

Location:	COLORADO	Slot:	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL, SEC.05)
Field:	WELD COUNTY	Well:	STATE ANTELOPE O34-K31-32HNB
Facility:	SEC.05-T04N-R62W	Wellbore:	STATE ANTELOPE O34-K31-32HNB PWB
Plot reference wellpath is STATE ANTELOPE O34-K31-32HNB 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: 4553 feet		Depths are in feet	
Mean Sea Level to Ground level (At Slot: SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL, SEC.05)): 0 feet		Created by: rsblad01 on 2018-10-11	
Coordinates are in feet referenced to Slot		Database: WADENIER	

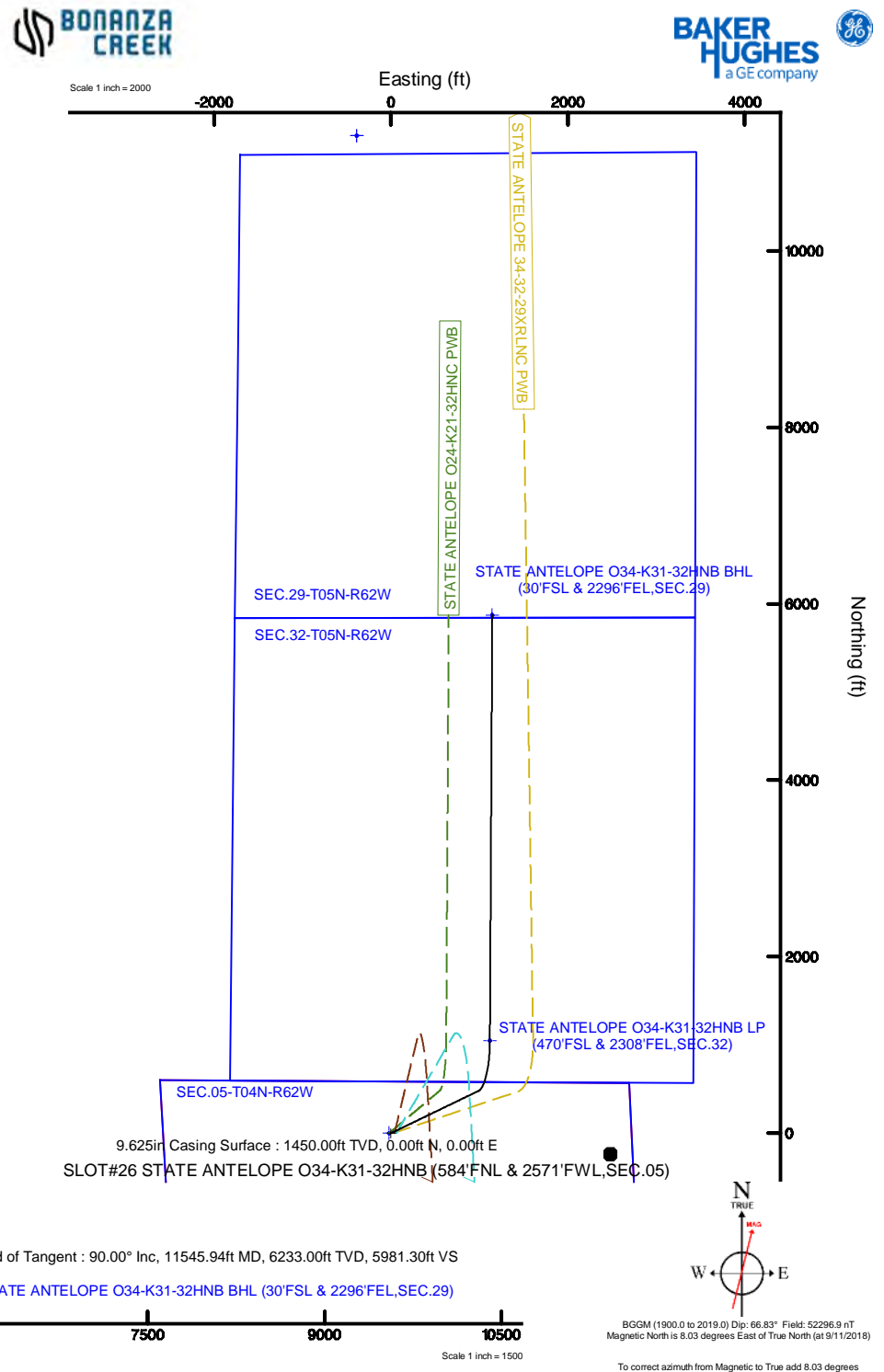
Location Information						
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC 05-T04N-R62W			3322559.236	1367149.704	40°20'07.620"N	104°20'34.476"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#26 STATE ANTELOPE 034-K31-32HNB (584FNL & 2571FWL_SEC.05)	4352.19	-2141.83	3320360.898	1371473.388	40°20'50.626"N	104°21'02.138"W
RIG (17) (RKB) to Ground level (A Slot: SLOT#26 STATE ANTELOPE 034-K31-32HNB (584FNL & 2571FWL_SEC.05))					45538	
Mean Sea Level to Ground level (A Slot: SLOT#26 STATE ANTELOPE 034-K31-32HNB (584FNL & 2571FWL_SEC.05))					OR	
RIG (17) (RKB) to Mean Sea Level					45538	

