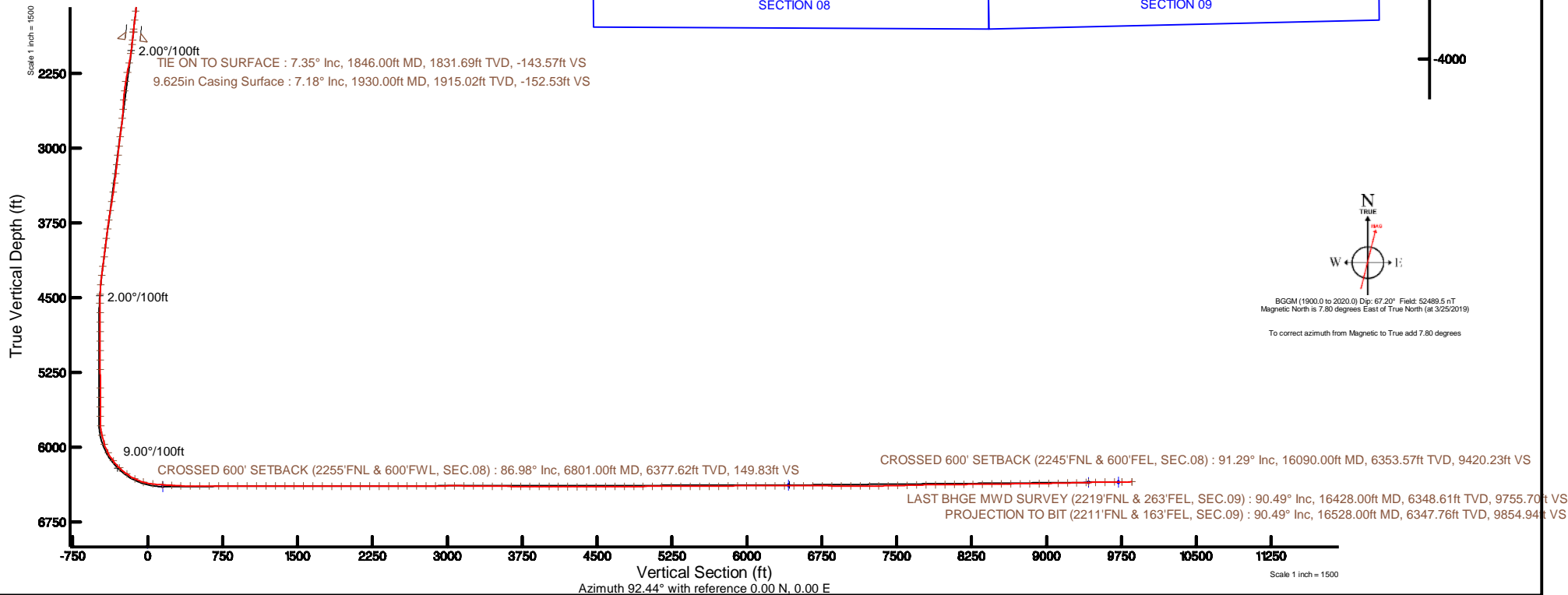
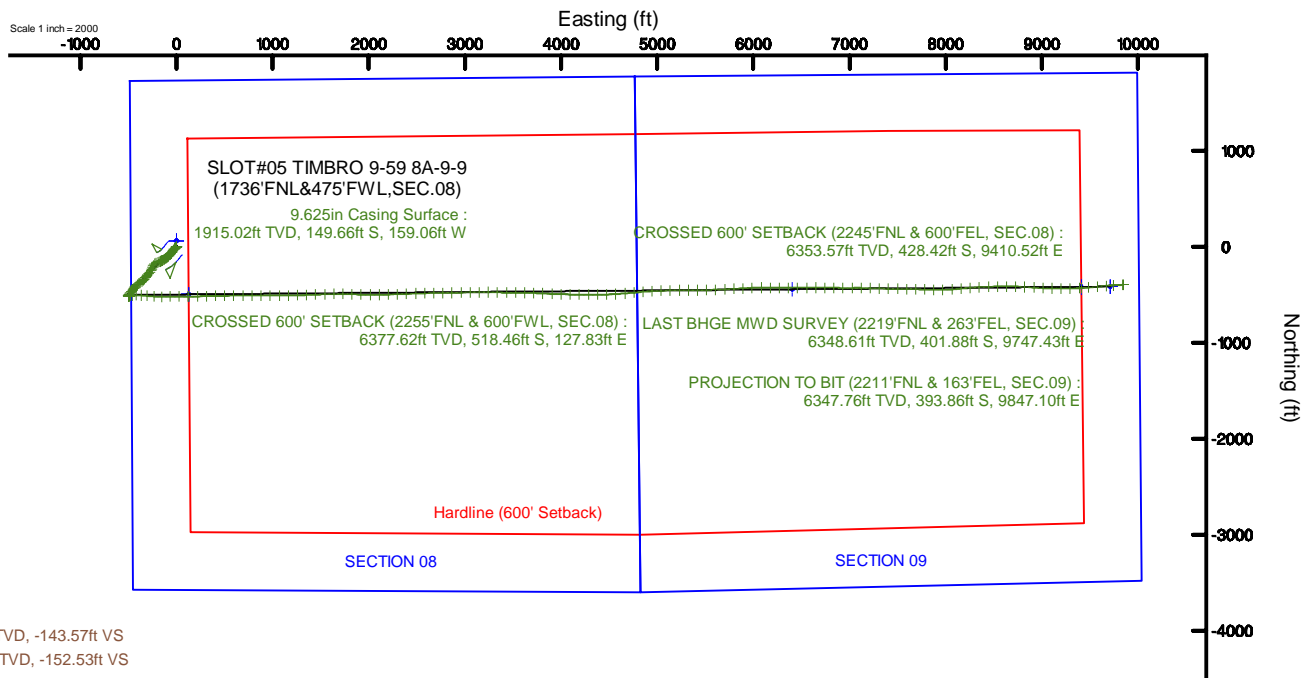


