

BONANZA CREEK OIL COMPANY

Location: COLORADO Slot: SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Field: WELD COUNTY Well: STATE SEVENTY HOLES 31-34-5HNB
Facility: SEC.05-T04N-R62W Wellbore: STATE SEVENTY HOLES 31-34-5HNB PWB

Plot reference wellpath is STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.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: 4552 feet		Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)): 0 feet		Created by robale01 on 2018-11-13
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			332259.236	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#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)	4351.43	-2081.85	3320420.883	1371473.407	40°20'50.619"N	104°21'01.364"W
RIG (17) (RKB) to Ground level (At Slot: SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05))					4552ft	
Mean Sea Level to Ground level (At Slot: SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05))					0ft	
RIG (17) (RKB) to Mean Sea Level					4552ft	

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1450.00	BHI NaviTrak	BHI NaviTrak (Rotating+Axial Corr)		STATE SEVENTY HOLES 31-34-5HNB PWB
1450.00	12360.25	BHI AutoTrak Curve	BHI AutoTrak Curve (Axial Corr, Short spacing)		STATE SEVENTY HOLES 31-34-5HNB PWB

Hole and Casing Sections

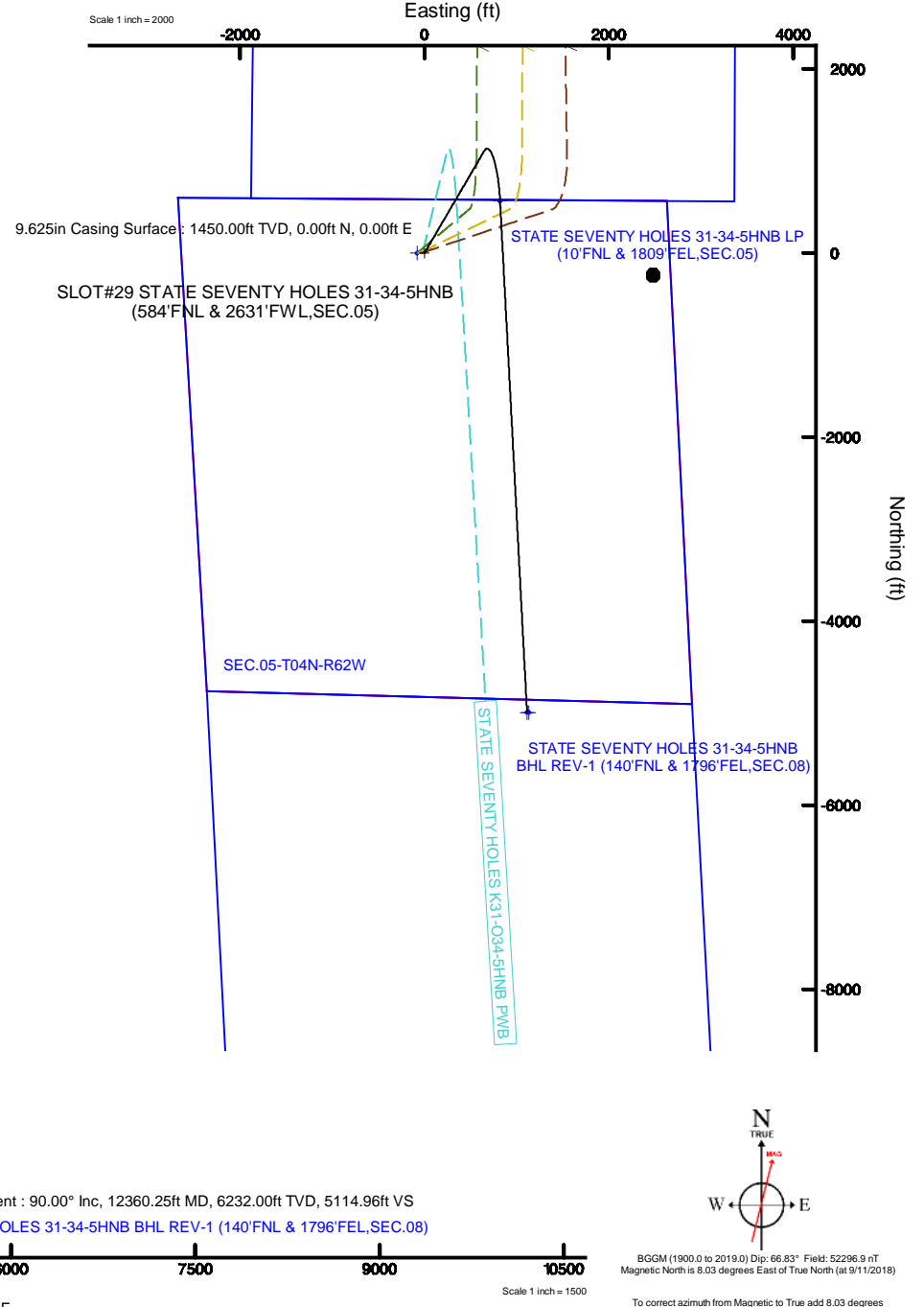
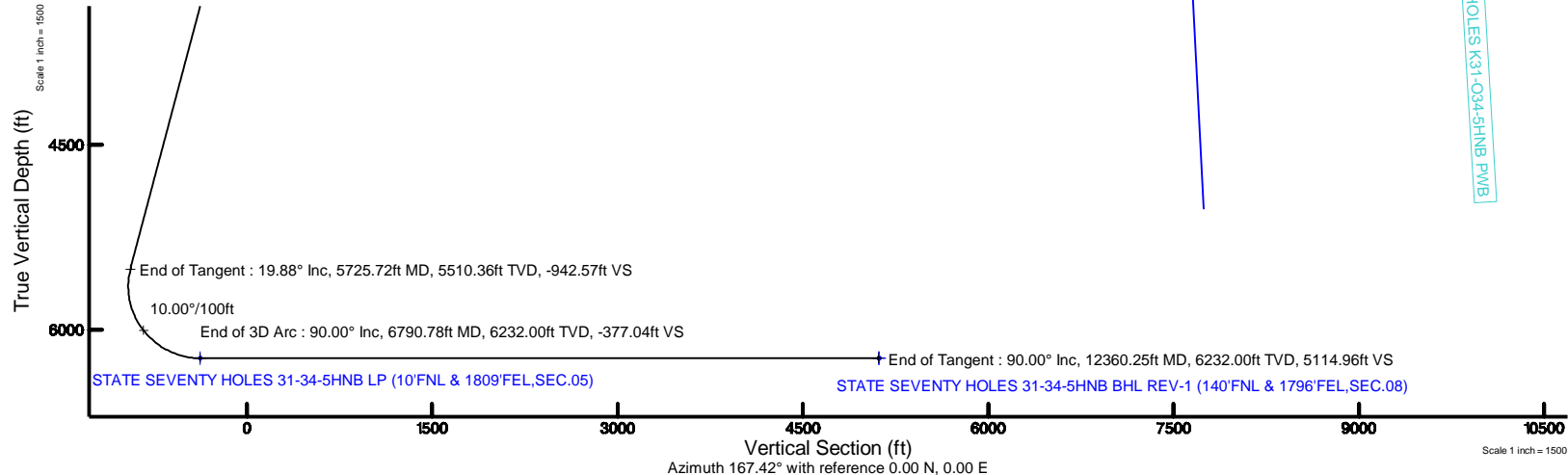
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	17.00	1450.00	1433.00	17.00	1450.00	0.00	0.00	0.00	0.00	STATE SEVENTY HOLES 31-34-5HNB PWB
8.5in Open Hole	1450.00	12360.25	10910.25	1450.00	6232.00	0.00	0.00	-4992.09	1114.36	STATE SEVENTY HOLES 31-34-5HNB 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	30.311	17.00	0.00	0.00	0.00	0.00
End of Tangent	1450.00	0.000	30.311	1450.00	0.00	0.00	0.00	0.00
End of Build	2443.92	19.878	30.311	2424.10	147.36	86.15	2.00	-125.05
End of Tangent	5725.72	19.878	30.311	5510.36	1110.72	649.33	0.00	-942.57
End of 3D Arc	6790.78	90.000	176.985	6232.00	569.67	821.39	10.00	-377.04
End of Tangent	12360.25	90.000	176.985	6232.00	-4992.09	1114.36	0.00	5114.96

