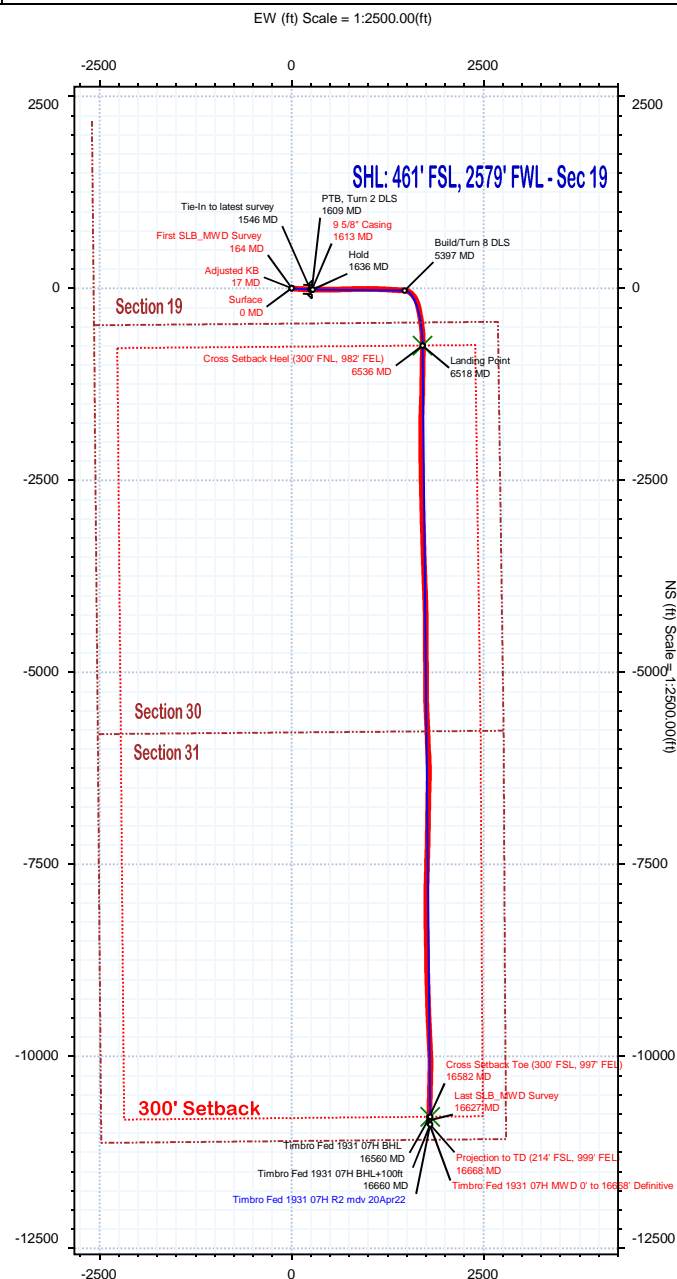
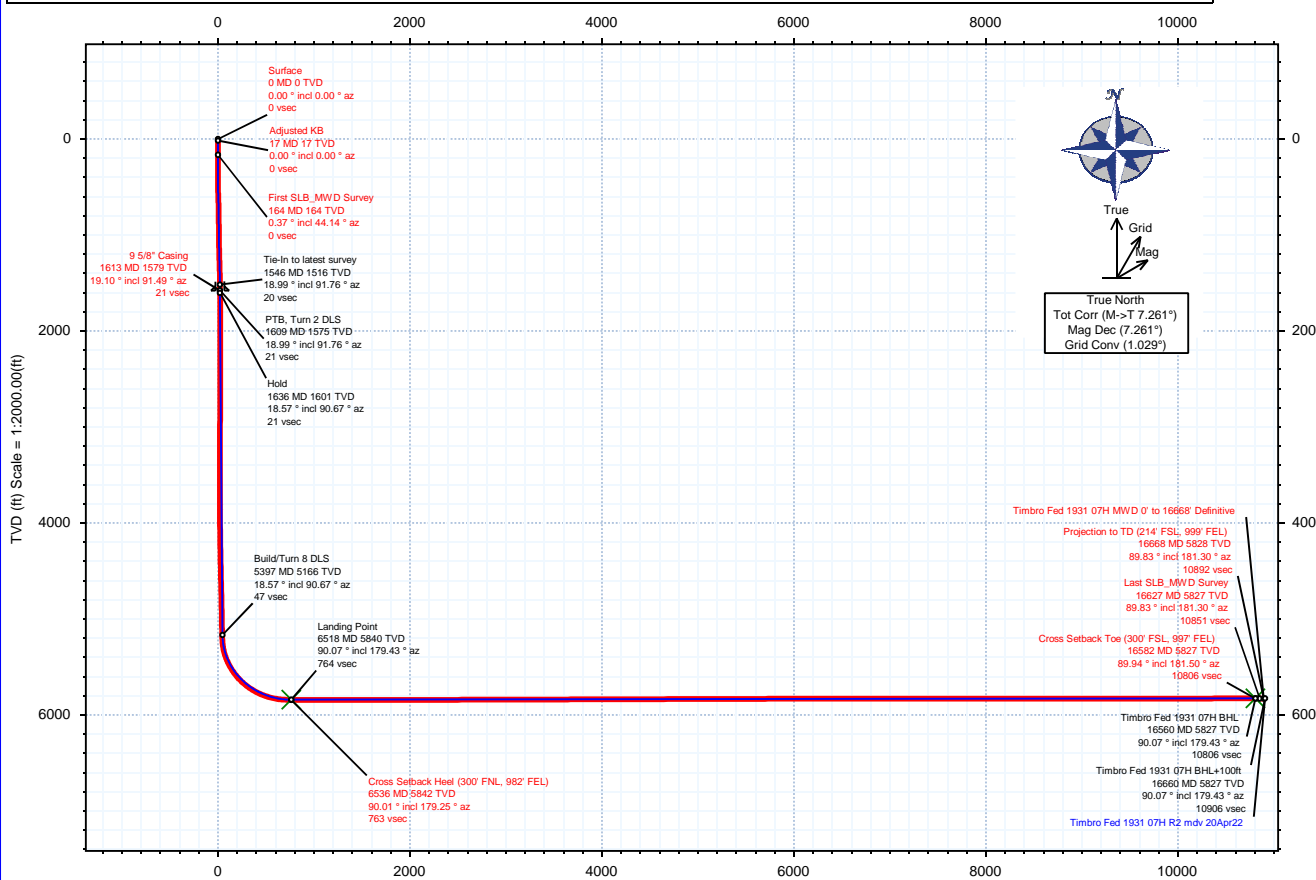


Borehole: Timbro Fed 1931 07H	Well: Timbro Fed 1931 07H	Field: CO, Weld County (NAD 83 NZ) - 2019	Structure: Verdad Resources 19-09N-58W (Timbro Fed 1931 Pad)
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Gravity & Magnetic Parameters				Surface Location				NAD83 Colorado State Plane, Northern Zone, US Feet				Miscellaneous			
Model:	HDGM 2022	Dip:	66.922°	Date:	20-Apr-2022	Lat:	N 40 43 49.60	Northing:	1512909.65ftUS	Grid Conv:	1.0291°	Slot:	07H	TVD Ref:	RKB = 21ft(4845ft above MSL)
MagDec:	7.261°	FS:	52136.324Nt	Gravity FS:	999.089mgn (9.80665 Based)	Lon:	W 103 54 26.27	Easting:	3441398.01ftUS	Scale Fact:	0.99999185	Plan:	Timbro Fed 1931 07H MWD 0' to 16668' Definitive		

Surface Location		Northing:		Easting:		Latitude:		Longitude:		VSec Azimuth:		Local Coord	
Target Description		Latitude	Longitude	Northing	Easting	TVD	VSec	N(+)/S(-)	E(+)/W(-)				
Timbro Fed 1931 Pad Sec 30-31 - 300' SB		N 40 43 49.60	W 103 54 27.44	1512907.34	3441308.05	4845.00	-0.20	-0.69	-89.99				
Timbro Fed 1931 Pad Sec 30-31		N 40 43 49.60	W 103 54 27.44	1512907.34	3441308.05	4845.00	-0.20	-0.69	-89.99				
Timbro Fed 1931 Pad Sec 30-31 - CL		N 40 43 49.60	W 103 54 27.44	1512907.34	3441308.05	4845.00	-0.20	-0.69	-89.99				
Timbro Fed 1931 07H BHL		N 40 42 3.00	W 103 54 2.87	1502155.00	3443394.36	5827.00	10806.28	-10788.88	1802.88				
Timbro Fed 1931 07H LP		N 40 43 42.22	W 103 54 4.15	1512193.07	3443114.54	5840.00	764.21	-747.30	1703.39				

Critical Points									
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS	
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Adjusted KB	17.00	0.00	0.00	17.00	0.00	0.00	0.00		
First SLB_MWD Survey	164.00	0.37	44.14	164.00	-0.34	0.34	0.33	0.25	
9 5/8" Casing	1613.00	19.10	91.49	1579.01	20.91	-18.28	264.72	0.20	
Cross Setback Heel (300' FNL, 982' FEL)	6535.93	90.01	179.25	5841.73	763.45	-746.50	1707.12	2.38	
Cross Setback Toe (300' FSL, 997' FEL)	16581.57	89.94	181.50	5827.34	10805.99	-10788.70	1791.90	0.50	
Last SLB_MWD Survey	16627.00	89.83	181.30	5827.43	10851.39	-10834.11	1790.79	0.50	
Projection to TD (214' FSL, 999' FEL)	16668.00	89.83	181.30	5827.55	10892.37	-10875.10	1789.86	0.00	



Vertical Section (ft) Azim = 179.43° Scale = 1:2000.00(ft) Origin = 0N-S, 0E-W

Timbro Fed 1931 07H MWD 0' to 16668' Definitive Survey Geodetic Report

(Def Survey)

Report Date: April 25, 2022 - 05:14 PM
Client: Verdad Resources
Field: CO, Weld County (NAD 83 NZ) - 2019
Structure / Slot: Verdad Resources 19-09N-58W (Timbro Fed 1931 Pad) / 07H
Well: Timbro Fed 1931 07H
Borehole: Timbro Fed 1931 07H
UWI / API#: Unknown / 05-123-51204
Survey Name: Timbro Fed 1931 07H MWD 0' to 16668' Definitive
Survey Date: April 20, 2022
Tort / AHD / DDI / ERD Ratio: 188.144 ° / 12409.153 ft / 6.823 / 2.124
Coordinate Reference System: NAD83 Colorado State Plane, Northern Zone, US Feet
