

BONANZA CREEK ENERGY

Location: COLORADO Slot: SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)
Field: WELD COUNTY (NAD83/TRUE) Well: STATE ANTELOPE O24-K21-31HNC
Facility: SEC.31-T05N-R62W Wellbore: STATE ANTELOPE O24-K21-31HNC PWB

Plot reference wellpath is STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501'), US feet
True vertical depths are referenced to RIG (17') (RKB)	North Reference: True north
Reference wellpath measured depths are referenced to RIG (17') (RKB)	Scale: True distance
RIG (17') (RKB) to Mean Sea Level: 4569 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by robiate01 on 2019-12-20; Database: WA_DENVER

Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.31-T05N-R62W				3317947.515	1376496.776	40°21'40.5720"N	104°21'32.4720"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)	-3907.50	-1956.65	3316041.382	1372564.590	40°21'1.9584"N	104°21'57.7440"W	
RIG (17') (RKB) to Ground level (At Slot: SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31))						4569ft	
Mean Sea Level to Ground level (At Slot: SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31))						0ft	
RIG (17') (RKB) to Mean Sea Level						4569ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1600.02	BH NavTrak (superseded model)	BH NavTrak (Rotating+Axial Corr)		STATE ANTELOPE O24-K21-31HNC PWB
1600.02	12021.27	BH AutoTrak Curve (superseded model)	BH AutoTrak Curve (Short)		STATE ANTELOPE O24-K21-31HNC PWB

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.06-T4N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W
SEC.30-T5N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W
SEC.31-T5N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W
SEC.05-T4N-R62W	N/A	16.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W
STATE ANTELOPE O24-K21-31HNC BHL (30'FSL & 2257'FWL, SEC.30)	12021.27	6347.00	4669.97	-421.61	3315560.11	1377228.59	40°21'48.1057"N	104°22'3.1905"W
STATE ANTELOPE O24-K21-31HNC LP (10'FSL & 2310'FWL, SEC.31)	6835.11	6347.00	-515.92	-368.61	3315679.42	1372044.02	40°20'56.8602"N	104°22'2.5048"W

Hole and Casing Sections

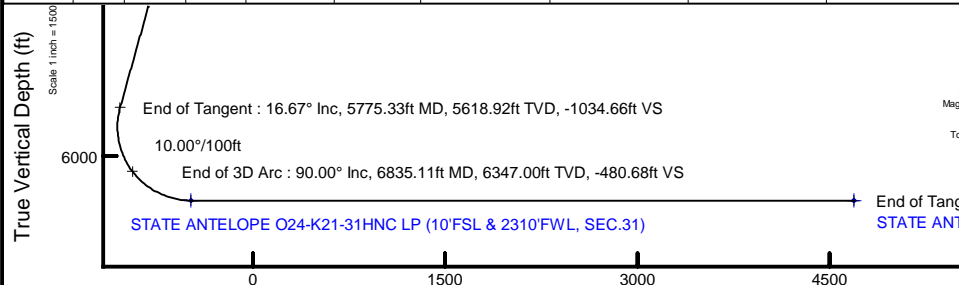
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	17.00	1600.02	1583.02	17.00	1600.00	0.00	0.00	-1.68	-0.48	STATE ANTELOPE O24-K21-31HNC PWB
8.5in Open Hole	1600.02	12021.27	10421.25	1600.00	6347.00	-1.68	-0.48	4669.97	-421.61	STATE ANTELOPE O24-K21-31HNC PWB