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
12360.25	90.000	176.985	6232.00	-4992.09	1114.36	3321599.82	1366496.40	40°20'01.288"N	104°20'46.974"W





Planned Wellpath Report
STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)
Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB 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	11/13/2018 at 9:55:53 AM
Convergence at slot	0.74° East	Database/Source file	WA DENVER/STATE_SEVENTY_HOLES_31-34-5HNB_PWP__REV-B.0_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	4351.43	-2081.85	3320420.88	1371473.41	40°20'50.619"N	104°21'01.364"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	4552.00ft
Horizontal Reference Pt	Slot	RIG (17') (RKB) to Mean Sea Level	4552.00ft
Vertical Reference Pt	RIG (17') (RKB)	RIG (17') (RKB) to Ground Level at Slot (SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05))	4552.00ft
MD Reference Pt	RIG (17') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	167.42°



Planned Wellpath Report
STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)
Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB PWB
Facility	SEC.05-T04N-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	30.311	0.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
17.00	0.000	30.311	17.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	Tie On
117.00†	0.000	30.311	117.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
217.00†	0.000	30.311	217.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
317.00†	0.000	30.311	317.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
417.00†	0.000	30.311	417.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
517.00†	0.000	30.311	517.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
617.00†	0.000	30.311	617.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
717.00†	0.000	30.311	717.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
817.00†	0.000	30.311	817.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
917.00†	0.000	30.311	917.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1017.00†	0.000	30.311	1017.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1117.00†	0.000	30.311	1117.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1217.00†	0.000	30.311	1217.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1317.00†	0.000	30.311	1317.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1417.00†	0.000	30.311	1417.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	
1450.00	0.000	30.311	1450.00	0.00	0.00	0.00	40°20'50.619"N	104°21'01.364"W	0.00	End of Tangent
1517.00†	1.340	30.311	1516.99	-0.57	0.68	0.40	40°20'50.625"N	104°21'01.359"W	2.00	
1617.00†	3.340	30.311	1616.91	-3.57	4.20	2.46	40°20'50.660"N	104°21'01.332"W	2.00	
1717.00†	5.340	30.311	1716.61	-9.11	10.73	6.27	40°20'50.725"N	104°21'01.283"W	2.00	
1817.00†	7.340	30.311	1816.00	-17.20	20.27	11.85	40°20'50.819"N	104°21'01.211"W	2.00	
1917.00†	9.340	30.311	1914.93	-27.82	32.79	19.17	40°20'50.943"N	104°21'01.116"W	2.00	
2017.00†	11.340	30.311	2013.31	-40.97	48.28	28.23	40°20'51.096"N	104°21'00.999"W	2.00	
2117.00†	13.340	30.311	2110.99	-56.63	66.73	39.01	40°20'51.278"N	104°21'00.860"W	2.00	
