

Well Name:
RUSCH 6X-HC-04-07-65

Project Name:
Sec. 3-T7N-R65W

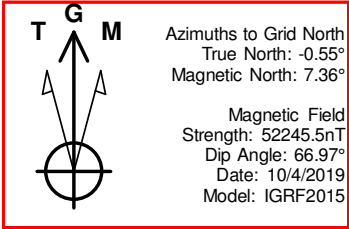
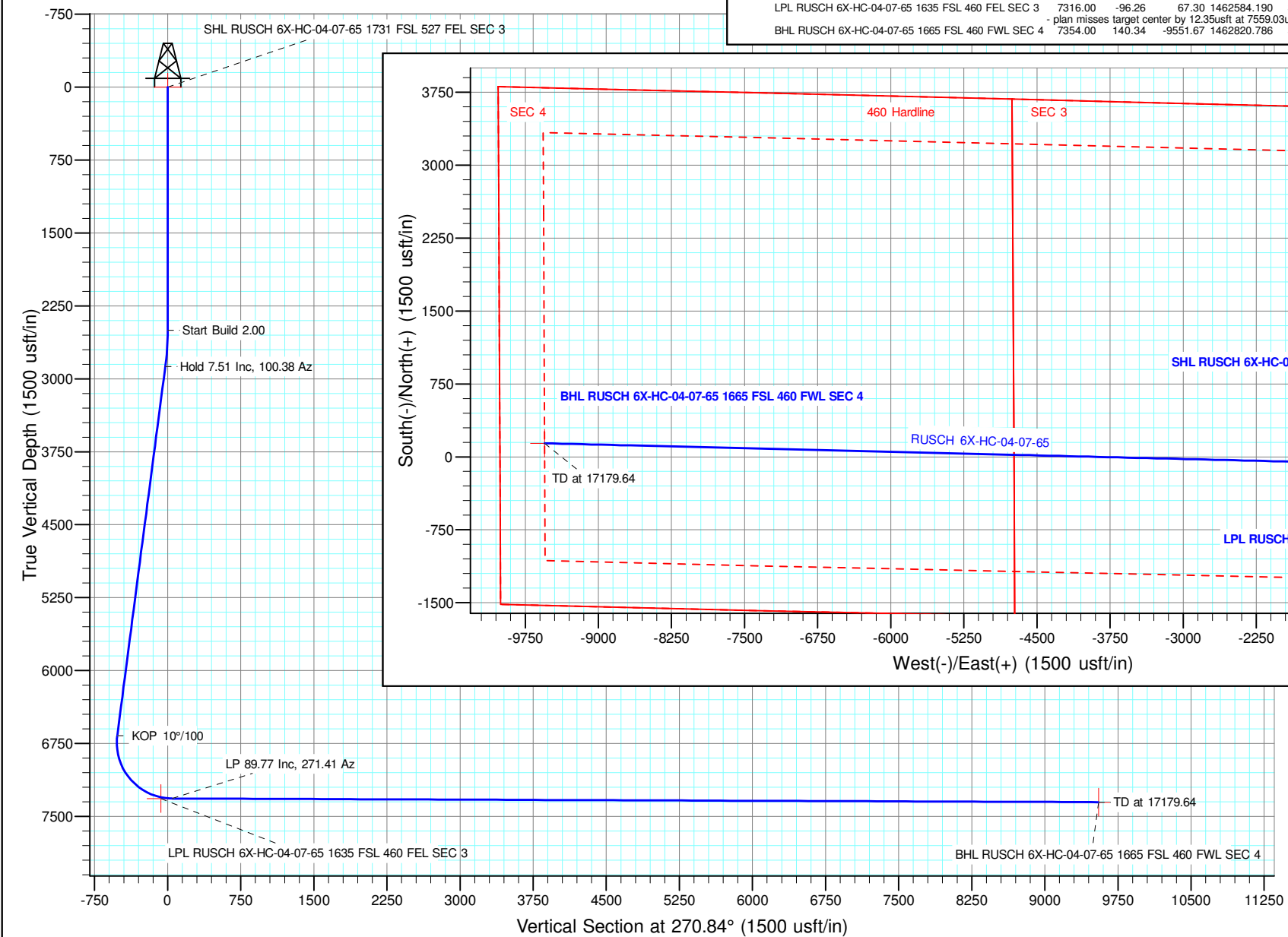
Pad Name:
Rusch Pad