Well Profile Data

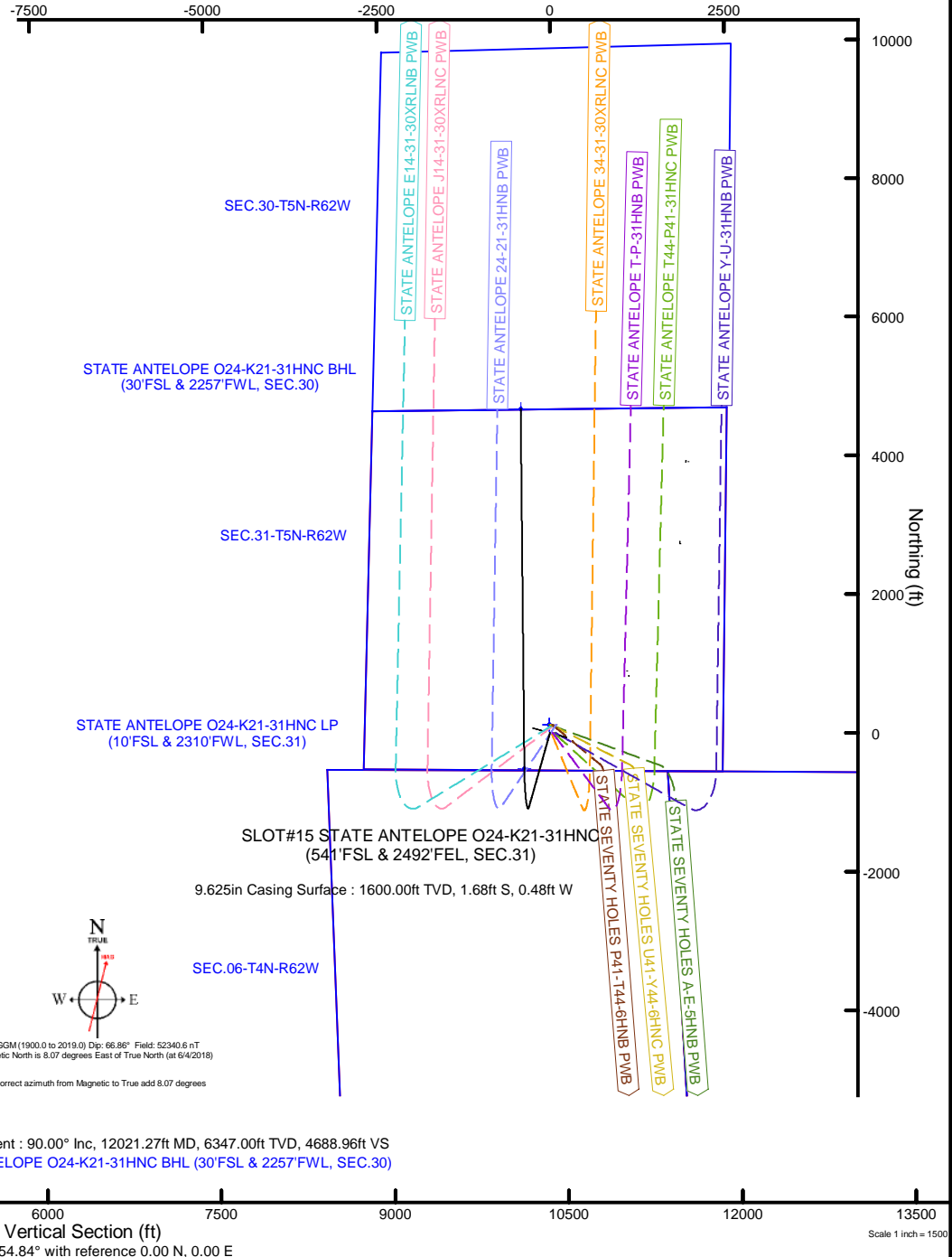
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	195.791	17.00	0.00	0.00	0.00	0.00
End of Tangent	1500.00	0.000	195.791	1500.00	0.00	0.00	0.00	0.00
End of Build	2333.65	16.673	195.791	2321.94	-115.90	-32.78	2.00	-112.48
End of Tangent	5775.33	16.673	195.791	5618.92	-1066.08	-301.50	0.00	-1034.66
End of 3D Arc	6835.11	90.000	359.414	6347.00	-515.92	-368.61	10.00	-480.68
End of Tangent	12021.27	90.000	359.414	6347.00	4669.97	-421.61	0.00	4688.96

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
12021.27	90.000	359.414	6347.00	4669.97	-421.61	3315560.11	1377228.59	40°21'48.1057"N	104°22'3.1905"W



Scale 1 inch = 2500'





Planned Wellpath Report

STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 6.0
North Reference	True	User	Robiale01
Scale	0.999958	Report Generated	12/20/2019 at 3:45:59 PM
Convergence at slot	0.73° East	Database	WA_DENVER

