

# GMT Exploration

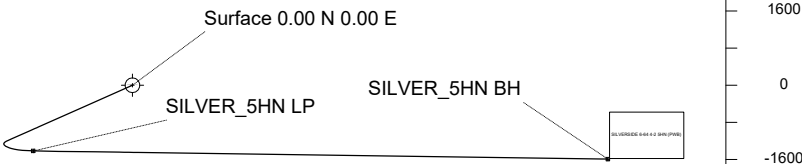
Location	DJ Basin	Slot	SILVERSIDE 6-64 4-2 5HN
Field	Elbert County Wells	Well	SILVERSIDE 6-64 4-2 5HN
Installation	Ragged 6-64 4 Pad	Wellbore	SILVERSIDE 6-64 4-2 5HN (PWB)

Created by	odoke
Date plotted	4-Apr-2023
Plot reference is SILVERSIDE 6-64 4-2 5HN (PWB).	
Ref wellpath is SILVERSIDE 6-64 4-2 5HN (PWB).	
Coordinates are in Feet reference SILVERSIDE 6-64 4-2 5HN.	
True Vertical Depths are reference Rig Datum.	
Measured Depths are reference Rig Datum.	
Rig Datum: Planned Datum #1	
Rig Datum to Mean Sea Level: 6017.80 ft.	
Plot North is aligned to TRUE North.	

Scale 1 cm = 800 ft

East (Feet) ->

000 -3200 -1600 0 1600 3200 4800 6400 8000 9600 11200 12800



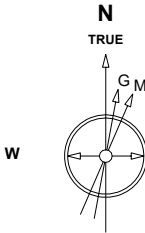
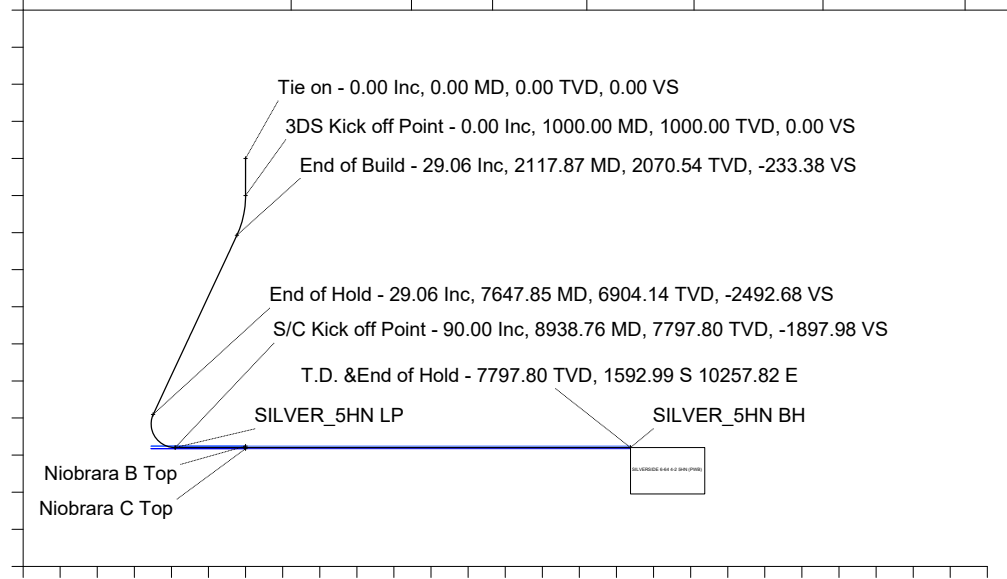
## WELL PROFILE DATA

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	246.07	1000.00	S 0.00	W 0.00	0.00	0.00
End of Build	2117.87	29.06	246.07	2070.54	S 112.55	W 253.66	2.60	-233.38
End of Hold	7647.85	29.06	246.07	6904.14	S 1202.10	W 2709.24	0.00	-2492.68
Target SILVER_5HN LP	8938.76	90.00	90.81	7797.80	S 1417.97	W 2140.93	9.00	-1897.98
T.D. & Target SIL... BH	21338.75	90.00	90.81	7797.80	S 1592.99	E 10257.82	0.00	10380.77

<- North (Feet)

Scale 1 cm = 800 ft

<- True Vertical Depth (Feet)



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 98.83 with reference 0.00 N, 0.00 E from SILVERSIDE 6-64 4-2 5HN

### Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Installation [ft]
SILVERSIDE 6-64 4-2 5HN	N39 33 43.3836	W104 33 5.5872	1084745.4076	3267412.3309	79.77S	0.56W	1.10

### 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	-6017.80	0.00N	0.00E		0.00
1000.00	0.00	246.07	1000.00	-5017.80	0.00N	0.00E	==>	0.00
2117.87	29.06	246.07	2070.54	-3947.26	112.55S	253.66W	2.60	-233.38
7647.85	29.06	246.07	6904.14	886.34	1202.10S	2709.24W	==>	-2492.68
8938.76	90.00	90.81	7797.80	1780.00	1417.97S	2140.93W	9.00	-1897.98
21338.75	90.00	90.81	7797.80	1780.00	1592.99S	10257.82E	==>	10380.77

