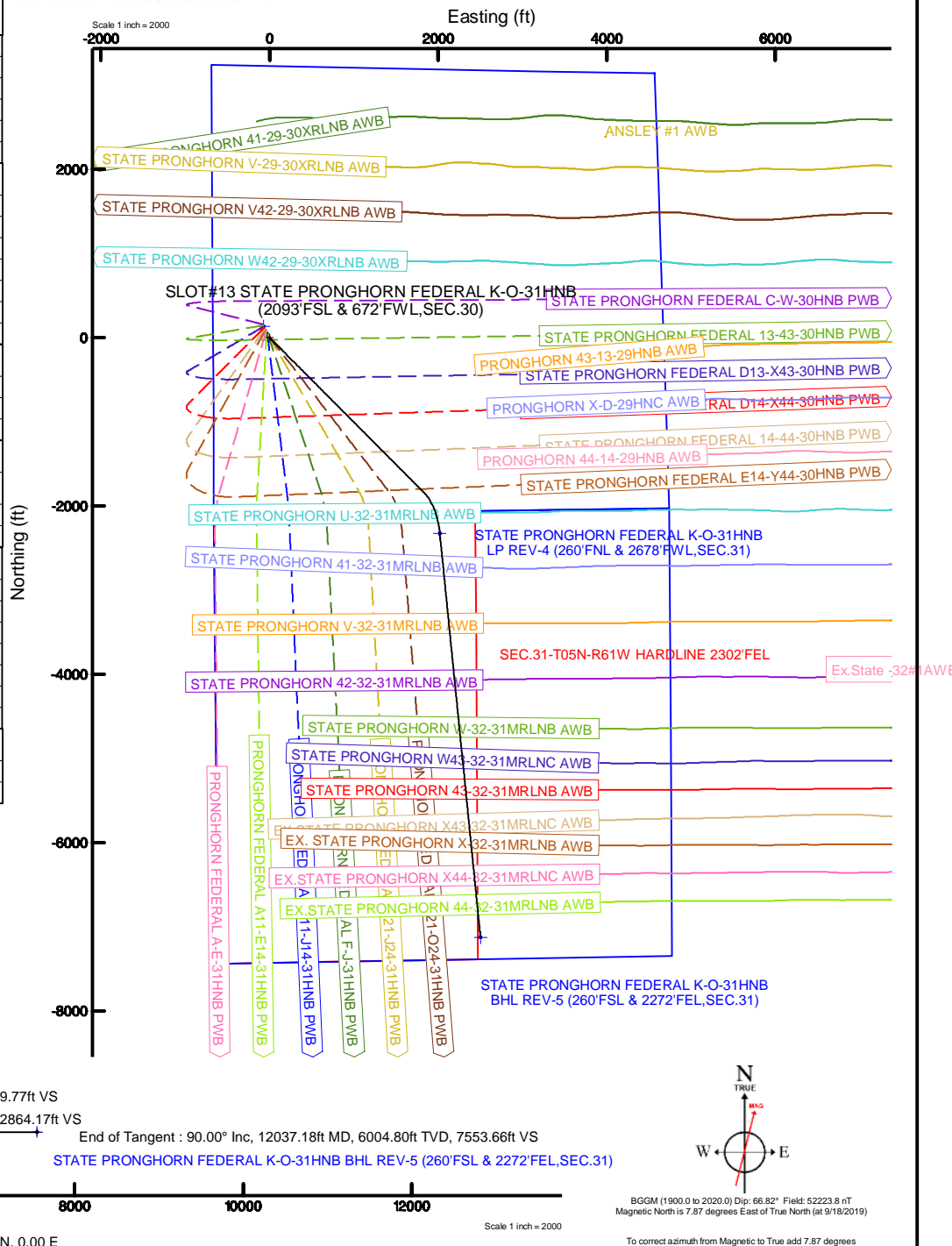


<div>BONANZA CREEK ENERGY</div>															
Location: COLORADO		Slot: SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093FSL & 672FWL,SEC.30)													
Field: WELD COUNTY (NAD83/TRUE)		Well: STATE PRONGHORN FEDERAL K-O-31HNB													
Facility: SEC.30-T05N-R61W		Wellbore: STATE PRONGHORN FEDERAL K-O-31HNB PWB													
Plot reference wellpath is STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP						Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet									
True vertical depths are referenced to RIG (17) (4527.8'GL+17KB@4544.8) (RKB)						North Reference: True north									
Measured depths are referenced to RIG (17) (4527.8'GL+17KB@4544.8) (RKB)						Scale: True distance									
RIG (17) (4527.8'GL+17KB@4544.8) (RKB) to Mean Sea Level: 4544.8 feet						Depths are in feet									
Mean Sea Level to Ground level (At Slot: SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093FSL & 672FWL,SEC.30)): 0 feet						Created by: robble01 on 2019-09-18									
Coordinates are in feet referenced to Slot						Database: WA DENVER									
Location Information															
Facility Name					Grid East (US ft)		Grid North (US ft)		Latitude						
SEC 30-T05N-R61W					334925.263		1382251.736								
Site		Local N (ft)		Local E (ft)		Grid East (US ft)		Grid North (US ft)	Latitude						
SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093FSL & 672FWL,SEC.30)		-186.10		85.47		3349216.070		1380383.891							
RIG (17) (4527.8'GL+17KB@4544.8) (RKB) to Ground level (At Slot: SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093FSL & 672FWL,SEC.30))									4544.8 ft						
Mean Sea Level to Ground level (At Slot: SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093FSL & 672FWL,SEC.30))									0 ft						
RIG (17) (4527.8'GL+17KB@4544.8) (RKB) to Mean Sea Level									4544.8 ft						
