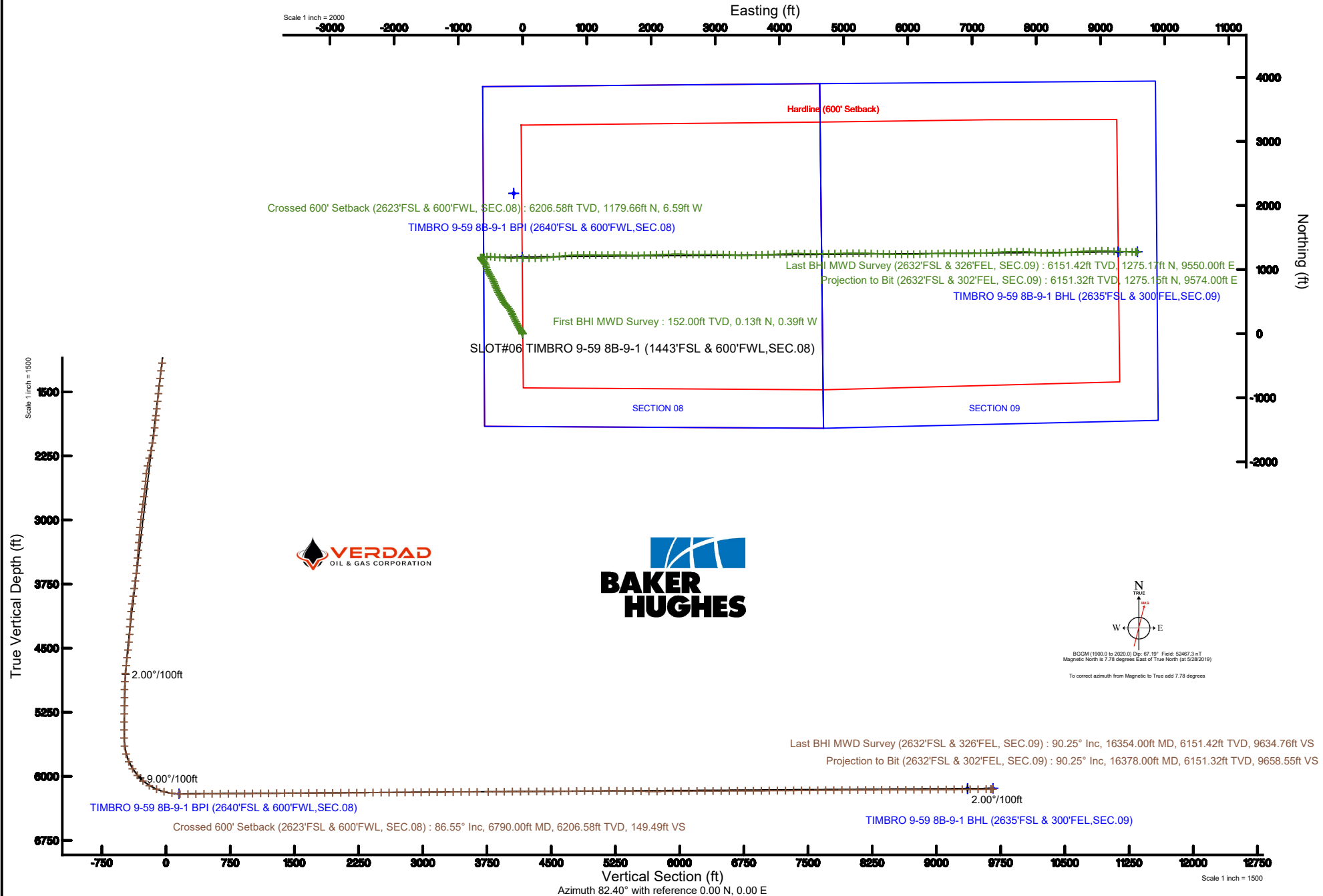


# VERDAD RESOURCES

Location: COLORADO Slot: SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)  
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8B-9-1  
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8B-9-1 PWB

Plot reference wellpath is TIMBRO 9-59 8B-9-1 PWB (REV-B.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (5044'GL+24'KB@5068'RKB) (RKB)	North Reference: True north
Measured depths are referenced to RIG (5044'GL+24'KB@5068'RKB) (RKB)	Scale: True distance
RIG (5044'GL+24'KB@5068'RKB) (RKB) to Mean Sea Level: 5068 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)): 0 feet	Created by: doddanna on 2019-06-27
Coordinates are in feet referenced to Slot	Database: WellArchitectDB



# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 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	Doddanna
Scale	0.999997	Report Generated	6/27/2019 at 4:22:23 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8B-9-1_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2188.92	137.71	3412878.75	1523800.83	40°45'42.102"N	104°00'34.286"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	RIG (5044'GL+24'KB@5068'RKB) (RKB) to Facility Vertical Datum	5068.00ft
Horizontal Reference Pt	Slot	RIG (5044'GL+24'KB@5068'RKB) (RKB) to Mean Sea Level	5068.00ft
Vertical Reference Pt	RIG (5044'GL+24'KB@5068'RKB) (RKB)	RIG (5044'GL+24'KB@5068'RKB) (RKB) to Ground Level at Slot (SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08))	5068.00ft
MD Reference Pt	RIG (5044'GL+24'KB@5068'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	82.40°

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 2 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (177 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	287.770	0.00	0.00	0.00	0.00	40°45'42.102"N	104°00'34.286"W	0.00	
24.00	0.000	287.770	24.00	0.00	0.00	0.00	40°45'42.102"N	104°00'34.286"W	0.00	
152.00	0.370	287.770	152.00	-0.37	0.13	-0.39	40°45'42.103"N	104°00'34.291"W	0.29	First BHI MWD Survey
244.00	0.330	330.240	244.00	-0.74	0.45	-0.81	40°45'42.106"N	104°00'34.296"W	0.28	
335.00	1.270	330.580	334.99	-1.22	1.55	-1.43	40°45'42.117"N	104°00'34.305"W	1.03	
427.00	1.790	342.330	426.95	-1.85	3.81	-2.37	40°45'42.140"N	104°00'34.317"W	0.66	
520.00	3.290	340.260	519.86	-2.66	7.71	-3.71	40°45'42.178"N	104°00'34.334"W	1.62	
611.00	4.900	336.270	610.63	-4.29	13.72	-6.16	40°45'42.238"N	104°00'34.366"W	1.80	
702.00	6.600	331.600	701.16	-7.23	21.88	-10.21	40°45'42.318"N	104°00'34.419"W	1.94	
797.00	8.460	330.700	795.34	-11.75	32.78	-16.23	40°45'42.426"N	104°00'34.497"W	1.96	
