

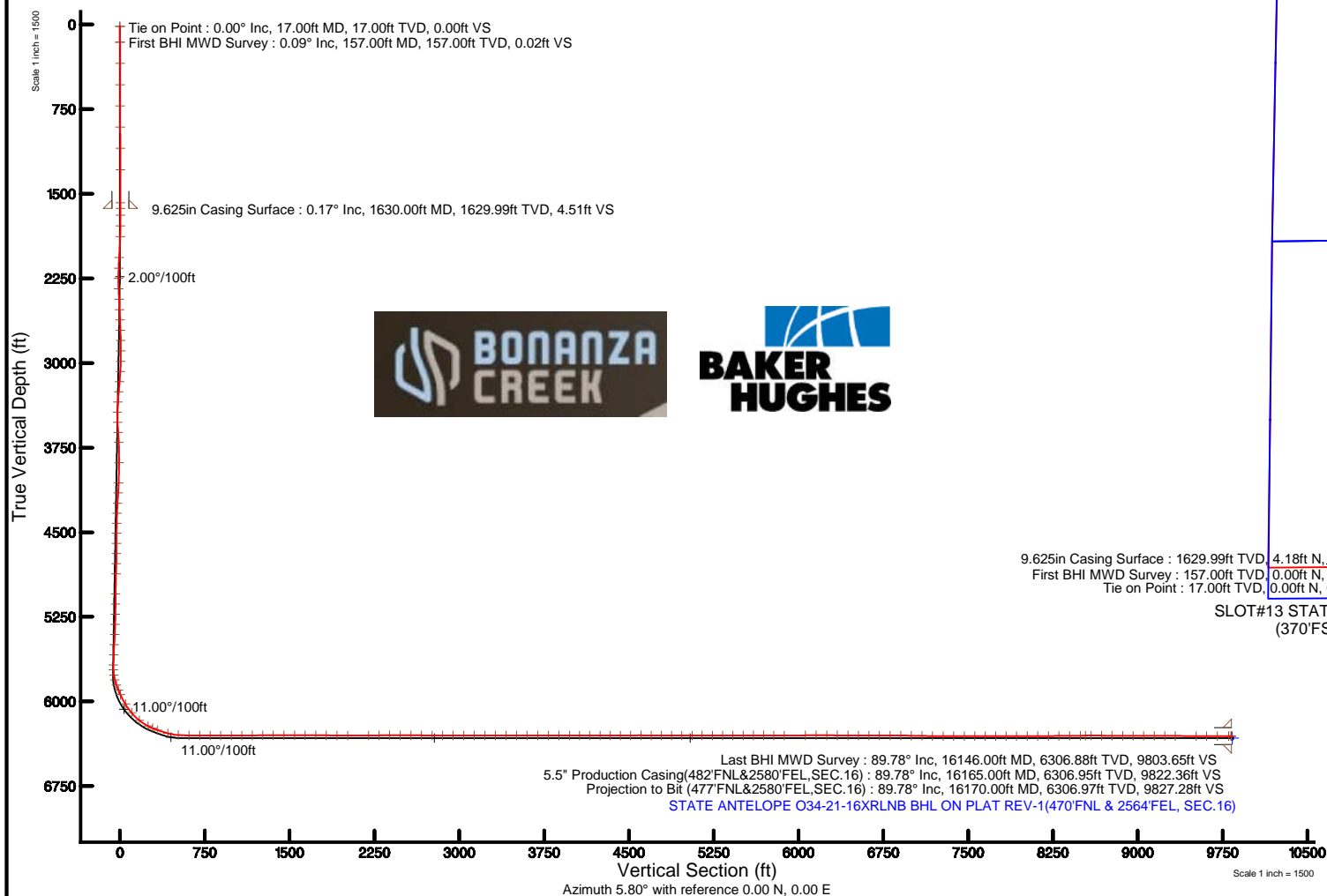
Location:	COLORADO	Slot:	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Field:	WELD COUNTY	Well:	STATE ANTELOPE O34-21-16XRLNB
Facility:	SEC.21-T05N-R62W	Wellbore:	STATE ANTELOPE O34-21-16XRLNB PWB

Location:	COLORADO	Slot:	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Field:	WELD COUNTY	Well:	STATE ANTELOPE O34-21-16XRLNB
Facility:	SEC.21-T05N-R62W	Wellbore:	STATE ANTELOPE O34-21-16XRLNB PWB

Plot reference wellpath is STATE ANTELOPE 034-21-16XRLNB PWP (REV-C.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to XTREME 22 (17KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to XTREME 22 (17KB) (RKB)	North Reference: True north
XTREME 22 (17KB) (RKB) to Mean Sea Level: 4651 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL, SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenater on 2016-05-07
	Database: WA_DEN_Denver_Defn

