

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Field: WELD COUNTY Well: STATE ANTELOPE 24-21-16XRLNC
Facility: SEC.21-T05N-R62W Wellbore: STATE ANTELOPE 24-21-16XRLNC PWB

Plot reference wellpath is STATE ANTELOPE 24-21-16XRLNC PWP (REV-B.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#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: guenaler on 2016-05-07
	Database: WA_DEN_Deriver_Defn

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	16272.75	BHI NavTrak	Custom NavTrak (Standard) (Rockies 0.03Gi model)		STATE ANTELOPE 24-21-16XRLNC PWB

Scale 1 inch = 1500
Tie on Point : 0.00° Inc, 17.00ft MD, 17.00ft TVD, 0.00ft VS
First BHI MWD Survey : 0.96° Inc, 157.00ft MD, 156.99ft TVD, -0.56ft VS

9.625in Casing Surface : 0.72° Inc, 1625.00ft MD, 1624.91ft TVD, 1.58ft VS

2.00°/100ft

2.00°/100ft

11.00°/100ft

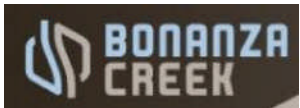
11.00°/100ft

0.00°/100ft

3.00°/100ft

Vertical Section (ft)

Azimuth 2.21° with reference 0.00 N, 0.00 E



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

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.21-T05N-R62W			3324534.181	1383157.077	40°22'45.538"N	104°20'06.259"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389FSL & 1815FWL, SEC.21)	-111.50	950.60	3325486.120	1383058.077	40°22'44.436"N	104°19'53.976"W
XTREME 22 (17KB) (RKB) to Mud line (At Slot: SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389FSL & 1815FWL, SEC.21))					4651ft	
Mean Sea Level to Mud line (At Slot: SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389FSL & 1815FWL, SEC.21))					0ft	
XTREME 22 (17KB) (RKB) to Mean Sea Level					4651ft	

Scale 1 inch = 2500
Easting (ft)
-5000 -2500 0 2500

STATE ANTELOPE 24-21-16XRLNC BHL ON PLAT (470'FNL & 2045'FWL, SEC.16)

Projection to Bit (467'FNL&2037'FWL,SEC.16) : 6382.68ft TVD, 9748.61ft N, 379.08ft E
5.5" Production Casing (473'FNL&2036'FWL,SEC.16) : 6382.98ft TVD, 9742.63ft N, 378.70ft E
Last BHI MWD Survey (: 6385.04ft TVD, 9700.77ft N, 376.00ft E

HARDLINES (460'FNL/FSL)

SEC.16-T05N-R62W

SEC.21-T05N-R62W

Tie on Point : 17.00ft TVD, 0.00ft N, 0.00ft E
First BHI MWD Survey : 156.99ft TVD, 0.60ft S, 1.01ft E
9.625in Casing Surface : 1624.91ft TVD, 1.61ft N, 0.75ft W

SLOT#12 STATE ANTELOPE 24-21-16XRLNC
(389'FSL & 1815'FWL, SEC.21)

Last BHI MWD Survey (: 92.81° Inc, 16220.00ft MD, 6385.04ft TVD, 9708.05ft VS
5.5" Production Casing (473'FNL&2036'FWL,SEC.16) : 92.81° Inc, 16262.00ft MD, 6382.98ft TVD, 9749.99ft VS
Projection to Bit (467'FNL&2037'FWL,SEC.16) : 92.81° Inc, 16268.00ft MD, 6382.68ft TVD, 9755.98ft VS
STATE ANTELOPE 24-21-16XRLNC BHL ON PLAT (470'FNL & 2045'FWL, SEC.16)

Scale 1 inch = 1500



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC 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 10:33:35 AM
Convergence at slot	0.76° East	Database/Source file	WA_DEN_Denver_Defn/STATE_ANTELOPE_24-21-16XRLNC_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-111.50	950.60	3325486.12	1383058.08	40°22'44.436"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#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'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	2.21°