# VERDAD RESOURCES

Location: COLORADO Slot: SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)  
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8A-9-9  
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8A-9-9 PWB



Plot reference wellpath is TIMBRO 9-59 8A-9-9 (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: 5106 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#05 TIMBRO 9-59 8A-9-9(1736'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-9-9 AWP

Page 1 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 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 5:23:30 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8A-9-9_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-63.74	0.28	3412705.63	1525923.40	40°46'03.101"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	5106.00ft
Horizontal Reference Pt	Slot	Big Rig (24'KB) (RKB) to Mean Sea Level	5106.00ft
Vertical Reference Pt	Big Rig (24'KB) (RKB)	Big Rig (24'KB) (RKB) to Ground Level at Slot (SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08))	5106.00ft
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	92.44°



# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 2 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 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	148.750	0.00	0.00	0.00	0.00	40°46'03.101"N	104°00'36.072"W	0.00	
24.00	0.000	148.750	24.00	0.00	0.00	0.00	40°46'03.101"N	104°00'36.072"W	0.00	
107.00	0.630	148.750	107.00	0.25	-0.39	0.24	40°46'03.097"N	104°00'36.069"W	0.76	
197.00	0.740	193.040	196.99	0.42	-1.38	0.36	40°46'03.087"N	104°00'36.067"W	0.58	
284.00	2.030	217.830	283.97	-0.57	-3.14	-0.71	40°46'03.070"N	104°00'36.081"W	1.60	
376.00	4.640	230.640	375.80	-4.29	-6.79	-4.59	40°46'03.034"N	104°00'36.132"W	2.93	
466.00	6.240	229.940	465.39	-10.61	-12.25	-11.15	40°46'02.980"N	104°00'36.217"W	1.78	
556.00	6.860	225.720	554.81	-17.90	-19.15	-18.74	40°46'02.912"N	104°00'36.316"W	0.87	
646.00	8.270	220.080	644.02	-25.54	-27.85	-26.75	40°46'02.826"N	104°00'36.420"W	1.77	
736.00	9.070	217.240	732.99	-33.54	-38.45	-35.21	40°46'02.721"N	104°00'36.530"W	1.01	
826.00	8.890	219.460	821.89	-41.78	-49.47	-43.93	40°46'02.612"N	104°00'36.643"W	0.43	
916.00	8.660	218.300	910.84	-49.93	-60.16	-52.55	40°46'02.507"N	104°00'36.755"W	0.32	
1006.00	8.670	218.750	999.81	-57.92	-70.77	-60.99	40°46'02.402"N	104°00'36.865"W	0.08	
1096.00	8.090	220.980	1088.85	-65.88	-80.84	-69.39	40°46'02.302"N	104°00'36.974"W	0.74	
1186.00	8.560	223.380	1177.90	-74.21	-90.49	-78.14	40°46'02.207"N	104°00'37.088"W	0.65	
1276.00	8.090	225.010	1266.95	-82.89	-99.83	-87.22	40°46'02.115"N	104°00'37.206"W	0.58	
1366.00	7.370	224.510	1356.13	-91.04	-108.43	-95.75	40°46'02.030"N	104°00'37.316"W	0.80	
1456.00	7.650	231.940	1445.36	-99.46	-116.24	-104.51	40°46'01.952"N	104°00'37.430"W	1.12	
1546.00	8.210	237.510	1534.50	-109.28	-123.38	-114.65	40°46'01.882"N	104°00'37.562"W	1.06	
1636.00	7.900	239.770	1623.62	-119.76	-129.95	-125.41	40°46'01.817"N	104°00'37.702"W	0.49	
1726.00	7.890	239.360	1712.76	-130.14	-136.21	-136.07	40°46'01.755"N	104°00'37.840"W	0.06	
1816.00	7.580	239.820	1801.95	-140.31	-142.34	-146.52	40°46'01.695"N	104°00'37.976"W	0.35	
1846.00	7.350	238.510	1831.69	-143.57	-144.34	-149.87	40°46'01.675"N	104°00'38.020"W	0.95	TIE ON TO SURFACE
1973.00	7.100	242.950	1957.68	-157.14	-152.15	-163.78	40°46'01.598"N	104°00'38.201"W	0.48	
2067.00	9.820	251.260	2050.66	-169.68	-157.37	-176.55	40°46'01.546"N	104°00'38.366"W	3.17	
2162.00	10.610	259.990	2144.15	-185.77	-161.49	-192.84	40°46'01.505"N	104°00'38.578"W	1.83	
2257.00	12.410	245.170	2237.26	-203.39	-167.30	-210.72	40°46'01.448"N	104°00'38.811"W	3.63	
2351.00	12.420	224.710	2329.11	-219.17	-178.73	-227.00	40°46'01.335"N	104°00'39.022"W	4.66	
2446.00	12.870	215.880	2421.81	-231.88	-194.57	-240.39	40°46'01.178"N	104°00'39.196"W	2.09	
2541.00	11.890	201.230	2514.62	-240.86	-212.27	-250.14	40°46'01.004"N	104°00'39.323"W	3.45	
2635.00	11.430	200.890	2606.68	-246.93	-229.99	-256.97	40°46'00.828"N	104°00'39.412"W	0.49	
2730.00	11.720	209.790	2699.76	-254.34	-247.16	-265.12	40°46'00.659"N	104°00'39.518"W	1.90	
2825.00	11.720	219.580	2792.79	-264.59	-262.98	-276.06	40°46'00.503"N	104°00'39.660"W	2.09	
2919.00	11.560	221.330	2884.86	-276.27	-277.41	-288.37	40°46'00.360"N	104°00'39.820"W	0.41	
3014.00	11.590	217.570	2977.92	-287.74	-292.12	-300.47	40°46'00.215"N	104°00'39.977"W	0.79	
3108.00	11.520	217.210	3070.02	-298.52	-307.08	-311.90	40°46'00.067"N	104°00'40.126"W	0.11	

