

Location:	COLORADO	Slot:	SLOT#25 STATE ANTELOPE 024-K21-32HNC (584'FNL & 2551'FWL, SEC.05)
Field:	WELD COUNTY	Well:	STATE ANTELOPE 024-K21-32HNC
Facility:	SEC.05-T04N-R62W	Wellbore:	STATE ANTELOPE 024-K21-32HNC PWB
Plot reference wellpath is STATE ANTELOPE 024-K21-32HNC PWB (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: 4553 feet		Depths are in feet	
Mean Sea Level to Ground level (A Slot: SLOT#25 STATE ANTELOPE 024-K21-32HNC (584'FNL & 2551'FWL, SEC.05): 0 feet)		Created by: robaltd1 on 2018-10-11	
Coordinates are in feet referenced to Slot		Database: WADENVER	

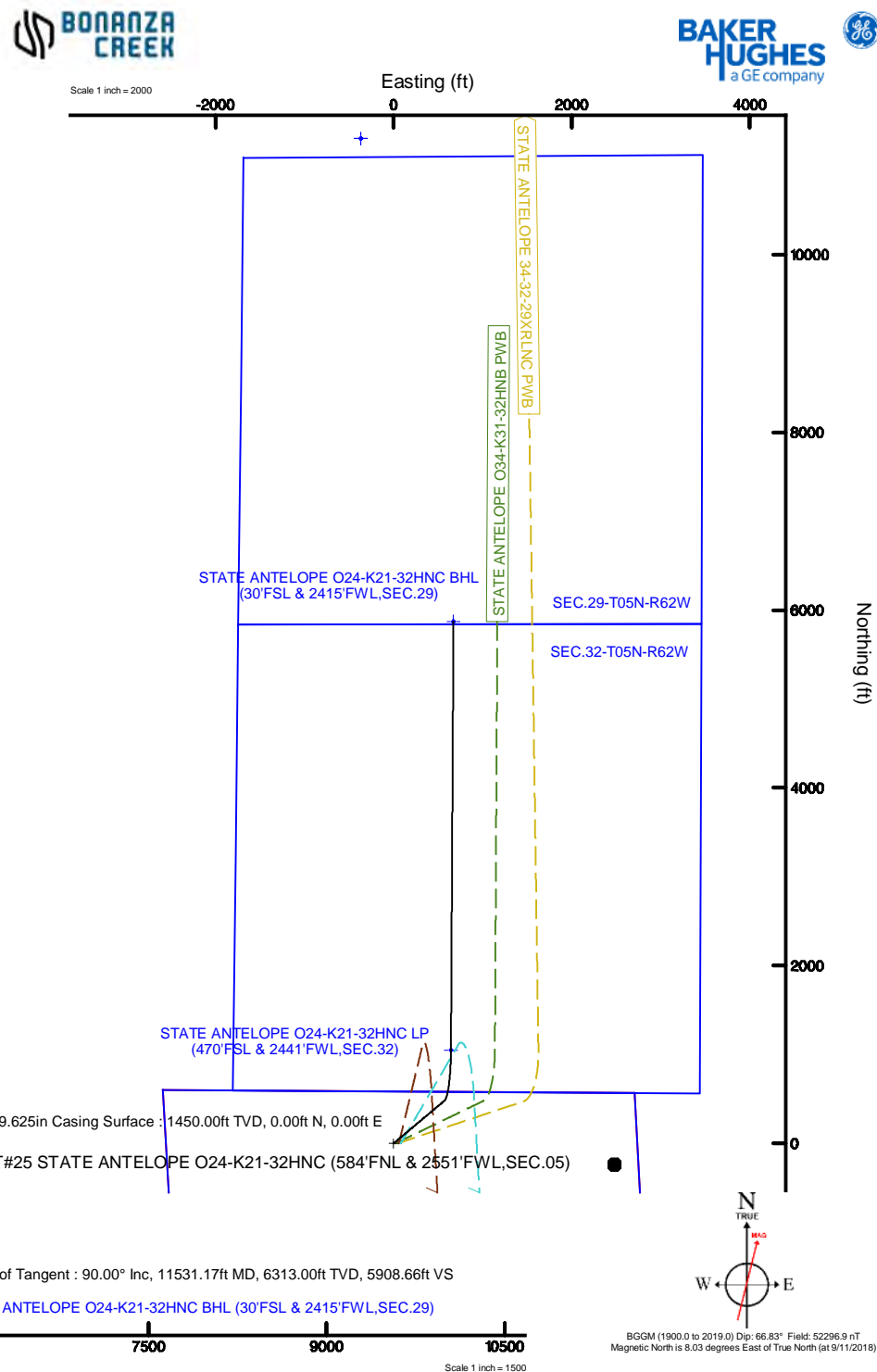
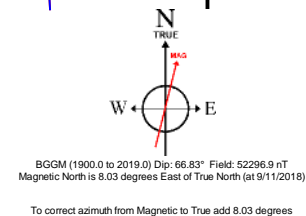
Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC 05-T04N-R62W			3322559.236	1367149.704	40°20'07.620"N	104°20'34.476"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#25 STATE ANTELOPE Q04-K21-32HNC (584FNL & 2551FWL_SEC.05)	4352.45	-2161.87	3320340.859	1371473.382	40°20'50.629"N	104°21'02.397"W
RIG (17) (RK8) to Ground level (A Slot: SLOT#25 STATE ANTELOPE Q04-K21-32HNC (584FNL & 2551FWL_SEC.05))					45538	
Mean Sea Level to Ground level (A Slot: SLOT#25 STATE ANTELOPE Q04-K21-32HNC (584FNL & 2551FWL_SEC.05))					0ft	
RIG (17) (RK8) to Mean Sea Level					45538	