Survey Program															
Start MD (ft)	End MD (ft)	Tool		Model		Log Name/Comment		Wellbore							
17.00	1600.00	BHI NaviTrak		BHI NaviTrak (Rotating+Axial Corr)				STATE PRONGHORN FEDERAL K-O-31HNB PWB							
1600.00	12037.18	BHI AutoTrak Curve		BHI AutoTrak Curve (Short)				STATE PRONGHORN FEDERAL K-O-31HNB 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	17.00	1600.00	1583.00	17.00	1600.00	0.00	0.00	0.00	0.00	STATE PRONGHORN FEDERAL K-O-31HNB PWB					
8.5in Open Hole	1600.00	12037.18	10437.18	1600.00	6004.80	0.00	0.00	-7127.44	2501.48	STATE PRONGHORN FEDERAL K-O-31HNB 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	135.169	17.00	0.00	0.00	0.00	0.00							
End of Tangent	1600.00	0.000	135.169	1600.00	0.00	0.00	0.00	0.00							
End of Build	3596.65	39.933	135.169	3438.88	-473.80	471.01	2.00	603.04							





Planned Wellpath Report

STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

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	0.999959	Report Generated	9/18/2019 at 3:38:43 PM
Convergence at slot	0.80° East	Database/Source file	WA DENVER/STATE_PRONGHORN_FEDERAL_K-O-31HNB_REV-E.0_PWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-168.10	88.47	3345716.07	1380083.89	40°22'12.332"N	104°15'33.130"W
Facility Reference Pt			3345625.26	1380250.73	40°22'13.993"N	104°15'34.273"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') (4527.8'GL+17'KB@4544.8') (RKB) to Facility Vertical Datum	4544.80ft
Horizontal Reference Pt	Slot	RIG (17') (4527.8'GL+17'KB@4544.8') (RKB) to Mean Sea Level	4544.80ft
Vertical Reference Pt	RIG (17') (4527.8'GL+17'KB@4544.8') (RKB)	RIG (17') (4527.8'GL+17'KB@4544.8') (RKB) to Ground Level at Slot (SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30))	4544.80ft
MD Reference Pt	RIG (17') (4527.8'GL+17'KB@4544.8') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.66°



