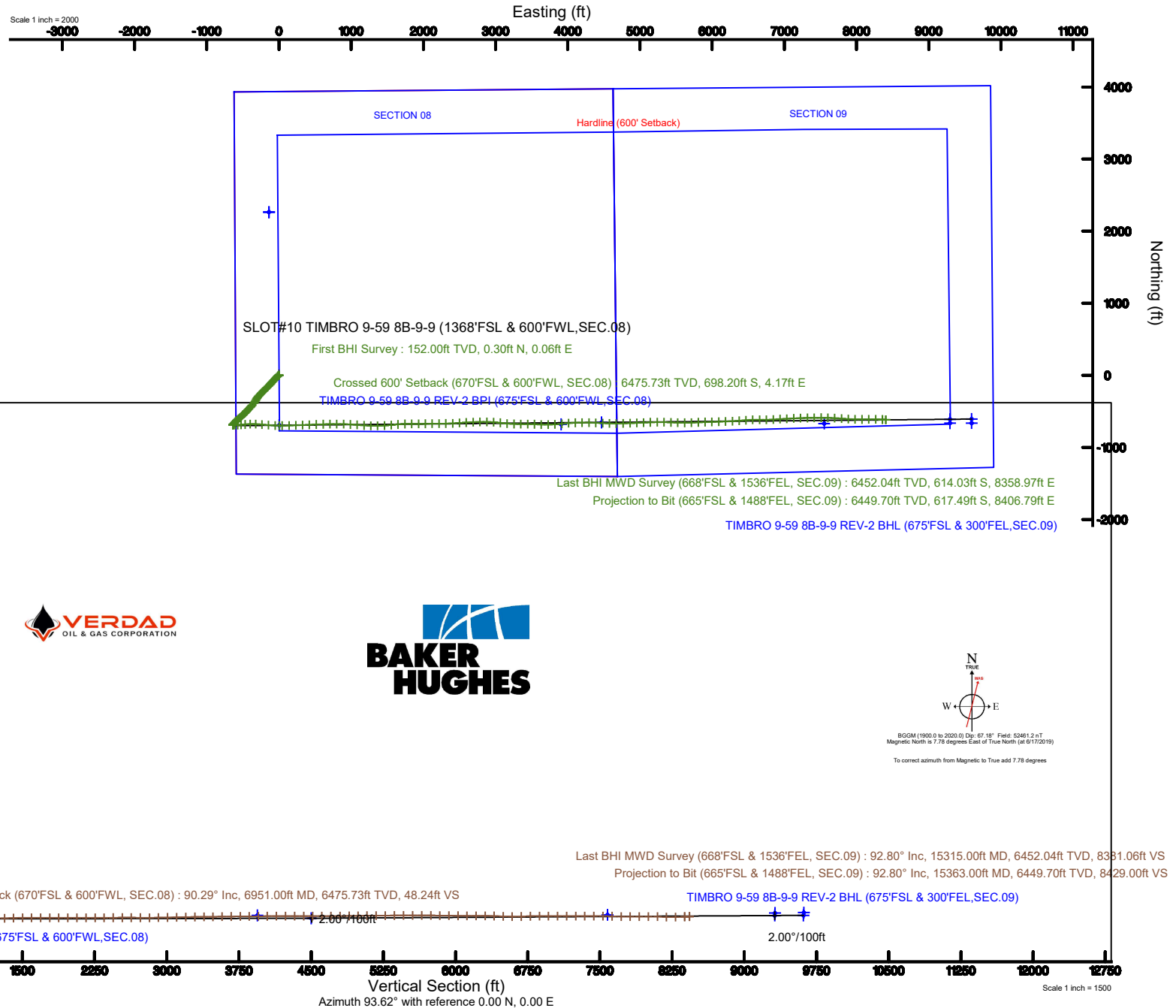


VERDAD RESOURCES

Location: COLORADO Slot: SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8B-9-9
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8B-9-9 PWB

