VERDAD RESOURCES

Location:	COLORADO	Slot:	SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)
Field:	WELD COUNTY (NAD83/TN)	Well:	TIMBRO 9-59 8A-9-2
Facility:	SEC.08-T09N-R59W	Wellbore:	TIMBRO 9-59 8A-9-2 PWB

Plot reference wellpath is TIMBRO 9-59 8A-9-2 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to Big Rig (24'KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Big Rig (24'KB) (RKB)	North Reference: True north
Big Rig (24'KB) (RKB) to Mean Sea Level: 5110 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2019-03-07
	Database: WA_DEN_Denver_Defn

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.08-T09N-R59W			3412704.278	1525987.120	40°46'03.731"N	104°00'36.076"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)	0.00	0.00	3412704.278	1525987.120	40°46'03.731"N	104°00'36.076"W

Big Rig (24'KB) (RKB) to Ground level (At Slot: SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08))	5110ft
Mean Sea Level to Ground level (At Slot: SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08))	0ft
Big Rig (24'KB) (RKB) to Mean Sea Level	5110ft

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	1846.00	12.300	337.820	1815.37	265.20	-126.80	1.15	-94.59
Tangent/Projection	1914.00	12.300	337.820	1881.81	278.61	-132.27	0.00	-98.44
End of 3D Arc (J)	2228.43	18.395	331.846	2184.91	353.44	-168.36	2.00	-125.43
End of Tangent (J)	4138.50	18.395	331.846	3997.38	884.87	-452.76	0.00	-345.07
End of Drop	5058.24	0.000	89.217	4901.40	1013.93	-521.83	2.00	-398.41
End of Tangent	5858.24	0.000	89.217	5701.40	1013.93	-521.83	0.00	-398.41
End of Build	6862.89	90.419	89.217	6338.00	1022.69	119.38	9.00	239.35
End of Tangent	16142.55	90.419	89.217	6270.20	1149.45	9397.93	0.00	9467.91
End of 3D Arc (J)	16142.80	90.420	89.212	6270.20	1149.46	9398.18	2.00	9468.16
End of Tangent (J)	16442.56	90.420	89.212	6268.00	1153.58	9697.90	0.00	9766.27

Targets

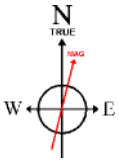
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
TIMBRO 9-59 8A-9-2 SECTION 08		18.00	0.00	0.00	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W
TIMBRO 9-59 8A-9-2 SECTION 09		18.00	0.00	0.00	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W
TIMBRO 9-59 8A-9-2 REV-2 TARGET BOTTOM HOLE(600'FNL&300'FEL,SEC.09)	16442.56	6268.00	1153.58	9697.90	3422381.38	1527303.47	40°46'15.110"N	103°58'30.032"W
TIMBRO 9-59 8A-9-2 rev-2 ENDING PROD. INTERVAL(603'FNL&600'FEL,SEC.09)	16142.55	6270.20	1149.45	9397.93	3422081.52	1527294.31	40°46'15.071"N	103°58'33.931"W
TIMBRO 9-59 8A-9-2 rev-2 BEG. PROD. INTERVAL(650'FNL&600'FWL,SEC.08)	6862.89	6338.00	1022.69	119.38	3412806.46	1527011.67	40°46'13.836"N	104°00'34.524"W
TIMBRO 9-59 8A-9-2 BEG. PROD. INTERVAL(650'FNL&600'FWL,SEC.08)		7018.00	1022.69	119.38	3412806.46	1527011.67	40°46'13.836"N	104°00'34.524"W
TIMBRO 9-59 8A-9-2 ENDING PROD. INTERVAL(603'FNL&600'FEL,SEC.09)		7018.00	1149.45	9397.92	3422081.52	1527294.31	40°46'15.071"N	103°58'33.931"W
TIMBRO 9-59 8A-9-2 REV-1 TARGET BOTTOM HOLE(600'FNL&300'FEL,SEC.09)		7018.00	1153.58	9697.90	3422381.38	1527303.47	40°46'15.110"N	103°58'30.032"W

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
16442.56	90.420	89.212	6268.00	1153.58	9697.90	3422381.38	1527303.47	40°46'15.110"N	103°58'30.032"W

