

# BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)  
Field: WELD COUNTY Well: STATE ANTELOPE V-B-13HNB  
Facility: SEC.13-T5N-R62W Wellbore: STATE ANTELOPE V-B-13HNB PWB

Plot reference wellpath is STATE ANTELOPE V-B-13HNB PWP (REV-A.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
Measured depths are referenced to RIG (17) (RKB)		Scale: True distance
RIG (17) (RKB) to Mean Sea Level: 4590 feet		Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)): 0 feet		Created by: robale01 on 2018-11-15
Coordinates are in feet referenced to Slot		Database: WA DENVER

## Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.13-T5N-R62W			333859.889	1389569.906	40°23'50.820"N	104°16'47.528"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)	1396.08	4472.42	3344312.490	1391427.341	40°24'04.612"N	104°15'49.219"W
RIG (17) (RKB) to Ground level (At Slot: SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13))						4590ft
Mean Sea Level to Ground level (At Slot: SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13))						0ft
RIG (17) (RKB) to Mean Sea Level						4590ft

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak	BHI NaviTrak (Rotating)		STATE ANTELOPE V-B-13HNB PWB
1550.00	11280.38	BHI AutoTrak Curve	BHI AutoTrak Curve (Short)		STATE ANTELOPE V-B-13HNB PWB

## Hole and Casing Sections

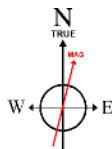
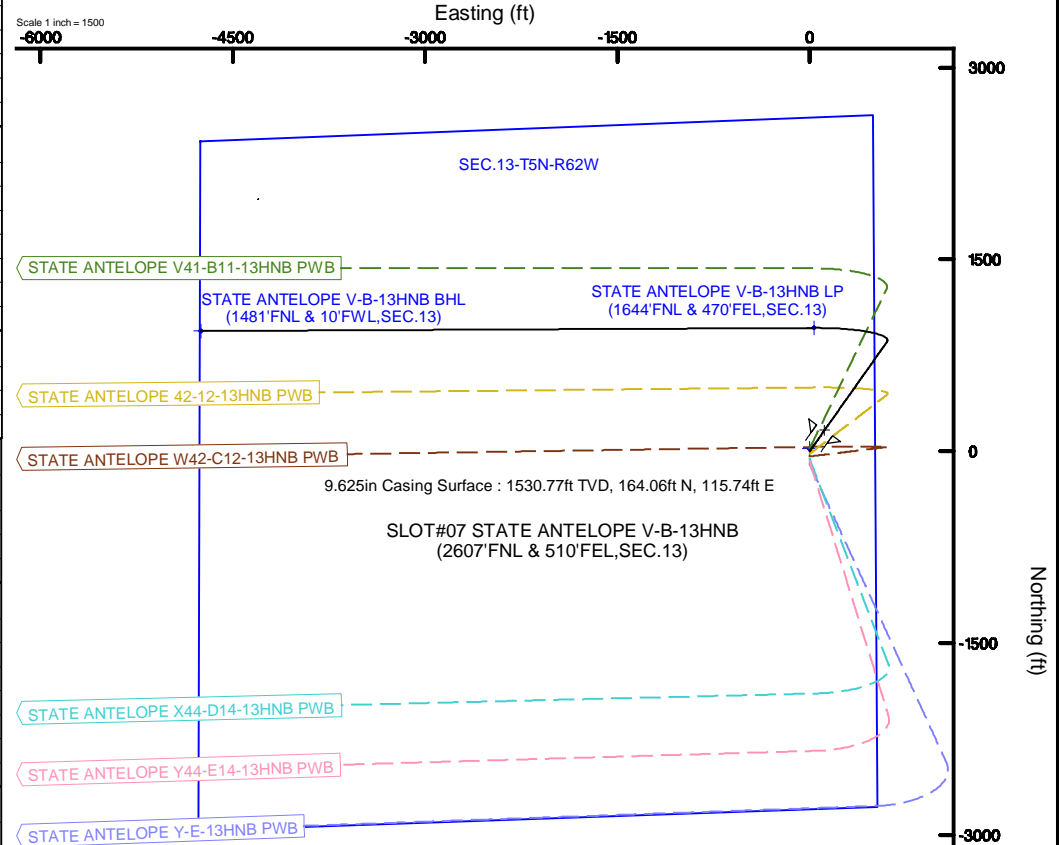
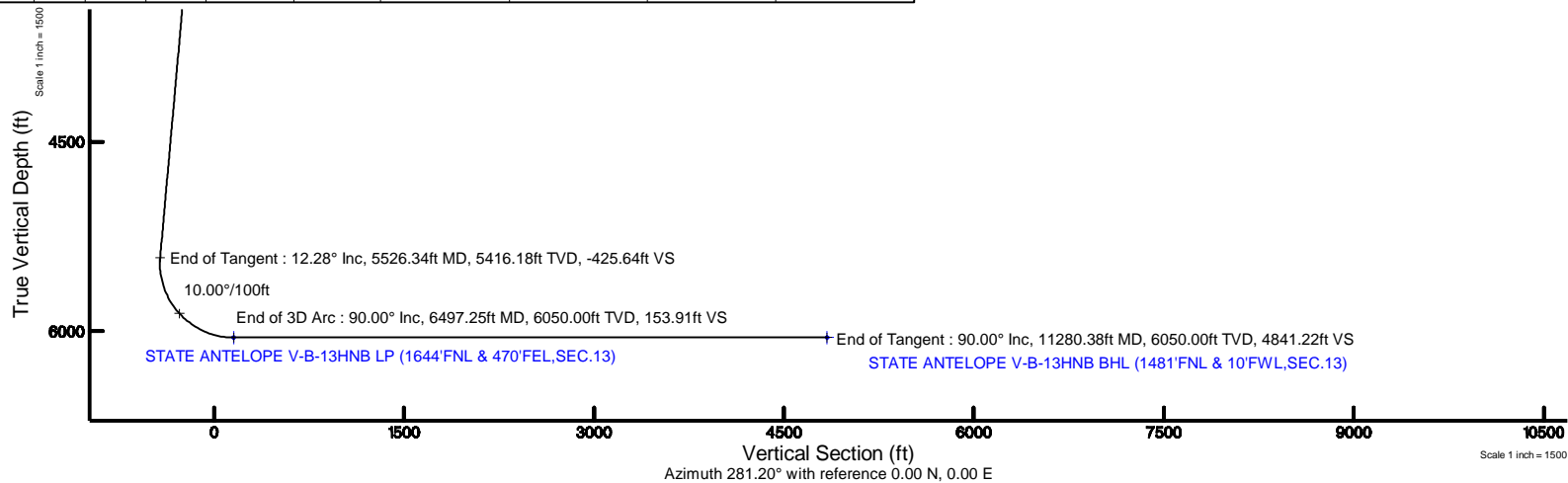
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74	STATE ANTELOPE V-B-13HNB PWB
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74	STATE ANTELOPE V-B-13HNB PWB
8.5in Open Hole	1550.00	11280.38	9730.38	1530.77	N/A	164.06	115.74	N/A	N/A	STATE ANTELOPE V-B-13HNB 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	35.201	17.00	0.00	0.00	0.00	0.00
End of Tangent	300.00	0.000	35.201	300.00	0.00	0.00	0.00	0.00
End of Build	913.82	12.276	35.201	909.13	53.53	37.76	2.00	-26.65
End of Tangent	5526.34	12.276	35.201	5416.18	854.93	603.12	0.00	-425.64
End of 3D Arc	6497.25	90.000	269.709	6050.00	964.33	33.98	10.00	153.91
End of Tangent	11280.38	90.000	269.709	6050.00	940.02	-4749.09	0.00	4841.22

## 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
11280.38	90.000	269.709	6050.00	940.02	-4749.09	3339550.96	1392301.02	40°24'13.896"N	104°16'50.606"W



BGM (1945.0 to 2015.0) Dip: 67.01° Field: 52833.7 nT  
Magnetic North is 8.26 degrees East of True North (at 4/24/2014)

To correct azimuth from Magnetic to True add 8.26 degrees



# Planned Wellpath Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999960	Report Generated	11/15/2018 at 9:43:46 AM
Convergence at slot	0.80° East	Database/Source file	WA DENVER/STATE_ ANTELOPE _V-B-13HNB_PWP__REV-A.0_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1396.08	4472.42	3344312.49	1391427.34	40°24'04.612"N	104°15'49.219"W
Facility Reference Pt			3339859.89	1389969.91	40°23'50.820"N	104°16'47.028"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.400"N	104°41'53.556"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (17') (RKB) to Facility Vertical Datum	4590.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4590.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13))	4590.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	281.20°



Planned Wellpath Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

WELLPATH DATA (119 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	35.201	0.00	0.00	0.00	0.00	40°24'04.612"N	104°15'49.219"W	0.00	
17.00	0.000	35.201	17.00	0.00	0.00	0.00	40°24'04.612"N	104°15'49.219"W	0.00	Tie On
117.00†	0.000	35.201	117.00	0.00	0.00	0.00	40°24'04.612"N	104°15'49.219"W	0.00	
217.00†	0.000	35.201	217.00	0.00	0.00	0.00	40°24'04.612"N	104°15'49.219"W	0.00	
300.00	0.000	35.201	300.00	0.00	0.00	0.00	40°24'04.612"N	104°15'49.219"W	0.00	End of Tangent
317.00†	0.340	35.201	317.00	-0.02	0.04	0.03	40°24'04.612"N	104°15'49.219"W	2.00	
417.00†	2.340	35.201	416.97	-0.97	1.95	1.38	40°24'04.631"N	104°15'49.201"W	2.00	
517.00†	4.340	35.201	516.79	-3.34	6.71	4.74	40°24'04.678"N	104°15'49.158"W	2.00	
617.00†	6.340	35.201	616.35	-7.13	14.32	10.10	40°24'04.753"N	104°15'49.089"W	2.00	
717.00†	8.340	35.201	715.53	-12.32	24.76	17.46	40°24'04.856"N	104°15'48.993"W	2.00	
817.00†	10.340	35.201	814.20	-18.93	38.02	26.82	40°24'04.987"N	104°15'48.873"W	2.00	
913.82	12.276	35.201	909.13	-26.65	53.53	37.76	40°24'05.141"N	104°15'48.731"W	2.00	End of Build
917.00†	12.276	35.201	912.24	-26.93	54.08	38.15	40°24'05.146"N	104°15'48.726"W	0.00	
1017.00†	12.276	35.201	1009.95	-35.58	71.46	50.41	40°24'05.318"N	104°15'48.568"W	0.00	
1117.00†	12.276	35.201	1107.67	-44.23	88.83	62.67	40°24'05.489"N	104°15'48.409"W	0.00	
1217.00†	12.276	35.201	1205.38	-52.88	106.21	74.92	40°24'05.661"N	104°15'48.251"W	0.00	
1317.00†	12.276	35.201	1303.09	-61.53	123.58	87.18	40°24'05.833"N	104°15'48.092"W	0.00	
1417.00†	12.276	35.201	1400.81	-70.18	140.95	99.44	40°24'06.004"N	104°15'47.934"W	0.00	
1517.00†	12.276	35.201	1498.52	-78.83	158.33	111.69	40°24'06.176"N	104°15'47.775"W	0.00	
1617.00†	12.276	35.201	1596.23	-87.48	175.70	123.95	40°24'06.348"N	104°15'47.617"W	0.00	
1717.00†	12.276	35.201	1693.95	-96.13	193.08	136.21	40°24'06.520"N	104°15'47.459"W	0.00	
1817.00†	12.276	35.201	1791.66	-104.78	210.45	148.46	40°24'06.691"N	104°15'47.300"W	0.00	
1917.00†	12.276	35.201	1889.37	-113.43	227.83	160.72	40°24'06.863"N	104°15'47.142"W	0.00	
2017.00†	12.276	35.201	1987.09	-122.08	245.20	172.98	40°24'07.035"N	104°15'46.983"W	0.00	
2117.00†	12.276	35.201	2084.80	-130.73	262.58	185.24	40°24'07.206"N	104°15'46.825"W	0.00	
2217.00†	12.276	35.201	2182.51	-139.38	279.95	197.49	40°24'07.378"N	104°15'46.666"W	0.00	
2317.00†	12.276	35.201	2280.23	-148.03	297.32	209.75	40°24'07.550"N	104°15'46.508"W	0.00	
2417.00†	12.276	35.201	2377.94	-156.68	314.70	222.01	40°24'07.721"N	104°15'46.350"W	0.00	
2517.00†	12.276	35.201	2475.65	-165.33	332.07	234.26	40°24'07.893"N	104°15'46.191"W	0.00	
2617.00†	12.276	35.201	2573.37	-173.98	349.45	246.52	40°24'08.065"N	104°15'46.033"W	0.00	
2717.00†	12.276	35.201	2671.08	-182.63	366.82	258.78	40°24'08.236"N	104°15'45.874"W	0.00	
2817.00†	12.276	35.201	2768.79	-191.28	384.20	271.03	40°24'08.408"N	104°15'45.716"W	0.00	
2917.00†	12.276	35.201	2866.51	-199.93	401.57	283.29	40°24'08.580"N	104°15'45.557"W	0.00	
3017.00†	12.276	35.201	2964.22	-208.58	418.95	295.55	40°24'08.751"N	104°15'45.399"W	0.00	
3117.00†	12.276	35.201	3061.93	-217.23	436.32	307.80	40°24'08.923"N	104°15'45.241"W	0.00	
3217.00†	12.276	35.201	3159.65	-225.88	453.70	320.06	40°24'09.095"N	104°15'45.082"W	0.00	