Plot reference wellpath is TIMBRO 9-59 8B-9-9 (REV-B.0) PWB	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#10 TIMBRO 9-59 8B-9-9 (1368'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-9-9 AWP

Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-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	Doddanna
Scale	0.999997	Report Generated	6/27/2019 at 4:49:45 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8B-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	-2263.61	137.94	3412880.24	1523726.16	40°45'41.364"N	104°00'34.283"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#10 TIMBRO 9-59 8B-9-9 (1368'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	93.62°

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 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	11.520	0.00	0.00	0.00	0.00	40°45'41.364"N	104°00'34.283"W	0.00	
24.00	0.000	11.520	24.00	0.00	0.00	0.00	40°45'41.364"N	104°00'34.283"W	0.00	
152.00	0.270	11.520	152.00	0.04	0.30	0.06	40°45'41.367"N	104°00'34.282"W	0.21	First BHI Survey
244.00	0.580	18.140	244.00	0.19	0.95	0.25	40°45'41.373"N	104°00'34.280"W	0.34	
335.00	1.280	262.000	334.99	-0.69	1.25	-0.61	40°45'41.376"N	104°00'34.291"W	1.78	
427.00	2.490	242.360	426.94	-3.41	0.18	-3.40	40°45'41.366"N	104°00'34.327"W	1.47	
520.00	3.540	233.630	519.81	-7.33	-2.46	-7.50	40°45'41.340"N	104°00'34.381"W	1.23	
611.00	5.400	225.390	610.53	-12.34	-7.14	-12.82	40°45'41.293"N	104°00'34.450"W	2.16	
702.00	8.630	225.020	700.84	-19.71	-14.97	-20.70	40°45'41.216"N	104°00'34.552"W	3.55	
797.00	10.490	225.820	794.51	-30.23	-26.04	-31.94	40°45'41.107"N	104°00'34.698"W	1.96	
892.00	12.050	224.700	887.68	-42.56	-39.11	-45.12	40°45'40.978"N	104°00'34.869"W	1.66	
986.00	11.210	223.100	979.75	-54.82	-52.76	-58.26	40°45'40.843"N	104°00'35.040"W	0.96	
1081.00	12.660	220.600	1072.69	-66.95	-67.41	-71.35	40°45'40.698"N	104°00'35.210"W	1.62	
1175.00	11.780	220.520	1164.56	-78.91	-82.52	-84.29	40°45'40.549"N	104°00'35.378"W	0.94	
1270.00	12.670	219.760	1257.41	-90.87	-97.90	-97.25	40°45'40.397"N	104°00'35.547"W	0.95	
1364.00	12.180	219.850	1349.20	-102.82	-113.44	-110.20	40°45'40.243"N	104°00'35.715"W	0.52	
1459.00	13.230	225.150	1441.88	-115.95	-128.80	-124.33	40°45'40.091"N	104°00'35.899"W	1.65	
1553.00	12.850	225.930	1533.46	-130.12	-143.66	-139.46	40°45'39.944"N	104°00'36.095"W	0.45	
1648.00	12.420	229.120	1626.16	-144.51	-157.69	-154.78	40°45'39.806"N	104°00'36.294"W	0.86	
1743.00	11.520	225.700	1719.09	-158.16	-171.01	-169.29	40°45'39.674"N	104°00'36.483"W	1.21	
1850.00	11.290	219.230	1823.98	-171.42	-186.58	-183.56	40°45'39.520"N	104°00'36.668"W	1.21	
1977.00	12.020	225.890	1948.37	-187.55	-205.42	-200.92	40°45'39.334"N	104°00'36.894"W	1.20	
2071.00	12.000	226.590	2040.31	-200.80	-218.95	-215.05	40°45'39.201"N	104°00'37.078"W	0.16	
2166.00	12.170	227.710	2133.21	-214.50	-232.47	-229.63	40°45'39.067"N	104°00'37.267"W	0.30	
2260.00	12.060	225.710	2225.11	-227.97	-246.00	-243.99	40°45'38.933"N	104°00'37.454"W	0.46	
2355.00	11.980	221.850	2318.03	-240.73	-260.27	-257.67	40°45'38.792"N	104°00'37.631"W	0.85	
2450.00	12.240	222.240	2410.92	-253.11	-275.07	-271.02	40°45'38.646"N	104°00'37.805"W	0.29	
2544.00	11.520	219.060	2502.90	-264.77	-289.74	-283.63	40°45'38.501"N	104°00'37.969"W	1.03	
2639.00	10.140	214.180	2596.21	-274.53	-304.02	-294.31	40°45'38.360"N	104°00'38.108"W	1.74	
2734.00	10.360	214.070	2689.70	-283.11	-318.01	-303.79	40°45'38.222"N	104°00'38.231"W	0.23	