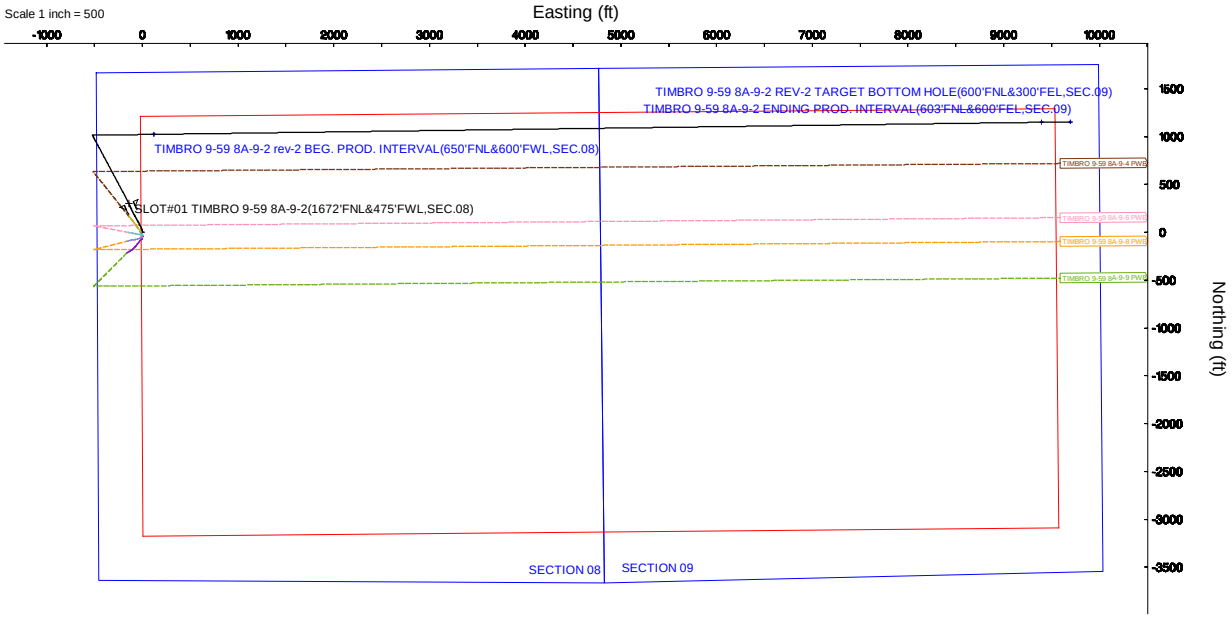
Survey Program

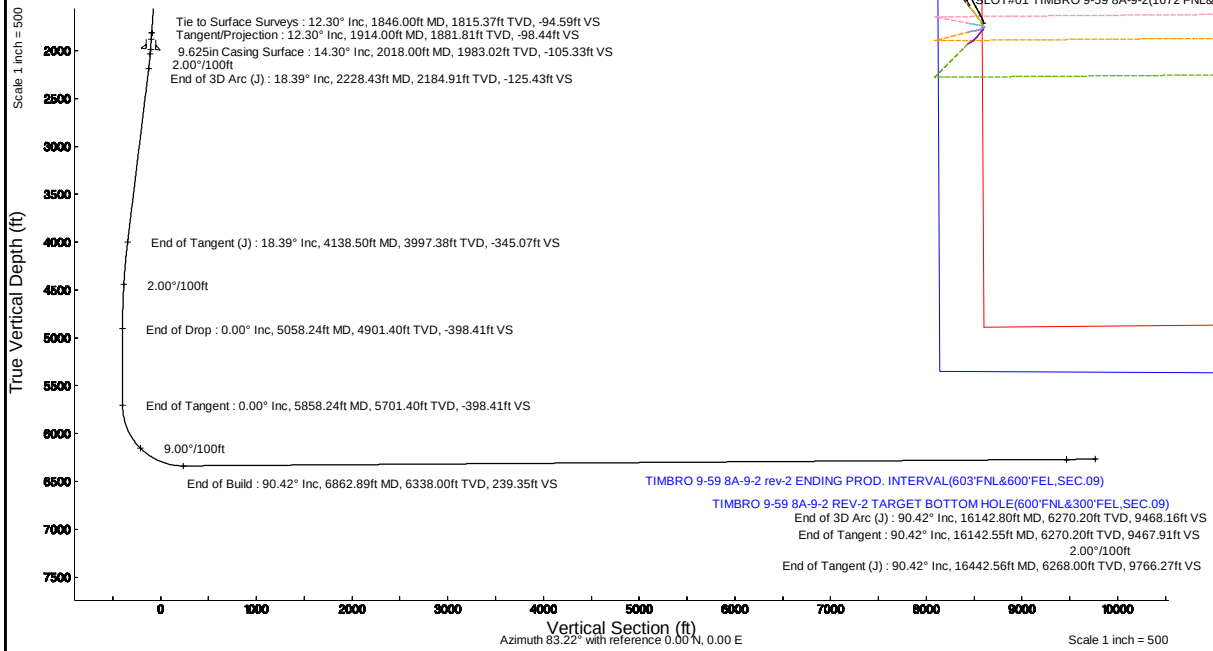
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
24.00	1846.00	BHI NaviTrak	BHI NaviTrak (Rotating+Axial Corr)		TIMBRO 9-59 8A-9-2 AWB
1846.00	17090.86	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		TIMBRO 9-59 8A-9-2 PWB



BGGM (1900.0 to 2020.0) Dip: 67.20° Field: 52495.3 nT
Magnetic North is 7.80 degrees East of True North (at 3/6/2019)

To correct azimuth from Magnetic to True add 7.80 degrees





Approval

Baker Hughes Representatives			
Prepared by		Reviewed by	
Signature		Signature	
Position		Position	
Date		Date	
VERDAD RESOURCES Representative			
Approved by		Position	
Signature		Date	
Comment			

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION

Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
Facility	**SEC.08-T09N-R59W**		