### 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 43.3836	W104 33 5.5872	Tie on, Slot Datum
80.00	0.00	0.00	80.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	Lower Dawson
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
205.00	0.00	0.00	205.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	Denver
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	
1000.00	0.00	246.07	1000.00	0.00N	0.00E	==>	0.00	N39 33 43.3836	W104 33 5.5872	3DS Kick off Point
1092.03	2.39	246.07	1092.00	0.78S	1.76W	2.60	-1.62	N39 33 43.3759	W104 33 5.6096	Upper Arapahoe
1100.00	2.60	246.07	1099.97	0.92S	2.07W	2.60	-1.91	N39 33 43.3745	W104 33 5.6137	
1200.00	5.20	246.07	1199.73	3.68S	8.29W	2.60	-7.63	N39 33 43.3472	W104 33 5.6931	
1300.00	7.80	246.07	1299.07	8.27S	18.64W	2.60	-17.15	N39 33 43.3019	W104 33 5.8252	
1400.00	10.40	246.07	1397.81	14.68S	33.09W	2.60	-30.45	N39 33 43.2385	W104 33 6.0097	
1500.00	13.00	246.07	1495.72	22.91S	51.63W	2.60	-47.50	N39 33 43.1572	W104 33 6.2464	
1600.00	15.60	246.07	1592.61	32.92S	74.20W	2.60	-68.27	N39 33 43.0582	W104 33 6.5346	
1700.00	18.20	246.07	1688.29	44.71S	100.77W	2.60	-92.72	N39 33 42.9417	W104 33 6.8739	
1800.00	20.80	246.07	1782.54	58.25S	131.28W	2.60	-120.79	N39 33 42.8079	W104 33 7.2635	
1900.00	23.40	246.07	1875.19	73.51S	165.67W	2.60	-152.43	N39 33 42.6571	W104 33 7.7025	
1923.83	24.02	246.07	1897.01	77.39S	174.43W	2.60	-160.48	N39 33 42.6187	W104 33 7.8143	Laramie - Fox Hills
2000.00	26.00	246.07	1966.03	90.45S	203.86W	2.60	-187.56	N39 33 42.4896	W104 33 8.1902	
2100.00	28.60	246.07	2054.89	109.05S	245.78W	2.60	-226.13	N39 33 42.3058	W104 33 8.7254	
2117.87	29.06	246.07	2070.54	112.55S	253.66W	2.60	-233.38	N39 33 42.2713	W104 33 8.8260	End of Build
2187.04	29.06	246.07	2131.00	126.18S	284.37W	==>	-261.64	N39 33 42.1366	W104 33 9.2182	Pierre Shale (Base of Fox Hills)
2200.00	29.06	246.07	2142.33	128.73S	290.13W	==>	-266.94	N39 33 42.1113	W104 33 9.2916	
2300.00	29.06	246.07	2229.73	148.43S	334.53W	==>	-307.79	N39 33 41.9166	W104 33 9.8586	
2400.00	29.06	246.07	2317.14	168.14S	378.94W	==>	-348.65	N39 33 41.7219	W104 33 10.4256	
2500.00	29.06	246.07	2404.55	187.84S	423.34W	==>	-389.50	N39 33 41.5272	W104 33 10.9926	
2600.00	29.06	246.07	2491.96	207.54S	467.75W	==>	-430.36	N39 33 41.3324	W104 33 11.5595	
2700.00	29.06	246.07	2579.36	227.24S	512.15W	==>	-471.21	N39 33 41.1377	W104 33 12.1265	
2800.00	29.06	246.07	2666.77	246.95S	556.56W	==>	-512.07	N39 33 40.9430	W104 33 12.6935	
2900.00	29.06	246.07	2754.18	266.65S	600.96W	==>	-552.92	N39 33 40.7482	W104 33 13.2605	
3000.00	29.06	246.07	2841.58	286.35S	645.37W	==>	-593.78	N39 33 40.5535	W104 33 13.8274	
3100.00	29.06	246.07	2928.99	306.05S	689.77W	==>	-634.64	N39 33 40.3588	W104 33 14.3944	
3200.00	29.06	246.07	3016.40	325.76S	734.18W	==>	-675.49	N39 33 40.1640	W104 33 14.9614	
3300.00	29.06	246.07	3103.81	345.46S	778.58W	==>	-716.35	N39 33 39.9693	W104 33 15.5283	
3400.00	29.06	246.07	3191.21	365.16S	822.99W	==>	-757.20	N39 33 39.7746	W104 33 16.0953	
3500.00	29.06	246.07	3278.62	384.86S	867.39W	==>	-798.06	N39 33 39.5798	W104 33 16.6623	
3600.00	29.06	246.07	3366.03	404.57S	911.80W	==>	-838.91	N39 33 39.3851	W104 33 17.2292	
3700.00	29.06	246.07	3453.43	424.27S	956.20W	==>	-879.77	N39 33 39.1903	W104 33 17.7962	
3800.00	29.06	246.07	3540.84	443.97S	1000.61W	==>	-920.62	N39 33 38.9956	W104 33 18.3631	
3900.00	29.06	246.07	3628.25	463.67S	1045.01W	==>	-961.48	N39 33 38.8009	W104 33 18.9301	
4000.00	29.06	246.07	3715.66	483.38S	1089.42W	==>	-1002.34	N39 33 38.6061	W104 33 19.4971	
4100.00	29.06	246.07	3803.06	503.08S	1133.82W	==>	-1043.19	N39 33 38.4114	W104 33 20.0640	
4200.00	29.06	246.07	3890.47	522.78S	1178.23W	==>	-1084.05	N39 33 38.2166	W104 33 20.6310	
4300.00	29.06	246.07	3977.88	542.48S	1222.63W	==>	-1124.90	N39 33 38.0219	W104 33 21.1979	
4400.00	29.06	246.07	4065.28	562.19S	1267.04W	==>	-1165.76	N39 33 37.8272	W104 33 21.7649	
4500.00	29.06	246.07	4152.69	581.89S	1311.44W	==>	-1206.61	N39 33 37.6324	W104 33 22.3319	