WELLPATH DATA (119 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3317.00†	12.276	35.201	3257.36	-234.53	471.07	332.32	40°24'09.267"N	104°15'44.924"W	0.00	
3417.00†	12.276	35.201	3355.07	-243.18	488.44	344.58	40°24'09.438"N	104°15'44.765"W	0.00	
3517.00†	12.276	35.201	3452.79	-251.83	505.82	356.83	40°24'09.610"N	104°15'44.607"W	0.00	
3617.00†	12.276	35.201	3550.50	-260.48	523.19	369.09	40°24'09.782"N	104°15'44.448"W	0.00	
3717.00†	12.276	35.201	3648.21	-269.13	540.57	381.35	40°24'09.953"N	104°15'44.290"W	0.00	
3817.00†	12.276	35.201	3745.93	-277.78	557.94	393.60	40°24'10.125"N	104°15'44.132"W	0.00	
3917.00†	12.276	35.201	3843.64	-286.43	575.32	405.86	40°24'10.297"N	104°15'43.973"W	0.00	
4017.00†	12.276	35.201	3941.35	-295.08	592.69	418.12	40°24'10.468"N	104°15'43.815"W	0.00	
4117.00†	12.276	35.201	4039.07	-303.73	610.07	430.37	40°24'10.640"N	104°15'43.656"W	0.00	

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	12.276	35.201	4136.78	-312.38	627.44	442.63	40°24'10.812"N	104°15'43.498"W	0.00	
4317.00†	12.276	35.201	4234.49	-321.03	644.82	454.89	40°24'10.983"N	104°15'43.339"W	0.00	
4417.00†	12.276	35.201	4332.21	-329.68	662.19	467.15	40°24'11.155"N	104°15'43.181"W	0.00	
4517.00†	12.276	35.201	4429.92	-338.33	679.56	479.40	40°24'11.327"N	104°15'43.022"W	0.00	
4617.00†	12.276	35.201	4527.63	-346.98	696.94	491.66	40°24'11.498"N	104°15'42.864"W	0.00	
4717.00†	12.276	35.201	4625.35	-355.63	714.31	503.92	40°24'11.670"N	104°15'42.706"W	0.00	
4817.00†	12.276	35.201	4723.06	-364.28	731.69	516.17	40°24'11.842"N	104°15'42.547"W	0.00	
4917.00†	12.276	35.201	4820.77	-372.93	749.06	528.43	40°24'12.014"N	104°15'42.389"W	0.00	
5017.00†	12.276	35.201	4918.49	-381.58	766.44	540.69	40°24'12.185"N	104°15'42.230"W	0.00	
5117.00†	12.276	35.201	5016.20	-390.23	783.81	552.94	40°24'12.357"N	104°15'42.072"W	0.00	
5217.00†	12.276	35.201	5113.91	-398.88	801.19	565.20	40°24'12.529"N	104°15'41.913"W	0.00	
5317.00†	12.276	35.201	5211.63	-407.53	818.56	577.46	40°24'12.700"N	104°15'41.755"W	0.00	
5417.00†	12.276	35.201	5309.34	-416.18	835.93	589.71	40°24'12.872"N	104°15'41.597"W	0.00	
5517.00†	12.276	35.201	5407.05	-424.83	853.31	601.97	40°24'13.044"N	104°15'41.438"W	0.00	
5526.34	12.276	35.201	5416.18	-425.64	854.93	603.12	40°24'13.060"N	104°15'41.423"W	0.00	End of Tangent
5617.00†	10.237	348.529	5505.27	-426.45	870.74	607.08	40°24'13.216"N	104°15'41.372"W	10.00	
5717.00†	15.584	309.147	5602.88	-411.13	887.97	594.86	40°24'13.386"N	104°15'41.530"W	10.00	
5817.00†	24.059	293.089	5696.94	-379.23	904.48	565.62	40°24'13.549"N	104°15'41.908"W	10.00	
5917.00†	33.356	285.322	5784.58	-331.75	919.78	520.24	40°24'13.700"N	104°15'42.495"W	10.00	
6017.00†	42.942	280.683	5863.15	-270.11	933.40	460.10	40°24'13.835"N	104°15'43.272"W	10.00	
6117.00†	52.659	277.477	5930.25	-196.19	944.91	387.03	40°24'13.949"N	104°15'44.216"W	10.00	
6217.00†	62.441	275.014	5983.85	-112.24	953.98	303.24	40°24'14.038"N	104°15'45.299"W	10.00	
6317.00†	72.260	272.958	6022.31	-20.81	960.33	211.29	40°24'14.101"N	104°15'46.488"W	10.00	
6417.00†	82.099	271.118	6044.47	75.33	963.76	113.97	40°24'14.135"N	104°15'47.746"W	10.00	
6497.25	90.000	269.709	6050.00¹	153.91	964.33	33.98	40°24'14.141"N	104°15'48.780"W	10.00	End of 3D Arc
6517.00†	90.000	269.709	6050.00	173.26	964.23	14.23	40°24'14.140"N	104°15'49.035"W	0.00	
6617.00†	90.000	269.709	6050.00	271.26	963.73	-85.77	40°24'14.135"N	104°15'50.328"W	0.00	
6717.00†	90.000	269.709	6050.00	369.26	963.22	-185.77	40°24'14.130"N	104°15'51.620"W	0.00	
6817.00†	90.000	269.709	6050.00	467.25	962.71	-285.76	40°24'14.125"N	104°15'52.913"W	0.00	
6917.00†	90.000	269.709	6050.00	565.25	962.2					

WELLPATH DATA (119 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7517.00†	90.000	269.709	6050.00	1153.23	959.15	-985.76	40°24'14.089"N	104°16'01.961"W	0.00	
7617.00†	90.000	269.709	6050.00	1251.23	958.64	-1085.75	40°24'14.084"N	104°16'03.254"W	0.00	
7717.00†	90.000	269.709	6050.00	1349.23	958.13	-1185.75	40°24'14.079"N	104°16'04.546"W	0.00	
7817.00†	90.000	269.709	6050.00	1447.22	957.63	-1285.75	40°24'14.074"N	104°16'05.839"W	0.00	
7917.00†	90.000	269.709	6050.00	1545.22	957.12	-1385.75	40°24'14.069"N	104°16'07.132"W	0.00	
8017.00†	90.000	269.709	6050.00	1643.22	956.61	-1485.75	40°24'14.064"N	104°16'08.424"W	0.00	
8117.00†	90.000	269.709	6050.00	1741.21	956.10	-1585.75	40°24'14.059"N	104°16'09.717"W	0.00	
8217.00†	90.000	269.709	6050.00	1839.21	955.59	-1685.75	40°24'14.054"N	104°16'11.009"W	0.00	
8317.00†	90.000	269.709	6050.00	1937.21	955.08	-1785.75	40°24'14.049"N	104°16'12.302"W	0.00	
8417.00†	90.000	269.709	6050.00	2035.20	954.57	-1885.74	40°24'14.044"N	104°16'13.595"W	0.00	