892.00	11.010	328.230	888.97	-18.05	46.59	-24.43	40°45'42.562"N	104°00'34.603"W	2.72	
986.00	13.130	328.860	980.88	-25.99	63.36	-34.67	40°45'42.728"N	104°00'34.737"W	2.26	
1081.00	14.710	327.260	1073.09	-35.42	82.74	-46.78	40°45'42.920"N	104°00'34.894"W	1.71	
1175.00	16.710	328.440	1163.57	-45.98	104.30	-60.31	40°45'43.133"N	104°00'35.070"W	2.15	
1270.00	18.800	330.600	1254.05	-57.21	129.27	-74.97	40°45'43.379"N	104°00'35.260"W	2.31	
1364.00	20.390	332.750	1342.60	-68.35	157.03	-89.91	40°45'43.654"N	104°00'35.454"W	1.86	
1459.00	19.260	334.700	1431.97	-78.68	185.91	-104.18	40°45'43.939"N	104°00'35.640"W	1.38	
1553.00	19.930	334.060	1520.53	-88.43	214.33	-117.81	40°45'44.220"N	104°00'35.817"W	0.75	
1648.00	19.190	334.300	1610.04	-98.38	242.96	-131.67	40°45'44.503"N	104°00'35.997"W	0.78	
1743.00	19.350	333.900	1699.72	-108.22	271.16	-145.36	40°45'44.781"N	104°00'36.175"W	0.22	
1826.00	19.310	331.850	1778.04	-117.40	295.61	-157.89	40°45'45.023"N	104°00'36.338"W	0.82	
1883.00	18.540	333.520	1831.96	-123.64	312.03	-166.37	40°45'45.185"N	104°00'36.448"W	1.65	
1978.00	19.210	335.660	1921.85	-133.03	339.79	-179.55	40°45'45.459"N	104°00'36.619"W	1.01	
2073.00	19.650	330.570	2011.45	-143.47	367.95	-193.84	40°45'45.738"N	104°00'36.805"W	1.84	
2167.00	20.640	325.080	2099.71	-156.95	395.30	-211.09	40°45'46.008"N	104°00'37.029"W	2.27	
2261.00	21.310	317.130	2187.49	-174.42	421.41	-232.20	40°45'46.266"N	104°00'37.304"W	3.11	
2356.00	18.410	306.220	2276.87	-195.23	442.94	-256.06	40°45'46.479"N	104°00'37.614"W	4.94	
2451.00	18.460	316.620	2367.01	-214.85	462.74	-278.50	40°45'46.674"N	104°00'37.905"W	3.46	
2546.00	18.030	329.630	2457.28	-229.34	486.36	-296.27	40°45'46.908"N	104°00'38.136"W	4.30	
2640.00	18.440	338.850	2546.57	-238.46	512.78	-308.99	40°45'47.169"N	104°00'38.301"W	3.10	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 3 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWP
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (177 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2735.00	18.730	334.200	2636.63	-246.74	540.53	-321.05	40°45'47.443"N	104°00'38.458"W	1.59	
2829.00	18.550	330.070	2725.70	-257.14	567.08	-335.08	40°45'47.705"N	104°00'38.641"W	1.42	
2924.00	18.530	327.140	2815.77	-269.32	592.85	-350.81	40°45'47.960"N	104°00'38.845"W	0.98	
3019.00	18.500	329.160	2905.85	-281.71	618.48	-366.73	40°45'48.213"N	104°00'39.052"W	0.68	
3113.00	18.380	331.940	2995.03	-292.77	644.36	-381.35	40°45'48.469"N	104°00'39.242"W	0.94	
3209.00	18.420	336.700	3086.13	-302.17	671.65	-394.47	40°45'48.739"N	104°00'39.412"W	1.57	