REPORT SETUP INFORMATION

Projection System	**NAD83 / Lambert Colorado SP, Northern Zone (501), US feet**	Software System	**WellArchitect® 5.0**
North Reference	**True**	User	**Guenaler**
Scale	**0.999998**	Report Generated	**3/7/2019** at **10:48:49 AM**
Convergence at slot	**0.97° East**	Database/Source file	**WA_DEN_Denver_Defn/TIMBRO_9-59_8A-9-2__REV-B.0__PWP.xml**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	**0.00**	**0.00**	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W
Facility Reference Pt			3412704.28	1525987.12	**40°46'03.731"N**	**104°00'36.076"W**
Field Reference Pt			3242930.13	1254608.21	**40°01'44.490"N**	**104°37'56.946"W**

WELLPATH DATUM

Calculation method	**Minimum curvature**	Big Rig (24'KB) (RKB) to Facility Vertical Datum	**5110.00ft**
Horizontal Reference Pt	**Slot**	Big Rig (24'KB) (RKB) to Mean Sea Level	**5110.00ft**
Vertical Reference Pt	**Big Rig (24'KB) (RKB)**	Big Rig (24'KB) (RKB) to Ground Level at Slot (SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08))	**5110.00ft**
MD Reference Pt	**Big Rig (24'KB) (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**83.22°**

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
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	216.350	0.00	0.00	0.00	0.00	40°46'03.731"N	104°00'36.076"W	0.00	
24.00	0.000	216.350	24.00	0.00	0.00	0.00	40°46'03.731"N	104°00'36.076"W	0.00	
107.00	0.500	216.350	107.00	-0.25	-0.29	-0.21	40°46'03.728"N	104°00'36.078"W	0.60	
197.00	0.220	45.670	197.00	-0.38	-0.49	-0.32	40°46'03.726"N	104°00'36.080"W	0.80	
284.00	1.540	5.280	283.99	0.00	0.79	-0.10	40°46'03.739"N	104°00'36.077"W	1.59	
376.00	4.730	352.490	375.84	0.21	5.79	-0.48	40°46'03.788"N	104°00'36.082"W	3.53	
466.00	6.080	350.870	465.44	-0.03	14.17	-1.72	40°46'03.871"N	104°00'36.098"W	1.51	
556.00	6.860	343.560	554.86	-1.13	24.03	-4.00	40°46'03.968"N	104°00'36.128"W	1.26	
646.00	8.100	336.140	644.10	-3.89	34.99	-8.08	40°46'04.077"N	104°00'36.181"W	1.74	
736.00	9.240	335.210	733.07	-7.99	47.35	-13.68	40°46'04.199"N	104°00'36.253"W	1.28	
826.00	10.800	332.760	821.69	-13.17	61.40	-20.57	40°46'04.338"N	104°00'36.343"W	1.80	
916.00	12.340	334.940	909.86	-19.13	77.61	-28.50	40°46'04.498"N	104°00'36.446"W	1.78	
1006.00	12.600	333.950	997.74	-25.39	95.15	-36.89	40°46'04.671"N	104°00'36.555"W	0.37	
1096.00	13.470	329.160	1085.42	-32.90	112.97	-46.57	40°46'04.847"N	104°00'36.681"W	1.54	
1186.00	13.140	329.630	1173.01	-41.27	130.79	-57.12	40°46'05.023"N	104°00'36.818"W	0.39	
1276.00	13.820	329.340	1260.53	-49.71	148.86	-67.77	40°46'05.202"N	104°00'36.956"W	0.76	
1366.00	13.100	331.910	1348.05	-57.77	167.11	-78.05	40°46'05.382"N	104°00'37.090"W	1.04	
1456.00	12.820	333.400	1435.76	-64.86	185.04	-87.33	40°46'05.559"N	104°00'37.211"W	0.48	
1546.00	13.600	332.820	1523.38	-71.93	203.38	-96.63	40°46'05.740"N	104°00'37.331"W	0.88	
1636.00	13.600	332.300	1610.86	-79.40	222.16	-106.38	40°46'05.926"N	104°00'37.458"W	0.14	
1726.00	13.490	334.290	1698.35	-86.58	240.99	-115.86	40°46'06.112"N	104°00'37.581"W	0.53	
1816.00	12.400	336.270	1786.06	-92.80	259.29	-124.30	40°46'06.293"N	104°00'37.691"W	1.31	
1846.00	12.300	337.820	1815.37	-94.59	265.20	-126.80	40°46'06.351"N	104°00'37.724"W	1.15	Tie On; Tie to Surface Surveys
1914.00	12.300	337.820	1881.81	-98.44	278.61	-132.27	40°46'06.484"N	104°00'37.795"W	0.00	Tangent/Projection
1946.00†	12.912	336.961	1913.04	-100.34	285.06	-134.96	40°46'06.547"N	104°00'37.830"W	2.00	
2046.00†	14.839	334.729	2010.12	-107.53	306.92	-144.80	40°46'06.763"N	104°00'37.957"W	2.00	
2146.00†	16.783	333.002	2106.33	-116.58	331.37	-156.82	40°46'07.005"N	104°00'38.114"W	2.00	
2228.43	18.395	331.846	2184.91	-125.43	353.44	-168.36	40°46'07.223"N	104°00'38.264"W	2.00	End of 3D Arc (J)
2246.00†	18.395	331.846	2201.57	-127.45	358.33	-170.98	40°46'07.271"N	104°00'38.298"W	0.00	
2346.00†	18.395	331.846	2296.46	-138.95	386.15	-185.87	40°46'07.546"N	104°00'38.491"W	0.00	