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	
2875.34	7.51	100.40	2874.27	-4.43	24.15	-24.21	24.55	Hold 7.51 Inc, 100.38 Az	
6703.13	7.51	100.40	6669.24	-94.69	516.05	-517.39	524.67	KOP 10°/100	
7675.00	89.77	271.41	7316.00	-94.00	-50.00	48.61	1101.97	LP 89.77 Inc, 271.41 Az	
17179.64	89.77	271.41	7353.69	140.18	-9550.68	9551.71	10605.54	TD at 17179.64	

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 6X-HC-04-07-65 1731 FSL 527 FEL SEC 3	0.00	0.00	0.00	1462680.446	3238469.034	40.600286	-104.641219	Point		
LPL RUSCH 6X-HC-04-07-65 1635 FSL 460 FEL SEC 3	7316.00	-96.26	67.30	1462584.190	3238536.337	40.600020	-104.640980	Point		
BHL RUSCH 6X-HC-04-07-65 1665 FSL 460 FWL SEC 4	7354.00	140.34	-9551.67	1462820.786	3228917.366	40.600920	-104.675610	Point		



NICKEL ROAD

O P E R A T I N G

Nickel Road Operating

Sec. 3-T7N-R65W

Rusch Pad

RUSCH 6X-HC-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 6X-HC-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 6X-HC-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 6X-HC-04-07-65					
Well Position	+N/-S	0.00 usft	Northing:	1,462,680.446 usft	Latitude:	40.600286
	+E/-W	0.00 usft	Easting:	3,238,469.035 usft	Longitude:	-104.641219
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	52,245.46571121

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	270.84

Plan Survey Tool Program	Date	10/18/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,179.63 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	
2,875.37	7.51	100.40	2,874.29	-4.43	24.15	2.00	2.00	0.00	100.40	
6,703.13	7.51	100.40	6,669.24	-94.69	516.05	0.00	0.00	0.00	0.00	
7,675.00	89.77	271.41	7,316.00	-94.00	-50.00	10.00	8.46	17.60	170.94	
17,179.64	89.77	271.41	7,354.00	140.34	-9,551.67	0.00	0.00	0.00	0.00	BHL RUSCH 6X-HC-(

