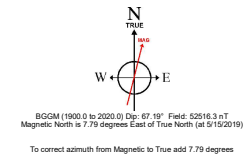
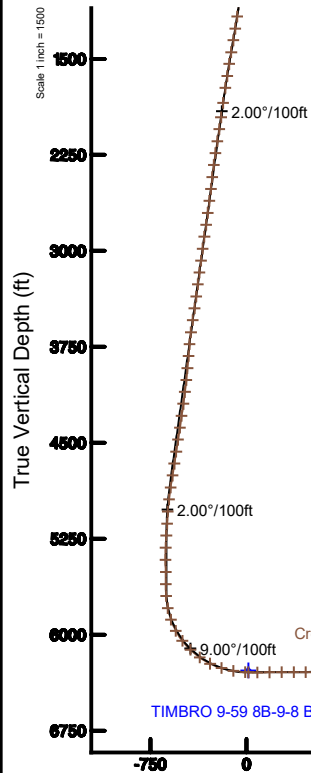
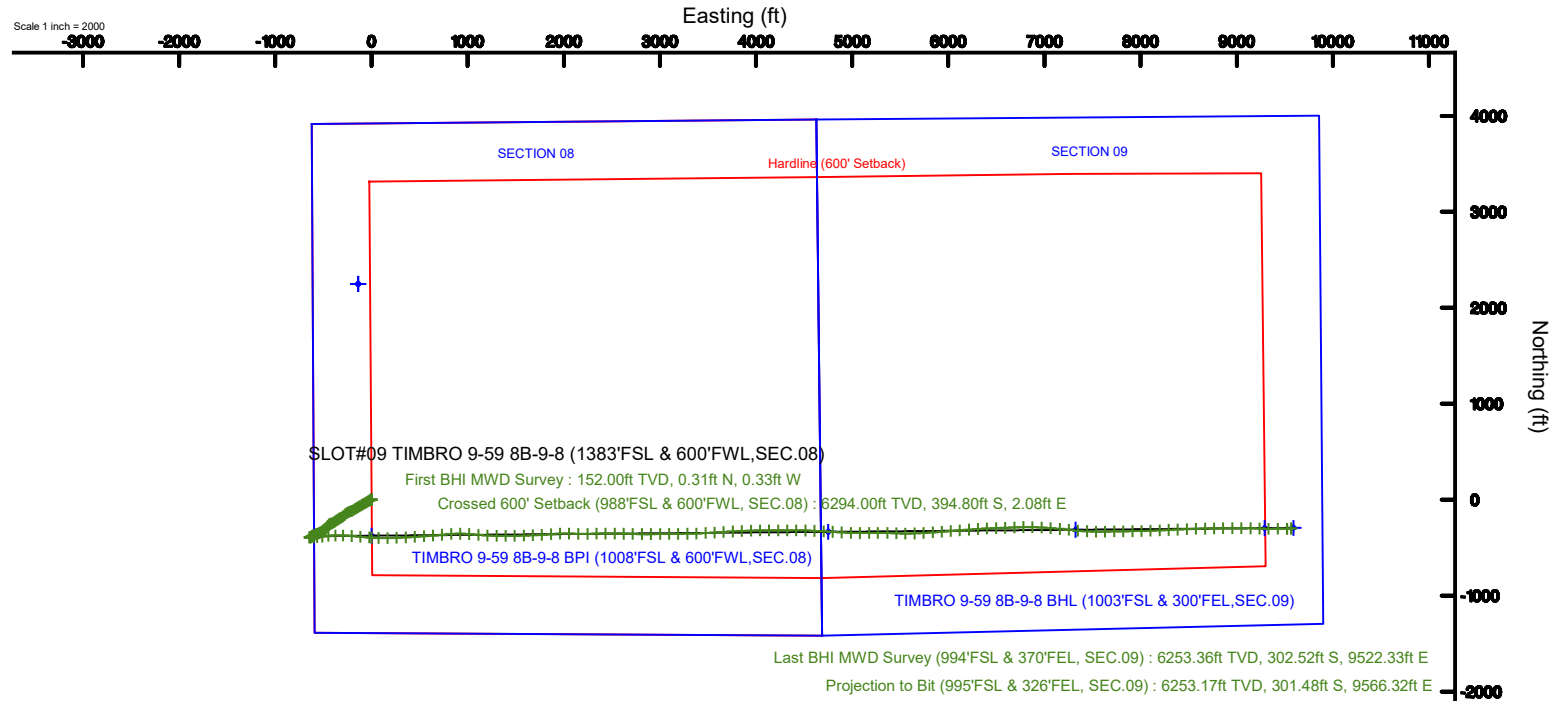