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 3 of 10



**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2828.00	12.410	208.790	2781.84	-291.69	-333.87	-313.39	40°45'38.065"N	104°00'38.356"W	2.44	
2923.00	12.560	209.370	2874.60	-300.52	-351.82	-323.38	40°45'37.888"N	104°00'38.485"W	0.21	
3018.00	12.740	212.650	2967.29	-310.09	-369.64	-334.09	40°45'37.712"N	104°00'38.625"W	0.78	
3112.00	12.700	220.500	3058.99	-321.32	-386.23	-346.40	40°45'37.548"N	104°00'38.784"W	1.84	
3301.00	12.640	221.000	3243.39	-346.34	-417.63	-373.46	40°45'37.237"N	104°00'39.136"W	0.07	
3396.00	12.270	221.600	3336.15	-358.87	-433.02	-386.98	40°45'37.085"N	104°00'39.312"W	0.41	
3491.00	12.160	222.350	3429.00	-371.34	-447.97	-400.42	40°45'36.938"N	104°00'39.486"W	0.20	
3585.00	12.210	223.980	3520.89	-383.97	-462.44	-413.99	40°45'36.795"N	104°00'39.663"W	0.37	
3680.00	12.390	221.790	3613.71	-396.77	-477.26	-427.76	40°45'36.648"N	104°00'39.842"W	0.53	
3775.00	12.320	221.710	3706.51	-409.33	-492.43	-441.29	40°45'36.498"N	104°00'40.018"W	0.08	
3869.00	12.460	224.170	3798.32	-422.10	-507.19	-455.03	40°45'36.352"N	104°00'40.196"W	0.58	
3964.00	12.430	225.280	3891.09	-435.56	-521.73	-469.44	40°45'36.209"N	104°00'40.383"W	0.25	
4058.00	12.640	230.240	3982.85	-449.76	-535.43	-484.53	40°45'36.073"N	104°00'40.579"W	1.17	
4153.00	12.350	228.830	4075.60	-464.53	-548.77	-500.17	40°45'35.942"N	104°00'40.783"W	0.44	
4247.00	12.270	224.700	4167.44	-478.23	-562.48	-514.76	40°45'35.806"N	104°00'40.972"W	0.94	
4342.00	12.280	229.670	4260.27	-492.13	-576.20	-529.57	40°45'35.671"N	104°00'41.165"W	1.11	
4436.00	12.510	230.940	4352.08	-506.81	-589.08	-545.09	40°45'35.543"N	104°00'41.366"W	0.38	
4531.00	12.300	228.320	4444.86	-521.50	-602.30	-560.64	40°45'35.413"N	104°00'41.568"W	0.63	
4626.00	11.340	224.880	4537.85	-534.77	-615.64	-574.79	40°45'35.281"N	104°00'41.752"W	1.25	
4721.00	10.330	226.600	4631.15	-546.74	-628.11	-587.57	40°45'35.158"N	104°00'41.918"W	1.12	
4815.00	10.880	224.650	4723.55	-558.31	-640.22	-599.93	40°45'35.038"N	104°00'42.079"W	0.70	
4910.00	10.010	221.260	4816.97	-569.24	-652.80	-611.67	40°45'34.914"N	104°00'42.232"W	1.12	
5004.00	8.130	219.330	4909.79	-578.11	-664.08	-621.27	40°45'34.802"N	104°00'42.356"W	2.03	
5099.00	5.340	222.170	5004.13	-584.79	-672.56	-628.50	40°45'34.718"N	104°00'42.450"W	2.96	
5193.00	3.970	216.480	5097.82	-589.28	-678.42	-633.37	40°45'34.660"N	104°00'42.514"W	1.54	
5288.00	2.970	203.990	5192.64	-591.92	-683.31	-636.33	40°45'34.612"N	104°00'42.552"W	1.31	
5383.00	1.220	198.450	5287.57	-593.03	-686.52	-637.65	40°45'34.580"N	104°00'42.569"W	1.85	
5478.00	0.210	163.910	5382.57	-593.23	-687.65	-637.92	40°45'34.569"N	104°00'42.573"W	1.11	
5572.00	0.100	321.130	5476.57	-593.23	-687.75	-637.92	40°45'34.568"N	104°00'42.573"W	0.32	
5667.00	0.190	253.510	5571.57	-593.44	-687.73	-638.13	40°45'34.568"N	104°00'42.575"W	0.19	