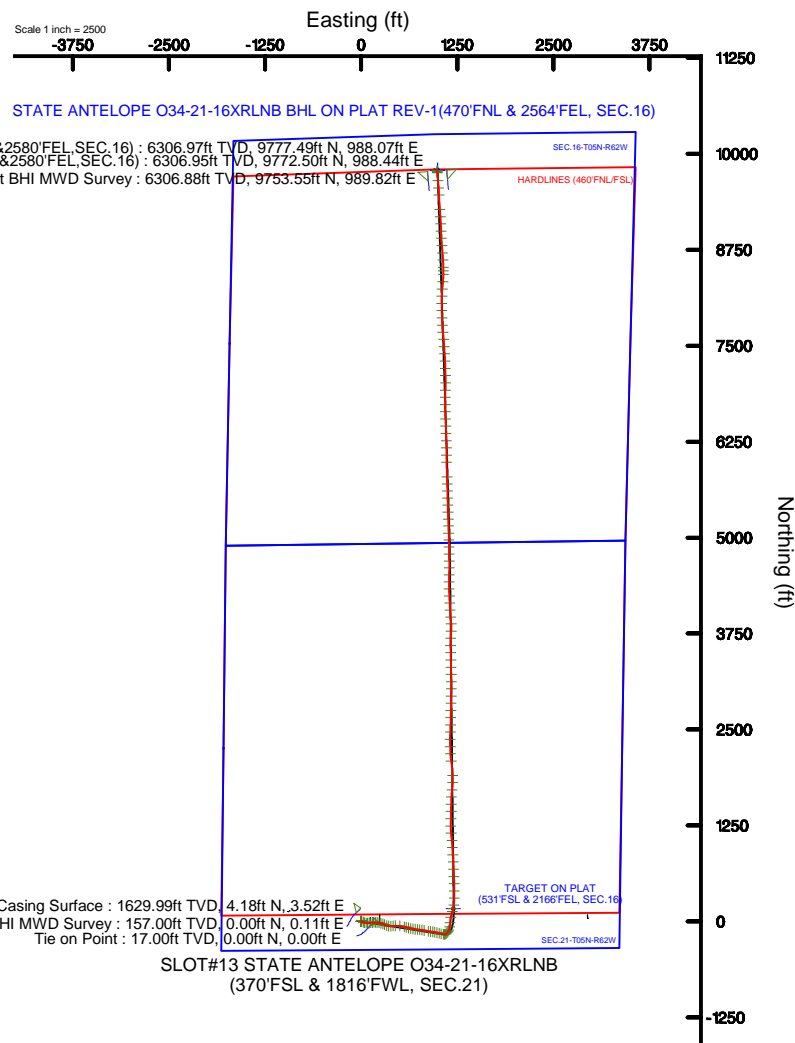
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1600.00	BHI NavTrak	Custom NavTrak (Standard) (Rockies 0.03Gt model)		STATE ANTELOPE 034-21-16XRLNB PWB
1600.00	16217.40	BHI NavTrak	Custom NavTrak (Short spacing) (AT Curve sf 0.01) (Rockies 0.03Gt model)		STATE ANTELOPE 034-21-16XRLNB PWB

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1600.00	BHI NavTrak	Custom NavTrak (Standard) (Rockies 0.03Gt model)		STATE ANTELOPE 034-21-16XRLNB PWB
1600.00	16217.40	BHI NavTrak	Custom NavTrak (Short spacing) (AT Curve sf 0.01) (Rockies 0.03Gt model)		STATE ANTELOPE 034-21-16XRLNB PWB



Facility Name			Grid East (US R)	Grid North (US T)	Latitude	Longitude
SEC 21-T09N-R62W			3324534.181	1383157.077	40°22'45.538"N	104°20'06.259"W
Site	Local N (ft)	Local E (ft)	Grid East (US R)	Grid North (US T)	Latitude	Longitude
SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21)	-129.72	950.60	3325486.360	1383039.864	40°22'44.256"N	104°19'53.976"W
XTREME 22 (17YK) (RKB) to Mud line (At Slot: SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21))					4651ft	
Mean Sea Level to Mud line (At Slot: SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21))					0ft	
XTREME 22 (17YK) (RKB) to Mean Sea Level					4651ft	

Facility Name			Grid East (US R)	Grid North (US T)	Latitude	Longitude
SEC 21-T09N-R62W			3324534.181	1383157.077	40°22'45.538"N	104°20'06.259"W
Site	Local N (ft)	Local E (ft)	Grid East (US R)	Grid North (US T)	Latitude	Longitude
SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21)	-129.72	950.60	3325486.360	1383039.864	40°22'44.256"N	104°19'53.976"W
XTREME 22 (17YK) (RKB) to Mud line (At Slot: SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21))					4651ft	
Mean Sea Level to Mud line (At Slot: SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370FSL & 1816FWL SEC.21))					0ft	
XTREME 22 (17YK) (RKB) to Mean Sea Level					4651ft	