# VERDAD RESOURCES

Location: COLORADO Slot: SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)  
Field: WELD COUNTY (NAD83/TN) Well: TIMBRO 9-59 8B-9-8  
Facility: SEC.08-T09N-R59W Wellbore: TIMBRO 9-59 8B-9-8 PWB

Plot reference wellpath is TIMBRO 9-59 8B-9-8 PWP (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#09 TIMBRO 9-59 8B-9-8 (1383'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 (994'FSL & 370'FEL, SEC.09) : 90.25° Inc, 16261.00ft MD, 6253.36ft TVD, 9527.13ft VS

Projection to Bit (995'FSL & 326'FEL, SEC.09) : 90.25° Inc, 16305.00ft MD, 6253.17ft TVD, 9571.07ft VS

2.00°/100ft

TIMBRO 9-59 8B-9-8 BHL (1003'FSL & 300'FEL,SEC.09)

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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 4:45:08 PM
Convergence at slot	0.96° East	Database/Source file	WellArchitectDB/TIMBRO_9-59_8B-9-8_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2248.68	137.96	3412880.00	1523741.09	40°45'41.512"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#09 TIMBRO 9-59 8B-9-8 (1383'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	91.76°

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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	313.200	0.00	0.00	0.00	0.00	40°45'41.512"N	104°00'34.283"W	0.00	
24.00	0.000	313.200	24.00	0.00	0.00	0.00	40°45'41.512"N	104°00'34.283"W	0.00	
152.00	0.400	313.200	152.00	-0.33	0.31	-0.33	40°45'41.515"N	104°00'34.287"W	0.31	First BHI MWD Survey
244.00	0.390	313.140	244.00	-0.81	0.74	-0.79	40°45'41.519"N	104°00'34.293"W	0.01	
335.00	0.070	277.980	335.00	-1.10	0.96	-1.07	40°45'41.521"N	104°00'34.297"W	0.37	
427.00	0.240	25.250	427.00	-1.08	1.14	-1.04	40°45'41.523"N	104°00'34.296"W	0.29	
520.00	1.310	240.300	519.99	-1.91	0.79	-1.88	40°45'41.519"N	104°00'34.307"W	1.63	
611.00	3.100	247.460	610.92	-5.04	-0.67	-5.06	40°45'41.505"N	104°00'34.349"W	1.99	
702.00	5.280	242.420	701.67	-10.93	-3.55	-11.04	40°45'41.477"N	104°00'34.426"W	2.43	
797.00	7.380	243.100	796.08	-20.10	-8.33	-20.36	40°45'41.429"N	104°00'34.547"W	2.21	
892.00	9.190	240.110	890.09	-31.91	-14.88	-32.38	40°45'41.365"N	104°00'34.704"W	1.96	
986.00	9.880	237.610	982.79	-44.97	-22.94	-45.70	40°45'41.285"N	104°00'34.877"W	0.86	
1081.00	10.590	238.940	1076.28	-59.06	-31.81	-60.06	40°45'41.197"N	104°00'35.063"W	0.79	
1175.00	9.860	239.900	1168.79	-73.15	-40.30	-74.42	40°45'41.113"N	104°00'35.250"W	0.80	
1270.00	10.940	242.250	1262.22	-87.91	-48.58	-89.44	40°45'41.032"N	104°00'35.445"W	1.22	
1364.00	11.480	236.890	1354.43	-103.34	-57.84	-105.17	40°45'40.940"N	104°00'35.649"W	1.25	
1459.00	11.500	240.260	1447.53	-119.18	-67.70	-121.31	40°45'40.843"N	104°00'35.859"W	0.71	
1553.00	11.300	242.460	1539.68	-135.20	-76.61	-137.61	40°45'40.755"N	104°00'36.071"W	0.51	
1648.00	10.670	237.980	1632.94	-150.63	-85.58	-153.32	40°45'40.666"N	104°00'36.275"W	1.12	
1743.00	10.460	236.450	1726.33	-164.97	-95.00	-167.96	40°45'40.573"N	104°00'36.465"W	0.37	
1862.00	9.970	237.650	1843.44	-182.32	-106.49	-185.67	40°45'40.459"N	104°00'36.696"W	0.45	
1977.00	9.010	243.080	1956.87	-198.46	-115.89	-202.11	40°45'40.366"N	104°00'36.909"W	1.14	