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 6017.8ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 98.83 degrees  
Bottom hole distance is 10380.77 Feet on azimuth 98.83 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
4600.00	29.06	246.07	4240.10	601.59S	1355.85W	=>	-1247.47	N39 33 37.4377	W104 33 22.8988	
4700.00	29.06	246.07	4327.51	621.29S	1400.25W	=>	-1288.32	N39 33 37.2429	W104 33 23.4658	
4800.00	29.06	246.07	4414.91	641.00S	1444.66W	=>	-1329.18	N39 33 37.0482	W104 33 24.0327	
4900.00	29.06	246.07	4502.32	660.70S	1489.06W	=>	-1370.04	N39 33 36.8534	W104 33 24.5997	
5000.00	29.06	246.07	4589.73	680.40S	1533.47W	=>	-1410.89	N39 33 36.6587	W104 33 25.1666	
5100.00	29.06	246.07	4677.13	700.10S	1577.87W	=>	-1451.75	N39 33 36.4639	W104 33 25.7336	
5200.00	29.06	246.07	4764.54	719.81S	1622.28W	=>	-1492.60	N39 33 36.2692	W104 33 26.3005	
5300.00	29.06	246.07	4851.95	739.51S	1666.68W	=>	-1533.46	N39 33 36.0744	W104 33 26.8675	
5400.00	29.06	246.07	4939.36	759.21S	1711.09W	=>	-1574.31	N39 33 35.8797	W104 33 27.4344	
5500.00	29.06	246.07	5026.76	778.92S	1755.49W	=>	-1615.17	N39 33 35.6849	W104 33 28.0014	
5600.00	29.06	246.07	5114.17	798.62S	1799.90W	=>	-1656.02	N39 33 35.4902	W104 33 28.5683	
5700.00	29.06	246.07	5201.58	818.32S	1844.30W	=>	-1696.88	N39 33 35.2954	W104 33 29.1353	
5800.00	29.06	246.07	5288.98	838.02S	1888.70W	=>	-1737.74	N39 33 35.1007	W104 33 29.7022	
5900.00	29.06	246.07	5376.39	857.73S	1933.11W	=>	-1778.59	N39 33 34.9059	W104 33 30.2692	
5996.80	29.06	246.07	5461.00	876.80S	1976.09W	=>	-1818.14	N39 33 34.7174	W104 33 30.8179	Sussex Sandstone
6000.00	29.06	246.07	5463.80	877.43S	1977.51W	=>	-1819.45	N39 33 34.7111	W104 33 30.8361	
6100.00	29.06	246.07	5551.21	897.13S	2021.92W	=>	-1860.30	N39 33 34.5164	W104 33 31.4030	
6200.00	29.06	246.07	5638.61	916.83S	2066.32W	=>	-1901.16	N39 33 34.3216	W104 33 31.9700	
6300.00	29.06	246.07	5726.02	936.54S	2110.73W	=>	-1942.01	N39 33 34.1269	W104 33 32.5369	
6400.00	29.06	246.07	5813.43	956.24S	2155.13W	=>	-1982.87	N39 33 33.9321	W104 33 33.1039	
6500.00	29.06	246.07	5900.83	975.94S	2199.54W	=>	-2023.72	N39 33 33.7374	W104 33 33.6708	
6600.00	29.06	246.07	5988.24	995.64S	2243.94W	=>	-2064.58	N39 33 33.5426	W104 33 34.2377	
6700.00	29.06	246.07	6075.65	1015.35S	2288.35W	=>	-2105.43	N39 33 33.3478	W104 33 34.8047	
6800.00	29.06	246.07	6163.06	1035.05S	2332.75W	=>	-2146.29	N39 33 33.1531	W104 33 35.3716	
6900.00	29.06	246.07	6250.46	1054.75S	2377.16W	=>	-2187.15	N39 33 32.9583	W104 33 35.9385	
7000.00	29.06	246.07	6337.87	1074.45S	2421.56W	=>	-2228.00	N39 33 32.7635	W104 33 36.5055	
7100.00	29.06	246.07	6425.28	1094.16S	2465.97W	=>	-2268.86	N39 33 32.5688	W104 33 37.0724	