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
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
2446.00†	18.395	331.846	2391.36	-150.45	413.98	-200.76	40°46'07.821"N	104°00'38.685"W	0.00	
2546.00†	18.395	331.846	2486.25	-161.95	441.80	-215.65	40°46'08.096"N	104°00'38.878"W	0.00	
2646.00†	18.395	331.846	2581.14	-173.45	469.62	-230.53	40°46'08.371"N	104°00'39.072"W	0.00	
2746.00†	18.395	331.846	2676.03	-184.95	497.44	-245.42	40°46'08.646"N	104°00'39.265"W	0.00	
2846.00†	18.395	331.846	2770.92	-196.45	525.27	-260.31	40°46'08.921"N	104°00'39.459"W	0.00	
2946.00†	18.395	331.846	2865.81	-207.95	553.09	-275.20	40°46'09.196"N	104°00'39.652"W	0.00	
3046.00†	18.395	331.846	2960.70	-219.45	580.91	-290.09	40°46'09.471"N	104°00'39.846"W	0.00	
3146.00†	18.395	331.846	3055.59	-230.94	608.73	-304.98	40°46'09.746"N	104°00'40.039"W	0.00	
3246.00†	18.395	331.846	3150.48	-242.44	636.56	-319.87	40°46'10.021"N	104°00'40.233"W	0.00	
3346.00†	18.395	331.846	3245.37	-253.94	664.38	-334.76	40°46'10.295"N	104°00'40.426"W	0.00	
3446.00†	18.395	331.846	3340.26	-265.44	692.20	-349.65	40°46'10.570"N	104°00'40.620"W	0.00	
3546.00†	18.395	331.846	3435.15	-276.94	720.02	-364.54	40°46'10.845"N	104°00'40.813"W	0.00	
3646.00†	18.395	331.846	3530.04	-288.44	747.85	-379.43	40°46'11.120"N	104°00'41.007"W	0.00	
3746.00†	18.395	331.846	3624.93	-299.94	775.67	-394.32	40°46'11.395"N	104°00'41.200"W	0.00	
3846.00†	18.395	331.846	3719.82	-311.44	803.49	-409.21	40°46'11.670"N	104°00'41.394"W	0.00	
3946.00†	18.395	331.846	3814.71	-322.94	831.31	-424.10	40°46'11.945"N	104°00'41.588"W	0.00	
4046.00†	18.395	331.846	3909.60	-334.44	859.14	-438.99	40°46'12.220"N	104°00'41.781"W	0.00	
4138.50	18.395	331.846	3997.38	-345.07	884.87	-452.76	40°46'12.474"N	104°00'41.960"W	0.00	End of Tangent (J)
4146.00†	18.245	331.846	4004.50	-345.93	886.95	-453.87	40°46'12.495"N	104°00'41.975"W	2.00	
4246.00†	16.245	331.846	4100.00	-356.73	913.09	-467.86	40°46'12.753"N	104°00'42.156"W	2.00	
4346.00†	14.245	331.846	4196.47	-366.32	936.27	-480.27	40°46'12.982"N	104°00'42.318"W	2.00	
4446.00†	12.245	331.846	4293.81	-374.66	956.47	-491.08	40°46'13.182"N	104°00'42.458"W	2.00	
4546.00†	10.245	331.846	4391.88	-381.77	973.66	-500.28	40°46'13.351"N	104°00'42.578"W	2.00	
4646.00†	8.245	331.846	4490.58	-387.62	987.82	-507.86	40°46'13.491"N	104°00'42.676"W	2.00	
4746.00†	6.245	331.846	4589.78	-392.22	998.94	-513.81	40°46'13.601"N	104°00'42.754"W	2.00	
4846.00†	4.245	331.846	4689.35	-395.55	1007.00	-518.12	40°46'13.681"N	104°00'42.810"W	2.00	
4946.00†	2.245	331.846	4789.19	-397.61	1011.99	-520.79	40°46'13.730"N	104°00'42.844"W	2.00	
5046.00†	0.245	331.846	4889.16	-398.40	1013.91	-521.82	40°46'13.749"N	104°00'42.858"W	2.00	
5058.24	0.000	89.217	4901.40	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	2.00	End of Drop
5146.00†	0.000	89.217	4989.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
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
5246.00†	0.000	89.217	5089.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5346.00†	0.000	89.217	5189.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5446.00†	0.000	89.217	5289.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5546.00†	0.000	89.217	5389.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5646.00†	0.000	89.217	5489.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5746.00†	0.000	89.217	5589.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5846.00†	0.000	89.217	5689.16	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	
5858.24	0.000	89.217	5701.40	-398.41	1013.93	-521.83	40°46'13.749"N	104°00'42.858"W	0.00	End of Tangent
5946.00†	7.898	89.217	5788.88	-392.41	1014.01	-515.79	40°46'13.750"N	104°00'42.779"W	9.00	
6046.00†	16.898	89.217	5886.45	-371.07	1014.31	-494.34	40°46'13.753"N	104°00'42.501"W	9.00	
6146.00†	25.898	89.217	5979.46	-334.83	1014.80	-457.90	40°46'13.758"N	104°00'42.027"W	9.00	
6246.00†	34.898	89.217	6065.62	-284.55	1015.49	-407.35	40°46'13.765"N	104°00'41.370"W	9.00	
6346.00†	43.898	89.217	6142.82	-221.50	1016.36	-343.95	40°46'13.773"N	104°00'40.546"W	9.00	
6446.00†	52.898	89.217	6209.14	-147.20	1017.38	-269.26	40°46'13.784"N	104°00'39.575"W	9.00	
6546.00†	61.898	89.217	6262.97	-63.51	1018.53	-185.11	40°46'13.795"N	104°00'38.481"W	9.00	
6646.00†	70.898	89.217	6302.96	27.53	1019.78	-93.58	40°46'13.807"N	104°00'37.292"W	9.00	
6746.00†	79.898	89.217	6328.15	123.67	1021.10	3.08	40°46'13.820"N	104°00'36.036"W	9.00	
6846.00†	88.898	89.217	6337.90	222.55	1022.46	102.49	40°46'13.834"N	104°00'34.743"W	9.00	
6862.89	90.419	89.217	6338.00[1]	239.35	1022.69	119.38	40°46'13.836"N	104°00'34.524"W	9.00	End of Build
6946.00†	90.419	89.217	6337.39	322.00	1023.83	202.48	40°46'13.847"N	104°00'33.444"W	0.00	
7046.00†	90.419	89.217	6336.66	421.45	1025.19	302.47	40°46'13.861"N	104°00'32.144"W	0.00	
7146.00†	90.419	89.217	6335.93	520.90	1026.56	402.46	40°46'13.874"N	104°00'30.845"W	0.00	
7246.00†	90.419	89.217	6335.20	620.35	1027.92	502.45	40°46'13.888"N	104°00'29.545"W	0.00	
7346.00†	90.419	89.217	6334.47	719.79	1029.29	602.43	40°46'13.901"N	104°00'28.246"W	0.00	
7446.00†	90.419	89.217	6333.74	819.24	1030.66	702.42	40°46'13.915"N	104°00'26.946"W	0.00	
7546.00†	90.419	89.217	6333.01	918.69	1032.02	802.41	40°46'13.928"N	104°00'25.647"W	0.00	
7646.00†	90.419	89.217	6332.28	1018.14	1033.39	902.40	40°46'13.942"N	104°00'24.347"W	0.00	
7746.00†	90.419	89.217	6331.55	1117.59	1034.75	1002.39	40°46'13.955"N	104°00'23.048"W	0.00	
7846.00†	90.419	89.217	6330.82	1217.04	1036.12	1102.37	40°46'13.968"N	104°00'21.748"W	0.00	
7946.00†	90.419	89.217	6330.09	1316.49	1037.49	1202.36	40°46'13.982"N	104°00'20.449"W	0.00	

