

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL, SEC.13)
Field: WELD COUNTY Well: STATE ANTELOPE Y-E-13HNB
Facility: SEC.13-T5N-R62W Wellbore: STATE ANTELOPE Y-E-13HNB PWB

Plot reference wellpath is STATE ANTELOPE Y-E-13HNB PWB (REV-A.0)

True vertical depths are referenced to RIG (17) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to RIG (17) (RKB)	North Reference: True north
RIG (17) (RKB) to Mean Sea Level: 4590 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL, SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robati01 on 2018-11-15
	Database: WA DENVER

Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.13-T5N-R62W			3339859.889	1389969.906	40°23'50.820"N	104°16'47.028"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL, SEC.13)	1295.90	4473.00	3344314.443	1391327.177	40°24'03.622"N	104°15'49.212"W
RIG (17) (RKB) to Ground level (At Slot: SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL, SEC.13))						4590ft
Mean Sea Level to Ground level (At Slot: SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 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 Y-E-13HNB PWB
1550.00	12383.68	BHI AutoTrak Curve	BHI AutoTrak Curve (Short)		STATE ANTELOPE Y-E-13HNB PWB

Hole and Casing Sections

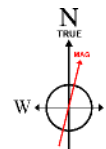
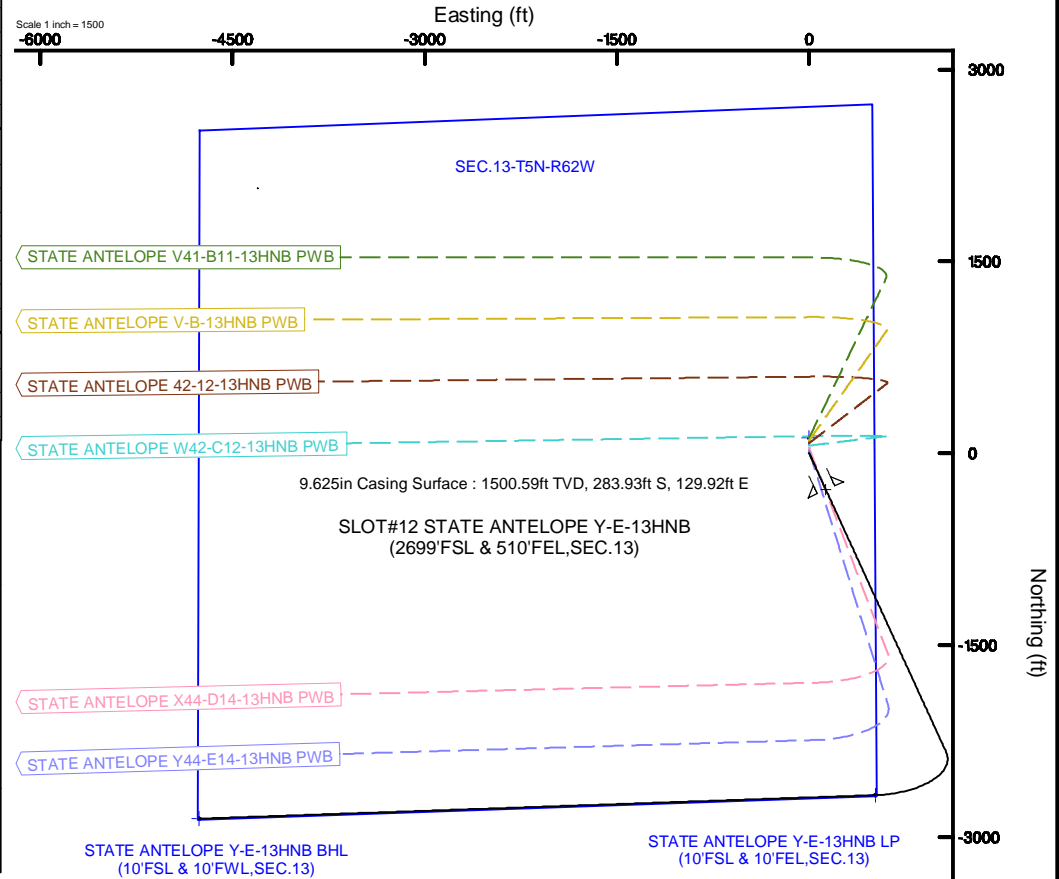
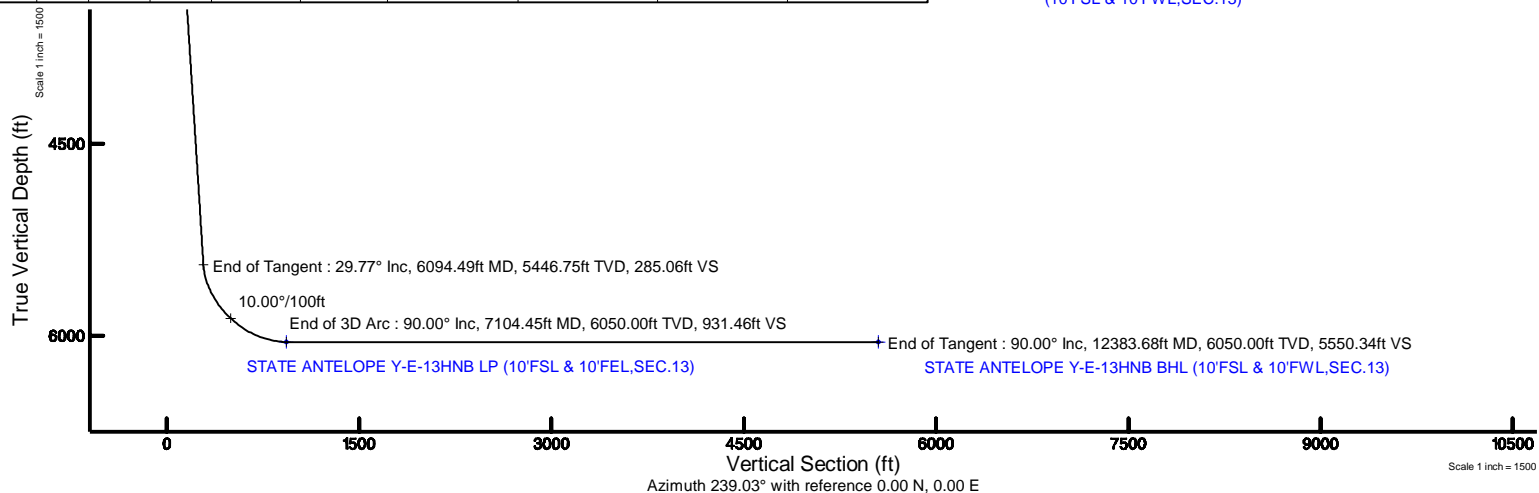
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
13.5in Open Hole	17.00	1550.00	1533.00	17.00	1500.59	0.00	0.00	-283.93	129.92	STATE ANTELOPE Y-E-13HNB PWB
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1500.59	0.00	0.00	-283.93	129.92	STATE ANTELOPE Y-E-13HNB PWB
8.5in Open Hole	1550.00	12383.68	10833.68	1500.59	N/A	-283.93	129.92	N/A	N/A	STATE ANTELOPE Y-E-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	155.413	17.00	0.00	0.00	0.00	0.00
End of Tangent	200.00	0.000	155.413	200.00	0.00	0.00	0.00	0.00
End of Build	1688.74	29.775	155.413	1622.63	-343.91	157.36	2.00	42.01
End of Tangent	6094.49	29.775	155.413	5446.75	-2333.40	1067.68	0.00	285.06
End of 3D Arc	7104.45	90.000	268.000	6050.00	-2671.49	516.71	10.00	931.46
End of Tangent	12383.68	90.000	268.000	6050.00	-2855.75	-4759.31	0.00	5550.34

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
12383.68	90.000	268.000	6050.00	-2855.75	-4759.31	3339859.61	1388405.48	40°23'35.398"N	104°16'50.722"W



BGGM (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 Y-E-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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 10:42:25 AM
Convergence at slot	0.80° East	Database/Source file	WA DENVER/STATE_ ANTELOPE_Y-E-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	1295.90	4473.00	3344314.44	1391327.18	40°24'03.622"N	104°15'49.212"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#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 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	239.03°