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3907.50	-1956.65	3316041.38	1372564.59	40°21'1.9584"N	104°21'57.7440"W
Facility Reference Pt			3317947.52	1376496.78	40°21'40.5720"N	104°21'32.4720"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.4000"N	104°41'53.5560"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (17") (RKB) to Facility Vertical Datum	4569.00ft
Horizontal Reference Pt	Slot	RIG (17") (RKB) to Mean Sea Level	4569.00ft
Vertical Reference Pt	RIG (17") (RKB)	RIG (17") (RKB) to Ground Level at Slot (SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31))	4569.00ft
MD Reference Pt	RIG (17") (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	354.84°



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

WELLPATH DATA (127 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	195.791	0.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
17.00	0.000	195.791	17.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	Tie On
117.00†	0.000	195.791	117.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
217.00†	0.000	195.791	217.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
317.00†	0.000	195.791	317.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
417.00†	0.000	195.791	417.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
517.00†	0.000	195.791	517.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
617.00†	0.000	195.791	617.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
717.00†	0.000	195.791	717.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
817.00†	0.000	195.791	817.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
917.00†	0.000	195.791	917.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1017.00†	0.000	195.791	1017.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1117.00†	0.000	195.791	1117.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1217.00†	0.000	195.791	1217.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1317.00†	0.000	195.791	1317.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1417.00†	0.000	195.791	1417.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	
1500.00	0.000	195.791	1500.00	0.00	0.00	0.00	40°21'1.9584"N	104°21'57.7440"W	0.00	End of Tangent
1517.00†	0.340	195.791	1517.00	-0.05	-0.05	-0.01	40°21'1.9579"N	104°21'57.7442"W	2.00	
1617.00†	2.340	195.791	1616.97	-2.23	-2.30	-0.65	40°21'1.9357"N	104°21'57.7524"W	2.00	
1717.00†	4.340	195.791	1716.79	-7.67	-7.90	-2.24	40°21'1.8803"N	104°21'57.7729"W	2.00	
1817.00†	6.340	195.791	1816.35	-16.36	-16.86	-4.77	40°21'1.7918"N	104°21'57.8056"W	2.00	
1917.00†	8.340	195.791	1915.53	-28.29	-29.15	-8.24	40°21'1.6703"N	104°21'57.8505"W	2.00	
2017.00†	10.340	195.791	2014.20	-43.45	-44.77	-12.66	40°21'1.5160"N	104°21'57.9075"W	2.00	
2117.00†	12.340	195.791	2112.24	-61.81	-63.69	-18.01	40°21'1.3290"N	104°21'57.9766"W	2.00	
2217.00†	14.340	195.791	2209.54	-83.36	-85.89	-24.29	40°21'1.1097"N	104°21'58.0577"W	2.00	
2317.00†	16.340	195.791	2305.97	-108.06	-111.34	-31.49	40°21'0.8581"N	104°21'58.1507"W	2.00	
2333.65	16.673	195.791	2321.94	-112.48	-115.90	-32.78	40°21'0.8131"N	104°21'58.1673"W	2.00	End of Build
2417.00†	16.673	195.791	2401.78	-134.81	-138.91	-39.28	40°21'0.5858"N	104°21'58.2514"W	0.00	
2517.00†	16.673	195.791	2497.58	-161.61	-166.52	-47.09	40°21'0.3129"N	104°21'58.3522"W	0.00	
2617.00†	16.673	195.791	2593.37	-188.40	-194.12	-54.90	40°21'0.0401"N	104°21'58.4531"W	0.00	



