

# GMT Exploration

**Location** DJ Basin      **Slot** RED LADY 6-64 4-6 1HN  
**Field** Elbert County Wells      **Well** RED LADY 6-64 4-6 1HN  
**Installation** Ragged 6-64 4 Pad      **Wellbore** RED LADY 6-64 4-6 1HN (PWB)

Created by cdoke

Date plotted 4-Apr-2023

Plot reference is RED LADY 6-64 4-6 1HN (PWB).

Ref wellpath is RED LADY 6-64 4-6 1HN (PWB).

Coordinates are in Feet reference RED LADY 6-64 4-6 1HN.

True Vertical Depths are reference Rig Datum.

Measured Depths are reference Rig Datum.

Rig Datum: Planned Datum #1

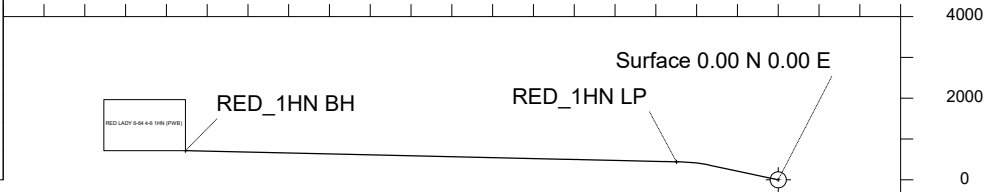
Rig Datum to Mean Sea Level: 6012.50 ft.

Plot North is aligned to TRUE North.

Scale 1 cm = 1000 ft

East (Feet) ->

-18000 -16000 -14000 -12000 -10000 -8000 -6000 -4000 -2000 0 2000



## WELL PROFILE DATA

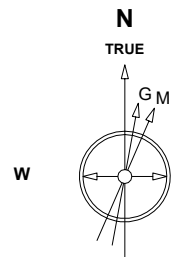
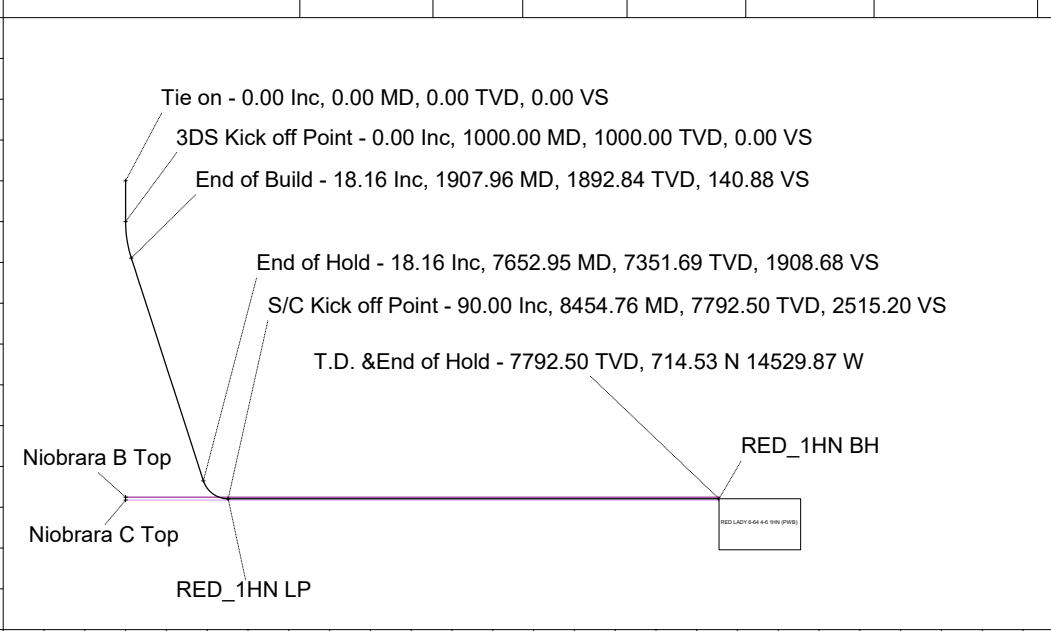
Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	S 0.00	W 0.00		0.00
KOP	1000.00	0.00	281.94	1000.00	S 0.00	W 0.00	0.00	0.00
End of Build	1907.96	18.16	281.94	1892.84	N 29.53	W 139.60	2.00	140.88
End of Hold	7652.95	18.16	281.94	7351.69	N 400.03	W 1891.32	0.00	1908.68
Target RED_1HN LP	8454.76	90.00	271.30	7792.50	N 440.51	W 2496.57	9.00	2515.20
T.D. & Target RED... BH	20491.18	90.00	271.30	7792.50	N 714.53	W 14529.87	0.00	14547.43

<- North(Feet)

Scale 1 cm = 1000 ft

<- True Vertical Depth (Feet)