BGGM (1945.0 to 2017.0) Dip: 67.01° Field: 52600.3 nT
Magnetic North is 8.24 degrees East of True North (at 2/23/2016)

To correct azimuth from Magnetic to True add 8.24 degrees



Actual Wellpath Report

STATE ANTELOPE 034-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 034-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 034-21-16XRLNB AWP
Facility	SEC.21-T05N-R62W		

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	0.999959	Report Generated	5/7/2016 at 10:12:47 AM
Convergence at slot	0.76° East	Database/Source file	WA_DEN_Denver_Defn/STATE_ANTELOPE_034-21-16XRLNB_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-129.72	950.60	3325486.36	1383039.86	40°22'44.256"N	104°19'53.976"W
Facility Reference Pt			3324534.18	1383157.08	40°22'45.538"N	104°20'06.259"W
Field Reference Pt			3335925.10	1457282.25	40°34'56.460"N	104°17'26.016"W

WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 22 (17'KB) (RKB) to Facility Vertical Datum	4651.00ft
Horizontal Reference Pt	Slot	XTREME 22 (17'KB) (RKB) to Mean Sea Level	4651.00ft
Vertical Reference Pt	XTREME 22 (17'KB) (RKB)	XTREME 22 (17'KB) (RKB) to Mud Line at Slot (SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21))	4651.00ft
MD Reference Pt	XTREME 22 (17'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	5.80°



Actual Wellpath Report

STATE ANTELOPE O34-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE O34-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-21-16XRLNB AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 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	87.730	0.00	0.00	0.00	0.00	40°22'44.256"N	104°19'53.976"W	0.00	
17.00	0.000	87.730	17.00	0.00	0.00	0.00	40°22'44.256"N	104°19'53.976"W	0.00	Tie on Point
157.00	0.090	87.730	157.00	0.02	0.00	0.11	40°22'44.256"N	104°19'53.975"W	0.06	First BHI MWD Survey
345.00	0.310	359.470	345.00	0.54	0.52	0.25	40°22'44.261"N	104°19'53.973"W	0.17	
534.00	0.220	27.270	534.00	1.39	1.35	0.41	40°22'44.269"N	104°19'53.971"W	0.08	
722.00	0.150	350.070	722.00	1.96	1.92	0.54	40°22'44.275"N	104°19'53.969"W	0.07	
910.00	0.280	69.630	910.00	2.40	2.32	0.93	40°22'44.279"N	104°19'53.964"W	0.16	
1098.00	0.220	22.990	1097.99	2.95	2.81	1.50	40°22'44.284"N	104°19'53.957"W	0.11	
1287.00	0.330	58.040	1286.99	3.63	3.43	2.10	40°22'44.290"N	104°19'53.949"W	0.10	
1579.00	0.230	66.910	1578.99	4.43	4.11	3.35	40°22'44.297"N	104°19'53.933"W	0.04	
1690.00	0.090	70.250	1689.99	4.57	4.22	3.64	40°22'44.298"N	104°19'53.929"W	0.13	
1785.00	0.040	3.630	1784.99	4.64	4.28	3.71	40°22'44.298"N	104°19'53.928"W	0.09	
1879.00	4.140	137.770	1878.91	2.40	1.80	6.00	40°22'44.274"N	104°19'53.899"W	4.43	
2068.00	11.490	112.110	2066.07	-7.47	-10.35	28.06	40°22'44.154"N	104°19'53.613"W	4.21	
2163.00	11.970	106.050	2159.09	-11.88	-16.64	46.29	40°22'44.092"N	104°19'53.378"W	1.39	
2257.00	12.070	96.630	2251.03	-13.75	-20.47	65.42	40°22'44.054"N	104°19'53.131"W	2.09	
2351.00	11.970	85.330	2342.99	-12.12	-20.81	84.90	40°22'44.050"N	104°19'52.879"W	2.50	
2446.00	12.210	80.770	2435.88	-7.73	-18.40	104.64	40°22'44.074"N	104°19'52.624"W	1.04	
2539.00	12.930	83.280	2526.65	-2.92	-15.60	124.68	40°22'44.102"N	104°19'52.365"W	0.97	
2632.00	12.950	87.090	2617.29	0.91	-13.86	145.42	40°22'44.119"N	104°19'52.097"W	0.92	
2727.00	13.000	88.090	2709.87	3.96	-12.96	166.73	40°22'44.128"N	104°19'51.822"W	0.24	
2820.00	12.920	90.810	2800.50	6.27	-12.76	187.58	40°22'44.130"N	104°19'51.552"W	0.66	
2915.00	13.440	95.020	2893.00	7.34	-13.87	209.20	40°22'44.119"N	104°19'51.273"W	1.15	
3009.00	15.030	99.520	2984.11	6.70	-16.85	232.10	40°22'44.090"N	104°19'50.977"W	2.06	
3103.00	17.150	108.340	3074.44	2.90	-23.22	257.29	40°22'44.026"N	104°19'50.652"W	3.44	
3198.00	14.920	111.860	3165.74	-3.52	-32.19	281.94	40°22'43.938"N	104°19'50.333"W	2.56	
3292.00	16.650	114.430	3256.19	-11.17	-42.26	305.43	40°22'43.838"N	104°19'50.029"W	1.98	
3386.00	17.770	110.220	3345.98	-19.05	-52.79	331.15	40°22'43.734"N	104°19'49.697"W	1.78	
3481.00	17.930	98.310	3436.44	-23.30	-59.92	359.24	40°22'43.664"N	104°19'49.334"W	3.84	
3575.00	18.020	87.460	3525.88	-21.82	-61.36	388.09	40°22'43.650"N	104°19'48.961"W	3.56	