3303.00	18.430	338.270	3175.31	-309.81	699.09	-405.84	40°45'49.010"N	104°00'39.560"W	0.53	
3398.00	18.560	335.430	3265.40	-317.89	726.79	-417.69	40°45'49.283"N	104°00'39.714"W	0.96	
3492.00	18.290	339.080	3354.59	-325.66	754.17	-429.17	40°45'49.554"N	104°00'39.863"W	1.26	
3587.00	18.350	341.630	3444.77	-331.89	782.29	-439.21	40°45'49.832"N	104°00'39.994"W	0.85	
3682.00	18.520	336.950	3534.90	-338.70	810.37	-449.83	40°45'50.109"N	104°00'40.132"W	1.57	
3776.00	18.960	332.920	3623.92	-347.77	837.70	-462.63	40°45'50.379"N	104°00'40.298"W	1.45	
3871.00	18.930	329.900	3713.78	-358.81	864.78	-477.38	40°45'50.647"N	104°00'40.490"W	1.03	
3965.00	18.850	329.150	3802.72	-370.64	891.00	-492.82	40°45'50.906"N	104°00'40.690"W	0.27	
4060.00	18.920	327.970	3892.60	-383.07	917.24	-508.85	40°45'51.165"N	104°00'40.899"W	0.41	
4154.00	18.830	327.890	3981.55	-395.67	943.01	-525.00	40°45'51.420"N	104°00'41.109"W	0.10	
4249.00	18.860	332.730	4071.46	-407.20	969.64	-540.19	40°45'51.683"N	104°00'41.306"W	1.65	
4344.00	18.220	339.510	4161.54	-415.68	997.21	-552.42	40°45'51.955"N	104°00'41.465"W	2.37	
4438.00	18.830	346.180	4250.68	-420.60	1025.71	-561.19	40°45'52.237"N	104°00'41.579"W	2.34	
4533.00	18.750	343.270	4340.62	-424.68	1055.22	-569.25	40°45'52.529"N	104°00'41.684"W	0.99	
4628.00	17.220	334.350	4430.99	-431.47	1082.52	-579.73	40°45'52.798"N	104°00'41.820"W	3.31	
4722.00	15.590	323.770	4521.18	-441.83	1105.26	-593.23	40°45'53.023"N	104°00'41.995"W	3.61	
4817.00	12.950	316.880	4613.25	-454.14	1123.33	-608.05	40°45'53.202"N	104°00'42.188"W	3.30	
4912.00	11.360	318.080	4706.12	-465.60	1138.06	-621.58	40°45'53.347"N	104°00'42.364"W	1.69	
5006.00	9.680	323.850	4798.54	-474.59	1151.33	-632.43	40°45'53.478"N	104°00'42.505"W	2.11	
5101.00	7.040	328.960	4892.52	-480.73	1162.77	-640.14	40°45'53.591"N	104°00'42.605"W	2.88	
5195.00	5.520	339.660	4985.96	-484.02	1171.95	-644.68	40°45'53.682"N	104°00'42.664"W	2.03	
5290.00	3.910	350.000	5080.64	-485.16	1179.42	-646.83	40°45'53.756"N	104°00'42.692"W	1.91	
5385.00	2.810	339.710	5175.47	-485.81	1184.80	-648.20	40°45'53.809"N	104°00'42.710"W	1.32	
5479.00	1.910	249.580	5269.42	-487.84	1186.41	-650.47	40°45'53.825"N	104°00'42.739"W	3.62	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 4 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (177 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS °/100ft	Comments
5574.00	0.280	150.530	5364.40	-489.30	1185.66	-651.84	40°45'53.817"N	104°00'42.757"W	2.08	
5668.00	0.440	265.890	5458.40	-489.57	1185.43	-652.09	40°45'53.815"N	104°00'42.760"W	0.65	
5763.00	0.000	97.780	5553.40	-489.94	1185.41	-652.45	40°45'53.815"N	104°00'42.765"W	0.46	