Planned Wellpath Report
STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

WELLPATH DATA (130 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	155.413	0.00	0.00	0.00	0.00	40°24'03.622"N	104°15'49.212"W	0.00	
17.00	0.000	155.413	17.00	0.00	0.00	0.00	40°24'03.622"N	104°15'49.212"W	0.00	Tie On
117.00†	0.000	155.413	117.00	0.00	0.00	0.00	40°24'03.622"N	104°15'49.212"W	0.00	
200.00	0.000	155.413	200.00	0.00	0.00	0.00	40°24'03.622"N	104°15'49.212"W	0.00	End of Tangent
217.00†	0.340	155.413	217.00	0.01	-0.05	0.02	40°24'03.621"N	104°15'49.212"W	2.00	
317.00†	2.340	155.413	316.97	0.27	-2.17	0.99	40°24'03.600"N	104°15'49.199"W	2.00	
417.00†	4.340	155.413	416.79	0.91	-7.47	3.42	40°24'03.548"N	104°15'49.168"W	2.00	
517.00†	6.340	155.413	516.35	1.95	-15.93	7.29	40°24'03.464"N	104°15'49.118"W	2.00	
617.00†	8.340	155.413	615.53	3.37	-27.55	12.61	40°24'03.349"N	104°15'49.049"W	2.00	
717.00†	10.340	155.413	714.20	5.17	-42.31	19.36	40°24'03.204"N	104°15'48.962"W	2.00	
817.00†	12.340	155.413	812.24	7.35	-60.19	27.54	40°24'03.027"N	104°15'48.856"W	2.00	
917.00†	14.340	155.413	909.54	9.92	-81.16	37.14	40°24'02.820"N	104°15'48.732"W	2.00	
1017.00†	16.340	155.413	1005.97	12.85	-105.22	48.14	40°24'02.582"N	104°15'48.590"W	2.00	
1117.00†	18.340	155.413	1101.42	16.16	-132.32	60.55	40°24'02.314"N	104°15'48.429"W	2.00	
1217.00†	20.340	155.413	1195.77	19.84	-162.43	74.32	40°24'02.016"N	104°15'48.251"W	2.00	
1317.00†	22.340	155.413	1288.91	23.89	-195.52	89.46	40°24'01.690"N	104°15'48.056"W	2.00	
1417.00†	24.340	155.413	1380.72	28.29	-231.55	105.95	40°24'01.334"N	104°15'47.843"W	2.00	
1517.00†	26.340	155.413	1471.10	33.04	-270.46	123.75	40°24'00.949"N	104°15'47.612"W	2.00	
1617.00†	28.340	155.413	1559.92	38.14	-312.22	142.86	40°24'00.536"N	104°15'47.365"W	2.00	
1688.74	29.775	155.413	1622.63	42.01	-343.91	157.36	40°24'00.223"N	104°15'47.178"W	2.00	End of Build
1717.00†	29.775	155.413	1647.16	43.57	-356.67	163.20	40°24'00.097"N	104°15'47.103"W	0.00	
1817.00†	29.775	155.413	1733.96	49.09	-401.82	183.86	40°23'59.651"N	104°15'46.836"W	0.00	
1917.00†	29.775	155.413	1820.76	54.61	-446.98	204.52	40°23'59.205"N	104°15'46.568"W	0.00	
2017.00†	29.775	155.413	1907.56	60.12	-492.14	225.19	40°23'58.758"N	104°15'46.301"W	0.00	
2117.00†	29.775	155.413	1994.35	65.64	-537.29	245.85	40°23'58.312"N	104°15'46.034"W	0.00	
2217.00†	29.775	155.413	2081.15	71.15	-582.45	266.51	40°23'57.866"N	104°15'45.767"W	0.00	
2317.00†	29.775	155.413	2167.95	76.67	-627.61	287.17	40°23'57.420"N	104°15'45.500"W	0.00	
2417.00†	29.775	155.413	2254.75	82.19	-672.76	307.83	40°23'56.974"N	104°15'45.233"W	0.00	
2517.00†	29.775	155.413	2341.55	87.70	-717.92	328.50	40°23'56.527"N	104°15'44.966"W	0.00	
2617.00†	29.775	155.413	2428.35	93.22	-763.08	349.16	40°23'56.081"N	104°15'44.699"W	0.00	
2717.00†	29.775	155.413	2515.14	98.74	-808.23	369.82	40°23'55.635"N	104°15'44.432"W	0.00	
2817.00†	29.775	155.413	2601.94	104.25	-853.39	390.48	40°23'55.189"N	104°15'44.165"W	0.00	
2917.00†	29.775	155.413	2688.74	109.77	-898.55	411.14	40°23'54.742"N	104°15'43.898"W	0.00	
3017.00†	29.775	155.413	2775.54	115.29	-943.70	431.81	40°23'54.296"N	104°15'43.631"W	0.00	
3117.00†	29.775	155.413	2862.34	120.80	-988.86	452.47	40°23'53.850"N	104°15'43.364"W	0.00	
3217.00†	29.775	155.413	2949.14	126.32	-1034.02	473.13	40°23'53.404"N	104°15'43.097"W	0.00	

WELLPATH DATA (130 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3317.00†	29.775	155.413	3035.93	131.84	-1079.17	493.79	40°23'52.958"N	104°15'42.830"W	0.00	
3417.00†	29.775	155.413	3122.73	137.35	-1124.33	514.45	40°23'52.511"N	104°15'42.563"W	0.00	
3517.00†	29.775	155.413	3209.53	142.87	-1169.49	535.12	40°23'52.065"N	104°15'42.296"W	0.00	
3617.00†	29.775	155.413	3296.33	148.39	-1214.64	555.78	40°23'51.619"N	104°15'42.029"W	0.00	
3717.00†	29.775	155.413	3383.13	153.90	-1259.80	576.44	40°23'51.173"N	104°15'41.762"W	0.00	
3817.00†	29.775	155.413	3469.93	159.42	-1304.96	597.10	40°23'50.726"N	104°15'41.495"W	0.00	
3917.00†	29.775	155.413	3556.72	164.94	-1350.11	617.77	40°23'50.280"N	104°15'41.227"W	0.00	
4017.00†	29.775	155.413	3643.52	170.45	-1395.27	638.43	40°23'49.834"N	104°15'40.960"W	0.00	
4117.00†	29.775	155.413	3730.32	175.97	-1440.43	659.09	40°23'49.388"N	104°15'40.693"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

WELLPATH DATA (130 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4217.00†	29.775	155.413	3817.12	181.49	-1485.58	679.75	40°23'48.941"N	104°15'40.426"W	0.00	
4317.00†	29.775	155.413	3903.92	187.00	-1530.74	700.41	40°23'48.495"N	104°15'40.159"W	0.00	
4417.00†	29.775	155.413	3990.72	192.52	-1575.90	721.08	40°23'48.049"N	104°15'39.892"W	0.00	
4517.00†	29.775	155.413	4077.51	198.04	-1621.05	741.74	40°23'47.603"N	104°15'39.625"W	0.00	
4617.00†	29.775	155.413	4164.31	203.55	-1666.21	762.40	40°23'47.157"N	104°15'39.358"W	0.00	
4717.00†	29.775	155.413	4251.11	209.07	-1711.37	783.06	40°23'46.710"N	104°15'39.091"W	0.00	
4817.00†	29.775	155.413	4337.91	214.58	-1756.53	803.72	40°23'46.264"N	104°15'38.824"W	0.00	
4917.00†	29.775	155.413	4424.71	220.10	-1801.68	824.39	40°23'45.818"N	104°15'38.557"W	0.00	
5017.00†	29.775	155.413	4511.51	225.62	-1846.84	845.05	40°23'45.372"N	104°15'38.290"W	0.00	
5117.00†	29.775	155.413	4598.30	231.13	-1892.00	865.71	40°23'44.925"N	104°15'38.023"W	0.00	
5217.00†	29.775	155.413	4685.10	236.65	-1937.15	886.37	40°23'44.479"N	104°15'37.756"W	0.00	
5317.00†	29.775	155.413	4771.90	242.17	-1982.31	907.03	40°23'44.033"N	104°15'37.489"W	0.00	
5417.00†	29.775	155.413	4858.70	247.68	-2027.47	927.70	40°23'43.587"N	104°15'37.222"W	0.00	
5517.00†	29.775	155.413	4945.50	253.20	-2072.62	948.36	40°23'43.141"N	104°15'36.955"W	0.00	
5617.00†	29.775	155.413	5032.30	258.72	-2117.78	969.02	40°23'42.694"N	104°15'36.688"W	0.00	
5717.00†	29.775	155.413	5119.09	264.23	-2162.94	989.68	40°23'42.248"N	104°15'36.421"W	0.00	
5817.00†	29.775	155.413	5205.89	269.75	-2208.09	1010.35	40°23'41.802"N	104°15'36.154"W	0.00	
5917.00†	29.775	155.413	5292.69	275.27	-2253.25	1031.01	40°23'41.356"N	104°15'35.887"W	0.00	
6017.00†	29.775	155.413	5379.49	280.78	-2298.41	1051.67	40°23'40.909"N	104°15'35.620"W	0.00	
6094.49	29.775	155.413	5446.75	285.06	-2333.40	1067.68	40°23'40.564"N	104°15'35.413"W	0.00	End of Tangent
6117.00†	29.081	159.772	5466.36	286.70	-2343.61	1071.90	40°23'40.463"N	104°15'35.358"W	10.00	
6217.00†	27.871	180.685	5554.48	303.53	-2389.91	1080.04	40°23'40.005"N	104°15'35.253"W	10.00	
6317.00†	29.864	201.077	5642.26	335.51	-2436.63	1070.79	40°23'39.543"N	104°15'35.373"W	10.00	
6417.00†	34.506	217.787	5727.04	381.66	-2482.36	1044.41	40°23'39.092"N	104°15'35.714"W	10.00	
6517.00†	40.897	230.419	5806.24	440.57	-2525.71	1001.72	40°23'38.663"N	104°15'36.266"W	10.00	
6617.00†	48.338	239.964	5877.45	510.46	-2565.37	944.00	40°23'38.271"N	104°15'37.012"W	10.00	
6717.00†	56.400	247.454	5938.51	589.21	-2600.12	873.02	40°23'37.928"N	104°15'37.929"W	10.00	
6817.00†	64.835	253.630	5987.57	674.42	-2628.92	790.93	40°23'37.643"N	104°15'38.990"W	10.00	
6917.00†	73.492	258.993	6023.13	763.50	-2650.88	700.22	40°23'37.426"N	104°15'40.162"W	10.00	
7017.00†	82.274	263.890	6044.11	853.74	-2665.34	603.65	40°23'37.284"N	104°15'41.410"W	10.00	
7104.45	90.000	268.000	6050.00 ¹	931.46	-2671.49	516.71	40°23'37.223"N	104°15'42.534"W	10.00	End of 3D Arc
7117.00†	90.000	268.000	6050.00	942.45	-2671.93	504.16	40°23'37.218"N	104°15'42.696"W	0.00	
7217.00†	90.000	268.000	6050.00	1029.94	-2675.42	404.22	40°23'37.184"N	104°15'43.988"W	0.00	
7317.00†	90.000	268.000	6050.00	1117.43	-2678.91	304.28	40°23'37.150"N	104°15'45.279"W	0.00	
7417.00†	90.000	268.000	6050.00	1204.92	-2682.40	204.35	40°23'37.115"N	104°15'46.571"W	0.00	

