793.261	3,237,186.456	40.608864	-104.645730	
9,900.00	89.83	271.42	7,212.00	3,080.61	-1,315.01	1,465,795.731	3,237,086.487	40.608873	-104.646090	
10,000.00	89.83	271.42	7,212.30	3,083.08	-1,414.98	1,465,798.200	3,236,986.518	40.608883	-104.646450	
10,100.00	89.83	271.42	7,212.60	3,085.54	-1,514.95	1,465,800.670	3,236,886.549	40.608892	-104.646810	
10,200.00	89.83	271.42	7,212.91	3,088.01	-1,614.92	1,465,803.139	3,236,786.579	40.608902	-104.647170	
10,300.00	89.83	271.42	7,213.21	3,090.48	-1,714.89	1,465,805.608	3,236,686.610	40.608911	-104.647530	
10,400.00	89.83	271.42	7,213.51	3,092.95	-1,814.85	1,465,808.078	3,236,586.641	40.608920	-104.647890	
10,500.00	89.83	271.42	7,213.81	3,095.42	-1,914.82	1,465,810.547	3,236,486.672	40.608930	-104.648249	
10,600.00	89.83	271.42	7,214.12	3,097.89	-2,014.79	1,465,813.016	3,236,386.703	40.608939	-104.648609	
10,700.00	89.83	271.42	7,214.42	3,100.36	-2,114.76	1,465,815.486	3,236,286.734	40.608949	-104.648969	
10,800.00	89.83	271.42	7,214.72	3,102.83	-2,214.73	1,465,817.955	3,236,186.765	40.608958	-104.649329	
10,900.00	89.83	271.42	7,215.03	3,105.30	-2,314.70	1,465,820.425	3,236,086.796	40.608968	-104.649689	
11,000.00	89.83	271.42	7,215.33	3,107.77	-2,414.67	1,465,822.894	3,235,986.827	40.608977	-104.650049	
11,100.00	89.83	271.42	7,215.63	3,110.24	-2,514.64	1,465,825.363	3,235,886.858	40.608986	-104.650409	
11,200.00	89.83	271.42	7,215.93	3,112.71	-2,614.61	1,465,827.833	3,235,786.889	40.608996	-104.650769	
11,300.00	89.83	271.42	7,216.24	3,115.18	-2,714.58	1,465,830.302	3,235,686.920	40.609005	-104.651129	
11,400.00	89.83	271.42	7,216.54	3,117.65	-2,814.54	1,465,832.771	3,235,586.951	40.609015	-104.651489	
11,500.00	89.83	271.42	7,216.84	3,120.12	-2,914.51	1,465,835.241	3,235,486.982	40.609024	-104.651849	
11,600.00	89.83	271.42	7,217.14	3,122.59	-3,014.48	1,465,837.710	3,235,387.013	40.609033	-104.652209	
11,700.00	89.83	271.42	7,217.45	3,125.05	-3,114.45	1,465,840.180	3,235,287.044	40.609043	-104.652569	
11,800.00	89.83	271.42	7,217.75	3,127.52	-3,214.42	1,465,842.649	3,235,187.075	40.609052	-104.652929	
11,900.00	89.83	271.42	7,218.05	3,129.99	-3,314.39	1,465,845.118	3,235,087.106	40.609062	-104.653289	
12,000.00	89.83	271.42	7,218.36	3,132.46	-3,414.36	1,465,847.588	3,234,987.137	40.609071	-104.653649	
12,100.00	89.83	271.42	7,218.66	3,134.93	-3,514.33	1,465,850.057	3,234,887.168	40.609080	-104.654009	
12,200.00	89.83	271.42	7,218.96	3,137.40	-3,614.30	1,465,852.527	3,234,787.199	40.609090	-104.654369	
12,300.00	89.83	271.42	7,219.26	3,139.87	-3,714.27	1,465,854.996	3,234,687.230	40.609099	-104.654729	
12,400.00	89.83	271.42	7,219.57	3,142.34	-3,814.24	1,465,857.465	3,234,587.261	40.609109	-104.655089	
12,500.00	89.83	271.42	7,219.87	3,144.81	-3,914.20	1,465,859.935	3,234,487.292	40.609118	-104.655449	
12,600.00	89.83	271.42	7,220.17	3,147.28	-4,014.17	1,465,862.404	3,234,387.322	40.609127	-104.655808	
12,700.00	89.83	271.42	7,220.47	3,149.75	-4,114.14	1,465,864.873	3,234,287.353	40.609137	-104.656168	
12,800.00	89.83	271.42	7,220.78	3,152.22	-4,214.11	1,465,867.343	3,234,187.384	40.609146	-104.656528	
12,900.00	89.83	271.42	7,221.08	3,154.69	-4,314.08	1,465,869.812	3,234,087.415	40.609155	-104.656888	
13,000.00	89.83	271.42	7,221.38	3,157.16	-4,414.05	1,465,872.282	3,233,987.446	40.609165	-104.657248	