5857.00	6.580	100.660	5647.19	-484.82	1184.41	-647.15	40°45'53.805"N	104°00'42.696"W	7.00	
5952.00	15.710	73.860	5740.35	-466.88	1186.99	-629.40	40°45'53.831"N	104°00'42.466"W	10.80	
6047.00	24.290	76.410	5829.54	-434.67	1195.17	-598.00	40°45'53.911"N	104°00'42.057"W	9.08	
6141.00	31.730	87.530	5912.53	-390.73	1200.79	-554.42	40°45'53.967"N	104°00'41.491"W	9.64	
6236.00	40.570	93.850	5989.19	-335.44	1199.79	-498.51	40°45'53.957"N	104°00'40.764"W	10.09	
6331.00	50.120	94.750	6055.88	-269.40	1194.68	-431.20	40°45'53.907"N	104°00'39.890"W	10.07	
6425.00	59.520	95.320	6109.98	-194.52	1187.92	-354.75	40°45'53.840"N	104°00'38.896"W	10.01	
6520.00	68.530	94.420	6151.55	-111.22	1180.71	-269.75	40°45'53.769"N	104°00'37.792"W	9.52	
6614.00	76.140	89.120	6180.07	-22.93	1178.03	-180.32	40°45'53.742"N	104°00'36.629"W	9.71	
6709.00	81.720	88.940	6198.30	69.64	1179.61	-87.14	40°45'53.758"N	104°00'35.418"W	5.88	
6790.00†	86.545	90.980	6206.58	149.49	1179.66	-6.59	40°45'53.758"N	104°00'34.372"W	6.46	Crossed 600' Setback (2623'FSL & 600'FWL, SEC.08)
6804.00	87.380	91.330	6207.32	163.30	1179.38	7.39	40°45'53.755"N	104°00'34.190"W	6.46	
6898.00	90.830	90.840	6208.79	256.20	1177.60	101.34	40°45'53.738"N	104°00'32.969"W	3.71	
6993.00	90.650	88.870	6207.56	350.39	1177.84	196.33	40°45'53.740"N	104°00'31.735"W	2.08	
7088.00	90.800	86.830	6206.36	444.94	1181.40	291.25	40°45'53.775"N	104°00'30.501"W	2.15	
7182.00	90.460	84.980	6205.33	538.76	1188.12	385.00	40°45'53.842"N	104°00'29.283"W	2.00	
7277.00	90.430	84.400	6204.59	633.68	1196.91	479.59	40°45'53.929"N	104°00'28.053"W	0.61	
7371.00	90.400	84.230	6203.91	727.62	1206.22	573.12	40°45'54.021"N	104°00'26.838"W	0.18	
7466.00	90.430	85.210	6203.22	822.54	1214.96	667.72	40°45'54.107"N	104°00'25.608"W	1.03	
7561.00	90.460	86.760	6202.48	917.35	1221.61	762.48	40°45'54.173"N	104°00'24.377"W	1.63	
7655.00	90.490	88.210	6201.70	1010.97	1225.74	856.38	40°45'54.213"N	104°00'23.157"W	1.54	
7750.00	90.340	88.880	6201.01	1105.43	1228.15	951.35	40°45'54.237"N	104°00'21.922"W	0.72	
7844.00	90.490	90.680	6200.33	1198.64	1228.51	1045.34	40°45'54.241"N	104°00'20.701"W	1.92	
7939.00	90.430	91.610	6199.57	1292.53	1226.61	1140.32	40°45'54.222"N	104°00'19.467"W	0.98	
8033.00	90.430	90.340	6198.87	1385.48	1225.01	1234.30	40°45'54.206"N	104°00'18.245"W	1.35	
8128.00	90.460	89.080	6198.13	1479.70	1225.49	1329.29	40°45'54.211"N	104°00'17.011"W	1.33	
8223.00	90.520	88.510	6197.32	1574.11	1227.49	1424.27	40°45'54.230"N	104°00'15.776"W	0.60	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 5 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8317.00	90.460	91.230	6196.51	1667.30	1227.70	1518.26	40°45'54.232"N	104°00'14.555"W	2.89	
