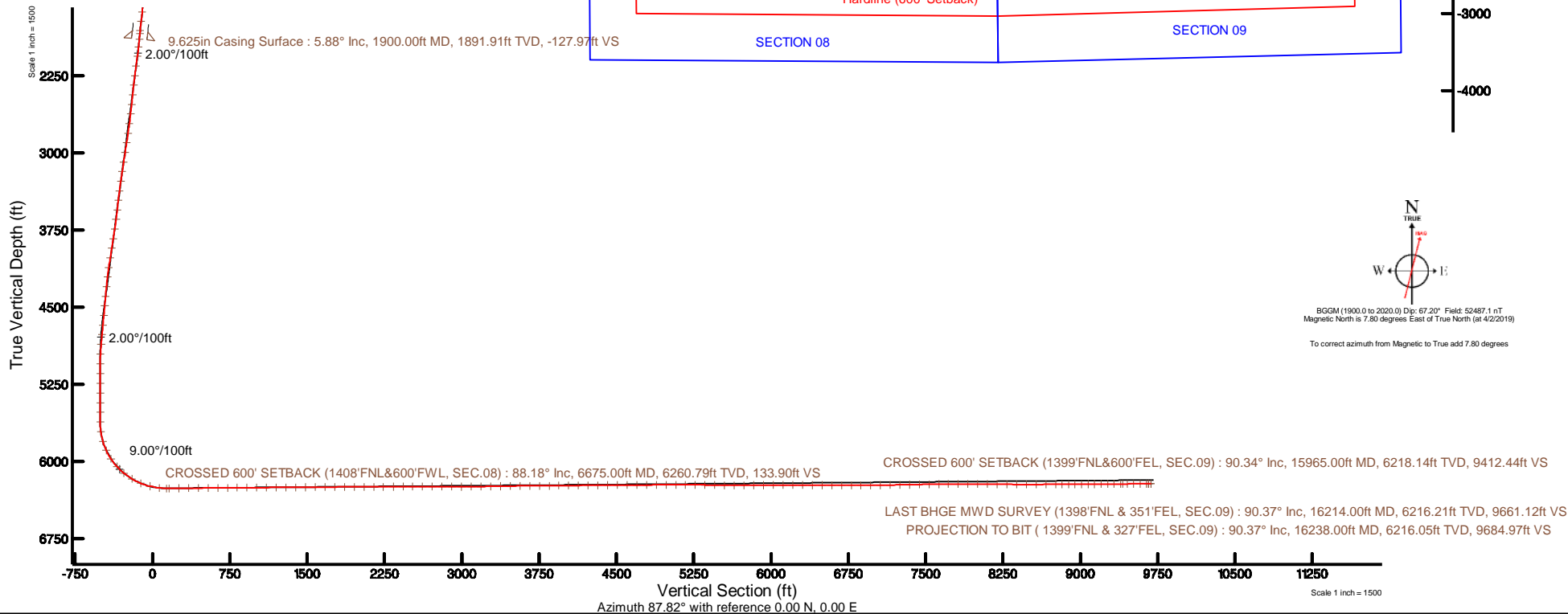
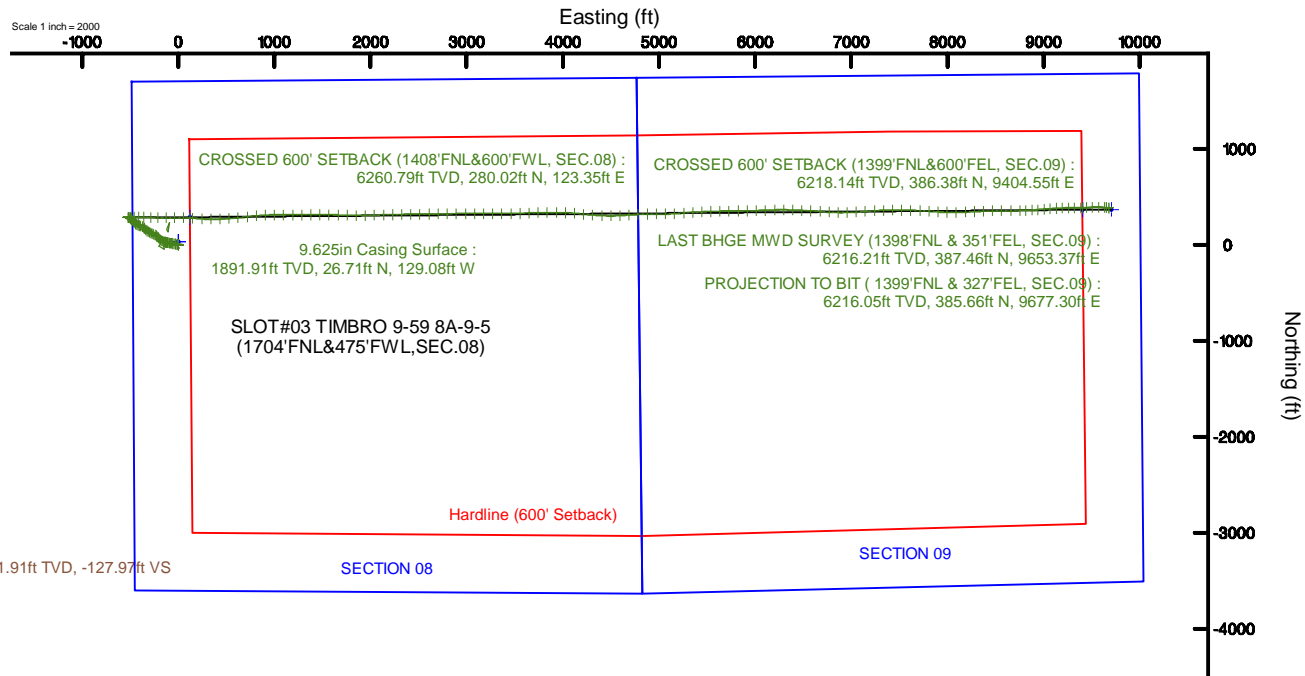