2071.00	9.520	257.310	2049.65	-212.45	-120.93	-216.26	40°45'40.317"N	104°00'37.093"W	2.49	
2166.00	9.910	249.940	2143.29	-227.65	-125.46	-231.60	40°45'40.272"N	104°00'37.292"W	1.37	
2260.00	9.870	241.170	2235.90	-242.09	-132.12	-246.26	40°45'40.206"N	104°00'37.483"W	1.60	
2355.00	9.950	232.840	2329.49	-255.49	-141.01	-259.93	40°45'40.118"N	104°00'37.661"W	1.51	
2450.00	9.520	220.760	2423.13	-266.82	-151.92	-271.60	40°45'40.011"N	104°00'37.812"W	2.19	
2544.00	9.760	225.570	2515.80	-277.23	-163.38	-282.37	40°45'39.897"N	104°00'37.952"W	0.89	
2639.00	9.700	232.330	2609.44	-288.99	-173.91	-294.45	40°45'39.793"N	104°00'38.109"W	1.20	
2734.00	9.500	239.870	2703.11	-301.83	-182.74	-307.57	40°45'39.706"N	104°00'38.280"W	1.34	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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**BAKER  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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
2828.00	9.480	243.610	2795.83	-315.24	-190.07	-321.21	40°45'39.633"N	104°00'38.457"W	0.66	
2923.00	9.510	237.600	2889.53	-328.63	-197.75	-334.85	40°45'39.558"N	104°00'38.634"W	1.04	
3018.00	9.550	234.760	2983.22	-341.42	-206.51	-347.91	40°45'39.471"N	104°00'38.804"W	0.50	
3112.00	9.560	236.610	3075.92	-354.03	-215.30	-360.80	40°45'39.384"N	104°00'38.971"W	0.33	
3207.00	9.410	236.050	3169.62	-366.79	-223.98	-373.83	40°45'39.298"N	104°00'39.141"W	0.19	
3301.00	9.380	236.850	3262.36	-379.31	-232.46	-386.61	40°45'39.215"N	104°00'39.307"W	0.14	
3396.00	9.340	239.710	3356.09	-392.19	-240.58	-399.75	40°45'39.134"N	104°00'39.478"W	0.49	
3491.00	9.000	250.180	3449.88	-405.64	-246.99	-413.40	40°45'39.071"N	104°00'39.655"W	1.79	
3585.00	9.420	252.390	3542.67	-419.73	-251.81	-427.65	40°45'39.023"N	104°00'39.840"W	0.58	
3680.00	9.470	237.330	3636.40	-433.52	-258.38	-441.64	40°45'38.958"N	104°00'40.022"W	2.59	
3775.00	9.490	218.560	3730.12	-444.66	-268.73	-453.10	40°45'38.856"N	104°00'40.171"W	3.24	
3869.00	9.370	210.060	3822.86	-452.93	-281.41	-461.77	40°45'38.731"N	104°00'40.283"W	1.49	
3964.00	9.430	215.630	3916.58	-460.93	-294.43	-470.17	40°45'38.602"N	104°00'40.393"W	0.96	
4058.00	9.270	222.430	4009.34	-470.16	-306.28	-479.77	40°45'38.485"N	104°00'40.517"W	1.19	
4153.00	9.380	230.930	4103.09	-481.01	-316.80	-490.94	40°45'38.381"N	104°00'40.663"W	1.45	
4247.00	9.590	234.530	4195.80	-493.04	-326.18	-503.27	40°45'38.289"N	104°00'40.823"W	0.67	
4342.00	9.610	241.530	4289.48	-506.19	-334.55	-516.68	40°45'38.206"N	104°00'40.997"W	1.23	
4436.00	9.480	244.650	4382.18	-519.86	-341.60	-530.58	40°45'38.136"N	104°00'41.178"W	0.57	
4531.00	9.470	246.760	4475.88	-533.91	-348.04	-544.83	40°45'38.073"N	104°00'41.363"W	0.37	
4626.00	9.600	249.880	4569.57	-548.34	-353.84	-559.45	40°45'38.015"N	104°00'41.553"W	0.56	
4721.00	9.470	254.600	4663.26	-563.16	-358.64	-574.42	40°45'37.968"N	104°00'41.747"W	0.83	
4815.00	9.480	250.650	4755.98	-577.77	-363.26	-589.18	40°45'37.922"N	104°00'41.939"W	0.69	
4910.00	9.470	246.000	4849.68	-592.11	-369.03	-603.70	40°45'37.865"N	104°00'42.128"W	0.81	
5004.00	7.890	242.050	4942.60	-604.68	-375.20	-616.46	40°45'37.804"N	104°00'42.294"W	1.80	
5099.00	5.900	221.990	5036.92	-613.50	-381.89	-625.49	40°45'37.738"N	104°00'42.411"W	3.26	
