

GMT Exploration

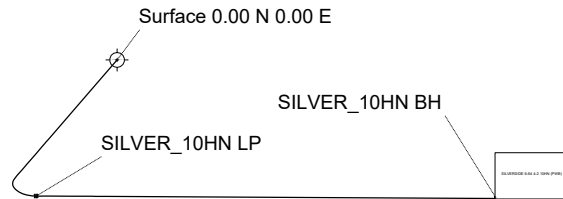
Location	DJ Basin	Slot	SILVERSIDE 6-64 4-2 10HN
Field	Elbert County Wells	Well	SILVERSIDE 6-64 4-2 10HN
Installation	Ragged 6-64 4 Pad	Wellbore	SILVERSIDE 6-64 4-2 10HN (PWB)

Created by	cdoke
Date plotted	4-Apr-2023
Plot reference is	SILVERSIDE 6-64 4-2 10HN (PWB).
Ref wellpath is	SILVERSIDE 6-64 4-2 10HN (PWB).
Coordinates are in	Feet reference SILVERSIDE 6-64 4-2 10HN.
True Vertical Depths are	reference Rig Datum.
Measured Depths are	reference Rig Datum.
Rig Datum:	Planned Datum #1
Rig Datum to Mean Sea Level:	6017.40 ft.
Plot North is aligned to	TRUE North.

Scale 1 cm = 1000 ft

East (Feet) ->

-8000 -6000 -4000 -2000 0 2000 4000 6000 8000 10000 12000

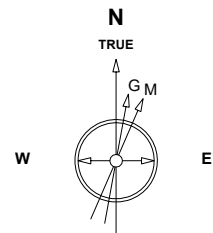
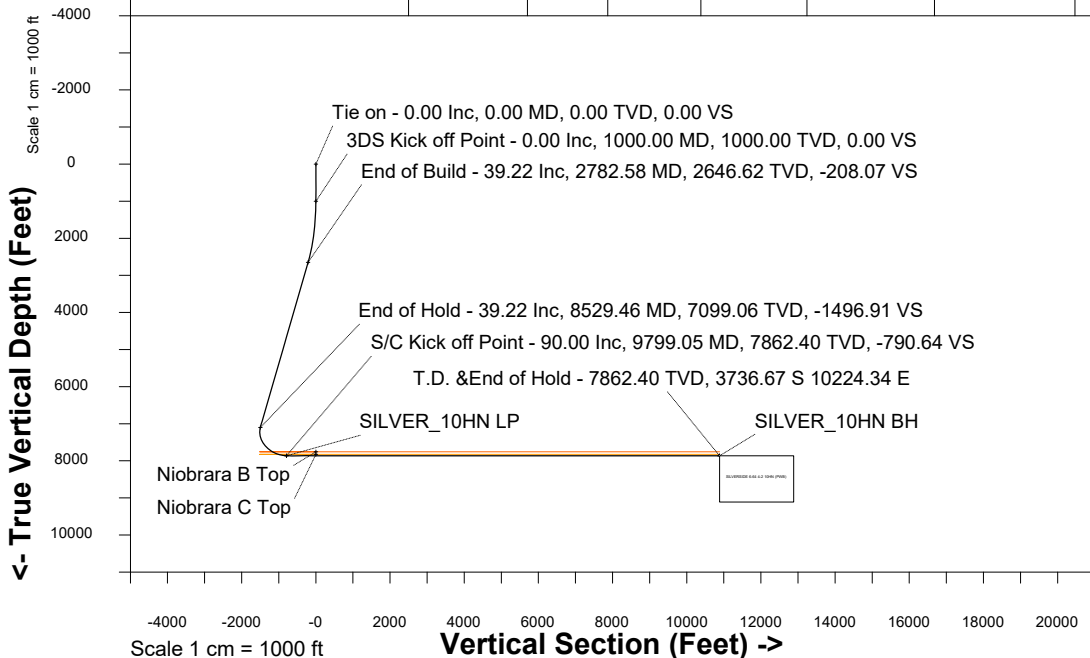


WELL PROFILE DATA

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	220.85	1000.00	S 0.00	W 0.00	0.00	0.00
End of Build	2782.58	39.22	220.85	2646.62	S 443.72	W 383.70	2.20	-208.07
End of Hold	8529.46	39.22	220.85	7099.06	S 3192.13	W 2760.37	0.00	-1496.91
Target SILVER_10HN LP	9799.05	90.00	90.31	7862.40	S 3668.72	W 2182.58	9.00	-790.64
T.D. & Target SIL... BH	22206.16	90.00	90.31	7862.40	S 3736.67	E 10224.34	0.00	10885.76

<- North(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

Azimuth 110.08 with reference 0.00 N, 0.00 E from SILVERSIDE 6-64 4-2 10HN

Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Installation [ft]
SILVERSIDE 6-64 4-2 10HN	N39 33 42.3936	W104 33 5.5944	1084645.2334	3267412.8384	179.94S	1.13W	0.70