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7517.00†	90.000	268.000	6050.00	1292.41	-2685.89	104.41	40°23'37.081"N	104°15'47.863"W	0.00	
7617.00†	90.000	268.000	6050.00	1379.90	-2689.38	4.47	40°23'37.046"N	104°15'49.154"W	0.00	
7717.00†	90.000	268.000	6050.00	1467.39	-2692.87	-95.47	40°23'37.012"N	104°15'50.446"W	0.00	
7817.00†	90.000	268.000	6050.00	1554.89	-2696.36	-195.41	40°23'36.977"N	104°15'51.738"W	0.00	
7917.00†	90.000	268.000	6050.00	1642.38	-2699.85	-295.35	40°23'36.943"N	104°15'53.029"W	0.00	
8017.00†	90.000	268.000	6050.00	1729.87	-2703.34	-395.29	40°23'36.908"N	104°15'54.321"W	0.00	
8117.00†	90.000	268.000	6050.00	1817.36	-2706.83	-495.23	40°23'36.874"N	104°15'55.612"W	0.00	
8217.00†	90.000	268.000	6050.00	1904.85	-2710.32	-595.17	40°23'36.839"N	104°15'56.904"W	0.00	
8317.00†	90.000	268.000	6050.00	1992.34	-2713.81	-695.11	40°23'36.805"N	104°15'58.196"W	0.00	
8417.00†	90.000	268.000	6050.00	2079.83	-2717.30	-795.04	40°23'36.770"N	104°15'59.487"W	0.00	



Planned Wellpath Report
STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

WELLPATH DATA (130 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	268.000	6050.00	2167.33	-2720.79	-894.98	40°23'36.736"N	104°16'00.779"W	0.00	
8617.00†	90.000	268.000	6050.00	2254.82	-2724.28	-994.92	40°23'36.701"N	104°16'02.071"W	0.00	
8717.00†	90.000	268.000	6050.00	2342.31	-2727.77	-1094.86	40°23'36.666"N	104°16'03.362"W	0.00	
8817.00†	90.000	268.000	6050.00	2429.80	-2731.26	-1194.80	40°23'36.632"N	104°16'04.654"W	0.00	
8917.00†	90.000	268.000	6050.00	2517.29	-2734.75	-1294.74	40°23'36.597"N	104°16'05.945"W	0.00	
9017.00†	90.000	268.000	6050.00	2604.78	-2738.24	-1394.68	40°23'36.563"N	104°16'07.237"W	0.00	
9117.00†	90.000	268.000	6050.00	2692.28	-2741.73	-1494.62	40°23'36.528"N	104°16'08.529"W	0.00	
9217.00†	90.000	268.000	6050.00	2779.77	-2745.22	-1594.56	40°23'36.494"N	104°16'09.820"W	0.00	
9317.00†	90.000	268.000	6050.00	2867.26	-2748.71	-1694.50	40°23'36.459"N	104°16'11.112"W	0.00	
9417.00†	90.000	268.000	6050.00	2954.75	-2752.20	-1794.44	40°23'36.425"N	104°16'12.404"W	0.00	
9517.00†	90.000	268.000	6050.00	3042.24	-2755.70	-1894.37	40°23'36.390"N	104°16'13.695"W	0.00	
9617.00†	90.000	268.000	6050.00	3129.73	-2759.19	-1994.31	40°23'36.356"N	104°16'14.987"W	0.00	
9717.00†	90.000	268.000	6050.00	3217.22	-2762.68	-2094.25	40°23'36.321"N	104°16'16.278"W	0.00	
9817.00†	90.000	268.000	6050.00	3304.72	-2766.17	-2194.19	40°23'36.286"N	104°16'17.570"W	0.00	
9917.00†	90.000	268.000	6050.00	3392.21	-2769.66	-2294.13	40°23'36.252"N	104°16'18.862"W	0.00	
10017.00†	90.000	268.000	6050.00	3479.70	-2773.15	-2394.07	40°23'36.217"N	104°16'20.153"W	0.00	
10117.00†	90.000	268.000	6050.00	3567.19	-2776.64	-2494.01	40°23'36.183"N	104°16'21.445"W	0.00	
10217.00†	90.000	268.000	6050.00	3654.68	-2780.13	-2593.95	40°23'36.148"N	104°16'22.736"W	0.00	
10317.00†	90.000	268.000	6050.00	3742.17	-2783.62	-2693.89	40°23'36.113"N	104°16'24.028"W	0.00	
10417.00†	90.000	268.000	6050.00	3829.66	-2787.11	-2793.83	40°23'36.079"N	104°16'25.320"W	0.00	
10517.00†	90.000	268.000	6050.00	3917.16	-2790.60	-2893.77	40°23'36.044"N	104°16'26.611"W	0.00	
10617.00†	90.000	268.000	6050.00	4004.65	-2794.09	-2993.70	40°23'36.010"N	104°16'27.903"W	0.00	
10717.00†	90.000	268.000	6050.00	4092.14	-2797.58	-3093.64	40°23'35.975"N	104°16'29.195"W	0.00	
10817.00†	90.000	268.000	6050.00	4179.63	-2801.07	-3193.58	40°23'35.940"N	104°16'30.486"W	0.00	
10917.00†	90.000	268.000	6050.00	4267.12	-2804.56	-3293.52	40°23'35.906"N	104°16'31.778"W	0.00	
11017.00†	90.000	268.000	6050.00	4354.61	-2808.05	-3393.46	40°23'35.871"N	104°16'33.069"W	0.00	
11117.00†	90.000	268.000	6050.00	4442.11	-2811.54	-3493.40	40°23'35.837"N	104°16'34.361"W	0.00	
11217.00†	90.000	268.000	6050.00	4529.60	-2815.03	-3593.34	40°23'35.802"N	104°16'35.653"W	0.00	
11317.00†	90.000	268.000	6050.00	4617.09	-2818.52	-3693.28	40°23'35.767"N	104°16'36.944"W	0.00	
11417.00†	90.000	268.000	6050.00	4704.58	-2822.01	-3793.22	40°23'35.733"N	104°16'38.236"W	0.00	
11517.00†	90.000	268.000	6050.00	4792.07	-2825.50	-3893.16	40°23'35.698"N	104°16'39.527"W	0.00	
11617.00†	90.000	268.000	6050.00	4879.56	-2828.99	-3993.10	40°23'35.663"N	104°16'40.819"W	0.00	
11717.00†	90.000	268.000	6050.00	4967.05	-2832.48	-4093.03	40°23'35.629"N	104°16'42.111"W	0.00	
11817.00†	90.000	268.000	6050.00	5054.55	-2835.97	-4192.97	40°23'35.594"N	104°16'43.402"W	0.00	
11917.00†	90.000	268.000	6050.00	5142.04	-2839.46	-4292.91	40°23'35.559"N	104°16'44.694"W	0.00	
12017.00†	90.000	268.000	6050.00	5229.53	-2842.95	-4392.85	40°23'35.525"N	104°16'45.986"W	0.00	

WELLPATH DATA (130 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12117.00†	90.000	268.000	6050.00	5317.02	-2846.44	-4492.79	40°23'35.490"N	104°16'47.277"W	0.00	
12217.00†	90.000	268.000	6050.00	5404.51	-2849.93	-4592.73	40°23'35.455"N	104°16'48.569"W	0.00	
12317.00†	90.000	268.000	6050.00	5492.00	-2853.42	-4692.67	40°23'35.421"N	104°16'49.860"W	0.00	
12383.68	90.000	268.000	6050.00 ²	5550.34	-2855.75	-4759.31	40°23'35.398"N	104°16'50.722"W	0.00	End of Tangent



Planned Wellpath Report
STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE Y-E-13HNB PWB Ref 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	0.00	0.00	-283.93	129.92
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1500.59	0.00	0.00	-283.93	129.92
8.5in Open Hole	1550.00	12383.68	10833.68	1500.59	N/A	-283.93	129.92	N/A	N/A

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	120.22	-0.56	3344312.21	1391447.38	40°24'04.810"N	104°15'49.219"W	polygon
2) STATE ANTELOPE Y-E-13HNB BHL (10'FSL & 10'FWL,SEC.13)	12383.68	6050.00	-2855.75	-4759.31	3339595.61	1388405.48	40°23'35.398"N	104°16'50.722"W	point
1) STATE ANTELOPE Y-E-13HNB LP (10'FSL & 10'FEL,SEC.13)	7104.45	6050.00	-2671.49	516.71	3344868.32	1388663.26	40°23'37.223"N	104°15'42.534"W	point

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE Y-E-13HNB PWB Ref 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



Planned Wellpath Report

STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	155.413	17.00	Tie On
200.00	0.000	155.413	200.00	End of Tangent
1688.74	29.775	155.413	1622.63	End of Build
6094.49	29.775	155.413	5446.75	End of Tangent
7104.45	90.000	268.000	6050.00	End of 3D Arc
12383.68	90.000	268.000	6050.00	End of Tangent