Location Lat / Long: N 40° 43' 49.60236", W 103° 54' 26.27280"
Location Grid N/E Y/X: N 1512909.648 ftUS, E 3441398.012 ftUS
CRS Grid Convergence Angle: 1.0291 °
Grid Scale Factor: 0.99999185
Version / Patch: 2.10.829.1

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.430 ° (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 21ft
TVD Reference Elevation: 4845.000 ft above MSL
Seabed / Ground Elevation: 4824.000 ft above MSL
Magnetic Declination: 7.261 °
Total Gravity Field Strength: 999.0892mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 52136.324 nT
Magnetic Dip Angle: 66.922 °
Declination Date: April 20, 2022
Magnetic Declination Model: HDGM 2022
North Reference: True North
Grid Convergence Used: 0.0000 °
Total Corr Mag North→True North: 7.2607 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	1512909.65	3441398.01	40.730445	-103.907298
Adjusted KB	17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	1512909.65	3441398.01	40.730445	-103.907298
First SLB_MWD Survey	164.00	0.37	44.14	164.00	-0.34	0.34	0.33	0.25	1512909.99	3441398.34	40.730446	-103.907297
	192.00	0.25	18.85	192.00	-0.46	0.46	0.41	0.64	1512910.12	3441398.42	40.730446	-103.907297
	221.00	0.39	16.46	221.00	-0.61	0.62	0.48	0.48	1512910.27	3441398.46	40.730447	-103.907296
	251.00	0.40	25.28	251.00	-0.81	0.81	0.54	0.21	1512910.47	3441398.53	40.730447	-103.907296
	281.00	0.37	17.06	281.00	-0.99	1.00	0.61	0.21	1512910.66	3441398.60	40.730448	-103.907296
	312.00	0.39	58.77	312.00	-1.14	1.15	0.73	0.87	1512910.81	3441398.72	40.730448	-103.907295
	343.00	1.07	96.12	342.99	-1.16	1.17	1.11	2.57	1512910.84	3441399.10	40.730448	-103.907294
	373.00	1.84	98.33	372.98	-1.05	1.07	1.86	2.57	1512910.75	3441399.85	40.730448	-103.907291
	403.00	2.58	95.27	402.96	-0.91	0.94	3.01	2.50	1512910.64	3441401.00	40.730448	-103.907287
	433.00	3.19	95.31	432.92	-0.76	0.80	4.51	2.03	1512910.53	3441402.51	40.730447	-103.907282
	463.00	4.00	100.02	462.86	-0.48	0.54	6.38	2.87	1512910.30	3441404.38	40.730447	-103.907275
	493.00	4.48	105.56	492.78	0.04	0.05	8.53	2.10	1512909.85	3441406.54	40.730445	-103.907267
	523.00	4.96	107.64	522.68	0.77	-0.66	10.90	1.70	1512909.18	3441408.92	40.730443	-103.907259
	553.00	5.73	108.56	552.55	1.67	-1.53	13.55	2.58	1512908.36	3441411.59	40.730441	-103.907249
	583.00	6.31	105.81	582.38	2.62	-2.46	16.56	2.16	1512907.49	3441414.61	40.730438	-103.907238
	613.00	6.89	103.82	612.18	3.53	-3.34	19.89	2.08	1512906.67	3441417.96	40.730436	-103.907226
	643.00	7.70	101.94	641.94	4.42	-4.18	23.61	2.81	1512905.89	3441421.69	40.730434	-103.907213
	673.00	8.36	100.96	671.65	5.29	-5.01	27.72	2.25	1512905.13	3441425.81	40.730431	-103.907198
	703.00	8.81	96.39	701.31	6.00	-5.68	32.14	2.72	1512904.54	3441430.25	40.730430	-103.907182
	733.00	8.93	92.78	730.95	6.42	-6.05	36.75	1.90	1512904.26	3441434.86	40.730428	-103.907165