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 6X-HC-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 6X-HC-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	1,462,680.446	3,238,469.035	40.600286	-104.641219	
SHL RUSCH 6X-HC-04-07-65 1731 FSL 527 FEL SEC 3										
100.00	0.00	0.00	100.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
200.00	0.00	0.00	200.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
300.00	0.00	0.00	300.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
400.00	0.00	0.00	400.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
500.00	0.00	0.00	500.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
600.00	0.00	0.00	600.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
700.00	0.00	0.00	700.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
800.00	0.00	0.00	800.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
900.00	0.00	0.00	900.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219	
Start Build 2.00										
2,600.00	2.00	100.40	2,599.98	-0.31	1.72	1,462,680.131	3,238,470.751	40.600285	-104.641213	
2,700.00	4.00	100.40	2,699.84	-1.26	6.86	1,462,679.186	3,238,475.899	40.600282	-104.641195	
2,800.00	6.00	100.40	2,799.45	-2.83	15.44	1,462,677.613	3,238,484.471	40.600278	-104.641164	
2,875.34	7.51	100.40	2,874.27	-4.43	24.15	1,462,676.014	3,238,493.185	40.600273	-104.641132	
Hold 7.51 Inc, 100.38 Az										
2,875.37	7.51	100.40	2,874.29	-4.43	24.15	1,462,676.014	3,238,493.188	40.600273	-104.641132	
2,900.00	7.51	100.40	2,898.72	-5.01	27.32	1,462,675.433	3,238,496.354	40.600272	-104.641121	
3,000.00	7.51	100.40	2,997.86	-7.37	40.17	1,462,673.075	3,238,509.204	40.600265	-104.641075	
3,100.00	7.51	100.40	3,097.00	-9.73	53.02	1,462,670.717	3,238,522.055	40.600258	-104.641029	
3,200.00	7.51	100.40	3,196.14	-12.09	65.87	1,462,668.359	3,238,534.906	40.600251	-104.640982	
3,300.00	7.51	100.40	3,295.29	-14.44	78.72	1,462,666.001	3,238,547.757	40.600244	-104.640936	
3,400.00	7.51	100.40	3,394.43	-16.80	91.57	1,462,663.643	3,238,560.607	40.600238	-104.640890	
3,500.00	7.51	100.40	3,493.57	-19.16	104.42	1,462,661.285	3,238,573.458	40.600231	-104.640844	
3,600.00	7.51	100.40	3,592.72	-21.52	117.27	1,462,658.927	3,238,586.309	40.600224	-104.640798	
3,700.00	7.51	100.40	3,691.86	-23.88	130.13	1,462,656.569	3,238,599.160	40.600217	-104.640752	
3,800.00	7.51	100.40	3,791.00	-26.23	142.98	1,462,654.211	3,238,612.010	40.600210	-104.640705	
3,900.00	7.51	100.40	3,890.14	-28.59	155.83	1,462,651.853	3,238,624.861	40.600203	-104.640659	
4,000.00	7.51	100.40	3,989.29	-30.95	168.68	1,462,649.495	3,238,637.712	40.600197	-104.640613	
4,100.00	7.51	100.40	4,088.43	-33.31	181.53	1,462,647.137	3,238,650.563	40.600190	-104.640567	
4,200.00	7.51	100.40	4,187.57	-35.67	194.38	1,462,644.779	3,238,663.414	40.600183	-104.640521	