Clearance Report

STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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 10:43:35 AM
Convergence at slot	0.80° East	Database/Source file	WA DENVER/STATE_ANTELOPE_Y-E-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	1295.90	4473.00	3344314.44	1391327.18	40°24'03.622"N	104°15'49.212"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#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 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 Y-E-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE Y-E-13HNB PWB Ref 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	0.00	0.00	-283.93	129.92
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1500.59	0.00	0.00	-283.93	129.92
8.5in Open Hole	1550.00	12383.68	10833.68	1500.59	N/A	-283.93	129.92	N/A	N/A

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE Y-E-13HNB PWB Ref 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

CALCULATION RANGE & CUTOFF		
From: 17.00ft MD	To: 12383.68ft 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#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	20.04	7517.00	12368.52	0.80	12368.52	FAIL
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	40.08	7517.00	12358.08	1.61	12358.08	PASS
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	60.11	7117.00	12383.68	4.98	12383.68	PASS
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	80.15	200.00	12383.68	5.82	12383.68	PASS
SEC.13-T5N-R62W	SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)	STATE ANTELOPE V-B-13HNB	STATE ANTELOPE V-B-13HNB PWB	STATE ANTELOPE V-B-13HNB PWP (REV-A.0)	17.00	100.19	200.00	12383.68	6.66	12383.68	PASS
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	120.22	200.00	12383.68	7.49	12383.68	PASS

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
3117.00†	2862.34	-988.86	452.47	3118.86	2935.47	-874.21	276.78	149.50	222.17	47.11	4.77	PASS
3217.00†	2949.14	-1034.02	473.13	3218.24	3026.00	-913.37	288.90	149.59	233.25	48.97	4.82	PASS
3317.00†	3035.93	-1079.17	493.79	3317.63	3116.53	-952.54	301.02	149.67	244.32	50.85	4.86	PASS
3417.00†	3122.73	-1124.33	514.45	3417.01	3207.07	-991.71	313.14	149.75	255.40	52.74	4.90	PASS
3517.00†	3209.53	-1169.49	535.12	3516.40	3297.60	-1030.87	325.27	149.82	266.47	54.64	4.93	PASS
3617.00†	3296.33	-1214.64	555.78	3615.78	3388.13	-1070.04	337.39	149.88	277.55	56.56	4.96	PASS
3717.00†	3383.13	-1259.80	576.44	3715.17	3478.66	-1109.21	349.51	149.94	288.62	58.49	4.98	PASS
3817.00†	3469.93	-1304.96	597.10	3814.55	3569.20	-1148.38	361.63	149.99	299.70	60.43	5.01	PASS
3917.00†	3556.72	-1350.11	617.77	3913.93	3659.73	-1187.54	373.76	150.04	310.77	62.38	5.03	PASS
4017.00†	3643.52	-1395.27	638.43	4013.32	3750.26	-1226.71	385.88	150.09	321.85	64.33	5.05	PASS
4117.00†	3730.32	-1440.43	659.09	4112.70	3840.80	-1265.88	398.00	150.13	332.93	66.30	5.07	PASS
4217.00†	3817.12	-1485.58	679.75	4212.09	3931.33	-1305.04	410.12	150.17	344.00	68.27	5.08	PASS

C-C Clearance Distance Cutoff: 1000.00 ft



Clearance Report
STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
Closest Approach
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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	
4317.00†	3903.92	-1530.74	700.41	4311.47	4021.86	-1344.21	422.25	150.21	355.08	70.25	5.10	PASS	
4417.00†	3990.72	-1575.90	721.08	4410.86	4112.40	-1383.38	434.37	150.24	366.16	72.23	5.11	PASS	
4517.00†	4077.51	-1621.05	741.74	4510.24	4202.93	-1422.55	446.49	150.28	377.23	74.22	5.12	PASS	
4617.00†	4164.31	-1666.21	762.40	4609.62	4293.46	-1461.71	458.62	150.31	388.31	76.21	5.13	PASS	
4717.00†	4251.11	-1711.37	783.06	4709.01	4384.00	-1500.88	470.74	150.34	399.39	78.21	5.14	PASS	
4817.00†	4337.91	-1756.53	803.72	4808.39	4474.53	-1540.05	482.86	150.37	410.46	80.22	5.15	PASS	
4917.00†	4424.71	-1801.68	824.39	4907.78	4565.06	-1579.21	494.98	150.39	421.54	82.22	5.16	PASS	
5017.00†	4511.51	-1846.84	845.05	5007.16	4655.59	-1618.38	507.11	150.42	432.62	84.23	5.17	PASS	
5117.00†	4598.30	-1892.00	865.71	5106.55	4746.13	-1657.55	519.23	150.44	443.70	86.25	5.18	PASS	
5217.00†	4685.10	-1937.15	886.37	5205.93	4836.66	-1696.72	531.35	150.47	454.77	88.26	5.19	PASS	
5317.00†	4771.90	-1982.31	907.03	5305.32	4927.19	-1735.88	543.47	150.49	465.85	90.28	5.19	PASS	
5417.00†	4858.70	-2027.47	927.70	5404.70	5017.73	-1775.05	555.60	150.51	476.93	92.31	5.20	PASS	
5517.00†	4945.50	-2072.62	948.36	5504.08	5108.26	-1814.22	567.72	150.53	488.01	94.33	5.20	PASS	
5617.00†	5032.30	-2117.78	969.02	5603.47	5198.79	-1853.38	579.84	150.55	499.09	96.36	5.21	PASS	
5717.00†	5119.09	-2162.94	989.68	5702.85	5289.33	-1892.55	591.96	150.57	510.16	98.39	5.22	PASS	
5817.00†	5205.89	-2208.09	1010.35	5802.24	5379.86	-1931.72	604.09	150.58	521.24	100.42	5.22	PASS	
5917.00†	5292.69	-2253.25	1031.01	5900.05	5468.96	-1970.27	616.01	150.60	532.33	102.43	5.23	PASS	
6017.00†	5379.49	-2298.41	1051.67	5957.32	5521.35	-1993.02	619.93	150.40	547.52	103.82	5.30	PASS	
6094.49	5446.75	-2333.40	1067.68	6000.31	5560.72	-2010.24	619.11	150.00	564.48	104.91	5.41	PASS	
6117.00†	5466.36	-2343.61	1071.90	6012.57	5571.92	-2015.15	618.29	145.72	569.91	105.16	5.45	PASS	
6217.00†	5554.48	-2389.91	1080.04	6066.90	5621.23	-2036.88	611.50	125.59	590.44	105.63	5.62	PASS	
6317.00†	5642.26	-2436.63	1070.79	6121.11	5669.56	-2058.33	599.68	106.71	604.81	104.75	5.81	PASS	
6417.00†	5727.04	-2482.36	1044.41	6175.25	5716.55	-2079.33	582.94	92.20	612.78	105.59	5.84	PASS	
6517.00†	5806.24	-2525.71	1001.72	6229.40	5761.83	-2099.74	561.41	82.48	614.24	99.16	6.23	PASS	
6617.00†	5877.45	-2565.37	944.00	6283.64	5805.07	-2119.39	535.25	76.58	609.27	94.79	6.47	PASS	
6717.00†	5938.51	-2600.12	873.02	6338.03	5845.90	-2138.12	504.63	73.58	598.11	89.98	6.69	PASS	
6817.00†	5987.57	-2628.92	790.93	6392.65	5884.00	-2155.78	469.74	72.85	581.16	85.43	6.85	PASS	
6917.00†	6023.13	-2650.88	700.22	6447.60	5919.04	-2172.23	430.76	74.05	559.06	81.96	6.87	PASS	
7017.00†	6044.11	-2665.34	603.65	6502.99	5950.69	-2187.31	387.91	77.05	532.72	80.41	6.68	PASS	
7104.45	6050.00	-2671.49	516.71	6551.90	5975.34	-2199.27	347.41	81.12	507.18	81.13	6.30	PASS	
7117.00†	6050.00	-2671.93	504.16	6559.01	5978.66	-2200.89	341.33	81.48	503.47	81.39	6.23	PASS	
7217.00†	6050.00	-2675.42	404.22	6619.34	6003.92	-2213.50	288.05	84.35	478.54	84.65	5.69	PASS	
7317.00†	6050.00	-2678.91	304.28	6685.91	6025.63	-2224.80	226.18	86.94	461.43	89.84	5.17	PASS	