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Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (149 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	120.880	0.00	0.00	0.00	0.00	40°22'44.436"N	104°19'53.976"W	0.00	
17.00	0.000	120.880	17.00	0.00	0.00	0.00	40°22'44.436"N	104°19'53.976"W	0.00	Tie on Point
157.00	0.960	120.880	156.99	-0.56	-0.60	1.01	40°22'44.430"N	104°19'53.963"W	0.69	First BHI MWD Survey
345.00	0.340	75.450	344.98	-1.16	-1.27	2.90	40°22'44.423"N	104°19'53.939"W	0.40	
534.00	0.590	71.920	533.97	-0.66	-0.83	4.37	40°22'44.428"N	104°19'53.920"W	0.13	
628.00	0.830	337.000	627.97	0.13	-0.05	4.56	40°22'44.436"N	104°19'53.917"W	1.13	
816.00	0.750	349.710	815.95	2.56	2.41	3.81	40°22'44.460"N	104°19'53.927"W	0.10	
1004.00	0.630	27.250	1003.94	4.70	4.54	4.06	40°22'44.481"N	104°19'53.924"W	0.24	
1098.00	0.370	232.260	1097.94	4.97	4.82	4.06	40°22'44.484"N	104°19'53.924"W	1.04	
1287.00	0.720	231.550	1286.93	3.80	3.70	2.65	40°22'44.473"N	104°19'53.942"W	0.19	
1579.00	0.640	244.620	1578.91	1.85	1.87	-0.26	40°22'44.454"N	104°19'53.979"W	0.06	
1748.00	0.960	229.490	1747.89	0.46	0.54	-2.19	40°22'44.441"N	104°19'54.004"W	0.23	
1938.00	0.860	215.630	1937.87	-1.81	-1.65	-4.23	40°22'44.420"N	104°19'54.031"W	0.13	
2127.00	0.430	28.180	2126.86	-2.36	-2.18	-4.73	40°22'44.414"N	104°19'54.037"W	0.68	
2315.00	0.560	69.550	2314.86	-1.37	-1.24	-3.53	40°22'44.424"N	104°19'54.022"W	0.20	
2502.00	1.200	61.350	2501.83	-0.02	0.02	-0.96	40°22'44.436"N	104°19'53.988"W	0.35	
2690.00	9.080	136.070	2689.01	-9.30	-9.74	11.09	40°22'44.340"N	104°19'53.833"W	4.70	
2879.00	7.970	130.420	2875.92	-27.74	-28.97	31.41	40°22'44.150"N	104°19'53.570"W	0.74	
2973.00	9.750	142.300	2968.80	-37.88	-39.50	41.24	40°22'44.046"N	104°19'53.443"W	2.71	
3067.00	11.080	164.310	3061.29	-52.59	-54.50	48.55	40°22'43.897"N	104°19'53.349"W	4.43	
3256.00	11.690	157.480	3246.58	-87.26	-89.67	60.80	40°22'43.550"N	104°19'53.190"W	0.78	
3444.00	11.300	156.770	3430.80	-121.20	-124.19	75.36	40°22'43.209"N	104°19'53.002"W	0.22	
3632.00	11.950	155.730	3614.95	-155.25	-158.86	90.62	40°22'42.866"N	104°19'52.805"W	0.36	
3820.00	11.560	155.060	3799.00	-189.44	-193.69	106.57	40°22'42.522"N	104°19'52.599"W	0.22	
4008.00	10.270	154.190	3983.60	-220.99	-225.85	121.81	40°22'42.204"N	104°19'52.402"W	0.69	
4291.00	9.990	141.480	4262.22	-261.87	-267.78	148.08	40°22'41.790"N	104°19'52.063"W	0.79	
4479.00	9.430	141.920	4447.53	-285.98	-292.66	167.74	40°22'41.544"N	104°19'51.809"W	0.30	
4573.00	8.950	142.850	4540.32	-297.50	-304.55	176.90	40°22'41.427"N	104°19'51.690"W	0.53	
4667.00	7.660	147.990	4633.34	-308.34	-315.69	184.64	40°22'41.316"N	104°19'51.590"W	1.58	
4856.00	2.330	164.180	4821.56	-322.42	-330.08	192.37	40°22'41.174"N	104°19'51.490"W	2.89	



