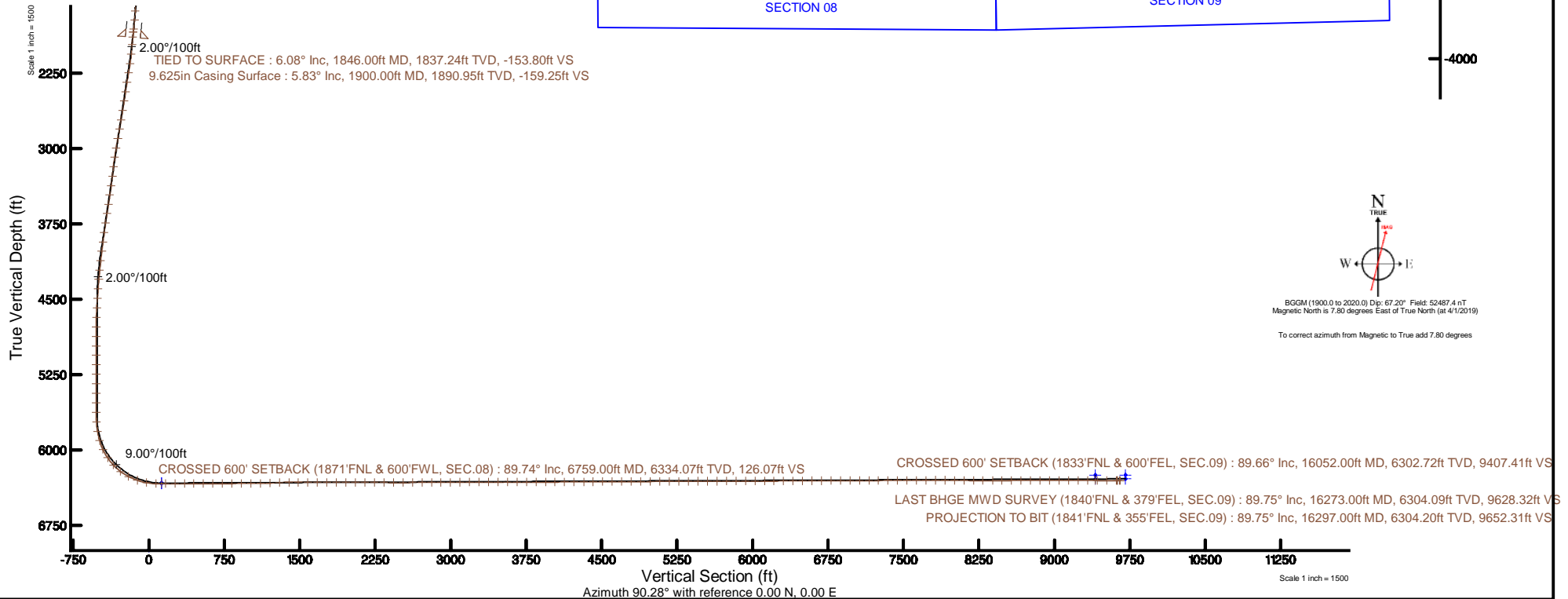
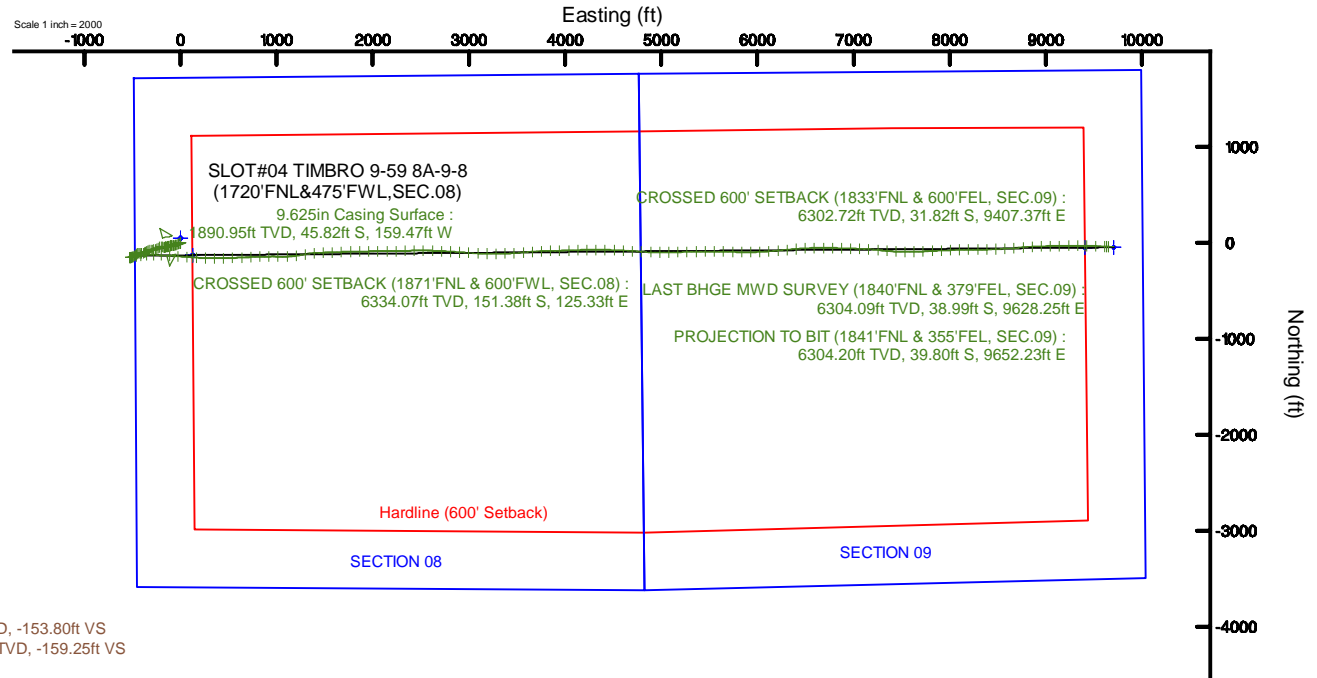