7200.00	29.06	246.07	6512.68	1113.86S	2510.37W	=>	-2309.71	N39 33 32.3740	W104 33 37.6393	
7300.00	29.06	246.07	6600.09	1133.56S	2554.78W	=>	-2350.57	N39 33 32.1792	W104 33 38.2063	
7400.00	29.06	246.07	6687.50	1153.26S	2599.18W	=>	-2391.42	N39 33 31.9845	W104 33 38.7732	
7500.00	29.06	246.07	6774.91	1172.97S	2643.59W	=>	-2432.28	N39 33 31.7897	W104 33 39.3401	
7600.00	29.06	246.07	6862.31	1192.67S	2687.99W	=>	-2473.13	N39 33 31.5949	W104 33 39.9071	
7647.85	29.06	246.07	6904.14	1202.10S	2709.24W	=>	-2492.68	N39 33 31.5017	W104 33 40.1783	End of Hold
7700.00	25.00	240.89	6950.59	1212.60S	2730.46W	9.00	-2512.04	N39 33 31.3979	W104 33 40.4492	
7800.00	18.02	225.17	7043.64	1233.83S	2759.95W	9.00	-2537.92	N39 33 31.1881	W104 33 40.8257	
7900.00	13.54	195.87	7140.00	1256.04S	2774.15W	9.00	-2548.54	N39 33 30.9686	W104 33 41.0070	
8000.00	14.19	157.74	7237.28	1278.69S	2772.70W	9.00	-2543.64	N39 33 30.7447	W104 33 40.9885	
8100.00	19.45	132.00	7333.10	1301.21S	2755.65W	9.00	-2523.34	N39 33 30.5221	W104 33 40.7708	
8200.00	26.73	118.31	7425.10	1323.06S	2723.42W	9.00	-2488.13	N39 33 30.3062	W104 33 40.3591	
8300.00	34.78	110.37	7511.00	1343.70S	2676.79W	9.00	-2438.88	N39 33 30.1023	W104 33 39.7638	
8376.14	41.15	106.24	7571.00	1358.28S	2632.33W	9.00	-2392.72	N39 33 29.9582	W104 33 39.1961	Sharon Springs Shale
8400.00	43.17	105.16	7588.69	1362.62S	2616.91W	9.00	-2376.81	N39 33 29.9154	W104 33 38.9993	
8445.80	47.07	103.30	7621.01	1370.58S	2585.46W	9.00	-2344.51	N39 33 29.8368	W104 33 38.5977	Niobrara
8460.66	48.35	102.75	7631.01	1373.05S	2574.75W	9.00	-2333.55	N39 33 29.8123	W104 33 38.4609	Niobrara A
8500.00	51.73	101.38	7656.27	1379.34S	2545.27W	9.00	-2303.45	N39 33 29.7502	W104 33 38.0845	
8600.00	60.38	98.41	7712.06	1393.47S	2463.62W	9.00	-2220.60	N39 33 29.6106	W104 33 37.0420	
8700.00	69.10	95.90	7754.70	1404.66S	2373.97W	9.00	-2130.30	N39 33 29.5002	W104 33 35.8974	
8703.69	69.42	95.82	7756.01	1405.01S	2370.53W	9.00	-2126.85	N39 33 29.4967	W104 33 35.8535	Niobrara B Top
8800.00	77.84	93.68	7783.13	1412.62S	2278.53W	9.00	-2034.77	N39 33 29.4216	W104 33 34.6789	
8900.00	86.60	91.60	7796.65	1417.16S	2179.66W	9.00	-1936.37	N39 33 29.3768	W104 33 33.4165	
8938.76	90.00	90.81	7797.80	1417.97S	2140.93W	9.00	-1897.98	N39 33 29.3688	W104 33 32.9220	S/C Kick off Point/Target, SILVER 5HN LP
9000.00	90.00	90.81	7797.80	1418.83S	2079.70W	=>	-1837.34	N39 33 29.3603	W104 33 32.1402	
9100.00	90.00	90.81	7797.80	1420.25S	1979.71W	=>	-1738.31	N39 33 29.3464	W104 33 30.8635	
9200.00	90.00	90.81	7797.80	1421.66S	1879.72W	=>	-1639.29	N39 33 29.3326	W104 33 29.5869	