Planned Wellpath Report

STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

WELLPATH DATA (127 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	135.169	0.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
17.00	0.000	135.169	17.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	Tie On
117.00†	0.000	135.169	117.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
217.00†	0.000	135.169	217.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
317.00†	0.000	135.169	317.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
417.00†	0.000	135.169	417.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
517.00†	0.000	135.169	517.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
617.00†	0.000	135.169	617.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
717.00†	0.000	135.169	717.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
817.00†	0.000	135.169	817.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
917.00†	0.000	135.169	917.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1017.00†	0.000	135.169	1017.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1117.00†	0.000	135.169	1117.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1217.00†	0.000	135.169	1217.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1317.00†	0.000	135.169	1317.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1417.00†	0.000	135.169	1417.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1517.00†	0.000	135.169	1517.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	
1600.00	0.000	135.169	1600.00	0.00	0.00	0.00	40°22'12.332"N	104°15'33.130"W	0.00	End of Tangent
1617.00†	0.340	135.169	1617.00	0.05	-0.04	0.04	40°22'12.332"N	104°15'33.129"W	2.00	
1717.00†	2.340	135.169	1716.97	2.16	-1.69	1.68	40°22'12.315"N	104°15'33.108"W	2.00	
1817.00†	4.340	135.169	1816.79	7.41	-5.83	5.79	40°22'12.274"N	104°15'33.055"W	2.00	
1917.00†	6.340	135.169	1916.35	15.82	-12.43	12.35	40°22'12.209"N	104°15'32.970"W	2.00	
2017.00†	8.340	135.169	2015.53	27.35	-21.49	21.36	40°22'12.120"N	104°15'32.854"W	2.00	
2117.00†	10.340	135.169	2114.20	42.00	-32.99	32.80	40°22'12.006"N	104°15'32.706"W	2.00	
2217.00†	12.340	135.169	2212.24	59.74	-46.94	46.66	40°22'11.868"N	104°15'32.527"W	2.00	
2317.00†	14.340	135.169	2309.54	80.57	-63.30	62.93	40°22'11.706"N	104°15'32.317"W	2.00	
2417.00†	16.340	135.169	2405.97	104.45	-82.06	81.58	40°22'11.521"N	104°15'32.076"W	2.00	
2517.00†	18.340	135.169	2501.42	131.35	-103.20	102.59	40°22'11.312"N	104°15'31.804"W	2.00	
2617.00†	20.340	135.169	2595.77	161.24	-126.68	125.94	40°22'11.080"N	104°15'31.503"W	2.00	
2717.00†	22.340	135.169	2688.91	194.09	-152.49	151.59	40°22'10.825"N	104°15'31.171"W	2.00	



Planned Wellpath Report

STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL, SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