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS °/100ft	Comments
5761.00	0.640	216.880	5665.56	-593.87	-688.19	-638.59	40°45'34.564"N	104°00'42.581"W	0.53	
5856.00	0.130	79.810	5760.56	-594.06	-688.60	-638.80	40°45'34.560"N	104°00'42.584"W	0.78	
5950.00	2.360	80.670	5854.53	-592.07	-688.26	-636.79	40°45'34.563"N	104°00'42.558"W	2.37	
6045.00	10.180	90.670	5948.89	-581.76	-688.04	-626.45	40°45'34.565"N	104°00'42.424"W	8.28	
6139.00	16.340	91.370	6040.34	-560.23	-688.46	-604.90	40°45'34.561"N	104°00'42.144"W	6.56	
6234.00	25.460	88.200	6129.00	-526.48	-688.14	-571.06	40°45'34.564"N	104°00'41.704"W	9.67	
6329.00	32.500	86.630	6212.06	-480.76	-685.99	-525.12	40°45'34.586"N	104°00'41.107"W	7.45	
6423.00	42.020	84.570	6286.79	-424.49	-681.52	-468.45	40°45'34.630"N	104°00'40.370"W	10.21	
6518.00	51.890	87.740	6351.56	-355.73	-677.02	-399.27	40°45'34.674"N	104°00'39.471"W	10.67	
6613.00	60.420	92.360	6404.44	-277.08	-677.25	-320.48	40°45'34.672"N	104°00'38.448"W	9.84	
6707.00	69.630	94.580	6444.09	-191.97	-682.47	-235.53	40°45'34.621"N	104°00'37.344"W	10.03	
6802.00	80.600	94.980	6468.46	-100.32	-690.11	-144.18	40°45'34.545"N	104°00'36.157"W	11.55	
6896.00	90.220	92.680	6475.97	-6.74	-696.35	-50.80	40°45'34.483"N	104°00'34.943"W	10.52	
6951.00†	90.290	91.175	6475.73	48.24	-698.20	4.17	40°45'34.465"N	104°00'34.229"W	2.74	Crossed 600' Setback (670'FSL & 600'FWL, SEC.08)
6991.00	90.340	90.080	6475.51	88.18	-698.64	44.16	40°45'34.461"N	104°00'33.709"W	2.74	
7086.00	90.220	87.400	6475.04	182.83	-696.55	139.13	40°45'34.481"N	104°00'32.475"W	2.82	
7180.00	90.060	87.760	6474.81	276.30	-692.58	233.04	40°45'34.521"N	104°00'31.255"W	0.42	
7275.00	90.220	88.690	6474.58	370.88	-689.64	328.00	40°45'34.550"N	104°00'30.021"W	0.99	
7369.00	89.910	87.250	6474.48	464.42	-686.31	421.94	40°45'34.583"N	104°00'28.800"W	1.57	
7464.00	90.000	87.110	6474.55	558.82	-681.63	516.82	40°45'34.629"N	104°00'27.567"W	0.18	
7559.00	90.180	89.310	6474.40	653.39	-678.67	611.77	40°45'34.658"N	104°00'26.333"W	2.32	
7653.00	90.030	89.190	6474.23	747.12	-677.44	705.76	40°45'34.670"N	104°00'25.112"W	0.20	
7748.00	90.000	89.510	6474.20	841.86	-676.36	800.75	40°45'34.681"N	104°00'23.877"W	0.34	
7842.00	90.030	91.740	6474.18	935.72	-677.38	894.74	40°45'34.671"N	104°00'22.656"W	2.37	
7937.00	90.920	93.150	6473.39	1030.70	-681.44	989.65	40°45'34.631"N	104°00'21.423"W	1.76	
8031.00	90.890	94.570	6471.91	1124.68	-687.76	1083.42	40°45'34.568"N	104°00'20.204"W	1.51	
8126.00	90.890	94.090	6470.43	1219.66	-694.94	1178.14	40°45'34.497"N	104°00'18.973"W	0.51	
8221.00	92.060	91.970	6467.99	1314.62	-699.96	1272.97	40°45'34.447"N	104°00'17.741"W	2.55	
8315.00	91.820	89.370	6464.80	1408.43	-701.05	1366.90	40°45'34.436"N	104°00'16.520"W	2.78	
8410.00	89.940	85.780	6463.34	1502.87	-697.04	1461.78	40°45'34.476"N	104°00'15.287"W	4.27	