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Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5044.00	1.820	336.550	5009.51	-323.36	-331.02	192.22	40°22'41.165"N	104°19'51.492"W	2.20	
5232.00	1.060	176.440	5197.49	-322.40	-330.01	191.14	40°22'41.175"N	104°19'51.506"W	1.51	
5351.00	1.240	137.800	5316.47	-324.42	-332.06	192.07	40°22'41.155"N	104°19'51.494"W	0.66	
5445.00	1.360	129.350	5410.44	-325.82	-333.53	193.62	40°22'41.140"N	104°19'51.474"W	0.24	
5634.00	0.250	180.720	5599.42	-327.58	-335.36	195.35	40°22'41.122"N	104°19'51.452"W	0.65	
5822.00	0.730	129.030	5787.41	-328.71	-336.52	196.28	40°22'41.111"N	104°19'51.440"W	0.32	
5915.00	7.020	354.730	5880.20	-323.42	-331.23	196.21	40°22'41.163"N	104°19'51.441"W	8.12	
6010.00	14.500	357.390	5973.46	-305.79	-313.54	195.14	40°22'41.338"N	104°19'51.455"W	7.89	
6104.00	23.210	357.770	6062.33	-275.54	-283.22	193.88	40°22'41.637"N	104°19'51.471"W	9.27	
6199.00	37.160	0.230	6144.25	-227.96	-235.59	193.26	40°22'42.108"N	104°19'51.479"W	14.74	
6294.00	44.880	0.410	6215.87	-165.69	-173.28	193.62	40°22'42.724"N	104°19'51.474"W	8.13	
6388.00	56.030	359.910	6275.63	-93.37	-100.91	193.79	40°22'43.439"N	104°19'51.472"W	11.87	
6482.00	64.990	0.880	6321.85	-11.67	-19.18	194.39	40°22'44.246"N	104°19'51.464"W	9.57	
6530.00	69.150	0.580	6340.55	32.51	25.02	194.95	40°22'44.683"N	104°19'51.457"W	8.69	
6576.00	69.560	0.160	6356.77	75.53	68.06	195.23	40°22'45.109"N	104°19'51.453"W	1.23	
6671.00	77.470	0.390	6383.70	166.50	159.08	195.67	40°22'46.008"N	104°19'51.448"W	8.33	
6765.00	90.770	2.640	6393.31	259.79	252.34	198.16	40°22'46.930"N	104°19'51.416"W	14.35	
6859.00	88.800	0.910	6393.67	353.78	346.28	201.07	40°22'47.858"N	104°19'51.378"W	2.79	
6954.00	89.690	1.010	6394.92	448.74	441.26	202.66	40°22'48.796"N	104°19'51.357"W	0.94	
7049.00	90.370	0.160	6394.87	543.70	536.26	203.63	40°22'49.735"N	104°19'51.345"W	1.15	
7143.00	91.140	0.350	6393.63	637.64	630.25	204.05	40°22'50.664"N	104°19'51.339"W	0.84	
7237.00	90.980	1.730	6391.89	731.60	724.21	205.75	40°22'51.592"N	104°19'51.317"W	1.48	
7332.00	90.490	1.200	6390.67	826.59	819.17	208.18	40°22'52.531"N	104°19'51.286"W	0.76	
7426.00	89.780	1.820	6390.45	920.58	913.14	210.66	40°22'53.459"N	104°19'51.254"W	1.00	
7520.00	91.020	1.150	6389.79	1014.57	1007.10	213.09	40°22'54.388"N	104°19'51.222"W	1.50	
7614.00	89.750	359.720	6389.16	1108.51	1101.09	213.81	40°22'55.317"N	104°19'51.213"W	2.03	
7708.00	91.290	359.830	6388.31	1202.42	1195.09	213.44	40°22'56.245"N	104°19'51.218"W	1.64	
7803.00	90.060	359.220	6387.19	1297.31	1290.07	212.65	40°22'57.184"N	104°19'51.228"W	1.45	
7897.00	90.280	358.220	6386.91	1391.13	1384.05	210.55	40°22'58.113"N	104°19'51.255"W	1.09	
7992.00	89.910	356.370	6386.75	1485.78	1478.94	206.07	40°22'59.050"N	104°19'51.313"W	1.99	