WELLPATH DATA (127 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2817.00†	24.340	135.169	2780.72	229.85	-180.59	179.52	40°22'10.547"N	104°15'30.810"W	2.00	
2917.00†	26.340	135.169	2871.10	268.48	-210.94	209.69	40°22'10.248"N	104°15'30.421"W	2.00	
3017.00†	28.340	135.169	2959.92	309.93	-243.51	242.07	40°22'09.926"N	104°15'30.002"W	2.00	
3117.00†	30.340	135.169	3047.09	354.16	-278.25	276.61	40°22'09.582"N	104°15'29.556"W	2.00	
3217.00†	32.340	135.169	3132.50	401.10	-315.14	313.28	40°22'09.218"N	104°15'29.082"W	2.00	
3317.00†	34.340	135.169	3216.04	450.71	-354.11	352.03	40°22'08.833"N	104°15'28.582"W	2.00	
3417.00†	36.340	135.169	3297.60	502.92	-395.13	392.80	40°22'08.427"N	104°15'28.055"W	2.00	
3517.00†	38.340	135.169	3377.11	557.67	-438.15	435.56	40°22'08.002"N	104°15'27.502"W	2.00	
3596.65	39.933	135.169	3438.88	603.04	-473.80	471.01	40°22'07.650"N	104°15'27.045"W	2.00	End of Build
3617.00†	39.933	135.169	3454.49	614.83	-483.06	480.22	40°22'07.558"N	104°15'26.926"W	0.00	
3717.00†	39.933	135.169	3531.17	672.77	-528.59	525.47	40°22'07.109"N	104°15'26.341"W	0.00	
3817.00†	39.933	135.169	3607.85	730.72	-574.11	570.72	40°22'06.659"N	104°15'25.756"W	0.00	
3917.00†	39.933	135.169	3684.53	788.66	-619.63	615.98	40°22'06.209"N	104°15'25.172"W	0.00	
4017.00†	39.933	135.169	3761.21	846.60	-665.15	661.23	40°22'05.759"N	104°15'24.587"W	0.00	
4117.00†	39.933	135.169	3837.89	904.54	-710.68	706.49	40°22'05.309"N	104°15'24.002"W	0.00	
4217.00†	39.933	135.169	3914.57	962.48	-756.20	751.74	40°22'04.859"N	104°15'23.418"W	0.00	
4317.00†	39.933	135.169	3991.24	1020.42	-801.72	796.99	40°22'04.409"N	104°15'22.833"W	0.00	
4417.00†	39.933	135.169	4067.92	1078.36	-847.24	842.25	40°22'03.960"N	104°15'22.249"W	0.00	
4517.00†	39.933	135.169	4144.60	1136.30	-892.77	887.50	40°22'03.510"N	104°15'21.664"W	0.00	
4617.00†	39.933	135.169	4221.28	1194.24	-938.29	932.76	40°22'03.060"N	104°15'21.079"W	0.00	
4717.00†	39.933	135.169	4297.96	1252.18	-983.81	978.01	40°22'02.610"N	104°15'20.495"W	0.00	
4817.00†	39.933	135.169	4374.64	1310.12	-1029.33	1023.27	40°22'02.160"N	104°15'19.910"W	0.00	
4917.00†	39.933	135.169	4451.32	1368.06	-1074.86	1068.52	40°22'01.710"N	104°15'19.325"W	0.00	
5017.00†	39.933	135.169	4528.00	1426.00	-1120.38	1113.77	40°22'01.260"N	104°15'18.741"W	0.00	
5117.00†	39.933	135.169	4604.68	1483.94	-1165.90	1159.03	40°22'00.811"N	104°15'18.156"W	0.00	
5217.00†	39.933	135.169	4681.36	1541.88	-1211.42	1204.28	40°22'00.361"N	104°15'17.572"W	0.00	
5317.00†	39.933	135.169	4758.04	1599.82	-1256.95	1249.54	40°21'59.911"N	104°15'16.987"W	0.00	
5417.00†	39.933	135.169	4834.72	1657.76	-1302.47	1294.79	40°21'59.461"N	104°15'16.402"W	0.00	
5517.00†	39.933	135.169	4911.40	1715.70	-1347.99	1340.04	40°21'59.011"N	104°15'15.818"W	0.00	
5617.00†	39.933	135.169	4988.08	1773.64	-1393.51	1385.30	40°21'58.561"N	104°15'15.233"W	0.00	