Scale 1 cm = 1000 ft



Jan-3-2023

IGRF-13 Dip: 65.95 deg Field: 51361.9 nT  
Lat: N39 33 44.1720 Long: W104 33 5.5800 Elev: 6016.70 ft  
Magnetic North is 7.50 deg East of TRUE North  
To correct azimuth from Magnetic to TRUE add 7.50 deg

Scale 1 cm = 1000 ft

Vertical Section (Feet) ->

Azimuth 272.82 with reference 0.00 N, 0.00 E from RED LADY 6-64 4-6 1HN

Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Installation [ft]
RED LADY 6-64 4-6 1HN	N39 33 44.1648	W104 33 4.4316	1084825.4177	3267501.9868	0.73S	89.94E	-4.20

Installation Details							
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment	Ground Level Elev [ft]
Ragged 6-64 4 Pad	N39 33 44.1720	W104 33 5.5800	1084825.1840	3267412.0415	NAD83 Colorado State Planes, North Zone, US Foot	True	6016.70

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
0.00	0.00	0.00	0.00	-6012.50	0.00N	0.00E		0.00
1000.00	0.00	281.94	1000.00	-5012.50	0.00N	0.00E	==>	0.00
1907.96	18.16	281.94	1892.84	-4119.66	29.53N	139.60W	2.00	140.88
7652.95	18.16	281.94	7351.69	1339.19	400.03N	1891.32W	==>	1908.68
8454.76	90.00	271.30	7792.50	1780.00	440.51N	2496.57W	9.00	2515.20
20491.18	90.00	271.30	7792.50	1780.00	714.53N	14529.87W	==>	14547.43

Interpolated Wellpath											
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)	All Station Comments	
0.00	0.00	0.00	0.00	0.00N	0.00E		0.00	N39 33 44.1648	W104 33 4.4316	Tie on, Slot Datum	
75.00	0.00	0.00	75.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316	Lower Dawson	
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316	Denver	
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316		
1000.00	0.00	281.94	1000.00	0.00N	0.00E	==>	0.00	N39 33 44.1648	W104 33 4.4316	3DS Kick off Point	
1087.01	1.74	281.94	1087.00	0.27N	1.29W	2.00	1.30	N39 33 44.1675	W104 33 4.4481	Upper Arapahoe	
1100.00	2.00	281.94	1099.98	0.36N	1.71W	2.00	1.72	N39 33 44.1684	W104 33 4.4534		
1200.00	4.00	281.94	1199.84	1.44N	6.83W	2.00	6.89	N39 33 44.1791	W104 33 4.5188		
1300.00	6.00	281.94	1299.45	3.25N	15.35W	2.00	15.49	N39 33 44.1969	W104 33 4.6276		
1400.00	8.00	281.94	1398.70	5.77N	27.28W	2.00	27.53	N39 33 44.2218	W104 33 4.7799		
1500.00	10.00	281.94	1497.47	9.01N	42.58W	2.00	42.97	N39 33 44.2538	W104 33 4.9753		
1600.00	12.00	281.94	1595.62	12.95N	61.25W	2.00	61.81	N39 33 44.2928	W104 33 5.2136		
1700.00	14.00	281.94	1693.06	17.61N	83.25W	2.00	84.02	N39 33 44.3388	W104 33 5.4946		
1800.00	16.00	281.94	1789.64	22.96N	108.58W	2.00	109.57	N39 33 44.3918	W104 33 5.8179		
1900.00	18.00	281.94	1885.27	29.01N	137.18W	2.00	138.44	N39 33 44.4515	W104 33 6.1832		
1907.08	18.14	281.94	1892.00	29.47N	139.33W	2.00	140.61	N39 33 44.4560	W104 33 6.2106	Laramie - Fox Hills	