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-2
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-2 PWB
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
8046.00†	90.419	89.217	6329.36	1415.94	1038.85	1302.35	40°46'13.995"N	104°00'19.149"W	0.00	
8146.00†	90.419	89.217	6328.63	1515.39	1040.22	1402.34	40°46'14.009"N	104°00'17.850"W	0.00	
8246.00†	90.419	89.217	6327.89	1614.84	1041.58	1502.33	40°46'14.022"N	104°00'16.550"W	0.00	
8346.00†	90.419	89.217	6327.16	1714.29	1042.95	1602.31	40°46'14.036"N	104°00'15.250"W	0.00	
8446.00†	90.419	89.217	6326.43	1813.74	1044.32	1702.30	40°46'14.049"N	104°00'13.951"W	0.00	
8546.00†	90.419	89.217	6325.70	1913.19	1045.68	1802.29	40°46'14.063"N	104°00'12.651"W	0.00	
8646.00†	90.419	89.217	6324.97	2012.64	1047.05	1902.28	40°46'14.076"N	104°00'11.352"W	0.00	
8746.00†	90.419	89.217	6324.24	2112.09	1048.41	2002.27	40°46'14.089"N	104°00'10.052"W	0.00	
8846.00†	90.419	89.217	6323.51	2211.54	1049.78	2102.25	40°46'14.103"N	104°00'08.753"W	0.00	
8946.00†	90.419	89.217	6322.78	2310.98	1051.15	2202.24	40°46'14.116"N	104°00'07.453"W	0.00	
9046.00†	90.419	89.217	6322.05	2410.43	1052.51	2302.23	40°46'14.130"N	104°00'06.154"W	0.00	
9146.00†	90.419	89.217	6321.32	2509.88	1053.88	2402.22	40°46'14.143"N	104°00'04.854"W	0.00	
9246.00†	90.419	89.217	6320.59	2609.33	1055.24	2502.21	40°46'14.156"N	104°00'03.555"W	0.00	
9346.00†	90.419	89.217	6319.86	2708.78	1056.61	2602.19	40°46'14.170"N	104°00'02.255"W	0.00	
9446.00†	90.419	89.217	6319.13	2808.23	1057.98	2702.18	40°46'14.183"N	104°00'00.956"W	0.00	
9546.00†	90.419	89.217	6318.40	2907.68	1059.34	2802.17	40°46'14.197"N	103°59'59.656"W	0.00	
9646.00†	90.419	89.217	6317.67	3007.13	1060.71	2902.16	40°46'14.210"N	103°59'58.357"W	0.00	
9746.00†	90.419	89.217	6316.94	3106.58	1062.07	3002.15	40°46'14.223"N	103°59'57.057"W	0.00	
9846.00†	90.419	89.217	6316.20	3206.03	1063.44	3102.13	40°46'14.237"N	103°59'55.757"W	0.00	
9946.00†	90.419	89.217	6315.47	3305.48	1064.81	3202.12	40°46'14.250"N	103°59'54.458"W	0.00	
10046.00†	90.419	89.217	6314.74	3404.93	1066.17	3302.11	40°46'14.263"N	103°59'53.158"W	0.00	
10146.00†	90.419	89.217	6314.01	3504.38	1067.54	3402.10	40°46'14.277"N	103°59'51.859"W	0.00	
10246.00†	90.419	89.217	6313.28	3603.83	1068.91	3502.09	40°46'14.290"N	103°59'50.559"W	0.00	
10346.00†	90.419	89.217	6312.55	3703.28	1070.27	3602.07	40°46'14.304"N	103°59'49.260"W	0.00	
10446.00†	90.419	89.217	6311.82	3802.73	1071.64	3702.06	40°46'14.317"N	103°59'47.960"W	0.00	
10546.00†	90.419	89.217	6311.09	3902.18	1073.00	3802.05	40°46'14.330"N	103°59'46.661"W	0.00	
10646.00†	90.419	89.217	6310.36	4001.62	1074.37	3902.04	40°46'14.344"N	103°59'45.361"W	0.00	
10746.00†	90.419	89.217	6309.63	4101.07	1075.74	4002.03	40°46'14.357"N	103°59'44.062"W	0.00	
10846.00†	90.419	89.217	6308.90	4200.52	1077.10	4102.01	40°46'14.370"N	103°59'42.762"W	0.00	
10946.00†	90.419	89.217	6308.17	4299.97	1078.47	4202.00	40°46'14.384"N	103°59'41.463"W	0.00	