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Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8086.00	89.110	356.680	6387.56	1579.31	1572.76	200.37	40°22'59.977"N	104°19'51.387"W	0.91	
8179.00	93.390	359.710	6385.53	1672.03	1665.66	197.44	40°23'00.895"N	104°19'51.425"W	5.64	
8273.00	92.160	359.820	6380.98	1765.83	1759.55	197.06	40°23'01.823"N	104°19'51.430"W	1.31	
8368.00	90.370	359.960	6378.88	1860.73	1854.52	196.87	40°23'02.762"N	104°19'51.432"W	1.89	
8463.00	89.750	0.050	6378.78	1955.66	1949.52	196.88	40°23'03.700"N	104°19'51.432"W	0.66	
8557.00	90.460	2.200	6378.61	2049.64	2043.49	198.73	40°23'04.629"N	104°19'51.408"W	2.41	
8652.00	89.540	3.280	6378.61	2144.63	2138.38	203.27	40°23'05.567"N	104°19'51.349"W	1.49	
8746.00	90.860	4.120	6378.28	2238.59	2232.18	209.33	40°23'06.494"N	104°19'51.271"W	1.66	
8840.00	89.570	1.240	6377.93	2332.58	2326.07	213.73	40°23'07.421"N	104°19'51.214"W	3.36	
8935.00	88.710	1.510	6379.35	2427.56	2421.03	216.01	40°23'08.360"N	104°19'51.185"W	0.95	
9028.00	89.380	1.570	6380.90	2520.54	2513.98	218.51	40°23'09.278"N	104°19'51.152"W	0.72	
9122.00	90.180	1.530	6381.27	2614.53	2607.95	221.05	40°23'10.207"N	104°19'51.119"W	0.85	
9216.00	91.760	359.450	6379.67	2708.46	2701.92	221.85	40°23'11.135"N	104°19'51.109"W	2.78	
9309.00	89.540	358.680	6378.62	2801.31	2794.90	220.34	40°23'12.054"N	104°19'51.129"W	2.53	
9403.00	89.940	358.570	6379.05	2895.13	2888.87	218.08	40°23'12.983"N	104°19'51.158"W	0.44	
9497.00	88.800	357.830	6380.08	2988.89	2982.81	215.13	40°23'13.911"N	104°19'51.196"W	1.45	
9591.00	89.200	0.490	6381.72	3082.73	3076.78	213.75	40°23'14.840"N	104°19'51.214"W	2.86	
9686.00	90.490	0.620	6381.98	3177.69	3171.77	214.67	40°23'15.778"N	104°19'51.202"W	1.36	
9779.00	89.230	359.270	6382.20	3270.61	3264.77	214.58	40°23'16.697"N	104°19'51.203"W	1.99	
9873.00	90.180	359.210	6382.69	3364.49	3358.76	213.34	40°23'17.626"N	104°19'51.219"W	1.01	
9968.00	89.750	355.260	6382.75	3459.11	3453.63	208.75	40°23'18.564"N	104°19'51.278"W	4.18	
10062.00	93.520	355.180	6380.07	3552.36	3547.25	200.93	40°23'19.489"N	104°19'51.379"W	4.01	
10156.00	91.510	359.250	6375.94	3645.88	3641.02	196.37	40°23'20.415"N	104°19'51.438"W	4.83	
10250.00	90.370	0.650	6374.40	3739.80	3735.01	196.28	40°23'21.344"N	104°19'51.439"W	1.92	
10341.00	90.830	1.020	6373.44	3830.76	3825.99	197.61	40°23'22.243"N	104°19'51.422"W	0.65	
10433.00	89.450	1.080	6373.22	3922.74	3917.97	199.30	40°23'23.152"N	104°19'51.400"W	1.50	
10524.00	89.970	1.750	6373.68	4013.73	4008.94	201.54	40°23'24.051"N	104°19'51.371"W	0.93	
10615.00	90.680	1.180	6373.16	4104.72	4099.91	203.87	40°23'24.950"N	104°19'51.341"W	1.00	
10706.00	89.410	2.300	6373.09	4195.72	4190.87	206.63	40°23'25.849"N	104°19'51.306"W	1.86	