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 5 of 10



**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8504.00	90.000	85.010	6463.39	1595.91	-689.49	1555.48	40°45'34.551"N	104°00'14.070"W	0.82	
8599.00	89.970	85.390	6463.42	1689.88	-681.54	1650.15	40°45'34.629"N	104°00'12.840"W	0.40	
8694.00	89.880	86.750	6463.54	1784.06	-675.03	1744.92	40°45'34.693"N	104°00'11.608"W	1.43	
8788.00	89.910	90.450	6463.71	1877.68	-672.73	1838.88	40°45'34.716"N	104°00'10.387"W	3.94	
8883.00	90.120	90.000	6463.69	1972.51	-673.10	1933.87	40°45'34.712"N	104°00'09.153"W	0.52	
8978.00	89.970	88.860	6463.61	2067.26	-672.16	2028.87	40°45'34.722"N	104°00'07.918"W	1.21	
9072.00	90.340	89.330	6463.36	2160.96	-670.68	2122.86	40°45'34.736"N	104°00'06.697"W	0.64	
9167.00	90.250	89.470	6462.87	2255.70	-669.68	2217.85	40°45'34.746"N	104°00'05.463"W	0.18	
9261.00	90.220	89.140	6462.49	2349.44	-668.54	2311.84	40°45'34.757"N	104°00'04.241"W	0.35	
9356.00	90.250	87.390	6462.10	2444.02	-665.66	2406.79	40°45'34.785"N	104°00'03.007"W	1.84	
9450.00	90.310	86.430	6461.64	2537.37	-660.60	2500.65	40°45'34.835"N	104°00'01.788"W	1.02	
9545.00	89.750	86.300	6461.59	2631.61	-654.57	2595.46	40°45'34.895"N	104°00'00.556"W	0.61	
9640.00	89.630	87.390	6462.10	2725.94	-649.35	2690.32	40°45'34.946"N	103°59'59.323"W	1.15	
9734.00	89.720	88.220	6462.63	2819.46	-645.75	2784.24	40°45'34.982"N	103°59'58.102"W	0.89	
9829.00	92.030	91.800	6461.18	2914.24	-645.76	2879.21	40°45'34.982"N	103°59'56.868"W	4.48	
9923.00	89.940	93.150	6459.57	3008.20	-649.82	2973.10	40°45'34.941"N	103°59'55.648"W	2.65	
10018.00	92.650	97.670	6457.42	3103.09	-658.77	3067.62	40°45'34.853"N	103°59'54.420"W	5.55	
10112.00	90.370	95.320	6454.94	3196.93	-669.40	3160.97	40°45'34.748"N	103°59'53.207"W	3.48	
10207.00	90.430	91.270	6454.28	3291.91	-674.86	3255.79	40°45'34.694"N	103°59'51.975"W	4.26	
10302.00	90.400	89.980	6453.59	3386.77	-675.89	3350.78	40°45'34.683"N	103°59'50.740"W	1.36	
10396.00	90.830	90.010	6452.58	3480.58	-675.88	3444.78	40°45'34.683"N	103°59'49.519"W	0.46	
10490.00	91.230	92.730	6450.89	3574.48	-678.13	3538.73	40°45'34.661"N	103°59'48.298"W	2.92	
10585.00	90.400	92.220	6449.54	3669.45	-682.23	3633.63	40°45'34.620"N	103°59'47.065"W	1.03	
10680.00	90.520	89.460	6448.78	3764.33	-683.62	3728.61	40°45'34.606"N	103°59'45.831"W	2.91	
10774.00	90.460	86.060	6447.97	3857.82	-679.95	3822.52	40°45'34.642"N	103°59'44.610"W	3.62	
10869.00	90.310	84.720	6447.33	3951.84	-672.32	3917.21	40°45'34.718"N	103°59'43.380"W	1.42	
10963.00	90.490	84.910	6446.68	4044.73	-663.82	4010.82	40°45'34.802"N	103°59'42.163"W	0.28	
11058.00	90.370	88.200	6445.97	4138.99	-658.11	4105.63	40°45'34.858"N	103°59'40.931"W	3.47	
11152.00	90.120	90.080	6445.56	4232.70	-656.70	4199.62	40°45'34.872"N	103°59'39.710"W	2.02	
11247.00	90.280	90.990	6445.23	4327.56	-657.59	4294.61	40°45'34.863"N	103°59'38.475"W	0.97	