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	-6017.40	0.00N	0.00E		0.00
1000.00	0.00	220.85	1000.00	-5017.40	0.00N	0.00E	==>	0.00
2782.58	39.22	220.85	2646.62	-3370.78	443.72S	383.70W	2.20	-208.07
8529.46	39.22	220.85	7099.06	1081.66	3192.13S	2760.37W	==>	-1496.91
9799.05	90.00	90.31	7862.40	1845.00	3668.72S	2182.58W	9.00	-790.64
22206.16	90.00	90.31	7862.40	1845.00	3736.67S	10224.34E	==>	10885.76

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 42.3936	W104 33 5.5944	Tie on, Slot Datum	
79.00	0.00	0.00	79.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944	Lower Dawson	
100.00	0.00	0.00	100.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
200.00	0.00	0.00	200.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
204.00	0.00	0.00	204.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944	Denver	
300.00	0.00	0.00	300.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
400.00	0.00	0.00	400.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
500.00	0.00	0.00	500.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
600.00	0.00	0.00	600.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
700.00	0.00	0.00	700.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
800.00	0.00	0.00	800.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
900.00	0.00	0.00	900.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944		
1000.00	0.00	220.85	1000.00	0.00N	0.00E	==>	0.00	N39 33 42.3936	W104 33 5.5944	3DS Kick off Point	
1091.02	2.00	220.85	1091.00	1.20S	1.04W	2.20	-0.56	N39 33 42.3817	W104 33 5.6077	Upper Arapahoe	
1100.00	2.20	220.85	1099.98	1.45S	1.26W	2.20	-0.68	N39 33 42.3792	W104 33 5.6104		
1200.00	4.40	220.85	1199.80	5.81S	5.02W	2.20	-2.72	N39 33 42.3362	W104 33 5.6585		
1300.00	6.60	220.85	1299.34	13.06S	11.29W	2.20	-6.12	N39 33 42.2646	W104 33 5.7385		
1400.00	8.80	220.85	1398.43	23.19S	20.05W	2.20	-10.87	N39 33 42.1644	W104 33 5.8504		
1500.00	11.00	220.85	1496.93	36.19S	31.30W	2.20	-16.97	N39 33 42.0359	W104 33 5.9940		
1600.00	13.20	220.85	1594.71	52.05S	45.01W	2.20	-24.41	N39 33 41.8792	W104 33 6.1691		
1700.00	15.40	220.85	1691.60	70.73S	61.16W	2.20	-33.17	N39 33 41.6946	W104 33 6.3754		
1800.00	17.60	220.85	1787.48	92.21S	79.74W	2.20	-43.24	N39 33 41.4823	W104 33 6.6125		
1900.00	19.80	220.85	1882.19	116.46S	100.71W	2.20	-54.61	N39 33 41.2426	W104 33 6.8803		
1914.69	20.12	220.85	1896.00	120.26S	103.99W	2.20	-56.39	N39 33 41.2051	W104 33 6.9222	Laramie - Fox Hills	
2000.00	22.00	220.85	1975.61	143.44S	124.04W	2.20	-67.27	N39 33 40.9759	W104 33 7.1782		
2100.00	24.20	220.85	2067.58	173.12S	149.70W	2.20	-81.18	N39 33 40.6826	W104 33 7.5059		
2168.85	25.71	220.85	2130.00	195.09S	168.70W	2.20	-91.49	N39 33 40.4655	W104 33 7.7485	Pierre Shale (Base of Fox Hills)	
2200.00	26.40	220.85	2157.99	205.44S	177.66W	2.20	-96.34	N39 33 40.3632	W104 33 7.8628		
2300.00	28.60	220.85	2246.68	240.37S	207.86W	2.20	-112.72	N39 33 40.0180	W104 33 8.2484		
2400.00	30.80	220.85	2333.54	277.84S	240.26W	2.20	-130.29	N39 33 39.6476	W104 33 8.6621		
2500.00	33.00	220.85	2418.43	317.81S	274.83W	2.20	-149.03	N39 33 39.2526	W104 33 9.1034		
2600.00	35.20	220.85	2501.23	360.22S	311.49W	2.20	-168.92	N39 33 38.8335	W104 33 9.5716		
2700.00	37.40	220.85	2581.82	404.99S	350.22W	2.20	-189.92	N39 33 38.3910	W104 33 10.0660		
2782.58	39.22	220.85	2646.62	443.72S	383.70W	2.20	-208.07	N39 33 38.0083	W104 33 10.4935	End of Build	
2800.00	39.22	220.85	2660.11	452.05S	390.90W	==>	-211.98	N39 33 37.9260	W104 33 10.5855		
2900.00	39.22	220.85	2737.59	499.87S	432.26W	==>	-234.41	N39 33 37.4533	W104 33 11.1135		
3000.00	39.22	220.85	2815.07	547.69S	473.61W	==>	-256.83	N39 33 36.9807	W104 33 11.6416		
3100.00	39.22	220.85	2892.54	595.52S	514.97W	==>	-279.26	N39 33 36.5080	W104 33 12.1696		
3200.00	39.22	220.85	2970.02	643.34S	556.33W	==>	-301.69	N39 33 36.0353	W104 33 12.6976		
3300.00	39.22	220.85	3047.49	691.17S	597.68W	==>	-324.11	N39 33 35.5627	W104 33 13.2256		
3400.00	39.22	220.85	3124.97	738.99S	639.04W	==>	-346.54	N39 33 35.0900	W104 33 13.7536		
3500.00	39.22	220.85	3202.45	786.82S	680.39W	==>	-368.97	N39 33 34.6173	W104 33 14.2816		
3600.00	39.22	220.85	3279.92	834.64S	721.75W	==>	-391.39	N39 33 34.1447	W104 33 14.8097		
3700.00	39.22	220.85	3357.40	882.47S	763.10W	==>	-413.82	N39 33 33.6720	W104 33 15.3377		
3800.00	39.22	220.85	3434.87	930.29S	804.46W	==>	-436.25	N39 33 33.1993	W104 33 15.8657		
3900.00	39.22	220.85	3512.35	978.12S	845.82W	==>	-458.67	N39 33 32.7267	W104 33 16.3937		
4000.00	39.22	220.85	3589.82	1025.94S	887.17W	==>	-481.10	N39 33 32.2540	W104 33 16.9217		
4100.00	39.22	220.85	3667.30	1073.76S	928.53W	==>	-503.53	N39 33 31.7813	W104 33 17.4497		
4200.00	39.22	220.85	3744.78	1121.59S	969.88W	==>	-525.95	N39 33 31.3087	W104 33 17.9777		
4300.00	39.22	220.85	3822.25	1169.41S	1011.24W	==>	-548.38	N39 33 30.8360	W104 33 18.5057		
4400.00	39.22	220.85	3899.73	1217.24S	1052.60W	==>	-570.81	N39 33 30.3633	W104 33 19.0337		
4500.00	39.22	220.85	3977.20	1265.06S	1093.95W	==>	-593.23	N39 33 29.8907	W104 33 19.5617		