Actual Wellpath Report

STATE ANTELOPE O34-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE O34-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3669.00	17.680	82.470	3615.36	-16.42	-58.85	416.76	40°22'43.674"N	104°19'48.591"W	1.67	
3762.00	17.610	87.150	3703.99	-11.05	-56.30	444.82	40°22'43.700"N	104°19'48.228"W	1.53	
3951.00	18.210	97.450	3883.87	-7.60	-58.71	502.67	40°22'43.676"N	104°19'47.481"W	1.70	
4139.00	17.860	103.310	4062.65	-12.21	-69.15	559.85	40°22'43.573"N	104°19'46.742"W	0.98	
4233.00	18.300	105.430	4152.01	-16.56	-76.40	588.11	40°22'43.501"N	104°19'46.377"W	0.84	
4328.00	18.450	106.150	4242.17	-21.75	-84.55	616.92	40°22'43.420"N	104°19'46.005"W	0.29	
4421.00	18.230	102.860	4330.45	-26.19	-91.88	645.24	40°22'43.348"N	104°19'45.639"W	1.14	
4515.00	17.480	100.140	4419.92	-29.06	-97.64	673.47	40°22'43.291"N	104°19'45.274"W	1.19	
4609.00	18.080	96.130	4509.43	-30.21	-101.68	701.88	40°22'43.251"N	104°19'44.907"W	1.45	
4704.00	18.100	94.830	4599.74	-30.05	-104.50	731.24	40°22'43.223"N	104°19'44.527"W	0.43	
4798.00	18.140	99.430	4689.08	-30.73	-108.13	760.22	40°22'43.187"N	104°19'44.153"W	1.52	
4892.00	18.240	100.230	4778.38	-32.79	-113.14	789.14	40°22'43.138"N	104°19'43.779"W	0.29	
4986.00	18.140	100.200	4867.69	-35.05	-118.34	818.02	40°22'43.086"N	104°19'43.406"W	0.11	
5174.00	16.600	97.990	5047.11	-38.32	-127.26	873.42	40°22'42.998"N	104°19'42.690"W	0.89	
5268.00	18.290	97.710	5136.78	-39.32	-131.10	901.33	40°22'42.960"N	104°19'42.330"W	1.80	
5363.00	17.600	99.210	5227.16	-40.67	-135.40	930.28	40°22'42.918"N	104°19'41.956"W	0.87	
5457.00	17.940	101.910	5316.68	-43.06	-140.66	958.48	40°22'42.866"N	104°19'41.591"W	0.95	
5551.00	17.260	104.510	5406.28	-46.71	-147.14	986.14	40°22'42.802"N	104°19'41.234"W	1.11	
5645.00	17.950	104.520	5495.87	-51.01	-154.27	1013.67	40°22'42.731"N	104°19'40.878"W	0.73	
5739.00	16.940	102.720	5585.55	-54.86	-160.92	1041.05	40°22'42.666"N	104°19'40.524"W	1.22	
5833.00	16.280	102.050	5675.63	-57.94	-166.68	1067.29	40°22'42.609"N	104°19'40.185"W	0.73	
5878.00	16.230	90.900	5718.84	-58.09	-168.10	1079.75	40°22'42.595"N	104°19'40.024"W	6.93	
5927.00	17.760	67.920	5765.75	-54.01	-165.39	1093.54	40°22'42.621"N	104°19'39.846"W	13.96	
5972.00	20.370	51.060	5808.31	-45.28	-157.88	1106.00	40°22'42.696"N	104°19'39.685"W	13.48	
6021.00	23.060	41.200	5853.85	-31.44	-145.30	1118.96	40°22'42.820"N	104°19'39.518"W	9.23	
6071.00	25.010	31.920	5899.53	-13.96	-128.95	1131.01	40°22'42.981"N	104°19'39.362"W	8.49	
6116.00	26.350	25.030	5940.09	4.01	-111.82	1140.26	40°22'43.151"N	104°19'39.242"W	7.27	
6210.00	30.920	7.660	6022.71	47.95	-68.89	1152.34	40°22'43.575"N	104°19'39.086"W	10.06	
6305.00	39.780	3.660	6100.13	102.83	-14.25	1157.54	40°22'44.115"N	104°19'39.019"W	9.63	
6400.00	51.380	11.640	6166.56	170.41	52.71	1167.01	40°22'44.777"N	104°19'38.897"W	13.59	