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 6 of 10



**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11342.00	90.120	91.750	6444.90	4422.48	-659.86	4389.58	40°45'34.840"N	103°59'37.241"W	0.82	
11436.00	90.060	92.620	6444.75	4516.45	-663.44	4483.51	40°45'34.804"N	103°59'36.021"W	0.93	
11530.00	89.570	92.660	6445.06	4610.44	-667.77	4577.41	40°45'34.761"N	103°59'34.801"W	0.52	
11625.00	90.000	89.000	6445.41	4705.31	-669.15	4672.38	40°45'34.748"N	103°59'33.566"W	3.88	
11720.00	90.280	88.100	6445.18	4799.94	-666.75	4767.35	40°45'34.771"N	103°59'32.332"W	0.99	
11815.00	91.080	88.600	6444.05	4894.53	-664.01	4862.31	40°45'34.798"N	103°59'31.098"W	0.99	
11909.00	90.920	87.270	6442.41	4988.05	-660.62	4956.23	40°45'34.831"N	103°59'29.878"W	1.42	
12002.00	90.060	86.670	6441.62	5080.42	-655.71	5049.09	40°45'34.880"N	103°59'28.671"W	1.13	
12098.00	90.250	88.650	6441.36	5175.89	-651.79	5145.01	40°45'34.918"N	103°59'27.425"W	2.07	
12193.00	90.830	90.080	6440.46	5270.62	-650.74	5239.99	40°45'34.929"N	103°59'26.190"W	1.62	
12287.00	90.680	90.280	6439.22	5364.45	-651.03	5333.99	40°45'34.925"N	103°59'24.969"W	0.27	
12382.00	90.800	91.830	6438.00	5459.34	-652.78	5428.96	40°45'34.908"N	103°59'23.735"W	1.64	
12477.00	89.750	92.310	6437.54	5554.30	-656.21	5523.89	40°45'34.874"N	103°59'22.501"W	1.22	
12571.00	90.310	89.870	6437.49	5648.20	-658.00	5617.87	40°45'34.856"N	103°59'21.280"W	2.66	
12666.00	88.620	87.700	6438.38	5742.85	-655.99	5712.84	40°45'34.876"N	103°59'20.046"W	2.90	
12761.00	89.140	87.400	6440.23	5837.30	-651.93	5807.73	40°45'34.916"N	103°59'18.813"W	0.63	
12855.00	89.910	88.410	6441.01	5930.83	-648.49	5901.66	40°45'34.949"N	103°59'17.592"W	1.35	
12950.00	88.800	88.210	6442.08	6025.41	-645.69	5996.61	40°45'34.977"N	103°59'16.358"W	1.19	
13044.00	90.030	88.270	6443.04	6118.99	-642.80	6090.56	40°45'35.005"N	103°59'15.137"W	1.31	
13139.00	90.090	87.880	6442.94	6213.55	-639.61	6185.51	40°45'35.036"N	103°59'13.904"W	0.42	
13234.00	89.880	87.440	6442.97	6308.04	-635.73	6280.43	40°45'35.074"N	103°59'12.670"W	0.51	
13328.00	88.120	85.140	6444.61	6401.24	-629.65	6374.21	40°45'35.134"N	103°59'11.451"W	3.08	
13423.00	88.520	86.360	6447.39	6495.31	-622.61	6468.90	40°45'35.204"N	103°59'10.221"W	1.35	