2217.00†	15.340	30.311	2207.87	-74.77	88.11	51.51	40°20'51.489"N	104°21'00.698"W	2.00	
2317.00†	17.340	30.311	2303.83	-95.38	112.40	65.71	40°20'51.729"N	104°21'00.515"W	2.00	
2417.00†	19.340	30.311	2398.74	-118.43	139.56	81.59	40°20'51.998"N	104°21'00.310"W	2.00	
2443.92	19.878	30.311	2424.10	-125.05	147.36	86.15	40°20'52.075"N	104°21'00.251"W	2.00	End of Build
2517.00†	19.878	30.311	2492.83	-143.26	168.81	98.69	40°20'52.287"N	104°21'00.089"W	0.00	
2617.00†	19.878	30.311	2586.87	-168.17	198.17	115.85	40°20'52.577"N	104°20'59.867"W	0.00	
2717.00†	19.878	30.311	2680.91	-193.08	227.52	133.01	40°20'52.867"N	104°20'59.646"W	0.00	
2817.00†	19.878	30.311	2774.95	-217.99	256.88	150.17	40°20'53.157"N	104°20'59.424"W	0.00	
2917.00†	19.878	30.311	2868.99	-242.90	286.23	167.33	40°20'53.447"N	104°20'59.203"W	0.00	
3017.00†	19.878	30.311	2963.03	-267.81	315.59	184.49	40°20'53.737"N	104°20'58.981"W	0.00	
3117.00†	19.878	30.311	3057.08	-292.72	344.94	201.65	40°20'54.027"N	104°20'58.759"W	0.00	
3217.00†	19.878	30.311	3151.12	-317.63	374.29	218.82	40°20'54.317"N	104°20'58.538"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†	19.878	30.311	3245.16	-342.54	403.65	235.98	40°20'54.608"N	104°20'58.316"W	0.00	
3417.00†	19.878	30.311	3339.20	-367.45	433.00	253.14	40°20'54.898"N	104°20'58.094"W	0.00	
3517.00†	19.878	30.311	3433.24	-392.36	462.36	270.30	40°20'55.188"N	104°20'57.873"W	0.00	
3617.00†	19.878	30.311	3527.28	-417.27	491.71	287.46	40°20'55.478"N	104°20'57.651"W	0.00	
3717.00†	19.878	30.311	3621.32	-442.18	521.07	304.62	40°20'55.768"N	104°20'57.429"W	0.00	
3817.00†	19.878	30.311	3715.37	-467.10	550.42	321.78	40°20'56.058"N	104°20'57.208"W	0.00	
3917.00†	19.878	30.311	3809.41	-492.01	579.78	338.94	40°20'56.348"N	104°20'56.986"W	0.00	
4017.00†	19.878	30.311	3903.45	-516.92	609.13	356.10	40°20'56.638"N	104°20'56.764"W	0.00	
4117.00†	19.878	30.311	3997.49	-541.83	638.48	373.26	40°20'56.928"N	104°20'56.543"W	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB PWB
Facility	SEC.05-T04N-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†	19.878	30.311	4091.53	-566.74	667.84	390.42	40°20'57.218"N	104°20'56.321"W	0.00	
4317.00†	19.878	30.311	4185.57	-591.65	697.19	407.58	40°20'57.508"N	104°20'56.099"W	0.00	
4417.00†	19.878	30.311	4279.62	-616.56	726.55	424.75	40°20'57.798"N	104°20'55.878"W	0.00	
4517.00†	19.878	30.311	4373.66	-641.47	755.90	441.91	40°20'58.088"N	104°20'55.656"W	0.00	
4617.00†	19.878	30.311	4467.70	-666.38	785.26	459.07	40°20'58.378"N	104°20'55.435"W	0.00	
4717.00†	19.878	30.311	4561.74	-691.29	814.61	476.23	40°20'58.669"N	104°20'55.213"W	0.00	
4817.00†	19.878	30.311	4655.78	-716.20	843.97	493.39	40°20'58.959"N	104°20'54.991"W	0.00	
4917.00†	19.878	30.311	4749.82	-741.11	873.32	510.55	40°20'59.249"N	104°20'54.770"W	0.00	
5017.00†	19.878	30.311	4843.87	-766.02	902.67	527.71	40°20'59.539"N	104°20'54.548"W	0.00	
5117.00†	19.878	30.311	4937.91	-790.93	932.03	544.87	40°20'59.829"N	104°20'54.326"W	0.00	
5217.00†	19.878	30.311	5031.95	-815.84	961.38	562.03	40°21'00.119"N	104°20'54.105"W	0.00	
5317.00†	19.878	30.311	5125.99	-840.76	990.74	579.19	40°21'00.409"N	104°20'53.883"W	0.00	