5194.00	4.450	236.150	5131.54	-619.65	-387.57	-631.82	40°45'37.682"N	104°00'42.493"W	2.02	
5288.00	3.910	268.240	5225.30	-625.81	-389.70	-638.05	40°45'37.661"N	104°00'42.574"W	2.52	
5383.00	2.210	229.820	5320.17	-630.41	-390.98	-642.69	40°45'37.648"N	104°00'42.635"W	2.71	
5478.00	0.720	101.380	5415.15	-631.18	-392.28	-643.51	40°45'37.635"N	104°00'42.645"W	2.86	
5572.00	0.630	116.460	5509.14	-630.13	-392.63	-642.46	40°45'37.632"N	104°00'42.632"W	0.21	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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	0.070	235.370	5604.14	-629.71	-392.90	-642.04	40°45'37.629"N	104°00'42.626"W	0.70	
5761.00	3.780	92.020	5698.07	-626.65	-393.04	-638.99	40°45'37.628"N	104°00'42.586"W	4.08	
5856.00	11.760	86.950	5792.13	-613.85	-392.63	-626.18	40°45'37.632"N	104°00'42.420"W	8.42	
5950.00	19.240	90.070	5882.64	-588.79	-392.14	-601.09	40°45'37.637"N	104°00'42.094"W	8.00	
6045.00	27.410	86.370	5969.81	-551.31	-390.77	-563.55	40°45'37.650"N	104°00'41.606"W	8.73	
6139.00	38.780	80.670	6048.45	-500.70	-384.61	-512.73	40°45'37.711"N	104°00'40.946"W	12.53	
6234.00	46.310	84.780	6118.41	-437.31	-376.65	-449.06	40°45'37.790"N	104°00'40.118"W	8.45	
6329.00	54.730	88.830	6178.77	-364.34	-372.72	-375.93	40°45'37.829"N	104°00'39.168"W	9.45	
6423.00	63.730	92.100	6226.82	-283.69	-373.49	-295.27	40°45'37.821"N	104°00'38.120"W	10.03	
6518.00	73.550	93.950	6261.38	-195.35	-378.20	-207.03	40°45'37.775"N	104°00'36.973"W	10.49	
6613.00	79.820	95.040	6283.25	-103.06	-385.45	-114.92	40°45'37.703"N	104°00'35.776"W	6.69	
6707.00	87.940	94.370	6293.26	-9.79	-393.11	-21.85	40°45'37.627"N	104°00'34.567"W	8.67	
6731.00†	88.546	93.746	6294.00	14.18	-394.80	2.08	40°45'37.611"N	104°00'34.256"W	3.62	Crossed 600' Setback (988'FSL & 600'FWL, SEC.08)
6802.00	90.340	91.900	6294.69	85.15	-398.30	72.98	40°45'37.576"N	104°00'33.334"W	3.62	
6897.00	90.340	89.270	6294.12	180.12	-399.27	167.97	40°45'37.566"N	104°00'32.100"W	2.77	
6991.00	90.430	87.830	6293.49	273.97	-396.89	261.93	40°45'37.590"N	104°00'30.879"W	1.53	
7086.00	90.180	86.570	6292.99	368.67	-392.25	356.82	40°45'37.636"N	104°00'29.646"W	1.35	
7180.00	90.460	86.970	6292.46	462.31	-386.95	450.67	40°45'37.688"N	104°00'28.426"W	0.52	
7275.00	90.340	85.780	6291.80	556.89	-380.95	545.47	40°45'37.747"N	104°00'27.194"W	1.26	
7369.00	90.400	85.640	6291.19	650.36	-373.92	639.21	40°45'37.817"N	104°00'25.976"W	0.16	
7464.00	90.250	83.980	6290.65	744.66	-365.32	733.81	40°45'37.902"N	104°00'24.747"W	1.75	
7559.00	90.340	86.460	6290.16	839.04	-357.41	828.47	40°45'37.980"N	104°00'23.517"W	2.61	
7653.00	90.280	90.060	6289.65	932.84	-354.55	922.41	40°45'38.008"N	104°00'22.296"W	3.83	
7748.00	90.490	94.640	6289.02	1027.81	-358.45	1017.31	40°45'37.970"N	104°00'21.063"W	4.83	
7842.00	90.310	94.510	6288.36	1121.70	-365.95	1111.00	40°45'37.895"N	104°00'19.845"W	0.24	
7937.00	90.280	93.000	6287.87	1216.63	-372.17	1205.80	40°45'37.834"N	104°00'18.614"W	1.59	
8032.00	90.280	91.250	6287.41	1311.63	-375.69	1300.73	40°45'37.799"N	104°00'17.380"W	1.84	
8126.00	90.400	89.920	6286.85	1405.60	-376.65	1394.72	40°45'37.790"N	104°00'16.159"W	1.42	