10797.00	91.020	1.740	6372.75	4286.71	4281.80	209.84	40°23'26.747"N	104°19'51.264"W	1.87	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10888.00	91.110	358.910	6371.06	4377.64	4372.78	210.36	40°23'27.646"N	104°19'51.257"W	3.11	
10979.00	90.180	1.130	6370.03	4468.56	4463.77	210.39	40°23'28.545"N	104°19'51.257"W	2.64	
11070.00	90.090	0.870	6369.82	4559.54	4554.75	211.98	40°23'29.444"N	104°19'51.236"W	0.30	
11159.00	89.320	1.270	6370.28	4648.52	4643.73	213.64	40°23'30.324"N	104°19'51.215"W	0.97	
11251.00	88.680	2.260	6371.88	4740.50	4735.68	216.47	40°23'31.232"N	104°19'51.178"W	1.28	
11343.00	89.750	2.460	6373.14	4832.49	4827.59	220.26	40°23'32.141"N	104°19'51.129"W	1.18	
11433.00	91.540	2.470	6372.13	4922.48	4917.49	224.13	40°23'33.029"N	104°19'51.079"W	1.99	
11525.00	89.540	3.010	6371.26	5014.47	5009.38	228.53	40°23'33.937"N	104°19'51.023"W	2.25	
11615.00	90.960	3.570	6370.87	5104.45	5099.23	233.69	40°23'34.825"N	104°19'50.956"W	1.70	
11707.00	89.450	2.840	6370.54	5196.43	5191.08	238.84	40°23'35.732"N	104°19'50.889"W	1.82	
11799.00	91.170	2.740	6370.04	5288.42	5282.97	243.31	40°23'36.640"N	104°19'50.831"W	1.87	
11891.00	88.650	0.470	6370.19	5380.40	5374.92	245.89	40°23'37.549"N	104°19'50.798"W	3.69	
11983.00	89.630	0.030	6371.57	5472.33	5466.90	246.29	40°23'38.458"N	104°19'50.793"W	1.17	
12073.00	90.400	359.630	6371.55	5562.26	5556.90	246.02	40°23'39.347"N	104°19'50.796"W	0.96	
12166.00	88.060	0.530	6372.80	5655.18	5649.89	246.15	40°23'40.266"N	104°19'50.795"W	2.70	
12261.00	89.540	1.100	6374.79	5750.12	5744.85	247.51	40°23'41.205"N	104°19'50.777"W	1.67	
12355.00	88.490	2.290	6376.40	5844.10	5838.80	250.29	40°23'42.133"N	104°19'50.741"W	1.69	
12450.00	89.820	2.590	6377.80	5939.09	5933.70	254.33	40°23'43.071"N	104°19'50.689"W	1.44	
12544.00	91.630	2.310	6376.61	6033.08	6027.60	258.35	40°23'43.999"N	104°19'50.637"W	1.95	
12639.00	89.940	0.810	6375.31	6128.06	6122.55	260.93	40°23'44.937"N	104°19'50.604"W	2.38	
12733.00	88.430	2.000	6376.65	6222.03	6216.51	263.24	40°23'45.865"N	104°19'50.574"W	2.05	
12827.00	89.940	2.960	6377.99	6316.02	6310.41	267.30	40°23'46.793"N	104°19'50.521"W	1.90	
12921.00	88.430	2.610	6379.32	6410.00	6404.28	271.87	40°23'47.721"N	104°19'50.462"W	1.65	
13015.00	89.880	2.490	6380.71	6503.99	6498.18	276.05	40°23'48.649"N	104°19'50.408"W	1.55	
13109.00	88.520	0.920	6382.02	6597.97	6592.12	278.85	40°23'49.577"N	104°19'50.372"W	2.21	
13204.00	89.940	1.150	6383.30	6692.94	6687.09	280.56	40°23'50.516"N	104°19'50.350"W	1.51	
13298.00	91.200	0.620	6382.36	6786.91	6781.08	282.02	40°23'51.444"N	104°19'50.331"W	1.45	
13391.00	89.480	1.300	6381.81	6879.88	6874.06	283.57	40°23'52.363"N	104°19'50.311"W	1.99	
13486.00	90.800	1.610	6381.58	6974.87	6969.02	285.99	40°23'53.301"N	104°19'50.280"W	1.43	
13581.00	88.280	1.910	6382.34	7069.85	7063.97	288.90	40°23'54.240"N	104°19'50.242"W	2.67	