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 6017.4ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 110.08 degrees
Bottom hole distance is 10885.76 Feet on azimuth 110.08 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	39.22	220.85	4054.68	1312.89S	1135.31W	=>	-615.66	N39 33 29.4180	W104 33 20.0897	
4700.00	39.22	220.85	4132.16	1360.71S	1176.66W	=>	-638.09	N39 33 28.9453	W104 33 20.6177	
4800.00	39.22	220.85	4209.63	1408.54S	1218.02W	=>	-660.51	N39 33 28.4726	W104 33 21.1457	
4900.00	39.22	220.85	4287.11	1456.36S	1259.37W	=>	-682.94	N39 33 28.0000	W104 33 21.6736	
5000.00	39.22	220.85	4364.58	1504.19S	1300.73W	=>	-705.37	N39 33 27.5273	W104 33 22.2016	
5100.00	39.22	220.85	4442.06	1552.01S	1342.09W	=>	-727.79	N39 33 27.0546	W104 33 22.7296	
5200.00	39.22	220.85	4519.53	1599.83S	1383.44W	=>	-750.22	N39 33 26.5819	W104 33 23.2576	
5300.00	39.22	220.85	4597.01	1647.66S	1424.80W	=>	-772.65	N39 33 26.1093	W104 33 23.7856	
5400.00	39.22	220.85	4674.49	1695.48S	1466.15W	=>	-795.07	N39 33 25.6366	W104 33 24.3136	
5500.00	39.22	220.85	4751.96	1743.31S	1507.51W	=>	-817.50	N39 33 25.1639	W104 33 24.8415	
5600.00	39.22	220.85	4829.44	1791.13S	1548.87W	=>	-839.93	N39 33 24.6912	W104 33 25.3695	
5700.00	39.22	220.85	4906.91	1838.96S	1590.22W	=>	-862.35	N39 33 24.2186	W104 33 25.8975	
5800.00	39.22	220.85	4984.39	1886.78S	1631.58W	=>	-884.78	N39 33 23.7459	W104 33 26.4254	
5900.00	39.22	220.85	5061.87	1934.61S	1672.93W	=>	-907.21	N39 33 23.2732	W104 33 26.9534	
6000.00	39.22	220.85	5139.34	1982.43S	1714.29W	=>	-929.63	N39 33 22.8005	W104 33 27.4814	
6100.00	39.22	220.85	5216.82	2030.26S	1755.64W	=>	-952.06	N39 33 22.3278	W104 33 28.0093	
6200.00	39.22	220.85	5294.29	2078.08S	1797.00W	=>	-974.49	N39 33 21.8552	W104 33 28.5373	
6300.00	39.22	220.85	5371.77	2125.90S	1838.36W	=>	-996.91	N39 33 21.3825	W104 33 29.0653	
6400.00	39.22	220.85	5449.24	2173.73S	1879.71W	=>	-1019.34	N39 33 20.9098	W104 33 29.5932	
6413.88	39.22	220.85	5460.00	2180.37S	1885.45W	=>	-1022.45	N39 33 20.8442	W104 33 29.6665	Sussex Sandstone
6500.00	39.22	220.85	5526.72	2221.55S	1921.07W	=>	-1041.77	N39 33 20.4371	W104 33 30.1212	
6600.00	39.22	220.85	5604.20	2269.38S	1962.42W	=>	-1064.19	N39 33 19.9644	W104 33 30.6491	
6700.00	39.22	220.85	5681.67	2317.20S	2003.78W	=>	-1086.62	N39 33 19.4917	W104 33 31.1771	
6800.00	39.22	220.85	5759.15	2365.03S	2045.14W	=>	-1109.05	N39 33 19.0190	W104 33 31.7050	
6900.00	39.22	220.85	5836.62	2412.85S	2086.49W	=>	-1131.48	N39 33 18.5464	W104 33 32.2330	
7000.00	39.22	220.85	5914.10	2460.68S	2127.85W	=>	-1153.90	N39 33 18.0737	W104 33 32.7609	
7100.00	39.22	220.85	5991.58	2508.50S	2169.20W	=>	-1176.33	N39 33 17.6010	W104 33 33.2889	
7200.00	39.22	220.85	6069.05	2556.33S	2210.56W	=>	-1198.76	N39 33 17.1283	W104 33 33.8168	
7300.00	39.22	220.85	6146.53	2604.15S	2251.91W	=>	-1221.18	N39 33 16.6556	W104 33 34.3447	
7400.00	39.22	220.85	6224.00	2651.97S	2293.27W	=>	-1243.61	N39 33 16.1829	W104 33 34.8727	
7500.00	39.22	220.85	6301.48	2699.80S	2334.63W	=>	-1266.04	N39 33 15.7102	W104 33 35.4006	
7600.00	39.22	220.85	6378.96	2747.62S	2375.98W	=>	-1288.46	N39 33 15.2375	W104 33 35.9285	