Planned Wellpath Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

WELLPATH DATA (119 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	269.709	6050.00	2133.20	954.07	-1985.74	40°24'14.039"N	104°16'14.887"W	0.00	
8617.00†	90.000	269.709	6050.00	2231.20	953.56	-2085.74	40°24'14.033"N	104°16'16.180"W	0.00	
8717.00†	90.000	269.709	6050.00	2329.19	953.05	-2185.74	40°24'14.028"N	104°16'17.472"W	0.00	
8817.00†	90.000	269.709	6050.00	2427.19	952.54	-2285.74	40°24'14.023"N	104°16'18.765"W	0.00	
8917.00†	90.000	269.709	6050.00	2525.19	952.03	-2385.74	40°24'14.018"N	104°16'20.058"W	0.00	
9017.00†	90.000	269.709	6050.00	2623.19	951.52	-2485.74	40°24'14.013"N	104°16'21.350"W	0.00	
9117.00†	90.000	269.709	6050.00	2721.18	951.02	-2585.74	40°24'14.008"N	104°16'22.643"W	0.00	
9217.00†	90.000	269.709	6050.00	2819.18	950.51	-2685.73	40°24'14.003"N	104°16'23.935"W	0.00	
9317.00†	90.000	269.709	6050.00	2917.18	950.00	-2785.73	40°24'13.998"N	104°16'25.228"W	0.00	
9417.00†	90.000	269.709	6050.00	3015.17	949.49	-2885.73	40°24'13.992"N	104°16'26.520"W	0.00	
9517.00†	90.000	269.709	6050.00	3113.17	948.98	-2985.73	40°24'13.987"N	104°16'27.813"W	0.00	
9617.00†	90.000	269.709	6050.00	3211.17	948.47	-3085.73	40°24'13.982"N	104°16'29.106"W	0.00	
9717.00†	90.000	269.709	6050.00	3309.16	947.97	-3185.73	40°24'13.977"N	104°16'30.398"W	0.00	
9817.00†	90.000	269.709	6050.00	3407.16	947.46	-3285.73	40°24'13.972"N	104°16'31.691"W	0.00	
9917.00†	90.000	269.709	6050.00	3505.16	946.95	-3385.72	40°24'13.967"N	104°16'32.983"W	0.00	
10017.00†	90.000	269.709	6050.00	3603.15	946.44	-3485.72	40°24'13.962"N	104°16'34.276"W	0.00	
10117.00†	90.000	269.709	6050.00	3701.15	945.93	-3585.72	40°24'13.956"N	104°16'35.569"W	0.00	
10217.00†	90.000	269.709	6050.00	3799.15	945.42	-3685.72	40°24'13.951"N	104°16'36.861"W	0.00	
10317.00†	90.000	269.709	6050.00	3897.14	944.92	-3785.72	40°24'13.946"N	104°16'38.154"W	0.00	
10417.00†	90.000	269.709	6050.00	3995.14	944.41	-3885.72	40°24'13.941"N	104°16'39.446"W	0.00	
10517.00†	90.000	269.709	6050.00	4093.14	943.90	-3985.72	40°24'13.936"N	104°16'40.739"W	0.00	
10617.00†	90.000	269.709	6050.00	4191.13	943.39	-4085.72	40°24'13.930"N	104°16'42.032"W	0.00	
10717.00†	90.000	269.709	6050.00	4289.13	942.88	-4185.71	40°24'13.925"N	104°16'43.324"W	0.00	
10817.00†	90.000	269.709	6050.00	4387.13	942.37	-4285.71	40°24'13.920"N	104°16'44.617"W	0.00	
10917.00†	90.000	269.709	6050.00	4485.12	941.87	-4385.71	40°24'13.915"N	104°16'45.909"W	0.00	
11017.00†	90.000	269.709	6050.00	4583.12	941.36	-4485.71	40°24'13.910"N	104°16'47.202"W	0.00	
11117.00†	90.000	269.709	6050.00	4681.12	940.85	-4585.71	40°24'13.905"N	104°16'48.495"W	0.00	
11217.00†	90.000	269.709	6050.00	4779.12	940.34	-4685.71	40°24'13.899"N	104°16'49.787"W	0.00	
11280.38	90.000	269.709	6050.00 <sup>2</sup>	4841.22	940.02	-4749.09	40°24'13.896"N	104°16'50.606"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE V-B-13HNB PWB      Ref Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE V-B-13HNB PWB      Ref Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.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	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74
8.5in Open Hole	1550.00	11280.38	9730.38	1530.77	N/A	164.06	115.74	N/A	N/A





Planned Wellpath Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T5N-R62W		0.00	20.04	0.00	3344312.21	1391447.38	40°24'04.810"N	104°15'49.219"W	polygon
2) STATE ANTELOPE V-B-13HNB BHL (1481'FNL & 10'FWL,SEC.13)	11280.38	6050.00	940.02	-4749.09	3339550.96	1392301.02	40°24'13.896"N	104°16'50.606"W	point
1) STATE ANTELOPE V-B-13HNB LP (1644'FNL & 470'FEL,SEC.13)	6497.25	6050.00	964.33	33.98	3344333.02	1392392.02	40°24'14.141"N	104°15'48.780"W	point

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE V-B-13HNB PWB      Ref Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE V-B-13HNB PWB
1550.00	11280.38	BHI AutoTrak Curve (Short)		STATE ANTELOPE V-B-13HNB PWB



Planned Wellpath Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	35.201	17.00	Tie On
300.00	0.000	35.201	300.00	End of Tangent
913.82	12.276	35.201	909.13	End of Build
5526.34	12.276	35.201	5416.18	End of Tangent
6497.25	90.000	269.709	6050.00	End of 3D Arc
11280.38	90.000	269.709	6050.00	End of Tangent



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999960	Report Generated	11/15/2018 at 9:45:56 AM
Convergence at slot	0.80° East	Database/Source file	WA DENVER/STATE_ ANTELOPE_V-B-13HNB_PWP_REV-A.0_CR.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1396.08	4472.42	3344312.49	1391427.34	40°24'04.612"N	104°15'49.219"W
Facility Reference Pt			3339859.89	1389969.91	40°23'50.820"N	104°16'47.028"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.400"N	104°41'53.556"W

WELLPATH DATUM			
Calculation method	Minimum Curvature	RIG (17') (RKB) to Facility Vertical Datum	4590.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4590.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13))	4590.00ft
MD Reference Pt	RIG (17') (RKB)		
Field Vertical Reference	Mean Sea Level		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS					
Ellipse Confidence Limit	3.00 Std Dev	Ellipse Start MD	17.00ft	Surface Position Uncertainty	included
Declination	8.26° East of TN	Dip Angle	67.01°	Mag Field Strength	52834 nT
Slot Surface Uncertainty @1SD		Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD		Horizontal	8.200ft	Vertical	3.000ft
Positional Uncertainty values in the WELLPATH DATA table are the projection of the ellipsoid of uncertainty onto the vertical and horizontal planes					

ANTI-COLLISION RULE			

ANTI-COLLISION RULE			
Rule Name	Baker Hughes Stop Drilling (offset is HSE risk)	Rule Based On	Ratio
Plane of Rule	Closest Approach	Threshold Value	1.00
Include Casing & Hole Size	yes	Apply Cone of Safety	no



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE V-B-13HNB PWB      Ref Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1530.77	0.00	0.00	164.06	115.74
8.5in Open Hole	1550.00	11280.38	9730.38	1530.77	N/A	164.06	115.74	N/A	N/A

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE V-B-13HNB PWB      Ref Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE V-B-13HNB PWB
1550.00	11280.38	BHI AutoTrak Curve (Short)		STATE ANTELOPE V-B-13HNB PWB

CALCULATION RANGE & CUTOFF		
From: 17.00ft MD	To: 11280.38ft MD	C-C Cutoff: 1000.00 ft

OFFSET WELL CLEARANCE SUMMARY (6 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane											
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	C-C Clearance Distance			ACR Separation Ratio			
					Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	ACR Status
SEC.13-T5N-R62W	SLOT#06 STATE ANTELOPE V41-B11-13HNB (2587'FNL & 510'FEL,SEC.13)	STATE ANTELOPE V41-B11-13HNB	STATE ANTELOPE V41-B11-13HNB PWB	STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)	17.00	20.04	117.00	11280.38	0.87	11280.38	FAIL
SEC.13-T5N-R62W	SLOT#08 STATE ANTELOPE 42-12-13HNB (2627'FNL & 510'FEL,SEC.13)	STATE ANTELOPE 42-12-13HNB	STATE ANTELOPE 42-12-13HNB PWB	STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)	17.00	20.04	300.00	11280.38	0.87	11280.38	FAIL
SEC.13-T5N-R62W	SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)	STATE ANTELOPE W42-C12-13HNB	STATE ANTELOPE W42-C12-13HNB PWB	STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)	17.00	40.08	300.00	11280.38	1.75	11280.38	PASS
SEC.13-T5N-R62W	SLOT#10 STATE ANTELOPE X44-D14-13HNB (2667'FNL & 510'FEL,SEC.13)	STATE ANTELOPE X44-D14-13HNB	STATE ANTELOPE X44-D14-13HNB PWB	STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)	17.00	60.11	300.00	11280.38	5.29	11280.38	PASS
SEC.13-T5N-R62W	SLOT#11 STATE ANTELOPE Y44-E14-13HNB (2687'FNL & 510'FEL,SEC.13)	STATE ANTELOPE Y44-E14-13HNB	STATE ANTELOPE Y44-E14-13HNB PWB	STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.0)	17.00	80.15	217.00	11280.38	6.15	11280.38	PASS
SEC.13-T5N-R62W	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)	STATE ANTELOPE Y-E-13HNB	STATE ANTELOPE Y-E-13HNB PWB	STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)	17.00	100.19	117.00	11280.38	6.74	11280.38	PASS

Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	17.00	17.00	20.04	0.00	0.00	20.04	1.56	31.79	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	20.04	0.00	0.00	20.04	2.18	15.64	PASS
217.00†	217.00	0.00	0.00	216.89	216.89	20.08	0.02	0.06	20.08	3.16	8.70	PASS
300.00	300.00	0.00	0.00	299.33	299.31	21.59	0.75	1.98	21.61	4.18	6.43	PASS
317.00†	317.00	0.04	0.03	316.21	316.17	22.16	1.02	-32.63	22.16	4.39	6.19	PASS
417.00†	416.97	1.95	1.38	415.38	415.17	27.33	3.50	-30.35	25.53	6.04	4.84	PASS
517.00†	516.79	6.71	4.74	514.43	513.80	35.57	7.47	-29.65	29.15	7.74	4.16	PASS
617.00†	616.35	14.32	10.10	613.35	611.91	46.87	12.89	-30.02	32.97	9.22	3.88	PASS
717.00†	715.53	24.76	17.46	712.14	709.41	61.19	19.77	-31.12	37.01	10.58	3.75	PASS
817.00†	814.20	38.02	26.82	810.79	806.18	78.50	28.09	-32.72	41.29	11.85	3.70	PASS
913.82	909.13	53.53	37.76	906.19	899.06	98.09	37.51	-34.57	45.69	13.07	3.70	PASS
917.00†	912.24	54.08	38.15	909.32	902.09	98.78	37.84	-34.64	45.84	13.10	3.70	PASS
1017.00†	1009.95	71.46	50.41	1007.71	997.06	121.98	48.99	-35.62	52.17	14.21	3.87	PASS
1117.00†	1107.67	88.83	62.67	1107.42	1092.89	146.78	60.90	-35.74	59.83	15.29	4.11	PASS
1217.00†	1205.38	106.21	74.92	1207.12	1188.73	171.58	72.82	-35.84	67.50	16.42	4.30	PASS
1317.00†	1303.09	123.58	87.18	1306.83	1284.56	196.38	84.73	-35.92	75.16	17.58	4.47	PASS
1417.00†	1400.81	140.95	99.44	1406.54	1380.40	221.18	96.65	-35.99	82.83	18.78	4.60	PASS
1517.00†	1498.52	158.33	111.69	1506.24	1476.23	245.98	108.56	-36.04	90.49	20.00	4.70	PASS
1617.00†	1596.23	175.70	123.95	1605.95	1572.07	270.78	120.48	-36.08	98.16	20.55	4.91	PASS
1717.00†	1693.95	193.08	136.21	1705.65	1667.90	295.57	132.39	-36.12	105.82	20.96	5.19	PASS
1817.00†	1791.66	210.45	148.46	1805.36	1763.73	320.37	144.31	-36.16	113.49	21.44	5.44	PASS
1917.00†	1889.37	227.83	160.72	1905.07	1859.57	345.17	156.22	-36.19	121.15	21.99	5.66	PASS
2017.00†	1987.09	245.20	172.98	2004.77	1955.40	369.97	168.14	-36.21	128.82	22.62	5.85	PASS
2117.00†	2084.80	262.58	185.24	2104.48	2051.24	394.77	180.06	-36.23	136.48	23.32	6.00	PASS
2217.00†	2182.51	279.95	197.49	2204.18	2147.07	419.57	191.97	-36.25	144.15	24.08	6.14	PASS
2317.00†	2280.23	297.32	209.75	2303.89	2242.91	444.37	203.89	-36.27	151.82	24.90	6.25	PASS
2417.00†	2377.94	314.70	222.01	2403.59	2338.74	469.16	215.80	-36.29	159.48	25.77	6.34	PASS
2517.00†	2475.65	332.07	234.26	2503.30	2434.58	493.96	227.72	-36.30	167.15	26.68	6.41	PASS
2617.00†	2573.37	349.45	246.52	2603.01	2530.41	518.76	239.63	-36.32	174.81	27.64	6.47	PASS
2717.00†	2671.08	366.82	258.78	2702.71	2626.25	543.56	251.55	-36.33	182.48	28.63	6.51	PASS
2817.00†	2768.79	384.20	271.03	2802.42	2722.08	568.36	263.46	-36.34	190.14	29.65	6.54	PASS
2917.00†	2866.51	401.57	283.29	2902.12	2817.92	593.16	275.38	-36.35	197.81	30.71	6.57	PASS
3017.00†	2964.22	418.95	295.55	3001.83	2913.75	617.95	287.29	-36.36	205.47	31.79	6.59	PASS