13,100.00	89.83	271.42	7,221.69	3,159.63	-4,514.02	1,465,874.751	3,233,887.477	40.609174	-104.657608	
13,200.00	89.83	271.42	7,221.99	3,162.10	-4,613.99	1,465,877.220	3,233,787.508	40.609184	-104.657968	
13,300.00	89.83	271.42	7,222.29	3,164.57	-4,713.96	1,465,879.690	3,233,687.539	40.609193	-104.658328	
13,400.00	89.83	271.42	7,222.59	3,167.03	-4,813.93	1,465,882.159	3,233,587.570	40.609202	-104.658688	
13,500.00	89.83	271.42	7,222.90	3,169.50	-4,913.89	1,465,884.628	3,233,487.601	40.609212	-104.659048	
13,600.00	89.83	271.42	7,223.20	3,171.97	-5,013.86	1,465,887.098	3,233,387.632	40.609221	-104.659408	
13,700.00	89.83	271.42	7,223.50	3,174.44	-5,113.83	1,465,889.567	3,233,287.663	40.609231	-104.659768	
13,800.00	89.83	271.42	7,223.80	3,176.91	-5,213.80	1,465,892.037	3,233,187.694	40.609240	-104.660128	
13,900.00	89.83	271.42	7,224.11	3,179.38	-5,313.77	1,465,894.506	3,233,087.725	40.609249	-104.660488	
14,000.00	89.83	271.42	7,224.41	3,181.85	-5,413.74	1,465,896.975	3,232,987.756	40.609259	-104.660848	
14,100.00	89.83	271.42	7,224.71	3,184.32	-5,513.71	1,465,899.445	3,232,887.787	40.609268	-104.661208	
14,200.00	89.83	271.42	7,225.02	3,186.79	-5,613.68	1,465,901.914	3,232,787.818	40.609277	-104.661568	
14,300.00	89.83	271.42	7,225.32	3,189.26	-5,713.65	1,465,904.383	3,232,687.849	40.609287	-104.661928	
14,400.00	89.83	271.42	7,225.62	3,191.73	-5,813.62	1,465,906.853	3,232,587.880	40.609296	-104.662288	
14,500.00	89.83	271.42	7,225.92	3,194.20	-5,913.59	1,465,909.322	3,232,487.911	40.609306	-104.662648	
14,600.00	89.83	271.42	7,226.23	3,196.67	-6,013.55	1,465,911.792	3,232,387.942	40.609315	-104.663008	
14,700.00	89.83	271.42	7,226.53	3,199.14	-6,113.52	1,465,914.261	3,232,287.973	40.609324	-104.663367	
14,800.00	89.83	271.42	7,226.83	3,201.61	-6,213.49	1,465,916.730	3,232,188.004	40.609334	-104.663727	
14,900.00	89.83	271.42	7,227.13	3,204.08	-6,313.46	1,465,919.200	3,232,088.034	40.609343	-104.664087	
15,000.00	89.83	271.42	7,227.44	3,206.54	-6,413.43	1,465,921.669	3,231,988.065	40.609352	-104.664447	
15,100.00	89.83	271.42	7,227.74	3,209.01	-6,513.40	1,465,924.138	3,231,888.096	40.609362	-104.664807	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,200.00	89.83	271.42	7,228.04	3,211.48	-6,613.37	1,465,926.608	3,231,788.127	40.609371	-104.665167
15,300.00	89.83	271.42	7,228.35	3,213.95	-6,713.34	1,465,929.077	3,231,688.157	40.609380	-104.665527
15,400.00	89.83	271.42	7,228.65	3,216.42	-6,813.31	1,465,931.547	3,231,588.188	40.609390	-104.665887
15,500.00	89.83	271.42	7,228.95	3,218.89	-6,913.28	1,465,934.016	3,231,488.219	40.609399	-104.666247
15,600.00	89.83	271.42	7,229.25	3,221.36	-7,013.24	1,465,936.485	3,231,388.250	40.609409	-104.666607
15,700.00	89.83	271.42	7,229.56	3,223.83	-7,113.21	1,465,938.955	3,231,288.281	40.609418	-104.666967
15,800.00	89.83	271.42	7,229.86	3,226.30	-7,213.18	1,465,941.424	3,231,188.312	40.609427	-104.667327
15,900.00	89.83	271.42	7,230.16	3,228.77	-7,313.15	1,465,943.894	3,231,088.343	40.609437	-104.667687
16,000.00	89.83	271.42	7,230.47	3,231.24	-7,413.12	1,465,946.363	3,230,988.374	40.609446	-104.668047
16,100.00	89.83	271.42	7,230.77	3,233.71	-7,513.09	1,465,948.832	3,230,888.405	40.609455	-104.668407
