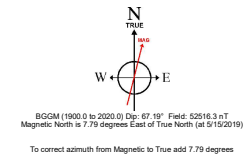
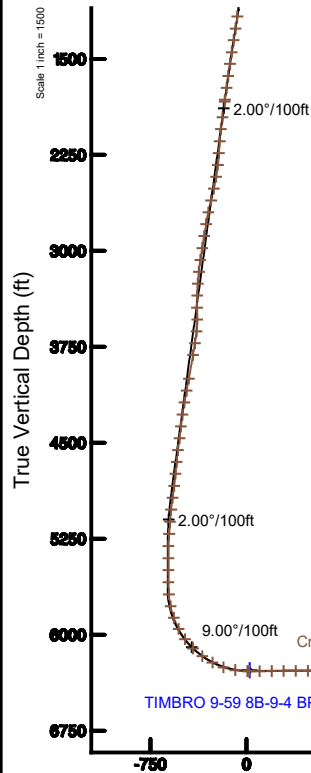
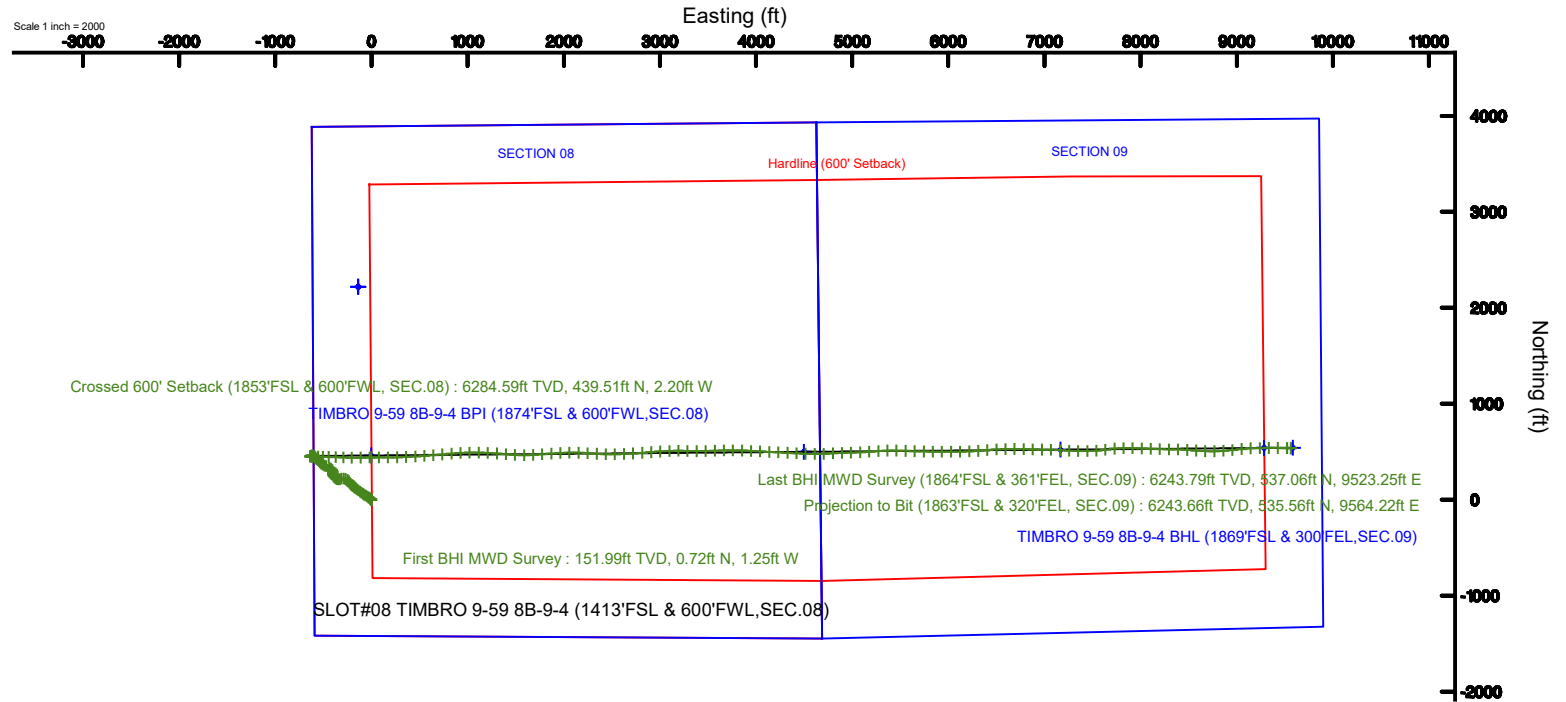