VERDAD RESOURCES

Location: COLORADO Slot: SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8A-9-8
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8A-9-8 PWB



Plot reference wellpath is TIMBRO 9-59 8A-9-8 (REV-C.0) PWB	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Big Rig (24'KB) (RKB)	North Reference: True north
Measured depths are referenced to Big Rig (24'KB) (RKB)	Scale: True distance
Big Rig (24'KB) (RKB) to Mean Sea Level: 5107 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)): 0 feet	Created by: robale01 on 2019-04-30
Coordinates are in feet referenced to Slot	Database: WellArchitectDB





Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999997	Report Generated	4/30/2019 at 5:21:58 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8A-9-8_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-47.75	0.28	3412705.36	1525939.38	40°46'03.259"N	104°00'36.072"W
Facility Reference Pt			3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W
Field Reference Pt			3242930.13	1254608.21	40°01'44.490"N	104°37'56.946"W

WELLPATH DATUM

Calculation method	Minimum curvature	Big Rig (24'KB) (RKB) to Facility Vertical Datum	5107.00ft
Horizontal Reference Pt	Slot	Big Rig (24'KB) (RKB) to Mean Sea Level	5107.00ft
Vertical Reference Pt	Big Rig (24'KB) (RKB)	Big Rig (24'KB) (RKB) to Ground Level at Slot (SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08))	5107.00ft
MD Reference Pt	Big Rig (24'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	90.28°