# VERDAD RESOURCES

Location: COLORADO Slot: SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)  
 Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8A-9-5  
 Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8A-9-5 PWB



Plot reference wellpath is TIMBRO 9-59 8A-9-5 (REV-B.0) PWP	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: 5108 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#03 TIMBRO 9-59 8A-9-5(1704'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-9-5 AWP

Page 1 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 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 5:19:03 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8A-9-5_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-31.66	-0.03	3412704.78	1525955.47	40°46'03.418"N	104°00'36.076"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	5108.00ft
Horizontal Reference Pt	Slot	Big Rig (24'KB (RKB) to Mean Sea Level	5108.00ft
Vertical Reference Pt	Big Rig (24'KB (RKB)	Big Rig (24'KB (RKB) to Ground Level at Slot (SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08))	5108.00ft
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	87.82°



# Actual Wellpath Report

TIMBRO 9-59 8A-9-5 AWP

Page 2 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (183 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	57.180	0.00	0.00	0.00	0.00	40°46'03.418"N	104°00'36.076"W	0.00	
24.00	0.000	57.180	24.00	0.00	0.00	0.00	40°46'03.418"N	104°00'36.076"W	0.00	
107.00	0.590	57.180	107.00	0.37	0.23	0.36	40°46'03.420"N	104°00'36.071"W	0.71	
197.00	0.680	66.420	196.99	1.26	0.70	1.24	40°46'03.425"N	104°00'36.060"W	0.15	
284.00	0.330	69.790	283.99	1.98	0.99	1.95	40°46'03.428"N	104°00'36.051"W	0.40	
376.00	0.390	95.620	375.99	2.54	1.05	2.51	40°46'03.428"N	104°00'36.043"W	0.19	
466.00	0.370	111.210	465.99	3.11	0.92	3.08	40°46'03.427"N	104°00'36.036"W	0.12	
556.00	0.490	89.800	555.98	3.77	0.81	3.74	40°46'03.426"N	104°00'36.027"W	0.22	
646.00	0.550	291.890	645.98	3.76	0.97	3.72	40°46'03.428"N	104°00'36.028"W	1.13	
736.00	1.580	271.270	735.97	2.12	1.16	2.08	40°46'03.429"N	104°00'36.049"W	1.20	
826.00	3.770	284.170	825.86	-1.95	1.91	-2.03	40°46'03.437"N	104°00'36.102"W	2.51	
916.00	7.100	283.960	915.45	-10.14	3.98	-10.30	40°46'03.457"N	104°00'36.210"W	3.70	
1006.00	8.270	281.740	1004.64	-21.77	6.64	-22.03	40°46'03.484"N	104°00'36.362"W	1.34	
1096.00	8.100	281.630	1093.72	-34.21	9.24	-34.58	40°46'03.509"N	104°00'36.525"W	0.19	
1186.00	7.760	279.910	1182.86	-46.30	11.56	-46.78	40°46'03.532"N	104°00'36.684"W	0.46	
1276.00	7.340	281.670	1272.08	-57.83	13.77	-58.39	40°46'03.554"N	104°00'36.835"W	0.53	