Planned Wellpath Report
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

WELLPATH DATA (127 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2717.00†	16.673	195.791	2689.17	-215.20	-221.73	-62.71	40°20'59.7673"N	104°21'58.5539"W	0.00	
2817.00†	16.673	195.791	2784.96	-241.99	-249.34	-70.52	40°20'59.4945"N	104°21'58.6548"W	0.00	
2917.00†	16.673	195.791	2880.76	-268.78	-276.95	-78.32	40°20'59.2217"N	104°21'58.7556"W	0.00	
3017.00†	16.673	195.791	2976.55	-295.58	-304.56	-86.13	40°20'58.9488"N	104°21'58.8565"W	0.00	
3117.00†	16.673	195.791	3072.35	-322.37	-332.17	-93.94	40°20'58.6760"N	104°21'58.9573"W	0.00	
3217.00†	16.673	195.791	3168.15	-349.17	-359.77	-101.75	40°20'58.4032"N	104°21'59.0581"W	0.00	
3317.00†	16.673	195.791	3263.94	-375.96	-387.38	-109.56	40°20'58.1304"N	104°21'59.1590"W	0.00	
3417.00†	16.673	195.791	3359.74	-402.76	-414.99	-117.36	40°20'57.8576"N	104°21'59.2598"W	0.00	
3517.00†	16.673	195.791	3455.53	-429.55	-442.60	-125.17	40°20'57.5848"N	104°21'59.3607"W	0.00	
3617.00†	16.673	195.791	3551.33	-456.35	-470.21	-132.98	40°20'57.3119"N	104°21'59.4615"W	0.00	
3717.00†	16.673	195.791	3647.12	-483.14	-497.82	-140.79	40°20'57.0391"N	104°21'59.5624"W	0.00	
3817.00†	16.673	195.791	3742.92	-509.93	-525.42	-148.59	40°20'56.7663"N	104°21'59.6632"W	0.00	
3917.00†	16.673	195.791	3838.72	-536.73	-553.03	-156.40	40°20'56.4935"N	104°21'59.7640"W	0.00	
4017.00†	16.673	195.791	3934.51	-563.52	-580.64	-164.21	40°20'56.2207"N	104°21'59.8649"W	0.00	
4117.00†	16.673	195.791	4030.31	-590.32	-608.25	-172.02	40°20'55.9479"N	104°21'59.9657"W	0.00	
4217.00†	16.673	195.791	4126.10	-617.11	-635.86	-179.83	40°20'55.6750"N	104°22'0.0666"W	0.00	
4317.00†	16.673	195.791	4221.90	-643.91	-663.46	-187.63	40°20'55.4022"N	104°22'0.1674"W	0.00	
4417.00†	16.673	195.791	4317.69	-670.70	-691.07	-195.44	40°20'55.1294"N	104°22'0.2682"W	0.00	
4517.00†	16.673	195.791	4413.49	-697.49	-718.68	-203.25	40°20'54.8566"N	104°22'0.3691"W	0.00	
4617.00†	16.673	195.791	4509.29	-724.29	-746.29	-211.06	40°20'54.5838"N	104°22'0.4699"W	0.00	
4717.00†	16.673	195.791	4605.08	-751.08	-773.90	-218.87	40°20'54.3109"N	104°22'0.5708"W	0.00	
4817.00†	16.673	195.791	4700.88	-777.88	-801.51	-226.67	40°20'54.0381"N	104°22'0.6716"W	0.00	
4917.00†	16.673	195.791	4796.67	-804.67	-829.11	-234.48	40°20'53.7653"N	104°22'0.7724"W	0.00	
5017.00†	16.673	195.791	4892.47	-831.47	-856.72	-242.29	40°20'53.4925"N	104°22'0.8733"W	0.00	
5117.00†	16.673	195.791	4988.26	-858.26	-884.33	-250.10	40°20'53.2197"N	104°22'0.9741"W	0.00	
5217.00†	16.673	195.791	5084.06	-885.06	-911.94	-257.90	40°20'52.9469"N	104°22'1.0750"W	0.00	
5317.00†	16.673	195.791	5179.86	-911.85	-939.55	-265.71	40°20'52.6740"N	104°22'1.1758"W	0.00	
5417.00†	16.673	195.791	5275.65	-938.64	-967.16	-273.52	40°20'52.4012"N	104°22'1.2766"W	0.00	
5517.00†	16.673	195.791	5371.45	-965.44	-994.76	-281.33	40°20'52.1284"N	104°22'1.3775"W	0.00	
5617.00†	16.673	195.791	5467.24	-992.23	-1022.37	-289.14	40°20'51.8556"N	104°22'1.4783"W	0.00	