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (179 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	309.600	0.00	0.00	0.00	0.00	40°46'03.259"N	104°00'36.072"W	0.00	
24.00	0.000	309.600	24.00	0.00	0.00	0.00	40°46'03.259"N	104°00'36.072"W	0.00	
107.00	0.190	309.600	107.00	-0.11	0.09	-0.11	40°46'03.260"N	104°00'36.073"W	0.23	
197.00	0.170	304.970	197.00	-0.33	0.26	-0.33	40°46'03.262"N	104°00'36.076"W	0.03	
284.00	0.470	263.000	284.00	-0.79	0.29	-0.79	40°46'03.262"N	104°00'36.082"W	0.42	
376.00	3.510	226.120	375.93	-3.19	-1.71	-3.20	40°46'03.242"N	104°00'36.114"W	3.42	
466.00	5.930	242.940	465.63	-9.29	-5.73	-9.32	40°46'03.202"N	104°00'36.193"W	3.07	
556.00	7.400	246.250	555.02	-18.72	-10.18	-18.77	40°46'03.158"N	104°00'36.316"W	1.69	
646.00	7.640	246.990	644.24	-29.51	-14.86	-29.58	40°46'03.112"N	104°00'36.456"W	0.29	
736.00	7.220	246.370	733.49	-40.17	-19.46	-40.27	40°46'03.067"N	104°00'36.595"W	0.48	
826.00†	6.710	253.020	822.82	-50.36	-23.26	-50.48	40°46'03.029"N	104°00'36.728"W	1.06	
916.00	7.320	253.840	912.15	-60.88	-26.40	-61.01	40°46'02.998"N	104°00'36.865"W	0.69	
1006.00	6.720	264.730	1001.48	-71.62	-28.48	-71.77	40°46'02.978"N	104°00'37.005"W	1.62	
1096.00	6.050	264.880	1090.92	-81.59	-29.38	-81.73	40°46'02.969"N	104°00'37.134"W	0.74	
1186.00	5.850	263.160	1180.43	-90.86	-30.35	-91.01	40°46'02.959"N	104°00'37.255"W	0.30	
1276.00	5.570	264.530	1269.99	-99.76	-31.31	-99.91	40°46'02.950"N	104°00'37.370"W	0.35	
1366.00	5.250	262.400	1359.59	-108.18	-32.28	-108.34	40°46'02.940"N	104°00'37.480"W	0.42	
1456.00	5.930	253.330	1449.16	-116.71	-34.15	-116.88	40°46'02.922"N	104°00'37.591"W	1.24	
1546.00	5.890	256.660	1538.68	-125.64	-36.55	-125.82	40°46'02.898"N	104°00'37.707"W	0.38	
1636.00	5.630	253.530	1628.23	-134.36	-38.87	-134.55	40°46'02.875"N	104°00'37.821"W	0.45	
1726.00	5.330	254.640	1717.82	-142.61	-41.23	-142.82	40°46'02.852"N	104°00'37.928"W	0.35	
1816.00	5.660	252.170	1807.40	-150.86	-43.69	-151.07	40°46'02.827"N	104°00'38.035"W	0.45	
1846.00	6.080	256.530	1837.24	-153.80	-44.52	-154.02	40°46'02.819"N	104°00'38.074"W	2.04	TIED TO SURFACE
1975.00	5.480	256.830	1965.59	-166.43	-47.51	-166.67	40°46'02.790"N	104°00'38.238"W	0.47	
2069.00	5.990	284.770	2059.14	-175.55	-47.28	-175.78	40°46'02.792"N	104°00'38.357"W	2.99	
2164.00	9.420	289.840	2153.26	-187.68	-43.38	-187.89	40°46'02.830"N	104°00'38.514"W	3.68	
2258.00	9.750	265.130	2245.99	-202.86	-41.45	-203.06	40°46'02.849"N	104°00'38.711"W	4.36	
2353.00	9.910	243.010	2339.63	-218.14	-45.84	-218.37	40°46'02.806"N	104°00'38.910"W	3.95	
2448.00	9.760	238.110	2433.24	-232.22	-53.80	-232.49	40°46'02.727"N	104°00'39.094"W	0.89	
2542.00	9.690	246.740	2525.89	-246.22	-61.14	-246.52	40°46'02.655"N	104°00'39.276"W	1.55	
2637.00	9.670	254.860	2619.54	-261.24	-66.38	-261.57	40°46'02.603"N	104°00'39.471"W	1.44	
2732.00	9.640	258.780	2713.20	-276.73	-70.01	-277.08	40°46'02.567"N	104°00'39.673"W	0.69	
2826.00	9.750	260.950	2805.85	-292.30	-72.79	-292.66	40°46'02.540"N	104°00'39.875"W	0.41	
2921.00	9.780	263.000	2899.48	-308.24	-75.04	-308.61	40°46'02.517"N	104°00'40.083"W	0.37	
3016.00	9.790	258.060	2993.10	-324.13	-77.70	-324.52	40°46'02.491"N	104°00'40.290"W	0.88	
3110.00	9.160	242.540	3085.83	-338.57	-82.80	-338.98	40°46'02.441"N	104°00'40.477"W	2.79	

WELLPATH DATA (179 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3205.00	8.570	232.620	3179.70	-350.87	-90.59	-351.32	40°46'02.364"N	104°00'40.638"W	1.72	
3299.00	8.450	239.880	3272.67	-362.37	-98.30	-362.85	40°46'02.288"N	104°00'40.788"W	1.15	
3394.00	8.440	251.810	3366.65	-375.00	-103.98	-375.52	40°46'02.232"N	104°00'40.952"W	1.84	
3488.00	8.450	262.840	3459.63	-388.39	-107.00	-388.92	40°46'02.202"N	104°00'41.127"W	1.72	
3583.00	8.640	272.080	3553.58	-402.45	-107.61	-402.98	40°46'02.196"N	104°00'41.309"W	1.46	
3677.00	8.590	269.640	3646.52	-416.53	-107.40	-417.06	40°46'02.198"N	104°00'41.492"W	0.39	
3772.00	8.480	260.370	3740.48	-430.52	-108.61	-431.06	40°46'02.186"N	104°00'41.674"W	1.45	
3866.00	8.680	249.020	3833.43	-443.96	-112.31	-444.52	40°46'02.149"N	104°00'41.849"W	1.81	
3961.00	8.570	236.580	3927.36	-456.53	-118.78	-457.12	40°46'02.085"N	104°00'42.013"W	1.96	