9300.00	90.00	90.81	7797.80	1423.07S	1779.73W	=>	-1540.27	N39 33 29.3187	W104 33 28.3102	
9400.00	90.00	90.81	7797.80	1424.48S	1679.74W	=>	-1441.25	N39 33 29.3048	W104 33 27.0336	
9500.00	90.00	90.81	7797.80	1425.89S	1579.75W	=>	-1342.22	N39 33 29.2909	W104 33 25.7570	
9600.00	90.00	90.81	7797.80	1427.30S	1479.76W	=>	-1243.20	N39 33 29.2770	W104 33 24.4803	
9700.00	90.00	90.81	7797.80	1428.71S	1379.77W	=>	-1144.18	N39 33 29.2631	W104 33 23.2037	
9800.00	90.00	90.81	7797.80	1430.13S	1279.78W	=>	-1045.16	N39 33 29.2492	W104 33 21.9270	
9900.00	90.00	90.81	7797.80	1431.54S	1179.79W	=>	-946.14	N39 33 29.2353	W104 33 20.6504	
10000.00	90.00	90.81	7797.80	1432.95S	1079.80W	=>	-847.11	N39 33 29.2214	W104 33 19.3737	
10100.00	90.00	90.81	7797.80	1434.36S	979.81W	=>	-748.09	N39 33 29.2075	W104 33 18.0971	
10200.00	90.00	90.81	7797.80	1435.77S	879.82W	=>	-649.07	N39 33 29.1936	W104 33 16.8204	
10300.00	90.00	90.81	7797.80	1437.18S	779.83W	=>	-550.05	N39 33 29.1797	W104 33 15.5438	
10400.00	90.00	90.81	7797.80	1438.59S	679.84W	=>	-451.02	N39 33 29.1658	W104 33 14.2672	
10500.00	90.00	90.81	7797.80	1440.01S	579.85W	=>	-352.00	N39 33 29.1519	W104 33 12.9905	
10600.00	90.00	90.81	7797.80	1441.42S	479.86W	=>	-252.98	N39 33 29.1379	W104 33 11.7139	
10700.00	90.00	90.81	7797.80	1442.83S	379.87W	=>	-153.96	N39 33 29.1240	W104 33 10.4372	
10800.00	90.00	90.81	7797.80	1444.24S	279.88W	=>	-54.93	N39 33 29.1101	W104 33 9.1606	
10900.00	90.00	90.81	7797.80	1445.65S	179.89W	=>	44.09	N39 33 29.0961	W104 33 7.8839	
11000.00	90.00	90.81	7797.80	1447.06S	79.90W	=>	143.11	N39 33 29.0822	W104 33 6.6073	
11100.00	90.00	90.81	7797.80	1448.47S	20.09E	=>	242.13	N39 33 29.0682	W104 33 5.3307	
11200.00	90.00	90.81	7797.80	1449.89S	120.08E	=>	341.15	N39 33 29.0543	W104 33 4.0540	
11300.00	90.00	90.81	7797.80	1451.30S	220.07E	=>	440.18	N39 33 29.0403	W104 33 2.7774	
11400.00	90.00	90.81	7797.80	1452.71S	320.06E	=>	539.20	N39 33 29.0264	W104 33 1.5007	
11500.00	90.00	90.81	7797.80	1454.12S	420.05E	=>	638.22	N39 33 29.0124	W104 33 0.2241	
11600.00	90.00	90.81	7797.80	1455.53S	520.04E	=>	737.24	N39 33 28.9984	W104 32 58.9474	
11700.00	90.00	90.81	7797.80	1456.94S	620.03E	=>	836.27	N39 33 28.9845	W104 32 57.6708	
11800.00	90.00	90.81	7797.80	1458.35S	720.02E	=>	935.29	N39 33 28.9705	W104 32 56.3942	
11900.00	90.00	90.81	7797.80	1459.77S	820.01E	=>	1034.31	N39 33 28.9565	W104 32 55.1175	
12000.00	90.00	90.81	7797.80	1461.18S	920.00E	=>	1133.33	N39 33 28.9425	W104 32 53.8409	
12100.00	90.00	90.81	7797.80	1462.59S	1019.99E	=>	1232.36	N39 33 28.9285	W104 32 52.5642	
12200.00	90.00	90.81	7797.80	1464.00S	1119.98E	=>	1331.38	N39 33 28.9145	W104 32 51.2876	