1366.00	7.070	280.430	1361.37	-68.81	15.93	-69.47	40°46'03.575"N	104°00'36.979"W	0.35	
1456.00	6.700	278.980	1450.72	-79.37	17.76	-80.10	40°46'03.593"N	104°00'37.117"W	0.45	
1546.00	6.720	281.270	1540.10	-89.64	19.60	-90.45	40°46'03.612"N	104°00'37.252"W	0.30	
1636.00	6.620	280.120	1629.49	-99.83	21.54	-100.72	40°46'03.631"N	104°00'37.385"W	0.19	
1726.00	6.450	280.470	1718.91	-109.83	23.37	-110.80	40°46'03.649"N	104°00'37.516"W	0.19	
1816.00	6.210	280.450	1808.36	-119.52	25.18	-120.56	40°46'03.667"N	104°00'37.643"W	0.27	
1846.00	5.830	280.330	1838.19	-122.59	25.74	-123.66	40°46'03.672"N	104°00'37.683"W	1.27	
1975.00	5.950	279.390	1966.51	-135.53	28.01	-136.70	40°46'03.695"N	104°00'37.853"W	0.12	
2069.00	7.690	283.540	2059.84	-146.36	30.28	-147.62	40°46'03.717"N	104°00'37.995"W	1.92	
2164.00	9.210	295.580	2153.82	-159.21	35.05	-160.66	40°46'03.764"N	104°00'38.164"W	2.45	
2258.00	8.990	302.940	2246.64	-171.87	42.29	-173.61	40°46'03.836"N	104°00'38.332"W	1.26	
2353.00	8.980	315.040	2340.48	-182.98	51.57	-185.08	40°46'03.928"N	104°00'38.481"W	1.99	
2448.00	9.090	320.600	2434.30	-192.56	62.62	-195.08	40°46'04.037"N	104°00'38.611"W	0.93	
2542.00	9.510	317.970	2527.07	-202.03	74.12	-204.99	40°46'04.150"N	104°00'38.740"W	0.64	
2637.00	9.690	313.790	2620.74	-212.61	85.49	-216.02	40°46'04.263"N	104°00'38.883"W	0.76	
2732.00	9.570	307.500	2714.40	-224.25	95.83	-228.05	40°46'04.365"N	104°00'39.040"W	1.11	
2826.00	9.660	299.350	2807.09	-236.98	104.45	-241.13	40°46'04.450"N	104°00'39.210"W	1.45	
2921.00	9.660	290.690	2900.74	-251.12	111.17	-255.53	40°46'04.516"N	104°00'39.397"W	1.53	
3016.00	9.710	294.590	2994.39	-265.62	117.32	-270.27	40°46'04.577"N	104°00'39.589"W	0.69	
3110.00	9.720	295.800	3087.04	-279.71	124.08	-284.63	40°46'04.644"N	104°00'39.775"W	0.22	

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3205.00	9.600	296.990	3180.70	-293.71	131.16	-298.91	40°46'04.714"N	104°00'39.961"W	0.25	
3299.00	9.720	299.770	3273.36	-307.28	138.66	-312.78	40°46'04.788"N	104°00'40.141"W	0.51	
3394.00	9.600	304.780	3367.02	-320.42	147.16	-326.25	40°46'04.872"N	104°00'40.316"W	0.89	
3488.00	9.610	315.260	3459.71	-331.99	157.20	-338.21	40°46'04.971"N	104°00'40.471"W	1.86	
3583.00	9.690	317.810	3553.36	-342.49	168.76	-349.16	40°46'05.085"N	104°00'40.614"W	0.46	
3677.00	9.730	310.450	3646.02	-353.42	179.78	-360.52	40°46'05.194"N	104°00'40.761"W	1.32	
3772.00	9.840	297.620	3739.65	-366.38	188.75	-373.82	40°46'05.283"N	104°00'40.934"W	2.29	
3866.00	9.580	289.080	3832.31	-380.64	195.03	-388.33	40°46'05.345"N	104°00'41.123"W	1.56	
3961.00	9.690	288.240	3925.97	-395.50	200.12	-403.39	40°46'05.395"N	104°00'41.319"W	0.19	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-5 AWP