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (179 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4055.00	8.510	230.180	4020.32	-467.68	-127.09	-468.31	40°46'02.003"N	104°00'42.158"W	1.01	
4150.00	8.370	234.900	4114.30	-478.69	-135.57	-479.36	40°46'01.919"N	104°00'42.302"W	0.74	
4245.00	6.950	235.840	4208.45	-489.07	-142.77	-489.77	40°46'01.848"N	104°00'42.437"W	1.50	
4339.00	5.730	242.660	4301.87	-497.92	-148.12	-498.65	40°46'01.795"N	104°00'42.553"W	1.52	
4434.00	3.830	247.100	4396.54	-505.04	-151.53	-505.79	40°46'01.762"N	104°00'42.645"W	2.04	
4529.00	3.880	266.500	4491.33	-511.16	-152.96	-511.92	40°46'01.748"N	104°00'42.725"W	1.37	
4623.00	2.850	260.620	4585.16	-516.64	-153.54	-517.40	40°46'01.742"N	104°00'42.796"W	1.15	
4717.00	2.330	274.350	4679.07	-520.85	-153.77	-521.61	40°46'01.739"N	104°00'42.851"W	0.86	
4812.00	0.190	101.110	4774.04	-522.62	-153.66	-523.38	40°46'01.741"N	104°00'42.874"W	2.65	
4906.00	0.030	11.210	4868.04	-522.46	-153.66	-523.22	40°46'01.741"N	104°00'42.872"W	0.20	
5001.00	0.090	195.800	4963.04	-522.48	-153.71	-523.24	40°46'01.740"N	104°00'42.872"W	0.13	
5095.00	0.040	335.020	5057.04	-522.51	-153.75	-523.27	40°46'01.740"N	104°00'42.873"W	0.13	
5190.00	0.030	270.630	5152.04	-522.55	-153.72	-523.31	40°46'01.740"N	104°00'42.873"W	0.04	
5284.00	0.000	97.800	5246.04	-522.58	-153.72	-523.33	40°46'01.740"N	104°00'42.873"W	0.03	
5379.00	0.030	164.820	5341.04	-522.57	-153.75	-523.33	40°46'01.740"N	104°00'42.873"W	0.03	
5474.00	0.040	344.140	5436.04	-522.57	-153.74	-523.33	40°46'01.740"N	104°00'42.873"W	0.07	
5568.00	0.030	215.320	5530.04	-522.59	-153.73	-523.35	40°46'01.740"N	104°00'42.874"W	0.07	
5663.00	0.030	228.420	5625.04	-522.63	-153.76	-523.39	40°46'01.740"N	104°00'42.874"W	0.01	
5758.00	2.950	91.080	5720.00	-520.20	-153.83	-520.96	40°46'01.739"N	104°00'42.843"W	3.13	
5852.00	9.580	79.340	5813.39	-510.09	-152.42	-510.84	40°46'01.753"N	104°00'42.711"W	7.15	
5947.00	15.950	78.030	5905.99	-489.55	-148.25	-490.28	40°46'01.794"N	104°00'42.444"W	6.71	
6041.00	26.290	77.170	5993.56	-456.57	-140.93	-457.26	40°46'01.866"N	104°00'42.015"W	11.00	
6136.00	34.350	81.990	6075.51	-409.47	-132.51	-410.12	40°46'01.950"N	104°00'41.402"W	8.86	
6230.00	42.900	87.050	6148.90	-351.16	-127.15	-351.79	40°46'02.003"N	104°00'40.644"W	9.69	
6325.00	52.450	92.150	6212.82	-281.05	-126.90	-281.68	40°46'02.005"N	104°00'39.733"W	10.80	
6419.00	62.740	92.430	6263.12	-201.85	-130.08	-202.49	40°46'01.974"N	104°00'38.704"W	10.95	
6514.00	70.880	93.000	6300.50	-114.68	-134.23	-115.33	40°46'01.933"N	104°00'37.571"W	8.59	
6609.00	79.850	94.120	6324.48	-23.00	-139.95	-23.69	40°46'01.876"N	104°00'36.380"W	9.51	
6703.00	89.110	94.660	6333.51	70.22	-147.10	69.50	40°46'01.805"N	104°00'35.169"W	9.87	
6759.00†	89.741	94.100	6334.07	126.07	-151.38	125.33	40°46'01.763"N	104°00'34.443"W	1.51	CROSSED 600' SETBACK (1871'FNL & 600'FWL, SEC.08)
6798.00	90.180	93.710	6334.10	164.99	-154.04	164.24	40°46'01.737"N	104°00'33.938"W	1.51	
6892.00	90.180	92.530	6333.80	258.87	-159.15	258.10	40°46'01.686"N	104°00'32.718"W	1.26	
6987.00	89.970	90.390	6333.68	353.85	-161.57	353.06	40°46'01.662"N	104°00'31.484"W	2.26	
7081.00	89.970	88.560	6333.73	447.84	-160.71	447.05	40°46'01.671"N	104°00'30.262"W	1.95	
7176.00	90.060	87.120	6333.70	542.75	-157.13	541.98	40°46'01.706"N	104°00'29.028"W	1.52	
7271.00	90.030	87.510	6333.63	637.62	-152.68	636.88	40°46'01.750"N	104°00'27.795"W	0.41	