1907.96	18.16	281.94	1892.84	29.53N	139.60W	2.00	140.88	N39 33 44.4566	W104 33 6.2140	End of Build	
2000.00	18.16	281.94	1980.29	35.46N	167.66W	==>	169.20	N39 33 44.5153	W104 33 6.5724		
2100.00	18.16	281.94	2075.31	41.91N	198.15W	==>	199.97	N39 33 44.5790	W104 33 6.9617		
2153.35	18.16	281.94	2126.00	45.35N	214.42W	==>	216.38	N39 33 44.6130	W104 33 7.1694	Pierre Shale (Base of Fox Hills)	
2200.00	18.16	281.94	2170.33	48.36N	228.64W	==>	230.74	N39 33 44.6427	W104 33 7.3510		
2300.00	18.16	281.94	2265.35	54.81N	259.13W	==>	261.51	N39 33 44.7065	W104 33 7.7403		
2400.00	18.16	281.94	2360.37	61.26N	289.62W	==>	292.28	N39 33 44.7702	W104 33 8.1297		
2500.00	18.16	281.94	2455.39	67.71N	320.12W	==>	323.05	N39 33 44.8339	W104 33 8.5190		
2600.00	18.16	281.94	2550.41	74.16N	350.61W	==>	353.83	N39 33 44.8977	W104 33 8.9083		
2700.00	18.16	281.94	2645.43	80.61N	381.10W	==>	384.60	N39 33 44.9614	W104 33 9.2977		
2800.00	18.16	281.94	2740.45	87.06N	411.59W	==>	415.37	N39 33 45.0251	W104 33 9.6870		
2900.00	18.16	281.94	2835.47	93.50N	442.08W	==>	446.14	N39 33 45.0889	W104 33 10.0763		
3000.00	18.16	281.94	2930.49	99.95N	472.57W	==>	476.91	N39 33 45.1526	W104 33 10.4657		
3100.00	18.16	281.94	3025.50	106.40N	503.06W	==>	507.68	N39 33 45.2163	W104 33 10.8550		
3200.00	18.16	281.94	3120.52	112.85N	533.55W	==>	538.45	N39 33 45.2801	W104 33 11.2443		
3300.00	18.16	281.94	3215.54	119.30N	564.05W	==>	569.23	N39 33 45.3438	W104 33 11.6336		
3400.00	18.16	281.94	3310.56	125.75N	594.54W	==>	600.00	N39 33 45.4075	W104 33 12.0230		
3500.00	18.16	281.94	3405.58	132.20N	625.03W	==>	630.77	N39 33 45.4713	W104 33 12.4123		
3600.00	18.16	281.94	3500.60	138.65N	655.52W	==>	661.54	N39 33 45.5350	W104 33 12.8016		
3700.00	18.16	281.94	3595.62	145.10N	686.01W	==>	692.31	N39 33 45.5987	W104 33 13.1910		
3800.00	18.16	281.94	3690.64	151.55N	716.50W	==>	723.08	N39 33 45.6625	W104 33 13.5803		
3900.00	18.16	281.94	3785.66	158.00N	746.99W	==>	753.85	N39 33 45.7262	W104 33 13.9696		
4000.00	18.16	281.94	3880.68	164.45N	777.49W	==>	784.62	N39 33 45.7899	W104 33 14.3590		
4100.00	18.16	281.94	3975.70	170.90N	807.98W	==>	815.40	N39 33 45.8536	W104 33 14.7483		
4200.00	18.16	281.94	4070.72	177.34N	838.47W	==>	846.17	N39 33 45.9174	W104 33 15.1376		
4300.00	18.16	281.94	4165.74	183.79N	868.96W	==>	876.94	N39 33 45.9811	W104 33 15.5270		
4400.00	18.16	281.94	4260.76	190.24N	899.45W	==>	907.71	N39 33 46.0448	W104 33 15.9163		
4500.00	18.16	281.94	4355.78	196.69N	929.94W	==>	938.48	N39 33 46.1086	W104 33 16.3056		
4600.00	18.16	281.94	4450.80	203.14N	960.43W	==>	969.25	N39 33 46.1723	W104 33 16.6950		