	763.00	8.70	93.52	760.60	6.71	-6.30	41.34	0.85	1512904.09	3441439.46	40.730428	-103.907149
	793.00	8.95	94.53	790.24	7.08	-6.63	45.93	0.98	1512903.85	3441444.05	40.730427	-103.907132
	823.00	9.53	94.33	819.85	7.50	-7.00	50.73	1.94	1512903.56	3441448.86	40.730426	-103.907115
	853.00	10.07	93.41	849.42	7.90	-7.34	55.83	1.87	1512903.31	3441453.96	40.730425	-103.907097
	883.00	10.48	93.78	878.94	8.29	-7.68	61.17	1.38	1512903.07	3441459.31	40.730424	-103.907077
	913.00	11.08	93.98	908.41	8.72	-8.06	66.77	2.00	1512902.79	3441464.91	40.730423	-103.907057
	943.00	11.70	93.54	937.81	9.17	-8.45	72.68	2.09	1512902.51	3441470.83	40.730422	-103.907036
	973.00	12.22	92.72	967.16	9.57	-8.78	78.89	1.82	1512902.28	3441477.04	40.730421	-103.907013
	1003.00	12.49	92.73	996.47	9.94	-9.09	85.30	0.90	1512902.09	3441483.46	40.730420	-103.906990
	1033.00	13.10	92.53	1025.72	10.31	-9.39	91.93	2.04	1512901.91	3441490.10	40.730419	-103.906966
	1063.00	13.69	92.37	1054.91	10.67	-9.69	98.88	1.97	1512901.73	3441497.05	40.730419	-103.906941
	1093.00	14.46	91.75	1084.01	11.01	-9.95	106.17	2.62	1512901.60	3441504.34	40.730418	-103.906915
	1123.00	15.05	92.01	1113.02	11.34	-10.20	113.80	1.98	1512901.49	3441511.98	40.730417	-103.906887
	1153.00	15.89	92.73	1141.94	11.74	-10.53	121.75	2.23	1512901.30	3441519.93	40.730416	-103.906859
	1183.00	16.22	93.86	1170.79	12.30	-11.01	129.98	2.05	1512900.98	3441528.17	40.730415	-103.906829
	1213.00	16.85	94.53	1199.55	13.01	-11.63	138.50	2.19	1512900.50	3441536.69	40.730413	-103.906798
	1243.00	17.52	95.54	1228.21	13.88	-12.41	147.33	2.44	1512899.88	3441545.54	40.730411	-103.906766
	1273.00	17.86	96.70	1256.79	14.94	-13.39	156.39	1.63	1512899.07	3441554.61	40.730408	-103.906734
	1303.00	18.50	96.57	1285.29	16.12	-14.47	165.69	2.14	1512898.16	3441563.93	40.730405	-103.906700
	1333.00	18.76	94.48	1313.72	17.13	-15.39	175.22	2.39	1512897.41	3441573.48	40.730403	-103.906666
	1363.00	18.43	92.62	1342.15	17.82	-15.98	184.77	2.26	1512896.99	3441583.04	40.730401	-103.906631
	1393.00	18.12	91.36	1370.64	18.24	-16.31	194.17	1.67	1512896.83	3441592.44	40.730400	-103.906597
	1423.00	18.19	91.46	1399.15	18.56	-16.54	203.52	0.26	1512896.77	3441601.79	40.730400	-103.906564
	1453.00	18.53	91.55	1427.62	18.91	-16.79	212.96	1.14	1512896.69	3441611.24	40.730399	-103.906530
	1483.00	18.75	91.71	1456.05	19.27	-17.06	222.55	0.75	1512896.59	3441620.83	40.730398	-103.906495
	1513.00	18.78	91.64	1484.45	19.65	-17.34	232.19	0.13	1512896.48	3441630.48	40.730397	-103.906460
	1546.00	18.99	91.76	1515.68	20.08	-17.66	242.87	0.65	1512896.35	3441641.16	40.730397	-103.906422
9 5/8" Casing	1613.00	19.10	91.49	1579.01	20.91	-18.28	264.72	0.20	1512896.13	3441663.02	40.730395	-103.906343
	1694.00	19.22	91.17	1655.52	21.79	-18.90	291.30	0.20	1512895.99	3441689.60	40.730393	-103.906247
	1783.00	18.60	91.15	1739.72	22.67	-19.48	320.14	0.70	1512895.92	3441718.45	40.730392	-103.906143