13517.00	88.430	87.500	6449.90	6588.63	-617.58	6562.73	40°45'35.253"N	103°59'09.002"W	1.22	
13612.00	92.120	91.900	6449.44	6683.37	-617.08	6657.69	40°45'35.258"N	103°59'07.768"W	6.04	
13707.00	91.260	88.660	6446.64	6778.15	-617.55	6752.64	40°45'35.253"N	103°59'06.534"W	3.53	
13801.00	90.120	86.590	6445.51	6871.63	-613.65	6846.54	40°45'35.291"N	103°59'05.313"W	2.51	
13896.00	90.150	86.360	6445.28	6965.89	-607.81	6941.36	40°45'35.349"N	103°59'04.081"W	0.24	
13990.00	90.120	86.920	6445.06	7059.19	-602.30	7035.20	40°45'35.403"N	103°59'02.862"W	0.60	
14085.00	90.060	87.640	6444.91	7153.61	-597.79	7130.09	40°45'35.447"N	103°59'01.629"W	0.76	

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 7 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWP
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (164 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS °/100ft	Comments
14180.00	89.910	88.010	6444.94	7248.12	-594.19	7225.02	40°45'35.482"N	103°59'00.395"W	0.42	
14275.00	90.340	88.440	6444.73	7342.70	-591.25	7319.98	40°45'35.511"N	103°58'59.161"W	0.64	
14369.00	89.140	88.870	6445.16	7436.35	-589.04	7413.95	40°45'35.533"N	103°58'57.940"W	1.36	
14464.00	90.180	90.550	6445.72	7531.12	-588.56	7508.94	40°45'35.537"N	103°58'56.706"W	2.08	
14558.00	88.210	91.390	6447.04	7625.00	-590.15	7602.91	40°45'35.521"N	103°58'55.485"W	2.28	
14653.00	88.280	93.710	6449.95	7719.94	-594.37	7697.77	40°45'35.479"N	103°58'54.252"W	2.44	
14747.00	90.150	93.910	6451.24	7813.92	-600.62	7791.55	40°45'35.417"N	103°58'53.033"W	2.00	
14842.00	90.370	92.830	6450.81	7908.92	-606.20	7886.38	40°45'35.362"N	103°58'51.801"W	1.16	
14936.00	90.400	92.140	6450.17	8002.90	-610.28	7980.29	40°45'35.321"N	103°58'50.581"W	0.73	
15031.00	88.120	89.020	6451.40	8097.74	-611.24	8075.26	40°45'35.311"N	103°58'49.347"W	4.07	
15125.00	87.750	88.780	6454.79	8191.36	-609.44	8169.18	40°45'35.329"N	103°58'48.126"W	0.47	
15220.00	91.380	91.320	6455.51	8286.15	-609.52	8264.15	40°45'35.328"N	103°58'46.892"W	4.66	
15315.00	92.800	94.130	6452.04	8381.06	-614.03	8358.97	40°45'35.283"N	103°58'45.660"W	3.31	Last BHI MWD Survey (668'FSL & 1536'FEL, SEC.09)
15363.00	92.800	94.130	6449.70	8429.00	-617.49	8406.79	40°45'35.248"N	103°58'45.038"W	0.00	Projection to Bit (665'FSL & 1488'FEL, SEC.09)