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 6012.5ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 272.82 degrees  
Bottom hole distance is 14547.43 Feet on azimuth 272.82 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 6-Apr-2023

Interpolated Wellpath										
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)	All Station Comments
4700.00	18.16	281.94	4545.82	209.59N	990.92W	==>	1000.02	N39 33 46.2360	W104 33 17.0843	
4800.00	18.16	281.94	4640.83	216.04N	1021.42W	==>	1030.79	N39 33 46.2997	W104 33 17.4736	
4900.00	18.16	281.94	4735.85	222.49N	1051.91W	==>	1061.57	N39 33 46.3635	W104 33 17.8630	
5000.00	18.16	281.94	4830.87	228.94N	1082.40W	==>	1092.34	N39 33 46.4272	W104 33 18.2523	
5100.00	18.16	281.94	4925.89	235.39N	1112.89W	==>	1123.11	N39 33 46.4909	W104 33 18.6417	
5200.00	18.16	281.94	5020.91	241.84N	1143.38W	==>	1153.88	N39 33 46.5546	W104 33 19.0310	
5300.00	18.16	281.94	5115.93	248.29N	1173.87W	==>	1184.65	N39 33 46.6184	W104 33 19.4203	
5400.00	18.16	281.94	5210.95	254.74N	1204.36W	==>	1215.42	N39 33 46.6821	W104 33 19.8097	
5500.00	18.16	281.94	5305.97	261.18N	1234.86W	==>	1246.19	N39 33 46.7458	W104 33 20.1990	
5600.00	18.16	281.94	5400.99	267.63N	1265.35W	==>	1276.97	N39 33 46.8095	W104 33 20.5883	
5657.89	18.16	281.94	5456.00	271.37N	1283.00W	==>	1294.78	N39 33 46.8464	W104 33 20.8137	Sussex Sandstone
5700.00	18.16	281.94	5496.01	274.08N	1295.84W	==>	1307.74	N39 33 46.8733	W104 33 20.9777	
5800.00	18.16	281.94	5591.03	280.53N	1326.33W	==>	1338.51	N39 33 46.9370	W104 33 21.3670	
5900.00	18.16	281.94	5686.05	286.98N	1356.82W	==>	1369.28	N39 33 47.0007	W104 33 21.7563	
6000.00	18.16	281.94	5781.07	293.43N	1387.31W	==>	1400.05	N39 33 47.0644	W104 33 22.1457	
6100.00	18.16	281.94	5876.09	299.88N	1417.80W	==>	1430.82	N39 33 47.1281	W104 33 22.5350	
6200.00	18.16	281.94	5971.11	306.33N	1448.29W	==>	1461.59	N39 33 47.1919	W104 33 22.9244	
6300.00	18.16	281.94	6066.13	312.78N	1478.79W	==>	1492.36	N39 33 47.2556	W104 33 23.3137	
6400.00	18.16	281.94	6161.14	319.23N	1509.28W	==>	1523.14	N39 33 47.3193	W104 33 23.7030	
6500.00	18.16	281.94	6256.16	325.68N	1539.77W	==>	1553.91	N39 33 47.3830	W104 33 24.0924	
6600.00	18.16	281.94	6351.18	332.13N	1570.26W	==>	1584.68	N39 33 47.4467	W104 33 24.4817	
6700.00	18.16	281.94	6446.20	338.58N	1600.75W	==>	1615.45	N39 33 47.5105	W104 33 24.8710	
6800.00	18.16	281.94	6541.22	345.03N	1631.24W	==>	1646.22	N39 33 47.5742	W104 33 25.2604	
6900.00	18.16	281.94	6636.24	351.47N	1661.73W	==>	1676.99	N39 33 47.6379	W104 33 25.6497	
7000.00	18.16	281.94	6731.26	357.92N	1692.23W	==>	1707.76	N39 33 47.7016	W104 33 26.0391	
7100.00	18.16	281.94	6826.28	364.37N	1722.72W	==>	1738.53	N39 33 47.7653	W104 33 26.4284	
7200.00	18.16	281.94	6921.30	370.82N	1753.21W	==>	1769.31	N39 33 47.8291	W104 33 26.8177	
7300.00	18.16	281.94	7016.32	377.27N	1783.70W	==>	1800.08	N39 33 47.8928	W104 33 27.2071	
7400.00	18.16	281.94	7111.34	383.72N	1814.19W	==>	1830.85	N39 33 47.9565	W104 33 27.5964	
7500.00	18.16	281.94	7206.36	390.17N	1844.68W	==>	1861.62	N39 33 48.0202	W104 33 27.9858	
7600.00	18.16	281.94	7301.38	396.62N	1875.17W	==>	1892.39	N39 33 48.0839	W104 33 28.3751	
7652.95	18.16	281.94	7351.69	400.03N	1891.32W	==>	1908.68	N39 33 48.1177	W104 33 28.5812	End of Hold
7700.00	22.33	279.78	7395.82	403.07N	1907.31W	9.00	1924.80	N39 33 48.1477	W104 33 28.7854	
7800.00	31.24	277.03	7485.01	409.49N	1951.86W	9.00	1969.61	N39 33 48.2110	W104 33 29.3543	
7899.86	40.18	275.42	7566.00	415.71N	2009.75W	9.00	2027.74	N39 33 48.2725	W104 33 30.0935	Sharon Springs Shale
7900.00	40.20	275.41	7566.11	415.72N	2009.84W	9.00	2027.84	N39 33 48.2726	W104 33 30.0947	
7968.56	46.34	274.62	7616.01	419.81N	2056.63W	9.00	2074.77	N39 33 48.3129	W104 33 30.6921	Niobrara Niobrara A
7983.22	47.66	274.47	7626.01	420.66N	2067.32W	9.00	2085.49	N39 33 48.3213	W104 33 30.8286	
8000.00	49.16	274.30	7637.15	421.62N	2079.83W	9.00	2098.03	N39 33 48.3308	W104 33 30.9884	