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1450.00	BHI NavTrak	BHI NavTrak (Rotating+Axial Corr)		STATE ANTELOPE O34-K31-32#NB PWB
1450.00	11545.94	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		STATE ANTELOPE O34-K31-32#NB 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 034-K31-32HNB PWB
8.5in Open Hole	1450.00	11545.94	10095.94	1450.00	6233.00	0.00	0.00	5870.54	1145.76	STATE ANTELOPE 034-K31-32HNB PWB

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	17.00	0.000	64.188	17.00	0.00	0.00	0.00	0.00
End of Tangent	1450.00	0.000	64.188	1450.00	0.00	0.00	0.00	0.00
End of Build	2238.88	15.778	64.188	2228.95	47.00	97.16	2.00	64.74
End of Tangent	5891.70	15.778	64.188	5744.15	479.46	991.29	0.00	660.47
End of 3D Arc	6722.91	90.000	0.324	6233.00	1047.59	1118.50	10.00	1242.44
End of Tangent	11545.94	90.000	0.324	6233.00	5870.54	1145.76	0.00	5981.30

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
11545.94	90.000	0.324	6233.00	5870.54	1145.76	3321430.43	1377358.03	40°21'48.637"N	104°20'47.337"W





Planned Wellpath Report

STATE ANTELOPE O34-K31-32HNB PWP (REV-A.0)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O34-K31-32HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-K31-32HNB 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 3:12:28 PM
Convergence at slot	0.74° East	Database/Source file	WA DENVER/STATE_ ANTELOPE_ O34-K31-32HNB_ 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	4352.19	-2141.83	3320360.90	1371473.39	40°20'50.626"N	104°21'02.138"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#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'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	11.04°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O34-K31-32HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-K31-32HNB 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	64.188	0.00	0.00	0.00	0.00	0.00		
17.00	0.000	64.188	17.00	0.00	0.00	0.00	0.00	Tie On	
117.00†	0.000	64.188	117.00	0.00	0.00	0.00	0.00		
217.00†	0.000	64.188	217.00	0.00	0.00	0.00	0.00		
317.00†	0.000	64.188	317.00	0.00	0.00	0.00	0.00		
417.00†	0.000	64.188	417.00	0.00	0.00	0.00	0.00		
517.00†	0.000	64.188	517.00	0.00	0.00	0.00	0.00		