16,200.00	89.83	271.42	7,231.07	3,236.18	-7,613.06	1,465,951.302	3,230,788.436	40.609465	-104.668767
16,300.00	89.83	271.42	7,231.37	3,238.65	-7,713.03	1,465,953.771	3,230,688.467	40.609474	-104.669127
16,400.00	89.83	271.42	7,231.68	3,241.12	-7,813.00	1,465,956.240	3,230,588.498	40.609483	-104.669487
16,500.00	89.83	271.42	7,231.98	3,243.59	-7,912.97	1,465,958.710	3,230,488.529	40.609493	-104.669847
16,600.00	89.83	271.42	7,232.28	3,246.05	-8,012.94	1,465,961.179	3,230,388.560	40.609502	-104.670207
16,700.00	89.83	271.42	7,232.58	3,248.52	-8,112.90	1,465,963.649	3,230,288.591	40.609511	-104.670567
16,800.00	89.83	271.42	7,232.89	3,250.99	-8,212.87	1,465,966.118	3,230,188.622	40.609521	-104.670927
16,900.00	89.83	271.42	7,233.19	3,253.46	-8,312.84	1,465,968.587	3,230,088.653	40.609530	-104.671286
17,000.00	89.83	271.42	7,233.49	3,255.93	-8,412.81	1,465,971.057	3,229,988.684	40.609539	-104.671646
17,100.00	89.83	271.42	7,233.80	3,258.40	-8,512.78	1,465,973.526	3,229,888.715	40.609549	-104.672006
17,200.00	89.83	271.42	7,234.10	3,260.87	-8,612.75	1,465,975.995	3,229,788.745	40.609558	-104.672366
17,300.00	89.83	271.42	7,234.40	3,263.34	-8,712.72	1,465,978.465	3,229,688.776	40.609567	-104.672726
17,400.00	89.83	271.42	7,234.70	3,265.81	-8,812.69	1,465,980.934	3,229,588.807	40.609577	-104.673086
17,500.00	89.83	271.42	7,235.01	3,268.28	-8,912.66	1,465,983.404	3,229,488.838	40.609586	-104.673446
17,600.00	89.83	271.42	7,235.31	3,270.75	-9,012.63	1,465,985.873	3,229,388.869	40.609595	-104.673806
17,700.00	89.83	271.42	7,235.61	3,273.22	-9,112.59	1,465,988.342	3,229,288.900	40.609605	-104.674166
17,800.00	89.83	271.42	7,235.91	3,275.69	-9,212.56	1,465,990.812	3,229,188.931	40.609614	-104.674526
17,900.00	89.83	271.42	7,236.22	3,278.16	-9,312.53	1,465,993.281	3,229,088.962	40.609623	-104.674886
18,000.00	89.83	271.42	7,236.52	3,280.63	-9,412.50	1,465,995.750	3,228,988.993	40.609633	-104.675246
18,083.53	89.83	271.42	7,236.77	3,282.69	-9,496.01	1,465,997.813	3,228,905.489	40.609641	-104.675547
TD at 18084.53									
18,084.53	89.83	271.42	7,237.00	3,282.51	-9,497.01	1,465,997.636	3,228,904.490	40.609640	-104.675550
BHL RUSCH 1X-HNC-04-07-65 480 FNL 460 FWL SEC 4									

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 RUSCH 1X-HNC-04-07-65 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,462,715.124	3,238,401.495	40.600383	-104.641461
LPL RUSCH 1X-HNC-04-07-65 - plan misses target center by 11.72usft at 8468.57usft MD (7199.43 TVD, 3038.41 N, 115.09 E) - Point	0.00	0.00	7,208.00	3,045.89	117.95	1,465,761.011	3,238,519.445	40.608740	-104.640930
BHL RUSCH 1X-HNC-04-07-65 - plan hits target center - Point	0.00	0.00	7,237.00	3,282.51	-9,497.01	1,465,997.636	3,228,904.490	40.609640	-104.675550

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 1X-HNC-04-07-65
Company:	Nickel Road Operating	TVD Reference:	WELL @ 4909.00usft (Original Well Elev)
Project:	Sec. 3-T7N-R65W	MD Reference:	WELL @ 4909.00usft (Original Well Elev)
Site:	Rusch Pad	North Reference:	Grid
Well:	RUSCH 1X-HNC-04-07-65	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	Start Build 2.00
4,515.77	4,353.50	665.30	142.53	Hold 40.32 Inc, 12.09 Az
7,612.07	6,714.40	2,624.16	562.20	KOP 10°/100
8,579.58	7,208.00	3,048.00	5.00	LP 89.83 Inc, 271.42 Az
18,083.53	7,236.77	3,282.69	-9,496.01	TD at 18084.53