Actual Wellpath Report

STATE ANTELOPE 24-21-16XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWP
Facility	SEC.21-T05N-R62W		

WELLPATH DATA (149 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13675.00	89.540	2.030	6384.13	7163.83	7157.89	292.13	40°23'55.168"N	104°19'50.200"W	1.35	
13769.00	91.010	1.330	6383.68	7257.83	7251.85	294.89	40°23'56.096"N	104°19'50.164"W	1.73	
13863.00	88.490	359.870	6384.09	7351.78	7345.83	295.87	40°23'57.025"N	104°19'50.152"W	3.10	
13957.00	89.170	0.470	6386.01	7445.70	7439.81	296.15	40°23'57.954"N	104°19'50.148"W	0.96	
14051.00	88.890	2.730	6387.60	7539.67	7533.76	298.78	40°23'58.882"N	104°19'50.114"W	2.42	
14145.00	90.550	2.620	6388.06	7633.67	7627.65	303.16	40°23'59.810"N	104°19'50.057"W	1.77	
14239.00	91.790	2.450	6386.14	7727.64	7721.54	307.32	40°24'00.737"N	104°19'50.004"W	1.33	
14334.00	89.350	3.310	6385.19	7822.62	7816.40	312.09	40°24'01.675"N	104°19'49.942"W	2.72	
14428.00	90.550	3.880	6385.28	7916.59	7910.22	317.99	40°24'02.602"N	104°19'49.866"W	1.41	
14523.00	89.630	1.020	6385.13	8011.58	8005.12	322.05	40°24'03.540"N	104°19'49.813"W	3.16	
14617.00	90.520	1.070	6385.00	8105.56	8099.10	323.76	40°24'04.468"N	104°19'49.791"W	0.95	
14712.00	88.460	1.210	6385.85	8200.54	8194.07	325.65	40°24'05.407"N	104°19'49.767"W	2.17	
14806.00	89.750	0.750	6387.32	8294.50	8288.05	327.26	40°24'06.336"N	104°19'49.746"W	1.46	
14900.00	90.770	0.180	6386.89	8388.46	8382.04	328.02	40°24'07.264"N	104°19'49.736"W	1.24	
14994.00	90.370	1.220	6385.96	8482.42	8476.03	329.17	40°24'08.193"N	104°19'49.721"W	1.19	
15088.00	88.740	1.310	6386.69	8576.40	8570.00	331.25	40°24'09.122"N	104°19'49.694"W	1.74	
15183.00	90.090	1.590	6387.66	8671.38	8664.96	333.65	40°24'10.060"N	104°19'49.663"W	1.45	
15277.00	91.660	0.690	6386.22	8765.35	8758.93	335.52	40°24'10.989"N	104°19'49.639"W	1.93	
15372.00	89.850	1.810	6384.97	8860.32	8853.89	337.59	40°24'11.927"N	104°19'49.612"W	2.24	
15466.00	87.940	1.880	6386.78	8954.30	8947.82	340.62	40°24'12.855"N	104°19'49.573"W	2.03	
15560.00	89.350	1.670	6389.00	9048.27	9041.75	343.53	40°24'13.783"N	104°19'49.536"W	1.52	
15654.00	90.740	0.960	6388.93	9142.25	9135.72	345.69	40°24'14.712"N	104°19'49.508"W	1.66	
15748.00	88.650	2.880	6389.43	9236.24	9229.66	348.83	40°24'15.640"N	104°19'49.467"W	3.02	
15843.00	89.940	2.670	6390.60	9331.23	9324.53	353.43	40°24'16.578"N	104°19'49.407"W	1.38	
15937.00	91.380	2.970	6389.52	9425.21	9418.41	358.06	40°24'17.505"N	104°19'49.348"W	1.56	
16031.00	89.480	3.820	6388.81	9519.19	9512.24	363.62	40°24'18.433"N	104°19'49.276"W	2.21	
16220.00	92.810	3.690	6385.04	9708.05	9700.77	376.00	40°24'20.296"N	104°19'49.116"W	1.76	Last BHI MWD Survey (
16262.00†	92.810	3.690	6382.98	9749.99	9742.63	378.70	40°24'20.709"N	104°19'49.081"W	0.00	5.5" Production Casing (473'FNL&2036'FWL, SEC.16)
16268.00	92.810	3.690	6382.68	9755.98	9748.61	379.08	40°24'20.768"N	104°19'49.076"W	0.00	Projection to Bit (467'FNL&2037'FWL, SEC.16)