617.00†	0.000	64.188	617.00	0.00	0.00	0.00	0.00		
717.00†	0.000	64.188	717.00	0.00	0.00	0.00	0.00		
817.00†	0.000	64.188	817.00	0.00	0.00	0.00	0.00		
917.00†	0.000	64.188	917.00	0.00	0.00	0.00	0.00		
1017.00†	0.000	64.188	1017.00	0.00	0.00	0.00	0.00		
1117.00†	0.000	64.188	1117.00	0.00	0.00	0.00	0.00		
1217.00†	0.000	64.188	1217.00	0.00	0.00	0.00	0.00		
1317.00†	0.000	64.188	1317.00	0.00	0.00	0.00	0.00		
1417.00†	0.000	64.188	1417.00	0.00	0.00	0.00	0.00		
1450.00	0.000	64.188	1450.00	0.00	0.00	0.00	0.00	End of Tangent	
1517.00†	1.340	64.188	1516.99	0.47	0.34	0.71	2.00		
1617.00†	3.340	64.188	1616.91	2.92	2.12	4.38	2.00		
1717.00†	5.340	64.188	1716.61	7.46	5.41	11.19	2.00		
1817.00†	7.340	64.188	1816.00	14.08	10.22	21.13	2.00		
1917.00†	9.340	64.188	1914.93	22.78	16.54	34.19	2.00		
2017.00†	11.340	64.188	2013.31	33.55	24.35	50.35	2.00		
2117.00†	13.340	64.188	2110.99	46.36	33.66	69.59	2.00		
2217.00†	15.340	64.188	2207.87	61.22	44.44	91.88	2.00		
2238.88	15.778	64.188	2228.95	64.74	47.00	97.16	2.00	End of Build	
2317.00†	15.778	64.188	2304.12	77.48	56.24	116.29	0.00		
2417.00†	15.778	64.188	2400.36	93.79	68.08	140.76	0.00		
2517.00†	15.778	64.188	2496.59	110.10	79.92	165.24	0.00		
2617.00†	15.778	64.188	2592.82	126.41	91.76	189.72	0.00		
2717.00†	15.778	64.188	2689.05	142.71	103.60	214.20	0.00		
2817.00†	15.778	64.188	2785.29	159.02	115.44	238.67	0.00		
2917.00†	15.778	64.188	2881.52	175.33	127.28	263.15	0.00		
3017.00†	15.778	64.188	2977.75	191.64	139.12	287.63	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†	15.778	64.188	3073.98	207.95	150.96	312.11	0.00	
3217.00†	15.778	64.188	3170.22	224.26	162.80	336.58	0.00	
3317.00†	15.778	64.188	3266.45	240.57	174.64	361.06	0.00	
3417.00†	15.778	64.188	3362.68	256.88	186.48	385.54	0.00	
3517.00†	15.778	64.188	3458.91	273.18	198.32	410.02	0.00	
3617.00†	15.778	64.188	3555.15	289.49	210.15	434.49	0.00	
3717.00†	15.778	64.188	3651.38	305.80	221.99	458.97	0.00	
3817.00†	15.778	64.188	3747.61	322.11	233.83	483.45	0.00	
3917.00†	15.778	64.188	3843.84	338.42	245.67	507.93	0.00	
4017.00†	15.778	64.188	3940.08	354.73	257.51	532.40	0.00	
4117.00†	15.778	64.188	4036.31	371.04	269.35	556.88	0.00	