# VERDAD RESOURCES

Location: COLORADO Slot: SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)  
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8B-9-4  
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8B-9-4 PWB

Plot reference wellpath is TIMBRO 9-59 8B-9-4 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) to Mean Sea Level: 5068 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)): 0 feet	Created by: doddanna on 2019-06-27
Coordinates are in feet referenced to Slot	Database: WellArchitectDB



Last BHI MWD Survey (1864'FSL & 361'FEL, SEC.09) : 90.18° Inc, 16261.00ft MD, 6243.79ft TVD, 9538.38ft VS  
Projection to Bit (1863'FSL & 320'FEL, SEC.09) : 90.18° Inc, 16302.00ft MD, 6243.66ft TVD, 9579.20ft VS

TIMBRO 9-59 8B-9-4 BHL (1869'FSL & 300'FEL,SEC.09)

Azimuth 86.76° with reference 0.00 N, 0.00 E

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 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 4:40:14 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8B-9-4_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2218.80	137.68	3412879.22	1523770.96	40°45'41.807"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#08 TIMBRO 9-59 8B-9-4 (1413'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	86.76°

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWP
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (175 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	299.990	0.00	0.00	0.00	0.00	40°45'41.807"N	104°00'34.286"W	0.00	
24.00	0.000	299.990	24.00	0.00	0.00	0.00	40°45'41.807"N	104°00'34.286"W	0.00	
152.00	1.290	299.990	151.99	-1.21	0.72	-1.25	40°45'41.814"N	104°00'34.303"W	1.01	First BHI MWD Survey
244.00	1.240	303.750	243.97	-2.87	1.79	-2.97	40°45'41.824"N	104°00'34.325"W	0.11	
335.00	1.070	298.410	334.95	-4.38	2.74	-4.54	40°45'41.834"N	104°00'34.345"W	0.22	
427.00	1.070	308.870	426.93	-5.75	3.69	-5.96	40°45'41.843"N	104°00'34.364"W	0.21	
520.00	2.180	314.710	519.89	-7.57	5.48	-7.90	40°45'41.861"N	104°00'34.389"W	1.21	
611.00	3.670	308.330	610.77	-10.91	8.50	-11.41	40°45'41.891"N	104°00'34.435"W	1.67	
702.00	4.930	310.960	701.51	-15.90	12.87	-16.65	40°45'41.934"N	104°00'34.503"W	1.40	
797.00	6.040	307.790	796.08	-22.59	18.61	-23.68	40°45'41.991"N	104°00'34.594"W	1.21	
892.00	7.870	303.600	890.38	-31.57	25.27	-33.05	40°45'42.057"N	104°00'34.716"W	2.00	
986.00	9.810	303.210	983.26	-43.16	33.22	-45.11	40°45'42.135"N	104°00'34.873"W	2.06	
1081.00	11.320	302.640	1076.64	-57.23	42.68	-59.73	40°45'42.229"N	104°00'35.063"W	1.59	
1175.00	10.390	303.410	1168.96	-71.51	52.33	-74.58	40°45'42.324"N	104°00'35.256"W	1.00	
1270.00	11.330	304.300	1262.26	-85.78	62.30	-89.44	40°45'42.422"N	104°00'35.449"W	1.01	
1364.00	11.490	305.450	1354.40	-100.41	72.94	-104.69	40°45'42.527"N	104°00'35.647"W	0.30	
1459.00	11.600	308.730	1447.48	-114.90	84.40	-119.85	40°45'42.641"N	104°00'35.844"W	0.70	
1553.00	11.150	310.420	1539.63	-128.50	96.21	-134.14	40°45'42.757"N	104°00'36.030"W	0.60	
1648.00	11.000	308.410	1632.86	-141.92	107.79	-148.24	40°45'42.872"N	104°00'36.213"W	0.44	
1743.00	10.250	304.310	1726.23	-155.39	118.19	-162.32	40°45'42.975"N	104°00'36.396"W	1.12	
1837.00	10.150	304.900	1818.75	-168.54	127.64	-176.02	40°45'43.068"N	104°00'36.574"W	0.15	
1851.00	9.930	304.340	1832.53	-170.47	129.03	-178.03	40°45'43.082"N	104°00'36.600"W	1.72	
1977.00	10.100	306.440	1956.61	-187.58	141.72	-195.89	40°45'43.207"N	104°00'36.832"W	0.32	
2071.00	9.350	311.750	2049.27	-199.32	151.70	-208.22	40°45'43.306"N	104°00'36.992"W	1.24	
2166.00	9.360	324.770	2143.01	-208.88	163.15	-218.43	40°45'43.419"N	104°00'37.125"W	2.22	
2260.00	10.250	336.080	2235.65	-215.88	177.04	-226.24	40°45'43.556"N	104°00'37.226"W	2.25	
2355.00	11.130	323.300	2329.01	-223.92	192.12	-235.14	40°45'43.705"N	104°00'37.342"W	2.66	
2450.00	12.540	304.200	2422.02	-237.18	205.28	-249.16	40°45'43.835"N	104°00'37.524"W	4.36	
2544.00	13.430	292.860	2513.64	-255.09	215.25	-267.66	40°45'43.934"N	104°00'37.765"W	2.87	
2639.00	13.890	278.420	2605.97	-276.17	221.21	-289.11	40°45'43.993"N	104°00'38.044"W	3.61	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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**BAKER  
HUGHES**

## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWP
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (175 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2734.00	12.890	254.240	2698.46	-297.70	220.00	-310.61	40°45'43.981"N	104°00'38.323"W	5.94	
2828.00	9.760	238.680	2790.64	-314.97	213.01	-327.51	40°45'43.912"N	104°00'38.543"W	4.63	
2923.00	9.850	275.980	2884.35	-330.11	209.67	-342.49	40°45'43.879"N	104°00'38.737"W	6.57	
3018.00	10.010	293.620	2977.95	-345.50	213.82	-358.14	40°45'43.920"N	104°00'38.941"W	3.19	
3112.00	9.980	302.740	3070.53	-359.38	221.50	-372.48	40°45'43.995"N	104°00'39.127"W	1.68	
3207.00	9.940	318.650	3164.11	-371.11	232.11	-384.82	40°45'44.100"N	104°00'39.287"W	2.89	
3301.00	10.180	333.040	3256.68	-379.46	245.61	-393.95	40°45'44.234"N	104°00'39.406"W	2.68	
3396.00	10.480	341.570	3350.15	-385.10	261.29	-400.49	40°45'44.389"N	104°00'39.491"W	1.64	
3491.00	10.150	4.910	3443.65	-386.18	277.83	-402.50	40°45'44.552"N	104°00'39.517"W	4.38	
3585.00	10.570	357.630	3536.12	-384.87	294.70	-402.15	40°45'44.719"N	104°00'39.512"W	1.46	
3680.00	11.140	321.970	3629.53	-389.98	310.65	-408.17	40°45'44.876"N	104°00'39.591"W	6.98	
3775.00	11.460	304.430	3722.71	-402.70	323.22	-421.61	40°45'45.001"N	104°00'39.765"W	3.62	
3869.00	11.510	303.090	3814.83	-417.64	333.62	-437.17	40°45'45.103"N	104°00'39.968"W	0.29	
4058.00	11.410	287.990	4000.11	-450.27	349.69	-470.76	40°45'45.262"N	104°00'40.404"W	1.58	
4153.00	11.490	288.600	4093.22	-467.81	355.61	-488.66	40°45'45.321"N	104°00'40.637"W	0.15	
4247.00	11.330	298.680	4185.37	-484.34	363.03	-505.64	40°45'45.394"N	104°00'40.857"W	2.13	
4342.00	11.370	310.980	4278.52	-498.98	373.65	-520.90	40°45'45.499"N	104°00'41.056"W	2.54	
4437.00	11.460	318.200	4371.65	-511.57	386.83	-534.26	40°45'45.629"N	104°00'41.229"W	1.51	
4531.00	11.380	320.300	4463.79	-522.91	400.93	-546.41	40°45'45.768"N	104°00'41.387"W	0.45	
4626.00	10.470	314.040	4557.07	-534.33	414.14	-558.60	40°45'45.899"N	104°00'41.546"W	1.57	
4721.00	10.290	323.460	4650.52	-544.85	426.96	-569.86	40°45'46.026"N	104°00'41.692"W	1.79	
4815.00	10.080	320.930	4743.04	-554.27	440.09	-580.04	40°45'46.155"N	104°00'41.824"W	0.53	
4910.00	9.940	313.010	4836.60	-564.81	452.14	-591.28	40°45'46.274"N	104°00'41.970"W	1.46	
5004.00	8.500	292.740	4929.41	-576.67	460.36	-603.62	40°45'46.356"N	104°00'42.131"W	3.75	
5099.00	6.470	261.900	5023.63	-588.32	462.32	-615.40	40°45'46.375"N	104°00'42.284"W	4.66	
5194.00	4.530	233.190	5118.20	-596.78	459.32	-623.70	40°45'46.345"N	104°00'42.392"W	3.48	
5288.00	4.450	253.820	5211.92	-603.43	456.08	-630.18	40°45'46.313"N	104°00'42.476"W	1.71	
5383.00	3.180	231.840	5306.71	-609.18	453.42	-635.79	40°45'46.287"N	104°00'42.549"W	2.02	
5478.00	1.730	108.750	5401.66	-610.02	451.33	-636.51	40°45'46.266"N	104°00'42.558"W	4.60	
5572.00	0.110	136.230	5495.65	-608.64	450.81	-635.10	40°45'46.261"N	104°00'42.540"W	1.74	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWP
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (175 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5667.00	0.150	325.620	5590.65	-608.65	450.85	-635.11	40°45'46.262"N	104°00'42.540"W	0.27	
5761.00	4.110	107.550	5684.57	-605.56	449.93	-631.96	40°45'46.253"N	104°00'42.499"W	4.50	
5856.00	11.950	94.620	5778.57	-592.61	448.11	-618.89	40°45'46.235"N	104°00'42.329"W	8.42	
5950.00	19.270	88.060	5869.05	-567.43	447.85	-593.65	40°45'46.232"N	104°00'42.001"W	8.00	
6045.00	27.750	90.210	5956.09	-529.61	448.30	-555.80	40°45'46.236"N	104°00'41.509"W	8.97	
6139.00	36.270	92.000	6035.72	-479.98	447.25	-506.04	40°45'46.226"N	104°00'40.863"W	9.12	
6234.00	46.320	90.750	6107.01	-417.57	445.82	-443.44	40°45'46.212"N	104°00'40.049"W	10.61	
6329.00	53.820	92.530	6167.94	-345.05	443.67	-370.68	40°45'46.191"N	104°00'39.104"W	8.02	
6423.00	61.490	92.700	6218.20	-266.11	440.04	-291.41	40°45'46.155"N	104°00'38.073"W	8.16	
6518.00	71.950	90.150	6255.70	-179.25	437.95	-204.30	40°45'46.134"N	104°00'36.941"W	11.28	
6613.00	82.100	89.110	6277.00	-86.92	438.57	-111.85	40°45'46.140"N	104°00'35.740"W	10.74	
6707.00	88.950	89.800	6284.33	6.64	439.46	-18.20	40°45'46.149"N	104°00'34.523"W	7.32	
6723.00†	89.184	89.815	6284.59	22.61	439.51	-2.20	40°45'46.150"N	104°00'34.315"W	1.47	Crossed 600' Setback (1853'FSL & 600'FWL, SEC.08)
6802.00	90.340	89.890	6284.92	101.50	439.71	76.80	40°45'46.152"N	104°00'33.288"W	1.47	
6897.00	90.460	89.600	6284.25	196.37	440.14	171.80	40°45'46.156"N	104°00'32.054"W	0.33	
6991.00	90.280	88.200	6283.65	290.30	441.94	265.77	40°45'46.174"N	104°00'30.833"W	1.50	
7086.00	90.400	87.420	6283.08	385.28	445.57	360.70	40°45'46.209"N	104°00'29.599"W	0.83	
7181.00	90.400	86.270	6282.42	480.27	450.80	455.55	40°45'46.261"N	104°00'28.366"W	1.21	
7275.00	90.280	85.770	6281.86	574.26	457.32	549.33	40°45'46.326"N	104°00'27.148"W	0.55	
7370.00	90.400	85.700	6281.30	669.25	464.39	644.06	40°45'46.395"N	104°00'25.917"W	0.15	
7464.00	90.430	85.150	6280.62	763.22	471.89	737.76	40°45'46.469"N	104°00'24.699"W	0.59	
7559.00	90.400	85.380	6279.93	858.18	479.73	832.43	40°45'46.547"N	104°00'23.469"W	0.24	
7653.00	90.400	86.510	6279.27	952.17	486.37	926.19	40°45'46.613"N	104°00'22.250"W	1.20	
7748.00	90.490	88.890	6278.54	1047.15	490.19	1021.11	40°45'46.650"N	104°00'21.017"W	2.51	
7842.00	90.520	90.730	6277.71	1141.01	490.50	1115.10	40°45'46.653"N	104°00'19.795"W	1.96	
7937.00	90.550	92.420	6276.82	1235.66	487.89	1210.05	40°45'46.627"N	104°00'18.561"W	1.78	
8032.00	90.370	94.920	6276.06	1329.97	481.81	1304.85	40°45'46.567"N	104°00'17.329"W	2.64	
8126.00	90.370	95.240	6275.45	1422.97	473.48	1398.48	40°45'46.485"N	104°00'16.113"W	0.34	
8221.00	90.150	93.130	6275.02	1517.17	466.55	1493.22	40°45'46.416"N	104°00'14.881"W	2.23	