8100.00	58.14	273.46	7696.36	427.03N	2160.11W	9.00	2178.48	N39 33 48.3842	W104 33 32.0134	
8200.00	67.12	272.77	7742.29	431.83N	2248.69W	9.00	2267.19	N39 33 48.4316	W104 33 33.1445	
8223.45	69.22	272.62	7751.01	432.85N	2270.44W	9.00	2288.96	N39 33 48.4417	W104 33 33.4221	Niobrara B Top
8300.00	76.10	272.16	7773.82	435.89N	2343.40W	9.00	2361.98	N39 33 48.4717	W104 33 34.3537	
8400.00	85.08	271.60	7790.15	439.13N	2441.90W	9.00	2460.52	N39 33 48.5035	W104 33 35.6115	S/C Kick off Point/Target, RED_1HN LP
8454.76	90.00	271.30	7792.50	440.51N	2496.57W	9.00	2515.20	N39 33 48.5172	W104 33 36.3096	
8500.00	90.00	271.30	7792.50	441.54N	2541.80W	==>	2560.42	N39 33 48.5273	W104 33 36.8871	
8600.00	90.00	271.30	7792.50	443.82N	2641.77W	==>	2660.38	N39 33 48.5497	W104 33 38.1636	
8700.00	90.00	271.30	7792.50	446.10N	2741.75W	==>	2760.35	N39 33 48.5721	W104 33 39.4402	
8800.00	90.00	271.30	7792.50	448.37N	2841.72W	==>	2860.31	N39 33 48.5945	W104 33 40.7167	
8900.00	90.00	271.30	7792.50	450.65N	2941.70W	==>	2960.28	N39 33 48.6169	W104 33 41.9933	
9000.00	90.00	271.30	7792.50	452.93N	3041.67W	==>	3060.25	N39 33 48.6393	W104 33 43.2698	
9100.00	90.00	271.30	7792.50	455.20N	3141.64W	==>	3160.21	N39 33 48.6617	W104 33 44.5463	
9200.00	90.00	271.30	7792.50	457.48N	3241.62W	==>	3260.18	N39 33 48.6840	W104 33 45.8229	
9300.00	90.00	271.30	7792.50	459.76N	3341.59W	==>	3360.14	N39 33 48.7064	W104 33 47.0994	
9400.00	90.00	271.30	7792.50	462.03N	3441.57W	==>	3460.11	N39 33 48.7288	W104 33 48.3760	
9500.00	90.00	271.30	7792.50	464.31N	3541.54W	==>	3560.07	N39 33 48.7511	W104 33 49.6525	
9600.00	90.00	271.30	7792.50	466.59N	3641.51W	==>	3660.04	N39 33 48.7735	W104 33 50.9291	
9700.00	90.00	271.30	7792.50	468.86N	3741.49W	==>	3760.00	N39 33 48.7958	W104 33 52.2056	
9800.00	90.00	271.30	7792.50	471.14N	3841.46W	==>	3859.97	N39 33 48.8182	W104 33 53.4822	
9900.00	90.00	271.30	7792.50	473.42N	3941.44W	==>	3959.93	N39 33 48.8405	W104 33 54.7587	
10000.00	90.00	271.30	7792.50	475.69N	4041.41W	==>	4059.90	N39 33 48.8629	W104 33 56.0353	
10100.00	90.00	271.30	7792.50	477.97N	4141.38W	==>	4159.86	N39 33 48.8852	W104 33 57.3118	
10200.00	90.00	271.30	7792.50	480.25N	4241.36W	==>	4259.83	N39 33 48.9075	W104 33 58.5883	
10300.00	90.00	271.30	7792.50	482.52N	4341.33W	==>	4359.79	N39 33 48.9299	W104 33 59.8649	
10400.00	90.00	271.30	7792.50	484.80N	4441.31W	==>	4459.76	N39 33 48.9522	W104 34 1.1414	
10500.00	90.00	271.30	7792.50	487.07N	4541.28W	==>	4559.72	N39 33 48.9745	W104 34 2.4180	
10600.00	90.00	271.30	7792.50	489.35N	4641.26W	==>	4659.69	N39 33 48.9968	W104 34 3.6945	
10700.00	90.00	271.30	7792.50	491.63N	4741.23W	==>	4759.65	N39 33 49.0191	W104 34 4.9711	
10800.00	90.00	271.30	7792.50	493.90N	4841.20W	==>	4859.62	N39 33 49.0415	W104 34 6.2476	
10900.00	90.00	271.30	7792.50	496.18N	4941.18W	==>	4959.58	N39 33 49.0638	W104 34 7.5242	
11000.00	90.00	271.30	7792.50	498.46N	5041.15W	==>	5059.55	N39 33 49.0861	W104 34 8.8007	
11100.00	90.00	271.30	7792.50	500.73N	5141.13W	==>	5159.52	N39 33 49.1084	W104 34 10.0773	
11200.00	90.00	271.30	7792.50	503.01N	5241.10W	==>	5259.48	N39 33 49.1307	W104 34 11.3538	
11300.00	90.00	271.30	7792.50	505.29N	5341.07W	==>	5359.45	N39 33 49.1529	W104 34 12.6304	
11400.00	90.00	271.30	7792.50	507.56N	5441.05W	==>	5459.41	N39 33 49.1752	W104 34 13.9069	
11500.00	90.00	271.30	7792.50	509.84N	5541.02W	==>	5559.38	N39 33 49.1975	W104 34 15.1835	
11600.00	90.00	271.30	7792.50	512.12N	5641.00W	==>	5659.34	N39 33 49.2198	W104 34 16.4600	
11700.00	90.00	271.30	7792.50	514.39N	5740.97W	==>	5759.31	N39 33 49.2421	W104 34 17.7366	
11800.00	90.00	271.30	7792.50	516.67N	5840.94W	==>	5859.27	N39 33 49.2643	W104 34 19.0131	
11900.00	90.00	271.30	7792.50	518.95N	5940.92W	==>	5959.24	N39 33 49.2866	W104 34 20.2897	
12000.00	90.00	271.30	7792.50	521.22N	6040.89W	==>	6059.20	N39 33 49.3089	W104 34 21.5662	
12100.00	90.00	271.30	7792.50	523.50N	6140.87W	==>	6159.17	N39 33 49.3311	W104 34 22.8428	
12200.00	90.00	271.30	7792.50	525.78N	6240.84W	==>	6259.13	N39 33 49.3534	W104 34 24.1193	