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STATE ANTELOPE O34-K31-32HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O34-K31-32HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-K31-32HNB 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†	15.778	64.188	4132.54	387.35	281.19	581.36	0.00		
4317.00†	15.778	64.188	4228.77	403.66	293.03	605.84	0.00		
4417.00†	15.778	64.188	4325.01	419.96	304.87	630.31	0.00		
4517.00†	15.778	64.188	4421.24	436.27	316.71	654.79	0.00		
4617.00†	15.778	64.188	4517.47	452.58	328.55	679.27	0.00		
4717.00†	15.778	64.188	4613.70	468.89	340.39	703.75	0.00		
4817.00†	15.778	64.188	4709.94	485.20	352.23	728.22	0.00		
4917.00†	15.778	64.188	4806.17	501.51	364.06	752.70	0.00		
5017.00†	15.778	64.188	4902.40	517.82	375.90	777.18	0.00		
5117.00†	15.778	64.188	4998.63	534.13	387.74	801.66	0.00		
5217.00†	15.778	64.188	5094.87	550.43	399.58	826.13	0.00		
5317.00†	15.778	64.188	5191.10	566.74	411.42	850.61	0.00		
5417.00†	15.778	64.188	5287.33	583.05	423.26	875.09	0.00		
5517.00†	15.778	64.188	5383.56	599.36	435.10	899.57	0.00		
5617.00†	15.778	64.188	5479.80	615.67	446.94	924.04	0.00		
5717.00†	15.778	64.188	5576.03	631.98	458.78	948.52	0.00		
5817.00†	15.778	64.188	5672.26	648.29	470.62	973.00	0.00		
5891.70	15.778	64.188	5744.15	660.47	479.46	991.29	0.00	End of Tangent	
5917.00†	17.008	56.346	5768.42	665.14	483.01	997.46	10.00		
6017.00†	23.905	35.233	5862.18	693.98	507.73	1021.39	10.00		
6117.00†	32.393	23.891	5950.34	738.69	548.87	1043.98	10.00		
6217.00†	41.503	16.983	6030.21	797.91	605.19	1064.56	10.00		
6317.00†	50.899	12.221	6099.36	869.84	674.98	1082.49	10.00		
6417.00†	60.443	8.594	6155.70	952.30	756.12	1097.24	10.00		
6517.00†	70.068	5.602	6197.52	1042.78	846.13	1108.36	10.00		
6617.00†	79.737	2.956	6223.54	1138.52	942.29	1115.50	10.00		
6717.00†	89.427	0.469	6232.97	1236.63	1041.67	1118.46	10.00		
6722.91	90.000	0.324	6233.00 [†]	1242.44	1047.59	1118.50	10.00	End of 3D Arc	
6817.00†	90.000	0.324	6233.00	1334.89	1141.67	1119.03	0.00		
6917.00†	90.000	0.324	6233.00	1433.14	1241.67	1119.60	0.00		
7017.00†	90.000	0.324	6233.00	1531.40	1341.67	1120.16	0.00		
7117.00†	90.000	0.324	6233.00	1629.65	1441.67	1120.73	0.00		
7217.00†	90.000	0.324	6233.00	1727.91	1541.66	1121.29	0.00		
7317.00†	90.000	0.324	6233.00	1826.16	1641.66	1121.86	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	0.324	6233.00	1924.42	1741.66	1122.42	0.00		
7517.00†	90.000	0.324	6233.00	2022.67	1841.66	1122.99	0.00		
7617.00†	90.000	0.324	6233.00	2120.93	1941.66	1123.55	0.00		
7717.00†	90.000	0.324	6233.00	2219.18	2041.66	1124.12	0.00		
7817.00†	90.000	0.324	6233.00	2317.44	2141.65	1124.68	0.00		
7917.00†	90.000	0.324	6233.00	2415.69	2241.65	1125.25	0.00		
8017.00†	90.000	0.324	6233.00	2513.95	2341.65	1125.81	0.00		
8117.00†	90.000	0.324	6233.00	2612.20	2441.65	1126.38	0.00		
8217.00†	90.000	0.324	6233.00	2710.45	2541.65	1126.95	0.00		
8317.00†	90.000	0.324	6233.00	2808.71	2641.65	1127.51	0.00		
8417.00†	90.000	0.324	6233.00	2906.96	2741.64	1128.08	0.00		