7700.00	39.22	220.85	6456.43	2795.45S	2417.34W	=>	-1310.89	N39 33 14.7648	W104 33 36.4565	
7800.00	39.22	220.85	6533.91	2843.27S	2458.69W	=>	-1333.32	N39 33 14.2921	W104 33 36.9844	
7900.00	39.22	220.85	6611.38	2891.10S	2500.05W	=>	-1355.74	N39 33 13.8195	W104 33 37.5123	
8000.00	39.22	220.85	6688.86	2938.92S	2541.41W	=>	-1378.17	N39 33 13.3468	W104 33 38.0402	
8100.00	39.22	220.85	6766.33	2986.75S	2582.76W	=>	-1400.60	N39 33 12.8741	W104 33 38.5682	
8200.00	39.22	220.85	6843.81	3034.57S	2624.12W	=>	-1423.02	N39 33 12.4014	W104 33 39.0961	
8300.00	39.22	220.85	6921.29	3082.40S	2665.47W	=>	-1445.45	N39 33 11.9287	W104 33 39.6240	
8400.00	39.22	220.85	6998.76	3130.22S	2706.83W	=>	-1467.88	N39 33 11.4560	W104 33 40.1519	
8500.00	39.22	220.85	7076.24	3178.04S	2748.18W	=>	-1490.30	N39 33 10.9833	W104 33 40.6798	
8529.46	39.22	220.85	7099.06	3192.13S	2760.37W	=>	-1496.91	N39 33 10.8440	W104 33 40.8353	End of Hold
8600.00	36.04	211.84	7154.97	3226.67S	2789.93W	9.00	-1509.06	N39 33 10.5027	W104 33 41.1616	
8700.00	32.91	196.89	7237.54	3277.75S	2809.38W	9.00	-1513.56	N39 33 9.9978	W104 33 41.4610	
8800.00	31.81	180.15	7322.19	3330.21S	2817.36W	9.00	-1503.04	N39 33 9.4794	W104 33 41.5627	
8900.00	32.95	163.44	7406.81	3382.73S	2809.66W	9.00	-1477.78	N39 33 8.9603	W104 33 41.4644	
9000.00	36.11	148.53	7489.33	3434.04S	2786.48W	9.00	-1438.39	N39 33 8.4532	W104 33 41.1683	
9100.00	40.83	136.18	7567.72	3482.86S	2748.38W	9.00	-1385.85	N39 33 7.9707	W104 33 40.6819	
9103.03	40.99	135.84	7570.00	3484.29S	2747.00W	9.00	-1384.07	N39 33 7.9567	W104 33 40.6643	Sharon Springs Shale
9171.30	44.88	128.84	7620.01	3515.49S	2712.61W	9.00	-1341.06	N39 33 7.6483	W104 33 40.2252	Niobrara
9185.51	45.73	127.51	7630.00	3521.73S	2704.67W	9.00	-1331.45	N39 33 7.5866	W104 33 40.1238	Niobrara A
9200.00	46.62	126.19	7640.04	3528.00S	2696.30W	9.00	-1321.44	N39 33 7.5247	W104 33 40.0170	
9300.00	53.13	118.04	7704.51	3568.34S	2631.53W	9.00	-1246.76	N39 33 7.1261	W104 33 39.1900	
9390.98	59.46	111.78	7755.01	3600.04S	2562.91W	9.00	-1171.43	N39 33 6.8129	W104 33 38.3139	Niobrara B Top
9400.00	60.10	111.21	7759.55	3602.89S	2555.66W	9.00	-1163.64	N39 33 6.7847	W104 33 38.2213	
9500.00	67.38	105.29	7803.80	3630.80S	2470.56W	9.00	-1074.13	N39 33 6.5089	W104 33 37.1348	
9560.96	71.91	102.00	7825.00	3644.26S	2415.03W	9.00	-1017.36	N39 33 6.3760	W104 33 36.4260	Niobrara C Top
9600.00	74.85	99.98	7836.17	3651.38S	2378.32W	9.00	-980.43	N39 33 6.3056	W104 33 35.9573	
9700.00	82.43	95.04	7855.86	3664.13S	2281.21W	9.00	-884.85	N39 33 6.1797	W104 33 34.7176	
9799.05	90.00	90.31	7862.40	3668.72S	2182.58W	9.00	-790.64	N39 33 6.1344	W104 33 33.4584	S/C Kick off Point/Target, SILVER_10HN LP
9800.00	90.00	90.31	7862.40	3668.73S	2181.64W	=>	-789.74	N39 33 6.1343	W104 33 33.4463	
9900.00	90.00	90.31	7862.40	3669.28S	2081.64W	=>	-695.63	N39 33 6.1290	W104 33 32.1697	
10000.00	90.00	90.31	7862.40	3669.83S	1981.64W	=>	-601.52	N39 33 6.1237	W104 33 30.8930	
10100.00	90.00	90.31	7862.40	3670.37S	1881.64W	=>	-507.41	N39 33 6.1184	W104 33 29.6164	
10200.00	90.00	90.31	7862.40	3670.92S	1781.64W	=>	-413.30	N39 33 6.1130	W104 33 28.3398	