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 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	2263.62	-137.93	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	2263.62	-137.93	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8B-9-9 BHL (620'FSL & 300'FEL,SEC.09)	6409.00	-661.94	9595.37	3422485.32	1523225.58	40°45'34.805"N	103°58'29.593"W	point
TIMBRO 9-59 8B-9-9 EPI (622'FSL & 600'FEL,SEC.09)	6412.40	-663.15	9295.34	3422185.36	1523219.33	40°45'34.794"N	103°58'33.492"W	point
TIMBRO 9-59 8B-9-9 WP2	6432.00	-668.60	7551.91	3420442.27	1523184.58	40°45'34.746"N	103°58'56.148"W	point
TIMBRO 9-59 8B-9-9 REV-2 BHL (675'FSL & 300'FEL,SEC.09)	6438.00	-607.00	9595.39	3422484.42	1523280.52	40°45'35.348"N	103°58'29.593"W	point
TIMBRO 9-59 8B-9-9 WP1	6438.00	-680.30	3907.46	3416798.55	1523111.63	40°45'34.639"N	103°59'43.506"W	point
TIMBRO 9-59 8B-9-9 REV-2 EPI (675'FSL & 600'FEL,SEC.09)	6439.75	-609.68	9295.34	3422184.46	1523272.80	40°45'35.322"N	103°58'33.492"W	point
TIMBRO 9-59 8B-9-9 BPI (675'FSL & 600'FWL,SEC.08)	6462.00	-692.94	4.16	3412896.04	1523033.38	40°45'34.517"N	104°00'34.229"W	point
TIMBRO 9-59 8B-9-9 REV-2 WP1	6468.00	-652.95	4467.71	3417358.26	1523148.39	40°45'34.908"N	103°59'36.226"W	point
TIMBRO 9-59 8B-9-9 REV-2 BPI (675'FSL & 600'FWL,SEC.08)	6476.00	-692.94	4.16	3412896.04	1523033.38	40°45'34.517"N	104°00'34.229"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6958.00	2263.62	-137.93	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8B-9-9 AWB Ref Wellpath: TIMBRO 9-59 8B-9-9 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1850.00	BHI Generic gyro - northseeking (Standard)	3rd Party Surface Surveys <152'-1850'>	TIMBRO 9-59 8B-9-9 AWB
1850.00	15315.00	BHI AutoTrak Curve (Short)	BH/ATC (Short) MWD 8.5" Hole <1977'-15315'>	TIMBRO 9-59 8B-9-9 AWB
15315.00	15363.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8B-9-9 AWB

Actual Wellpath Report

TIMBRO 9-59 8B-9-9 AWP

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#10 TIMBRO 9-59 8B-9-9 (1368'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-9
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-9 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
152.00	0.270	11.520	152.00	First BHI Survey
6951.00	90.290	91.175	6475.73	Crossed 600' Setback (670'FSL & 600'FWL, SEC.08)
15315.00	92.800	94.130	6452.04	Last BHI MWD Survey (668'FSL & 1536'FEL, SEC.09)
15363.00	92.800	94.130	6449.70	Projection to Bit (665'FSL & 1488'FEL, SEC.09)