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
3203.00	11.450	217.580	3163.12	-309.36	-322.11	-323.39	40°45'59.918"N	104°00'40.275"W	0.11	
3297.00	11.470	219.470	3255.24	-320.36	-336.71	-335.02	40°45'59.774"N	104°00'40.426"W	0.40	
3392.00	11.420	223.750	3348.36	-332.25	-350.80	-347.53	40°45'59.635"N	104°00'40.589"W	0.90	
3487.00	10.850	233.060	3441.58	-345.37	-362.97	-361.18	40°45'59.514"N	104°00'40.766"W	1.98	
3581.00	11.450	238.970	3533.80	-359.99	-373.10	-376.25	40°45'59.414"N	104°00'40.962"W	1.37	
3675.00	11.310	235.180	3625.96	-375.11	-383.17	-391.81	40°45'59.315"N	104°00'41.164"W	0.81	
3770.00	11.400	231.420	3719.10	-389.61	-394.34	-406.80	40°45'59.204"N	104°00'41.359"W	0.78	
3864.00	11.310	223.860	3811.26	-402.72	-406.78	-420.45	40°45'59.082"N	104°00'41.536"W	1.59	
3959.00	11.490	219.690	3904.39	-414.61	-420.78	-432.95	40°45'58.943"N	104°00'41.699"W	0.89	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 3 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 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
4054.00	11.440	218.920	3997.50	-425.93	-435.39	-444.91	40°45'58.799"N	104°00'41.854"W	0.17	
4148.00	11.360	220.400	4089.64	-437.17	-449.69	-456.76	40°45'58.658"N	104°00'42.008"W	0.32	
4243.00	11.330	223.840	4182.79	-449.09	-463.55	-469.29	40°45'58.521"N	104°00'42.171"W	0.71	
4337.00	10.980	222.700	4275.01	-460.98	-476.79	-481.76	40°45'58.390"N	104°00'42.333"W	0.44	
4432.00	8.700	214.100	4368.61	-470.60	-489.39	-491.92	40°45'58.265"N	104°00'42.465"W	2.85	
4527.00	5.920	203.180	4462.83	-476.11	-499.85	-497.88	40°45'58.162"N	104°00'42.543"W	3.26	
4621.00	3.550	180.340	4556.52	-477.72	-507.21	-499.81	40°45'58.089"N	104°00'42.568"W	3.17	
4716.00	1.460	130.730	4651.43	-476.66	-510.95	-498.91	40°45'58.052"N	104°00'42.556"W	2.98	
4810.00	0.260	342.520	4745.42	-475.79	-511.52	-498.06	40°45'58.047"N	104°00'42.545"W	1.79	
4905.00	0.070	319.640	4840.42	-475.91	-511.27	-498.17	40°45'58.049"N	104°00'42.546"W	0.21	
4999.00	0.030	18.210	4934.42	-475.94	-511.21	-498.20	40°45'58.050"N	104°00'42.547"W	0.06	
5094.00	0.090	207.850	5029.42	-475.96	-511.25	-498.22	40°45'58.049"N	104°00'42.547"W	0.13	
5188.00	0.200	122.190	5123.42	-475.85	-511.40	-498.12	40°45'58.048"N	104°00'42.546"W	0.23	
5283.00	0.180	93.090	5218.42	-475.56	-511.50	-497.83	40°45'58.047"N	104°00'42.542"W	0.10	
5472.00	0.800	95.580	5407.41	-473.95	-511.64	-496.22	40°45'58.045"N	104°00'42.521"W	0.33	
5566.00	0.500	244.750	5501.41	-473.65	-511.88	-495.94	40°45'58.043"N	104°00'42.517"W	1.34	
5661.00	0.180	213.080	5596.41	-474.10	-512.18	-496.39	40°45'58.040"N	104°00'42.523"W	0.38	
5756.00	0.090	172.540	5691.41	-474.16	-512.38	-496.47	40°45'58.038"N	104°00'42.524"W	0.13	
5850.00	3.360	104.040	5785.35	-471.45	-513.12	-493.78	40°45'58.031"N	104°00'42.489"W	3.54	
5945.00	12.230	73.810	5879.41	-459.16	-510.99	-481.39	40°45'58.052"N	104°00'42.328"W	9.98	
6038.00	19.180	83.200	5968.89	-434.71	-506.43	-456.73	40°45'58.097"N	104°00'42.008"W	7.93	
6134.00	28.060	89.150	6056.77	-396.52	-504.22	-418.41	40°45'58.119"N	104°00'41.510"W	9.57	
6229.00	37.010	92.740	6136.79	-345.52	-505.26	-367.40	40°45'58.109"N	104°00'40.847"W	9.63	
6323.00	46.160	94.790	6207.03	-283.22	-509.45	-305.22	40°45'58.067"N	104°00'40.039"W	9.84	
6418.00	54.250	95.370	6267.78	-210.36	-515.93	-232.58	40°45'58.003"N	104°00'39.095"W	8.53	
6512.00	63.730	90.020	6316.18	-129.94	-519.52	-152.23	40°45'57.968"N	104°00'38.050"W	11.20	
6607.00	73.850	88.350	6350.51	-41.64	-518.22	-63.80	40°45'57.980"N	104°00'36.901"W	10.78	
6702.00	83.250	91.000	6369.35	51.25	-517.73	29.20	40°45'57.985"N	104°00'35.693"W	10.26	
6796.00	86.980	89.910	6377.35	144.84	-518.47	122.84	40°45'57.978"N	104°00'34.476"W	4.13	
6801.00†	86.977	89.804	6377.62	149.83	-518.46	127.83	40°45'57.978"N	104°00'34.411"W	2.11	CROSSED 600' SETBACK (2255'FNL & 600'FWL, SEC.08)
6891.00	86.920	87.900	6382.41	239.52	-516.66	217.68	40°45'57.996"N	104°00'33.243"W	2.11	
6985.00	87.070	87.570	6387.34	333.07	-512.95	311.48	40°45'58.033"N	104°00'32.024"W	0.39	
7080.00	89.850	89.830	6389.89	427.82	-510.80	406.40	40°45'58.054"N	104°00'30.790"W	3.77	
7174.00	90.090	88.900	6389.94	521.68	-509.75	500.39	40°45'58.064"N	104°00'29.569"W	1.02	
7269.00	90.060	88.570	6389.81	616.48	-507.66	595.37	40°45'58.085"N	104°00'28.335"W	0.35	
7364.00	89.940	90.230	6389.81	711.34	-506.66	690.36	40°45'58.095"N	104°00'27.100"W	1.75	