8221.00	90.250	89.400	6286.31	1500.54	-376.09	1489.71	40°45'37.795"N	104°00'14.924"W	0.57	
8315.00	90.490	88.180	6285.70	1594.41	-374.10	1583.69	40°45'37.815"N	104°00'13.703"W	1.32	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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**BAKER  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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
8410.00	90.490	88.010	6284.89	1689.21	-370.94	1678.63	40°45'37.846"N	104°00'12.469"W	0.18	
8504.00	90.370	86.130	6284.18	1782.89	-366.14	1772.50	40°45'37.893"N	104°00'11.249"W	2.00	
8599.00	90.280	86.360	6283.64	1877.45	-359.92	1867.30	40°45'37.955"N	104°00'10.017"W	0.26	
8694.00	90.180	86.900	6283.26	1972.07	-354.33	1962.13	40°45'38.010"N	104°00'08.785"W	0.58	
8788.00	90.310	91.730	6282.86	2065.95	-353.21	2056.10	40°45'38.021"N	104°00'07.564"W	5.14	
8883.00	90.400	91.510	6282.27	2160.95	-355.89	2151.06	40°45'37.994"N	104°00'06.330"W	0.25	
8978.00	90.430	88.950	6281.58	2255.91	-356.28	2246.05	40°45'37.990"N	104°00'05.096"W	2.69	
9072.00	90.280	88.120	6281.00	2349.76	-353.87	2340.01	40°45'38.014"N	104°00'03.874"W	0.90	
9167.00	90.030	90.070	6280.75	2444.65	-352.37	2435.00	40°45'38.029"N	104°00'02.640"W	2.07	
9261.00	89.970	90.700	6280.75	2538.62	-353.00	2528.99	40°45'38.022"N	104°00'01.419"W	0.67	
9356.00	89.970	91.420	6280.79	2633.61	-354.76	2623.98	40°45'38.005"N	104°00'00.184"W	0.76	
9450.00	90.150	91.450	6280.70	2727.61	-357.12	2717.95	40°45'37.981"N	103°59'58.963"W	0.19	
9545.00	90.060	90.230	6280.52	2822.60	-358.51	2812.93	40°45'37.968"N	103°59'57.729"W	1.29	
9640.00	90.090	89.520	6280.40	2917.55	-358.30	2907.93	40°45'37.970"N	103°59'56.494"W	0.75	
9734.00	90.120	88.960	6280.23	3011.46	-357.05	3001.93	40°45'37.982"N	103°59'55.273"W	0.60	
9829.00	89.690	89.910	6280.38	3106.38	-356.12	3096.92	40°45'37.991"N	103°59'54.038"W	1.10	
9923.00	90.120	89.370	6280.54	3200.31	-355.53	3190.92	40°45'37.997"N	103°59'52.817"W	0.73	
10018.00	90.060	89.350	6280.39	3295.23	-354.47	3285.91	40°45'38.007"N	103°59'51.583"W	0.07	
10112.00	90.310	87.800	6280.09	3389.08	-352.13	3379.88	40°45'38.030"N	103°59'50.361"W	1.67	
10207.00	90.460	86.790	6279.45	3483.79	-347.64	3474.77	40°45'38.074"N	103°59'49.128"W	1.07	
10302.00	90.370	86.670	6278.76	3578.42	-342.23	3569.61	40°45'38.127"N	103°59'47.896"W	0.16	
10396.00	90.430	86.300	6278.10	3672.02	-336.46	3663.43	40°45'38.184"N	103°59'46.677"W	0.40	
10490.00	90.340	87.160	6277.47	3765.66	-331.10	3757.28	40°45'38.237"N	103°59'45.457"W	0.92	
10585.00	90.400	87.490	6276.86	3860.37	-326.67	3852.17	40°45'38.281"N	103°59'44.224"W	0.35	
10680.00	90.310	87.880	6276.27	3955.13	-322.83	3947.09	40°45'38.319"N	103°59'42.990"W	0.42	
10774.00	90.340	89.090	6275.74	4048.97	-320.35	4041.06	40°45'38.343"N	103°59'41.769"W	1.29	
10869.00	90.310	89.480	6275.20	4143.88	-319.16	4136.05	40°45'38.355"N	103°59'40.535"W	0.41	
10963.00	90.250	90.180	6274.74	4237.83	-318.88	4230.04	40°45'38.357"N	103°59'39.313"W	0.75	
11058.00	89.850	89.850	6274.66	4332.78	-318.91	4325.04	40°45'38.357"N	103°59'38.079"W	0.55	
11152.00	90.280	90.750	6274.55	4426.75	-319.40	4419.04	40°45'38.352"N	103°59'36.857"W	1.06	