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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	
8617.00†	6050.00	-2724.28	-994.92	7923.94	6050.00	-2271.86	-1008.27	90.00	452.62	193.94	2.34	PASS	
8717.00†	6050.00	-2727.77	-1094.86	8023.93	6050.00	-2274.81	-1108.23	90.00	453.16	203.76	2.23	PASS	
8817.00†	6050.00	-2731.26	-1194.80	8123.93	6050.00	-2277.76	-1208.18	90.00	453.70	213.69	2.13	PASS	
8917.00†	6050.00	-2734.75	-1294.74	8223.93	6050.00	-2280.71	-1308.14	90.00	454.24	223.71	2.03	PASS	
9017.00†	6050.00	-2738.24	-1394.68	8323.93	6050.00	-2283.66	-1408.09	90.00	454.78	233.81	1.95	PASS	
9117.00†	6050.00	-2741.73	-1494.62	8423.93	6050.00	-2286.61	-1508.05	90.00	455.32	243.98	1.87	PASS	
9217.00†	6050.00	-2745.22	-1594.56	8523.93	6050.00	-2289.56	-1608.00	90.00	455.86	254.20	1.80	PASS	
9317.00†	6050.00	-2748.71	-1694.50	8623.93	6050.00	-2292.51	-1707.96	90.00	456.41	264.48	1.73	PASS	
9417.00†	6050.00	-2752.20	-1794.44	8723.92	6050.00	-2295.46	-1807.91	90.00	456.95	274.81	1.66	PASS	
9517.00†	6050.00	-2755.70	-1894.37	8823.92	6050.00	-2298.41	-1907.87	90.00	457.49	285.18	1.61	PASS	
9617.00†	6050.00	-2759.19	-1994.31	8923.92	6050.00	-2301.36	-2007.82	90.00	458.03	295.58	1.55	PASS	
9717.00†	6050.00	-2762.68	-2094.25	9023.92	6050.00	-2304.31	-2107.78	90.00	458.57	306.02	1.50	PASS	
9817.00†	6050.00	-2766.17	-2194.19	9123.92	6050.00	-2307.25	-2207.73	90.00	459.11	316.49	1.45	PASS	
9917.00†	6050.00	-2769.66	-2294.13	9223.92	6050.00	-2310.20	-2307.69	90.00	459.65	326.99	1.41	PASS	
10017.00†	6050.00	-2773.15	-2394.07	9323.91	6050.00	-2313.15	-2407.64	90.00	460.19	337.51	1.36	PASS	
10117.00†	6050.00	-2776.64	-2494.01	9423.91	6050.00	-2316.10	-2507.60	90.00	460.73	348.05	1.32	PASS	
10217.00†	6050.00	-2780.13	-2593.95	9523.91	6050.00	-2319.05	-2607.55	90.00	461.28	358.62	1.29	PASS	
10317.00†	6050.00	-2783.62	-2693.89	9623.91	6050.00	-2322.00	-2707.51	90.00	461.82	369.20	1.25	PASS	
10417.00†	6050.00	-2787.11	-2793.83	9723.91	6050.00	-2324.95	-2807.46	90.00	462.36	379.80	1.22	PASS	
10517.00†	6050.00	-2790.60	-2893.77	9823.91	6050.00	-2327.90	-2907.42	90.00	462.90	390.42	1.19	PASS	
10617.00†	6050.00	-2794.09	-2993.70	9923.91	6050.00	-2330.85	-3007.37	90.00	463.44	401.05	1.16	PASS	
10717.00†	6050.00	-2797.58	-3093.64	10023.90	6050.00	-2333.80	-3107.33	90.00	463.98	411.69	1.13	PASS	
10817.00†	6050.00	-2801.07	-3193.58	10123.90	6050.00	-2336.75	-3207.28	90.00	464.52	422.35	1.10	PASS	
10917.00†	6050.00	-2804.56	-3293.52	10223.90	6050.00	-2339.70	-3307.24	90.00	465.06	433.01	1.07	PASS	
11017.00†	6050.00	-2808.05	-3393.46	10323.90	6050.00	-2342.65	-3407.19	90.00	465.60	443.69	1.05	PASS	
11117.00†	6050.00	-2811.54	-3493.40	10423.90	6050.00	-2345.60	-3507.15	90.00	466.15	454.38	1.03	PASS	
11217.00†	6050.00	-2815.03	-3593.34	10523.90	6050.00	-2348.54	-3607.10	90.00	466.69	465.08	1.00	PASS	
11317.00†	6050.00	-2818.52	-3693.28	10623.90	6050.00	-2351.49	-3707.06	90.00	467.23	475.78	0.98	FAIL	
11417.00†	6050.00	-2822.01	-3793.22	10723.89	6050.00	-2354.44	-3807.01	90.00	467.77	486.50	0.96	FAIL	
11517.00†	6050.00	-2825.50	-3893.16	10823.89	6050.00	-2357.39	-3906.97	90.00	468.31	497.22	0.94	FAIL	
11617.00†	6050.00	-2828.99	-3993.10	10923.89	6050.00	-2360.34	-4006.92	90.00	468.85	507.95	0.92	FAIL	
11717.00†	6050.00	-2832.48	-4093.03	11023.89	6050.00	-2363.29	-4106.88	90.00	469.39	518.68	0.90	FAIL	
11817.00†	6050.00	-2835.97	-4192.97	11123.89	6050.00	-2366.24	-4206.83	90.00	469.93	529.42	0.89	FAIL	

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
11917.00†	6050.00	-2839.46	-4292.91	11223.89	6050.00	-2369.19	-4306.79	90.00	470.47	540.17	0.87	FAIL
12017.00†	6050.00	-2842.95	-4392.85	11323.89	6050.00	-2372.14	-4406.74	90.00	471.02	550.92	0.85	FAIL
12117.00†	6050.00	-2846.44	-4492.79	11423.88	6050.00	-2375.09	-4506.70	90.00	471.56	561.68	0.84	FAIL
12217.00†	6050.00	-2849.93	-4592.73	11523.88	6050.00	-2378.04	-4606.65	90.00	472.10	572.44	0.82	FAIL
12317.00†	6050.00	-2853.42	-4692.67	11623.88	6050.00	-2380.99	-4706.61	90.00	472.64	583.21	0.81	FAIL
12368.52†	6050.00	-2855.22	-4744.15	11675.40	6050.00	-2382.51	-4758.10	90.00	472.92	588.76	0.80	FAIL
12383.68	6050.00	-2855.75	-4759.31	11675.40	6050.00	-2382.51	-4758.10	90.00	473.24	587.42	0.81	FAIL

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



Clearance Report

STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

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	12.21	0.00	-71.90	26.03
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1506.33	12.21	0.00	-71.90	26.03
8.5in Open Hole	1550.00	11675.40	10125.40	1506.33	N/A	-71.90	26.03	N/A	N/A

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 DATA - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#10 STATE ANTELOPE X44-D14-13HNB (2667'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE X44-D14-13HNB		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†	2862.34	-988.86	452.47	3114.33	2980.55	-711.42	287.40	174.13	343.80	31.42	11.17	PASS
3217.00†	2949.14	-1034.02	473.13	3212.96	3073.00	-743.50	299.68	174.05	360.31	32.50	11.31	PASS
3317.00†	3035.93	-1079.17	493.79	3311.58	3165.45	-775.59	311.96	173.97	376.83	33.60	11.43	PASS
3417.00†	3122.73	-1124.33	514.45	3410.21	3257.89	-807.67	324.24	173.90	393.35	34.73	11.54	PASS
3517.00†	3209.53	-1169.49	535.12	3508.83	3350.34	-839.75	336.52	173.84	409.87	35.88	11.63	PASS
3617.00†	3296.33	-1214.64	555.78	3607.46	3442.79	-871.83	348.80	173.78	426.39	37.05	11.71	PASS
3717.00†	3383.13	-1259.80	576.44	3706.08	3535.24	-903.92	361.08	173.72	442.91	38.23	11.78	PASS
3817.00†	3469.93	-1304.96	597.10	3804.71	3627.69	-936.00	373.37	173.67	459.43	39.44	11.84	PASS
3917.00†	3556.72	-1350.11	617.77	3903.33	3720.14	-968.08	385.65	173.63	475.95	40.66	11.90	PASS
4017.00†	3643.52	-1395.27	638.43	4001.96	3812.59	-1000.17	397.93	173.58	492.47	41.89	11.94	PASS
4117.00†	3730.32	-1440.43	659.09	4100.58	3905.04	-1032.25	410.21	173.54	509.00	43.14	11.98	PASS
4217.00†	3817.12	-1485.58	679.75	4199.21	3997.48	-1064.33	422.49	173.50	525.52	44.40	12.01	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: **STATE ANTELOPE X44-D14-13HNB PWB** Offset Wellpath: **STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)**