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
7458.00	90.060	90.190	6389.81	805.27	-507.01	784.36	40°45'58.091"N	104°00'25.878"W	0.13	
7553.00	90.030	90.470	6389.74	900.21	-507.55	879.36	40°45'58.086"N	104°00'24.644"W	0.30	
7647.00	89.970	90.290	6389.74	994.15	-508.18	973.36	40°45'58.080"N	104°00'23.422"W	0.20	
7742.00	89.910	89.660	6389.84	1089.06	-508.14	1068.36	40°45'58.080"N	104°00'22.188"W	0.67	
7837.00	90.030	89.200	6389.89	1183.93	-507.19	1163.35	40°45'58.089"N	104°00'20.953"W	0.50	
7931.00	90.250	88.110	6389.66	1277.72	-504.98	1257.33	40°45'58.111"N	104°00'19.732"W	1.18	
8026.00	90.000	88.210	6389.45	1372.45	-501.93	1352.28	40°45'58.141"N	104°00'18.498"W	0.28	
8120.00	90.060	87.430	6389.40	1466.15	-498.36	1446.21	40°45'58.176"N	104°00'17.277"W	0.83	
8215.00	89.510	87.160	6389.76	1560.76	-493.88	1541.10	40°45'58.221"N	104°00'16.044"W	0.64	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 4 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 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
8310.00	89.940	88.770	6390.22	1655.47	-490.50	1636.04	40°45'58.254"N	104°00'14.810"W	1.75	
8404.00	89.690	91.830	6390.52	1749.39	-490.99	1730.02	40°45'58.249"N	104°00'13.589"W	3.27	
8499.00	89.940	91.900	6390.83	1844.38	-494.09	1824.97	40°45'58.218"N	104°00'12.355"W	0.27	
8593.00	90.030	91.930	6390.85	1938.38	-497.23	1918.92	40°45'58.187"N	104°00'11.134"W	0.10	
8688.00	90.220	90.530	6390.64	2033.36	-499.27	2013.89	40°45'58.167"N	104°00'09.899"W	1.49	
8783.00	89.880	88.970	6390.56	2128.25	-498.85	2108.89	40°45'58.171"N	104°00'08.665"W	1.68	
8877.00	90.030	88.160	6390.63	2222.03	-496.50	2202.86	40°45'58.194"N	104°00'07.444"W	0.88	
8972.00	90.310	87.840	6390.35	2316.75	-493.18	2297.80	40°45'58.227"N	104°00'06.210"W	0.45	
9066.00	90.120	87.920	6390.00	2410.45	-489.70	2391.74	40°45'58.261"N	104°00'04.989"W	0.22	
9161.00	90.250	87.550	6389.69	2505.13	-485.95	2486.66	40°45'58.298"N	104°00'03.755"W	0.41	
9255.00	90.220	88.590	6389.31	2598.85	-482.78	2580.61	40°45'58.329"N	104°00'02.534"W	1.11	
9350.00	90.090	89.830	6389.05	2693.70	-481.47	2675.60	40°45'58.342"N	104°00'01.300"W	1.31	
9445.00	90.120	89.050	6388.88	2788.56	-480.55	2770.59	40°45'58.351"N	104°00'00.065"W	0.82	
9539.00	90.400	88.690	6388.45	2882.38	-478.69	2864.57	40°45'58.369"N	103°59'58.844"W	0.49	
9634.00	90.250	88.350	6387.91	2977.16	-476.24	2959.54	40°45'58.394"N	103°59'57.610"W	0.39	
9728.00	90.220	89.070	6387.52	3070.96	-474.12	3053.51	40°45'58.414"N	103°59'56.388"W	0.77	
9823.00	89.170	89.410	6388.03	3165.80	-472.86	3148.50	40°45'58.427"N	103°59'55.154"W	1.16	
9918.00	89.630	90.390	6389.03	3260.70	-472.70	3243.49	40°45'58.428"N	103°59'53.919"W	1.14	
10012.00	89.290	91.810	6389.91	3354.67	-474.50	3337.47	40°45'58.410"N	103°59'52.698"W	1.55	
10107.00	89.290	91.200	6391.09	3449.65	-477.00	3432.43	40°45'58.385"N	103°59'51.464"W	0.64	
10202.00	89.450	90.100	6392.13	3544.60	-478.07	3527.42	40°45'58.375"N	103°59'50.229"W	1.17	
10296.00	89.570	90.920	6392.94	3638.54	-478.91	3621.41	40°45'58.366"N	103°59'49.008"W	0.88	
10391.00	89.380	92.320	6393.81	3733.52	-481.60	3716.36	40°45'58.340"N	103°59'47.774"W	1.49	
10485.00	90.090	92.820	6394.24	3827.52	-485.81	3810.27	40°45'58.298"N	103°59'46.554"W	0.92	
10580.00	89.750	92.730	6394.37	3922.52	-490.41	3905.16	40°45'58.252"N	103°59'45.320"W	0.37	
10675.00	89.780	91.240	6394.76	4017.51	-493.70	4000.10	40°45'58.220"N	103°59'44.087"W	1.57	
10769.00	89.720	91.590	6395.17	4111.50	-496.02	4094.07	40°45'58.196"N	103°59'42.865"W	0.38	
10864.00	89.750	90.090	6395.61	4206.46	-497.41	4189.05	40°45'58.183"N	103°59'41.631"W	1.58	
10959.00	89.750	90.330	6396.03	4301.38	-497.76	4284.05	40°45'58.179"N	103°59'40.396"W	0.25	
11054.00	89.970	89.980	6396.26	4396.31	-498.02	4379.05	40°45'58.176"N	103°59'39.162"W	0.44	
11148.00	90.580	88.100	6395.81	4490.13	-496.44	4473.03	40°45'58.192"N	103°59'37.940"W	2.10	
11243.00	90.770	86.910	6394.69	4584.77	-492.31	4567.93	40°45'58.232"N	103°59'36.707"W	1.27	
11338.00	90.520	84.930	6393.62	4679.15	-485.55	4662.68	40°45'58.299"N	103°59'35.476"W	2.10	
11432.00	89.850	84.640	6393.32	4772.31	-477.01	4756.29	40°45'58.383"N	103°59'34.259"W	0.78	
11527.00	90.120	85.320	6393.34	4866.50	-468.69	4850.92	40°45'58.465"N	103°59'33.029"W	0.77	
11622.00	90.340	86.580	6392.96	4960.89	-461.99	4945.68	40°45'58.531"N	103°59'31.798"W	1.35	