5417.00†	19.878	30.311	5220.03	-865.67	1020.09	596.35	40°21'00.699"N	104°20'53.661"W	0.00	
5517.00†	19.878	30.311	5314.07	-890.58	1049.45	613.51	40°21'00.989"N	104°20'53.440"W	0.00	
5617.00†	19.878	30.311	5408.11	-915.49	1078.80	630.68	40°21'01.279"N	104°20'53.218"W	0.00	
5717.00†	19.878	30.311	5502.16	-940.40	1108.16	647.84	40°21'01.569"N	104°20'52.996"W	0.00	
5725.72	19.878	30.311	5510.36	-942.57	1110.72	649.33	40°21'01.595"N	104°20'52.977"W	0.00	End of Tangent
5817.00†	13.415	53.378	5597.86	-958.29	1130.47	665.70	40°21'01.790"N	104°20'52.766"W	10.00	
5917.00†	11.534	100.211	5695.73	-959.14	1135.63	684.90	40°21'01.841"N	104°20'52.518"W	10.00	
6017.00†	16.837	135.958	5792.83	-942.87	1123.42	704.85	40°21'01.720"N	104°20'52.260"W	10.00	
6117.00†	25.127	151.925	5886.19	-909.97	1094.20	724.96	40°21'01.431"N	104°20'52.000"W	10.00	
6217.00†	34.299	160.054	5972.98	-861.45	1048.87	744.62	40°21'00.983"N	104°20'51.746"W	10.00	
6317.00†	43.802	165.030	6050.57	-798.77	988.80	763.22	40°21'00.390"N	104°20'51.506"W	10.00	
6417.00†	53.456	168.518	6116.60	-723.83	915.81	780.20	40°20'59.668"N	104°20'51.287"W	10.00	
6517.00†	63.189	171.223	6169.05	-638.93	832.13	795.04	40°20'58.842"N	104°20'51.095"W	10.00	
6617.00†	72.965	173.495	6206.35	-546.63	740.29	807.29	40°20'57.934"N	104°20'50.937"W	10.00	
6717.00†	82.764	175.539	6227.35	-449.74	643.10	816.59	40°20'56.974"N	104°20'50.817"W	10.00	
6790.78	90.000	176.985	6232.00 ¹	-377.04	569.67	821.39	40°20'56.248"N	104°20'50.755"W	10.00	End of 3D Arc
6817.00†	90.000	176.985	6232.00	-351.18	543.49	822.76	40°20'55.989"N	104°20'50.737"W	0.00	
6917.00†	90.000	176.985	6232.00	-252.57	443.63	828.02	40°20'55.002"N	104°20'50.669"W	0.00	
7017.00†	90.000	176.985	6232.00	-153.96	343.76	833.29	40°20'54.016"N	104°20'50.601"W	0.00	
7117.00†	90.000	176.985	6232.00	-55.36	243.90	838.55	40°20'53.029"N	104°20'50.534"W	0.00	
7217.00†	90.000	176.985	6232.00	43.25	144.04	843.81	40°20'52.042"N	104°20'50.466"W	0.00	
7317.00†	90.000	176.985	6232.00	141.86	44.18	849.07	40°20'51.055"N	104°20'50.398"W	0.00	
7417.00†	90.000	176.985	6232.00	240.47	-55.68	854.33	40°20'50.068"N	104°20'50.330"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
7517.00†	90.000	176.985	6232.00	339.08	-155.54	859.59	40°20'49.082"N	104°20'50.262"W	0.00	
7617.00†	90.000	176.985	6232.00	437.69	-255.41	864.85	40°20'48.095"N	104°20'50.194"W	0.00	
7717.00†	90.000	176.985	6232.00	536.30	-355.27	870.11	40°20'47.108"N	104°20'50.126"W	0.00	
7817.00†	90.000	176.985	6232.00	634.91	-455.13	875.37	40°20'46.121"N	104°20'50.058"W	0.00	
7917.00†	90.000	176.985	6232.00	733.52	-554.99	880.63	40°20'45.134"N	104°20'49.990"W	0.00	
8017.00†	90.000	176.985	6232.00	832.12	-654.85	885.89	40°20'44.148"N	104°20'49.922"W	0.00	
8117.00†	90.000	176.985	6232.00	930.73	-754.71	891.15	40°20'43.161"N	104°20'49.855"W	0.00	
8217.00†	90.000	176.985	6232.00	1029.34	-854.57	896.41	40°20'42.174"N	104°20'49.787"W	0.00	
8317.00†	90.000	176.985	6232.00	1127.95	-954.44	901.67	40°20'41.187"N	104°20'49.719"W	0.00	
8417.00†	90.000	176.985	6232.00	1226.56	-1054.30	906.93	40°20'40.200"N	104°20'49.651"W	0.00	