WELLPATH DATA (179 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7365.00	90.150	86.910	6333.48	731.48	-148.10	730.77	40°46'01.795"N	104°00'26.575"W	0.65	
7460.00	90.460	88.590	6332.98	826.39	-144.37	825.69	40°46'01.832"N	104°00'25.341"W	1.80	
7554.00	90.340	89.030	6332.32	920.35	-142.42	919.67	40°46'01.852"N	104°00'24.120"W	0.49	
7649.00	90.220	91.400	6331.86	1015.35	-142.78	1014.66	40°46'01.848"N	104°00'22.885"W	2.50	
7744.00	90.250	88.320	6331.47	1110.33	-142.55	1109.65	40°46'01.850"N	104°00'21.651"W	3.24	
7839.00	93.480	81.430	6328.37	1204.79	-134.08	1204.15	40°46'01.934"N	104°00'20.423"W	8.01	
7933.00	91.850	80.790	6324.00	1297.48	-119.57	1296.91	40°46'02.077"N	104°00'19.217"W	1.86	
8028.00	90.280	85.450	6322.23	1391.70	-108.19	1391.18	40°46'02.190"N	104°00'17.992"W	5.18	
8122.00	89.940	87.890	6322.05	1485.50	-102.73	1485.02	40°46'02.243"N	104°00'16.772"W	2.62	



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (179 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8217.00	89.910	88.120	6322.18	1580.43	-99.43	1579.96	40°46'02.276"N	104°00'15.538"W	0.24	
8311.00	89.970	87.580	6322.28	1674.34	-95.90	1673.89	40°46'02.311"N	104°00'14.318"W	0.58	
8406.00	89.910	87.790	6322.38	1769.25	-92.06	1768.82	40°46'02.349"N	104°00'13.084"W	0.23	
8501.00	90.060	89.290	6322.40	1864.20	-89.64	1863.78	40°46'02.373"N	104°00'11.850"W	1.59	
8595.00	89.910	89.720	6322.43	1958.19	-88.83	1957.78	40°46'02.381"N	104°00'10.628"W	0.48	
8690.00	89.940	89.740	6322.55	2053.19	-88.38	2052.78	40°46'02.385"N	104°00'09.394"W	0.04	
8784.00	89.910	89.970	6322.67	2147.18	-88.14	2146.78	40°46'02.387"N	104°00'08.172"W	0.25	
8879.00	90.090	88.550	6322.67	2242.17	-86.92	2241.77	40°46'02.399"N	104°00'06.937"W	1.51	
8974.00	89.850	87.850	6322.72	2337.10	-83.93	2336.72	40°46'02.429"N	104°00'05.703"W	0.78	
9068.00	89.880	88.660	6322.94	2431.04	-81.07	2430.67	40°46'02.457"N	104°00'04.482"W	0.86	
9163.00	90.120	90.250	6322.94	2526.03	-80.17	2525.67	40°46'02.466"N	104°00'03.248"W	1.69	
9257.00	90.090	92.490	6322.77	2620.01	-82.41	2619.63	40°46'02.443"N	104°00'02.027"W	2.38	
9352.00	90.280	93.090	6322.47	2714.91	-87.04	2714.52	40°46'02.397"N	104°00'00.793"W	0.66	
9447.00	90.340	93.420	6321.95	2809.78	-92.43	2809.37	40°46'02.344"N	103°59'59.561"W	0.35	
9541.00	90.370	93.990	6321.37	2903.61	-98.51	2903.17	40°46'02.284"N	103°59'58.342"W	0.61	
9636.00	90.180	93.060	6320.91	2998.46	-104.35	2997.98	40°46'02.226"N	103°59'57.109"W	1.00	
9730.00	90.400	92.480	6320.44	3092.37	-108.89	3091.87	40°46'02.181"N	103°59'55.889"W	0.66	
9825.00	90.460	91.540	6319.72	3187.32	-112.22	3186.81	40°46'02.148"N	103°59'54.655"W	0.99	
9919.00	90.340	89.740	6319.07	3281.31	-113.27	3280.80	40°46'02.138"N	103°59'53.434"W	1.92	
10014.00	90.310	87.970	6318.53	3376.28	-111.37	3375.77	40°46'02.156"N	103°59'52.200"W	1.86	
10109.00	90.310	86.090	6318.01	3471.12	-106.45	3470.64	40°46'02.205"N	103°59'50.967"W	1.98	
10203.00	89.910	85.840	6317.83	3564.85	-99.84	3564.41	40°46'02.270"N	103°59'49.748"W	0.50	
10298.00	89.850	86.410	6318.03	3659.60	-93.42	3659.19	40°46'02.333"N	103°59'48.516"W	0.60	
10393.00	89.880	86.670	6318.26	3754.40	-87.68	3754.02	40°46'02.390"N	103°59'47.284"W	0.28	
10487.00	89.970	89.260	6318.38	3848.32	-84.35	3847.95	40°46'02.423"N	103°59'46.063"W	2.76	
10582.00	90.090	88.710	6318.33	3943.29	-82.66	3942.93	40°46'02.439"N	103°59'44.829"W	0.59	
10676.00	90.280	87.800	6318.03	4037.23	-79.80	4036.89	40°46'02.467"N	103°59'43.607"W	0.99	
10771.00	90.460	88.020	6317.41	4132.15	-76.34	4131.82	40°46'02.501"N	103°59'42.374"W	0.30	
10866.00	90.460	88.740	6316.65	4227.09	-73.65	4226.78	40°46'02.528"N	103°59'41.140"W	0.76	
10961.00	90.460	90.180	6315.89	4322.08	-72.76	4321.77	40°46'02.536"N	103°59'39.905"W	1.52	
11055.00	90.460	91.050	6315.13	4416.07	-73.76	4415.76	40°46'02.526"N	103°59'38.684"W	0.93	
11150.00	90.520	92.670	6314.32	4511.03	-76.85	4510.71	40°46'02.496"N	103°59'37.450"W	1.71	
11245.00	89.970	93.260	6313.91	4605.92	-81.76	4605.58	40°46'02.447"N	103°59'36.217"W	0.85	
11339.00	89.850	93.390	6314.06	4699.79	-87.21	4699.42	40°46'02.393"N	103°59'34.997"W	0.19	
11434.00	90.280	93.000	6313.95	4794.67	-92.51	4794.27	40°46'02.340"N	103°59'33.764"W	0.61	
11529.00	90.340	92.060	6313.44	4889.59	-96.70	4889.18	40°46'02.299"N	103°59'32.531"W	0.99	