Facility: SEC.13-T5N-R62W	Slot: SLOT#10 STATE ANTELOPE X44-D14-13HNB (2667'FNL & 510'FEL,SEC.13)	Well: STATE ANTELOPE X44-D14-13HNB	Threshold Value=1.00	† = interpolated/extrapolated station
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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†	3903.92	-1530.74	700.41	4297.83	4089.93	-1096.41	434.77	173.47	542.04	45.67	12.04	PASS
4417.00†	3990.72	-1575.90	721.08	4396.46	4182.38	-1128.50	447.05	173.43	558.56	46.94	12.07	PASS
4517.00†	4077.51	-1621.05	741.74	4495.08	4274.83	-1160.58	459.34	173.40	575.09	48.23	12.09	PASS
4617.00†	4164.31	-1666.21	762.40	4593.71	4367.28	-1192.66	471.62	173.37	591.61	49.53	12.10	PASS
4717.00†	4251.11	-1711.37	783.06	4692.33	4459.73	-1224.74	483.90	173.34	608.13	50.83	12.12	PASS
4817.00†	4337.91	-1756.53	803.72	4790.96	4552.18	-1256.83	496.18	173.31	624.65	52.14	12.13	PASS
4917.00†	4424.71	-1801.68	824.39	4889.58	4644.63	-1288.91	508.46	173.29	641.18	53.45	12.14	PASS
5017.00†	4511.51	-1846.84	845.05	4988.21	4737.07	-1320.99	520.74	173.26	657.70	54.78	12.15	PASS
5117.00†	4598.30	-1892.00	865.71	5086.83	4829.52	-1353.07	533.02	173.24	674.22	56.10	12.16	PASS
5217.00†	4685.10	-1937.15	886.37	5185.46	4921.97	-1385.16	545.30	173.22	690.75	57.44	12.16	PASS
5317.00†	4771.90	-1982.31	907.03	5284.08	5014.42	-1417.24	557.59	173.20	707.27	58.78	12.17	PASS
5417.00†	4858.70	-2027.47	927.70	5382.71	5106.87	-1449.32	569.87	173.18	723.79	60.12	12.17	PASS
5517.00†	4945.50	-2072.62	948.36	5481.33	5199.32	-1481.41	582.15	173.16	740.32	61.46	12.17	PASS
5617.00†	5032.30	-2117.78	969.02	5579.96	5291.77	-1513.49	594.43	173.14	756.84	62.82	12.17	PASS
5717.00†	5119.09	-2162.94	989.68	5678.58	5384.22	-1545.57	606.71	173.12	773.37	64.17	12.18	PASS
5817.00†	5205.89	-2208.09	1010.35	5764.29	5464.59	-1573.47	617.05	173.08	790.16	65.40	12.20	PASS
5917.00†	5292.69	-2253.25	1031.01	5822.55	5519.52	-1592.66	619.38	172.76	810.72	66.48	12.32	PASS
6017.00†	5379.49	-2298.41	1051.67	5878.31	5572.00	-1611.12	616.06	172.12	836.17	67.79	12.45	PASS
6094.49	5446.75	-2333.40	1067.68	5919.26	5610.20	-1624.65	610.19	171.45	859.27	68.81	12.61	PASS
6117.00†	5466.36	-2343.61	1071.90	5930.84	5620.92	-1628.45	608.00	166.80	866.34	68.98	12.68	PASS
6217.00†	5554.48	-2389.91	1080.04	5982.21	5667.85	-1645.20	595.56	145.06	895.64	71.30	12.68	PASS
6317.00†	5642.26	-2436.63	1070.79	6033.54	5713.46	-1661.59	578.73	124.61	920.80	71.09	13.07	PASS
6417.00†	5727.04	-2482.36	1044.41	6084.86	5757.43	-1677.51	557.63	108.61	941.10	71.32	13.32	PASS
6517.00†	5806.24	-2525.71	1001.72	6136.22	5799.45	-1692.85	532.41	97.46	956.01	71.17	13.56	PASS
6617.00†	5877.45	-2565.37	944.00	6187.66	5839.19	-1707.48	503.25	90.19	965.25	70.89	13.74	PASS
6717.00†	5938.51	-2600.12	873.02	6239.22	5876.35	-1721.31	470.32	85.79	968.68	70.92	13.79	PASS
6817.00†	5987.57	-2628.92	790.93	6290.92	5910.64	-1734.21	433.87	83.57	966.39	71.65	13.61	PASS
6917.00†	6023.13	-2650.88	700.22	6342.80	5941.76	-1746.09	394.12	83.12	958.63	73.42	13.17	PASS
7017.00†	6044.11	-2665.34	603.65	6394.90	5969.44	-1756.84	351.34	84.19	945.85	76.32	12.50	PASS
7104.45	6050.00	-2671.49	516.71	6440.65	5990.63	-1765.23	311.67	86.28	931.06	79.70	11.78	PASS
7117.00†	6050.00	-2671.93	504.16	6447.28	5993.45	-1766.36	305.78	86.45	928.77	80.24	11.67	PASS
7217.00†	6050.00	-2675.42	404.22	6502.70	6014.44	-1774.95	255.24	87.75	913.40	84.76	10.86	PASS
7317.00†	6050.00	-2678.91	304.28	6562.48	6031.77	-1782.42	198.55	88.84	902.89	89.89	10.12	PASS



Clearance Report
STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
Closest Approach
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#10 STATE ANTELOPE X44-D14-13HNB (2667'FNL & 510'FEL,SEC.13)			Well: STATE ANTELOPE X44-D14-13HNB			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	-2724.28	-994.92	7780.37	6050.00	-1818.62	-1017.14	90.00	905.93	193.24	4.70	PASS
8717.00†	6050.00	-2727.77	-1094.86	7880.36	6050.00	-1821.07	-1117.10	90.00	906.97	203.11	4.48	PASS
8817.00†	6050.00	-2731.26	-1194.80	7980.35	6050.00	-1823.53	-1217.07	90.00	908.01	213.07	4.27	PASS
8917.00†	6050.00	-2734.75	-1294.74	8080.35	6050.00	-1825.98	-1317.03	90.00	909.05	223.12	4.08	PASS
9017.00†	6050.00	-2738.24	-1394.68	8180.34	6050.00	-1828.43	-1417.00	90.00	910.09	233.25	3.91	PASS
9117.00†	6050.00	-2741.73	-1494.62	8280.34	6050.00	-1830.88	-1516.96	90.00	911.13	243.44	3.75	PASS
9217.00†	6050.00	-2745.22	-1594.56	8380.33	6050.00	-1833.34	-1616.93	90.00	912.16	253.69	3.60	PASS
9317.00†	6050.00	-2748.71	-1694.50	8480.33	6050.00	-1835.79	-1716.89	90.00	913.20	263.99	3.47	PASS
9417.00†	6050.00	-2752.20	-1794.44	8580.32	6050.00	-1838.24	-1816.86	90.00	914.24	274.33	3.34	PASS
9517.00†	6050.00	-2755.70	-1894.37	8680.32	6050.00	-1840.69	-1916.82	90.00	915.28	284.72	3.22	PASS
9617.00†	6050.00	-2759.19	-1994.31	8780.31	6050.00	-1843.14	-2016.78	90.00	916.32	295.14	3.11	PASS
9717.00†	6050.00	-2762.68	-2094.25	8880.31	6050.00	-1845.60	-2116.75	90.00	917.36	305.59	3.01	PASS
9817.00†	6050.00	-2766.17	-2194.19	8980.30	6050.00	-1848.05	-2216.71	90.00	918.39	316.08	2.91	PASS
9917.00†	6050.00	-2769.66	-2294.13	9080.30	6050.00	-1850.50	-2316.68	90.00	919.43	326.59	2.82	PASS
10017.00†	6050.00	-2773.15	-2394.07	9180.29	6050.00	-1852.95	-2416.64	90.00	920.47	337.12	2.73	PASS
10117.00†	6050.00	-2776.64	-2494.01	9280.28	6050.00	-1855.40	-2516.61	90.00	921.51	347.68	2.65	PASS
10217.00†	6050.00	-2780.13	-2593.95	9380.28	6050.00	-1857.86	-2616.57	90.00	922.55	358.26	2.58	PASS
10317.00†	6050.00	-2783.62	-2693.89	9480.27	6050.00	-1860.31	-2716.54	90.00	923.59	368.85	2.51	PASS
10417.00†	6050.00	-2787.11	-2793.83	9580.27	6050.00	-1862.76	-2816.50	90.00	924.62	379.46	2.44	PASS
10517.00†	6050.00	-2790.60	-2893.77	9680.26	6050.00	-1865.21	-2916.47	90.00	925.66	390.09	2.38	PASS
10617.00†	6050.00	-2794.09	-2993.70	9780.26	6050.00	-1867.66	-3016.43	90.00	926.70	400.73	2.31	PASS
10717.00†	6050.00	-2797.58	-3093.64	9880.25	6050.00	-1870.12	-3116.39	90.00	927.74	411.38	2.26	PASS
10817.00†	6050.00	-2801.07	-3193.58	9980.25	6050.00	-1872.57	-3216.36	90.00	928.78	422.04	2.20	PASS
10917.00†	6050.00	-2804.56	-3293.52	10080.24	6050.00	-1875.02	-3316.32	90.00	929.82	432.72	2.15	PASS
11017.00†	6050.00	-2808.05	-3393.46	10180.24	6050.00	-1877.47	-3416.29	90.00	930.85	443.41	2.10	PASS
11117.00†	6050.00	-2811.54	-3493.40	10280.23	6050.00	-1879.93	-3516.25	90.00	931.89	454.10	2.05	PASS
11217.00†	6050.00	-2815.03	-3593.34	10380.23	6050.00	-1882.38	-3616.22	90.00	932.93	464.81	2.01	PASS
11317.00†	6050.00	-2818.52	-3693.28	10480.22	6050.00	-1884.83	-3716.18	90.00	933.97	475.52	1.97	PASS
11417.00†	6050.00	-2822.01	-3793.22	10580.21	6050.00	-1887.28	-3816.15	90.00	935.01	486.24	1.92	PASS
11517.00†	6050.00	-2825.50	-3893.16	10680.21	6050.00	-1889.73	-3916.11	90.00	936.05	496.97	1.88	PASS
11617.00†	6050.00	-2828.99	-3993.10	10780.20	6050.00	-1892.19	-4016.07	90.00	937.08	507.70	1.85	PASS
11717.00†	6050.00	-2832.48	-4093.03	10880.20	6050.00	-1894.64	-4116.04	90.00	938.12	518.44	1.81	PASS
11817.00†	6050.00	-2835.97	-4192.97	10980.19	6050.00	-1897.09	-4216.00	90.00	939.16	529.19	1.78	PASS