	1873.00	18.40	90.48	1825.07	23.36	-19.89	348.69	0.33	1512896.02	3441747.00	40.730391	-103.906040
	1962.00	18.64	89.23	1909.46	23.56	-19.82	376.96	0.53	1512896.61	3441775.26	40.730391	-103.905938
	2052.00	18.46	89.48	1994.78	23.53	-19.49	405.59	0.22	1512897.44	3441803.89	40.730392	-103.905835
	2141.00	18.59	89.31	2079.17	23.51	-19.20	433.87	0.15	1512898.25	3441832.15	40.730392	-103.905733
	2231.00	18.75	89.33	2164.44	23.46	-18.86	462.67	0.18	1512899.10	3441860.95	40.730393	-103.905629
	2321.00	18.47	89.45	2249.73	23.44	-18.55	491.40	0.31	1512899.93	3441889.66	40.730394	-103.905525
	2410.00	18.48	89.15	2334.14	23.37	-18.20	519.60	0.11	1512900.78	3441917.85	40.730395	-103.905423
	2500.00	18.36	89.44	2419.53	23.30	-17.85	548.03	0.17	1512901.64	3441946.27	40.730396	-103.905321
	2589.00	18.86	89.67	2503.88	23.36	-17.63	576.43	0.57	1512902.37	3441974.66	40.730397	-103.905218
	2679.00	18.54	89.31	2589.13	23.39	-17.37	605.28	0.37	1512903.15	3442003.50	40.730397	-103.905114
	2768.00	18.50	88.86	2673.52	23.22	-16.92	633.55	0.17	1512904.11	3442031.76	40.730399	-103.905012
	2858.00	18.57	88.44	2758.85	22.83	-16.24	662.16	0.17	1512905.30	3442060.35	40.730400	-103.904909
	2947.00	18.47	88.43	2843.24	22.34	-15.47	690.42	0.12	1512906.58	3442088.59	40.730403	-103.904807
	3036.00	18.20	88.27	2927.72	21.81	-14.67	718.40	0.31	1512907.89	3442116.55	40.730405	-103.904706
	3125.00	17.91	88.24	3012.34	21.25	-13.83	745.96	0.32	1512909.22	3442144.10	40.730407	-103.904606
	3215.00	17.62	88.08	3098.05	20.64	-12.95	773.41	0.33				

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ft)	Easting (ft)	Latitude (°)	Longitude (°)
	4109.00	18.37	92.23	3945.37	19.93	-9.40	1058.41	0.62	1512919.26	3442456.41	40.730419	-103.903479
	4199.00	18.21	92.30	4030.83	21.33	-10.52	1086.63	0.18	1512918.65	3442484.65	40.730416	-103.903377
	4288.00	18.13	92.16	4115.39	22.68	-11.60	1114.37	0.10	1512918.07	3442512.40	40.730413	-103.903277
	4378.00	18.38	92.61	4200.86	24.14	-12.77	1142.53	0.31	1512917.40	3442540.58	40.730410	-103.903176
	4467.00	18.61	93.16	4285.27	25.84	-14.19	1170.72	0.32	1512916.48	3442568.79	40.730406	-103.903074
	4557.00	18.18	92.25	4370.67	27.46	-15.54	1199.09	0.57	1512915.65	3442597.18	40.730402	-103.902972
	4646.00	18.39	92.07	4455.17	28.80	-16.59	1226.99	0.24	1512915.10	3442625.09	40.730399	-103.902871
	4736.00	18.52	93.97	4540.55	30.58	-18.09	1255.44	0.68	1512914.11	3442653.56	40.730395	-103.902768
	4826.00	18.31	93.50	4625.94	32.71	-19.94	1283.81	0.29	1512912.77	3442681.96	40.730390	-103.902666
	4915.00	18.19	92.65	4710.46	34.49	-21.44	1311.64	0.32	1512911.77	3442709.81	40.730386	-103.902565
	5005.00	18.33	92.94	4795.93	36.14	-22.81	1339.81	0.18	1512910.90	3442738.00	40.730382	-103.902464
	5094.00	18.55	93.19	4880.36	37.92	-24.32	1367.92	0.27	1512909.90	3442766.13	40.730378	-103.902362