8412.00	90.180	92.990	6195.98	1760.93	1224.21	1613.19	40°45'54.198"N	104°00'13.321"W	1.88	
8506.00	90.180	91.150	6195.69	1853.59	1220.81	1707.12	40°45'54.164"N	104°00'12.101"W	1.96	
8601.00	90.490	89.090	6195.13	1947.72	1220.61	1802.11	40°45'54.162"N	104°00'10.866"W	2.19	
8695.00	90.650	87.580	6194.19	2041.21	1223.34	1896.07	40°45'54.189"N	104°00'09.645"W	1.62	
8790.00	90.620	89.170	6193.14	2135.68	1226.04	1991.02	40°45'54.216"N	104°00'08.411"W	1.67	
8885.00	90.310	86.910	6192.37	2230.22	1229.29	2085.96	40°45'54.248"N	104°00'07.177"W	2.40	
8979.00	90.370	87.270	6191.81	2323.90	1234.06	2179.83	40°45'54.295"N	104°00'05.957"W	0.39	
9074.00	90.310	87.900	6191.25	2418.51	1238.06	2274.75	40°45'54.334"N	104°00'04.724"W	0.67	
9169.00	90.400	89.110	6190.66	2512.97	1240.54	2369.71	40°45'54.359"N	104°00'03.490"W	1.28	
9263.00	90.580	91.410	6189.86	2606.07	1240.11	2463.70	40°45'54.354"N	104°00'02.268"W	2.45	
9357.00	90.490	92.250	6188.98	2698.80	1237.11	2557.65	40°45'54.325"N	104°00'01.047"W	0.90	
9452.00	90.400	90.480	6188.24	2792.63	1234.85	2652.61	40°45'54.302"N	103°59'59.813"W	1.87	
9547.00	90.550	89.390	6187.45	2886.81	1234.96	2747.61	40°45'54.303"N	103°59'58.579"W	1.16	
9641.00	90.180	89.230	6186.85	2980.12	1236.09	2841.60	40°45'54.314"N	103°59'57.357"W	0.43	
9736.00	90.460	90.340	6186.32	3074.33	1236.44	2936.59	40°45'54.318"N	103°59'56.123"W	1.21	
9830.00	90.490	90.340	6185.54	3167.42	1235.89	3030.59	40°45'54.312"N	103°59'54.901"W	0.03	
9925.00	90.340	91.820	6184.86	3261.33	1234.10	3125.57	40°45'54.294"N	103°59'53.667"W	1.57	
10020.00	90.490	92.490	6184.17	3354.95	1230.52	3220.50	40°45'54.259"N	103°59'52.433"W	0.72	
10114.00	90.060	93.430	6183.72	3447.36	1225.67	3314.37	40°45'54.211"N	103°59'51.213"W	1.10	
10209.00	90.310	91.730	6183.41	3540.86	1221.39	3409.27	40°45'54.168"N	103°59'49.980"W	1.81	
10303.00	90.520	88.500	6182.73	3634.00	1221.20	3503.25	40°45'54.166"N	103°59'48.758"W	3.44	
10434.00	90.460	87.780	6181.61	3764.33	1225.46	3634.18	40°45'54.208"N	103°59'47.057"W	0.55	
10529.00	90.430	88.340	6180.87	3858.87	1228.67	3729.12	40°45'54.240"N	103°59'45.823"W	0.59	
10623.00	90.430	87.180	6180.17	3952.45	1232.35	3823.05	40°45'54.276"N	103°59'44.602"W	1.23	
10718.00	90.490	87.130	6179.40	4047.12	1237.06	3917.93	40°45'54.322"N	103°59'43.369"W	0.08	
10813.00	90.000	88.070	6179.00	4141.73	1241.04	4012.84	40°45'54.361"N	103°59'42.136"W	1.12	
10907.00	90.400	86.630	6178.67	4235.37	1245.39	4106.74	40°45'54.404"N	103°59'40.916"W	1.59	
11002.00	90.310	88.310	6178.08	4330.00	1249.58	4201.64	40°45'54.446"N	103°59'39.682"W	1.77	