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1450.00	BHI NaviTrak	BHI NaviTrak (Rotating+Axial Corr)		STATE ANTELOPE Q24-K21-32HNC PWB
1450.00	11531.17	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		STATE ANTELOPE Q24-K21-32HNC PWB

Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	17.00	1450.00	1433.00	17.00	1450.00	0.00	0.00	0.00	0.00	STATE ANTELOPE O24-K21-32N-NC P1WB
8.5in Open Hole	1450.00	11531.17	10081.17	1450.00	6313.00	0.00	0.00	5870.17	673.40	STATE ANTELOPE O24-K21-32N-NC P1WB

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	49.931	17.00	0.00	0.00	0.00	0.00
End of Tangent	1450.00	0.000	49.931	1450.00	0.00	0.00	0.00	0.00
End of Build	1966.43	10.329	49.931	1963.64	29.88	35.53	2.00	33.74
End of Tangent	5877.61	10.329	49.931	5811.44	481.29	572.17	0.00	543.36
End of 3D Arc	6710.87	90.000	0.336	6313.00	1049.95	645.11	10.00	1116.63
End of Tangent	11531.17	90.000	0.336	6313.00	5870.17	673.40	0.00	5908.66

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
11531.17	90.00	0.336	6313.00	5870.17	673.40	3320938.09	1377351.53	40°21'48.636"N	104°20'53.698"W





Planned Wellpath Report

STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)
Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O24-K21-32HNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O24-K21-32HNC PWB
Facility	SEC.05-T04N-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	0.999958	Report Generated	10/11/2018 at 3:01:59 PM
Convergence at slot	0.74° East	Database/Source file	WA DENVER/STATE_ ANTELOPE_ O24-K21-32HNC_ 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	4352.45	-2161.87	3320340.86	1371473.38	40°20'50.629"N	104°21'02.397"W
Facility Reference Pt			3322559.24	1367149.70	40°20'07.620"N	104°20'34.476"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	4553.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4553.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05))	4553.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	6.54°



Planned Wellpath Report

STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)

Page 2 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O24-K21-32HNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O24-K21-32HNC PWB
Facility	SEC.05-T04N-R62W		