Planned Wellpath Report

STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

WELLPATH DATA (127 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5717.00†	39.933	135.169	5064.76	1831.58	-1439.04	1430.55	40°21'58.111"N	104°15'14.649"W	0.00	
5817.00†	39.933	135.169	5141.44	1889.52	-1484.56	1475.81	40°21'57.662"N	104°15'14.064"W	0.00	
5917.00†	39.933	135.169	5218.12	1947.46	-1530.08	1521.06	40°21'57.212"N	104°15'13.479"W	0.00	
6017.00†	39.933	135.169	5294.80	2005.40	-1575.60	1566.32	40°21'56.762"N	104°15'12.895"W	0.00	
6117.00†	39.933	135.169	5371.48	2063.34	-1621.13	1611.57	40°21'56.312"N	104°15'12.310"W	0.00	
6217.00†	39.933	135.169	5448.16	2121.28	-1666.65	1656.82	40°21'55.862"N	104°15'11.726"W	0.00	
6317.00†	39.933	135.169	5524.84	2179.22	-1712.17	1702.08	40°21'55.412"N	104°15'11.141"W	0.00	
6417.00†	39.933	135.169	5601.52	2237.16	-1757.69	1747.33	40°21'54.962"N	104°15'10.556"W	0.00	
6517.00†	39.933	135.169	5678.20	2295.10	-1803.22	1792.59	40°21'54.512"N	104°15'09.972"W	0.00	
6611.36	39.933	135.169	5750.55	2349.77	-1846.17	1835.29	40°21'54.088"N	104°15'09.420"W	0.00	End of Tangent
6617.00†	40.322	135.803	5754.86	2353.06	-1848.76	1837.84	40°21'54.062"N	104°15'09.387"W	10.00	
6717.00†	47.700	145.554	5826.82	2418.29	-1902.59	1881.42	40°21'53.530"N	104°15'08.824"W	10.00	
6817.00†	55.725	153.174	5888.78	2495.15	-1970.13	1921.08	40°21'52.863"N	104°15'08.312"W	10.00	
6917.00†	64.139	159.432	5938.88	2581.32	-2049.33	1955.62	40°21'52.080"N	104°15'07.866"W	10.00	
7017.00†	72.784	164.843	5975.58	2674.17	-2137.78	1983.99	40°21'51.206"N	104°15'07.499"W	10.00	
7117.00†	81.561	169.764	5997.77	2770.89	-2232.79	2005.32	40°21'50.267"N	104°15'07.224"W	10.00	
7212.52	90.000	174.255	6004.80†	2864.17	-2327.02	2018.53	40°21'49.336"N	104°15'07.053"W	10.00	End of 3D Arc
7217.00†	90.000	174.255	6004.80	2868.53	-2331.47	2018.98	40°21'49.292"N	104°15'07.048"W	0.00	
7317.00†	90.000	174.255	6004.80	2965.72	-2430.97	2028.99	40°21'48.309"N	104°15'06.918"W	0.00	
7417.00†	90.000	174.255	6004.80	3062.92	-2530.47	2039.00	40°21'47.326"N	104°15'06.789"W	0.00	
7517.00†	90.000	174.255	6004.80	3160.12	-2629.97	2049.01	40°21'46.343"N	104°15'06.660"W	0.00	
7617.00†	90.000	174.255	6004.80	3257.32	-2729.47	2059.02	40°21'45.359"N	104°15'06.531"W	0.00	
7717.00†	90.000	174.255	6004.80	3354.52	-2828.96	2069.03	40°21'44.376"N	104°15'06.402"W	0.00	
7817.00†	90.000	174.255	6004.80	3451.72	-2928.46	2079.04	40°21'43.393"N	104°15'06.272"W	0.00	
7917.00†	90.000	174.255	6004.80	3548.91	-3027.96	2089.05	40°21'42.410"N	104°15'06.143"W	0.00	
8017.00†	90.000	174.255	6004.80	3646.11	-3127.46	2099.06	40°21'41.426"N	104°15'06.014"W	0.00	
8117.00†	90.000	174.255	6004.80	3743.31	-3226.95	2109.07	40°21'40.443"N	104°15'05.885"W	0.00	
8217.00†	90.000	174.255	6004.80	3840.51	-3326.45	2119.08	40°21'39.460"N	104°15'05.756"W	0.00	
8317.00†	90.000	174.255	6004.80	3937.71	-3425.95	2129.09	40°21'38.477"N	104°15'05.626"W	0.00	
8417.00†	90.000	174.255	6004.80	4034.91	-3525.45	2139.10	40°21'37.494"N	104°15'05.497"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