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE X44-D14-13HNB PWB Offset Wellpath: STATE ANTELOPE X44-D14-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W		Slot: SLOT#10 STATE ANTELOPE X44-D14-13HNB (2667'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE X44-D14-13HNB			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
11917.00†	6050.00	-2839.46	-4292.91	11080.19	6050.00	-1899.54	-4315.97	90.00	940.20	539.94	1.74	PASS
12017.00†	6050.00	-2842.95	-4392.85	11180.18	6050.00	-1901.99	-4415.93	90.00	y41.24	550.70	1.71	PASS
12117.00†	6050.00	-2846.44	-4492.79	11280.18	6050.00	-1904.45	-4515.90	90.00	942.28	561.47	1.68	PASS
12217.00†	6050.00	-2849.93	-4592.73	11380.17	6050.00	-1906.90	-4615.86	90.00	943.31	572.23	1.65	PASS
12317.00†	6050.00	-2853.42	-4692.67	11480.17	6050.00	-1909.35	-4715.83	90.00	944.35	583.01	1.62	PASS
12358.08†	6050.00	-2854.85	-4733.73	11521.25	6050.00	-1910.36	-4756.90	90.00	944.78	587.43	1.61	PASS
12383.68	6050.00	-2855.75	-4759.31	11521.25	6050.00	-1910.36	-4756.90	90.00	945.39	587.13	1.61	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

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
Facility Surface Uncertainty @1SD			Horizontal	8.200ft
			Vertical	1.000ft
			Vertical	3.000ft



Clearance Report

STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

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	24.43	-0.17	-49.52	28.14
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1514.18	24.43	-0.17	-49.52	28.14
8.5in Open Hole	1550.00	11521.25	9971.25	1514.18	N/A	-49.52	28.14	N/A	N/A

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 Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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	60.11	-0.28	-0.27	60.11	1.56	98.58	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	60.11	-0.28	-0.27	60.11	2.18	48.51	PASS
200.00	200.00	0.00	0.00	200.00	200.00	60.11	-0.28	-0.27	60.11	2.99	29.14	PASS
217.00†	217.00	-0.05	0.02	217.00	217.00	60.11	-0.28	-155.70	60.16	3.16	26.93	PASS
317.00†	316.97	-2.17	0.99	316.97	316.97	60.11	-0.28	-156.57	62.30	4.38	17.95	PASS
417.00†	416.79	-7.47	3.42	416.79	416.79	60.11	-0.28	-158.49	67.68	5.90	13.51	PASS
517.00†	516.35	-15.93	7.29	516.34	516.34	60.12	-0.23	-160.95	76.42	7.26	11.99	PASS
617.00†	615.53	-27.55	12.61	615.55	615.52	60.39	2.03	-162.09	88.58	8.52	11.59	PASS
717.00†	714.20	-42.31	19.36	714.33	714.13	61.08	7.68	-161.58	104.05	9.73	11.75	PASS
817.00†	812.24	-60.19	27.54	812.42	811.80	62.17	16.62	-160.07	122.85	10.92	12.24	PASS
917.00†	909.54	-81.16	37.14	909.73	908.38	63.62	28.48	-158.17	145.05	12.16	12.87	PASS
1017.00†	1005.97	-105.22	48.14	1006.40	1004.23	65.13	40.83	-156.97	170.52	13.35	13.69	PASS
1117.00†	1101.42	-132.32	60.55	1102.21	1099.26	66.62	53.07	-156.41	199.10	14.59	14.54	PASS
1217.00†	1195.77	-162.43	74.32	1197.07	1193.32	68.10	65.19	-156.27	230.73	15.86	15.43	PASS
1317.00†	1288.91	-195.52	89.46	1290.85	1286.33	69.57	77.17	-156.39	265.39	17.13	16.36	PASS
1417.00†	1380.72	-231.55	105.95	1383.45	1378.15	71.01	89.00	-156.66	303.04	18.41	17.31	PASS
1517.00†	1471.10	-270.46	123.75	1474.74	1468.68	72.43	100.66	-157.02	343.68	19.68	18.31	PASS
1617.00†	1559.92	-312.22	142.86	1564.61	1557.81	73.83	112.14	-157.43	387.28	20.46	19.58	PASS
1688.74	1622.63	-343.91	157.36	1628.16	1620.83	74.83	120.26	-157.73	420.38	20.90	20.78	PASS
1717.00†	1647.16	-356.67	163.20	1653.03	1645.49	75.21	123.44	-157.95	433.71	21.03	21.31	PASS
1817.00†	1733.96	-401.82	183.86	1741.04	1732.77	76.59	134.68	-158.65	480.93	21.47	23.13	PASS
1917.00†	1820.76	-446.98	204.52	1829.06	1820.05	77.96	145.93	-159.22	528.20	21.99	24.78	PASS
2017.00†	1907.56	-492.14	225.19	1917.07	1907.33	79.33	157.17	-159.70	575.50	22.58	26.28	PASS
2117.00†	1994.35	-537.29	245.85	2005.08	1994.61	80.70	168.41	-160.10	622.83	23.24	27.62	PASS
2217.00†	2081.15	-582.45	266.51	2093.09	2081.89	82.08	179.66	-160.45	670.18	23.95	28.81	PASS
2317.00†	2167.95	-627.61	287.17	2181.10	2169.17	83.45	190.90	-160.75	717.55	24.71	29.86	PASS
2417.00†	2254.75	-672.76	307.83	2269.11	2256.45	84.82	202.14	-161.02	764.92	25.53	30.79	PASS
2517.00†	2341.55	-717.92	328.50	2357.13	2343.73	86.19	213.39	-161.25	812.32	26.39	31.61	PASS
2617.00†	2428.35	-763.08	349.16	2445.14	2431.01	87.57	224.63	-161.46	859.71	27.28	32.32	PASS
2717.00†	2515.14	-808.23	369.82	2533.15	2518.29	88.94	235.87	-161.65	907.12	28.22	32.95	PASS
2817.00†	2601.94	-853.39	390.48	2621.16	2605.57	90.31	247.12	-161.81	954.54	29.18	33.50	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	0.100ft	Vertical	1.000ft
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	36.64	-0.17	40.76	33.53
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1543.32	36.64	-0.17	40.76	33.53
8.5in Open Hole	1550.00	11208.26	9658.26	1543.32	6050.00	40.76	33.53	36.78	-1448.51



Clearance Report

STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

Closest Approach

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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



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STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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
17.00	17.00	0.00	0.00	17.00	17.00	80.15	-0.56	-0.40	80.15	1.56	131.98	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	80.15	-0.56	-0.40	80.15	2.18	64.95	PASS
200.00	200.00	0.00	0.00	200.00	200.00	80.15	-0.56	-0.40	80.15	2.99	39.01	PASS
217.00†	217.00	-0.05	0.02	217.00	217.00	80.15	-0.56	-155.83	80.20	3.16	36.04	PASS
317.00†	316.97	-2.17	0.99	316.97	316.97	80.15	-0.56	-156.48	82.34	4.38	23.81	PASS
417.00†	416.79	-7.47	3.42	416.50	416.50	80.18	-0.52	-157.92	87.74	5.90	17.59	PASS
517.00†	516.35	-15.93	7.29	514.21	514.18	81.53	1.25	-158.79	97.68	7.27	15.33	PASS
617.00†	615.53	-27.55	12.61	611.09	610.90	84.87	5.62	-158.64	112.73	8.65	14.55	PASS
717.00†	714.20	-42.31	19.36	706.72	706.14	90.12	12.47	-157.83	132.85	9.94	14.69	PASS
817.00†	812.24	-60.19	27.54	800.74	799.43	97.15	21.67	-156.67	157.97	11.20	15.34	PASS
917.00†	909.54	-81.16	37.14	894.33	891.93	105.83	33.00	-155.44	187.86	12.41	16.32	PASS
1017.00†	1005.97	-105.22	48.14	988.64	985.06	114.85	44.80	-154.73	221.09	13.58	17.45	PASS
1117.00†	1101.42	-132.32	60.55	1081.85	1077.11	123.78	56.46	-154.44	257.28	14.78	18.55	PASS
1217.00†	1195.77	-162.43	74.32	1173.87	1167.97	132.59	67.98	-154.42	296.40	15.99	19.66	PASS
1317.00†	1288.91	-195.52	89.46	1264.57	1257.54	141.27	79.33	-154.56	338.40	17.22	20.76	PASS
1417.00†	1380.72	-231.55	105.95	1353.85	1345.71	149.82	90.50	-154.80	383.28	18.46	21.85	PASS
1517.00†	1471.10	-270.46	123.75	1441.60	1432.36	158.22	101.48	-155.09	431.01	19.68	22.97	PASS
1617.00†	1559.92	-312.22	142.86	1527.70	1517.39	166.47	112.25	-155.40	481.55	20.56	24.27	PASS
1688.74	1622.63	-343.91	157.36	1588.41	1577.34	172.28	119.85	-155.61	519.53	20.99	25.58	PASS
1717.00†	1647.16	-356.67	163.20	1612.14	1600.78	174.55	122.82	-155.84	534.77	21.17	26.10	PASS
1817.00†	1733.96	-401.82	183.86	1696.12	1683.70	182.59	133.32	-156.55	588.74	21.63	28.10	PASS
1917.00†	1820.76	-446.98	204.52	1780.09	1766.63	190.63	143.83	-157.14	642.78	22.16	29.93	PASS
2017.00†	1907.56	-492.14	225.19	1864.07	1849.56	198.67	154.34	-157.64	696.85	22.76	31.57	PASS
2117.00†	1994.35	-537.29	245.85	1948.05	1932.48	206.71	164.85	-158.06	750.95	23.41	33.05	PASS
2217.00†	2081.15	-582.45	266.51	2032.02	2015.41	214.75	175.35	-158.43	805.08	24.12	34.36	PASS
2317.00†	2167.95	-627.61	287.17	2116.00	2098.34	222.79	185.86	-158.76	859.24	24.88	35.52	PASS
2417.00†	2254.75	-672.76	307.83	2199.98	2181.27	230.83	196.37	-159.04	913.40	25.69	36.53	PASS
2517.00†	2341.55	-717.92	328.50	2283.95	2264.19	238.87	206.88	-159.30	967.59	26.54	37.42	PASS