Page 3 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4055.00	9.550	289.360	4018.65	-410.16	205.18	-418.26	40°46'05.445"N	104°00'41.512"W	0.25	
4150.00	9.630	295.770	4112.32	-424.51	211.24	-432.86	40°46'05.505"N	104°00'41.702"W	1.13	
4244.00	9.130	309.950	4205.08	-436.99	219.45	-445.65	40°46'05.586"N	104°00'41.868"W	2.51	
4339.00	9.300	325.180	4298.87	-446.72	230.60	-455.82	40°46'05.696"N	104°00'42.000"W	2.57	
4434.00	9.250	326.980	4392.62	-454.78	243.30	-464.36	40°46'05.822"N	104°00'42.111"W	0.31	
4529.00	9.230	323.480	4486.39	-462.99	255.82	-473.06	40°46'05.946"N	104°00'42.224"W	0.59	
4623.00	8.840	319.910	4579.23	-471.68	267.41	-482.19	40°46'06.060"N	104°00'42.343"W	0.73	
4717.00	7.270	307.830	4672.30	-480.68	276.58	-491.54	40°46'06.151"N	104°00'42.464"W	2.45	
4812.00	5.860	292.880	4766.68	-489.68	282.16	-500.76	40°46'06.206"N	104°00'42.584"W	2.32	
4906.00	4.870	280.780	4860.27	-497.91	284.77	-509.10	40°46'06.232"N	104°00'42.693"W	1.59	
5001.00	3.050	256.500	4955.05	-504.32	284.93	-515.52	40°46'06.233"N	104°00'42.776"W	2.56	
5095.00	0.060	16.310	5049.01	-506.76	284.40	-517.94	40°46'06.228"N	104°00'42.807"W	3.28	
5190.00	0.040	284.860	5144.01	-506.77	284.45	-517.96	40°46'06.229"N	104°00'42.808"W	0.08	
5284.00	0.040	332.830	5238.01	-506.82	284.49	-518.01	40°46'06.229"N	104°00'42.808"W	0.03	
5379.00	0.000	97.800	5333.01	-506.83	284.52	-518.02	40°46'06.229"N	104°00'42.808"W	0.04	
5474.00	0.030	326.560	5428.01	-506.85	284.54	-518.03	40°46'06.229"N	104°00'42.809"W	0.03	
5568.00	0.070	34.130	5522.01	-506.82	284.61	-518.02	40°46'06.230"N	104°00'42.808"W	0.07	
5663.00	0.070	270.050	5617.01	-506.85	284.66	-518.04	40°46'06.231"N	104°00'42.809"W	0.13	
5758.00	7.430	84.180	5711.74	-500.77	285.28	-511.98	40°46'06.237"N	104°00'42.730"W	7.89	
5852.00	16.680	83.150	5803.57	-481.21	287.51	-492.50	40°46'06.259"N	104°00'42.477"W	9.84	
5947.00	24.180	88.740	5892.54	-448.12	289.57	-459.46	40°46'06.279"N	104°00'42.047"W	8.15	
6041.00	33.480	91.580	5974.80	-402.90	289.28	-414.19	40°46'06.276"N	104°00'41.459"W	10.00	
6136.00	42.500	92.140	6049.60	-344.63	287.35	-355.81	40°46'06.257"N	104°00'40.700"W	9.50	
6230.00	51.400	91.650	6113.70	-276.18	285.10	-287.23	40°46'06.235"N	104°00'39.809"W	9.48	
6325.00	57.870	92.750	6168.66	-198.98	282.10	-209.86	40°46'06.205"N	104°00'38.803"W	6.88	
6419.00	67.580	89.290	6211.69	-115.68	280.73	-126.44	40°46'06.192"N	104°00'37.719"W	10.83	
6514.00	77.000	88.570	6240.56	-25.30	282.43	-36.06	40°46'06.209"N	104°00'36.545"W	9.94	
6609.00	83.960	91.310	6256.26	68.26	282.50	57.57	40°46'06.209"N	104°00'35.328"W	7.86	
6675.00†	88.179	93.019	6260.79	133.90	280.02	123.35	40°46'06.185"N	104°00'34.473"W	6.89	CROSSED 600' SETBACK (1408'FNL&600'FWL, SEC.08)
6703.00	89.970	93.740	6261.24	161.76	278.36	151.29	40°46'06.169"N	104°00'34.110"W	6.89	
6798.00	90.830	94.570	6260.58	256.18	271.48	246.04	40°46'06.101"N	104°00'32.878"W	1.26	
6892.00	90.800	90.420	6259.24	349.84	267.39	339.92	40°46'06.060"N	104°00'31.658"W	4.41	
6987.00	90.460	87.030	6258.19	444.81	269.50	434.88	40°46'06.081"N	104°00'30.424"W	3.59	
7081.00	90.490	86.000	6257.41	538.78	275.22	528.70	40°46'06.137"N	104°00'29.205"W	1.10	
7176.00	90.580	84.420	6256.53	633.67	283.15	623.36	40°46'06.216"N	104°00'27.975"W	1.67	
7271.00	90.460	83.900	6255.66	728.47	292.82	717.86	40°46'06.311"N	104°00'26.746"W	0.56	