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Vertical Section is from 0.00N 0.00E on azimuth 98.83 degrees  
Bottom hole distance is 10380.77 Feet on azimuth 98.83 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	90.81	7797.80	1465.41S	1219.97E	=>	1430.40	N39 33 28.9005	W104 32 50.0109	
12400.00	90.00	90.81	7797.80	1466.82S	1319.96E	=>	1529.42	N39 33 28.8865	W104 32 48.7343	
12500.00	90.00	90.81	7797.80	1468.23S	1419.95E	=>	1628.44	N39 33 28.8725	W104 32 47.4577	
12600.00	90.00	90.81	7797.80	1469.65S	1519.94E	=>	1727.47	N39 33 28.8585	W104 32 46.1810	
12700.00	90.00	90.81	7797.80	1471.06S	1619.93E	=>	1826.49	N39 33 28.8445	W104 32 44.9044	
12800.00	90.00	90.81	7797.80	1472.47S	1719.92E	=>	1925.51	N39 33 28.8305	W104 32 43.6277	
12900.00	90.00	90.81	7797.80	1473.88S	1819.91E	=>	2024.53	N39 33 28.8165	W104 32 42.3511	
13000.00	90.00	90.81	7797.80	1475.29S	1919.90E	=>	2123.56	N39 33 28.8025	W104 32 41.0745	
13100.00	90.00	90.81	7797.80	1476.70S	2019.89E	=>	2222.58	N39 33 28.7884	W104 32 39.7978	
13200.00	90.00	90.81	7797.80	1478.11S	2119.88E	=>	2321.60	N39 33 28.7744	W104 32 38.5212	
13300.00	90.00	90.81	7797.80	1479.53S	2219.87E	=>	2420.62	N39 33 28.7604	W104 32 37.2445	
13400.00	90.00	90.81	7797.80	1480.94S	2319.86E	=>	2519.65	N39 33 28.7463	W104 32 35.9679	
13500.00	90.00	90.81	7797.80	1482.35S	2419.85E	=>	2618.67	N39 33 28.7323	W104 32 34.6913	
13600.00	90.00	90.81	7797.80	1483.76S	2519.84E	=>	2717.69	N39 33 28.7182	W104 32 33.4146	
13700.00	90.00	90.81	7797.80	1485.17S	2619.83E	=>	2816.71	N39 33 28.7042	W104 32 32.1380	
13800.00	90.00	90.81	7797.80	1486.58S	2719.82E	=>	2915.73	N39 33 28.6901	W104 32 30.8613	
13900.00	90.00	90.81	7797.80	1487.99S	2819.81E	=>	3014.76	N39 33 28.6761	W104 32 29.5847	
14000.00	90.00	90.81	7797.80	1489.41S	2919.80E	=>	3113.78	N39 33 28.6620	W104 32 28.3081	
14100.00	90.00	90.81	7797.80	1490.82S	3019.79E	=>	3212.80	N39 33 28.6479	W104 32 27.0314	
14200.00	90.00	90.81	7797.80	1492.23S	3119.78E	=>	3311.82	N39 33 28.6339	W104 32 25.7548	
14300.00	90.00	90.81	7797.80	1493.64S	3219.77E	=>	3410.85	N39 33 28.6198	W104 32 24.4782	
14400.00	90.00	90.81	7797.80	1495.05S	3319.76E	=>	3509.87	N39 33 28.6057	W104 32 23.2015	
14500.00	90.00	90.81	7797.80	1496.46S	3419.75E	=>	3608.89	N39 33 28.5916	W104 32 21.9249	
14600.00	90.00	90.81	7797.80	1497.87S	3519.74E	=>	3707.91	N39 33 28.5776	W104 32 20.6482	
14700.00	90.00	90.81	7797.80	1499.29S	3619.74E	=>	3806.94	N39 33 28.5635	W104 32 19.3716	
14800.00	90.00	90.81	7797.80	1500.70S	3719.73E	=>	3905.96	N39 33 28.5494	W104 32 18.0950	
14900.00	90.00	90.81	7797.80	1502.11S	3819.72E	=>	4004.98	N39 33 28.5353	W104 32 16.8183	
15000.00	90.00	90.81	7797.80	1503.52S	3919.71E	=>	4104.00	N39 33 28.5212	W104 32 15.5417	
15100.00	90.00	90.81	7797.80	1504.93S	4019.70E	=>	4203.02	N39 33 28.5071	W104 32 14.2651	
15200.00	90.00	90.81	7797.80	1506.34S	4119.69E	=>	4302.05	N39 33 28.4930	W104 32 12.9884	
15300.00	90.00	90.81	7797.80	1507.75S	4219.68E	=>	4401.07	N39 33 28.4788	W104 32 11.7118	
15400.00	90.00	90.81	7797.80	1509.17S	4319.67E	=>	4500.09	N39 33 28.4647	W104 32 10.4351	
15500.00	90.00	90.81	7797.80	1510.58S	4419.66E	=>	4599.11	N39 33 28.4506	W104 32 9.1585	
15600.00	90.00	90.81	7797.80	1511.99S	4519.65E	=>	4698.14	N39 33 28.4365	W104 32 7.8819	
15700.00	90.00	90.81	7797.80	1513.40S	4619.64E	=>	4797.16	N39 33 28.4223	W104 32 6.6052	
15800.00	90.00	90.81	7797.80	1514.81S	4719.63E	=>	4896.18	N39 33 28.4082	W104 32 5.3286	
15900.00	90.00	90.81	7797.80	1516.22S	4819.62E	=>	4995.20	N39 33 28.3941	W104 32 4.0520	
16000.00	90.00	90.81	7797.80	1517.63S	4919.61E	=>	5094.22	N39 33 28.3799	W104 32 2.7753	
16100.00	90.00	90.81	7797.80	1519.05S	5019.60E	=>	5193.25	N39 33 28.3658	W104 32 1.4987	
16200.00	90.00	90.81	7797.80	1520.46S	5119.59E	=>	5292.27	N39 33 28.3516	W104 32 0.2221	
16300.00	90.00	90.81	7797.80	1521.87S	5219.58E	=>	5391.29	N39 33 28.3375	W104 31 58.9454	