4,300.00	7.51	100.40	4,286.72	-38.02	207.23	1,462,642.421	3,238,676.264	40.600176	-104.640474	
4,400.00	7.51	100.40	4,385.86	-40.38	220.08	1,462,640.063	3,238,689.115	40.600169	-104.640428	
4,500.00	7.51	100.40	4,485.00	-42.74	232.93	1,462,637.705	3,238,701.966	40.600163	-104.640382	
4,600.00	7.51	100.40	4,584.14	-45.10	245.78	1,462,635.347	3,238,714.817	40.600156	-104.640336	
4,700.00	7.51	100.40	4,683.29	-47.46	258.63	1,462,632.989	3,238,727.667	40.600149	-104.640290	
4,800.00	7.51	100.40	4,782.43	-49.81	271.48	1,462,630.631	3,238,740.518	40.600142	-104.640243	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 6X-HC-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 6X-HC-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	7.51	100.40	4,881.57	-52.17	284.33	1,462,628.273	3,238,753.369	40.600135	-104.640197
5,000.00	7.51	100.40	4,980.71	-54.53	297.19	1,462,625.915	3,238,766.220	40.600128	-104.640151
5,100.00	7.51	100.40	5,079.86	-56.89	310.04	1,462,623.557	3,238,779.071	40.600122	-104.640105
5,200.00	7.51	100.40	5,179.00	-59.25	322.89	1,462,621.199	3,238,791.921	40.600115	-104.640059
5,300.00	7.51	100.40	5,278.14	-61.60	335.74	1,462,618.841	3,238,804.772	40.600108	-104.640012
5,400.00	7.51	100.40	5,377.29	-63.96	348.59	1,462,616.483	3,238,817.623	40.600101	-104.639966
5,500.00	7.51	100.40	5,476.43	-66.32	361.44	1,462,614.125	3,238,830.474	40.600094	-104.639920
5,600.00	7.51	100.40	5,575.57	-68.68	374.29	1,462,611.767	3,238,843.324	40.600088	-104.639874
5,700.00	7.51	100.40	5,674.71	-71.04	387.14	1,462,609.409	3,238,856.175	40.600081	-104.639828
5,800.00	7.51	100.40	5,773.86	-73.39	399.99	1,462,607.052	3,238,869.026	40.600074	-104.639781
5,900.00	7.51	100.40	5,873.00	-75.75	412.84	1,462,604.694	3,238,881.877	40.600067	-104.639735
6,000.00	7.51	100.40	5,972.14	-78.11	425.69	1,462,602.336	3,238,894.727	40.600060	-104.639689
6,100.00	7.51	100.40	6,071.29	-80.47	438.54	1,462,599.978	3,238,907.578	40.600054	-104.639643
6,200.00	7.51	100.40	6,170.43	-82.83	451.39	1,462,597.620	3,238,920.429	40.600047	-104.639597
6,300.00	7.51	100.40	6,269.57	-85.18	464.25	1,462,595.262	3,238,933.280	40.600040	-104.639550
6,400.00	7.51	100.40	6,368.71	-87.54	477.10	1,462,592.904	3,238,946.131	40.600033	-104.639504
6,500.00	7.51	100.40	6,467.86	-89.90	489.95	1,462,590.546	3,238,958.981	40.600026	-104.639458
6,600.00	7.51	100.40	6,567.00	-92.26	502.80	1,462,588.188	3,238,971.832	40.600019	-104.639412
6,700.00	7.51	100.40	6,666.14	-94.62	515.65	1,462,585.830	3,238,984.683	40.600013	-104.639366
6,703.13	7.51	100.40	6,669.24	-94.69	516.05	1,462,585.756	3,238,985.085	40.600012	-104.639364
KOP 10°/100									
6,800.00	2.56	244.02	6,765.88	-96.78	520.34	1,462,583.661	3,238,989.375	40.600007	-104.639349
6,900.00	12.33	266.02	6,864.93	-98.51	507.65	1,462,581.937	3,238,976.685	40.600002	-104.639395