WELLPATH DATA (179 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11716.00	90.340	87.320	6392.40	5054.45	-456.98	5039.55	40°45'58.580"N	103°59'30.578"W	0.79	
11811.00	90.180	87.840	6391.97	5149.11	-452.97	5134.46	40°45'58.620"N	103°59'29.344"W	0.57	
11906.00	89.940	90.830	6391.87	5243.96	-451.87	5229.45	40°45'58.631"N	103°59'28.110"W	3.16	
12000.00	90.000	89.960	6391.92	5337.90	-452.52	5323.44	40°45'58.624"N	103°59'26.888"W	0.93	
12095.00	89.940	89.790	6391.97	5432.80	-452.31	5418.44	40°45'58.626"N	103°59'25.654"W	0.19	
12190.00	89.880	88.480	6392.12	5527.64	-450.88	5513.43	40°45'58.640"N	103°59'24.419"W	1.38	
12284.00	90.370	87.130	6391.92	5621.33	-447.28	5607.36	40°45'58.675"N	103°59'23.198"W	1.53	
12379.00	90.980	87.370	6390.80	5715.94	-442.72	5702.24	40°45'58.720"N	103°59'21.965"W	0.69	
12474.00	91.200	87.180	6388.99	5810.53	-438.20	5797.12	40°45'58.764"N	103°59'20.732"W	0.31	





# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 5 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 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
12569.00	90.710	87.220	6387.41	5905.12	-433.56	5891.99	40°45'58.810"N	103°59'19.499"W	0.52	
12663.00	90.060	86.920	6386.77	5998.70	-428.76	5985.86	40°45'58.857"N	103°59'18.279"W	0.76	
12758.00	90.090	89.360	6386.65	6093.43	-425.68	6080.81	40°45'58.887"N	103°59'17.045"W	2.57	
12852.00	89.940	91.490	6386.63	6187.37	-426.37	6174.80	40°45'58.880"N	103°59'15.824"W	2.27	
12947.00	90.310	89.980	6386.42	6282.32	-427.59	6269.79	40°45'58.868"N	103°59'14.589"W	1.64	
13041.00	90.000	89.730	6386.16	6376.22	-427.35	6363.79	40°45'58.870"N	103°59'13.368"W	0.42	
13136.00	90.120	89.600	6386.06	6471.11	-426.80	6458.79	40°45'58.875"N	103°59'12.133"W	0.19	
13231.00	90.060	89.750	6385.91	6566.00	-426.26	6553.78	40°45'58.880"N	103°59'10.898"W	0.17	
13326.00	89.510	89.860	6386.27	6660.90	-425.94	6648.78	40°45'58.883"N	103°59'09.664"W	0.59	
13420.00	89.570	90.860	6387.03	6754.83	-426.53	6742.78	40°45'58.877"N	103°59'08.442"W	1.07	
13515.00	89.420	91.040	6387.86	6849.80	-428.10	6837.76	40°45'58.862"N	103°59'07.208"W	0.25	
13609.00	89.660	90.310	6388.62	6943.75	-429.21	6931.75	40°45'58.850"N	103°59'05.986"W	0.82	
13704.00	89.510	89.450	6389.31	7038.65	-429.01	7026.75	40°45'58.852"N	103°59'04.752"W	0.92	
13798.00	89.780	90.570	6389.89	7132.56	-429.03	7120.74	40°45'58.852"N	103°59'03.530"W	1.23	
13893.00	90.340	92.700	6389.79	7227.55	-431.74	7215.70	40°45'58.825"N	103°59'02.296"W	2.32	
13987.00	90.950	90.590	6388.73	7321.52	-434.43	7309.65	40°45'58.798"N	103°59'01.075"W	2.34	
14082.00	91.110	91.440	6387.02	7416.48	-436.12	7404.62	40°45'58.781"N	103°58'59.841"W	0.91	
14176.00	91.540	91.370	6384.85	7510.44	-438.42	7498.56	40°45'58.758"N	103°58'58.620"W	0.46	
14271.00	91.630	90.570	6382.22	7605.37	-440.03	7593.51	40°45'58.741"N	103°58'57.386"W	0.85	
14365.00	91.660	91.390	6379.52	7699.30	-441.64	7687.46	40°45'58.725"N	103°58'56.165"W	0.87	
14460.00	90.680	91.660	6377.58	7794.27	-444.16	7782.40	40°45'58.700"N	103°58'54.931"W	1.07	
14554.00	90.710	91.090	6376.44	7888.24	-446.42	7876.37	40°45'58.677"N	103°58'53.710"W	0.61	