	5183.00	18.05	93.24	4964.86	39.77	-25.88	1395.82	0.56	1512908.84	3442794.06	40.730374	-103.902262
	5273.00	18.01	91.87	5050.44	41.29	-27.12	1423.65	0.47	1512908.10	3442821.91	40.730371	-103.902161
	5362.00	18.76	93.28	5134.89	42.83	-28.39	1451.69	0.98	1512907.33	3442849.96	40.730367	-103.902060
	5452.00	19.59	97.90	5219.90	46.03	-31.30	1481.09	1.92	1512904.96	3442879.41	40.730359	-103.901954
	5541.00	23.03	112.66	5302.87	55.10	-40.06	1511.96	7.13	1512896.75	3442910.44	40.730335	-103.901843
	5631.00	28.70	128.41	5383.92	75.68	-60.31	1545.21	9.85	1512877.10	3442944.04	40.730279	-103.901723
	5720.00	32.71	138.98	5460.48	107.46	-91.76	1577.77	7.55	1512846.24	3442977.16	40.730193	-103.901605
	5810.00	37.10	149.39	5534.33	149.52	-133.53	1607.60	8.20	1512805.01	3443007.73	40.730078	-103.901498
	5899.00	42.01	159.87	5603.01	200.91	-184.69	1631.56	9.29	1512754.29	3443032.60	40.729938	-103.901411
	5989.00	48.78	166.37	5666.21	262.37	-245.96	1649.53	9.11	1512693.36	3443052.07	40.729770	-103.901345
	6078.00	56.95	170.30	5719.90	331.93	-315.39	1664.13	9.83	1512624.20	3443067.52	40.729579	-103.901294
	6168.00	63.02	170.88	5764.90	408.90	-392.24	1676.85	6.77	1512547.59	3443081.62	40.729368	-103.901248
	6257.00	70.59	171.70	5799.93	489.83	-473.05	1689.21	8.55	1512467.02	3443095.43	40.729147	-103.901203
	6346.00	77.69	174.58	5824.24	574.86	-557.99	1699.39	8.56	1512382.28	3443107.14	40.728913	-103.901167
	6436.00	84.94	178.32	5837.83	663.64	-646.71	1704.87	9.04	1512293.67	3443114.20	40.728670	-103.901147
	6525.00	90.03	178.99	5841.73	752.51	-735.57	1706.96	5.77	1512204.86	3443117.89	40.728426	-103.901139
Cross Setback Heel (300' FNL, 982' FEL)	6535.93	90.01	179.25	5841.73	763.45	-746.50	1707.12	2.38	1512193.94	3443118.25	40.728396	-103.901139
	6615.00	89.88	181.13	5841.80	842.50	-825.56	1706.86	2.38	1512114.88	3443119.41	40.728179	-103.901140
	6704.00	89.90	180.93	5841.97	931.47	-914.55	1705.26	0.22	1512025.88	3443119.40	40.727935	-103.901146
	6794.00	90.04	181.15	5842.02	1021.43	-1004.53	1703.62	0.29	1511935.88	3443119.38	40.727688	-103.901151
	6883.00	89.88	180.87	5842.08	1110.40	-1093.52	1702.04	0.36	1511846.88	3443119.40	40.727444	-103.901157
	6973.00	89.90	180.54	5842.26	1200.38	-1183.51	1700.93	0.37	1511756.89	3443119.91	40.727196	-103.901161
	7062.00	89.91	180.95	5842.41	1289.35	-1272.51	1699.77	0.46	1511667.89	3443120.35	40.726952	-103.901165
	7152.00	90.02	181.44	5842.47	1379.31	-1362.49	1697.89	0.56	1511577.89	3443120.09	40.726705	-103.901172
	7241.00	89.84	181.92	5842.58	1468.24	-1451.45	1695.28	0.58	1511488.90	3443119.07	40.726461	-103.901182
	7330.00	89.97	182.27	5842.73	1557.14	-1540.39	1692.02	0.41	1511399.91	3443117.41	40.726217	-103.901193
	7420.00	90.13	181.76	5842.65	1647.05	-1630.33	1688.86	0.59	1511309.93	3443115.86	40.725970	-103.901205
	7509.00	89.95	181.28	5842.59	1735.99	-1719.30	1686.50	0.58	1511220.93	3443115.10	40.725726	-103.901213