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7365.00	90.460	85.820	6254.91	822.34	301.24	811.48	40°46'06.394"N	104°00'25.530"W	2.04	
7460.00	90.490	86.150	6254.12	917.29	307.89	906.24	40°46'06.460"N	104°00'24.298"W	0.35	
7554.00	90.250	89.400	6253.51	1011.27	311.54	1000.16	40°46'06.496"N	104°00'23.077"W	3.47	
7649.00	90.400	89.910	6252.98	1106.22	312.11	1095.15	40°46'06.502"N	104°00'21.843"W	0.56	
7744.00	90.370	89.840	6252.34	1201.16	312.32	1190.15	40°46'06.504"N	104°00'20.608"W	0.08	
7839.00	90.550	89.710	6251.57	1296.10	312.69	1285.15	40°46'06.507"N	104°00'19.374"W	0.23	
7933.00	90.310	89.400	6250.87	1390.06	313.42	1379.14	40°46'06.515"N	104°00'18.152"W	0.42	
8028.00	90.280	90.920	6250.38	1484.97	313.15	1474.14	40°46'06.512"N	104°00'16.917"W	1.60	
8122.00	90.490	91.070	6249.75	1578.83	311.52	1568.12	40°46'06.496"N	104°00'15.696"W	0.27	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-5 AWP

Page 4 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8217.00	90.460	90.650	6248.96	1673.69	310.10	1663.11	40°46'06.482"N	104°00'14.461"W	0.44	
8311.00	90.550	91.540	6248.13	1767.53	308.30	1757.08	40°46'06.464"N	104°00'13.240"W	0.95	
8406.00	90.980	91.010	6246.86	1862.35	306.19	1852.05	40°46'06.443"N	104°00'12.006"W	0.72	
8501.00	89.230	88.860	6246.69	1957.28	306.29	1947.04	40°46'06.444"N	104°00'10.771"W	2.92	
8595.00	89.880	88.340	6247.42	2051.26	308.59	2041.01	40°46'06.466"N	104°00'09.550"W	0.89	
8690.00	90.400	88.630	6247.19	2146.26	311.10	2135.98	40°46'06.491"N	104°00'08.316"W	0.63	
8784.00	90.520	88.330	6246.43	2240.25	313.60	2229.94	40°46'06.516"N	104°00'07.095"W	0.34	
8879.00	90.520	88.250	6245.57	2335.24	316.43	2324.89	40°46'06.544"N	104°00'05.861"W	0.08	
8974.00	90.370	89.350	6244.83	2430.22	318.42	2419.87	40°46'06.563"N	104°00'04.626"W	1.17	
9068.00	90.550	89.400	6244.08	2524.18	319.45	2513.86	40°46'06.573"N	104°00'03.405"W	0.20	
9163.00	90.430	89.600	6243.27	2619.14	320.27	2608.85	40°46'06.581"N	104°00'02.170"W	0.25	
9257.00	89.570	89.320	6243.27	2713.10	321.16	2702.85	40°46'06.590"N	104°00'00.948"W	0.96	
9352.00	89.690	89.370	6243.88	2808.07	322.25	2797.84	40°46'06.601"N	103°59'59.714"W	0.14	
9447.00	89.600	89.030	6244.47	2903.04	323.57	2892.83	40°46'06.614"N	103°59'58.479"W	0.37	
9541.00	89.720	89.110	6245.03	2997.01	325.10	2986.81	40°46'06.629"N	103°59'57.258"W	0.15	
9636.00	90.740	90.480	6244.64	3091.95	325.44	3081.81	40°46'06.632"N	103°59'56.023"W	1.80	
9730.00	90.830	90.660	6243.36	3185.83	324.50	3175.80	40°46'06.622"N	103°59'54.802"W	0.21	
9825.00	90.710	90.220	6242.08	3280.73	323.77	3270.78	40°46'06.615"N	103°59'53.567"W	0.48	
9919.00	91.080	89.590	6240.61	3374.65	323.93	3364.77	40°46'06.616"N	103°59'52.346"W	0.78	
10014.00	91.080	89.250	6238.82	3469.60	324.89	3459.75	40°46'06.626"N	103°59'51.111"W	0.36	
10109.00	90.490	87.990	6237.52	3564.58	327.18	3554.71	40°46'06.648"N	103°59'49.877"W	1.46	
10203.00	89.720	87.320	6237.35	3658.58	331.03	3648.63	40°46'06.686"N	103°59'48.657"W	1.09	
10298.00	90.650	87.950	6237.04	3753.57	334.95	3743.55	40°46'06.725"N	103°59'47.423"W	1.18	
10393.00	90.860	89.940	6235.79	3848.54	336.69	3838.52	40°46'06.742"N	103°59'46.189"W	2.11	
10487.00	90.620	90.430	6234.57	3942.45	336.39	3932.51	40°46'06.739"N	103°59'44.967"W	0.58	
10582.00	90.520	92.420	6233.63	4037.26	334.03	4027.47	40°46'06.715"N	103°59'43.733"W	2.10	
10676.00	90.340	95.090	6232.92	4130.74	327.87	4121.26	40°46'06.654"N	103°59'42.514"W	2.85	
10771.00	90.340	94.780	6232.36	4225.01	319.70	4215.90	40°46'06.573"N	103°59'41.284"W	0.33	
10866.00	90.860	94.730	6231.37	4319.31	311.83	4310.57	40°46'06.495"N	103°59'40.054"W	0.55	
10961.00	90.340	93.090	6230.37	4413.76	305.35	4405.34	40°46'06.431"N	103°59'38.822"W	1.81	
11055.00	90.370	89.670	6229.79	4507.57	303.09	4499.30	40°46'06.409"N	103°59'37.601"W	3.64	
11150.00	90.280	86.660	6229.25	4602.55	306.13	4594.24	40°46'06.439"N	103°59'36.367"W	3.17	
11245.00	90.370	86.180	6228.71	4697.52	312.06	4689.05	40°46'06.497"N	103°59'35.135"W	0.51	
11339.00	90.340	87.340	6228.13	4791.50	317.37	4782.90	40°46'06.549"N	103°59'33.915"W	1.23	
11434.00	90.490	89.360	6227.44	4886.49	320.11	4877.85	40°46'06.576"N	103°59'32.681"W	2.13	
11529.00	90.490	89.710	6226.63	4981.45	320.88	4972.84	40°46'06.584"N	103°59'31.446"W	0.37	