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11624.00	90.340	90.940	6312.88	4984.57	-99.19	4984.14	40°46'02.274"N	103°59'31.297"W	1.18	
11718.00	90.430	89.120	6312.24	5078.56	-99.24	5078.13	40°46'02.273"N	103°59'30.075"W	1.94	
11813.00	90.280	87.970	6311.66	5173.51	-96.83	5173.10	40°46'02.297"N	103°59'28.841"W	1.22	
11908.00	90.120	88.560	6311.32	5268.45	-93.95	5268.06	40°46'02.325"N	103°59'27.607"W	0.64	
12002.00	90.220	88.750	6311.05	5362.41	-91.74	5362.03	40°46'02.347"N	103°59'26.386"W	0.23	
12097.00	90.250	89.230	6310.66	5457.39	-90.07	5457.01	40°46'02.363"N	103°59'25.151"W	0.51	
12192.00	90.090	90.020	6310.37	5552.38	-89.45	5552.01	40°46'02.369"N	103°59'23.917"W	0.85	
12286.00	90.280	92.210	6310.07	5646.37	-91.28	5645.99	40°46'02.351"N	103°59'22.695"W	2.34	
12381.00	89.970	91.820	6309.86	5741.32	-94.62	5740.93	40°46'02.317"N	103°59'21.461"W	0.52	