	7599.00	90.08	180.54	5842.56	1825.96	-1809.29	1685.07	0.83	1511130.93	3443115.29	40.725479	-103.901219
	7688.00	89.97	179.86	5842.52	1914.95	-1898.29	1684.76	0.77	1511041.95	3443116.58	40.725235	-103.901220
	7778.00	90.16	179.63	5842.42	2004.95	-1988.29	1685.16	0.33	1510951.97	3443118.59	40.724988	-103.901218
	7867.00	90.25	179.33	5842.10	2093.95	-2077.28	1685.96	0.36	1510863.00	3443120.99	40.724743	-103.901215
	7957.00	90.13	178.95	5841.79	2183.95	-2167.27	1687.32	0.44	1510773.05	3443123.96	40.724496	-103.901211
	8046.00	90.26	179.47	5841.49	2272.95	-2256.26	1688.54	0.60	1510684.10	3443126.79	40.724252	-103.901206
	8135.00	90.23	179.51	5841.11	2361.95	-2345.26	1689.34	0.06	1510595.13	3443129.18	40.724008	-103.901203
	8225.00	90.05	178.78	5840.89	2451.94	-2435.25	1690.68	0.84	1510505.18	3443132.14	40.723761	-103.901198
	8314.00	90.18	178.49	5840.71	2540.94	-2524.22	1692.80	0.35	1510416.26	3443135.86	40.723517	-103.901191
	8403.00	89.97	179.00	5840.59	2629.93	-2613.20	1694.75	0.62	1510327.34	3443139.40	40.723272	-103.901184
	8493.00	90.05	178.80	5840.58	2719.92	-2703.18	1696.48	0.24	1510237.40	3443142.75	40.723025	-103.901178
	8582.00	90.28	178.68	5840.33	2808.92	-2792.16	1698.44	0.29	1510148.47	3443146.31	40.722781	-103.901171
	8672.00	90.05	178.30	5840.07	2898.90	-2882.13	1700.81	0.48	1510058.56	3443150.29	40.722534	-103.901162
	8762.00	90.01	179.03	5840.02	2988.90	-2972.10	1702.90	0.81	1509968.64	3443154.00	40.722287	-103.901155
	8851.00	90.17	178.34	5839.88	3077.89	-3061.08	1704.94	0.80	1509879.71	3443157.64	40.722043	-103.901147
	8940.00	90.08	177.59	5839.69	3166.86	-3150.02	1708.10	0.85	1509790.84	3443162.39	40.721799	-103.901136
	9030.00	90.23	178.60	5839.45	3256.83	-3239.97	1711.09	1.13	1509700.96	3443167.00	40.721552	-103.901125
	9119.00	90.39	178.24	5838.96	3345.82	-3328.94	1713.55	0.44	1509612.06	3443171.05	40.721308	-103.901116
	9209.00	90.18	178.26	5838.52	3435.80	-3418.89	1716.29	0.24	1509522.17	3443175.41	40.721061	-103.901106
	9298.00	90.23	178.27	5838.20	3524.78	-3507.85	1718.98	0.06	1509433.27	3443179.70	40.720817	-103.901097
	9387.00	90.37	178.04	5837.73	3613.75	-3596.80	1721.84	0.30	1509344.39	3443184.16	40.720573	-103.901086
	9477.00	90.08	178.34	5837.37	3703.73	-3686.76	1724.68	0.46	1509254.50	3443188.61	40.720326	-103.901076
	9566.00	90.36	177.93	5837.03	3792.71	-3775.71	1727.58	0.56	1509165.61	3443193.11	40.720082	-103.901066
	9656.00	90.25	177.47	5836.54	3882.67	-3865.64	1731.19	0.52	1509075.77	3443198.33	40.719835	-103.901053
	9745.00	90.32	177.47	5836.10	3971.61	-3954.55	1735.12	0.07	1508986.94	3443203.86	40.719591	-103.901039
	9834.00	90.02	178.52	5835.84	4060.58	-4043.49	1738.23	1.23	1508898.07	3443208.57	40.719347	-103.901027
	9924.00	90.08	178.06	5835.77	4150.57	-4133.45	1740.92	0.52	1508808.17	3443212.87	40.719100	-103.901018
	10013.00	90.45	178.79	5835.36	4239.55	-4222.42	1743.37	0.93	1508719.27	3443216.92	40.718855	-103.901009