WELLPATH DATA (183 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11624.00	90.180	88.580	6226.07	5076.42	322.30	5067.83	40°46'06.597"N	103°59'30.212"W	1.23	
11718.00	90.280	87.080	6225.69	5170.41	325.85	5161.76	40°46'06.632"N	103°59'28.991"W	1.60	
11813.00	89.050	86.300	6226.25	5265.39	331.34	5256.60	40°46'06.686"N	103°59'27.759"W	1.53	
11908.00	89.080	86.120	6227.80	5360.34	337.62	5351.38	40°46'06.748"N	103°59'26.527"W	0.19	
12002.00	88.950	87.620	6229.42	5454.31	342.75	5445.22	40°46'06.799"N	103°59'25.307"W	1.60	
12097.00	88.950	87.620	6231.16	5549.29	346.69	5540.12	40°46'06.838"N	103°59'24.074"W	0.00	
12192.00	90.430	88.310	6231.67	5644.29	350.07	5635.06	40°46'06.871"N	103°59'22.840"W	1.72	
12286.00	90.370	88.780	6231.01	5738.28	352.45	5729.02	40°46'06.894"N	103°59'21.619"W	0.50	
12381.00	90.220	90.190	6230.53	5833.24	353.31	5824.02	40°46'06.902"N	103°59'20.384"W	1.49	