Actual Wellpath Report

STATE ANTELOPE O34-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE O34-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
6493.00	62.530	16.650	6217.22	247.34	128.09	1186.23	40°22'45.521"N	104°19'38.648"W	12.81	
6539.00	67.680	13.750	6236.58	288.49	168.35	1197.14	40°22'45.919"N	104°19'38.507"W	12.57	
6588.00	70.250	7.220	6254.18	334.04	213.29	1205.44	40°22'46.363"N	104°19'38.400"W	13.50	
6682.00	75.220	359.210	6282.11	423.60	302.80	1210.38	40°22'47.248"N	104°19'38.336"W	9.70	
6777.00	86.430	0.070	6297.24	516.69	396.43	1209.80	40°22'48.173"N	104°19'38.343"W	11.83	
6871.00	89.050	359.550	6300.95	610.10	490.35	1209.49	40°22'49.101"N	104°19'38.347"W	2.84	
6966.00	90.150	357.530	6301.61	704.33	585.31	1207.07	40°22'50.040"N	104°19'38.379"W	2.42	
7060.00	89.820	357.540	6301.63	797.35	679.22	1203.03	40°22'50.968"N	104°19'38.431"W	0.35	
7155.00	90.550	355.710	6301.33	891.13	774.05	1197.44	40°22'51.905"N	104°19'38.503"W	2.07	
7249.00	89.850	356.680	6301.00	983.81	867.84	1191.20	40°22'52.831"N	104°19'38.584"W	1.27	
7344.00	90.030	358.030	6301.10	1077.78	962.74	1186.81	40°22'53.769"N	104°19'38.640"W	1.43	
7437.00	90.400	354.710	6300.75	1169.51	1055.54	1180.93	40°22'54.686"N	104°19'38.716"W	3.59	
7532.00	90.430	352.930	6300.06	1262.43	1149.98	1170.70	40°22'55.619"N	104°19'38.848"W	1.87	
7626.00	90.340	359.740	6299.43	1355.09	1243.73	1164.70	40°22'56.546"N	104°19'38.926"W	7.25	
7720.00	90.250	3.460	6298.94	1448.82	1337.68	1167.32	40°22'57.474"N	104°19'38.892"W	3.96	
7815.00	89.940	0.270	6298.79	1543.59	1432.61	1170.41	40°22'58.412"N	104°19'38.852"W	3.37	
7909.00	89.420	0.710	6299.31	1637.18	1526.61	1171.22	40°22'59.341"N	104°19'38.841"W	0.72	
8003.00	89.940	3.260	6299.84	1730.96	1620.54	1174.47	40°23'00.269"N	104°19'38.799"W	2.77	
8097.00	89.510	5.030	6300.29	1824.92	1714.29	1181.27	40°23'01.196"N	104°19'38.711"W	1.94	
8191.00	89.570	3.900	6301.04	1918.89	1808.00	1188.58	40°23'02.122"N	104°19'38.617"W	1.20	
8285.00	89.510	357.920	6301.80	2012.50	1901.95	1190.08	40°23'03.050"N	104°19'38.597"W	6.36	
8474.00	90.520	350.640	6301.75	2197.57	2089.88	1171.25	40°23'04.907"N	104°19'38.841"W	3.89	
8569.00	90.980	358.000	6300.50	2290.59	2184.34	1161.86	40°23'05.841"N	104°19'38.962"W	7.76	
8663.00	89.600	357.970	6300.03	2383.71	2278.27	1158.55	40°23'06.769"N	104°19'39.005"W	1.47	
8757.00	90.090	0.460	6300.28	2477.09	2372.26	1157.26	40°23'07.698"N	104°19'39.021"W	2.70	
8852.00	90.090	2.010	6300.13	2571.78	2467.23	1159.31	40°23'08.636"N	104°19'38.995"W	1.63	
8946.00	89.600	2.280	6300.39	2665.59	2561.17	1162.83	40°23'09.564"N	104°19'38.949"W	0.60	
9040.00	89.480	1.120	6301.14	2759.34	2655.12	1165.62	40°23'10.493"N	104°19'38.913"W	1.24	
9134.00	89.540	0.960	6301.95	2853.02	2749.10	1167.32	40°23'11.421"N	104°19'38.891"W	0.18	
9227.00	89.940	0.930	6302.37	2945.68	2842.09	1168.86	40°23'12.340"N	104°19'38.871"W	0.43	