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (179 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12476.00	90.340	90.450	6309.61	5836.31	-96.50	5835.90	40°46'02.299"N	103°59'20.227"W	1.49	
12570.00	90.180	89.950	6309.18	5930.31	-96.83	5929.90	40°46'02.295"N	103°59'19.005"W	0.56	
12665.00	90.150	87.190	6308.91	6025.25	-94.46	6024.86	40°46'02.318"N	103°59'17.771"W	2.91	
12760.00	90.340	85.880	6308.50	6120.05	-88.71	6119.69	40°46'02.375"N	103°59'16.539"W	1.39	
12854.00	90.280	85.940	6307.99	6213.77	-82.01	6213.45	40°46'02.441"N	103°59'15.320"W	0.09	
12949.00	90.370	84.240	6307.45	6308.38	-73.88	6308.09	40°46'02.521"N	103°59'14.090"W	1.79	
13043.00	90.340	84.960	6306.87	6401.92	-65.03	6401.67	40°46'02.608"N	103°59'12.874"W	0.77	
13138.00	90.370	86.600	6306.28	6496.62	-58.04	6496.41	40°46'02.677"N	103°59'11.643"W	1.73	
13233.00	90.370	88.460	6305.67	6591.50	-53.95	6591.32	40°46'02.717"N	103°59'10.409"W	1.96	
13328.00	90.340	89.970	6305.08	6686.48	-52.65	6686.30	40°46'02.730"N	103°59'09.175"W	1.59	
13422.00	90.340	91.500	6304.52	6780.47	-53.85	6780.29	40°46'02.718"N	103°59'07.953"W	1.63	
13517.00	90.180	92.030	6304.09	6875.44	-56.78	6875.24	40°46'02.688"N	103°59'06.719"W	0.58	
13611.00	90.120	91.770	6303.84	6969.40	-59.90	6969.19	40°46'02.657"N	103°59'05.498"W	0.28	
13705.00	90.120	92.170	6303.65	7063.36	-63.13	7063.14	40°46'02.625"N	103°59'04.277"W	0.43	
13800.00	90.250	92.920	6303.34	7158.29	-67.34	7158.04	40°46'02.583"N	103°59'03.044"W	0.80	
13894.00	90.250	94.510	6302.93	7252.11	-73.44	7251.84	40°46'02.523"N	103°59'01.825"W	1.69	
13989.00	90.400	96.780	6302.39	7346.69	-82.78	7346.37	40°46'02.430"N	103°59'00.597"W	2.39	
14084.00	90.120	93.460	6301.96	7441.34	-91.26	7440.98	40°46'02.346"N	103°58'59.367"W	3.51	
14178.00	90.220	89.560	6301.68	7535.30	-93.73	7534.93	40°46'02.321"N	103°58'58.146"W	4.15	
14272.00	90.180	88.760	6301.35	7629.28	-92.35	7628.92	40°46'02.335"N	103°58'56.925"W	0.85	
14367.00	90.250	87.470	6301.00	7724.21	-89.23	7723.86	40°46'02.365"N	103°58'55.691"W	1.36	
14462.00	90.180	87.220	6300.64	7819.08	-84.83	7818.76	40°46'02.409"N	103°58'54.457"W	0.27	
14556.00	90.280	86.900	6300.26	7912.93	-80.01	7912.63	40°46'02.456"N	103°58'53.237"W	0.36	
14650.00	89.170	87.710	6300.71	8006.80	-75.59	8006.53	40°46'02.499"N	103°58'52.017"W	1.46	
14745.00	89.080	88.570	6302.16	8101.72	-72.50	8101.46	40°46'02.529"N	103°58'50.783"W	0.91	
14840.00	89.140	89.230	6303.64	8196.68	-70.68	8196.44	40°46'02.547"N	103°58'49.549"W	0.70	
14934.00	90.180	90.040	6304.20	8290.67	-70.08	8290.43	40°46'02.553"N	103°58'48.327"W	1.40	
15029.00	90.280	88.460	6303.82	8385.65	-68.84	8385.42	40°46'02.565"N	103°58'47.093"W	1.67	
15123.00	90.340	87.480	6303.31	8479.58	-65.51	8479.36	40°46'02.597"N	103°58'45.872"W	1.04	
15218.00	90.340	87.480	6302.74	8574.46	-61.33	8574.26	40°46'02.638"N	103°58'44.638"W	0.00	
15313.00	90.490	85.510	6302.06	8669.25	-55.53	8669.08	40°46'02.695"N	103°58'43.406"W	2.08	
15407.00	90.120	85.350	6301.56	8762.91	-48.04	8762.78	40°46'02.769"N	103°58'42.188"W	0.43	
15502.00	90.150	86.790	6301.33	8857.65	-41.52	8857.55	40°46'02.833"N	103°58'40.957"W	1.52	
15597.00	90.180	88.100	6301.06	8952.53	-37.29	8952.45	40°46'02.874"N	103°58'39.723"W	1.38	
15691.00	89.970	88.870	6300.94	9046.48	-34.80	9046.42	40°46'02.899"N	103°58'38.502"W	0.85	
15786.00	89.720	88.560	6301.19	9141.45	-32.67	9141.40	40°46'02.919"N	103°58'37.268"W	0.42	

WELLPATH DATA (179 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15881.00	89.660	89.520	6301.71	9236.42	-31.08	9236.38	40°46'02.935"N	103°58'36.033"W	1.01	
15975.00	89.660	90.320	6302.26	9330.42	-30.95	9330.38	40°46'02.936"N	103°58'34.812"W	0.85	
16052.00†	89.660	90.968	6302.72	9407.41	-31.82	9407.37	40°46'02.927"N	103°58'33.811"W	0.84	CROSSED 600' SETBACK (1833'FNL & 600'FEL, SEC.09)
16070.00	89.660	91.120	6302.83	9425.41	-32.15	9425.37	40°46'02.924"N	103°58'33.577"W	0.84	
16164.00	89.600	92.300	6303.44	9519.38	-34.95	9519.32	40°46'02.895"N	103°58'32.356"W	1.26	
16259.00	89.690	91.990	6304.02	9614.33	-38.51	9614.25	40°46'02.860"N	103°58'31.122"W	0.34	
16273.00	89.750	91.940	6304.09	9628.32	-38.99	9628.25	40°46'02.855"N	103°58'30.940"W	0.56	LAST BHGE MWD SURVEY (1840'FNL & 379'FEL, SEC.09)
16297.00	89.750	91.940	6304.20	9652.31	-39.80	9652.23	40°46'02.847"N	103°58'30.629"W	0.00	PROJECTION TO BIT (1841'FNL & 355'FEL, SEC.09)