10300.00	90.00	90.31	7862.40	3671.47S	1681.64W	=>	-319.19	N39 33 6.1077	W104 33 27.0631	
10400.00	90.00	90.31	7862.40	3672.02S	1581.65W	=>	-225.08	N39 33 6.1023	W104 33 25.7865	
10500.00	90.00	90.31	7862.40	3672.56S	1481.65W	=>	-130.97	N39 33 6.0970	W104 33 24.5099	
10600.00	90.00	90.31	7862.40	3673.11S	1381.65W	=>	-36.86	N39 33 6.0916	W104 33 23.2332	
10700.00	90.00	90.31	7862.40	3673.66S	1281.65W	=>	57.25	N39 33 6.0863	W104 33 21.9566	
10800.00	90.00	90.31	7862.40	3674.21S	1181.65W	=>	151.36	N39 33 6.0809	W104 33 20.6800	
10900.00	90.00	90.31	7862.40	3674.75S	1081.65W	=>	245.47	N39 33 6.0755	W104 33 19.4033	
11000.00	90.00	90.31	7862.40	3675.30S	981.66W	=>	339.58	N39 33 6.0702	W104 33 18.1267	
11100.00	90.00	90.31	7862.40	3675.85S	881.66W	=>	433.69	N39 33 6.0648	W104 33 16.8501	
11200.00	90.00	90.31	7862.40	3676.40S	781.66W	=>	527.80	N39 33 6.0594	W104 33 15.5734	
11300.00	90.00	90.31	7862.40	3676.94S	681.66W	=>	621.91	N39 33 6.0540	W104 33 14.2968	
11400.00	90.00	90.31	7862.40	3677.49S	581.66W	=>	716.02	N39 33 6.0486	W104 33 13.0202	
11500.00	90.00	90.31	7862.40	3678.04S	481.66W	=>	810.13	N39 33 6.0432	W104 33 11.7436	
11600.00	90.00	90.31	7862.40	3678.59S	381.66W	=>	904.25	N39 33 6.0378	W104 33 10.4669	
11700.00	90.00	90.31	7862.40	3679.13S	281.67W	=>	998.36	N39 33 6.0324	W104 33 9.1903	
11800.00	90.00	90.31	7862.40	3679.68S	181.67W	=>	1092.47	N39 33 6.0270	W104 33 7.9137	
11900.00	90.00	90.31	7862.40	3680.23S	81.67W	=>	1186.58	N39 33 6.0216	W104 33 6.6370	
12000.00	90.00	90.31	7862.40	3680.78S	18.33E	=>	1280.69	N39 33 6.0162	W104 33 5.3604	
12100.00	90.00	90.31	7862.40	3681.32S	118.33E	=>	1374.80	N39 33 6.0108	W104 33 4.0838	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 6017.4ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 110.08 degrees
Bottom hole distance is 10885.76 Feet on azimuth 110.08 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
12200.00	90.00	90.31	7862.40	3681.87S	218.33E	=>	1468.91	N39 33 6.0054	W104 33 2.8071	
12300.00	90.00	90.31	7862.40	3682.42S	318.33E	=>	1563.02	N39 33 6.0000	W104 33 1.5305	
12400.00	90.00	90.31	7862.40	3682.97S	418.32E	=>	1657.13	N39 33 5.9945	W104 33 0.2539	
12500.00	90.00	90.31	7862.40	3683.52S	518.32E	=>	1751.24	N39 33 5.9891	W104 32 58.9772	
12600.00	90.00	90.31	7862.40	3684.06S	618.32E	=>	1845.35	N39 33 5.9837	W104 32 57.7006	
12700.00	90.00	90.31	7862.40	3684.61S	718.32E	=>	1939.46	N39 33 5.9782	W104 32 56.4240	
12800.00	90.00	90.31	7862.40	3685.16S	818.32E	=>	2033.57	N39 33 5.9728	W104 32 55.1473	
12900.00	90.00	90.31	7862.40	3685.71S	918.32E	=>	2127.68	N39 33 5.9673	W104 32 53.8707	
13000.00	90.00	90.31	7862.40	3686.25S	1018.31E	=>	2221.79	N39 33 5.9619	W104 32 52.5941	
13100.00	90.00	90.31	7862.40	3686.80S	1118.31E	=>	2315.90	N39 33 5.9564	W104 32 51.3174	
13200.00	90.00	90.31	7862.40	3687.35S	1218.31E	=>	2410.01	N39 33 5.9510	W104 32 50.0408	
13300.00	90.00	90.31	7862.40	3687.90S	1318.31E	=>	2504.12	N39 33 5.9455	W104 32 48.7642	
13400.00	90.00	90.31	7862.40	3688.44S	1418.31E	=>	2598.23	N39 33 5.9401	W104 32 47.4875	
13500.00	90.00	90.31	7862.40	3688.99S	1518.31E	=>	2692.35	N39 33 5.9346	W104 32 46.2109	