WELLPATH DATA (122 stations) † = interpolated/extrapolated station									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments	
0.00†	0.000	49.931	0.00	0.00	0.00	0.00	0.00		
17.00	0.000	49.931	17.00	0.00	0.00	0.00	0.00	Tie On	
117.00†	0.000	49.931	117.00	0.00	0.00	0.00	0.00		
217.00†	0.000	49.931	217.00	0.00	0.00	0.00	0.00		
317.00†	0.000	49.931	317.00	0.00	0.00	0.00	0.00		
417.00†	0.000	49.931	417.00	0.00	0.00	0.00	0.00		
517.00†	0.000	49.931	517.00	0.00	0.00	0.00	0.00		
617.00†	0.000	49.931	617.00	0.00	0.00	0.00	0.00		
717.00†	0.000	49.931	717.00	0.00	0.00	0.00	0.00		
817.00†	0.000	49.931	817.00	0.00	0.00	0.00	0.00		
917.00†	0.000	49.931	917.00	0.00	0.00	0.00	0.00		
1017.00†	0.000	49.931	1017.00	0.00	0.00	0.00	0.00		
1117.00†	0.000	49.931	1117.00	0.00	0.00	0.00	0.00		
1217.00†	0.000	49.931	1217.00	0.00	0.00	0.00	0.00		
1317.00†	0.000	49.931	1317.00	0.00	0.00	0.00	0.00		
1417.00†	0.000	49.931	1417.00	0.00	0.00	0.00	0.00		
1450.00	0.000	49.931	1450.00	0.00	0.00	0.00	0.00	End of Tangent	
1517.00†	1.340	49.931	1516.99	0.57	0.50	0.60	2.00		
1617.00†	3.340	49.931	1616.91	3.54	3.13	3.72	2.00		
1717.00†	5.340	49.931	1716.61	9.04	8.00	9.51	2.00		
1817.00†	7.340	49.931	1816.00	17.06	15.11	17.97	2.00		
1917.00†	9.340	49.931	1914.93	27.60	24.45	29.06	2.00		
1966.43	10.329	49.931	1963.64	33.74	29.88	35.53	2.00	End of Build	
2017.00†	10.329	49.931	2013.39	40.33	35.72	42.46	0.00		
2117.00†	10.329	49.931	2111.77	53.36	47.26	56.18	0.00		
2217.00†	10.329	49.931	2210.15	66.39	58.80	69.91	0.00		
2317.00†	10.329	49.931	2308.53	79.42	70.34	83.63	0.00		
2417.00†	10.329	49.931	2406.91	92.45	81.88	97.35	0.00		
2517.00†	10.329	49.931	2505.29	105.48	93.43	111.07	0.00		
2617.00†	10.329	49.931	2603.67	118.51	104.97	124.79	0.00		
2717.00†	10.329	49.931	2702.04	131.54	116.51	138.51	0.00		
2817.00†	10.329	49.931	2800.42	144.57	128.05	152.23	0.00		
2917.00†	10.329	49.931	2898.80	157.60	139.59	165.95	0.00		
3017.00†	10.329	49.931	2997.18	170.63	151.13	179.67	0.00		

WELLPATH DATA (122 stations) † = interpolated/extrapolated station									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments	
3117.00†	10.329	49.931	3095.56	183.66	162.68	193.39	0.00		
3217.00†	10.329	49.931	3193.94	196.69	174.22	207.11	0.00		
3317.00†	10.329	49.931	3292.32	209.72	185.76	220.83	0.00		
3417.00†	10.329	49.931	3390.70	222.75	197.30	234.55	0.00		
3517.00†	10.329	49.931	3489.08	235.78	208.84	248.28	0.00		
3617.00†	10.329	49.931	3587.46	248.81	220.38	262.00	0.00		
3717.00†	10.329	49.931	3685.84	261.84	231.92	275.72	0.00		
3817.00†	10.329	49.931	3784.22	274.87	243.47	289.44	0.00		
3917.00†	10.329	49.931	3882.60	287.90	255.01	303.16	0.00		
4017.00†	10.329	49.931	3980.98	300.93	266.55	316.88	0.00		
4117.00†	10.329	49.931	4079.36	313.96	278.09	330.60	0.00		



Planned Wellpath Report

STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)

Page 3 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O24-K21-32HNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O24-K21-32HNC PWB
Facility	SEC.05-T04N-R62W		