Planned Wellpath Report
STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)
Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB PWB
Facility	SEC.05-T04N-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	176.985	6232.00	1325.17	-1154.16	912.19	40°20'39.214"N	104°20'49.583"W	0.00	
8617.00†	90.000	176.985	6232.00	1423.78	-1254.02	917.45	40°20'38.227"N	104°20'49.515"W	0.00	
8717.00†	90.000	176.985	6232.00	1522.39	-1353.88	922.71	40°20'37.240"N	104°20'49.447"W	0.00	
8817.00†	90.000	176.985	6232.00	1620.99	-1453.74	927.97	40°20'36.253"N	104°20'49.379"W	0.00	
8917.00†	90.000	176.985	6232.00	1719.60	-1553.61	933.23	40°20'35.266"N	104°20'49.311"W	0.00	
9017.00†	90.000	176.985	6232.00	1818.21	-1653.47	938.49	40°20'34.280"N	104°20'49.244"W	0.00	
9117.00†	90.000	176.985	6232.00	1916.82	-1753.33	943.75	40°20'33.293"N	104°20'49.176"W	0.00	
9217.00†	90.000	176.985	6232.00	2015.43	-1853.19	949.01	40°20'32.306"N	104°20'49.108"W	0.00	
9317.00†	90.000	176.985	6232.00	2114.04	-1953.05	954.27	40°20'31.319"N	104°20'49.040"W	0.00	
9417.00†	90.000	176.985	6232.00	2212.65	-2052.91	959.54	40°20'30.332"N	104°20'48.972"W	0.00	
9517.00†	90.000	176.985	6232.00	2311.26	-2152.77	964.80	40°20'29.345"N	104°20'48.904"W	0.00	
9617.00†	90.000	176.985	6232.00	2409.87	-2252.64	970.06	40°20'28.359"N	104°20'48.836"W	0.00	
9717.00†	90.000	176.985	6232.00	2508.47	-2352.50	975.32	40°20'27.372"N	104°20'48.768"W	0.00	
9817.00†	90.000	176.985	6232.00	2607.08	-2452.36	980.58	40°20'26.385"N	104°20'48.700"W	0.00	
9917.00†	90.000	176.985	6232.00	2705.69	-2552.22	985.84	40°20'25.398"N	104°20'48.633"W	0.00	
10017.00†	90.000	176.985	6232.00	2804.30	-2652.08	991.10	40°20'24.411"N	104°20'48.565"W	0.00	
10117.00†	90.000	176.985	6232.00	2902.91	-2751.94	996.36	40°20'23.425"N	104°20'48.497"W	0.00	
10217.00†	90.000	176.985	6232.00	3001.52	-2851.81	1001.62	40°20'22.438"N	104°20'48.429"W	0.00	
10317.00†	90.000	176.985	6232.00	3100.13	-2951.67	1006.88	40°20'21.451"N	104°20'48.361"W	0.00	
10417.00†	90.000	176.985	6232.00	3198.74	-3051.53	1012.14	40°20'20.464"N	104°20'48.293"W	0.00	
10517.00†	90.000	176.985	6232.00	3297.35	-3151.39	1017.40	40°20'19.477"N	104°20'48.225"W	0.00	
10617.00†	90.000	176.985	6232.00	3395.95	-3251.25	1022.66	40°20'18.491"N	104°20'48.157"W	0.00	
10717.00†	90.000	176.985	6232.00	3494.56	-3351.11	1027.92	40°20'17.504"N	104°20'48.090"W	0.00	
10817.00†	90.000	176.985	6232.00	3593.17	-3450.97	1033.18	40°20'16.517"N	104°20'48.022"W	0.00	
10917.00†	90.000	176.985	6232.00	3691.78	-3550.84	1038.44	40°20'15.530"N	104°20'47.954"W	0.00	
11017.00†	90.000	176.985	6232.00	3790.39	-3650.70	1043.70	40°20'14.543"N	104°20'47.886"W	0.00	
11117.00†	90.000	176.985	6232.00	3889.00	-3750.56	1048.96	40°20'13.557"N	104°20'47.818"W	0.00	
11217.00†	90.000	176.985	6232.00	3987.61	-3850.42	1054.22	40°20'12.570"N	104°20'47.750"W	0.00	
11317.00†	90.000	176.985	6232.00	4086.22	-3950.28	1059.48	40°20'11.583"N	104°20'47.682"W	0.00	
11417.00†	90.000	176.985	6232.00	4184.82	-4050.14	1064.74	40°20'10.596"N	104°20'47.614"W	0.00	
11517.00†	90.000	176.985	6232.00	4283.43	-4150.01	1070.00	40°20'09.609"N	104°20'47.547"W	0.00	
11617.00†	90.000	176.985	6232.00	4382.04	-4249.87	1075.26	40°20'08.622"N	104°20'47.479"W	0.00	
11717.00†	90.000	176.985	6232.00	4480.65	-4349.73	1080.52	40°20'07.636"N	104°20'47.411"W	0.00	
11817.00†	90.000	176.985	6232.00	4579.26	-4449.59	1085.78	40°20'06.649"N	104°20'47.343"W	0.00	
11917.00†	90.000	176.985	6232.00	4677.87	-4549.45	1091.05	40°20'05.662"N	104°20'47.275"W	0.00	
12017.00†	90.000	176.985	6232.00	4776.48	-4649.31	1096.31	40°20'04.675"N	104°20'47.207"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	176.985	6232.00	4875.09	-4749.17	1101.57	40°20'03.688"N	104°20'47.139"W	0.00	
12217.00†	90.000	176.985	6232.00	4973.70	-4849.04	1106.83	40°20'02.702"N	104°20'47.071"W	0.00	
12317.00†	90.000	176.985	6232.00	5072.30	-4948.90	1112.09	40°20'01.715"N	104°20'47.004"W	0.00	
12360.25	90.000	176.985	6232.00 ²	5114.96	-4992.09	1114.36	40°20'01.288"N	104°20'46.974"W	0.00	End of Tangent