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
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
11046.00†	90.419	89.217	6307.44	4399.42	1079.83	4301.99	40°46'14.397"N	103°59'40.163"W	0.00	
11146.00†	90.419	89.217	6306.71	4498.87	1081.20	4401.98	40°46'14.410"N	103°59'38.863"W	0.00	
11246.00†	90.419	89.217	6305.98	4598.32	1082.57	4501.97	40°46'14.424"N	103°59'37.564"W	0.00	
11346.00†	90.419	89.217	6305.25	4697.77	1083.93	4601.95	40°46'14.437"N	103°59'36.264"W	0.00	
11446.00†	90.419	89.217	6304.51	4797.22	1085.30	4701.94	40°46'14.450"N	103°59'34.965"W	0.00	
11546.00†	90.419	89.217	6303.78	4896.67	1086.66	4801.93	40°46'14.463"N	103°59'33.665"W	0.00	
11646.00†	90.419	89.217	6303.05	4996.12	1088.03	4901.92	40°46'14.477"N	103°59'32.366"W	0.00	
11746.00†	90.419	89.217	6302.32	5095.57	1089.40	5001.91	40°46'14.490"N	103°59'31.066"W	0.00	
11846.00†	90.419	89.217	6301.59	5195.02	1090.76	5101.89	40°46'14.503"N	103°59'29.767"W	0.00	
11946.00†	90.419	89.217	6300.86	5294.47	1092.13	5201.88	40°46'14.517"N	103°59'28.467"W	0.00	
12046.00†	90.419	89.217	6300.13	5393.92	1093.49	5301.87	40°46'14.530"N	103°59'27.168"W	0.00	
12146.00†	90.419	89.217	6299.40	5493.37	1094.86	5401.86	40°46'14.543"N	103°59'25.868"W	0.00	
12246.00†	90.419	89.217	6298.67	5592.81	1096.23	5501.85	40°46'14.557"N	103°59'24.569"W	0.00	
12346.00†	90.419	89.217	6297.94	5692.26	1097.59	5601.83	40°46'14.570"N	103°59'23.269"W	0.00	
12446.00†	90.419	89.217	6297.21	5791.71	1098.96	5701.82	40°46'14.583"N	103°59'21.969"W	0.00	
12546.00†	90.419	89.217	6296.48	5891.16	1100.32	5801.81	40°46'14.596"N	103°59'20.670"W	0.00	
12646.00†	90.419	89.217	6295.75	5990.61	1101.69	5901.80	40°46'14.610"N	103°59'19.370"W	0.00	
12746.00†	90.419	89.217	6295.02	6090.06	1103.06	6001.79	40°46'14.623"N	103°59'18.071"W	0.00	
12846.00†	90.419	89.217	6294.29	6189.51	1104.42	6101.77	40°46'14.636"N	103°59'16.771"W	0.00	
12946.00†	90.419	89.217	6293.55	6288.96	1105.79	6201.76	40°46'14.649"N	103°59'15.472"W	0.00	
13046.00†	90.419	89.217	6292.82	6388.41	1107.15	6301.75	40°46'14.663"N	103°59'14.172"W	0.00	
13146.00†	90.419	89.217	6292.09	6487.86	1108.52	6401.74	40°46'14.676"N	103°59'12.873"W	0.00	
13246.00†	90.419	89.217	6291.36	6587.31	1109.89	6501.73	40°46'14.689"N	103°59'11.573"W	0.00	
13346.00†	90.419	89.217	6290.63	6686.76	1111.25	6601.71	40°46'14.702"N	103°59'10.274"W	0.00	
13446.00†	90.419	89.217	6289.90	6786.21	1112.62	6701.70	40°46'14.716"N	103°59'08.974"W	0.00	
13546.00†	90.419	89.217	6289.17	6885.66	1113.98	6801.69	40°46'14.729"N	103°59'07.674"W	0.00	
13646.00†	90.419	89.217	6288.44	6985.11	1115.35	6901.68	40°46'14.742"N	103°59'06.375"W	0.00	
13746.00†	90.419	89.217	6287.71	7084.56	1116.72	7001.67	40°46'14.755"N	103°59'05.075"W	0.00	
13846.00†	90.419	89.217	6286.98	7184.00	1118.08	7101.65	40°46'14.768"N	103°59'03.776"W	0.00	
13946.00†	90.419	89.217	6286.25	7283.45	1119.45	7201.64	40°46'14.782"N	103°59'02.476"W	0.00	