WELLPATH DATA (127 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	174.255	6004.80	4132.11	-3624.95	2149.11	40°21'36.510"N	104°15'05.368"W	0.00	
8617.00†	90.000	174.255	6004.80	4229.30	-3724.44	2159.12	40°21'35.527"N	104°15'05.239"W	0.00	
8717.00†	90.000	174.255	6004.80	4326.50	-3823.94	2169.13	40°21'34.544"N	104°15'05.110"W	0.00	
8817.00†	90.000	174.255	6004.80	4423.70	-3923.44	2179.14	40°21'33.561"N	104°15'04.980"W	0.00	
8917.00†	90.000	174.255	6004.80	4520.90	-4022.94	2189.15	40°21'32.578"N	104°15'04.851"W	0.00	
9017.00†	90.000	174.255	6004.80	4618.10	-4122.43	2199.16	40°21'31.594"N	104°15'04.722"W	0.00	
9117.00†	90.000	174.255	6004.80	4715.30	-4221.93	2209.17	40°21'30.611"N	104°15'04.593"W	0.00	
9217.00†	90.000	174.255	6004.80	4812.49	-4321.43	2219.18	40°21'29.628"N	104°15'04.464"W	0.00	
9317.00†	90.000	174.255	6004.80	4909.69	-4420.93	2229.19	40°21'28.645"N	104°15'04.335"W	0.00	
9417.00†	90.000	174.255	6004.80	5006.89	-4520.42	2239.20	40°21'27.661"N	104°15'04.205"W	0.00	
9517.00†	90.000	174.255	6004.80	5104.09	-4619.92	2249.21	40°21'26.678"N	104°15'04.076"W	0.00	
9617.00†	90.000	174.255	6004.80	5201.29	-4719.42	2259.22	40°21'25.695"N	104°15'03.947"W	0.00	
9717.00†	90.000	174.255	6004.80	5298.49	-4818.92	2269.23	40°21'24.712"N	104°15'03.818"W	0.00	
9817.00†	90.000	174.255	6004.80	5395.69	-4918.42	2279.24	40°21'23.729"N	104°15'03.689"W	0.00	
9917.00†	90.000	174.255	6004.80	5492.88	-5017.91	2289.25	40°21'22.745"N	104°15'03.559"W	0.00	
10017.00†	90.000	174.255	6004.80	5590.08	-5117.41	2299.26	40°21'21.762"N	104°15'03.430"W	0.00	
10117.00†	90.000	174.255	6004.80	5687.28	-5216.91	2309.27	40°21'20.779"N	104°15'03.301"W	0.00	
10217.00†	90.000	174.255	6004.80	5784.48	-5316.41	2319.28	40°21'19.796"N	104°15'03.172"W	0.00	
10317.00†	90.000	174.255	6004.80	5881.68	-5415.90	2329.29	40°21'18.812"N	104°15'03.043"W	0.00	
10417.00†	90.000	174.255	6004.80	5978.88	-5515.40	2339.30	40°21'17.829"N	104°15'02.914"W	0.00	
10517.00†	90.000	174.255	6004.80	6076.07	-5614.90	2349.31	40°21'16.846"N	104°15'02.784"W	0.00	
10617.00†	90.000	174.255	6004.80	6173.27	-5714.40	2359.32	40°21'15.863"N	104°15'02.655"W	0.00	
10717.00†	90.000	174.255	6004.80	6270.47	-5813.90	2369.33	40°21'14.880"N	104°15'02.526"W	0.00	
10817.00†	90.000	174.255	6004.80	6367.67	-5913.39	2379.34	40°21'13.896"N	104°15'02.397"W	0.00	
10917.00†	90.000	174.255	6004.80	6464.87	-6012.89	2389.35	40°21'12.913"N	104°15'02.268"W	0.00	
11017.00†	90.000	174.255	6004.80	6562.07	-6112.39	2399.36	40°21'11.930"N	104°15'02.139"W	0.00	
11117.00†	90.000	174.255	6004.80	6659.26	-6211.89	2409.37	40°21'10.947"N	104°15'02.009"W	0.00	
11217.00†	90.000	174.255	6004.80	6756.46	-6311.38	2419.38	40°21'09.964"N	104°15'01.880"W	0.00	
11317.00†	90.000	174.255	6004.80	6853.66	-6410.88	2429.39	40°21'08.980"N	104°15'01.751"W	0.00	
11417.00†	90.000	174.255	6004.80	6950.86	-6510.38	2439.40	40°21'07.997"N	104°15'01.622"W	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