WELLPATH DATA (122 stations) † = interpolated/extrapolated station									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments	
4217.00†	10.329	49.931	4177.74	326.99	289.63	344.32	0.00		
4317.00†	10.329	49.931	4276.12	340.02	301.17	358.04	0.00		
4417.00†	10.329	49.931	4374.50	353.05	312.71	371.76	0.00		
4517.00†	10.329	49.931	4472.88	366.08	324.26	385.48	0.00		
4617.00†	10.329	49.931	4571.26	379.11	335.80	399.20	0.00		
4717.00†	10.329	49.931	4669.64	392.14	347.34	412.93	0.00		
4817.00†	10.329	49.931	4768.02	405.17	358.88	426.65	0.00		
4917.00†	10.329	49.931	4866.39	418.20	370.42	440.37	0.00		
5017.00†	10.329	49.931	4964.77	431.23	381.96	454.09	0.00		
5117.00†	10.329	49.931	5063.15	444.26	393.50	467.81	0.00		
5217.00†	10.329	49.931	5161.53	457.29	405.05	481.53	0.00		
5317.00†	10.329	49.931	5259.91	470.32	416.59	495.25	0.00		
5417.00†	10.329	49.931	5358.29	483.35	428.13	508.97	0.00		
5517.00†	10.329	49.931	5456.67	496.38	439.67	522.69	0.00		
5617.00†	10.329	49.931	5555.05	509.41	451.21	536.41	0.00		
5717.00†	10.329	49.931	5653.43	522.44	462.75	550.13	0.00		
5817.00†	10.329	49.931	5751.81	535.47	474.29	563.85	0.00		
5877.61	10.329	49.931	5811.44	543.36	481.29	572.17	0.00	End of Tangent	
5917.00†	13.204	36.599	5850.00	549.83	487.18	577.56	10.00		
6017.00†	22.014	20.411	5945.28	577.98	513.98	590.94	10.00		
6117.00†	31.520	13.415	6034.48	622.24	557.08	603.57	10.00		
6217.00†	41.243	9.443	6114.91	681.26	615.17	615.07	10.00		
6317.00†	51.058	6.775	6184.10	753.25	686.48	625.09	10.00		
6417.00†	60.919	4.763	6239.97	836.03	768.86	633.33	10.00		
6517.00†	70.804	3.106	6280.82	927.07	859.78	639.53	10.00		
6617.00†	80.703	1.638	6305.40	1023.61	956.50	643.51	10.00		
6710.87	90.000	0.336	6313.00 [†]	1116.63	1049.95	645.11	10.00	End of 3D Arc	
6717.00†	90.000	0.336	6313.00	1122.72	1056.08	645.15	0.00		
6817.00†	90.000	0.336	6313.00	1222.14	1156.08	645.74	0.00		
6917.00†	90.000	0.336	6313.00	1321.55	1256.07	646.32	0.00		
7017.00†	90.000	0.336	6313.00	1420.96	1356.07	646.91	0.00		
7117.00†	90.000	0.336	6313.00	1520.38	1456.07	647.50	0.00		
7217.00†	90.000	0.336	6313.00	1619.79	1556.07	648.08	0.00		
7317.00†	90.000	0.336	6313.00	1719.20	1656.07	648.67	0.00		

WELLPATH DATA (122 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
7417.00†	90.000	0.336	6313.00	1818.62	1756.06	649.26	0.00	
7517.00†	90.000	0.336	6313.00	1918.03	1856.06	649.84	0.00	
7617.00†	90.000	0.336	6313.00	2017.44	1956.06	650.43	0.00	
7717.00†	90.000	0.336	6313.00	2116.86	2056.06	651.02	0.00	
7817.00†	90.000	0.336	6313.00	2216.27	2156.06	651.60	0.00	
7917.00†	90.000	0.336	6313.00	2315.69	2256.06	652.19	0.00	
8017.00†	90.000	0.336	6313.00	2415.10	2356.05	652.78	0.00	
8117.00†	90.000	0.336	6313.00	2514.51	2456.05	653.36	0.00	
8217.00†	90.000	0.336	6313.00	2613.93	2556.05	653.95	0.00	
8317.00†	90.000	0.336	6313.00	2713.34	2656.05	654.54	0.00	
8417.00†	90.000	0.336	6313.00	2812.75	2756.05	655.12	0.00	



Planned Wellpath Report

STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)

Page 4 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O24-K21-32HNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O24-K21-32HNC PWB
Facility	SEC.05-T04N-R62W		