Actual Wellpath Report

STATE ANTELOPE 034-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 034-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 034-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9321.00	90.120	1.080	6302.32	3039.35	2936.07	1170.51	40°23'13.269"N	104°19'38.850"W	0.25	
9415.00	90.220	1.260	6302.04	3133.04	3030.05	1172.43	40°23'14.198"N	104°19'38.825"W	0.22	
9509.00	90.430	359.510	6301.51	3226.62	3124.04	1173.06	40°23'15.126"N	104°19'38.817"W	1.88	
9603.00	90.310	358.520	6300.90	3319.96	3218.03	1171.44	40°23'16.055"N	104°19'38.837"W	1.06	
9697.00	89.570	358.370	6301.00	3413.18	3311.99	1168.89	40°23'16.984"N	104°19'38.870"W	0.80	
9791.00	89.910	358.540	6301.42	3506.41	3405.96	1166.36	40°23'17.912"N	104°19'38.903"W	0.40	
9885.00	89.720	358.510	6301.73	3599.65	3499.93	1163.94	40°23'18.841"N	104°19'38.934"W	0.20	
9979.00	89.820	359.650	6302.10	3693.00	3593.91	1162.43	40°23'19.770"N	104°19'38.954"W	1.22	
10074.00	89.880	3.340	6302.35	3787.72	3688.86	1164.90	40°23'20.708"N	104°19'38.922"W	3.88	
10168.00	90.520	3.580	6302.03	3881.64	3782.69	1170.58	40°23'21.635"N	104°19'38.848"W	0.73	
10262.00	89.690	356.590	6301.85	3975.11	3876.63	1170.72	40°23'22.563"N	104°19'38.846"W	7.49	
10352.00	89.880	354.240	6302.19	4063.63	3966.33	1163.52	40°23'23.450"N	104°19'38.939"W	2.62	
10444.00	89.880	356.300	6302.38	4154.08	4058.02	1155.94	40°23'24.356"N	104°19'39.037"W	2.24	
10536.00	90.340	357.850	6302.21	4245.01	4149.89	1151.24	40°23'25.264"N	104°19'39.098"W	1.76	
10627.00	90.030	357.910	6301.91	4335.14	4240.83	1147.88	40°23'26.162"N	104°19'39.141"W	0.35	
10718.00	90.120	357.180	6301.79	4425.20	4331.75	1143.98	40°23'27.061"N	104°19'39.192"W	0.81	
10809.00	90.890	1.530	6300.99	4515.59	4422.71	1142.95	40°23'27.960"N	104°19'39.205"W	4.85	
10900.00	89.780	1.170	6300.46	4606.32	4513.69	1145.10	40°23'28.858"N	104°19'39.177"W	1.28	
10991.00	89.720	0.280	6300.86	4696.96	4604.68	1146.25	40°23'29.758"N	104°19'39.162"W	0.98	
11082.00	89.720	359.520	6301.30	4787.47	4695.68	1146.09	40°23'30.657"N	104°19'39.164"W	0.84	
11171.00	89.910	358.840	6301.59	4875.88	4784.67	1144.82	40°23'31.536"N	104°19'39.181"W	0.79	
11263.00	90.310	358.850	6301.41	4967.20	4876.65	1142.96	40°23'32.445"N	104°19'39.204"W	0.43	
11355.00	90.250	358.500	6300.96	5058.49	4968.62	1140.84	40°23'33.354"N	104°19'39.232"W	0.39	
11445.00	89.940	358.080	6300.81	5147.72	5058.58	1138.15	40°23'34.243"N	104°19'39.267"W	0.58	
11537.00	89.820	358.950	6301.01	5238.97	5150.55	1135.77	40°23'35.152"N	104°19'39.297"W	0.95	
11627.00	89.820	357.680	6301.29	5328.20	5240.51	1133.12	40°23'36.041"N	104°19'39.331"W	1.41	
11719.00	90.000	357.320	6301.43	5419.24	5332.42	1129.11	40°23'36.949"N	104°19'39.383"W	0.44	
11811.00	90.650	358.930	6300.91	5510.41	5424.36	1126.10	40°23'37.857"N	104°19'39.422"W	1.89	
11902.00	89.820	358.730	6300.54	5600.74	5515.34	1124.24	40°23'38.756"N	104°19'39.446"W	0.94	
11994.00	89.850	358.940	6300.80	5692.06	5607.32	1122.37	40°23'39.665"N	104°19'39.470"W	0.23	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 034-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 034-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12084.00	89.880	358.160	6301.01	5781.34	5697.29	1120.09	40°23'40.554"N	104°19'39.500"W	0.87	
12178.00	89.850	357.580	6301.24	5874.44	5791.23	1116.60	40°23'41.483"N	104°19'39.545"W	0.62	
12367.00	90.680	358.190	6300.36	6061.63	5980.10	1109.62	40°23'43.349"N	104°19'39.635"W	0.54	
12461.00	89.750	0.620	6300.01	6155.04	6074.08	1108.65	40°23'44.278"N	104°19'39.647"W	2.77	
12556.00	89.880	359.840	6300.32	6249.59	6169.08	1109.03	40°23'45.216"N	104°19'39.642"W	0.83	
12650.00	89.910	357.490	6300.49	6342.85	6263.05	1106.84	40°23'46.145"N	104°19'39.671"W	2.50	
12745.00	89.850	358.060	6300.69	6436.92	6357.98	1103.15	40°23'47.083"N	104°19'39.718"W	0.60	