Planned Wellpath Report

STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

WELLPATH DATA (127 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5717.00†	16.673	195.791	5563.04	-1019.03	-1049.98	-296.94	40°20'51.5828"N	104°22'1.5791"W	0.00	
5775.33	16.673	195.791	5618.92	-1034.66	-1066.08	-301.50	40°20'51.4236"N	104°22'1.6380"W	0.00	End of Tangent
5817.00†	12.746	201.334	5659.21	-1044.36	-1076.12	-304.80	40°20'51.3244"N	104°22'1.6806"W	10.00	
5917.00†	5.155	248.821	5758.03	-1055.50	-1088.05	-313.02	40°20'51.2066"N	104°22'1.7868"W	10.00	
6017.00†	9.497	329.098	5857.40	-1049.29	-1082.58	-321.47	40°20'51.2606"N	104°22'1.8959"W	10.00	
6117.00†	18.798	345.050	5954.29	-1025.92	-1059.88	-329.88	40°20'51.4849"N	104°22'2.0046"W	10.00	
6217.00†	28.566	350.492	6045.77	-986.11	-1020.63	-338.01	40°20'51.8728"N	104°22'2.1095"W	10.00	
6317.00†	38.447	353.309	6129.05	-931.05	-966.04	-345.60	40°20'52.4123"N	104°22'2.2076"W	10.00	
6417.00†	48.371	355.110	6201.61	-862.42	-897.75	-352.43	40°20'53.0871"N	104°22'2.2958"W	10.00	
6517.00†	58.315	356.427	6261.24	-782.32	-817.85	-358.28	40°20'53.8767"N	104°22'2.3714"W	10.00	
6617.00†	68.270	357.486	6306.13	-693.16	-728.75	-362.98	40°20'54.7571"N	104°22'2.4321"W	10.00	
6717.00†	78.231	358.406	6334.91	-597.67	-633.18	-366.39	40°20'55.7015"N	104°22'2.4761"W	10.00	
6817.00†	88.195	359.262	6346.71	-498.74	-534.02	-368.40	40°20'56.6813"N	104°22'2.5021"W	10.00	
6835.11	90.000	359.414	6347.00 [†]	-480.68	-515.92	-368.61	40°20'56.8602"N	104°22'2.5048"W	10.00	End of 3D Arc
6917.00†	90.000	359.414	6347.00	-399.06	-434.03	-369.44	40°20'57.6694"N	104°22'2.5156"W	0.00	
7017.00†	90.000	359.414	6347.00	-299.37	-334.04	-370.47	40°20'58.6575"N	104°22'2.5289"W	0.00	
7117.00†	90.000	359.414	6347.00	-199.69	-234.04	-371.49	40°20'59.6456"N	104°22'2.5421"W	0.00	
7217.00†	90.000	359.414	6347.00	-100.01	-134.05	-372.51	40°21'0.6337"N	104°22'2.5553"W	0.00	
7317.00†	90.000	359.414	6347.00	-0.33	-34.05	-373.53	40°21'1.6219"N	104°22'2.5685"W	0.00	
7417.00†	90.000	359.414	6347.00	99.35	65.94	-374.55	40°21'2.6100"N	104°22'2.5817"W	0.00	
7517.00†	90.000	359.414	6347.00	199.03	165.94	-375.58	40°21'3.5981"N	104°22'2.5949"W	0.00	
7617.00†	90.000	359.414	6347.00	298.72	265.93	-376.60	40°21'4.5862"N	104°22'2.6082"W	0.00	
7717.00†	90.000	359.414	6347.00	398.40	365.93	-377.62	40°21'5.5744"N	104°22'2.6214"W	0.00	
7817.00†	90.000	359.414	6347.00	498.08	465.92	-378.64	40°21'6.5625"N	104°22'2.6346"W	0.00	
7917.00†	90.000	359.414	6347.00	597.76	565.92	-379.66	40°21'7.5506"N	104°22'2.6478"W	0.00	
8017.00†	90.000	359.414	6347.00	697.44	665.91	-380.69	40°21'8.5387"N	104°22'2.6610"W	0.00	
8117.00†	90.000	359.414	6347.00	797.12	765.91	-381.71	40°21'9.5268"N	104°22'2.6743"W	0.00	
8217.00†	90.000	359.414	6347.00	896.81	865.90	-382.73	40°21'10.5150"N	104°22'2.6875"W	0.00	
8317.00†	90.000	359.414	6347.00	996.49	965.89	-383.75	40°21'11.5031"N	104°22'2.7007"W	0.00	
8417.00†	90.000	359.414	6347.00	1096.17	1065.89	-384.77	40°21'12.4912"N	104°22'2.7139"W	0.00	