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#06 STATE ANTELOPE V41-B11-13HNB (2587'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE V41-B11-13HNB			Threshold Value=1.00    † = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
3117.00†	3061.93	436.32	307.80	3101.53	3009.59	642.75	299.21	-36.37	213.14	32.89	6.60	PASS
3217.00†	3159.65	453.70	320.06	3201.24	3105.42	667.55	311.13	-36.38	220.80	34.02	6.61	PASS
3317.00†	3257.36	471.07	332.32	3300.95	3201.26	692.35	323.04	-36.39	228.47	35.17	6.61	PASS
3417.00†	3355.07	488.44	344.58	3400.65	3297.09	717.15	334.96	-36.39	236.14	36.33	6.61	PASS
3517.00†	3452.79	505.82	356.83	3500.36	3392.93	741.95	346.87	-36.40	243.80	37.51	6.61	PASS
3617.00†	3550.50	523.19	369.09	3600.06	3488.76	766.75	358.79	-36.41	251.47	38.71	6.60	PASS
3717.00†	3648.21	540.57	381.35	3699.77	3584.59	791.54	370.70	-36.41	259.13	39.91	6.59	PASS
3817.00†	3745.93	557.94	393.60	3799.47	3680.43	816.34	382.62	-36.42	266.80	41.13	6.58	PASS
3917.00†	3843.64	575.32	405.86	3899.18	3776.26	841.14	394.53	-36.43	274.46	42.36	6.57	PASS
4017.00†	3941.35	592.69	418.12	3998.89	3872.10	865.94	406.45	-36.43	282.13	43.60	6.56	PASS
4117.00†	4039.07	610.07	430.37	4098.59	3967.93	890.74	418.37	-36.44	289.79	44.85	6.55	PASS
4217.00†	4136.78	627.44	442.63	4198.30	4063.77	915.54	430.28	-36.44	297.46	46.11	6.54	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#06 STATE ANTELOPE V41-B11-13HNB (2587'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE V41-B11-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
4317.00†	4234.49	644.82	454.89	4298.00	4159.60	940.33	442.20	-36.44	305.13	47.38	6.52	PASS	
4417.00†	4332.21	662.19	467.15	4397.71	4255.44	965.13	454.11	-36.45	312.79	48.65	6.51	PASS	
4517.00†	4429.92	679.56	479.40	4497.42	4351.27	989.93	466.03	-36.45	320.46	49.93	6.50	PASS	
4617.00†	4527.63	696.94	491.66	4597.12	4447.11	1014.73	477.94	-36.46	328.12	51.21	6.48	PASS	
4717.00†	4625.35	714.31	503.92	4696.83	4542.94	1039.53	489.86	-36.46	335.79	52.51	6.47	PASS	
4817.00†	4723.06	731.69	516.17	4796.53	4638.78	1064.33	501.77	-36.46	343.45	53.80	6.46	PASS	
4917.00†	4820.77	749.06	528.43	4896.24	4734.61	1089.13	513.69	-36.47	351.12	55.10	6.44	PASS	
5017.00†	4918.49	766.44	540.69	4995.94	4830.45	1113.92	525.60	-36.47	358.78	56.41	6.43	PASS	
5117.00†	5016.20	783.81	552.94	5095.65	4926.28	1138.72	537.52	-36.47	366.45	57.72	6.42	PASS	
5217.00†	5113.91	801.19	565.20	5195.36	5022.12	1163.52	549.44	-36.48	374.12	59.03	6.40	PASS	
5317.00†	5211.63	818.56	577.46	5295.06	5117.95	1188.32	561.35	-36.48	381.78	60.35	6.39	PASS	
5417.00†	5309.34	835.93	589.71	5394.77	5213.78	1213.12	573.27	-36.48	389.45	61.67	6.38	PASS	
5517.00†	5407.05	853.31	601.97	5494.47	5309.62	1237.92	585.18	-36.48	397.11	62.99	6.36	PASS	
5526.34	5416.18	854.93	603.12	5503.79	5318.57	1240.23	586.30	-36.48	397.83	63.11	6.36	PASS	
5617.00†	5505.27	870.74	607.08	5593.82	5405.11	1262.63	597.05	9.72	404.61	63.55	6.43	PASS	
5717.00†	5602.88	887.97	594.86	5691.84	5499.67	1287.10	604.12	50.12	412.36	62.64	6.65	PASS	
5817.00†	5696.94	904.48	565.62	5792.92	5596.95	1312.27	594.44	67.18	420.85	62.07	6.85	PASS	
5917.00†	5784.58	919.78	520.24	5897.91	5694.61	1337.54	565.88	75.81	429.77	61.23	7.09	PASS	
6017.00†	5863.15	933.40	460.10	6007.08	5789.04	1361.99	517.22	81.11	438.68	61.56	7.20	PASS	
6117.00†	5930.25	944.91	387.03	6120.55	5875.88	1384.46	448.02	84.69	447.08	62.49	7.22	PASS	
6217.00†	5983.85	953.98	303.24	6238.15	5950.14	1403.69	359.16	87.18	454.42	64.72	7.09	PASS	
6317.00†	6022.31	960.33	211.29	6359.36	6006.67	1418.33	253.20	88.84	460.18	68.29	6.80	PASS	
6417.00†	6044.47	963.76	113.97	6483.26	6040.87	1427.19	134.70	89.76	463.90	72.91	6.41	PASS	
6497.25	6050.00	964.33	33.98	6583.78	6049.99	1429.56	34.75	90.00	465.22	77.06	6.08	PASS	
6517.00†	6050.00	964.23	14.23	6604.25	6050.00	1429.56	14.28	90.00	465.33	78.06	6.01	PASS	
6617.00†	6050.00	963.73	-85.77	6704.25	6050.00	1429.57	-85.72	90.00	465.85	83.74	5.60	PASS	
6717.00†	6050.00	963.22	-185.77	6804.25	6050.00	1429.58	-185.72	90.00	466.36	90.37	5.19	PASS	
6817.00†	6050.00	962.71	-285.76	6904.25	6050.00	1429.59	-285.72	90.00	466.88	97.78	4.80	PASS	
6917.00†	6050.00	962.20	-385.76	7004.25	6050.00	1429.60	-385.72	90.00	467.40	106.48	4.41	PASS	
7017.00†	6050.00	961.69	-485.76	7104.25	6050.00	1429.61	-485.72	90.00	467.92	114.30	4.11	PASS	
7117.00†	6050.00	961.18	-585.76	7204.25	6050.00	1429.62	-585.72	90.00	468.44	123.20	3.82	PASS	
7217.00†	6050.00	960.68	-685.76	7304.24	6050.00	1429.63	-685.71	90.00	468.95	132.40	3.56	PASS	
7317.00†	6050.00	960.17	-785.76	7404.24	6050.00	1429.64	-785.71	90.00	469.47	141.84	3.32	PASS	



CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#06 STATE ANTELOPE V41-B11-13HNB (2587'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE V41-B11-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station	
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
7417.00†	6050.00	959.66	-885.76	7504.24	6050.00	1429.65	-885.71	90.00	469.99	151.48	3.11	PASS
7517.00†	6050.00	959.15	-985.76	7604.24	6050.00	1429.66	-985.71	90.00	470.51	161.29	2.93	PASS
7617.00†	6050.00	958.64	-1085.75	7704.24	6050.00	1429.67	-1085.71	90.00	471.03	171.23	2.76	PASS
7717.00†	6050.00	958.13	-1185.75	7804.24	6050.00	1429.68	-1185.71	90.00	471.54	181.28	2.61	PASS
7817.00†	6050.00	957.63	-1285.75	7904.24	6050.00	1429.69	-1285.71	90.00	472.06	191.43	2.47	PASS
7917.00†	6050.00	957.12	-1385.75	8004.23	6050.00	1429.70	-1385.71	90.00	472.58	201.65	2.35	PASS
8017.00†	6050.00	956.61	-1485.75	8104.23	6050.00	1429.71	-1485.70	90.00	473.10	211.95	2.24	PASS
8117.00†	6050.00	956.10	-1585.75	8204.23	6050.00	1429.72	-1585.70	90.00	473.62	222.30	2.13	PASS
8217.00†	6050.00	955.59	-1685.75	8304.23	6050.00	1429.73	-1685.70	90.00	474.13	232.71	2.04	PASS
8317.00†	6050.00	955.08	-1785.75	8404.23	6050.00	1429.74	-1785.70	90.00	474.65	243.16	1.95	PASS
8417.00†	6050.00	954.57	-1885.74	8504.23	6050.00	1429.74	-1885.70	90.00	475.17	253.65	1.88	PASS
8517.00†	6050.00	954.07	-1985.74	8604.23	6050.00	1429.75	-1985.70	90.00	475.69	264.17	1.80	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#06 STATE ANTELOPE V41-B11-13HNB (2587'FNL & 510'FEL,SEC.13)			Well: STATE ANTELOPE V41-B11-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8617.00†	6050.00	953.56	-2085.74	8704.23	6050.00	1429.76	-2085.70	90.00	476.21	274.73	1.74	PASS	
8717.00†	6050.00	953.05	-2185.74	8804.22	6050.00	1429.77	-2185.69	90.00	476.72	285.31	1.67	PASS	
8817.00†	6050.00	952.54	-2285.74	8904.22	6050.00	1429.78	-2285.69	90.00	477.24	295.92	1.61	PASS	
8917.00†	6050.00	952.03	-2385.74	9004.22	6050.00	1429.79	-2385.69	90.00	477.76	306.54	1.56	PASS	
9017.00†	6050.00	951.52	-2485.74	9104.22	6050.00	1429.80	-2485.69	90.00	478.28	317.19	1.51	PASS	
9117.00†	6050.00	951.02	-2585.74	9204.22	6050.00	1429.81	-2585.69	90.00	478.80	327.86	1.46	PASS	
9217.00†	6050.00	950.51	-2685.73	9304.22	6050.00	1429.82	-2685.69	90.00	479.31	338.54	1.42	PASS	
9317.00†	6050.00	950.00	-2785.73	9404.22	6050.00	1429.83	-2785.69	90.00	479.83	349.23	1.37	PASS	
9417.00†	6050.00	949.49	-2885.73	9504.21	6050.00	1429.84	-2885.69	90.00	480.35	359.94	1.34	PASS	
9517.00†	6050.00	948.98	-2985.73	9604.21	6050.00	1429.85	-2985.68	90.00	480.87	370.66	1.30	PASS	
9617.00†	6050.00	948.47	-3085.73	9704.21	6050.00	1429.86	-3085.68	90.00	481.38	381.39	1.26	PASS	
9717.00†	6050.00	947.97	-3185.73	9804.21	6050.00	1429.87	-3185.68	90.00	481.90	392.13	1.23	PASS	
9817.00†	6050.00	947.46	-3285.73	9904.21	6050.00	1429.88	-3285.68	90.00	482.42	402.89	1.20	PASS	
9917.00†	6050.00	946.95	-3385.72	10004.21	6050.00	1429.89	-3385.68	90.00	482.94	413.64	1.17	PASS	
10017.00†	6050.00	946.44	-3485.72	10104.21	6050.00	1429.90	-3485.68	90.00	483.46	424.41	1.14	PASS	
10117.00†	6050.00	945.93	-3585.72	10204.21	6050.00	1429.91	-3585.68	90.00	483.97	435.19	1.11	PASS	
10217.00†	6050.00	945.42	-3685.72	10304.20	6050.00	1429.92	-3685.67	90.00	484.49	445.97	1.09	PASS	
10317.00†	6050.00	944.92	-3785.72	10404.20	6050.00	1429.93	-3785.67	90.00	485.01	456.76	1.06	PASS	
10417.00†	6050.00	944.41	-3885.72	10504.20	6050.00	1429.94	-3885.67	90.00	485.53	467.55	1.04	PASS	
10517.00†	6050.00	943.90	-3985.72	10604.20	6050.00	1429.95	-3985.67	90.00	486.05	478.35	1.02	PASS	
10617.00†	6050.00	943.39	-4085.72	10704.20	6050.00	1429.95	-4085.67	90.00	486.56	489.15	0.99	FAIL	
10717.00†	6050.00	942.88	-4185.71	10804.20	6050.00	1429.96	-4185.67	90.00	487.08	499.96	0.97	FAIL	
10817.00†	6050.00	942.37	-4285.71	10904.20	6050.00	1429.97	-4285.67	90.00	487.60	510.78	0.95	FAIL	
10917.00†	6050.00	941.87	-4385.71	11004.19	6050.00	1429.98	-4385.67	90.00	488.12	521.59	0.94	FAIL	
11017.00†	6050.00	941.36	-4485.71	11104.19	6050.00	1429.99	-4485.66	90.00	488.64	532.41	0.92	FAIL	
11117.00†	6050.00	940.85	-4585.71	11204.19	6050.00	1430.00	-4585.66	90.00	489.15	543.24	0.90	FAIL	
11217.00†	6050.00	940.34	-4685.71	11304.19	6050.00	1430.01	-4685.66	90.00	489.67	554.07	0.88	FAIL	
11280.38	6050.00	940.02	-4749.09	11366.41	6050.00	1430.02	-4747.88	90.00	490.00	560.96	0.87	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)			
Slot Surface Uncertainty @1SD		Horizontal	Vertical
		0.100ft	1.000ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)				
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1518.29	12.21	0.00	84.40	34.68
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1518.29	12.21	0.00	84.40	34.68
8.5in Open Hole	1550.00	11366.41	9816.41	1518.29	N/A	84.40	34.68	N/A	N/A



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE V41-B11-13HNB PWB
1550.00	11366.41	BHI AutoTrak Curve (Short)		STATE ANTELOPE V41-B11-13HNB PWB

OFFSET WELLPATH REFERENCE -    Offset Wellbore: STATE ANTELOPE V41-B11-13HNB PWB    Offset Wellpath: STATE ANTELOPE V41-B11-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft



CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB    Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#08 STATE ANTELOPE 42-12-13HNB (2627'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE 42-12-13HNB			Threshold Value=1.00    † = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
3117.00†	3061.93	436.32	307.80	3112.78	3082.67	218.04	311.14	143.98	219.29	31.94	7.00	PASS
3217.00†	3159.65	453.70	320.06	3212.47	3181.12	227.58	323.62	143.96	227.16	33.04	7.00	PASS
3317.00†	3257.36	471.07	332.32	3312.16	3279.56	237.13	336.09	143.93	235.02	34.17	7.00	PASS
3417.00†	3355.07	488.44	344.58	3411.85	3378.01	246.67	348.56	143.91	242.89	35.31	7.00	PASS
3517.00†	3452.79	505.82	356.83	3511.54	3476.45	256.22	361.04	143.89	250.76	36.47	6.99	PASS
3617.00†	3550.50	523.19	369.09	3611.23	3574.90	265.76	373.51	143.87	258.62	37.64	6.98	PASS
3717.00†	3648.21	540.57	381.35	3710.92	3673.34	275.30	385.98	143.85	266.49	38.82	6.97	PASS
3817.00†	3745.93	557.94	393.60	3810.61	3771.79	284.85	398.46	143.84	274.36	40.01	6.96	PASS
3917.00†	3843.64	575.32	405.86	3910.30	3870.23	294.39	410.93	143.82	282.22	41.22	6.95	PASS
4017.00†	3941.35	592.69	418.12	4009.99	3968.68	303.94	423.41	143.81	290.09	42.43	6.94	PASS
4117.00†	4039.07	610.07	430.37	4109.68	4067.12	313.48	435.88	143.79	297.96	43.65	6.92	PASS
4217.00†	4136.78	627.44	442.63	4209.37	4165.57	323.03	448.35	143.78	305.83	44.88	6.91	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#08 STATE ANTELOPE 42-12-13HNB (2627'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE 42-12-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
4317.00†	4234.49	644.82	454.89	4309.06	4264.01	332.57	460.83	143.77	313.69	46.11	6.89	PASS	
4417.00†	4332.21	662.19	467.15	4408.75	4362.46	342.12	473.30	143.75	321.56	47.36	6.88	PASS	
4517.00†	4429.92	679.56	479.40	4508.44	4460.90	351.66	485.77	143.74	329.43	48.61	6.86	PASS	
4617.00†	4527.63	696.94	491.66	4608.13	4559.35	361.21	498.25	143.73	337.29	49.86	6.85	PASS	
4717.00†	4625.35	714.31	503.92	4707.82	4657.79	370.75	510.72	143.72	345.16	51.12	6.83	PASS	
4817.00†	4723.06	731.69	516.17	4807.51	4756.24	380.29	523.20	143.71	353.03	52.38	6.82	PASS	
4917.00†	4820.77	749.06	528.43	4907.20	4854.68	389.84	535.67	143.70	360.89	53.65	6.80	PASS	
5017.00†	4918.49	766.44	540.69	5006.89	4953.13	399.38	548.14	143.69	368.76	54.93	6.79	PASS	
5117.00†	5016.20	783.81	552.94	5106.58	5051.57	408.93	560.62	143.68	376.63	56.20	6.77	PASS	
5217.00†	5113.91	801.19	565.20	5206.28	5150.02	418.47	573.09	143.67	384.49	57.48	6.76	PASS	
5317.00†	5211.63	818.56	577.46	5305.97	5248.46	428.02	585.56	143.67	392.36	58.77	6.75	PASS	
5417.00†	5309.34	835.93	589.71	5405.66	5346.91	437.56	598.04	143.66	400.23	60.05	6.73	PASS	
5517.00†	5407.05	853.31	601.97	5505.58	5445.72	447.13	609.27	143.83	408.08	61.22	6.73	PASS	
5526.34	5416.18	854.93	603.12	5514.92	5455.00	448.02	609.74	143.93	408.81	61.31	6.73	PASS	
5617.00†	5505.27	870.74	607.08	5604.81	5544.34	456.53	606.49	-168.46	416.04	61.84	6.79	PASS	
5717.00†	5602.88	887.97	594.86	5702.69	5639.73	465.46	587.06	-128.12	424.18	62.52	6.85	PASS	
5817.00†	5696.94	904.48	565.62	5799.38	5729.40	473.68	552.15	-111.25	432.23	62.23	7.01	PASS	
5917.00†	5784.58	919.78	520.24	5895.02	5811.13	481.00	503.23	-102.87	439.91	62.28	7.13	PASS	
6017.00†	5863.15	933.40	460.10	5989.79	5883.02	487.26	441.97	-97.87	446.95	62.32	7.24	PASS	
6117.00†	5930.25	944.91	387.03	6083.85	5943.50	492.31	370.25	-94.59	453.10	63.13	7.25	PASS	
6217.00†	5983.85	953.98	303.24	6177.36	5991.26	496.07	290.06	-92.38	458.17	65.00	7.12	PASS	
6317.00†	6022.31	960.33	211.29	6270.48	6025.31	498.44	203.53	-90.96	461.96	67.96	6.86	PASS	
6417.00†	6044.47	963.76	113.97	6363.38	6044.95	499.40	112.84	-90.19	464.36	71.68	6.53	PASS	
6497.25	6050.00	964.33	33.98	6437.87	6050.00	499.13	38.57	-90.00	465.23	75.50	6.21	PASS	
6517.00†	6050.00	964.23	14.23	6457.48	6050.00	498.93	18.97	-90.00	465.33	76.50	6.13	PASS	
6617.00†	6050.00	963.73	-85.77	6557.48	6050.00	497.91	-81.03	-90.00	465.84	82.27	5.70	PASS	
6717.00†	6050.00	963.22	-185.77	6657.48	6050.00	496.89	-181.02	-90.00	466.35	88.45	5.31	PASS	
6817.00†	6050.00	962.71	-285.76	6757.47	6050.00	495.87	-281.01	-90.00	466.86	96.50	4.87	PASS	
6917.00†	6050.00	962.20	-385.76	6857.47	6050.00	494.86	-381.01	-90.00	467.37	104.60	4.49	PASS	
7017.00†	6050.00	961.69	-485.76	6957.47	6050.00	493.84	-481.00	-90.00	467.88	113.18	4.15	PASS	
7117.00†	6050.00	961.18	-585.76	7057.47	6050.00	492.82	-580.99	-90.00	468.39	122.13	3.85	PASS	
7217.00†	6050.00	960.68	-685.76	7157.47	6050.00	491.80	-680.99	-90.00	468.90	131.38	3.58	PASS	
7317.00†	6050.00	960.17	-785.76	7257.47	6050.00	490.78	-780.98	-90.00	469.41	140.87	3.34	PASS	







Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#08 STATE ANTELOPE 42-12-13HNB (2627'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE 42-12-13HNB		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
8617.00†	6050.00	953.56	-2085.74	8557.45	6050.00	477.55	-2080.90	-90.00	476.03	274.07	1.74	PASS	
8717.00†	6050.00	953.05	-2185.74	8657.45	6050.00	476.54	-2180.89	-90.00	476.54	284.66	1.68	PASS	
8817.00†	6050.00	952.54	-2285.74	8757.45	6050.00	475.52	-2280.88	-90.00	477.05	295.28	1.62	PASS	
8917.00†	6050.00	952.03	-2385.74	8857.45	6050.00	474.50	-2380.88	-90.00	477.56	305.92	1.56	PASS	
9017.00†	6050.00	951.52	-2485.74	8957.45	6050.00	473.48	-2480.87	-90.00	478.07	316.57	1.51	PASS	
9117.00†	6050.00	951.02	-2585.74	9057.44	6050.00	472.46	-2580.86	-90.00	478.58	327.24	1.46	PASS	
9217.00†	6050.00	950.51	-2685.73	9157.44	6050.00	471.45	-2680.86	-90.00	479.09	337.93	1.42	PASS	
9317.00†	6050.00	950.00	-2785.73	9257.44	6050.00	470.43	-2780.85	-90.00	479.60	348.63	1.38	PASS	
9417.00†	6050.00	949.49	-2885.73	9357.44	6050.00	469.41	-2880.84	-90.00	480.11	359.34	1.34	PASS	
9517.00†	6050.00	948.98	-2985.73	9457.44	6050.00	468.39	-2980.84	-90.00	480.61	370.07	1.30	PASS	
9617.00†	6050.00	948.47	-3085.73	9557.44	6050.00	467.38	-3080.83	-90.00	481.12	380.80	1.26	PASS	
9717.00†	6050.00	947.97	-3185.73	9657.44	6050.00	466.36	-3180.83	-90.00	481.63	391.55	1.23	PASS	
9817.00†	6050.00	947.46	-3285.73	9757.44	6050.00	465.34	-3280.82	-90.00	482.14	402.30	1.20	PASS	
9917.00†	6050.00	946.95	-3385.72	9857.43	6050.00	464.32	-3380.81	-90.00	482.65	413.07	1.17	PASS	
10017.00†	6050.00	946.44	-3485.72	9957.43	6050.00	463.30	-3480.81	-90.00	483.16	423.84	1.14	PASS	
10117.00†	6050.00	945.93	-3585.72	10057.43	6050.00	462.29	-3580.80	-90.00	483.67	434.61	1.11	PASS	
10217.00†	6050.00	945.42	-3685.72	10157.43	6050.00	461.27	-3680.79	-90.00	484.18	445.40	1.09	PASS	
10317.00†	6050.00	944.92	-3785.72	10257.43	6050.00	460.25	-3780.79	-90.00	484.69	456.19	1.06	PASS	
10417.00†	6050.00	944.41	-3885.72	10357.43	6050.00	459.23	-3880.78	-90.00	485.20	466.98	1.04	PASS	
10517.00†	6050.00	943.90	-3985.72	10457.43	6050.00	458.22	-3980.77	-90.00	485.71	477.78	1.02	PASS	
10617.00†	6050.00	943.39	-4085.72	10557.43	6050.00	457.20	-4080.77	-90.00	486.22	488.59	1.00	FAIL	
10717.00†	6050.00	942.88	-4185.71	10657.42	6050.00	456.18	-4180.76	-90.00	486.73	499.40	0.97	FAIL	
10817.00†	6050.00	942.37	-4285.71	10757.42	6050.00	455.16	-4280.75	-90.00	487.24	510.21	0.95	FAIL	
10917.00†	6050.00	941.87	-4385.71	10857.42	6050.00	454.14	-4380.75	-90.00	487.75	521.03	0.94	FAIL	
11017.00†	6050.00	941.36	-4485.71	10957.42	6050.00	453.13	-4480.74	-90.00	488.26	531.85	0.92	FAIL	
11117.00†	6050.00	940.85	-4585.71	11057.42	6050.00	452.11	-4580.73	-90.00	488.77	542.67	0.90	FAIL	
11217.00†	6050.00	940.34	-4685.71	11157.42	6050.00	451.09	-4680.73	-90.00	489.28	553.50	0.88	FAIL	
11280.38	6050.00	940.02	-4749.09	11220.80	6050.00	450.45	-4744.10	-90.00	489.60	560.37	0.87	FAIL	

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)			
Slot Surface Uncertainty @1SD		Horizontal	Vertical
		0.100ft	1.000ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB    Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)				
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB    Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1539.41	-12.21	0.00	14.75	35.23
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1539.41	-12.21	0.00	14.75	35.23
8.5in Open Hole	1550.00	11226.99	9676.99	1539.41	N/A	14.75	35.23	N/A	N/A



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB    Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE 42-12-13HNB PWB
1550.00	11226.99	BHI AutoTrak Curve (Short)		STATE ANTELOPE 42-12-13HNB PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE ANTELOPE 42-12-13HNB PWB    Offset Wellpath: STATE ANTELOPE 42-12-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE W42-C12-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
17.00	17.00	0.00	0.00	17.00	17.00	-40.07	0.28	179.60	40.08	1.56	65.19	PASS	
117.00†	117.00	0.00	0.00	117.00	117.00	-40.07	0.28	179.60	40.08	2.18	32.08	PASS	
217.00†	217.00	0.00	0.00	217.00	217.00	-40.07	0.28	179.60	40.08	3.16	17.78	PASS	
300.00	300.00	0.00	0.00	300.00	300.00	-40.07	0.28	179.60	40.08	4.01	12.84	PASS	
317.00†	317.00	0.04	0.03	317.00	317.00	-40.07	0.28	144.44	40.12	4.18	12.15	PASS	
417.00†	416.97	1.95	1.38	416.97	416.97	-40.07	0.28	146.27	42.04	5.35	9.38	PASS	
517.00†	516.79	6.71	4.74	516.85	516.85	-40.07	0.33	150.11	46.99	6.77	7.93	PASS	
617.00†	616.35	14.32	10.10	616.96	616.92	-39.79	2.65	152.53	54.62	8.09	7.53	PASS	
717.00†	715.53	24.76	17.46	717.00	716.80	-39.08	8.43	152.68	64.48	9.37	7.56	PASS	
817.00†	814.20	38.02	26.82	816.88	816.23	-37.95	17.66	151.41	76.55	10.60	7.85	PASS	
913.82	909.13	53.53	37.76	913.01	911.62	-36.51	29.46	149.66	90.46	11.78	8.27	PASS	
917.00†	912.24	54.08	38.15	916.15	914.73	-36.46	29.86	149.63	90.96	11.81	8.30	PASS	
1017.00†	1009.95	71.46	50.41	1014.88	1012.65	-34.92	42.47	148.64	106.71	12.87	8.88	PASS	
1117.00†	1107.67	88.83	62.67	1113.62	1110.57	-33.38	55.09	147.91	122.48	13.98	9.33	PASS	
1217.00†	1205.38	106.21	74.92	1212.36	1208.48	-31.84	67.70	147.34	138.27	15.14	9.69	PASS	
1317.00†	1303.09	123.58	87.18	1311.10	1306.40	-30.30	80.31	146.89	154.07	16.32	9.97	PASS	
1417.00†	1400.81	140.95	99.44	1409.83	1404.32	-28.76	92.93	146.53	169.88	17.52	10.20	PASS	
1517.00†	1498.52	158.33	111.69	1508.57	1502.23	-27.22	105.54	146.23	185.69	18.75	10.39	PASS	
1617.00†	1596.23	175.70	123.95	1607.31	1600.15	-25.69	118.15	145.97	201.51	19.30	10.80	PASS	
1717.00†	1693.95	193.08	136.21	1706.05	1698.06	-24.15	130.77	145.75	217.33	19.71	11.40	PASS	
1817.00†	1791.66	210.45	148.46	1804.78	1795.98	-22.61	143.38	145.56	233.15	20.18	11.94	PASS	
1917.00†	1889.37	227.83	160.72	1903.52	1893.90	-21.07	156.00	145.40	248.98	20.73	12.40	PASS	
2017.00†	1987.09	245.20	172.98	2002.26	1991.81	-19.53	168.61	145.25	264.81	21.35	12.80	PASS	
2117.00†	2084.80	262.58	185.24	2101.00	2089.73	-17.99	181.22	145.12	280.63	22.04	13.12	PASS	
2217.00†	2182.51	279.95	197.49	2199.73	2187.65	-16.45	193.84	145.01	296.46	22.79	13.40	PASS	
2317.00†	2280.23	297.32	209.75	2298.47	2285.56	-14.91	206.45	144.90	312.29	23.59	13.62	PASS	
2417.00†	2377.94	314.70	222.01	2397.21	2383.48	-13.37	219.06	144.81	328.13	24.44	13.80	PASS	
2517.00†	2475.65	332.07	234.26	2495.95	2481.40	-11.83	231.68	144.73	343.96	25.34	13.94	PASS	
2617.00†	2573.37	349.45	246.52	2594.68	2579.31	-10.29	244.29	144.65	359.79	26.27	14.05	PASS	
2717.00†	2671.08	366.82	258.78	2693.42	2677.23	-8.75	256.91	144.58	375.63	27.24	14.13	PASS	
2817.00†	2768.79	384.20	271.03	2792.16	2775.14	-7.21	269.52	144.51	391.46	28.24	14.19	PASS	
2917.00†	2866.51	401.57	283.29	2890.90	2873.06	-5.67	282.13	144.45	407.29	29.27	14.24	PASS	
3017.00†	2964.22	418.95	295.55	2989.63	2970.98	-4.13	294.75	144.40	423.13	30.32	14.26	PASS	