Planned Wellpath Report

STATE ANTELOPE O34-K31-32HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O34-K31-32HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-K31-32HNB 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	0.324	6233.00	3005.22	2841.64	1128.64	0.00		
8617.00†	90.000	0.324	6233.00	3103.47	2941.64	1129.21	0.00		
8717.00†	90.000	0.324	6233.00	3201.73	3041.64	1129.77	0.00		
8817.00†	90.000	0.324	6233.00	3299.98	3141.64	1130.34	0.00		
8917.00†	90.000	0.324	6233.00	3398.24	3241.64	1130.90	0.00		
9017.00†	90.000	0.324	6233.00	3496.49	3341.64	1131.47	0.00		
9117.00†	90.000	0.324	6233.00	3594.75	3441.63	1132.03	0.00		
9217.00†	90.000	0.324	6233.00	3693.00	3541.63	1132.60	0.00		
9317.00†	90.000	0.324	6233.00	3791.26	3641.63	1133.16	0.00		
9417.00†	90.000	0.324	6233.00	3889.51	3741.63	1133.73	0.00		
9517.00†	90.000	0.324	6233.00	3987.77	3841.63	1134.29	0.00		
9617.00†	90.000	0.324	6233.00	4086.02	3941.63	1134.86	0.00		
9717.00†	90.000	0.324	6233.00	4184.28	4041.62	1135.42	0.00		
9817.00†	90.000	0.324	6233.00	4282.53	4141.62	1135.99	0.00		
9917.00†	90.000	0.324	6233.00	4380.79	4241.62	1136.55	0.00		
10017.00†	90.000	0.324	6233.00	4479.04	4341.62	1137.12	0.00		
10117.00†	90.000	0.324	6233.00	4577.30	4441.62	1137.68	0.00		
10217.00†	90.000	0.324	6233.00	4675.55	4541.62	1138.25	0.00		
10317.00†	90.000	0.324	6233.00	4773.81	4641.61	1138.82	0.00		
10417.00†	90.000	0.324	6233.00	4872.06	4741.61	1139.38	0.00		
10517.00†	90.000	0.324	6233.00	4970.32	4841.61	1139.95	0.00		
10617.00†	90.000	0.324	6233.00	5068.57	4941.61	1140.51	0.00		
10717.00†	90.000	0.324	6233.00	5166.83	5041.61	1141.08	0.00		
10817.00†	90.000	0.324	6233.00	5265.08	5141.61	1141.64	0.00		
10917.00†	90.000	0.324	6233.00	5363.34	5241.60	1142.21	0.00		
11017.00†	90.000	0.324	6233.00	5461.59	5341.60	1142.77	0.00		
11117.00†	90.000	0.324	6233.00	5559.85	5441.60	1143.34	0.00		
11217.00†	90.000	0.324	6233.00	5658.10	5541.60	1143.90	0.00		
11317.00†	90.000	0.324	6233.00	5756.36	5641.60	1144.47	0.00		
11417.00†	90.000	0.324	6233.00	5854.61	5741.60	1145.03	0.00		
11517.00†	90.000	0.324	6233.00	5952.87	5841.60	1145.60	0.00		
11545.94	90.000	0.324	6233.00 ²	5981.30	5870.54	1145.76	0.00	End of Tangent	

HOLE & CASING SECTIONS - Ref Wellbore: STATE ANTELOPE O34-K31-32HNB PWB Ref Wellpath: STATE ANTELOPE O34-K31-32HNB 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	11545.94	10095.94	1450.00	6233.00	0.00	0.00	5870.54	1145.76



Planned Wellpath Report

STATE ANTELOPE O34-K31-32HNB PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#26 STATE ANTELOPE O34-K31-32HNB (584'FNL & 2571'FWL,SEC.05)
Area	COLORADO	Well	STATE ANTELOPE O34-K31-32HNB
Field	WELD COUNTY	Wellbore	STATE ANTELOPE O34-K31-32HNB 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	1267.37	-4314.37	3316030.65	1372684.68	40°21'03.146"N	104°21'57.863"W	polygon
SEC.08-T04N-R62W		0.00	0.25	-20.04	3320340.86	1371473.38	40°20'50.629"N	104°21'02.397"W	polygon
SEC.29-T05N-R62W		0.00	11302.99	-385.61	3319828.83	1382769.94	40°22'42.319"N	104°21'07.121"W	polygon
SEC.32-T05N-R62W		0.00	11302.99	-385.61	3319828.83	1382769.94	40°22'42.319"N	104°21'07.121"W	polygon
2) STATE ANTELOPE O34-K31-32HNB BHL (30'FSL & 2296'FEL,SEC.29)	11545.94	6233.00	5870.54	1145.76	3321430.43	1377358.03	40°21'48.637"N	104°20'47.337"W	point
1) STATE ANTELOPE O34-K31-32HNB LP (470'FSL & 2308'FEL,SEC.32)	6722.91	6233.00	1047.59	1118.50	3321465.68	1372535.34	40°21'00.978"N	104°20'47.692"W	point

SURVEY PROGRAM - Ref Wellbore: STATE ANTELOPE O34-K31-32HNB PWB					Ref Wellpath: STATE ANTELOPE O34-K31-32HNB 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 O34-K31-32HNB PWB	
1450.00	11545.94	BHI AutoTrak Curve (Axial Corr, Short spacing)			STATE ANTELOPE O34-K31-32HNB PWB	