16400.00	90.00	90.81	7797.80	1523.28S	5319.57E	=>	5490.31	N39 33 28.3233	W104 31 57.6688	
16500.00	90.00	90.81	7797.80	1524.69S	5419.56E	=>	5589.34	N39 33 28.3092	W104 31 56.3921	
16600.00	90.00	90.81	7797.80	1526.10S	5519.55E	=>	5688.36	N39 33 28.2950	W104 31 55.1155	
16700.00	90.00	90.81	7797.80	1527.51S	5619.54E	=>	5787.38	N39 33 28.2808	W104 31 53.8389	
16800.00	90.00	90.81	7797.80	1528.93S	5719.53E	=>	5886.40	N39 33 28.2667	W104 31 52.5622	
16900.00	90.00	90.81	7797.80	1530.34S	5819.52E	=>	5985.43	N39 33 28.2525	W104 31 51.2856	
17000.00	90.00	90.81	7797.80	1531.75S	5919.51E	=>	6084.45	N39 33 28.2383	W104 31 50.0090	
17100.00	90.00	90.81	7797.80	1533.16S	6019.50E	=>	6183.47	N39 33 28.2241	W104 31 48.7323	
17200.00	90.00	90.81	7797.80	1534.57S	6119.49E	=>	6282.49	N39 33 28.2099	W104 31 47.4557	
17300.00	90.00	90.81	7797.80	1535.98S	6219.48E	=>	6381.51	N39 33 28.1957	W104 31 46.1791	
17400.00	90.00	90.81	7797.80	1537.39S	6319.47E	=>	6480.54	N39 33 28.1815	W104 31 44.9024	
17500.00	90.00	90.81	7797.80	1538.81S	6419.46E	=>	6579.56	N39 33 28.1673	W104 31 43.6258	
17600.00	90.00	90.81	7797.80	1540.22S	6519.45E	=>	6678.58	N39 33 28.1531	W104 31 42.3492	
17700.00	90.00	90.81	7797.80	1541.63S	6619.44E	=>	6777.60	N39 33 28.1389	W104 31 41.0725	
17800.00	90.00	90.81	7797.80	1543.04S	6719.43E	=>	6876.63	N39 33 28.1247	W104 31 39.7959	
17900.00	90.00	90.81	7797.80	1544.45S	6819.42E	=>	6975.65	N39 33 28.1105	W104 31 38.5193	
18000.00	90.00	90.81	7797.80	1545.86S	6919.41E	=>	7074.67	N39 33 28.0963	W104 31 37.2426	
18100.00	90.00	90.81	7797.80	1547.27S	7019.40E	=>	7173.69	N39 33 28.0820	W104 31 35.9660	
18200.00	90.00	90.81	7797.80	1548.69S	7119.39E	=>	7272.72	N39 33 28.0678	W104 31 34.6894	
18300.00	90.00	90.81	7797.80	1550.10S	7219.38E	=>	7371.74	N39 33 28.0536	W104 31 33.4127	
18400.00	90.00	90.81	7797.80	1551.51S	7319.37E	=>	7470.76	N39 33 28.0393	W104 31 32.1361	
18500.00	90.00	90.81	7797.80	1552.92S	7419.36E	=>	7569.78	N39 33 28.0251	W104 31 30.8595	
18600.00	90.00	90.81	7797.80	1554.33S	7519.35E	=>	7668.80	N39 33 28.0109	W104 31 29.5828	
18700.00	90.00	90.81	7797.80	1555.74S	7619.34E	=>	7767.83	N39 33 27.9966	W104 31 28.3062	
18800.00	90.00	90.81	7797.80	1557.15S	7719.33E	=>	7866.85	N39 33 27.9824	W104 31 27.0296	
18900.00	90.00	90.81	7797.80	1558.57S	7819.32E	=>	7965.87	N39 33 27.9681	W104 31 25.7529	
19000.00	90.00	90.81	7797.80	1559.98S	7919.31E	=>	8064.89	N39 33 27.9538	W104 31 24.4763	
19100.00	90.00	90.81	7797.80	1561.39S	8019.30E	=>	8163.92	N39 33 27.9396	W104 31 23.1997	
19200.00	90.00	90.81	7797.80	1562.80S	8119.29E	=>	8262.94	N39 33 27.9253	W104 31 21.9231	
19300.00	90.00	90.81	7797.80	1564.21S	8219.28E	=>	8361.96	N39 33 27.9110	W104 31 20.6464	
19400.00	90.00	90.81	7797.80	1565.62S	8319.27E	=>	8460.98	N39 33 27.8968	W104 31 19.3698	
19500.00	90.00	90.81	7797.80	1567.03S	8419.26E	=>	8560.01	N39 33 27.8825	W104 31 18.0932	
19600.00	90.00	90.81	7797.80	1568.45S	8519.25E	=>	8659.03	N39 33 27.8682	W104 31 16.8165	
19700.00	90.00	90.81	7797.80	1569.86S	8619.24E	=>	8758.05	N39 33 27.8539	W104 31 15.5399	
19800.00	90.00	90.81	7797.80	1571.27S	8719.23E	=>	8857.07	N39 33 27.8396	W104 31 14.2633	
19900.00	90.00	90.81	7797.80	1572.68S	8819.22E	=>	8956.09	N39 33 27.8253	W104 31 12.9866	
20000.00	90.00	90.81	7797.80	1574.09S	8919.21E	=>	9055.12	N39 33 27.8110	W104 31 11.7100	
20100.00	90.00	90.81	7797.80	1575.50S	9019.20E	=>	9154.14	N39 33 27.7967	W104 31 10.4334	
20200.00	90.00	90.81	7797.80	1576.91S	9119.19E	=>	9253.16	N39 33 27.7824	W104 31 9.1568	
20300.00	90.00	90.81	7797.80	1578.33S	9219.18E	=>	9352.18	N39 33 27.7681	W104 31 7.8801	
20400.00	90.00	90.81	7797.80	1579.74S	9319.17E	=>	9451.21	N39 33 27.7538	W104 31 6.6035	
20500.00	90.00	90.81	7797.80	1581.15S	9419.16E	=>	9550.23	N39 33 27.7395	W104 31 5.3269	
20600.00	90.00	90.81	7797.80	1582.56S	9519.15E	=>	9649.25	N39 33 27.7251	W104 31 4.0502	
20700.00	90.00	90.81	7797.80	1583.97S	9619.14E	=>	9748.27	N39 33 27.7108	W104 31 2.7736	