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 6012.5ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 272.82 degrees  
Bottom hole distance is 14547.43 Feet on azimuth 272.82 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 6-Apr-2023

Interpolated Wellpath										
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)	All Station Comments
12300.00	90.00	271.30	7792.50	528.05N	6340.81W	==>	6359.10	N39 33 49.3756	W104 34 25.3959	
12400.00	90.00	271.30	7792.50	530.33N	6440.79W	==>	6459.06	N39 33 49.3979	W104 34 26.6724	
12500.00	90.00	271.30	7792.50	532.61N	6540.76W	==>	6559.03	N39 33 49.4201	W104 34 27.9490	
12600.00	90.00	271.30	7792.50	534.88N	6640.74W	==>	6658.99	N39 33 49.4424	W104 34 29.2255	
12700.00	90.00	271.30	7792.50	537.16N	6740.71W	==>	6758.96	N39 33 49.4646	W104 34 30.5021	
12800.00	90.00	271.30	7792.50	539.44N	6840.69W	==>	6858.92	N39 33 49.4868	W104 34 31.7786	
12900.00	90.00	271.30	7792.50	541.71N	6940.66W	==>	6958.89	N39 33 49.5091	W104 34 33.0552	
13000.00	90.00	271.30	7792.50	543.99N	7040.63W	==>	7058.85	N39 33 49.5313	W104 34 34.3317	
13100.00	90.00	271.30	7792.50	546.26N	7140.61W	==>	7158.82	N39 33 49.5535	W104 34 35.6083	
13200.00	90.00	271.30	7792.50	548.54N	7240.58W	==>	7258.79	N39 33 49.5757	W104 34 36.8848	
13300.00	90.00	271.30	7792.50	550.82N	7340.56W	==>	7358.75	N39 33 49.5979	W104 34 38.1614	
13400.00	90.00	271.30	7792.50	553.09N	7440.53W	==>	7458.72	N39 33 49.6201	W104 34 39.4380	
13500.00	90.00	271.30	7792.50	555.37N	7540.50W	==>	7558.68	N39 33 49.6423	W104 34 40.7145	
13600.00	90.00	271.30	7792.50	557.65N	7640.48W	==>	7658.65	N39 33 49.6645	W104 34 41.9911	
13700.00	90.00	271.30	7792.50	559.92N	7740.45W	==>	7758.61	N39 33 49.6867	W104 34 43.2676	
13800.00	90.00	271.30	7792.50	562.20N	7840.43W	==>	7858.58	N39 33 49.7089	W104 34 44.5442	
13900.00	90.00	271.30	7792.50	564.48N	7940.40W	==>	7958.54	N39 33 49.7311	W104 34 45.8207	
14000.00	90.00	271.30	7792.50	566.75N	8040.37W	==>	8058.51	N39 33 49.7533	W104 34 47.0973	
14100.00	90.00	271.30	7792.50	569.03N	8140.35W	==>	8158.47	N39 33 49.7755	W104 34 48.3738	
14200.00	90.00	271.30	7792.50	571.31N	8240.32W	==>	8258.44	N39 33 49.7976	W104 34 49.6504	
14300.00	90.00	271.30	7792.50	573.58N	8340.30W	==>	8358.40	N39 33 49.8198	W104 34 50.9269	
14400.00	90.00	271.30	7792.50	575.86N	8440.27W	==>	8458.37	N39 33 49.8420	W104 34 52.2035	
14500.00	90.00	271.30	7792.50	578.14N	8540.24W	==>	8558.33	N39 33 49.8641	W104 34 53.4801	
14600.00	90.00	271.30	7792.50	580.41N	8640.22W	==>	8658.30	N39 33 49.8863	W104 34 54.7566	
14700.00	90.00	271.30	7792.50	582.69N	8740.19W	==>	8758.26	N39 33 49.9085	W104 34 56.0332	
14800.00	90.00	271.30	7792.50	584.97N	8840.17W	==>	8858.23	N39 33 49.9306	W104 34 57.3097	
14900.00	90.00	271.30	7792.50	587.24N	8940.14W	==>	8958.19	N39 33 49.9528	W104 34 58.5863	
15000.00	90.00	271.30	7792.50	589.52N	9040.12W	==>	9058.16	N39 33 49.9749	W104 34 59.8628	
15100.00	90.00	271.30	7792.50	591.80N	9140.09W	==>	9158.12	N39 33 49.9970	W104 35 1.1394	
15200.00	90.00	271.30	7792.50	594.07N	9240.06W	==>	9258.09	N39 33 50.0192	W104 35 2.4160	
15300.00	90.00	271.30	7792.50	596.35N	9340.04W	==>	9358.06	N39 33 50.0413	W104 35 3.6925	
15400.00	90.00	271.30	7792.50	598.63N	9440.01W	==>	9458.02	N39 33 50.0634	W104 35 4.9691	
15500.00	90.00	271.30	7792.50	600.90N	9539.99W	==>	9557.99	N39 33 50.0856	W104 35 6.2456	
15600.00	90.00	271.30	7792.50	603.18N	9639.96W	==>	9657.95	N39 33 50.1077	W104 35 7.5222	
15700.00	90.00	271.30	7792.50	605.45N	9739.93W	==>	9757.92	N39 33 50.1298	W104 35 8.7988	
15800.00	90.00	271.30	7792.50	607.73N	9839.91W	==>	9857.88	N39 33 50.1519	W104 35 10.0753	
15900.00	90.00	271.30	7792.50	610.01N	9939.88W	==>	9957.85	N39 33 50.1740	W104 35 11.3519	
16000.00	90.00	271.30	7792.50	612.28N	10039.86W	==>	10057.81	N39 33 50.1961	W104 35 12.6284	
16100.00	90.00	271.30	7792.50	614.56N	10139.83W	==>	10157.78	N39 33 50.2182	W104 35 13.9050	
16200.00	90.00	271.30	7792.50	616.84N	10239.80W	==>	10257.74	N39 33 50.2403	W104 35 15.1816	