14648.00	90.650	89.180	6375.33	7982.15	-446.64	7970.36	40°45'58.675"N	103°58'52.489"W	2.03	
14743.00	90.710	85.960	6374.20	8076.79	-442.61	8065.25	40°45'58.714"N	103°58'51.255"W	3.39	
14838.00	90.460	84.740	6373.23	8171.06	-434.91	8159.93	40°45'58.790"N	103°58'50.025"W	1.31	
14932.00	90.830	86.300	6372.17	8264.36	-427.57	8253.64	40°45'58.862"N	103°58'48.807"W	1.71	
15027.00	90.490	86.560	6371.08	8358.83	-421.66	8348.45	40°45'58.921"N	103°58'47.575"W	0.45	
15122.00	90.950	88.020	6369.88	8453.44	-417.16	8443.33	40°45'58.965"N	103°58'46.342"W	1.61	
15216.00	90.400	88.310	6368.78	8547.17	-414.15	8537.27	40°45'58.994"N	103°58'45.121"W	0.66	
15311.00	90.650	90.050	6367.91	8642.01	-412.80	8632.26	40°45'59.007"N	103°58'43.886"W	1.85	
15405.00	90.550	91.940	6366.92	8735.97	-414.43	8726.23	40°45'58.991"N	103°58'42.665"W	2.01	
15500.00	90.520	92.980	6366.03	8830.96	-418.50	8821.14	40°45'58.950"N	103°58'41.432"W	1.10	
15595.00	90.490	93.530	6365.20	8925.95	-423.90	8915.98	40°45'58.896"N	103°58'40.199"W	0.58	
15690.00	91.540	92.650	6363.51	9020.93	-429.02	9010.83	40°45'58.846"N	103°58'38.967"W	1.44	
15784.00	91.540	91.600	6360.99	9114.89	-432.50	9104.73	40°45'58.811"N	103°58'37.746"W	1.12	
15879.00	91.320	90.110	6358.62	9209.82	-433.92	9199.69	40°45'58.796"N	103°58'36.512"W	1.58	

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
15973.00	91.420	88.930	6356.37	9303.67	-433.13	9293.65	40°45'58.804"N	103°58'35.291"W	1.26	
16068.00	91.350	86.900	6354.07	9398.34	-429.68	9388.56	40°45'58.838"N	103°58'34.058"W	2.14	
16090.00†	91.294	86.526	6353.57	9420.23	-428.42	9410.52	40°45'58.850"N	103°58'33.772"W	1.72	CROSSED 600' SETBACK (2245'FNL & 600'FEL, SEC.08)
16162.00	91.110	85.300	6352.05	9491.74	-423.29	9482.32	40°45'58.900"N	103°58'32.839"W	1.72	
16257.00	90.830	85.640	6350.45	9586.02	-415.78	9577.01	40°45'58.974"N	103°58'31.608"W	0.46	
16352.00	90.550	85.140	6349.30	9680.30	-408.15	9671.69	40°45'59.049"N	103°58'30.378"W	0.60	
16428.00	90.490	85.400	6348.61	9755.70	-401.88	9747.43	40°45'59.111"N	103°58'29.393"W	0.35	LAST BHGE MWD SURVEY (2219'FNL & 263'FEL, SEC.09)
16528.00	90.490	85.400	6347.76	9854.94	-393.86	9847.10	40°45'59.190"N	103°58'28.098"W	0.00	PROJECTION TO BIT (2211'FNL & 163'FEL, SEC.09)



# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 6 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 AWB
Facility	SEC.08-T09N-R59W		

## HOLE & CASING SECTIONS - Ref Wellbore: TIMBRO 9-59 8A-9-9 AWB Ref Wellpath: TIMBRO 9-59 8A-9-9 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	1930.00	1906.00	24.00	1915.02	0.00	0.00	-149.66	-159.06

## 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	14.00	63.74	-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	14.00	63.74	-0.28	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-9 Rev-2 TARGET BOTTOM HOLE (2232'FNL&300'FEL,SEC.09)	6203.00	-414.54	9710.15	3422421.33	1525672.07	40°45'58.986"N	103°58'29.878"W	point
TIMBRO 9-59 8A-9-9 Rev-2 ENDING PROD. INTERVAL(2234'FNL&600'FEL,SEC.09)	6206.60	-416.88	9410.21	3422121.47	1525664.69	40°45'58.964"N	103°58'33.776"W	point
TIMBRO 9-59 8A-9-9 Rev-2 BEG. PROD. INTERVAL(2232'FNL&600'FWL,SEC.08)	6318.00	-495.50	127.96	3412841.89	1525430.12	40°45'58.205"N	104°00'34.409"W	point
TIMBRO 9-59 8A-9-9 Rev-3 TARGET BOTTOM HOLE (2232'FNL&300'FEL,SEC.09)	6350.00	-414.54	9710.15	3422421.33	1525672.07	40°45'58.986"N	103°58'29.878"W	point
TIMBRO 9-59 8A-9-9 Rev-3 ENDING PROD. INTERVAL(2234'FNL&600'FEL,SEC.09)	6352.73	-416.88	9410.21	3422121.47	1525664.69	40°45'58.964"N	103°58'33.776"W	point
TIMBRO 9-59 8A-9-9 Target 1	6380.00	-442.33	6404.96	3419117.09	1525588.75	40°45'58.722"N	103°59'12.833"W	point
TIMBRO 9-59 8A-9-9 Rev-3 BEG. PROD. INTERVAL(2232'FNL&600'FWL,SEC.08)	6394.00	-495.50	127.96	3412841.89	1525430.12	40°45'58.205"N	104°00'34.409"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6996.00	63.74	-0.28	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-9 BEG. PROD. INTERVAL (2232'FNL&600'FWL,SEC.08)	7018.00	-495.52	127.98	3412841.91	1525430.10	40°45'58.205"N	104°00'34.409"W	point
TIMBRO 9-59 8A-9-9 ENDING PROD. INTERVAL(2234'FNL&600'FEL,SEC.09)	7018.00	-416.84	9410.18	3422121.44	1525664.73	40°45'58.964"N	103°58'33.776"W	point
	7018.00	-414.54	9710.18	3422421.36	1525672.07	40°45'58.986"N	103°58'29.878"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
TIMBRO 9-59 8A-9-9 TARGET BOTTOM HOLE (2232'FNL&300'FEL,SEC.09)								

WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8A-9-9 AWB					Ref Wellpath: TIMBRO 9-59 8A-9-9 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 MWD Surface Surveys <89'-1828'>			TIMBRO 9-59 8A-9-9 AWB	
1846.00	16428.00	BHI AutoTrak Curve (Short)		BH/ATC 8.5 MWD Surveys <1973'-16428'>			TIMBRO 9-59 8A-9-9 AWB	
16428.00	16528.00	Blind Drilling (std)		Projection to bit			TIMBRO 9-59 8A-9-9 AWB	



# Actual Wellpath Report

TIMBRO 9-59 8A-9-9 AWP

Page 7 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#05 TIMBRO 9-59 8A-9-9(1736'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-9 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1846.00	7.350	238.510	1831.69	TIE ON TO SURFACE
6801.00	86.977	89.804	6377.62	CROSSED 600' SETBACK (2255'FNL & 600'FWL, SEC.08)
16090.00	91.294	86.526	6353.57	CROSSED 600' SETBACK (2245'FNL & 600'FEL, SEC.08)
16428.00	90.490	85.400	6348.61	LAST BHGE MWD SURVEY (2219'FNL & 263'FEL, SEC.09)
16528.00	90.490	85.400	6347.76	PROJECTION TO BIT (2211'FNL & 163'FEL, SEC.09)