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE W42-C12-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station	
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
3117.00†	3061.93	436.32	307.80	3088.37	3068.89	-2.59	307.36	144.35	438.97	31.40	14.28	PASS
3217.00†	3159.65	453.70	320.06	3187.11	3166.81	-1.05	319.97	144.30	454.80	32.49	14.29	PASS
3317.00†	3257.36	471.07	332.32	3285.85	3264.73	0.49	332.59	144.25	470.64	33.61	14.28	PASS
3417.00†	3355.07	488.44	344.58	3384.58	3362.64	2.03	345.20	144.21	486.47	34.74	14.28	PASS
3517.00†	3452.79	505.82	356.83	3483.32	3460.56	3.57	357.82	144.17	502.31	35.88	14.26	PASS
3617.00†	3550.50	523.19	369.09	3582.06	3558.48	5.11	370.43	144.13	518.15	37.04	14.24	PASS
3717.00†	3648.21	540.57	381.35	3680.79	3656.39	6.65	383.04	144.10	533.98	38.21	14.22	PASS
3817.00†	3745.93	557.94	393.60	3779.53	3754.31	8.19	395.66	144.07	549.82	39.39	14.20	PASS
3917.00†	3843.64	575.32	405.86	3878.27	3852.22	9.73	408.27	144.04	565.66	40.58	14.17	PASS
4017.00†	3941.35	592.69	418.12	3977.01	3950.14	11.27	420.88	144.01	581.50	41.78	14.14	PASS
4117.00†	4039.07	610.07	430.37	4075.74	4048.06	12.81	433.50	143.98	597.33	42.99	14.11	PASS
4217.00†	4136.78	627.44	442.63	4174.48	4145.97	14.35	446.11	143.95	613.17	44.21	14.08	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)													
Facility: SEC.13-T5N-R62W		Slot: SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)			Well: STATE ANTELOPE W42-C12-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status	
4317.00†	4234.49	644.82	454.89	4273.22	4243.89	15.89	458.73	143.93	629.01	45.43	14.05	PASS	
4417.00†	4332.21	662.19	467.15	4371.96	4341.81	17.43	471.34	143.91	644.85	46.66	14.02	PASS	
4517.00†	4429.92	679.56	479.40	4470.69	4439.72	18.97	483.95	143.88	660.68	47.90	13.99	PASS	
4617.00†	4527.63	696.94	491.66	4569.43	4537.64	20.51	496.57	143.86	676.52	49.14	13.95	PASS	
4717.00†	4625.35	714.31	503.92	4668.17	4635.56	22.05	509.18	143.84	692.36	50.39	13.92	PASS	
4817.00†	4723.06	731.69	516.17	4766.91	4733.47	23.59	521.79	143.82	708.20	51.64	13.89	PASS	
4917.00†	4820.77	749.06	528.43	4865.64	4831.39	25.13	534.41	143.80	724.04	52.90	13.86	PASS	
5017.00†	4918.49	766.44	540.69	4964.38	4929.30	26.67	547.02	143.79	739.88	54.16	13.83	PASS	
5117.00†	5016.20	783.81	552.94	5063.12	5027.22	28.21	559.63	143.77	755.71	55.42	13.80	PASS	
5217.00†	5113.91	801.19	565.20	5161.86	5125.14	29.75	572.25	143.75	771.55	56.69	13.77	PASS	
5317.00†	5211.63	818.56	577.46	5260.59	5223.05	31.29	584.86	143.74	787.39	57.96	13.74	PASS	
5417.00†	5309.34	835.93	589.71	5359.33	5320.97	32.83	597.48	143.72	803.23	59.23	13.71	PASS	
5517.00†	5407.05	853.31	601.97	5457.95	5418.79	34.36	609.88	143.72	819.07	60.50	13.69	PASS	
5526.34	5416.18	854.93	603.12	5467.09	5427.89	34.50	610.73	143.74	820.55	60.61	13.69	PASS	
5617.00†	5505.27	870.74	607.08	5555.46	5516.16	35.72	611.50	-168.68	835.10	61.75	13.67	PASS	
5717.00†	5602.88	887.97	594.86	5652.41	5611.85	36.81	596.74	-128.36	851.21	62.94	13.67	PASS	
5817.00†	5696.94	904.48	565.62	5748.98	5703.36	37.60	566.22	-111.47	866.91	64.44	13.59	PASS	
5917.00†	5784.58	919.78	520.24	5845.39	5788.31	38.07	520.88	-103.06	881.72	64.17	13.88	PASS	
6017.00†	5863.15	933.40	460.10	5941.81	5864.47	38.20	461.95	-98.01	895.19	64.06	14.12	PASS	
6117.00†	5930.25	944.91	387.03	6038.36	5929.78	38.01	390.98	-94.68	906.91	64.59	14.18	PASS	
6217.00†	5983.85	953.98	303.24	6135.16	5982.37	37.48	309.86	-92.44	916.53	66.14	14.00	PASS	
6317.00†	6022.31	960.33	211.29	6232.26	6020.68	36.63	220.77	-90.99	923.75	68.86	13.54	PASS	
6417.00†	6044.47	963.76	113.97	6329.67	6043.45	35.49	126.18	-90.20	928.36	72.66	12.89	PASS	
6497.25	6050.00	964.33	33.98	6408.06	6049.94	34.37	48.13	-90.00	930.07	76.31	12.29	PASS	
6517.00†	6050.00	964.23	14.23	6427.62	6050.00	34.07	28.57	-90.00	930.27	77.30	12.14	PASS	
6617.00†	6050.00	963.73	-85.77	6527.61	6050.00	32.53	-71.41	-90.00	931.31	82.93	11.32	PASS	
6717.00†	6050.00	963.22	-185.77	6627.61	6050.00	30.99	-171.40	-90.00	932.34	89.56	10.48	PASS	
6817.00†	6050.00	962.71	-285.76	6727.60	6050.00	29.45	-271.38	-90.00	933.37	96.98	9.69	PASS	
6917.00†	6050.00	962.20	-385.76	6827.60	6050.00	27.91	-371.36	-90.00	934.41	105.01	8.95	PASS	
7017.00†	6050.00	961.69	-485.76	6927.59	6050.00	26.37	-471.34	-90.00	935.44	113.52	8.29	PASS	
7117.00†	6050.00	961.18	-585.76	7027.59	6050.00	24.82	-571.33	-90.00	936.47	122.41	7.69	PASS	
7217.00†	6050.00	960.68	-685.76	7127.58	6050.00	23.28	-671.31	-90.00	937.50	131.61	7.16	PASS	
7317.00†	6050.00	960.17	-785.76	7227.58	6050.00	21.74	-771.29	-90.00	938.54	141.06	6.68	PASS	

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)					Well: STATE ANTELOPE W42-C12-13HNB			Threshold Value=1.00    † = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
7417.00†	6050.00	959.66	-885.76	7327.57	6050.00	20.20	-871.27	-90.00	939.57	150.70	6.26	PASS
7517.00†	6050.00	959.15	-985.76	7427.57	6050.00	18.66	-971.26	-90.00	940.60	160.51	5.88	PASS
7617.00†	6050.00	958.64	-1085.75	7527.56	6050.00	17.12	-1071.24	-90.00	941.64	170.45	5.54	PASS
7717.00†	6050.00	958.13	-1185.75	7627.56	6050.00	15.58	-1171.22	-90.00	942.67	180.50	5.24	PASS
7817.00†	6050.00	957.63	-1285.75	7727.55	6050.00	14.03	-1271.21	-90.00	943.70	190.65	4.96	PASS
7917.00†	6050.00	957.12	-1385.75	7827.55	6050.00	12.49	-1371.19	-90.00	944.74	200.88	4.72	PASS
8017.00†	6050.00	956.61	-1485.75	7927.54	6050.00	10.95	-1471.17	-90.00	945.77	211.17	4.49	PASS
8117.00†	6050.00	956.10	-1585.75	8027.53	6050.00	9.41	-1571.15	-90.00	946.80	221.53	4.28	PASS
8217.00†	6050.00	955.59	-1685.75	8127.53	6050.00	7.87	-1671.14	-90.00	947.84	231.93	4.10	PASS
8317.00†	6050.00	955.08	-1785.75	8227.52	6050.00	6.33	-1771.12	-90.00	948.87	242.38	3.92	PASS
8417.00†	6050.00	954.57	-1885.74	8327.52	6050.00	4.79	-1871.10	-90.00	949.90	252.87	3.76	PASS
8517.00†	6050.00	954.07	-1985.74	8427.51	6050.00	3.25	-1971.09	-90.00	950.93	263.39	3.62	PASS

C-C Clearance Distance Cutoff: 1000.00 ft





Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#09 STATE ANTELOPE W42-C12-13HNB (2647'FNL & 510'FEL,SEC.13)			Well: STATE ANTELOPE W42-C12-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
8617.00†	6050.00	953.56	-2085.74	8527.51	6050.00	1.70	-2071.07	-90.00	951.97	273.95	3.48	PASS
8717.00†	6050.00	953.05	-2185.74	8627.50	6050.00	0.16	-2171.05	-90.00	953.00	284.53	3.36	PASS
8817.00†	6050.00	952.54	-2285.74	8727.50	6050.00	-1.38	-2271.03	-90.00	954.03	295.13	3.24	PASS
8917.00†	6050.00	952.03	-2385.74	8827.49	6050.00	-2.92	-2371.02	-90.00	955.07	305.75	3.13	PASS
9017.00†	6050.00	951.52	-2485.74	8927.49	6050.00	-4.46	-2471.00	-90.00	956.10	316.40	3.03	PASS
9117.00†	6050.00	951.02	-2585.74	9027.48	6050.00	-6.00	-2570.98	-90.00	957.13	327.06	2.93	PASS
9217.00†	6050.00	950.51	-2685.73	9127.48	6050.00	-7.54	-2670.96	-90.00	958.17	337.74	2.84	PASS
9317.00†	6050.00	950.00	-2785.73	9227.47	6050.00	-9.09	-2770.95	-90.00	959.20	348.43	2.76	PASS
9417.00†	6050.00	949.49	-2885.73	9327.47	6050.00	-10.63	-2870.93	-90.00	960.23	359.13	2.68	PASS
9517.00†	6050.00	948.98	-2985.73	9427.46	6050.00	-12.17	-2970.91	-90.00	961.26	369.85	2.60	PASS
9617.00†	6050.00	948.47	-3085.73	9527.45	6050.00	-13.71	-3070.90	-90.00	962.30	380.57	2.53	PASS
9717.00†	6050.00	947.97	-3185.73	9627.45	6050.00	-15.25	-3170.88	-90.00	963.33	391.31	2.46	PASS
9817.00†	6050.00	947.46	-3285.73	9727.44	6050.00	-16.79	-3270.86	-90.00	964.36	402.06	2.40	PASS
9917.00†	6050.00	946.95	-3385.72	9827.44	6050.00	-18.33	-3370.84	-90.00	965.40	412.81	2.34	PASS
10017.00†	6050.00	946.44	-3485.72	9927.43	6050.00	-19.87	-3470.83	-90.00	966.43	423.57	2.28	PASS
10117.00†	6050.00	945.93	-3585.72	10027.43	6050.00	-21.42	-3570.81	-90.00	967.46	434.34	2.23	PASS
10217.00†	6050.00	945.42	-3685.72	10127.42	6050.00	-22.96	-3670.79	-90.00	968.50	445.12	2.18	PASS
10317.00†	6050.00	944.92	-3785.72	10227.42	6050.00	-24.50	-3770.78	-90.00	969.53	455.90	2.13	PASS
10417.00†	6050.00	944.41	-3885.72	10327.41	6050.00	-26.04	-3870.76	-90.00	970.56	466.69	2.08	PASS
10517.00†	6050.00	943.90	-3985.72	10427.41	6050.00	-27.58	-3970.74	-90.00	971.60	477.49	2.04	PASS
10617.00†	6050.00	943.39	-4085.72	10527.40	6050.00	-29.12	-4070.72	-90.00	972.63	488.28	1.99	PASS
10717.00†	6050.00	942.88	-4185.71	10627.40	6050.00	-30.66	-4170.71	-90.00	973.66	499.09	1.95	PASS
10817.00†	6050.00	942.37	-4285.71	10727.39	6050.00	-32.21	-4270.69	-90.00	974.69	509.90	1.91	PASS
10917.00†	6050.00	941.87	-4385.71	10827.39	6050.00	-33.75	-4370.67	-90.00	975.73	520.71	1.88	PASS
11017.00†	6050.00	941.36	-4485.71	10927.38	6050.00	-35.29	-4470.65	-90.00	976.76	531.52	1.84	PASS
11117.00†	6050.00	940.85	-4585.71	11027.37	6050.00	-36.83	-4570.64	-90.00	977.79	542.34	1.80	PASS
11217.00†	6050.00	940.34	-4685.71	11127.37	6050.00	-38.37	-4670.62	-90.00	978.83	553.17	1.77	PASS
11280.38	6050.00	940.02	-4749.09	11190.74	6050.00	-39.35	-4733.99	-90.00	979.48	560.03	1.75	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)			
Slot Surface Uncertainty @1SD		Horizontal	Vertical
		0.100ft	1.000ft



POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)				
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1543.32	-24.43	0.17	-20.32	33.87
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1543.32	-24.43	0.17	-20.32	33.87
8.5in Open Hole	1550.00	11208.26	9658.26	1543.32	6050.00	-20.32	33.87	-24.29	-1448.17



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE W42-C12-13HNB PWB
1550.00	11208.26	BHI AutoTrak Curve (Short)		STATE ANTELOPE W42-C12-13HNB PWB

OFFSET WELLPATH REFERENCE -    Offset Wellbore: STATE ANTELOPE W42-C12-13HNB PWB    Offset Wellpath: STATE ANTELOPE W42-C12-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft



POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB    Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)				
Slot Surface Uncertainty @1SD	Horizontal	0.100ft	Vertical	1.000ft
Facility Surface Uncertainty @1SD	Horizontal	8.200ft	Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB    Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1514.18	-36.64	0.17	-110.59	28.48
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1514.18	-36.64	0.17	-110.59	28.48
8.5in Open Hole	1550.00	11521.25	9971.25	1514.18	N/A	-110.59	28.48	N/A	N/A



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB    Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE X44-D14-13HNB PWB
1550.00	11521.25	BHI AutoTrak Curve (Short)		STATE ANTELOPE X44-D14-13HNB PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB    Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft



Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE Y44-E14-13HNB PWB Offset Wellpath: STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#11 STATE ANTELOPE Y44-E14-13HNB (2687'FNL & 510'FEL,SEC.13)			Well: STATE ANTELOPE Y44-E14-13HNB			Threshold Value=1.00		† = interpolated/extrapolated station		
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	17.00	17.00	-80.15	0.56	179.60	80.15	1.56	131.98	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	-80.15	0.56	179.60	80.15	2.18	64.95	PASS
217.00†	217.00	0.00	0.00	217.00	217.00	-80.15	0.56	179.60	80.15	3.16	36.01	PASS
300.00	300.00	0.00	0.00	298.69	298.69	-80.54	0.68	179.52	80.56	4.04	25.89	PASS
317.00†	317.00	0.04	0.03	315.24	315.23	-80.86	0.78	144.26	80.92	4.22	24.55	PASS
417.00†	416.97	1.95	1.38	412.36	412.27	-84.54	1.92	144.34	86.62	5.66	18.22	PASS
517.00†	516.79	6.71	4.74	508.69	508.33	-91.30	4.01	144.93	98.38	7.40	15.14	PASS
617.00†	616.35	14.32	10.10	603.70	602.80	-100.98	7.00	145.75	116.13	8.90	14.50	PASS
717.00†	715.53	24.76	17.46	696.89	695.08	-113.38	10.84	146.59	139.80	10.32	14.84	PASS
817.00†	814.20	38.02	26.82	787.82	784.67	-128.23	15.44	147.30	169.24	11.57	15.87	PASS
913.82	909.13	53.53	37.76	873.31	868.40	-144.67	20.53	147.84	203.07	12.71	17.21	PASS
917.00†	912.24	54.08	38.15	876.07	871.10	-145.24	20.70	147.87	204.27	12.75	17.24	PASS
1017.00†	1009.95	71.46	50.41	961.92	954.61	-164.22	26.58	148.49	243.25	13.79	18.89	PASS
1117.00†	1107.67	88.83	62.67	1045.76	1035.56	-185.05	33.02	148.73	284.76	14.79	20.53	PASS
1217.00†	1205.38	106.21	74.92	1127.52	1113.86	-207.54	39.98	148.72	328.68	15.78	22.12	PASS
1317.00†	1303.09	123.58	87.18	1207.15	1189.44	-231.48	47.40	148.57	374.92	16.76	23.67	PASS
1417.00†	1400.81	140.95	99.44	1284.61	1262.27	-256.69	55.20	148.33	423.40	17.65	25.31	PASS
1517.00†	1498.52	158.33	111.69	1359.89	1332.33	-282.98	63.33	148.03	474.04	18.68	26.70	PASS
1617.00†	1596.23	175.70	123.95	1432.97	1399.64	-310.18	71.75	147.70	526.74	19.24	28.45	PASS
1717.00†	1693.95	193.08	136.21	1510.60	1470.44	-340.58	81.16	147.33	581.19	19.85	30.39	PASS
1817.00†	1791.66	210.45	148.46	1594.26	1546.65	-373.55	91.37	146.99	635.89	20.34	32.35	PASS
1917.00†	1889.37	227.83	160.72	1677.92	1622.86	-406.52	101.57	146.70	690.60	20.78	34.38	PASS
2017.00†	1987.09	245.20	172.98	1761.58	1699.07	-439.49	111.78	146.46	745.32	21.22	36.29	PASS
2117.00†	2084.80	262.58	185.24	1845.24	1775.27	-472.46	121.98	146.25	800.05	21.73	38.02	PASS
2217.00†	2182.51	279.95	197.49	1928.89	1851.48	-505.43	132.19	146.06	854.79	22.30	39.55	PASS
2317.00†	2280.23	297.32	209.75	2012.55	1927.69	-538.40	142.39	145.90	909.54	22.92	40.91	PASS
2417.00†	2377.94	314.70	222.01	2096.21	2003.90	-571.37	152.59	145.76	964.28	23.60	42.09	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE Y44-E14-13HNB PWB Offset Wellpath: STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.0)			
Slot Surface Uncertainty @1SD		Horizontal	0.100ft
Facility Surface Uncertainty @1SD		Horizontal	8.200ft
		Vertical	1.000ft
		Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE Y44-E14-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1506.33	-48.86	0.34	-132.97	26.37
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1506.33	-48.86	0.34	-132.97	26.37
8.5in Open Hole	1550.00	11675.40	10125.40	1506.33	N/A	-132.97	26.37	N/A	N/A



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE Y44-E14-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE Y44-E14-13HNB PWB
1550.00	11675.40	BHI AutoTrak Curve (Short)		STATE ANTELOPE Y44-E14-13HNB PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE ANTELOPE Y44-E14-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y44-E14-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft





Clearance Report  
STATE ANTELOPE V-B-13HNB PWP (REV-A.0)  
Closest Approach  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE Y-E-13HNB PWB Offset Wellpath: STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)			Well: STATE ANTELOPE Y-E-13HNB		Threshold Value=1.00		† = interpolated/extrapolated station			
Ref MD [ft]	Ref TVD [ft]	Ref North [ft]	Ref East [ft]	Offset MD [ft]	Offset TVD [ft]	Offset North [ft]	Offset East [ft]	Angle from Highside [°]	C-C Clear Dist [ft]	ACR MASD [ft]	Sep Ratio	ACR Status
17.00	17.00	0.00	0.00	17.00	17.00	-100.19	0.56	179.68	100.19	1.56	165.37	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	-100.19	0.56	179.68	100.19	2.18	81.38	PASS
217.00†	217.00	0.00	0.00	216.47	216.47	-100.23	0.58	179.67	100.23	3.16	45.20	PASS
300.00	300.00	0.00	0.00	296.87	296.85	-101.68	1.24	179.30	101.73	4.16	31.55	PASS
317.00†	317.00	0.04	0.03	313.32	313.30	-102.22	1.49	143.97	102.34	4.36	29.81	PASS
417.00†	416.97	1.95	1.38	409.80	409.62	-107.17	3.75	143.44	109.39	5.96	21.71	PASS
517.00†	516.79	6.71	4.74	505.41	504.84	-114.98	7.32	143.25	122.30	7.59	18.31	PASS
617.00†	616.35	14.32	10.10	599.68	598.38	-125.50	12.14	143.31	140.98	9.02	17.37	PASS
717.00†	715.53	24.76	17.46	692.14	689.72	-138.53	18.10	143.50	165.31	10.38	17.45	PASS
817.00†	814.20	38.02	26.82	782.39	778.38	-153.83	25.10	143.72	195.17	11.61	18.25	PASS
913.82	909.13	53.53	37.76	867.31	861.29	-170.54	32.75	143.91	229.17	12.72	19.40	PASS
917.00†	912.24	54.08	38.15	870.05	863.96	-171.12	33.01	143.93	230.37	12.77	19.43	PASS
1017.00†	1009.95	71.46	50.41	955.41	946.68	-190.23	41.76	144.34	269.36	13.84	20.84	PASS
1117.00†	1107.67	88.83	62.67	1038.82	1026.88	-211.06	51.29	144.42	310.79	14.87	22.28	PASS
1217.00†	1205.38	106.21	74.92	1120.22	1104.47	-233.43	61.52	144.31	354.56	15.88	23.71	PASS
1317.00†	1303.09	123.58	87.18	1199.55	1179.39	-257.15	72.38	144.06	400.59	16.85	25.16	PASS
1417.00†	1400.81	140.95	99.44	1276.77	1251.59	-282.04	83.77	143.73	448.81	17.88	26.47	PASS
1517.00†	1498.52	158.33	111.69	1351.86	1321.07	-307.93	95.62	143.35	499.15	18.91	27.76	PASS
1617.00†	1596.23	175.70	123.95	1424.80	1387.83	-334.66	107.85	142.95	551.51	19.52	29.35	PASS
1717.00†	1693.95	193.08	136.21	1495.60	1451.89	-362.08	120.39	142.53	605.84	20.15	31.20	PASS
1817.00†	1791.66	210.45	148.46	1564.27	1513.28	-390.04	133.18	142.12	662.05	20.64	33.18	PASS
1917.00†	1889.37	227.83	160.72	1630.82	1572.07	-418.40	146.16	141.71	720.07	21.11	35.25	PASS
2017.00†	1987.09	245.20	172.98	1696.93	1629.74	-447.79	159.61	141.29	779.82	21.51	37.46	PASS
2117.00†	2084.80	262.58	185.24	1776.43	1698.75	-483.69	176.04	140.84	840.26	22.08	39.28	PASS
2217.00†	2182.51	279.95	197.49	1855.93	1767.75	-519.59	192.46	140.45	900.73	22.71	40.91	PASS
2317.00†	2280.23	297.32	209.75	1935.43	1836.76	-555.49	208.89	140.10	961.23	23.39	42.35	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE Y-E-13HNB PWB Offset Wellpath: STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)			
Slot Surface Uncertainty @1SD		Horizontal	0.100ft
Facility Surface Uncertainty @1SD		Horizontal	8.200ft
		Vertical	1.000ft
		Vertical	3.000ft

HOLE & CASING SECTIONS - Offset Wellbore: STATE ANTELOPE Y-E-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y-E-13HNB PWP (REV-A.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]
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1500.59	-61.07	0.34	-147.62	39.94
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1500.59	-61.07	0.34	-147.62	39.94
8.5in Open Hole	1550.00	12383.68	10833.68	1500.59	N/A	-147.62	39.94	N/A	N/A



Clearance Report

STATE ANTELOPE V-B-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE V-B-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE V-B-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE Y-E-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1550.00	BHI NaviTrak (Rotating)		STATE ANTELOPE Y-E-13HNB PWB
1550.00	12383.68	BHI AutoTrak Curve (Short)		STATE ANTELOPE Y-E-13HNB PWB

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE ANTELOPE Y-E-13HNB PWB    Offset Wellpath: STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)	
MD Reference: RIG (17') (RKB)	Offset TVD & local coordinates use Reference Wellpath settings (See WELLPATH DATUM on page 1 of this report)
Ellipse Start MD	17.00ft