13600.00	90.00	90.31	7862.40	3689.54S	1618.31E	=>	2786.46	N39 33 5.9291	W104 32 44.9343	
13700.00	90.00	90.31	7862.40	3690.09S	1718.30E	=>	2880.57	N39 33 5.9236	W104 32 43.6577	
13800.00	90.00	90.31	7862.40	3690.63S	1818.30E	=>	2974.68	N39 33 5.9182	W104 32 42.3810	
13900.00	90.00	90.31	7862.40	3691.18S	1918.30E	=>	3068.79	N39 33 5.9127	W104 32 41.1044	
14000.00	90.00	90.31	7862.40	3691.73S	2018.30E	=>	3162.90	N39 33 5.9072	W104 32 39.8278	
14100.00	90.00	90.31	7862.40	3692.28S	2118.30E	=>	3257.01	N39 33 5.9017	W104 32 38.5511	
14200.00	90.00	90.31	7862.40	3692.82S	2218.30E	=>	3351.12	N39 33 5.8962	W104 32 37.2745	
14300.00	90.00	90.31	7862.40	3693.37S	2318.30E	=>	3445.23	N39 33 5.8907	W104 32 35.9979	
14400.00	90.00	90.31	7862.40	3693.92S	2418.29E	=>	3539.34	N39 33 5.8852	W104 32 34.7212	
14500.00	90.00	90.31	7862.40	3694.47S	2518.29E	=>	3633.45	N39 33 5.8797	W104 32 33.4446	
14600.00	90.00	90.31	7862.40	3695.02S	2618.29E	=>	3727.56	N39 33 5.8742	W104 32 32.1680	
14700.00	90.00	90.31	7862.40	3695.56S	2718.29E	=>	3821.67	N39 33 5.8686	W104 32 30.8914	
14800.00	90.00	90.31	7862.40	3696.11S	2818.29E	=>	3915.78	N39 33 5.8631	W104 32 29.6147	
14900.00	90.00	90.31	7862.40	3696.66S	2918.29E	=>	4009.89	N39 33 5.8576	W104 32 28.3381	
15000.00	90.00	90.31	7862.40	3697.21S	3018.28E	=>	4104.00	N39 33 5.8521	W104 32 27.0615	
15100.00	90.00	90.31	7862.40	3697.75S	3118.28E	=>	4198.11	N39 33 5.8465	W104 32 25.7848	
15200.00	90.00	90.31	7862.40	3698.30S	3218.28E	=>	4292.22	N39 33 5.8410	W104 32 24.5082	
15300.00	90.00	90.31	7862.40	3698.85S	3318.28E	=>	4386.33	N39 33 5.8354	W104 32 23.2316	
15400.00	90.00	90.31	7862.40	3699.40S	3418.28E	=>	4480.45	N39 33 5.8299	W104 32 21.9549	
15500.00	90.00	90.31	7862.40	3699.94S	3518.28E	=>	4574.56	N39 33 5.8244	W104 32 20.6783	
15600.00	90.00	90.31	7862.40	3700.49S	3618.28E	=>	4668.67	N39 33 5.8188	W104 32 19.4017	
15700.00	90.00	90.31	7862.40	3701.04S	3718.27E	=>	4762.78	N39 33 5.8132	W104 32 18.1250	
15800.00	90.00	90.31	7862.40	3701.59S	3818.27E	=>	4856.89	N39 33 5.8077	W104 32 16.8484	
15900.00	90.00	90.31	7862.40	3702.13S	3918.27E	=>	4951.00	N39 33 5.8021	W104 32 15.5718	
16000.00	90.00	90.31	7862.40	3702.68S	4018.27E	=>	5045.11	N39 33 5.7966	W104 32 14.2952	
16100.00	90.00	90.31	7862.40	3703.23S	4118.27E	=>	5139.22	N39 33 5.7910	W104 32 13.0185	
16200.00	90.00	90.31	7862.40	3703.78S	4218.27E	=>	5233.33	N39 33 5.7854	W104 32 11.7419	
16300.00	90.00	90.31	7862.40	3704.32S	4318.27E	=>	5327.44	N39 33 5.7798	W104 32 10.4653	
16400.00	90.00	90.31	7862.40	3704.87S	4418.26E	=>	5421.55	N39 33 5.7742	W104 32 9.1886	
16500.00	90.00	90.31	7862.40	3705.42S	4518.26E	=>	5515.66	N39 33 5.7686	W104 32 7.9120	
16600.00	90.00	90.31	7862.40	3705.97S	4618.26E	=>	5609.77	N39 33 5.7631	W104 32 6.6354	
16700.00	90.00	90.31	7862.40	3706.52S	4718.26E	=>	5703.88	N39 33 5.7575	W104 32 5.3588	
16800.00	90.00	90.31	7862.40	3707.06S	4818.26E	=>	5797.99	N39 33 5.7519	W104 32 4.0821	
16900.00	90.00	90.31	7862.40	3707.61S	4918.26E	=>	5892.10	N39 33 5.7463	W104 32 2.8055	
17000.00	90.00	90.31	7862.40	3708.16S	5018.25E	=>	5986.21	N39 33 5.7406	W104 32 1.5289	
17100.00	90.00	90.31	7862.40	3708.71S	5118.25E	=>	6080.32	N39 33 5.7350	W104 32 0.2522	