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	48.86	-0.34	75.82	34.89
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1539.41	48.86	-0.34	75.82	34.89
8.5in Open Hole	1550.00	11226.99	9676.99	1539.41	N/A	75.82	34.89	N/A	N/A



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STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

CLEARANCE DATA - Offset Wellbore: STATE ANTELOPE V-B-13HNB PWB Offset Wellpath: STATE ANTELOPE V-B-13HNB PWP (REV-A.0)												
Facility: SEC.13-T5N-R62W Slot: SLOT#07 STATE ANTELOPE V-B-13HNB (2607'FNL & 510'FEL,SEC.13)				Well: STATE ANTELOPE V-B-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	-0.32	100.19	1.56	165.37	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	100.19	-0.56	-0.32	100.19	2.18	81.38	PASS
200.00	200.00	0.00	0.00	200.00	200.00	100.19	-0.56	-0.32	100.19	2.99	48.89	PASS
217.00†	217.00	-0.05	0.02	217.00	217.00	100.19	-0.56	-155.74	100.23	3.16	45.15	PASS
317.00†	316.97	-2.17	0.99	316.49	316.49	100.22	-0.53	-156.24	102.41	4.38	29.71	PASS
417.00†	416.79	-7.47	3.42	413.34	413.31	102.02	0.74	-156.70	109.58	5.99	21.60	PASS
517.00†	516.35	-15.93	7.29	509.36	509.18	106.43	3.85	-156.75	122.62	7.60	18.33	PASS
617.00†	615.53	-27.55	12.61	604.07	603.50	113.36	8.74	-156.48	141.47	9.04	17.41	PASS
717.00†	714.20	-42.31	19.36	697.00	695.73	122.63	15.27	-156.02	166.01	10.41	17.47	PASS
817.00†	812.24	-60.19	27.54	787.73	785.38	134.03	23.32	-155.45	196.11	11.63	18.29	PASS
917.00†	909.54	-81.16	37.14	875.88	872.01	147.32	32.70	-154.84	231.59	12.87	19.38	PASS
1017.00†	1005.97	-105.22	48.14	964.79	958.94	162.57	43.45	-154.27	271.93	13.97	20.83	PASS
1117.00†	1101.42	-132.32	60.55	1054.87	1046.96	178.22	54.49	-153.97	315.34	15.09	22.26	PASS
1217.00†	1195.77	-162.43	74.32	1143.52	1133.59	193.63	65.36	-153.88	361.56	16.22	23.63	PASS
1317.00†	1288.91	-195.52	89.46	1230.64	1218.71	208.76	76.04	-153.91	410.55	17.39	24.93	PASS
1417.00†	1380.72	-231.55	105.95	1316.11	1302.23	223.61	86.51	-154.00	462.29	18.54	26.25	PASS
1517.00†	1471.10	-270.46	123.75	1399.84	1384.04	238.16	96.78	-154.14	516.72	19.71	27.52	PASS
1617.00†	1559.92	-312.22	142.86	1481.72	1464.05	252.39	106.81	-154.28	573.82	20.57	28.91	PASS
1688.74	1622.63	-343.91	157.36	1539.27	1520.29	262.38	113.87	-154.37	616.41	21.11	30.24	PASS
1717.00†	1647.16	-356.67	163.20	1561.74	1542.24	266.29	116.62	-154.59	633.44	21.24	30.82	PASS
1817.00†	1733.96	-401.82	183.86	1641.24	1619.92	280.10	126.36	-155.26	693.78	21.80	32.86	PASS
1917.00†	1820.76	-446.98	204.52	1720.74	1697.60	293.91	136.11	-155.83	754.17	22.30	34.89	PASS
2017.00†	1907.56	-492.14	225.19	1800.24	1775.28	307.73	145.85	-156.32	814.60	22.87	36.72	PASS
2117.00†	1994.35	-537.29	245.85	1879.74	1852.97	321.54	155.60	-156.74	875.06	23.50	38.36	PASS
2217.00†	2081.15	-582.45	266.51	1959.24	1930.65	335.35	165.34	-157.10	935.55	24.19	39.82	PASS
2317.00†	2167.95	-627.61	287.17	2038.74	2008.33	349.16	175.09	-157.42	996.06	24.92	41.11	PASS

C-C Clearance Distance Cutoff: 1000.00 ft

POSITIONAL UNCERTAINTY - Offset Wellbore: STATE ANTELOPE V-B-13HNB PWB Offset Wellpath: STATE ANTELOPE V-B-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 V-B-13HNB PWB Offset 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	61.07	-0.34	111.08	34.94
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1530.77	61.07	-0.34	111.08	34.94
8.5in Open Hole	1550.00	11280.38	9730.38	1530.77	N/A	111.08	34.94	N/A	N/A



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STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-13HNB PWB
Facility	SEC.13-T5N-R62W		

SURVEY PROGRAM - Offset Wellbore: STATE ANTELOPE V-B-13HNB PWB Offset 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

OFFSET WELLPATH REFERENCE - Offset Wellbore: STATE ANTELOPE V-B-13HNB PWB Offset Wellpath: STATE ANTELOPE V-B-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



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STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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
17.00	17.00	0.00	0.00	17.00	17.00	120.22	-0.56	-0.27	120.22	1.56	198.77	PASS
117.00†	117.00	0.00	0.00	117.00	117.00	120.22	-0.56	-0.27	120.22	2.18	97.81	PASS
200.00	200.00	0.00	0.00	200.00	200.00	120.22	-0.56	-0.27	120.22	2.99	58.84	PASS
217.00†	217.00	-0.05	0.02	216.38	216.38	120.27	-0.54	-155.68	120.31	3.16	54.37	PASS
317.00†	316.97	-2.17	0.99	312.60	312.57	122.22	0.40	-155.63	124.47	4.55	34.45	PASS
417.00†	416.79	-7.47	3.42	408.17	407.99	127.04	2.72	-155.53	134.80	6.46	24.35	PASS
517.00†	516.35	-15.93	7.29	502.57	502.01	134.61	6.36	-155.38	151.23	8.03	21.26	PASS
617.00†	615.53	-27.55	12.61	595.30	594.04	144.77	11.24	-155.20	173.65	9.43	20.40	PASS
717.00†	714.20	-42.31	19.36	685.88	683.55	157.27	17.24	-154.99	201.93	10.75	20.54	PASS
817.00†	812.24	-60.19	27.54	773.89	770.06	171.86	24.26	-154.76	235.87	11.95	21.39	PASS
917.00†	909.54	-81.16	37.14	858.98	853.18	188.24	32.12	-154.50	275.28	13.12	22.57	PASS
1017.00†	1005.97	-105.22	48.14	940.83	932.60	206.08	40.70	-154.20	319.92	14.24	24.02	PASS
1117.00†	1101.42	-132.32	60.55	1021.31	1010.12	225.55	50.05	-153.89	369.48	15.32	25.67	PASS
1217.00†	1195.77	-162.43	74.32	1106.15	1091.67	246.65	60.19	-153.68	422.36	16.38	27.34	PASS
1317.00†	1288.91	-195.52	89.46	1189.25	1171.55	267.32	70.12	-153.57	477.88	17.50	28.85	PASS
1417.00†	1380.72	-231.55	105.95	1270.51	1249.65	287.53	79.83	-153.52	536.01	18.55	30.43	PASS
1517.00†	1471.10	-270.46	123.75	1349.83	1325.89	307.26	89.31	-153.50	596.69	19.65	31.88	PASS
1617.00†	1559.92	-312.22	142.86	1427.10	1400.16	326.48	98.55	-153.47	659.87	20.47	33.44	PASS
1688.74	1622.63	-343.91	157.36	1481.23	1452.19	339.94	105.02	-153.44	706.71	21.03	34.82	PASS
1717.00†	1647.16	-356.67	163.20	1502.33	1472.47	345.19	107.54	-153.65	725.41	21.24	35.37	PASS
1817.00†	1733.96	-401.82	183.86	1576.99	1544.23	363.76	116.46	-154.29	791.62	21.81	37.47	PASS
1917.00†	1820.76	-446.98	204.52	1651.66	1616.00	382.33	125.38	-154.84	857.87	22.37	39.56	PASS
2017.00†	1907.56	-492.14	225.19	1726.33	1687.77	400.90	134.31	-155.31	924.17	22.90	41.61	PASS
2117.00†	1994.35	-537.29	245.85	1800.99	1759.54	419.47	143.23	-155.72	990.49	23.48	43.46	PASS

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	0.100ft	Vertical 1.000ft
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	73.29	-0.34	145.47	34.34
9.625in Casing Surface	17.00	1550.00	1533.00	17.00	1518.29	73.29	-0.34	145.47	34.34
8.5in Open Hole	1550.00	11366.41	9816.41	1518.29	N/A	145.47	34.34	N/A	N/A



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STATE ANTELOPE Y-E-13HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#12 STATE ANTELOPE Y-E-13HNB (2699'FSL & 510'FEL,SEC.13)
Area	COLORADO	Well	STATE ANTELOPE Y-E-13HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE Y-E-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