Planned Wellpath Report

STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

WELLPATH DATA (127 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8517.00†	90.000	359.414	6347.00	1195.85	1165.88	-385.80	40°21'13.4793"N	104°22'2.7271"W	0.00	
8617.00†	90.000	359.414	6347.00	1295.53	1265.88	-386.82	40°21'14.4674"N	104°22'2.7404"W	0.00	
8717.00†	90.000	359.414	6347.00	1395.21	1365.87	-387.84	40°21'15.4556"N	104°22'2.7536"W	0.00	
8817.00†	90.000	359.414	6347.00	1494.90	1465.87	-388.86	40°21'16.4437"N	104°22'2.7668"W	0.00	
8917.00†	90.000	359.414	6347.00	1594.58	1565.86	-389.88	40°21'17.4318"N	104°22'2.7800"W	0.00	
9017.00†	90.000	359.414	6347.00	1694.26	1665.86	-390.91	40°21'18.4199"N	104°22'2.7932"W	0.00	
9117.00†	90.000	359.414	6347.00	1793.94	1765.85	-391.93	40°21'19.4080"N	104°22'2.8065"W	0.00	
9217.00†	90.000	359.414	6347.00	1893.62	1865.85	-392.95	40°21'20.3961"N	104°22'2.8197"W	0.00	
9317.00†	90.000	359.414	6347.00	1993.30	1965.84	-393.97	40°21'21.3843"N	104°22'2.8329"W	0.00	
9417.00†	90.000	359.414	6347.00	2092.99	2065.84	-394.99	40°21'22.3724"N	104°22'2.8461"W	0.00	
9517.00†	90.000	359.414	6347.00	2192.67	2165.83	-396.01	40°21'23.3605"N	104°22'2.8593"W	0.00	
9617.00†	90.000	359.414	6347.00	2292.35	2265.83	-397.04	40°21'24.3486"N	104°22'2.8726"W	0.00	
9717.00†	90.000	359.414	6347.00	2392.03	2365.82	-398.06	40°21'25.3367"N	104°22'2.8858"W	0.00	
9817.00†	90.000	359.414	6347.00	2491.71	2465.82	-399.08	40°21'26.3249"N	104°22'2.8990"W	0.00	
9917.00†	90.000	359.414	6347.00	2591.39	2565.81	-400.10	40°21'27.3130"N	104°22'2.9122"W	0.00	
10017.00†	90.000	359.414	6347.00	2691.07	2665.81	-401.12	40°21'28.3011"N	104°22'2.9255"W	0.00	
10117.00†	90.000	359.414	6347.00	2790.76	2765.80	-402.15	40°21'29.2892"N	104°22'2.9387"W	0.00	
10217.00†	90.000	359.414	6347.00	2890.44	2865.80	-403.17	40°21'30.2773"N	104°22'2.9519"W	0.00	
10317.00†	90.000	359.414	6347.00	2990.12	2965.79	-404.19	40°21'31.2655"N	104°22'2.9651"W	0.00	
10417.00†	90.000	359.414	6347.00	3089.80	3065.79	-405.21	40°21'32.2536"N	104°22'2.9783"W	0.00	
10517.00†	90.000	359.414	6347.00	3189.48	3165.78	-406.23	40°21'33.2417"N	104°22'2.9916"W	0.00	
10617.00†	90.000	359.414	6347.00	3289.16	3265.77	-407.26	40°21'34.2298"N	104°22'3.0048"W	0.00	
10717.00†	90.000	359.414	6347.00	3388.85	3365.77	-408.28	40°21'35.2179"N	104°22'3.0180"W	0.00	
10817.00†	90.000	359.414	6347.00	3488.53	3465.76	-409.30	40°21'36.2061"N	104°22'3.0312"W	0.00	
10917.00†	90.000	359.414	6347.00	3588.21	3565.76	-410.32	40°21'37.1942"N	104°22'3.0444"W	0.00	
11017.00†	90.000	359.414	6347.00	3687.89	3665.75	-411.34	40°21'38.1823"N	104°22'3.0577"W	0.00	
11117.00†	90.000	359.414	6347.00	3787.57	3765.75	-412.37	40°21'39.1704"N	104°22'3.0709"W	0.00	
11217.00†	90.000	359.414	6347.00	3887.25	3865.74	-413.39	40°21'40.1585"N	104°22'3.0841"W	0.00	
11317.00†	90.000	359.414	6347.00	3986.94	3965.74	-414.41	40°21'41.1466"N	104°22'3.0973"W	0.00	
11417.00†	90.000	359.414	6347.00	4086.62	4065.73	-415.43	40°21'42.1348"N	104°22'3.1106"W	0.00	