17200.00	90.00	90.31	7862.40	3709.25S	5218.25E	=>	6174.44	N39 33 5.7294	W104 31 58.9756	
17300.00	90.00	90.31	7862.40	3709.80S	5318.25E	=>	6268.55	N39 33 5.7238	W104 31 57.6990	
17400.00	90.00	90.31	7862.40	3710.35S	5418.25E	=>	6362.66	N39 33 5.7182	W104 31 56.4224	
17500.00	90.00	90.31	7862.40	3710.90S	5518.25E	=>	6456.77	N39 33 5.7125	W104 31 55.1457	
17600.00	90.00	90.31	7862.40	3711.44S	5618.25E	=>	6550.88	N39 33 5.7069	W104 31 53.8691	
17700.00	90.00	90.31	7862.40	3711.99S	5718.24E	=>	6644.99	N39 33 5.7013	W104 31 52.5925	
17800.00	90.00	90.31	7862.40	3712.54S	5818.24E	=>	6739.10	N39 33 5.6956	W104 31 51.3158	
17900.00	90.00	90.31	7862.40	3713.09S	5918.24E	=>	6833.21	N39 33 5.6900	W104 31 50.0392	
18000.00	90.00	90.31	7862.40	3713.63S	6018.24E	=>	6927.32	N39 33 5.6843	W104 31 48.7626	
18100.00	90.00	90.31	7862.40	3714.18S	6118.24E	=>	7021.43	N39 33 5.6787	W104 31 47.4860	
18200.00	90.00	90.31	7862.40	3714.73S	6218.24E	=>	7115.54	N39 33 5.6730	W104 31 46.2093	
18300.00	90.00	90.31	7862.40	3715.28S	6318.24E	=>	7209.65	N39 33 5.6674	W104 31 44.9327	
18400.00	90.00	90.31	7862.40	3715.82S	6418.23E	=>	7303.76	N39 33 5.6617	W104 31 43.6561	
18500.00	90.00	90.31	7862.40	3716.37S	6518.23E	=>	7397.87	N39 33 5.6560	W104 31 42.3794	
18600.00	90.00	90.31	7862.40	3716.92S	6618.23E	=>	7491.98	N39 33 5.6504	W104 31 41.1028	
18700.00	90.00	90.31	7862.40	3717.47S	6718.23E	=>	7586.09	N39 33 5.6447	W104 31 39.8262	
18800.00	90.00	90.31	7862.40	3718.01S	6818.23E	=>	7680.20	N39 33 5.6390	W104 31 38.5496	
18900.00	90.00	90.31	7862.40	3718.56S	6918.23E	=>	7774.31	N39 33 5.6333	W104 31 37.2729	
19000.00	90.00	90.31	7862.40	3719.11S	7018.22E	=>	7868.42	N39 33 5.6276	W104 31 35.9963	
19100.00	90.00	90.31	7862.40	3719.66S	7118.22E	=>	7962.54	N39 33 5.6220	W104 31 34.7197	
19200.00	90.00	90.31	7862.40	3720.21S	7218.22E	=>	8056.65	N39 33 5.6163	W104 31 33.4430	
19300.00	90.00	90.31	7862.40	3720.75S	7318.22E	=>	8150.76	N39 33 5.6106	W104 31 32.1664	
19400.00	90.00	90.31	7862.40	3721.30S	7418.22E	=>	8244.87	N39 33 5.6049	W104 31 30.8898	
19500.00	90.00	90.31	7862.40	3721.85S	7518.22E	=>	8338.98	N39 33 5.5991	W104 31 29.6132	
19600.00	90.00	90.31	7862.40	3722.40S	7618.22E	=>	8433.09	N39 33 5.5934	W104 31 28.3365	
19700.00	90.00	90.31	7862.40	3722.94S	7718.21E	=>	8527.20	N39 33 5.5877	W104 31 27.0599	
19800.00	90.00	90.31	7862.40	3723.49S	7818.21E	=>	8621.31	N39 33 5.5820	W104 31 25.7833	
19900.00	90.00	90.31	7862.40	3724.04S	7918.21E	=>	8715.42	N39 33 5.5763	W104 31 24.5066	
20000.00	90.00	90.31	7862.40	3724.59S	8018.21E	=>	8809.53	N39 33 5.5706	W104 31 23.2300	
20100.00	90.00	90.31	7862.40	3725.13S	8118.21E	=>	8903.64	N39 33 5.5648	W104 31 21.9534	
20200.00	90.00	90.31	7862.40	3725.68S	8218.21E	=>	8997.75	N39 33 5.5591	W104 31 20.6768	
20300.00	90.00	90.31	7862.40	3726.23S	8318.21E	=>	9091.86	N39 33 5.5533	W104 31 19.4001	
20400.00	90.00	90.31	7862.40	3726.78S	8418.20E	=>	9185.97	N39 33 5.5476	W104 31 18.1235	
20500.00	90.00	90.31	7862.40	3727.32S	8518.20E	=>	9280.08	N39 33 5.5419	W104 31 16.8469	
20600.00	90.00	90.31	7862.40	3727.87S	8618.20E	=>	9374.19	N39 33 5.5361	W104 31 15.5703	