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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**BAKER  
HUGHES**

## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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	90.430	91.830	6273.96	4521.75	-321.54	4514.01	40°45'38.330"N	103°59'35.623"W	1.15	
11342.00	90.370	92.370	6273.30	4616.74	-325.02	4608.95	40°45'38.296"N	103°59'34.390"W	0.57	
11436.00	90.520	93.280	6272.57	4710.72	-329.65	4702.83	40°45'38.250"N	103°59'33.170"W	0.98	
11531.00	90.280	93.380	6271.90	4805.68	-335.17	4797.67	40°45'38.195"N	103°59'31.937"W	0.27	
11625.00	90.400	94.290	6271.35	4899.62	-341.46	4891.45	40°45'38.133"N	103°59'30.719"W	0.98	
11720.00	90.370	92.110	6270.71	4994.58	-346.76	4986.30	40°45'38.080"N	103°59'29.486"W	2.29	
11815.00	90.310	89.380	6270.14	5089.55	-347.99	5081.28	40°45'38.068"N	103°59'28.252"W	2.87	
11909.00	90.220	88.550	6269.71	5183.44	-346.29	5175.26	40°45'38.084"N	103°59'27.030"W	0.89	
12002.00	90.370	90.510	6269.23	5276.37	-345.53	5268.25	40°45'38.092"N	103°59'25.822"W	2.11	
12099.00	90.550	91.450	6268.45	5373.35	-347.19	5365.23	40°45'38.075"N	103°59'24.562"W	0.99	
12193.00	90.520	92.240	6267.57	5467.35	-350.22	5459.18	40°45'38.045"N	103°59'23.341"W	0.84	
12288.00	90.250	90.990	6266.94	5562.34	-352.89	5554.14	40°45'38.018"N	103°59'22.107"W	1.35	
12382.00	90.220	87.350	6266.55	5656.23	-351.53	5648.11	40°45'38.032"N	103°59'20.886"W	3.87	
12477.00	90.340	86.820	6266.09	5750.91	-346.70	5742.99	40°45'38.079"N	103°59'19.653"W	0.57	
12572.00	90.310	85.780	6265.55	5845.48	-340.57	5837.79	40°45'38.140"N	103°59'18.421"W	1.10	
12666.00	90.370	86.190	6264.99	5939.00	-333.99	5931.55	40°45'38.204"N	103°59'17.202"W	0.44	
12761.00	90.310	85.700	6264.42	6033.51	-327.27	6026.31	40°45'38.271"N	103°59'15.971"W	0.52	
12855.00	90.370	85.040	6263.87	6126.93	-319.68	6120.01	40°45'38.345"N	103°59'14.753"W	0.71	
12950.00	90.370	85.210	6263.25	6221.29	-311.61	6214.66	40°45'38.425"N	103°59'13.523"W	0.18	
13044.00	90.340	86.580	6262.67	6314.79	-304.88	6308.41	40°45'38.491"N	103°59'12.305"W	1.46	
13139.00	90.400	87.640	6262.06	6409.48	-300.09	6403.29	40°45'38.538"N	103°59'11.072"W	1.12	
13234.00	90.340	87.390	6261.44	6504.22	-295.97	6498.20	40°45'38.579"N	103°59'09.839"W	0.27	
13328.00	90.310	88.510	6260.91	6598.01	-292.61	6592.14	40°45'38.612"N	103°59'08.618"W	1.19	
13423.00	90.310	86.750	6260.40	6692.75	-288.68	6687.05	40°45'38.650"N	103°59'07.385"W	1.85	
13518.00	90.150	88.880	6260.02	6787.52	-285.06	6781.97	40°45'38.686"N	103°59'06.151"W	2.25	
13612.00	90.090	91.900	6259.82	6881.49	-285.70	6875.96	40°45'38.679"N	103°59'04.930"W	3.21	
13707.00	90.220	93.530	6259.56	6976.47	-290.20	6970.85	40°45'38.634"N	103°59'03.697"W	1.72	
13801.00	90.120	94.300	6259.28	7070.40	-296.62	7064.63	40°45'38.571"N	103°59'02.478"W	0.83	
13896.00	90.150	95.430	6259.06	7165.26	-304.68	7159.29	40°45'38.491"N	103°59'01.248"W	1.19	
13990.00	90.120	95.740	6258.84	7259.05	-313.82	7252.84	40°45'38.400"N	103°59'00.032"W	0.33	

# Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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	90.150	94.550	6258.61	7353.88	-322.34	7347.45	40°45'38.316"N	103°58'58.803"W	1.25	
14180.00	90.120	93.110	6258.39	7448.82	-328.69	7442.24	40°45'38.253"N	103°58'57.571"W	1.52	
14275.00	90.120	90.950	6258.19	7543.81	-332.05	7537.17	40°45'38.219"N	103°58'56.337"W	2.27	
14369.00	90.030	89.080	6258.07	7637.76	-332.08	7631.17	40°45'38.219"N	103°58'55.116"W	1.99	
14464.00	90.370	89.160	6257.74	7732.66	-330.62	7726.16	40°45'38.233"N	103°58'53.882"W	0.37	
14558.00	90.400	89.090	6257.10	7826.56	-329.18	7820.15	40°45'38.247"N	103°58'52.660"W	0.08	
14653.00	90.340	89.640	6256.49	7921.47	-328.13	7915.14	40°45'38.257"N	103°58'51.426"W	0.58	
14747.00	89.480	88.470	6256.64	8015.37	-326.58	8009.12	40°45'38.272"N	103°58'50.204"W	1.54	
14842.00	89.260	87.370	6257.68	8110.15	-323.13	8104.05	40°45'38.306"N	103°58'48.971"W	1.18	
14936.00	89.380	87.720	6258.80	8203.89	-319.11	8197.96	40°45'38.345"N	103°58'47.751"W	0.39	
15031.00	89.290	87.630	6259.90	8298.64	-315.25	8292.87	40°45'38.383"N	103°58'46.517"W	0.13	
15125.00	89.380	87.320	6260.99	8392.37	-311.11	8386.78	40°45'38.423"N	103°58'45.297"W	0.34	
15220.00	89.350	88.040	6262.04	8487.12	-307.27	8481.69	40°45'38.461"N	103°58'44.063"W	0.76	
15314.00	90.250	88.010	6262.37	8580.92	-304.03	8575.63	40°45'38.493"N	103°58'42.843"W	0.96	
15409.00	90.150	88.620	6262.04	8675.75	-301.23	8670.59	40°45'38.520"N	103°58'41.609"W	0.65	
15504.00	90.180	88.880	6261.77	8770.62	-299.16	8765.57	40°45'38.540"N	103°58'40.374"W	0.28	
15598.00	90.180	88.960	6261.47	8864.50	-297.39	8859.55	40°45'38.557"N	103°58'39.153"W	0.09	
15693.00	90.950	89.310	6260.54	8959.40	-295.96	8954.54	40°45'38.571"N	103°58'37.919"W	0.89	
15787.00	91.080	90.530	6258.87	9053.33	-295.82	9048.52	40°45'38.572"N	103°58'36.697"W	1.31	
15882.00	91.910	92.330	6256.39	9148.30	-298.19	9143.45	40°45'38.548"N	103°58'35.464"W	2.09	
15977.00	90.250	91.700	6254.60	9243.27	-301.53	9238.37	40°45'38.515"N	103°58'34.230"W	1.87	
16071.00	90.280	90.750	6254.17	9337.27	-303.54	9332.35	40°45'38.495"N	103°58'33.009"W	1.01	
16166.00	90.220	89.680	6253.75	9432.23	-303.90	9427.35	40°45'38.491"N	103°58'31.775"W	1.13	
16261.00	90.250	88.650	6253.36	9527.13	-302.52	9522.33	40°45'38.504"N	103°58'30.540"W	1.08	Last BHI MWD Survey (994'FSL & 370'FEL, SEC.09)
16305.00	90.250	88.650	6253.17	9571.07	-301.48	9566.32	40°45'38.514"N	103°58'29.969"W	0.00	Projection to Bit (995'FSL & 326'FEL, SEC.09)



# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 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	2248.68	-137.95	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	2248.68	-137.95	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8B-9-8 BHL (1003'FSL & 300'FEL,SEC.09)	6215.00	-293.97	9591.61	3422475.14	1523608.38	40°45'38.588"N	103°58'29.640"W	point
TIMBRO 9-59 8B-9-8 EPI (1004'FSL & 600'FEL,SEC.09)	6219.16	-296.65	9291.88	3422175.50	1523600.65	40°45'38.563"N	103°58'33.535"W	point
TIMBRO 9-59 8B-9-8 WP1	6234.00	-334.83	4751.97	3417636.90	1523486.18	40°45'38.199"N	103°59'32.531"W	point
TIMBRO 9-59 8B-9-8 WP2	6246.00	-313.12	7323.85	3420208.04	1523551.11	40°45'38.407"N	103°58'59.110"W	point
TIMBRO 9-59 8B-9-8 BPI (1008'FSL & 600'FWL,SEC.08)	6280.00	-374.92	2.22	3412888.52	1523366.26	40°45'37.807"N	104°00'34.254"W	point
TIMBRO 9-59 8A-9-2 Hardline (600' Setback)	6958.00	2248.68	-137.95	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon

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

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1862.00	BHI Generic gyro - northseeking (Standard)	3rd Party Surface Surveys <152'-1862'>	TIMBRO 9-59 8B-9-8 AWB
1862.00	16261.00	BHI AutoTrak Curve (Short)	BHI AutoTrak Curve (Short) 8.5" Hole <1977'-16261'>	TIMBRO 9-59 8B-9-8 AWB
16261.00	16305.00	Blind Drilling (std)	Projection to bit	TIMBRO 9-59 8B-9-8 AWB

# Actual Wellpath Report

TIMBRO 9-59 8B-9-8 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	VERDAD RESOURCES	Slot	SLOT#09 TIMBRO 9-59 8B-9-8 (1383'FSL & 600'FWL, SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8B-9-8
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8B-9-8 AWB
Facility	SEC.08-T09N-R59W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
152.00	0.400	313.200	152.00	First BHI MWD Survey
6731.00	88.546	93.746	6294.00	Crossed 600' Setback (988'FSL & 600'FWL, SEC.08)
16261.00	90.250	88.650	6253.36	Last BHI MWD Survey (994'FSL & 370'FEL, SEC.09)
16305.00	90.250	88.650	6253.17	Projection to Bit (995'FSL & 326'FEL, SEC.09)