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

HOLE & CASING SECTIONS - Ref Wellbore: TIMBRO 9-59 8A-9-8 AWB Ref Wellpath: TIMBRO 9-59 8A-9-8 AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	24.00	1900.00	1876.00	24.00	1890.95	0.00	0.00	-45.82	-159.47

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
TIMBRO 9-59 8A-9-2 SECTION 08	15.00	47.75	-0.28	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-2 SECTION 09	15.00	47.75	-0.28	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-8 Rev-2 TARGET BOTTOM HOLE(1849'FNL&300'FEL,SEC.09)	6248.00	-47.57	9707.23	3422411.97	1526054.92	40°46'02.770"N	103°58'29.914"W	point
TIMBRO 9-59 8A-9-8 Rev-2 ENDING PROD. INTERVAL(1851'FNL&600'FEL,SEC.09)	6250.56	-49.91	9407.30	3422112.12	1526047.54	40°46'02.748"N	103°58'33.812"W	point
TIMBRO 9-59 8A-9-8 Rev-3 TARGET BOTTOM HOLE(1849'FNL&300'FEL,SEC.09)	6287.00	-47.57	9707.23	3422411.97	1526054.92	40°46'02.770"N	103°58'29.914"W	point
TIMBRO 9-59 8A-9-8 Rev-3 ENDING PROD. INTERVAL(1851'FNL&600'FEL,SEC.09)	6288.32	-49.91	9407.30	3422112.12	1526047.54	40°46'02.748"N	103°58'33.812"W	point
TIMBRO 9-59 8A-9-8 Rev-3 BEG. PROD. INTERVAL(1849'FNL&600'FWL,SEC.08)	6329.00	-128.63	125.73	3412833.23	1525812.88	40°46'01.988"N	104°00'34.438"W	point
TIMBRO 9-59 8A-9-8 Rev-2 BEG. PROD. INTERVAL(1849'FNL&600'FWL,SEC.08)	6330.00	-128.63	125.73	3412833.23	1525812.88	40°46'01.988"N	104°00'34.438"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6997.00	47.75	-0.28	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-8 BEG. PROD. INTERVAL (1849'FNL&600'FWL,SEC.08)	7018.00	-128.59	125.76	3412833.26	1525812.93	40°46'01.988"N	104°00'34.438"W	point
TIMBRO 9-59 8A-9-8 ENDING PROD. INTERVAL(1851'FNL&600'FEL,SEC.09)	7018.00	-49.91	9407.27	3422112.09	1526047.54	40°46'02.748"N	103°58'33.812"W	point
TIMBRO 9-59 8A-9-8 TARGET BOTTOM HOLE(1849'FNL&300'FEL,SEC.09)	7018.00	-47.61	9707.26	3422412.00	1526054.88	40°46'02.770"N	103°58'29.914"W	point

WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8A-9-8 AWB Ref Wellpath: TIMBRO 9-59 8A-9-8 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1846.00	BHI NaviTrak (Rotating+Axial Corr)	BH/Navitrak Surface <89'-1828'>	TIMBRO 9-59 8A-9-8 AWB
1846.00	16273.00	BHI AutoTrak Curve (Short)	8 1/2" MONOBORE <1975-16273>	TIMBRO 9-59 8A-9-8 AWB
16273.00	16297.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8A-9-8 AWB



Actual Wellpath Report

TIMBRO 9-59 8A-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#04 TIMBRO 9-59 8A-9-8(1720'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-8 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1846.00	6.080	256.530	1837.24	TIED TO SURFACE
6759.00	89.741	94.100	6334.07	CROSSED 600' SETBACK (1871'FNL & 600'FWL, SEC.08)
16052.00	89.660	90.968	6302.72	CROSSED 600' SETBACK (1833'FNL & 600'FEL, SEC.09)
16273.00	89.750	91.940	6304.09	LAST BHGE MWD SURVEY (1840'FNL & 379'FEL, SEC.09)
16297.00	89.750	91.940	6304.20	PROJECTION TO BIT (1841'FNL & 355'FEL, SEC.09)