11096.00	90.370	90.550	6177.52	4423.28	1250.51	4295.63	40°45'54.455"N	103°59'38.461"W	2.38	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 6 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (177 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11191.00	90.180	91.720	6177.07	4517.18	1248.63	4390.61	40°45'54.436"N	103°59'37.226"W	1.25	
11285.00	90.490	91.770	6176.52	4609.93	1245.77	4484.56	40°45'54.407"N	103°59'36.005"W	0.33	
11380.00	90.890	90.990	6175.37	4703.76	1243.48	4579.52	40°45'54.385"N	103°59'34.771"W	0.92	
11474.00	90.460	88.890	6174.27	4796.93	1243.58	4673.51	40°45'54.385"N	103°59'33.550"W	2.28	
11569.00	90.490	88.090	6173.48	4891.39	1246.08	4768.48	40°45'54.410"N	103°59'32.316"W	0.84	
11664.00	90.460	88.470	6172.69	4985.89	1248.93	4863.43	40°45'54.438"N	103°59'31.082"W	0.40	
11758.00	90.280	89.320	6172.08	5079.28	1250.75	4957.41	40°45'54.456"N	103°59'29.860"W	0.92	
11853.00	90.430	88.630	6171.49	5173.65	1252.45	5052.39	40°45'54.472"N	103°59'28.626"W	0.74	
11948.00	89.110	89.080	6171.88	5268.05	1254.35	5147.37	40°45'54.491"N	103°59'27.392"W	1.47	
12042.00	89.230	90.620	6173.24	5361.24	1254.59	5241.36	40°45'54.493"N	103°59'26.170"W	1.64	
12137.00	89.230	91.420	6174.51	5455.16	1252.90	5336.33	40°45'54.476"N	103°59'24.936"W	0.84	
12232.00	89.260	91.740	6175.77	5548.94	1250.28	5431.29	40°45'54.450"N	103°59'23.702"W	0.34	
12326.00	89.140	92.100	6177.08	5641.63	1247.13	5525.22	40°45'54.419"N	103°59'22.481"W	0.40	
12421.00	90.620	92.520	6177.28	5735.21	1243.30	5620.14	40°45'54.381"N	103°59'21.248"W	1.62	
12515.00	90.490	91.610	6176.37	5827.87	1239.92	5714.08	40°45'54.347"N	103°59'20.027"W	0.98	
12610.00	90.460	90.410	6175.58	5921.80	1238.24	5809.06	40°45'54.330"N	103°59'18.792"W	1.26	
12705.00	90.340	90.480	6174.92	6015.86	1237.50	5904.05	40°45'54.323"N	103°59'17.558"W	0.15	
12799.00	90.340	89.840	6174.36	6109.00	1237.24	5998.05	40°45'54.320"N	103°59'16.336"W	0.68	
12894.00	90.430	89.210	6173.72	6203.26	1238.03	6093.04	40°45'54.328"N	103°59'15.102"W	0.67	
12988.00	90.550	88.200	6172.92	6296.69	1240.15	6187.02	40°45'54.348"N	103°59'13.881"W	1.08	
13083.00	90.430	87.370	6172.10	6391.26	1243.82	6281.94	40°45'54.384"N	103°59'12.647"W	0.88	
13177.00	90.000	87.920	6171.75	6484.87	1247.69	6375.86	40°45'54.422"N	103°59'11.426"W	0.74	
13272.00	90.030	88.440	6171.73	6579.38	1250.70	6470.81	40°45'54.452"N	103°59'10.192"W	0.55	
13367.00	90.150	88.260	6171.58	6673.87	1253.44	6565.77	40°45'54.479"N	103°59'08.958"W	0.23	
13461.00	90.120	90.270	6171.36	6767.19	1254.65	6659.76	40°45'54.490"N	103°59'07.737"W	2.14	