WELLPATH DATA (127 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11517.00†	90.000	174.255	6004.80	7048.06	-6609.88	2449.41	40°21'07.014"N	104°15'01.493"W	0.00	
11617.00†	90.000	174.255	6004.80	7145.26	-6709.37	2459.42	40°21'06.031"N	104°15'01.364"W	0.00	
11717.00†	90.000	174.255	6004.80	7242.46	-6808.87	2469.43	40°21'05.047"N	104°15'01.234"W	0.00	
11817.00†	90.000	174.255	6004.80	7339.65	-6908.37	2479.44	40°21'04.064"N	104°15'01.105"W	0.00	
11917.00†	90.000	174.255	6004.80	7436.85	-7007.87	2489.45	40°21'03.081"N	104°15'00.976"W	0.00	
12017.00†	90.000	174.255	6004.80	7534.05	-7107.37	2499.46	40°21'02.098"N	104°15'00.847"W	0.00	
12037.18	90.000	174.255	6004.80 ²	7553.66	-7127.44	2501.48	40°21'01.899"N	104°15'00.821"W	0.00	End of Tangent

HOLE & CASING SECTIONS

- Ref Wellbore: STATE PRONGHORN FEDERAL K-O-31HNB PWB Ref Wellpath: STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP

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	17.00	1600.00	1583.00	17.00	1600.00	0.00	0.00	0.00	0.00
8.5in Open Hole	1600.00	12037.18	10437.18	1600.00	6004.80	0.00	0.00	-7127.44	2501.48



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REFERENCE WELLPATH IDENTIFICATION

Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.31-T05N-R61W HARDLINE 2302'FEL		2.20	132.72	-69.83	3345644.39	1380215.61	40°22'13.643"N	104°15'34.032"W	polygon
2) STATE PRONGHORN FEDERAL K-O-31HNB BHL REV-5 (260'FSL & 2272'FEL,SEC.31)	12037.18	6004.80	-7127.44	2501.48	3348316.92	1372992.45	40°21'01.899"N	104°15'00.821"W	point
1) STATE PRONGHORN FEDERAL K-O-31HNB LP REV-4 (260'FNL & 2678'FWL,SEC.31)	7212.52	6004.80	-2327.02	2018.53	3347766.87	1377785.44	40°21'49.336"N	104°15'07.053"W	point
SEC.30-T05N-R61W		12000.80	1980.53	10462.34	3356149.23	1382210.53	40°22'31.881"N	104°13'17.949"W	polygon
SEC.31-T05N-R61W		12000.80	-3259.66	9200.04	3354960.43	1376953.41	40°21'40.104"N	104°13'34.284"W	polygon

SURVEY PROGRAM -

Ref Wellbore: STATE PRONGHORN FEDERAL K-O-31HNB PWB Ref Wellpath: STATE PRONGHORN FEDERAL K-O-31HNB (REV-E.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1600.00	BHI NaviTrak (Rotating+Axial Corr)		STATE PRONGHORN FEDERAL K-O-31HNB PWB
1600.00	12037.18	BHI AutoTrak Curve (Short)		STATE PRONGHORN FEDERAL K-O-31HNB PWB



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Slot	SLOT#13 STATE PRONGHORN FEDERAL K-O-31HNB (2093'FSL & 672'FWL,SEC.30)
Area	COLORADO	Well	STATE PRONGHORN FEDERAL K-O-31HNB
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	STATE PRONGHORN FEDERAL K-O-31HNB PWB
Facility	SEC.30-T05N-R61W		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	135.169	17.00	Tie On
1600.00	0.000	135.169	1600.00	End of Tangent
3596.65	39.933	135.169	3438.88	End of Build
6611.36	39.933	135.169	5750.55	End of Tangent
7212.52	90.000	174.255	6004.80	End of 3D Arc
12037.18	90.000	174.255	6004.80	End of Tangent