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
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
14046.00†	90.419	89.217	6285.52	7382.90	1120.82	7301.63	40°46'14.795"N	103°59'01.177"W	0.00	
14146.00†	90.419	89.217	6284.79	7482.35	1122.18	7401.62	40°46'14.808"N	103°58'59.877"W	0.00	
14246.00†	90.419	89.217	6284.06	7581.80	1123.55	7501.61	40°46'14.821"N	103°58'58.578"W	0.00	
14346.00†	90.419	89.217	6283.33	7681.25	1124.91	7601.59	40°46'14.834"N	103°58'57.278"W	0.00	
14446.00†	90.419	89.217	6282.60	7780.70	1126.28	7701.58	40°46'14.848"N	103°58'55.979"W	0.00	
14546.00†	90.419	89.217	6281.86	7880.15	1127.65	7801.57	40°46'14.861"N	103°58'54.679"W	0.00	
14646.00†	90.419	89.217	6281.13	7979.60	1129.01	7901.56	40°46'14.874"N	103°58'53.379"W	0.00	
14746.00†	90.419	89.217	6280.40	8079.05	1130.38	8001.55	40°46'14.887"N	103°58'52.080"W	0.00	
14846.00†	90.419	89.217	6279.67	8178.50	1131.74	8101.53	40°46'14.900"N	103°58'50.780"W	0.00	
14946.00†	90.419	89.217	6278.94	8277.95	1133.11	8201.52	40°46'14.914"N	103°58'49.481"W	0.00	
15046.00†	90.419	89.217	6278.21	8377.40	1134.48	8301.51	40°46'14.927"N	103°58'48.181"W	0.00	
15146.00†	90.419	89.217	6277.48	8476.85	1135.84	8401.50	40°46'14.940"N	103°58'46.882"W	0.00	
15246.00†	90.419	89.217	6276.75	8576.30	1137.21	8501.49	40°46'14.953"N	103°58'45.582"W	0.00	
15346.00†	90.419	89.217	6276.02	8675.75	1138.57	8601.47	40°46'14.966"N	103°58'44.283"W	0.00	
15446.00†	90.419	89.217	6275.29	8775.20	1139.94	8701.46	40°46'14.979"N	103°58'42.983"W	0.00	
15546.00†	90.419	89.217	6274.56	8874.64	1141.31	8801.45	40°46'14.992"N	103°58'41.684"W	0.00	
15646.00†	90.419	89.217	6273.83	8974.09	1142.67	8901.44	40°46'15.006"N	103°58'40.384"W	0.00	
15746.00†	90.419	89.217	6273.10	9073.54	1144.04	9001.43	40°46'15.019"N	103°58'39.085"W	0.00	
15846.00†	90.419	89.217	6272.37	9172.99	1145.40	9101.41	40°46'15.032"N	103°58'37.785"W	0.00	
15946.00†	90.419	89.217	6271.64	9272.44	1146.77	9201.40	40°46'15.045"N	103°58'36.485"W	0.00	
16046.00†	90.419	89.217	6270.91	9371.89	1148.14	9301.39	40°46'15.058"N	103°58'35.186"W	0.00	
16142.55	90.419	89.217	6270.20[2]	9467.91	1149.45	9397.93	40°46'15.071"N	103°58'33.931"W	0.00	End of Tangent
16142.80	90.420	89.212	6270.20	9468.16	1149.46	9398.18	40°46'15.071"N	103°58'33.928"W	2.00	End of 3D Arc (J)
16146.00†	90.420	89.212	6270.17	9471.34	1149.50	9401.38	40°46'15.071"N	103°58'33.886"W	0.00	
16246.00†	90.420	89.212	6269.44	9570.79	1150.88	9501.37	40°46'15.084"N	103°58'32.587"W	0.00	
16346.00†	90.420	89.212	6268.71	9670.24	1152.25	9601.35	40°46'15.098"N	103°58'31.287"W	0.00	
16442.56	90.420	89.212	6268.00[3]	9766.27	1153.58	9697.90	40°46'15.110"N	103°58'30.032"W	0.00	End of Tangent (J)