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 6017.8ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 98.83 degrees  
Bottom hole distance is 10380.77 Feet on azimuth 98.83 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
20800.00	90.00	90.81	7797.80	1585.38S	9719.13E	==>	9847.30	N39 33 27.6965	W104 31 1.4970	
20900.00	90.00	90.81	7797.80	1586.79S	9819.12E	==>	9946.32	N39 33 27.6821	W104 31 0.2203	
21000.00	90.00	90.81	7797.80	1588.21S	9919.11E	==>	10045.34	N39 33 27.6678	W104 30 58.9437	
21100.00	90.00	90.81	7797.80	1589.62S	10019.10E	==>	10144.36	N39 33 27.6535	W104 30 57.6671	
21200.00	90.00	90.81	7797.80	1591.03S	10119.09E	==>	10243.38	N39 33 27.6391	W104 30 56.3905	
21300.00	90.00	90.81	7797.80	1592.44S	10219.08E	==>	10342.41	N39 33 27.6248	W104 30 55.1138	
21338.75	90.00	90.81	7797.80	1592.99S	10257.82E	==>	10380.77	N39 33 27.6192	W104 30 54.6192	End of Hold/Target, SILVER 5HN BH

All data is in Feet unless otherwise stated  
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 Vertical Section is from 0.00N 0.00E on azimuth 98.83 degrees  
 Bottom hole distance is 10380.77 Feet on azimuth 98.83 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
SILVER 5HN BH	1592.99S	10257.82E	7797.80	N39 33 27.6192	W104 30 54.6192	1083262.19	3277686.87
SILVER 5HN LP	1417.97S	2140.93W	7797.80	N39 33 29.3688	W104 33 32.9220	1083304.58	3265286.63

Formations						
Formation Name	Formation MD	Formation TVD	Wellpath Inc	Incidence Angle	North	East
Lower Dawson	80.00	80.00	0.00	90.00	0.00N	0.00E
Denver	205.00	205.00	0.00	90.00	0.00N	0.00E
Upper Arapahoe	1092.03	1092.00	2.39	87.61	0.78S	1.76W
Laramie - Fox Hills	1923.83	1897.01	24.02	65.98	77.39S	174.43W
Pierre Shale (Base of Fox Hills)	2187.04	2131.00	29.06	60.94	126.18S	284.37W
Sussex Sandstone	5996.80	5461.00	29.06	60.94	876.80S	1976.09W
Sharon Springs Shale	8376.14	7571.00	41.15	48.85	1358.28S	2632.33W
Niobrara	8445.80	7621.01	47.07	42.93	1370.58S	2585.46W
Niobrara A	8460.66	7631.01	48.35	41.65	1373.05S	2574.75W
Niobrara B Top	8703.69	7756.01	69.42	20.58	1405.01S	2370.53W

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
1095586	Planned	21338.75	7797.80	WdW Rate Gyro	Standard

Notes