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STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

WELLPATH DATA (127 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11517.00†	90.000	359.414	6347.00	4186.30	4165.73	-416.45	40°21'43.1229"N	104°22'3.1238"W	0.00	
11617.00†	90.000	359.414	6347.00	4285.98	4265.72	-417.47	40°21'44.1110"N	104°22'3.1370"W	0.00	
11717.00†	90.000	359.414	6347.00	4385.66	4365.72	-418.50	40°21'45.0991"N	104°22'3.1502"W	0.00	
11817.00†	90.000	359.414	6347.00	4485.34	4465.71	-419.52	40°21'46.0872"N	104°22'3.1635"W	0.00	
11917.00†	90.000	359.414	6347.00	4585.03	4565.71	-420.54	40°21'47.0754"N	104°22'3.1767"W	0.00	
12017.00†	90.000	359.414	6347.00	4684.71	4665.70	-421.56	40°21'48.0635"N	104°22'3.1899"W	0.00	
12021.27	90.000	359.414	6347.00 ²	4688.96	4669.97	-421.61	40°21'48.1057"N	104°22'3.1905"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE O24-K21-31HNC PWB Ref Wellpath: STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)									
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	17.00	1600.02	1583.02	17.00	1600.00	0.00	0.00	-1.68	-0.48
8.5in Open Hole	1600.02	12021.27	10421.25	1600.00	6347.00	-1.68	-0.48	4669.97	-421.61



Planned Wellpath Report

STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.06-T4N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W	polygon
	2D Polygon: dimensions not calculated								
SEC.30-T5N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W	polygon
	2D Polygon: dimensions not calculated								
SEC.31-T5N-R62W	N/A	0.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W	polygon
	2D Polygon: dimensions not calculated								
SEC.05-T4N-R62W	N/A	16.00	120.22	-9.20	3316030.65	1372684.68	40°21'3.1464"N	104°21'57.8628"W	polygon
	2D Polygon: dimensions not calculated								
2) STATE ANTELOPE O24-K21-31HNC BHL (30'FSL & 2257'FWL, SEC.30)	12021.27	6347.00	4669.97	-421.61	3315560.11	1377228.59	40°21'48.1057"N	104°22'3.1905"W	point
1) STATE ANTELOPE O24-K21-31HNC LP (10'FSL & 2310'FWL, SEC.31)	6835.11	6347.00	-515.92	-368.61	3315679.42	1372044.02	40°20'56.8602"N	104°22'2.5048"W	point

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE O24-K21-31HNC PWB Ref Wellpath: STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1600.02	BHI NaviTrak (Rotating+Axial Corr)		STATE ANTELOPE O24-K21-31HNC PWB
1600.02	12021.27	BH AutoTrak Curve (Short)		STATE ANTELOPE O24-K21-31HNC PWB



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STATE ANTELOPE O24-K21-31HNC PWP (REV-C.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	STATE ANTELOPE O24-K21-31HNC
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.31-T05N-R62W	Wellbore	STATE ANTELOPE O24-K21-31HNC PWB
Slot	SLOT#15 STATE ANTELOPE O24-K21-31HNC (541'FSL & 2492'FEL, SEC.31)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	195.791	17.00	Tie On
1500.00	0.000	195.791	1500.00	End of Tangent
2333.65	16.673	195.791	2321.94	End of Build
5775.33	16.673	195.791	5618.92	End of Tangent
6835.11	90.000	359.414	6347.00	End of 3D Arc
12021.27	90.000	359.414	6347.00	End of Tangent