# Actual Wellpath Report

TIMBRO 9-59 8A-9-5 AWP

Page 5 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12476.00	90.310	88.990	6230.09	5928.19	353.99	5919.01	40°46'06.909"N	103°59'19.149"W	1.27	
12570.00	90.310	88.190	6229.58	6022.18	356.30	6012.98	40°46'06.931"N	103°59'17.928"W	0.85	
12665.00	90.250	87.780	6229.11	6117.18	359.64	6107.92	40°46'06.964"N	103°59'16.694"W	0.44	
12760.00	89.690	88.120	6229.16	6212.17	363.04	6202.86	40°46'06.997"N	103°59'15.460"W	0.69	
12854.00	89.780	90.500	6229.60	6306.14	364.17	6296.84	40°46'07.008"N	103°59'14.239"W	2.53	
12949.00	89.750	92.810	6229.99	6400.92	361.43	6391.80	40°46'06.981"N	103°59'13.005"W	2.43	
13043.00	89.750	92.400	6230.40	6494.59	357.16	6485.70	40°46'06.939"N	103°59'11.784"W	0.44	
13138.00	89.660	92.150	6230.89	6589.30	353.38	6580.62	40°46'06.901"N	103°59'10.551"W	0.28	
13233.00	89.880	93.710	6231.27	6683.92	348.53	6675.49	40°46'06.853"N	103°59'09.318"W	1.66	
13328.00	89.600	94.760	6231.70	6778.32	341.51	6770.23	40°46'06.783"N	103°59'08.087"W	1.14	
13422.00	89.630	90.850	6232.33	6871.95	336.91	6864.10	40°46'06.738"N	103°59'06.867"W	4.16	
13517.00	90.950	88.020	6231.85	6966.89	337.85	6959.08	40°46'06.747"N	103°59'05.632"W	3.29	
13611.00	91.080	86.760	6230.18	7060.88	342.13	7052.97	40°46'06.789"N	103°59'04.412"W	1.35	
13705.00	90.950	85.510	6228.52	7154.82	348.47	7146.74	40°46'06.851"N	103°59'03.193"W	1.34	
13800.00	91.010	87.540	6226.89	7249.78	354.22	7241.54	40°46'06.908"N	103°59'01.961"W	2.14	
13894.00	91.080	87.250	6225.18	7343.76	358.49	7335.43	40°46'06.949"N	103°59'00.741"W	0.32	
13989.00	91.080	89.510	6223.39	7438.73	361.18	7430.37	40°46'06.976"N	103°58'59.507"W	2.38	
14084.00	91.200	91.390	6221.50	7533.61	360.43	7525.34	40°46'06.968"N	103°58'58.273"W	1.98	
14178.00	90.250	91.320	6220.31	7627.42	358.21	7619.31	40°46'06.946"N	103°58'57.051"W	1.01	
14272.00	90.460	91.850	6219.73	7721.21	355.61	7713.27	40°46'06.920"N	103°58'55.830"W	0.61	
14367.00	90.310	93.810	6219.09	7815.84	350.92	7808.15	40°46'06.873"N	103°58'54.597"W	2.07	
14462.00	90.400	93.590	6218.50	7910.34	344.79	7902.95	40°46'06.812"N	103°58'53.365"W	0.25	
14556.00	90.250	91.960	6217.97	8003.99	340.24	7996.83	40°46'06.767"N	103°58'52.145"W	1.74	
14650.00	88.890	89.070	6218.67	8097.87	339.39	8090.82	40°46'06.758"N	103°58'50.924"W	3.40	
14745.00	89.080	87.350	6220.36	8192.85	342.36	8185.75	40°46'06.787"N	103°58'49.690"W	1.82	
14840.00	89.110	87.030	6221.86	8287.83	347.02	8280.62	40°46'06.833"N	103°58'48.457"W	0.34	
14934.00	89.080	87.340	6223.34	8381.81	351.63	8374.50	40°46'06.878"N	103°58'47.237"W	0.33	
15029.00	90.370	89.660	6223.80	8476.80	354.12	8469.46	40°46'06.903"N	103°58'46.003"W	2.79	
15123.00	90.340	89.570	6223.21	8570.75	354.75	8563.45	40°46'06.909"N	103°58'44.781"W	0.10	
15218.00	90.400	89.500	6222.60	8665.70	355.52	8658.45	40°46'06.916"N	103°58'43.546"W	0.10	
15313.00	90.220	88.360	6222.09	8760.68	357.30	8753.43	40°46'06.933"N	103°58'42.312"W	1.21	
15376.00	90.310	88.500	6221.80	8823.68	359.02	8816.40	40°46'06.950"N	103°58'41.493"W	0.26	
15439.00	90.120	86.530	6221.56	8886.67	361.75	8879.34	40°46'06.977"N	103°58'40.675"W	3.14	
15502.00	90.310	86.010	6221.32	8949.65	365.85	8942.21	40°46'07.017"N	103°58'39.858"W	0.88	
15565.00	90.370	85.460	6220.95	9012.61	370.54	9005.03	40°46'07.063"N	103°58'39.042"W	0.88	
15628.00	90.310	85.450	6220.57	9075.55	375.53	9067.83	40°46'07.112"N	103°58'38.226"W	0.10	