7,000.00	22.30	268.54	6,960.28	-99.74	477.96	1,462,580.709	3,238,946.992	40.600000	-104.639502
7,100.00	32.29	269.55	7,049.03	-100.43	432.16	1,462,580.015	3,238,901.197	40.599999	-104.639667
7,200.00	42.29	270.12	7,128.49	-100.57	371.66	1,462,579.876	3,238,840.691	40.600000	-104.639884
7,300.00	52.28	270.51	7,196.24	-100.15	298.28	1,462,580.297	3,238,767.313	40.600003	-104.640149
7,400.00	62.28	270.80	7,250.23	-99.18	214.26	1,462,581.264	3,238,683.293	40.600008	-104.640451
7,500.00	72.28	271.04	7,288.80	-97.70	122.15	1,462,582.748	3,238,591.183	40.600015	-104.640783
7,559.58	78.23	271.17	7,303.96	-96.59	64.57	1,462,583.860	3,238,533.600	40.600019	-104.640990
LPL RUSCH 6X-HC-04-07-65 1635 FSL 460 FEL SEC 3									
7,600.00	82.27	271.26	7,310.80	-95.74	24.75	1,462,584.704	3,238,493.782	40.600023	-104.641133
7,675.00	89.77	271.41	7,316.00	-94.00	-50.00	1,462,586.446	3,238,419.039	40.600029	-104.641403
LP 89.77 Inc, 271.41 Az									
7,700.00	89.77	271.41	7,316.10	-93.38	-74.99	1,462,587.062	3,238,394.044	40.600032	-104.641493
7,800.00	89.77	271.41	7,316.50	-90.92	-174.96	1,462,589.526	3,238,294.076	40.600041	-104.641852
7,900.00	89.77	271.41	7,316.89	-88.46	-274.93	1,462,591.990	3,238,194.107	40.600051	-104.642212
8,000.00	89.77	271.41	7,317.29	-85.99	-374.90	1,462,594.454	3,238,094.138	40.600060	-104.642572
8,100.00	89.77	271.41	7,317.69	-83.53	-474.87	1,462,596.918	3,237,994.169	40.600069	-104.642932
8,200.00	89.77	271.41	7,318.08	-81.06	-574.83	1,462,599.382	3,237,894.200	40.600079	-104.643292
8,300.00	89.77	271.41	7,318.48	-78.60	-674.80	1,462,601.846	3,237,794.231	40.600088	-104.643652
8,400.00	89.77	271.41	7,318.88	-76.14	-774.77	1,462,604.311	3,237,694.263	40.600098	-104.644012
8,500.00	89.77	271.41	7,319.27	-73.67	-874.74	1,462,606.775	3,237,594.294	40.600107	-104.644372
8,600.00	89.77	271.41	7,319.67	-71.21	-974.71	1,462,609.239	3,237,494.325	40.600116	-104.644732
8,700.00	89.77	271.41	7,320.06	-68.74	-1,074.68	1,462,611.703	3,237,394.356	40.600126	-104.645092
8,800.00	89.77	271.41	7,320.46	-66.28	-1,174.65	1,462,614.167	3,237,294.387	40.600135	-104.645451
8,900.00	89.77	271.41	7,320.86	-63.81	-1,274.62	1,462,616.631	3,237,194.418	40.600145	-104.645811
9,000.00	89.77	271.41	7,321.25	-61.35	-1,374.59	1,462,619.095	3,237,094.449	40.600154	-104.646171
9,100.00	89.77	271.41	7,321.65	-58.89	-1,474.55	1,462,621.560	3,236,994.481	40.600164	-104.646531
9,200.00	89.77	271.41	7,322.05	-56.42	-1,574.52	1,462,624.024	3,236,894.512	40.600173	-104.646891
9,300.00	89.77	271.41	7,322.44	-53.96	-1,674.49	1,462,626.488	3,236,794.543	40.600182	-104.647251
9,400.00	89.77	271.41	7,322.84	-51.49	-1,774.46	1,462,628.952	3,236,694.574	40.600192	-104.647611
9,500.00	89.77	271.41	7,323.24	-49.03	-1,874.43	1,462,631.416	3,236,594.605	40.600201	-104.647971
9,600.00	89.77	271.41	7,323.63	-46.57	-1,974.40	1,462,633.880	3,236,494.636	40.600211	-104.648331