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	VERDAD RESOURCES	Slot	SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)
Area	COLORADO	Well	TIMBRO 9-59 8A-9-2
Field	WELD COUNTY (NAD83/TN)	Wellbore	TIMBRO 9-59 8A-9-2 PWB
Facility	SEC.08-T09N-R59W		

HOLE & CASING SECTIONS - Ref Wellbore: TIMBRO 9-59 8A-9-2 PWB Ref Wellpath: TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Surface	24.00	2018.00	1994.00	24.00	1983.02	0.00	0.00	300.54	-141.82

TARGETS

Name	MD [ft]	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		18.00	0.00	0.00	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
TIMBRO 9-59 8A-9-2 SECTION 09		18.00	0.00	0.00	3412704.28	1525987.12	40°46'03.731"N	104°00'36.076"W	polygon
3) TIMBRO 9-59 8A-9-2 REV-2 TARGET BOTTOM HOLE (600'FNL&300'FEL,SEC.09)	16442.56	6268.00	1153.58	9697.90	3422381.38	1527303.47	40°46'15.110"N	103°58'30.032"W	point
2) TIMBRO 9-59 8A-9-2 rev-2 ENDING PROD. INTERVAL (603'FNL&600'FEL,SEC.09)	16142.55	6270.20	1149.45	9397.93	3422081.52	1527294.31	40°46'15.071"N	103°58'33.931"W	point
1) TIMBRO 9-59 8A-9-2 rev-2 BEG. PROD. INTERVAL (650'FNL&600'FWL,SEC.08)	6862.89	6338.00	1022.69	119.38	3412806.46	1527011.67	40°46'13.836"N	104°00'34.524"W	point
TIMBRO 9-59 8A-9-2 BEG. PROD. INTERVAL (650'FNL&600'FWL,SEC.08)		7018.00	1022.69	119.38	3412806.46	1527011.67	**40°46'13.836"N**	**104°00'34.524"W**	point
TIMBRO 9-59 8A-9-2 ENDING PROD. INTERVAL (603'FNL&600'FEL,SEC.09)		7018.00	1149.45	9397.92	3422081.52	1527294.31	**40°46'15.071"N**	**103°58'33.931"W**	point
TIMBRO 9-59 8A-9-2 REV-1 TARGET BOTTOM HOLE (600'FNL&300'FEL,SEC.09)		7018.00	1153.58	9697.90	3422381.38	1527303.47	**40°46'15.110"N**	**103°58'30.032"W**	point

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
Facility	**SEC.08-T09N-R59W**		

SURVEY PROGRAM - Ref Wellbore: TIMBRO 9-59 8A-9-2 PWB Ref Wellpath: TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.00	1846.00	BHI NaviTrak (Rotating+Axial Corr)		TIMBRO 9-59 8A-9-2 AWB
1846.00	17090.86	BHI AutoTrak Curve (Axial Corr, Short spacing)		TIMBRO 9-59 8A-9-2 PWB

Planned Wellpath Report

TIMBRO 9-59 8A-9-2 (REV-B.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**VERDAD RESOURCES**	Slot	**SLOT#01 TIMBRO 9-59 8A-9-2(1672'FNL&475'FWL,SEC.08)**
Area	**COLORADO**	Well	**TIMBRO 9-59 8A-9-2**
Field	**WELD COUNTY (NAD83/TN)**	Wellbore	**TIMBRO 9-59 8A-9-2 PWB**
Facility	**SEC.08-T09N-R59W**		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1846.00	12.300	337.820	1815.37	Tie to Surface Surveys

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1846.00	12.300	337.820	1815.37	Tie On
1914.00	12.300	337.820	1881.81	Tangent/Projection
2228.43	18.395	331.846	2184.91	End of 3D Arc (J)
4138.50	18.395	331.846	3997.38	End of Tangent (J)
5058.24	0.000	89.217	4901.40	End of Drop
5858.24	0.000	89.217	5701.40	End of Tangent
6862.89	90.419	89.217	6338.00	End of Build
16142.55	90.419	89.217	6270.20	End of Tangent
16142.80	90.420	89.212	6270.20	End of 3D Arc (J)
16442.56	90.420	89.212	6268.00	End of Tangent (J)