All data is in Feet unless otherwise stated
Coordinates are from Rig and TVD's are from Rig (Planned Datum #1 6017.4ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 110.08 degrees
Bottom hole distance is 10885.76 Feet on azimuth 110.08 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
20700.00	90.00	90.31	7862.40	3728.42S	8718.20E	==>	9468.30	N39 33 5.5304	W104 31 14.2936	
20800.00	90.00	90.31	7862.40	3728.97S	8818.20E	==>	9562.41	N39 33 5.5246	W104 31 13.0170	
20900.00	90.00	90.31	7862.40	3729.51S	8918.20E	==>	9656.52	N39 33 5.5188	W104 31 11.7404	
21000.00	90.00	90.31	7862.40	3730.06S	9018.20E	==>	9750.64	N39 33 5.5131	W104 31 10.4638	
21100.00	90.00	90.31	7862.40	3730.61S	9118.19E	==>	9844.75	N39 33 5.5073	W104 31 9.1871	
21200.00	90.00	90.31	7862.40	3731.16S	9218.19E	==>	9938.86	N39 33 5.5015	W104 31 7.9105	
21300.00	90.00	90.31	7862.40	3731.71S	9318.19E	==>	10032.97	N39 33 5.4957	W104 31 6.6339	
21400.00	90.00	90.31	7862.40	3732.25S	9418.19E	==>	10127.08	N39 33 5.4900	W104 31 5.3572	
21500.00	90.00	90.31	7862.40	3732.80S	9518.19E	==>	10221.19	N39 33 5.4842	W104 31 4.0806	
21600.00	90.00	90.31	7862.40	3733.35S	9618.19E	==>	10315.30	N39 33 5.4784	W104 31 2.8040	
21700.00	90.00	90.31	7862.40	3733.90S	9718.18E	==>	10409.41	N39 33 5.4726	W104 31 1.5274	
21800.00	90.00	90.31	7862.40	3734.44S	9818.18E	==>	10503.52	N39 33 5.4668	W104 31 0.2507	
21900.00	90.00	90.31	7862.40	3734.99S	9918.18E	==>	10597.63	N39 33 5.4610	W104 30 58.9741	
22000.00	90.00	90.31	7862.40	3735.54S	10018.18E	==>	10691.74	N39 33 5.4552	W104 30 57.6975	
22100.00	90.00	90.31	7862.40	3736.09S	10118.18E	==>	10785.85	N39 33 5.4494	W104 30 56.4209	
22200.00	90.00	90.31	7862.40	3736.63S	10218.18E	==>	10879.96	N39 33 5.4436	W104 30 55.1442	
22206.16	90.00	90.31	7862.40	3736.67S	10224.34E	==>	10885.76	N39 33 5.4432	W104 30 55.0656	End of Hold/Target, SILVER_10HN 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 6017.4ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 110.08 degrees
Bottom hole distance is 10885.76 Feet on azimuth 110.08 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 10HN BH	3736.67S	10224.34E	7862.40	N39 33 5.4432	W104 30 55.0656	1081018.04	3277676.83
SILVER 10HN LP	3668.72S	2182.58W	7862.40	N39 33 6.1344	W104 33 33.4584	1080953.28	3265269.56

Formations						
Formation Name	Formation MD	Formation TVD	Wellpath Inc	Incidence Angle	North	East
Lower Dawson	79.00	79.00	0.00	90.00	0.00N	0.00E
Denver	204.00	204.00	0.00	90.00	0.00N	0.00E
Upper Arapahoe	1091.02	1091.00	2.00	88.00	1.20S	1.04W
Laramie - Fox Hills	1914.69	1896.00	20.12	69.88	120.26S	103.99W
Pierre Shale (Base of Fox Hills)	2168.85	2130.00	25.71	64.29	195.09S	168.70W
Sussex Sandstone	6413.88	5460.00	39.22	50.78	2180.37S	1885.45W
Sharon Springs Shale	9103.03	7570.00	40.99	49.01	3484.29S	2747.00W
Niobrara	9171.30	7620.01	44.88	45.12	3515.49S	2712.61W
Niobrara A	9185.51	7630.00	45.73	44.27	3521.73S	2704.67W
Niobrara B Top	9390.98	7755.01	59.46	30.54	3600.04S	2562.91W
Niobrara C Top	9560.96	7825.00	71.91	18.09	3644.26S	2415.03W

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
1095676	Planned	22206.16	7862.40	WdW Rate Gyro	Standard

Notes