12839.00	89.880	358.860	6300.91	6530.15	6451.94	1100.62	40°23'48.012"N	104°19'39.751"W	0.85	
12932.00	89.880	357.100	6301.10	6622.28	6544.88	1097.34	40°23'48.930"N	104°19'39.793"W	1.89	
13026.00	90.150	358.540	6301.08	6715.37	6638.81	1093.77	40°23'49.858"N	104°19'39.839"W	1.56	
13121.00	89.880	0.480	6301.05	6809.79	6733.80	1092.96	40°23'50.797"N	104°19'39.850"W	2.06	
13215.00	89.140	1.110	6301.86	6903.43	6827.79	1094.26	40°23'51.726"N	104°19'39.833"W	1.03	
13309.00	89.110	1.030	6303.29	6997.09	6921.76	1096.02	40°23'52.654"N	104°19'39.810"W	0.09	
13403.00	89.110	359.860	6304.75	7090.67	7015.74	1096.75	40°23'53.583"N	104°19'39.801"W	1.24	
13498.00	89.480	359.450	6305.92	7185.12	7110.73	1096.17	40°23'54.522"N	104°19'39.808"W	0.58	
13592.00	89.750	358.200	6306.55	7278.42	7204.71	1094.25	40°23'55.450"N	104°19'39.833"W	1.36	
13686.00	89.850	357.600	6306.88	7371.52	7298.65	1090.80	40°23'56.378"N	104°19'39.877"W	0.65	
13781.00	89.820	355.580	6307.16	7465.29	7393.47	1085.15	40°23'57.315"N	104°19'39.950"W	2.13	
13875.00	90.000	357.360	6307.30	7558.05	7487.29	1079.36	40°23'58.243"N	104°19'40.025"W	1.90	
13969.00	90.220	353.780	6307.12	7650.54	7580.99	1072.10	40°23'59.169"N	104°19'40.119"W	3.82	
14063.00	90.310	354.280	6306.69	7742.56	7674.48	1062.33	40°24'00.092"N	104°19'40.245"W	0.54	
14157.00	90.280	356.970	6306.20	7835.07	7768.20	1055.16	40°24'01.018"N	104°19'40.338"W	2.86	
14251.00	90.120	358.150	6305.88	7928.10	7862.11	1051.16	40°24'01.946"N	104°19'40.389"W	1.27	
14346.00	90.060	0.050	6305.73	8022.44	7957.10	1049.66	40°24'02.885"N	104°19'40.409"W	2.00	
14440.00	90.030	359.720	6305.65	8115.94	8051.09	1049.48	40°24'03.814"N	104°19'40.411"W	0.35	
14534.00	90.090	0.780	6305.55	8209.50	8145.09	1049.89	40°24'04.743"N	104°19'40.406"W	1.13	
14628.00	90.180	4.140	6305.33	8303.33	8238.99	1053.92	40°24'05.671"N	104°19'40.353"W	3.58	
14723.00	90.180	6.750	6305.03	8398.32	8333.55	1062.93	40°24'06.605"N	104°19'40.237"W	2.75	
14818.00	91.450	1.240	6303.68	8493.22	8428.28	1069.55	40°24'07.541"N	104°19'40.151"W	5.95	
14863.00	90.920	359.540	6302.75	8538.01	8473.26	1069.86	40°24'07.986"N	104°19'40.147"W	3.96	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 034-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 034-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (165 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14912.00	89.690	358.240	6302.49	8586.65	8522.25	1068.91	40°24'08.470"N	104°19'40.160"W	3.65	
15006.00	89.750	356.190	6302.95	8679.59	8616.13	1064.34	40°24'09.397"N	104°19'40.219"W	2.18	
15100.00	89.820	355.430	6303.30	8772.16	8709.88	1057.47	40°24'10.324"N	104°19'40.307"W	0.81	
15195.00	89.720	355.540	6303.68	8865.63	8804.59	1049.99	40°24'11.260"N	104°19'40.404"W	0.16	
15289.00	89.940	357.590	6303.96	8958.40	8898.41	1044.36	40°24'12.187"N	104°19'40.477"W	2.19	
15384.00	89.690	357.810	6304.27	9052.45	8993.33	1040.55	40°24'13.125"N	104°19'40.526"W	0.35	
15478.00	89.850	356.250	6304.65	9145.35	9087.20	1035.68	40°24'14.052"N	104°19'40.589"W	1.67	
15572.00	89.910	356.860	6304.84	9238.13	9181.03	1030.03	40°24'14.980"N	104°19'40.662"W	0.65	
15666.00	89.720	355.400	6305.15	9330.79	9274.82	1023.69	40°24'15.906"N	104°19'40.744"W	1.57	
15854.00	89.750	357.730	6306.02	9516.34	9462.46	1012.42	40°24'17.761"N	104°19'40.889"W	1.24	
15948.00	89.880	355.580	6306.32	9609.14	9556.30	1006.94	40°24'18.688"N	104°19'40.960"W	2.29	
16043.00	89.850	354.370	6306.54	9702.44	9650.93	998.62	40°24'19.623"N	104°19'41.067"W	1.27	
16146.00	89.780	355.830	6306.88	9803.65	9753.55	989.82	40°24'20.637"N	104°19'41.181"W	1.42	Last BHI MWD Survey
16165.00†	89.780	355.830	6306.95	9822.36	9772.50	988.44	40°24'20.824"N	104°19'41.199"W	0.00	5.5" Production Casing(482'FNL&2580'FEL,SEC.16)
16170.00	89.780	355.830	6306.97	9827.28	9777.49	988.07	40°24'20.873"N	104°19'41.204"W	0.00	Projection to Bit (477'FNL&2580'FEL,SEC.16)