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 6X-HC-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 6X-HC-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	89.77	271.41	7,324.03	-44.10	-2,074.37	1,462,636.344	3,236,394.668	40.600220	-104.648691	
9,800.00	89.77	271.41	7,324.43	-41.64	-2,174.34	1,462,638.809	3,236,294.699	40.600229	-104.649050	
9,900.00	89.77	271.41	7,324.82	-39.17	-2,274.30	1,462,641.273	3,236,194.730	40.600239	-104.649410	
10,000.00	89.77	271.41	7,325.22	-36.71	-2,374.27	1,462,643.737	3,236,094.761	40.600248	-104.649770	
10,100.00	89.77	271.41	7,325.62	-34.24	-2,474.24	1,462,646.201	3,235,994.792	40.600258	-104.650130	
10,200.00	89.77	271.41	7,326.01	-31.78	-2,574.21	1,462,648.665	3,235,894.823	40.600267	-104.650490	
10,300.00	89.77	271.41	7,326.41	-29.32	-2,674.18	1,462,651.129	3,235,794.855	40.600276	-104.650850	
10,400.00	89.77	271.41	7,326.81	-26.85	-2,774.15	1,462,653.593	3,235,694.886	40.600286	-104.651210	
10,500.00	89.77	271.41	7,327.20	-24.39	-2,874.12	1,462,656.057	3,235,594.917	40.600295	-104.651570	
10,600.00	89.77	271.41	7,327.60	-21.92	-2,974.09	1,462,658.522	3,235,494.948	40.600304	-104.651930	
10,700.00	89.77	271.41	7,328.00	-19.46	-3,074.06	1,462,660.986	3,235,394.979	40.600314	-104.652290	
10,800.00	89.77	271.41	7,328.39	-17.00	-3,174.02	1,462,663.450	3,235,295.010	40.600323	-104.652650	
10,900.00	89.77	271.41	7,328.79	-14.53	-3,273.99	1,462,665.914	3,235,195.041	40.600333	-104.653009	
11,000.00	89.77	271.41	7,329.18	-12.07	-3,373.96	1,462,668.378	3,235,095.073	40.600342	-104.653369	
11,100.00	89.77	271.41	7,329.58	-9.60	-3,473.93	1,462,670.842	3,234,995.104	40.600351	-104.653729	
11,200.00	89.77	271.41	7,329.98	-7.14	-3,573.90	1,462,673.306	3,234,895.135	40.600361	-104.654089	
11,300.00	89.77	271.41	7,330.37	-4.68	-3,673.87	1,462,675.771	3,234,795.166	40.600370	-104.654449	
11,400.00	89.77	271.41	7,330.77	-2.21	-3,773.84	1,462,678.235	3,234,695.197	40.600380	-104.654809	
11,500.00	89.77	271.41	7,331.17	0.25	-3,873.81	1,462,680.699	3,234,595.228	40.600389	-104.655169	
11,600.00	89.77	271.41	7,331.56	2.72	-3,973.78	1,462,683.163	3,234,495.260	40.600398	-104.655529	
11,700.00	89.77	271.41	7,331.96	5.18	-4,073.74	1,462,685.627	3,234,395.291	40.600408	-104.655889	
11,800.00	89.77	271.41	7,332.36	7.65	-4,173.71	1,462,688.091	3,234,295.322	40.600417	-104.656249	
11,900.00	89.77	271.41	7,332.75	10.11	-4,273.68	1,462,690.555	3,234,195.353	40.600426	-104.656608	
12,000.00	89.77	271.41	7,333.15	12.57	-4,373.65	1,462,693.020	3,234,095.384	40.600436	-104.656968	
12,100.00	89.77	271.41	7,333.55	15.04	-4,473.62	1,462,695.484	3,233,995.415	40.600445	-104.657328	
12,200.00	89.77	271.41	7,333.94	17.50	-4,573.59	1,462,697.948	3,233,895.446	40.600455	-104.657688	
12,300.00	89.77	271.41	7,334.34	19.97	-4,673.56	1,462,700.412	3,233,795.478	40.600464	-104.658048	
12,400.00	89.77	271.41	7,334.74	22.43	-4,773.53	1,462,702.876	3,233,695.509	40.600473	-104.658408	