13556.00	90.550	91.300	6170.80	6861.17	1253.34	6754.75	40°45'54.477"N	103°59'06.502"W	1.17	
13650.00	90.490	91.930	6169.95	6953.96	1250.69	6848.71	40°45'54.451"N	103°59'05.281"W	0.67	
13745.00	90.430	88.550	6169.18	7048.05	1250.30	6943.69	40°45'54.447"N	103°59'04.047"W	3.56	
13840.00	90.550	88.120	6168.37	7142.54	1253.06	7038.64	40°45'54.474"N	103°59'02.813"W	0.47	
13934.00	90.430	87.860	6167.57	7236.09	1256.35	7132.58	40°45'54.506"N	103°59'01.592"W	0.30	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 7 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (177 stations)										
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Latitude	Longitude	DLS °/100ft	Comments
14029.00	90.550	87.640	6166.75	7330.67	1260.08	7227.51	40°45'54.542"N	103°59'00.358"W	0.26	
14123.00	90.550	87.400	6165.85	7424.29	1264.15	7321.41	40°45'54.582"N	103°58'59.138"W	0.26	
14218.00	90.490	86.010	6164.99	7519.02	1269.61	7416.25	40°45'54.636"N	103°58'57.906"W	1.46	
14313.00	90.490	87.790	6164.18	7613.72	1274.75	7511.10	40°45'54.686"N	103°58'56.673"W	1.87	
14407.00	90.620	88.610	6163.27	7707.23	1277.70	7605.05	40°45'54.715"N	103°58'55.452"W	0.88	
14502.00	90.430	90.070	6162.40	7801.53	1278.79	7700.04	40°45'54.726"N	103°58'54.217"W	1.55	
14597.00	90.460	90.800	6161.66	7895.59	1278.07	7795.03	40°45'54.718"N	103°58'52.983"W	0.77	
14691.00	90.520	92.660	6160.85	7988.34	1275.24	7888.98	40°45'54.690"N	103°58'51.762"W	1.98	
14786.00	90.220	94.890	6160.24	8081.47	1268.98	7983.77	40°45'54.628"N	103°58'50.530"W	2.37	
14880.00	90.220	94.420	6159.88	8173.32	1261.35	8077.46	40°45'54.552"N	103°58'49.313"W	0.50	
14975.00	90.310	90.680	6159.44	8266.82	1257.13	8172.35	40°45'54.510"N	103°58'48.079"W	3.94	
15069.00	90.150	88.550	6159.06	8360.07	1257.76	8266.34	40°45'54.516"N	103°58'46.858"W	2.27	
15164.00	90.150	87.230	6158.81	8454.63	1261.26	8361.27	40°45'54.550"N	103°58'45.624"W	1.39	
15258.00	90.180	86.960	6158.54	8548.32	1266.02	8455.15	40°45'54.597"N	103°58'44.404"W	0.29	
15353.00	90.180	86.880	6158.25	8643.02	1271.12	8550.01	40°45'54.647"N	103°58'43.171"W	0.08	
15448.00	90.250	86.260	6157.89	8737.77	1276.81	8644.84	40°45'54.703"N	103°58'41.939"W	0.66	
15542.00	90.520	86.230	6157.26	8831.55	1282.96	8738.64	40°45'54.764"N	103°58'40.720"W	0.29	
15637.00	90.370	87.250	6156.52	8926.28	1288.37	8833.48	40°45'54.817"N	103°58'39.487"W	1.09	
15731.00	90.430	88.950	6155.86	9019.81	1291.48	8927.42	40°45'54.847"N	103°58'38.266"W	1.81	
15826.00	90.490	90.010	6155.10	9114.08	1292.34	9022.41	40°45'54.855"N	103°58'37.032"W	1.12	
15920.00	90.400	93.180	6154.37	9206.85	1289.73	9116.36	40°45'54.829"N	103°58'35.811"W	3.37	