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE 24-21-16XRLNC AWP Ref Wellpath: STATE ANTELOPE 24-21-16XRLNC 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	1635.00	1618.00	17.00	1634.90	0.00	0.00	1.54	-0.85
9.625in Casing Surface	17.00	1625.00	1608.00	17.00	1624.91	0.00	0.00	1.61	-0.75
8.75in Open Hole	1635.00	16268.00	14633.00	1634.90	6382.68	1.54	-0.85	9748.61	379.08
5.5in Casing Production	17.00	16268.00	16251.00	17.00	6382.68	0.00	0.00	9748.61	379.08

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	132.28	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon
SEC.21-T05N-R62W	-7.00	132.28	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon
SEC.16/21-T05N-R62W HARDLINES (460'FNL/FSL)	6397.00	132.28	-894.33	3324590.16	1383178.56	40°22'45.743"N	104°20'05.532"W	polygon
STATE ANTELOPE 24-21-16XRLNC BHL ON PLAT (470'FNL & 2045'FWL, SEC.16)	6397.00	9748.99	375.97	3325733.60	1392810.76	40°24'20.772"N	104°19'49.116"W	point
STATE ANTELOPE 24-21-16XRLNC MID LATERAL TARGET (1991'FWL, SEC.16/21)	6397.00	4904.00	231.74	3325653.22	1387964.50	40°23'32.896"N	104°19'50.981"W	point
STATE ANTELOPE 24-21-16XRLNC TARGET ON PLAT (531'FSL & 2011'FWL, SEC.21)	6397.00	142.08	197.81	3325682.03	1383202.75	40°22'45.840"N	104°19'51.420"W	point



Actual Wellpath Report

STATE ANTELOPE 24-21-16XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWB
Facility	SEC.21-T05N-R62W		

WELLPATH COMPOSITION - Ref Wellbore: STATE ANTELOPE 24-21-16XRLNC AWB				Ref Wellpath: STATE ANTELOPE 24-21-16XRLNC AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1579.00	Custom NaviTrak (MagCorr) (Rockies 0.03Gt model)	BHI MWD/NAVITRAK (MAGCORR) 13.5" HOLE <157-1579>	STATE ANTELOPE 24-21-16XRLNC AWB
1579.00	16220.00	Custom NaviTrak (MagCorr) (Rockies 0.03Gt model)	BHI MWD/NAVITRAK (MAGCORR) 8.75" HOLE <1748-16220>	STATE ANTELOPE 24-21-16XRLNC AWB
16220.00	16268.00	Blind Drilling (std)	Projection to bit	STATE ANTELOPE 24-21-16XRLNC AWB



Actual Wellpath Report

STATE ANTELOPE 24-21-16XRLNC AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE 24-21-16XRLNC (389'FSL & 1815'FWL, SEC.21)
Area	COLORADO	Well	STATE ANTELOPE 24-21-16XRLNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE 24-21-16XRLNC AWB
Facility	SEC.21-T05N-R62W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	120.880	17.00	Tie on Point
157.00	0.960	120.880	156.99	First BHI MWD Survey
16220.00	92.810	3.690	6385.04	Last BHI MWD Survey (
16262.00	92.810	3.690	6382.98	5.5" Production Casing (473'FNL&2036'FWL,SEC.16)
16268.00	92.810	3.690	6382.68	Projection to Bit (467'FNL&2037'FWL,SEC.16)