12,500.00	89.77	271.41	7,335.13	24.89	-4,873.50	1,462,705.340	3,233,595.540	40.600483	-104.658768	
12,600.00	89.77	271.41	7,335.53	27.36	-4,973.46	1,462,707.804	3,233,495.571	40.600492	-104.659128	
12,700.00	89.77	271.41	7,335.93	29.82	-5,073.43	1,462,710.268	3,233,395.602	40.600501	-104.659488	
12,800.00	89.77	271.41	7,336.32	32.29	-5,173.40	1,462,712.733	3,233,295.633	40.600511	-104.659848	
12,900.00	89.77	271.41	7,336.72	34.75	-5,273.37	1,462,715.197	3,233,195.665	40.600520	-104.660208	
13,000.00	89.77	271.41	7,337.12	37.22	-5,373.34	1,462,717.661	3,233,095.696	40.600529	-104.660567	
13,100.00	89.77	271.41	7,337.51	39.68	-5,473.31	1,462,720.125	3,232,995.727	40.600539	-104.660927	
13,200.00	89.77	271.41	7,337.91	42.14	-5,573.28	1,462,722.589	3,232,895.758	40.600548	-104.661287	
13,300.00	89.77	271.41	7,338.31	44.61	-5,673.25	1,462,725.053	3,232,795.789	40.600558	-104.661647	
13,400.00	89.77	271.41	7,338.70	47.07	-5,773.21	1,462,727.517	3,232,695.820	40.600567	-104.662007	
13,500.00	89.77	271.41	7,339.10	49.54	-5,873.18	1,462,729.982	3,232,595.851	40.600576	-104.662367	
13,600.00	89.77	271.41	7,339.49	52.00	-5,973.15	1,462,732.446	3,232,495.883	40.600586	-104.662727	
13,700.00	89.77	271.41	7,339.89	54.46	-6,073.12	1,462,734.910	3,232,395.914	40.600595	-104.663087	
13,800.00	89.77	271.41	7,340.29	56.93	-6,173.09	1,462,737.374	3,232,295.945	40.600604	-104.663447	
13,900.00	89.77	271.41	7,340.68	59.39	-6,273.06	1,462,739.838	3,232,195.976	40.600614	-104.663807	
14,000.00	89.77	271.41	7,341.08	61.86	-6,373.03	1,462,742.302	3,232,096.007	40.600623	-104.664167	
14,100.00	89.77	271.41	7,341.48	64.32	-6,473.00	1,462,744.766	3,231,996.038	40.600632	-104.664526	
14,200.00	89.77	271.41	7,341.87	66.78	-6,572.97	1,462,747.231	3,231,896.070	40.600642	-104.664886	
14,300.00	89.77	271.41	7,342.27	69.25	-6,672.93	1,462,749.695	3,231,796.101	40.600651	-104.665246	
14,400.00	89.77	271.41	7,342.67	71.71	-6,772.90	1,462,752.159	3,231,696.131	40.600660	-104.665606	
14,500.00	89.77	271.41	7,343.06	74.18	-6,872.87	1,462,754.623	3,231,596.162	40.600670	-104.665966	
14,600.00	89.77	271.41	7,343.46	76.64	-6,972.84	1,462,757.087	3,231,496.193	40.600679	-104.666326	
14,700.00	89.77	271.41	7,343.86	79.11	-7,072.81	1,462,759.551	3,231,396.224	40.600688	-104.666686	
14,800.00	89.77	271.41	7,344.25	81.57	-7,172.78	1,462,762.015	3,231,296.256	40.600698	-104.667046	
14,900.00	89.77	271.41	7,344.65	84.03	-7,272.75	1,462,764.479	3,231,196.287	40.600707	-104.667406	
15,000.00	89.77	271.41	7,345.05	86.50	-7,372.72	1,462,766.944	3,231,096.318	40.600716	-104.667766	
15,100.00	89.77	271.41	7,345.44	88.96	-7,472.69	1,462,769.408	3,230,996.349	40.600726	-104.668125	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well RUSCH 6X-HC-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 6X-HC-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	89.77	271.41	7,345.84	91.43	-7,572.65	1,462,771.872	3,230,896.380	40.600735	-104.668485