	10103.00	90.21	179.77	5834.84	4329.55	-4312.41	1744.49	1.12	1508629.31	3443219.66	40.718608	-103.901005
	10192.00	90.08	180.37	5834.62	4418.54	-4401.41	1744.39	0.68	1508540.33	3443221.15	40.718364	-103.901005
	10282.00	90.16	179.84	5834.43	4508.53	-4491.40	1744.22	0.59	1508450.34	3443222.60	40.718117	-103.901006
	10372.00	90.07	179.73	5834.25	4598.53	-4581.40	1744.55	0.16	1508360.36	3443224.55	40.717870	-103.901005
	10461.00	90.26	179.88	5833.99	4687.53	-4670.40	1744.85	0.27	1508271.38	3443226.45	40.717626	-103.901004
	10550.00	90.18	179.60	5833.65	4776.53	-4759.40	1745.26	0.33	1508182.41	3443228.45	40.717382	-103.901002
	10640.00	90.15	178.72	5833.39	4866.53	-4849.39	1746.58	0.98	1508092.46	3443231.39	40.717135	-103.900997
	10729.00	90.25	179.58	5833.07	4955.52	-4938.38	1747.90	0.97	1508003.51	3443234.31	40.716890	-103.900993
	10819.00	90.18	180.20	5832.73	5044.52	-5028.38	1748.08	0.69	1507913.53	3443236.10	40.716643	-103.900992
	10908.00	90.27	180.20	5832.38	5134.51	-5117.38	1747.77	0.10	1507			

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (°)	Longitude (°)
	13591.00	89.94	180.89	5828.08	7816.34	-7799.27	1754.75	0.51	1505143.23	3443292.54	40.709038	-103.900969
	13680.00	90.11	180.82	5828.05	7905.31	-7888.26	1753.43	0.20	1505054.23	3443292.81	40.708794	-103.900974
	13770.00	90.12	180.47	5827.87	7995.29	-7978.25	1752.41	0.39	1504964.24	3443293.41	40.708547	-103.900977
	13859.00	89.92	179.98	5827.84	8084.28	-8067.25	1752.05	0.60	1504875.25	3443294.65	40.708302	-103.900979
	13949.00	90.22	179.41	5827.73	8174.28	-8157.25	1752.53	0.72	1504785.27	3443296.75	40.708055	-103.900977
	14038.00	89.91	179.41	5827.62	8263.28	-8246.24	1753.45	0.35	1504696.31	3443299.26	40.707811	-103.900974
	14128.00	89.88	178.66	5827.79	8353.28	-8336.23	1754.97	0.83	1504606.37	3443302.40	40.707564	-103.900968
	14217.00	90.14	179.07	5827.78	8442.27	-8425.21	1756.73	0.55	1504517.43	3443305.76	40.707320	-103.900962
	14307.00	89.90	178.75	5827.75	8532.27	-8515.20	1758.45	0.45	1504427.49	3443309.09	40.707073	-103.900956
	14396.00	89.98	178.83	5827.84	8621.26	-8604.18	1760.34	0.13	1504338.56	3443312.58	40.706829	-103.900949
	14486.00	90.02	179.51	5827.84	8711.26	-8694.17	1761.64	0.77	1504248.61	3443315.50	40.706582	-103.900944
	14575.00	89.93	179.87	5827.88	8800.26	-8783.16	1762.12	0.41	1504159.64	3443317.58	40.706337	-103.900942
	14664.00	89.98	179.17	5827.96	8889.26	-8872.16	1762.87	0.78	1504070.67	3443319.92	40.706093	-103.900940
	14754.00	90.02	178.72	5827.96	8979.25	-8962.14	1764.53	0.51	1503980.73	3443323.20	40.705846	-103.900934
	14843.00	90.02	178.06	5827.94	9068.24	-9051.11	1767.03	0.73	1503891.83	3443327.29	40.705602	-103.900925
	14933.00	90.03	178.24	5827.90	9158.22	-9141.06	1769.93	0.20	1503801.94	3443331.81	40.705355	-103.900914
	15022.00	89.96	178.46	5827.91	9247.20	-9230.03	1772.49	0.26	1503713.04	3443335.97	40.705111	-103.900905