WELLPATH DATA (122 stations) † = interpolated/extrapolated station									
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments	
8517.00†	90.000	0.336	6313.00	2912.17	2856.05	655.71	0.00		
8617.00†	90.000	0.336	6313.00	3011.58	2956.04	656.30	0.00		
8717.00†	90.000	0.336	6313.00	3110.99	3056.04	656.88	0.00		
8817.00†	90.000	0.336	6313.00	3210.41	3156.04	657.47	0.00		
8917.00†	90.000	0.336	6313.00	3309.82	3256.04	658.06	0.00		
9017.00†	90.000	0.336	6313.00	3409.24	3356.04	658.64	0.00		
9117.00†	90.000	0.336	6313.00	3508.65	3456.04	659.23	0.00		
9217.00†	90.000	0.336	6313.00	3608.06	3556.03	659.82	0.00		
9317.00†	90.000	0.336	6313.00	3707.48	3656.03	660.40	0.00		
9417.00†	90.000	0.336	6313.00	3806.89	3756.03	660.99	0.00		
9517.00†	90.000	0.336	6313.00	3906.30	3856.03	661.58	0.00		
9617.00†	90.000	0.336	6313.00	4005.72	3956.03	662.17	0.00		
9717.00†	90.000	0.336	6313.00	4105.13	4056.03	662.75	0.00		
9817.00†	90.000	0.336	6313.00	4204.54	4156.02	663.34	0.00		
9917.00†	90.000	0.336	6313.00	4303.96	4256.02	663.93	0.00		
10017.00†	90.000	0.336	6313.00	4403.37	4356.02	664.51	0.00		
10117.00†	90.000	0.336	6313.00	4502.78	4456.02	665.10	0.00		
10217.00†	90.000	0.336	6313.00	4602.20	4556.02	665.69	0.00		
10317.00†	90.000	0.336	6313.00	4701.61	4656.01	666.27	0.00		
10417.00†	90.000	0.336	6313.00	4801.03	4756.01	666.86	0.00		
10517.00†	90.000	0.336	6313.00	4900.44	4856.01	667.45	0.00		
10617.00†	90.000	0.336	6313.00	4999.85	4956.01	668.03	0.00		
10717.00†	90.000	0.336	6313.00	5099.27	5056.01	668.62	0.00		
10817.00†	90.000	0.336	6313.00	5198.68	5156.01	669.21	0.00		
10917.00†	90.000	0.336	6313.00	5298.09	5256.00	669.79	0.00		
11017.00†	90.000	0.336	6313.00	5397.51	5356.00	670.38	0.00		
11117.00†	90.000	0.336	6313.00	5496.92	5456.00	670.97	0.00		
11217.00†	90.000	0.336	6313.00	5596.33	5556.00	671.55	0.00		
11317.00†	90.000	0.336	6313.00	5695.75	5656.00	672.14	0.00		
11417.00†	90.000	0.336	6313.00	5795.16	5756.00	672.73	0.00		
11517.00†	90.000	0.336	6313.00	5894.58	5855.99	673.31	0.00		
11531.17	90.000	0.336	6313.00 ²	5908.66	5870.17	673.40	0.00	End of Tangent	

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE 024-K21-32HNC PWB Ref Wellpath: STATE ANTELOPE 024-K21-32HNC 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	1450.00	1433.00	17.00	1450.00	0.00	0.00	0.00	0.00
8.5in Open Hole	1450.00	11531.17	10081.17	1450.00	6313.00	0.00	0.00	5870.17	673.40



Planned Wellpath Report

STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)

Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#25 STATE ANTELOPE O24-K21-32HNC (584'FNL & 2551'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O24-K21-32HNC
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O24-K21-32HNC PWB
Facility	SEC.05-T04N-R62W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.05-T4N-R62W		0.00	1267.12	-4294.34	3316030.65	1372684.68	40°21'03.146"N	104°21'57.863"W	polygon
SEC.29-T05N-R62W		0.00	11302.74	-365.58	3319828.83	1382769.94	40°22'42.319"N	104°21'07.121"W	polygon
SEC.32-T05N-R62W		0.00	11302.74	-365.58	3319828.83	1382769.94	40°22'42.319"N	104°21'07.121"W	polygon
2) STATE ANTELOPE O24-K21-32HNC BHL (30'FSL & 2415'FWL,SEC.29)	11531.17	6313.00	5870.17	673.40	3320938.09	1377351.53	40°21'48.636"N	104°20'53.698"W	point
1) STATE ANTELOPE O24-K21-32HNC LP (470'FSL & 2441'FWL,SEC.32)	6710.87	6313.00	1049.95	645.11	3320972.28	1372531.55	40°21'01.004"N	104°20'54.065"W	point

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE O24-K21-32HNC PWB					Ref Wellpath: STATE ANTELOPE O24-K21-32HNC PWP (REV-A.0)	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment	Wellbore
17.00	1450.00	BHI NaviTrak (Rotating+Axial Corr)				STATE ANTELOPE O24-K21-32HNC PWB
1450.00	11531.17	BHI AutoTrak Curve (Axial Corr, Short spacing)				STATE ANTELOPE O24-K21-32HNC PWB