15,300.00	89.77	271.41	7,346.24	93.89	-7,672.62	1,462,774.336	3,230,796.411	40.600744	-104.668845
15,400.00	89.77	271.41	7,346.63	96.35	-7,772.59	1,462,776.800	3,230,696.442	40.600754	-104.669205
15,500.00	89.77	271.41	7,347.03	98.82	-7,872.56	1,462,779.264	3,230,596.474	40.600763	-104.669565
15,600.00	89.77	271.41	7,347.43	101.28	-7,972.53	1,462,781.728	3,230,496.505	40.600772	-104.669925
15,700.00	89.77	271.41	7,347.82	103.75	-8,072.50	1,462,784.193	3,230,396.536	40.600782	-104.670285
15,800.00	89.77	271.41	7,348.22	106.21	-8,172.47	1,462,786.657	3,230,296.567	40.600791	-104.670645
15,900.00	89.77	271.41	7,348.62	108.68	-8,272.44	1,462,789.121	3,230,196.598	40.600800	-104.671005
16,000.00	89.77	271.41	7,349.01	111.14	-8,372.40	1,462,791.585	3,230,096.629	40.600810	-104.671365
16,100.00	89.77	271.41	7,349.41	113.60	-8,472.37	1,462,794.049	3,229,996.661	40.600819	-104.671725
16,200.00	89.77	271.41	7,349.80	116.07	-8,572.34	1,462,796.513	3,229,896.692	40.600828	-104.672084
16,300.00	89.77	271.41	7,350.20	118.53	-8,672.31	1,462,798.977	3,229,796.723	40.600838	-104.672444
16,400.00	89.77	271.41	7,350.60	121.00	-8,772.28	1,462,801.442	3,229,696.754	40.600847	-104.672804
16,500.00	89.77	271.41	7,350.99	123.46	-8,872.25	1,462,803.906	3,229,596.785	40.600856	-104.673164
16,600.00	89.77	271.41	7,351.39	125.92	-8,972.22	1,462,806.370	3,229,496.816	40.600866	-104.673524
16,700.00	89.77	271.41	7,351.79	128.39	-9,072.19	1,462,808.834	3,229,396.847	40.600875	-104.673884
16,800.00	89.77	271.41	7,352.18	130.85	-9,172.16	1,462,811.298	3,229,296.879	40.600884	-104.674244
16,900.00	89.77	271.41	7,352.58	133.32	-9,272.12	1,462,813.762	3,229,196.910	40.600894	-104.674604
17,000.00	89.77	271.41	7,352.98	135.78	-9,372.09	1,462,816.226	3,229,096.941	40.600903	-104.674964
17,100.00	89.77	271.41	7,353.37	138.24	-9,472.06	1,462,818.690	3,228,996.972	40.600912	-104.675324
17,178.64	89.77	271.41	7,353.69	140.18	-9,550.68	1,462,820.628	3,228,918.357	40.600920	-104.675607
TD at 17179.64									
17,179.64	89.77	271.41	7,354.00	140.34	-9,551.67	1,462,820.785	3,228,917.366	40.600920	-104.675610
BHL RUSCH 6X-HC-04-07-65 1665 FSL 460 FWL SEC 4									

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 RUSCH 6X-HC-04-	0.00	0.00	0.00	0.00	0.00	1,462,680.446	3,238,469.035	40.600286	-104.641219
- plan hits target center									
- Point									
LPL RUSCH 6X-HC-04-	0.00	0.00	7,316.00	-96.26	67.30	1,462,584.189	3,238,536.338	40.600020	-104.640980
- plan misses target center by 12.35usft at 7559.58usft MD (7303.96 TVD, -96.59 N, 64.57 E)									
- Point									
BHL RUSCH 6X-HC-04-	0.00	0.00	7,354.00	140.34	-9,551.67	1,462,820.785	3,228,917.366	40.600920	-104.675610
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,500.00	2,500.00	0.00	0.00	Start Build 2.00	
2,875.34	2,874.27	-4.43	24.15	Hold 7.51 Inc, 100.38 Az	
6,703.13	6,669.24	-94.69	516.05	KOP 10°/100	
7,675.00	7,316.00	-94.00	-50.00	LP 89.77 Inc, 271.41 Az	
17,178.64	7,353.69	140.18	-9,550.68	TD at 17179.64	