Planned Wellpath Report

STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)

Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB PWB
Facility	SEC.05-T04N-R62W		

HOLE & CASING SECTIONS - Ref Wellbore: STATE SEVENTY HOLES 31-34-5HNB PWB Ref Wellpath: STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.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	12360.25	10910.25	1450.00	6232.00	0.00	0.00	-4992.09	1114.36

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		-1.00	1268.14	-4374.35	3316030.65	1372684.68	40°21'03.146"N	104°21'57.863"W	polygon
SEC.08-T04N-R62W		-1.00	1.01	-80.02	3320340.86	1371473.38	40°20'50.629"N	104°21'02.397"W	polygon
SEC.32-T05N-R62W		-1.00	11303.75	-445.57	3319828.83	1382769.94	40°22'42.319"N	104°21'07.121"W	polygon
STATE SEVENTY HOLES 31-34-5HNB BHL (140'FNL & 1776'FEL,SEC.08)		6232.00	-4992.09	1134.36	3321619.82	1366496.66	40°20'01.288"N	104°20'46.716"W	point
2) STATE SEVENTY HOLES 31-34-5HNB BHL REV-1 (140'FNL & 1796'FEL,SEC.08)	12360.25	6232.00	-4992.09	1114.36	3321599.82	1366496.40	40°20'01.288"N	104°20'46.974"W	point
1) STATE SEVENTY HOLES 31-34-5HNB LP (10'FNL & 1809'FEL,SEC.05)	6790.78	6232.00	569.67	821.39	3321234.78	1372053.65	40°20'56.248"N	104°20'50.755"W	point

SURVEY PROGRAM - Ref Wellbore: STATE SEVENTY HOLES 31-34-5HNB PWB Ref Wellpath: STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1450.00	BHI NaviTrak (Rotating+Axial Corr)		STATE SEVENTY HOLES 31-34-5HNB PWB
1450.00	12360.25	BHI AutoTrak Curve (Axial Corr, Short spacing)		STATE SEVENTY HOLES 31-34-5HNB PWB



Planned Wellpath Report

STATE SEVENTY HOLES 31-34-5HNB PWP (REV-B.0)

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK OIL COMPANY	Slot	SLOT#29 STATE SEVENTY HOLES 31-34-5HNB (584'FNL & 2631'FWL,SEC.05)
Area	COLORADO	Well	STATE SEVENTY HOLES 31-34-5HNB
Field	WELD COUNTY	Wellbore	STATE SEVENTY HOLES 31-34-5HNB PWB
Facility	SEC.05-T04N-R62W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	30.311	17.00	Tie On
1450.00	0.000	30.311	1450.00	End of Tangent
2443.92	19.878	30.311	2424.10	End of Build
5725.72	19.878	30.311	5510.36	End of Tangent
6790.78	90.000	176.985	6232.00	End of 3D Arc
12360.25	90.000	176.985	6232.00	End of Tangent