16015.00	90.310	93.390	6153.78	9300.14	1284.29	9211.20	40°45'54.775"N	103°58'34.579"W	0.24	
16110.00	90.280	92.690	6153.29	9393.51	1279.25	9306.07	40°45'54.725"N	103°58'33.346"W	0.74	
16204.00	90.580	91.010	6152.59	9486.23	1276.21	9400.01	40°45'54.695"N	103°58'32.125"W	1.82	
16299.00	90.430	90.140	6151.75	9580.26	1275.26	9495.00	40°45'54.685"N	103°58'30.890"W	0.93	
16354.00	90.250	90.050	6151.42	9634.76	1275.17	9550.00	40°45'54.684"N	103°58'30.176"W	0.37	Last BHI MWD Survey (2632'FSL & 326'FEL, SEC.09)
16378.00	90.250	90.050	6151.32	9658.55	1275.15	9574.00	40°45'54.683"N	103°58'29.864"W	0.00	Projection to Bit (2632'FSL & 302'FEL, SEC.09)



# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 8 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWB
Facility	SEC.08-T09N-R59W		

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	-24.00	2188.93	-137.70	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-2 SECTION 09	-24.00	2188.93	-137.70	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8B-9-1 BHL (2635'FSL & 300'FEL,SEC.09)	6141.00	1277.75	9575.98	3422431.85	1525239.34	40°45'54.709"N	103°58'29.838"W	point
TIMBRO 9-59 8B-9-1 REV-2 EPI (2636'FSL & 600'FEL,SEC.09)	6143.01	1275.21	9275.35	3422131.30	1525231.75	40°45'54.685"N	103°58'33.745"W	point
TIMBRO 9-59 8B-9-1 EPI (2636'FSL & 600'FEL,SEC.09)	6145.42	1275.10	9275.96	3422131.92	1525231.65	40°45'54.684"N	103°58'33.737"W	point
TIMBRO 9-59 8B-9-1 BPI (2640'FSL & 600'FWL,SEC.08)	6205.00	1196.84	-6.93	3412851.71	1524997.38	40°45'53.928"N	104°00'34.376"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6958.00	2188.93	-137.70	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8B-9-1 AWB Ref Wellpath: TIMBRO 9-59 8B-9-1 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1826.00	BHI NaviTrak (Rotating)	BHI NaviTrak (Rotating) <152'-1826'>	TIMBRO 9-59 8B-9-1 AWB
1826.00	16354.00	BHI AutoTrak Curve (Standard)	BHI AutoTrak Curve (Short) 8.5" Hole <1883'-16354'>	TIMBRO 9-59 8B-9-1 AWB
16354.00	16378.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8B-9-1 AWB

# Actual Wellpath Report

TIMBRO 9-59 8B-9-1 AWP

Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#06 TIMBRO 9-59 8B-9-1 (1443'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-1
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-1 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
152.00	0.370	287.770	152.00	First BHI MWD Survey
6790.00	86.545	90.980	6206.58	Crossed 600' Setback (2623'FSL & 600'FWL, SEC.08)
16354.00	90.250	90.050	6151.42	Last BHI MWD Survey (2632'FSL & 326'FEL, SEC.09)
16378.00	90.250	90.050	6151.32	Projection to Bit (2632'FSL & 302'FEL, SEC.09)