	15112.00	89.94	178.19	5827.99	9337.18	-9319.99	1775.12	0.30	1503623.14	3443340.21	40.704864	-103.900896
	15201.00	90.00	177.83	5828.03	9426.16	-9408.93	1778.21	0.41	1503534.26	3443344.90	40.704620	-103.900885
	15291.00	90.08	177.76	5827.97	9516.12	-9498.87	1781.67	0.13	1503444.41	3443349.98	40.704373	-103.900872
	15380.00	89.99	177.36	5827.91	9605.07	-9587.79	1785.47	0.46	1503355.57	3443355.37	40.704129	-103.900858
	15469.00	89.95	177.60	5827.95	9694.02	-9676.70	1789.38	0.28	1503266.75	3443360.88	40.703885	-103.900844
	15559.00	89.92	177.25	5828.06	9783.97	-9766.61	1793.42	0.40	1503176.92	3443366.53	40.703638	-103.900830
	15648.00	89.91	177.25	5828.20	9872.90	-9855.51	1797.69	0.01	1503088.12	3443372.40	40.703394	-103.900814
	15738.00	90.34	177.26	5828.01	9962.84	-9945.40	1802.01	0.48	1502998.32	3443378.33	40.703147	-103.900799
	15827.00	89.98	177.77	5827.76	10051.79	-10034.32	1805.87	0.70	1502909.49	3443383.79	40.702903	-103.900785
	15917.00	89.97	181.12	5827.79	10141.77	-10124.30	1806.75	3.73	1502819.53	3443386.28	40.702656	-103.900782
	16006.00	90.02	181.29	5827.80	10230.73	-10213.28	1804.87	0.20	1502730.53	3443386.01	40.702412	-103.900789
	16095.00	90.25	181.10	5827.60	10319.69	-10302.26	1803.02	0.34	1502641.54	3443385.75	40.702168	-103.900795
	16185.00	89.95	181.68	5827.44	10409.63	-10392.23	1800.84	0.73	1502551.54	3443385.18	40.701921	-103.900803
	16275.00	90.05	181.34	5827.44	10499.57	-10482.20	1798.46	0.40	1502461.54	3443384.42	40.701674	-103.900812
	16364.00	90.03	180.86	5827.37	10588.54	-10571.18	1796.75	0.55	1502372.55	3443384.31	40.701430	-103.900818
	16454.00	89.99	181.16	5827.35	10678.50	-10661.17	1795.16	0.34	1502282.55	3443384.34	40.701183	-103.900824
	16543.00	90.04	181.67	5827.33	10767.45	-10750.14	1792.97	0.57	1502193.55	3443383.74	40.700938	-103.900832
Cross Setback Toe (300' FSL, 997' FEL)	16581.57	89.94	181.50	5827.34	10805.99	-10788.70	1791.90	0.50	1502154.98	3443383.37	40.700833	-103.900836
Last SLB_MWD Survey	16627.00	89.83	181.30	5827.43	10851.39	-10834.11	1790.79	0.50	1502109.55	3443383.08	40.700708	-103.900840
Projection to TD (214' FSL, 999' FEL)	16668.00	89.83	181.30	5827.55	10892.37	-10875.10	1789.86	0.00	1502068.55	3443382.88	40.700595	-103.900843

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 97.071% Confidence 3.0000 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	17.000	1/98.425	13.500	9.625	B001Mb_MWD+HRGM-Depth Only	Timbro Fed 1931 07H / Timbro Fed 1931 07H MWD 0' to 16668' Definitive
	1	17.000	21.000	Act Stns	13.500	9.625	B001Mb_MWD+HRGM-Depth Only	Timbro Fed 1931 07H / Timbro Fed 1931 07H MWD 0' to 16668' Definitive
	1	21.000	1546.000	Act Stns	13.500	9.625	B001Mb_MWD+HRGM	Timbro Fed 1931 07H / Timbro Fed 1931 07H MWD 0' to 16668' Definitive
	1	1546.000	16668.000	Act Stns	8.500	5.500	B001Mb_MWD+HRGM	Timbro Fed 1931 07H / Timbro Fed 1931 07H MWD 0' to 16668' Definitive