16300.00	90.00	271.30	7792.50	619.11N	10339.78W	==>	10357.71	N39 33 50.2624	W104 35 16.4581	
16400.00	90.00	271.30	7792.50	621.39N	10439.75W	==>	10457.67	N39 33 50.2845	W104 35 17.7347	
16500.00	90.00	271.30	7792.50	623.67N	10539.73W	==>	10557.64	N39 33 50.3066	W104 35 19.0112	
16600.00	90.00	271.30	7792.50	625.94N	10639.70W	==>	10657.60	N39 33 50.3287	W104 35 20.2878	
16700.00	90.00	271.30	7792.50	628.22N	10739.67W	==>	10757.57	N39 33 50.3507	W104 35 21.5644	
16800.00	90.00	271.30	7792.50	630.50N	10839.65W	==>	10857.53	N39 33 50.3728	W104 35 22.8409	
16900.00	90.00	271.30	7792.50	632.77N	10939.62W	==>	10957.50	N39 33 50.3949	W104 35 24.1175	
17000.00	90.00	271.30	7792.50	635.05N	11039.60W	==>	11057.46	N39 33 50.4170	W104 35 25.3940	
17100.00	90.00	271.30	7792.50	637.33N	11139.57W	==>	11157.43	N39 33 50.4390	W104 35 26.6706	
17200.00	90.00	271.30	7792.50	639.60N	11239.54W	==>	11257.39	N39 33 50.4611	W104 35 27.9472	
17300.00	90.00	271.30	7792.50	641.88N	11339.52W	==>	11357.36	N39 33 50.4831	W104 35 29.2237	
17400.00	90.00	271.30	7792.50	644.16N	11439.49W	==>	11457.32	N39 33 50.5052	W104 35 30.5003	
17500.00	90.00	271.30	7792.50	646.43N	11539.47W	==>	11557.29	N39 33 50.5272	W104 35 31.7769	
17600.00	90.00	271.30	7792.50	648.71N	11639.44W	==>	11657.26	N39 33 50.5493	W104 35 33.0534	
17700.00	90.00	271.30	7792.50	650.99N	11739.42W	==>	11757.22	N39 33 50.5713	W104 35 34.3300	
17800.00	90.00	271.30	7792.50	653.26N	11839.39W	==>	11857.19	N39 33 50.5933	W104 35 35.6065	
17900.00	90.00	271.30	7792.50	655.54N	11939.36W	==>	11957.15	N39 33 50.6154	W104 35 36.8831	
18000.00	90.00	271.30	7792.50	657.82N	12039.34W	==>	12057.12	N39 33 50.6374	W104 35 38.1597	
18100.00	90.00	271.30	7792.50	660.09N	12139.31W	==>	12157.08	N39 33 50.6594	W104 35 39.4362	
18200.00	90.00	271.30	7792.50	662.37N	12239.29W	==>	12257.05	N39 33 50.6814	W104 35 40.7128	
18300.00	90.00	271.30	7792.50	664.64N	12339.26W	==>	12357.01	N39 33 50.7034	W104 35 41.9894	
18400.00	90.00	271.30	7792.50	666.92N	12439.23W	==>	12456.98	N39 33 50.7254	W104 35 43.2659	
18500.00	90.00	271.30	7792.50	669.20N	12539.21W	==>	12556.94	N39 33 50.7475	W104 35 44.5425	
18600.00	90.00	271.30	7792.50	671.47N	12639.18W	==>	12656.91	N39 33 50.7695	W104 35 45.8191	
18700.00	90.00	271.30	7792.50	673.75N	12739.16W	==>	12756.87	N39 33 50.7915	W104 35 47.0956	
18800.00	90.00	271.30	7792.50	676.03N	12839.13W	==>	12856.84	N39 33 50.8134	W104 35 48.3722	
18900.00	90.00	271.30	7792.50	678.30N	12939.10W	==>	12956.80	N39 33 50.8354	W104 35 49.6488	
19000.00	90.00	271.30	7792.50	680.58N	13039.08W	==>	13056.77	N39 33 50.8574	W104 35 50.9253	
19100.00	90.00	271.30	7792.50	682.86N	13139.05W	==>	13156.73	N39 33 50.8794	W104 35 52.2019	
19200.00	90.00	271.30	7792.50	685.13N	13239.03W	==>	13256.70	N39 33 50.9014	W104 35 53.4785	
19300.00	90.00	271.30	7792.50	687.41N	13339.00W	==>	13356.66	N39 33 50.9234	W104 35 54.7550	
19400.00	90.00	271.30	7792.50	689.69N	13438.97W	==>	13456.63	N39 33 50.9453	W104 35 56.0316	
19500.00	90.00	271.30	7792.50	691.96N	13538.95W	==>	13556.59	N39 33 50.9673	W104 35 57.3082	
19600.00	90.00	271.30	7792.50	694.24N	13638.92W	==>	13656.56	N39 33 50.9893	W104 35 58.5847	
19700.00	90.00	271.30	7792.50	696.52N	13738.90W	==>	13756.53	N39 33 51.0112	W104 35 59.8613	
19800.00	90.00	271.30	7792.50	698.79N	13838.87W	==>	13856.49	N39 33 51.0332	W104 36 1.1379	
19900.00	90.00	271.30	7792.50	701.07N	13938.85W	==>	13956.46	N39 33 51.0551	W104 36 2.4144	
20000.00	90.00	271.30	7792.50	703.35N	14038.82W	==>	14056.42	N39 33 51.0771	W104 36 3.6910	
20100.00	90.00	271.30	7792.50	705.62N	14138.79W	==>	14156.39	N39 33 51.0990	W104 36 4.9676	
20200.00	90.00	271.30	7792.50	707.90N	14238.77W	==>	14256.35	N39 33 51.1209	W104 36 6.2441	
20300.00	90.00	271.30	7792.50	710.18N	14338.74W	==>	14356.32	N39 33 51.1429	W104 36 7.5207	
20400.00	90.00	271.30	7792.50	712.45N	14438.72W	==>	14456.28	N39 33 51.1648	W104 36 8.7973	
20491.18	90.00	271.30	7792.50	714.53N	14529.87W	==>	14547.43	N39 33 51.1848	W104 36 9.9612	End of Hold/Target, RED 1HN BH