WELLPATH DATA (183 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15691.00	90.490	86.850	6220.14	9138.52	379.76	9130.69	40°46'07.154"N	103°58'37.409"W	2.24	
15755.00	90.520	87.900	6219.57	9202.52	382.69	9194.62	40°46'07.182"N	103°58'36.578"W	1.64	
15818.00	90.460	89.210	6219.03	9265.51	384.28	9257.59	40°46'07.198"N	103°58'35.759"W	2.08	
15881.00	90.340	90.550	6218.59	9328.47	384.41	9320.59	40°46'07.199"N	103°58'34.941"W	2.14	
15944.00	90.280	87.540	6218.25	9391.44	385.46	9383.57	40°46'07.209"N	103°58'34.122"W	4.78	
15965.00†	90.340	87.443	6218.14	9412.44	386.38	9404.55	40°46'07.218"N	103°58'33.849"W	0.54	CROSSED 600' SETBACK (1399'FNL&600'FEL, SEC.09)
16007.00	90.460	87.250	6217.84	9454.44	388.32	9446.51	40°46'07.237"N	103°58'33.304"W	0.54	
16070.00	90.460	89.030	6217.34	9517.43	390.37	9509.47	40°46'07.257"N	103°58'32.486"W	2.83	
16133.00	90.490	90.100	6216.82	9580.40	390.85	9572.46	40°46'07.262"N	103°58'31.667"W	1.70	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-5 AWP

Page 6 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16196.00	90.400	93.760	6216.33	9643.23	388.73	9635.41	40°46'07.240"N	103°58'30.849"W	5.81	
16214.00	90.370	94.300	6216.21	9661.12	387.46	9653.37	40°46'07.228"N	103°58'30.616"W	3.00	LAST BHGE MWD SURVEY (1398'FNL & 351'FEL, SEC.09)
16238.00	90.370	94.300	6216.05	9684.97	385.66	9677.30	40°46'07.210"N	103°58'30.305"W	0.00	PROJECTION TO BIT ( 1399'FNL & 327'FEL, SEC.09)

## HOLE & CASING SECTIONS - Ref Wellbore: TIMBRO 9-59 8A-9-5 AWB Ref Wellpath: TIMBRO 9-59 8A-9-5 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	1891.91	0.00	0.00	26.71	-129.08

## 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	16.00	31.66	0.03	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-2 SECTION 09	16.00	31.66	0.03	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-5 REV-1 BHL (1416'FNL&300'FEL,SEC.09)	6350.00	369.09	9704.06	3422401.22	1526487.55	40°46'07.046"N	103°58'29.957"W	point
TIMBRO 9-59 8A-9-5 REV-1 EPI (1418'FNL&600'FEL,SEC.09)	6351.88	366.84	9404.36	3422101.61	1526480.27	40°46'07.025"N	103°58'33.852"W	point
TIMBRO 9-59 8A-9-5 REV-1 BPI (1416'FNL&600'FWL,SEC.08)	6410.00	288.53	123.88	3412823.79	1526246.04	40°46'06.269"N	104°00'34.466"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6998.00	31.66	0.03	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8A-9-5 AWB Ref Wellpath: TIMBRO 9-59 8A-9-5 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1846.00	BHI NaviTrak (Rotating+Axial Corr)	BHI/Navitrak (Rotating-axial) <89'-1828'>	TIMBRO 9-59 8A-9-5 AWB
1846.00	16214.00	BHI AutoTrak Curve (Short)	8.5" Monobore <1975-16214>	TIMBRO 9-59 8A-9-5 AWB
16214.00	16238.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8A-9-5 AWB



**Actual Wellpath Report**  
TIMBRO 9-59 8A-9-5 AWP  
Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#03 TIMBRO 9-59 8A-9-5(1704'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-5
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-5 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
6675.00	88.179	93.019	6260.79	CROSSED 600' SETBACK (1408'FNL&600'FWL, SEC.08)
15965.00	90.340	87.443	6218.14	CROSSED 600' SETBACK (1399'FNL&600'FEL, SEC.09)
16214.00	90.370	94.300	6216.21	LAST BHGE MWD SURVEY (1398'FNL & 351'FEL, SEC.09)
16238.00	90.370	94.300	6216.05	PROJECTION TO BIT ( 1399'FNL & 327'FEL, SEC.09)