8315.00	90.150	90.320	6274.77	1610.81	463.72	1587.17	40°45'46.388"N	104°00'13.661"W	2.99	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (175 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8410.00	90.120	86.770	6274.55	1705.75	466.13	1682.12	40°45'46.412"N	104°00'12.427"W	3.74	
8504.00	90.120	85.310	6274.35	1799.74	472.63	1775.89	40°45'46.476"N	104°00'11.208"W	1.55	
8599.00	90.120	85.560	6274.15	1894.71	480.19	1870.59	40°45'46.551"N	104°00'09.977"W	0.26	
8694.00	90.060	86.850	6274.00	1989.71	486.47	1965.38	40°45'46.613"N	104°00'08.745"W	1.36	
8788.00	90.000	88.930	6273.95	2083.68	489.93	2059.31	40°45'46.647"N	104°00'07.525"W	2.21	
8883.00	90.370	92.220	6273.65	2178.46	488.98	2154.29	40°45'46.638"N	104°00'06.290"W	3.48	
8978.00	90.340	93.400	6273.06	2272.93	484.32	2249.18	40°45'46.591"N	104°00'05.057"W	1.24	
9072.00	90.370	93.730	6272.48	2366.26	478.48	2342.99	40°45'46.534"N	104°00'03.838"W	0.35	
9167.00	90.340	92.040	6271.89	2460.72	473.70	2437.87	40°45'46.486"N	104°00'02.605"W	1.78	
9261.00	90.280	88.980	6271.38	2554.50	472.86	2531.85	40°45'46.478"N	104°00'01.384"W	3.26	
9356.00	90.060	86.860	6271.10	2649.48	476.31	2626.78	40°45'46.512"N	104°00'00.150"W	2.24	
9450.00	90.180	86.150	6270.90	2743.48	482.04	2720.61	40°45'46.568"N	103°59'58.931"W	0.77	
9545.00	90.220	85.900	6270.57	2838.47	488.63	2815.38	40°45'46.633"N	103°59'57.699"W	0.27	
9640.00	90.030	85.690	6270.36	2933.45	495.59	2910.12	40°45'46.702"N	103°59'56.468"W	0.30	
9734.00	90.340	85.840	6270.06	3027.44	502.53	3003.86	40°45'46.771"N	103°59'55.250"W	0.37	
9829.00	90.220	87.950	6269.59	3122.43	507.68	3098.72	40°45'46.821"N	103°59'54.017"W	2.22	
9923.00	90.400	89.910	6269.09	3216.36	509.43	3192.69	40°45'46.838"N	103°59'52.796"W	2.09	
10018.00	90.550	92.260	6268.30	3311.08	507.63	3287.67	40°45'46.821"N	103°59'51.562"W	2.48	
10112.00	90.430	90.380	6267.49	3404.78	505.47	3381.64	40°45'46.799"N	103°59'50.341"W	2.00	
10207.00	90.340	88.370	6266.86	3499.67	506.51	3476.62	40°45'46.809"N	103°59'49.106"W	2.12	
10302.00	90.310	87.560	6266.32	3594.65	509.88	3571.56	40°45'46.842"N	103°59'47.872"W	0.85	
10396.00	90.280	88.920	6265.83	3688.61	512.77	3665.51	40°45'46.871"N	103°59'46.651"W	1.45	
10490.00	90.400	89.740	6265.27	3782.52	513.87	3759.50	40°45'46.881"N	103°59'45.430"W	0.88	
10585.00	90.340	92.040	6264.66	3877.26	512.39	3854.48	40°45'46.867"N	103°59'44.196"W	2.42	
10680.00	90.340	93.240	6264.10	3971.76	508.01	3949.38	40°45'46.823"N	103°59'42.963"W	1.26	
10774.00	90.280	93.160	6263.59	4065.16	502.77	4043.23	40°45'46.771"N	103°59'41.743"W	0.11	
10869.00	90.340	92.920	6263.07	4159.59	497.73	4138.10	40°45'46.721"N	103°59'40.510"W	0.26	
10963.00	90.370	92.530	6262.49	4253.08	493.26	4231.99	40°45'46.677"N	103°59'39.290"W	0.42	
11058.00	90.340	93.250	6261.90	4347.54	488.47	4326.86	40°45'46.630"N	103°59'38.057"W	0.76	
11152.00	90.340	93.330	6261.35	4440.93	483.08	4420.71	40°45'46.576"N	103°59'36.837"W	0.09	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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**BAKER  
HUGHES**

## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWP
Facility	SEC.08-T09N-R59W		

## WELLPATH DATA (175 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11247.00	90.250	92.350	6260.86	4535.39	478.37	4515.59	40°45'46.529"N	103°59'35.604"W	1.04	
11342.00	90.250	90.410	6260.44	4630.08	476.08	4610.56	40°45'46.507"N	103°59'34.370"W	2.04	
11436.00	90.280	87.120	6260.01	4724.01	478.11	4704.52	40°45'46.527"N	103°59'33.149"W	3.50	
11531.00	90.220	86.230	6259.59	4819.01	483.62	4799.36	40°45'46.581"N	103°59'31.917"W	0.94	
11625.00	90.150	88.090	6259.29	4913.00	488.27	4893.24	40°45'46.627"N	103°59'30.697"W	1.98	
11720.00	90.150	88.530	6259.04	5007.96	491.08	4988.20	40°45'46.654"N	103°59'29.463"W	0.46	
11815.00	90.250	86.970	6258.71	5102.95	494.81	5083.12	40°45'46.691"N	103°59'28.229"W	1.65	
11909.00	90.250	85.840	6258.30	5196.94	500.70	5176.93	40°45'46.749"N	103°59'27.010"W	1.20	
12004.00	90.250	86.160	6257.88	5291.93	507.33	5271.70	40°45'46.814"N	103°59'25.778"W	0.34	
12099.00	90.220	88.500	6257.49	5386.92	511.75	5366.59	40°45'46.858"N	103°59'24.545"W	2.46	
12193.00	90.150	91.110	6257.19	5480.78	512.07	5460.58	40°45'46.861"N	103°59'23.324"W	2.78	
12288.00	90.310	92.610	6256.81	5575.40	508.99	5555.53	40°45'46.830"N	103°59'22.090"W	1.59	
12382.00	90.280	91.880	6256.33	5668.97	505.31	5649.45	40°45'46.793"N	103°59'20.869"W	0.78	
12477.00	90.460	91.500	6255.71	5763.62	502.50	5744.41	40°45'46.765"N	103°59'19.635"W	0.44	
12572.00	90.310	90.370	6255.07	5858.36	500.95	5839.39	40°45'46.750"N	103°59'18.401"W	1.20	
12666.00	90.340	90.520	6254.54	5952.16	500.22	5933.39	40°45'46.742"N	103°59'17.179"W	0.16	
12761.00	90.220	89.620	6254.08	6047.00	500.11	6028.39	40°45'46.741"N	103°59'15.945"W	0.96	
12856.00	90.220	88.880	6253.71	6141.91	501.35	6123.38	40°45'46.753"N	103°59'14.711"W	0.78	
12950.00	90.220	88.260	6253.35	6235.87	503.70	6217.35	40°45'46.776"N	103°59'13.489"W	0.66	
13044.00	90.150	85.180	6253.05	6329.85	509.07	6311.18	40°45'46.829"N	103°59'12.270"W	3.28	
13139.00	90.220	84.680	6252.74	6424.80	517.47	6405.81	40°45'46.912"N	103°59'11.040"W	0.53	
13234.00	90.280	87.290	6252.33	6519.79	524.12	6500.57	40°45'46.977"N	103°59'09.809"W	2.75	
13328.00	90.280	88.580	6251.87	6613.76	527.51	6594.50	40°45'47.010"N	103°59'08.588"W	1.37	
13423.00	90.250	89.930	6251.43	6708.67	528.74	6689.49	40°45'47.022"N	103°59'07.354"W	1.42	
13518.00	90.220	91.620	6251.04	6803.43	527.46	6784.48	40°45'47.009"N	103°59'06.119"W	1.78	
13612.00	90.180	92.000	6250.71	6897.07	524.49	6878.43	40°45'46.980"N	103°59'04.898"W	0.41	
13707.00	90.400	91.180	6250.23	6991.73	521.85	6973.39	40°45'46.953"N	103°59'03.664"W	0.89	
13801.00	90.120	91.590	6249.80	7085.42	519.58	7067.36	40°45'46.931"N	103°59'02.443"W	0.53	
13896.00	88.920	92.920	6250.60	7179.98	515.84	7162.28	40°45'46.894"N	103°59'01.209"W	1.89	
13990.00	89.350	92.930	6252.02	7273.43	511.05	7256.15	40°45'46.846"N	103°58'59.990"W	0.46	

# Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWB
Facility	SEC.08-T09N-R59W		

WELLPATH DATA (175 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14085.00	89.510	91.440	6252.96	7367.99	507.43	7351.07	40°45'46.810"N	103°58'58.756"W	1.58	
14180.00	90.150	89.460	6253.24	7462.79	506.68	7446.06	40°45'46.802"N	103°58'57.522"W	2.19	
14275.00	90.250	85.320	6252.91	7557.76	511.00	7540.94	40°45'46.845"N	103°58'56.289"W	4.36	
14369.00	90.150	81.890	6252.58	7651.61	521.47	7634.34	40°45'46.948"N	103°58'55.075"W	3.65	
14464.00	90.220	84.890	6252.28	7746.43	532.41	7728.70	40°45'47.056"N	103°58'53.849"W	3.16	
14558.00	90.250	89.300	6251.89	7840.41	537.17	7822.56	40°45'47.102"N	103°58'52.629"W	4.69	
14653.00	90.220	90.580	6251.50	7935.26	537.27	7917.55	40°45'47.103"N	103°58'51.394"W	1.35	
14747.00	90.250	92.270	6251.12	8028.94	534.93	8011.52	40°45'47.080"N	103°58'50.173"W	1.80	
14842.00	90.310	92.200	6250.65	8123.51	531.23	8106.45	40°45'47.043"N	103°58'48.940"W	0.10	
14936.00	90.250	91.850	6250.19	8217.11	527.91	8200.39	40°45'47.010"N	103°58'47.719"W	0.38	
15031.00	90.370	91.980	6249.68	8311.73	524.73	8295.33	40°45'46.978"N	103°58'46.485"W	0.19	
15125.00	90.400	90.460	6249.05	8405.44	522.73	8389.31	40°45'46.958"N	103°58'45.264"W	1.62	
15220.00	90.890	94.000	6247.98	8499.98	519.03	8484.21	40°45'46.921"N	103°58'44.030"W	3.76	
15314.00	90.310	94.830	6246.99	8593.14	511.80	8577.93	40°45'46.849"N	103°58'42.813"W	1.08	
15409.00	90.310	92.350	6246.48	8687.46	505.85	8672.73	40°45'46.790"N	103°58'41.581"W	2.61	
15504.00	90.310	88.340	6245.96	8782.25	505.28	8767.71	40°45'46.784"N	103°58'40.346"W	4.22	
15598.00	90.120	86.740	6245.61	8876.24	509.31	8861.62	40°45'46.824"N	103°58'39.126"W	1.71	
15693.00	90.090	82.840	6245.44	8971.17	517.94	8956.21	40°45'46.908"N	103°58'37.897"W	4.11	
15787.00	90.220	83.900	6245.18	9065.00	528.79	9049.58	40°45'47.015"N	103°58'36.683"W	1.14	
15882.00	90.120	87.940	6244.90	9159.97	535.55	9144.32	40°45'47.082"N	103°58'35.452"W	4.25	
15977.00	90.150	88.760	6244.68	9254.93	538.28	9239.28	40°45'47.108"N	103°58'34.218"W	0.86	
16071.00	90.250	90.240	6244.35	9348.82	539.10	9333.27	40°45'47.116"N	103°58'32.996"W	1.58	
16166.00	90.120	90.070	6244.04	9443.65	538.85	9428.27	40°45'47.113"N	103°58'31.762"W	0.23	
16261.00	90.180	92.090	6243.79	9538.38	537.06	9523.25	40°45'47.095"N	103°58'30.528"W	2.13	Last BHI MWD Survey (1864'FSL & 361'FEL, SEC.09)
16302.00	90.180	92.090	6243.66	9579.20	535.56	9564.22	40°45'47.080"N	103°58'29.995"W	0.00	Projection to Bit (1863'FSL & 320'FEL, SEC.09)



# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 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	2218.80	-137.67	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	2218.80	-137.67	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8B-9-4 BHL (1869'FSL & 300'FEL,SEC.09)	6212.00	541.81	9583.51	3422452.22	1524473.77	40°45'47.142"N	103°58'29.744"W	point
TIMBRO 9-59 8B-9-4 EPI (1870'FSL & 600'FEL,SEC.09)	6214.06	539.47	9283.51	3422152.31	1524466.38	40°45'47.120"N	103°58'33.643"W	point
TIMBRO 9-59 8B-9-4 WP1	6236.00	498.89	4499.01	3417369.19	1524345.39	40°45'46.732"N	103°59'35.820"W	point
TIMBRO 9-59 8B-9-4 WP2	6242.00	521.41	7167.00	3420036.41	1524412.75	40°45'46.949"N	103°59'01.148"W	point
TIMBRO 9-59 8B-9-4 BPI (1874'FSL & 600'FWL,SEC.08)	6278.00	460.90	-2.51	3412868.97	1524231.75	40°45'46.361"N	104°00'34.319"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6958.00	2218.80	-137.67	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: TIMBRO 9-59 8B-9-4 AWB Ref Wellpath: TIMBRO 9-59 8B-9-4 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1851.00	BHI NaviTrak (Rotating+Axial Corr)	BHI/Navitrak Surface MWD Surveys <152'-1851'>	TIMBRO 9-59 8B-9-4 AWB
1851.00	16261.00	BHI AutoTrak Curve (Short)	BH/ATC MWD (Short) 8.5" Hole <1977'-16261'>	TIMBRO 9-59 8B-9-4 AWB
16261.00	16302.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8B-9-4 AWB

# Actual Wellpath Report

TIMBRO 9-59 8B-9-4 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#08 TIMBRO 9-59 8B-9-4 (1413'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-4
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-4 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
152.00	1.290	299.990	151.99	First BHI MWD Survey
6723.00	89.184	89.815	6284.59	Crossed 600' Setback (1853'FSL & 600'FWL, SEC.08)
16261.00	90.180	92.090	6243.79	Last BHI MWD Survey (1864'FSL & 361'FEL, SEC.09)
16302.00	90.180	92.090	6243.66	Projection to Bit (1863'FSL & 320'FEL, SEC.09)