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 6012.5ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 272.82 degrees  
Bottom hole distance is 14547.43 Feet on azimuth 272.82 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by  
Date Printed: 6-Apr-2023

Targets							
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
RED 1HN BH	714.53N	14529.87W	7792.50	N39 33 51.1848	W104 36 9.9612	1085384.46	3252964.92
RED 1HN LP	440.51N	2496.57W	7792.50	N39 33 48.5172	W104 33 36.3096	1085239.21	3265000.78

Formations						
Formation Name	Formation MD	Formation TVD	Wellpath Inc	Incidence Angle	North	East
Lower Dawson	75.00	75.00	0.00	90.00	0.00N	0.00E
Denver	200.00	200.00	0.00	90.00	0.00N	0.00E
Upper Arapahoe	1087.01	1087.00	1.74	88.26	0.27N	1.29W
Laramie - Fox Hills	1907.08	1892.00	18.14	71.86	29.47N	139.33W
Pierre Shale (Base of Fox Hills)	2153.35	2126.00	18.16	71.84	45.35N	214.42W
Sussex Sandstone	5657.89	5456.00	18.16	71.84	271.37N	1283.00W
Sharon Springs Shale	7899.86	7566.00	40.18	49.82	415.71N	2009.75W
Niobrara	7968.56	7616.01	46.34	43.66	419.81N	2056.63W
Niobrara A	7983.22	7626.01	47.66	42.34	420.66N	2067.32W
Niobrara B Top	8223.45	7751.01	69.22	20.78	432.85N	2270.44W

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
1095694	Planned	20491.18	7792.50	WdW Rate Gyro	Standard

Notes