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE 034-21-16XRLNB AWB Ref Wellpath: STATE ANTELOPE 034-21-16XRLNB AWP

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]
13.5in Open Hole	17.00	1630.00	1613.00	17.00	1629.99	0.00	0.00	4.18	3.52
9.625in Casing Surface	17.00	1630.00	1613.00	17.00	1629.99	0.00	0.00	4.18	3.52
8.75in Open Hole	1630.00	16170.00	14540.00	1629.99	6306.97	4.18	3.52	9777.49	988.07
5.5in Casing Production	17.00	16170.00	16153.00	17.00	6306.97	0.00	0.00	9777.49	988.07



Actual Wellpath Report

STATE ANTELOPE 034-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE 034-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 034-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 034-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.16-T05N-R62W	-7.00	150.50	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon
SEC.21-T05N-R62W	-7.00	150.50	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon
STATE ANTELOPE 034-21-16XRLNB BHL ON PLAT (470'FNL & 2564'FEL, SEC.16)	6322.00	9785.44	994.24	3326351.55	1392837.13	40°24'20.952"N	104°19'41.124"W	point
STATE ANTELOPE 034-21-16XRLNB MID- LATERAL TARGET (2275'FEL, SEC.16/20))	6322.00	4930.06	1151.91	3326573.17	1387984.46	40°23'32.973"N	104°19'39.089"W	point
STATE ANTELOPE 034-21-16XRLNB TARGET ON PLAT (531'FSL & 2166'FEL, SEC.16)	6322.00	167.61	1198.01	3326682.01	1383223.24	40°22'45.912"N	104°19'38.496"W	point
STATE ANTELOPE 034-21-16XRLNB BHL ON PLAT REV-1(470'FNL & 2564'FEL, SEC.16)	6325.00	9785.44	994.24	3326351.55	1392837.13	40°24'20.952"N	104°19'41.124"W	point
STATE ANTELOPE 034-21-16XRLNB MID- LATERAL TARGET REV-1 (2275'FEL, SEC.16/20))	6325.00	4930.06	1151.91	3326573.17	1387984.46	40°23'32.973"N	104°19'39.089"W	point
SEC.16/21-T05N-R62W HARDLINES (460'FNL/FSL)	6397.00	150.50	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: STATE ANTELOPE 034-21-16XRLNB AWB Ref Wellpath: STATE ANTELOPE 034-21-16XRLNB AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1579.00	Custom BHI NaviTrak (Standard Rotating) (Rockies 0.03Gt model)	BHI\Navitrak MWD 13.5' Hole <157'-1579'>	STATE ANTELOPE 034-21-16XRLNB AWB
1579.00	16146.00	Custom NaviTrak (Short spacing) (AT Curve sf 0.01) (Rockies 0.03Gt model)	BHI\Navitrak MWD 8.75" Hole <1690'-16146'>	STATE ANTELOPE 034-21-16XRLNB AWB
16146.00	16170.00	Blind Drilling (std)	Projection to bit	STATE ANTELOPE 034-21-16XRLNB AWB



Actual Wellpath Report

STATE ANTELOPE O34-21-16XRLNB AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#13 STATE ANTELOPE O34-21-16XRLNB (370'FSL & 1816'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE O34-21-16XRLNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-21-16XRLNB AWB
Facility	SEC.21-T05N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	87.730	17.00	Tie on Point
157.00	0.090	87.730	157.00	First BHI MWD Survey
16146.00	89.780	355.830	6306.88	Last BHI MWD Survey
16165.00	89.780	355.830	6306.95	5.5" Production Casing(482'FNL&2580'FEL,SEC.16)
16170.00	89.780	355.830	6306.97	Projection to Bit (477'FNL&2580'FEL,SEC.16)