

# BONANZA CREEK ENERGY

Location: COLORADO Slot: SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL, SEC.30)  
Field: WELD COUNTY (NAD83/TRUE) Well: PRONGHORN FEDERAL F21-J24-31HNB  
Facility: SEC.30-T05N-R61W Wellbore: PRONGHORN FEDERAL F21-J24-31HNB PWB

Plot reference wellpath is PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP		Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to RIG (17) (4527.3GL+17KB@4544.3) (RKB)		North Reference: True north
Reference wellpath measured depths are referenced to RIG (17) (4527.3GL+17KB@4544.3) (RKB)		Scale: True distance
RIG (17) (4527.3GL+17KB@4544.3) (RKB) to Mean Sea Level: 4544.3 feet		Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL, SEC.30): 0 feet		Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum		Created by robak01 on 2020-02-26; Database: WA, DENVER

## Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.30-T05N-R61W				334625.203	138029.726	40°21'15.950"N	104°15'34.272"W
Site	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL, SEC.30)	-141.57	74.51	334701.741	138010.214	40°21'12.550"N	104°15'33.301"W	
RIG (17) (4527.3GL+17KB@4544.3) (RKB) to Ground level (At Slot: SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL, SEC.30))						4544.31	
Mean Sea Level to Ground level (At Slot: SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL, SEC.30))						01	
RIG (17) (4527.3GL+17KB@4544.3) (RKB) to Mean Sea Level						4544.31	

## Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
17.00	1600.00	BH NavTrak (superseded model)	BH NavTrak (Rotating+Axial Cor)		PRONGHORN FEDERAL F21-J24-31HNB PWB
1600.00	11749.80	BH AutoTrak Cone (superseded model)	BH AutoTrak Cone (Short)		PRONGHORN FEDERAL F21-J24-31HNB PWB

## Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.31-T05N-R61W HARLINE 1830'FWL	NA	1.70	106.20	-55.87	334564.39	1380215.61	40°22'13.643"N	104°15'34.031"W
PRONGHORN FEDERAL F21-J24-31HNB BHL REV-5 (260'FNL & 2061'FWL, SEC.31)	11749.80	6004.30	-7172.04	1460.36	3347262.24	1372959.61	40°21'1.7215"N	104°15'14.4482"W
PRONGHORN FEDERAL F21-J24-31HNB LP REV-5 (260'FNL & 1848'FWL, SEC.31)	6934.84	6004.30	-2363.98	1202.75	3346937.39	1377763.40	40°21'49.238"N	104°15'17.7725"W
SEC.30-T05N-R61W	NA	12000.30	1954.01	10476.30	3356149.23	1382210.53	40°22'31.8810"N	104°13'17.9480"W
SEC.31-T05N-R61W	NA	12000.30	-3285.16	9214.01	3354960.45	1376953.41	40°21'40.1047"N	104°15'34.2840"W

## Hole and Casing Sections

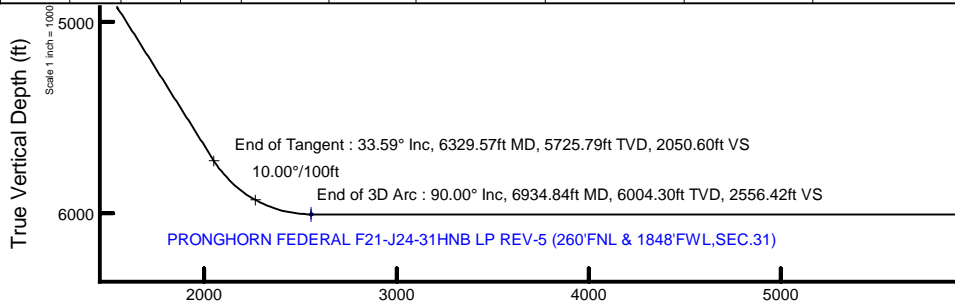
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing	17.00	1600.00	1583.00	17.00	1600.00	0.00	0.00	0.00	0.00	PRONGHORN FEDERAL F21-J24-31HNB PWB
8.5in Open Hole	1600.00	11749.80	10149.80	1600.00	6004.30	0.00	0.00	-7172.04	1460.36	PRONGHORN FEDERAL F21-J24-31HNB 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	149.731	17.00	0.00	0.00	0.00	0.00
End of Tangent	1600.00	0.000	149.731	1600.00	0.00	0.00	0.00	0.00
End of Build	3279.33	33.587	149.731	3184.79	-413.07	241.08	2.00	452.87
End of Tangent	6329.57	33.587	149.731	5725.79	-1870.41	1091.64	0.00	2050.60
End of 3D Arc	6934.84	90.000	176.933	6004.30	-2363.98	1202.75	10.00	2556.42
End of Tangent	11749.80	90.000	176.933	6004.30	-7172.04	1460.36	0.00	7319.21

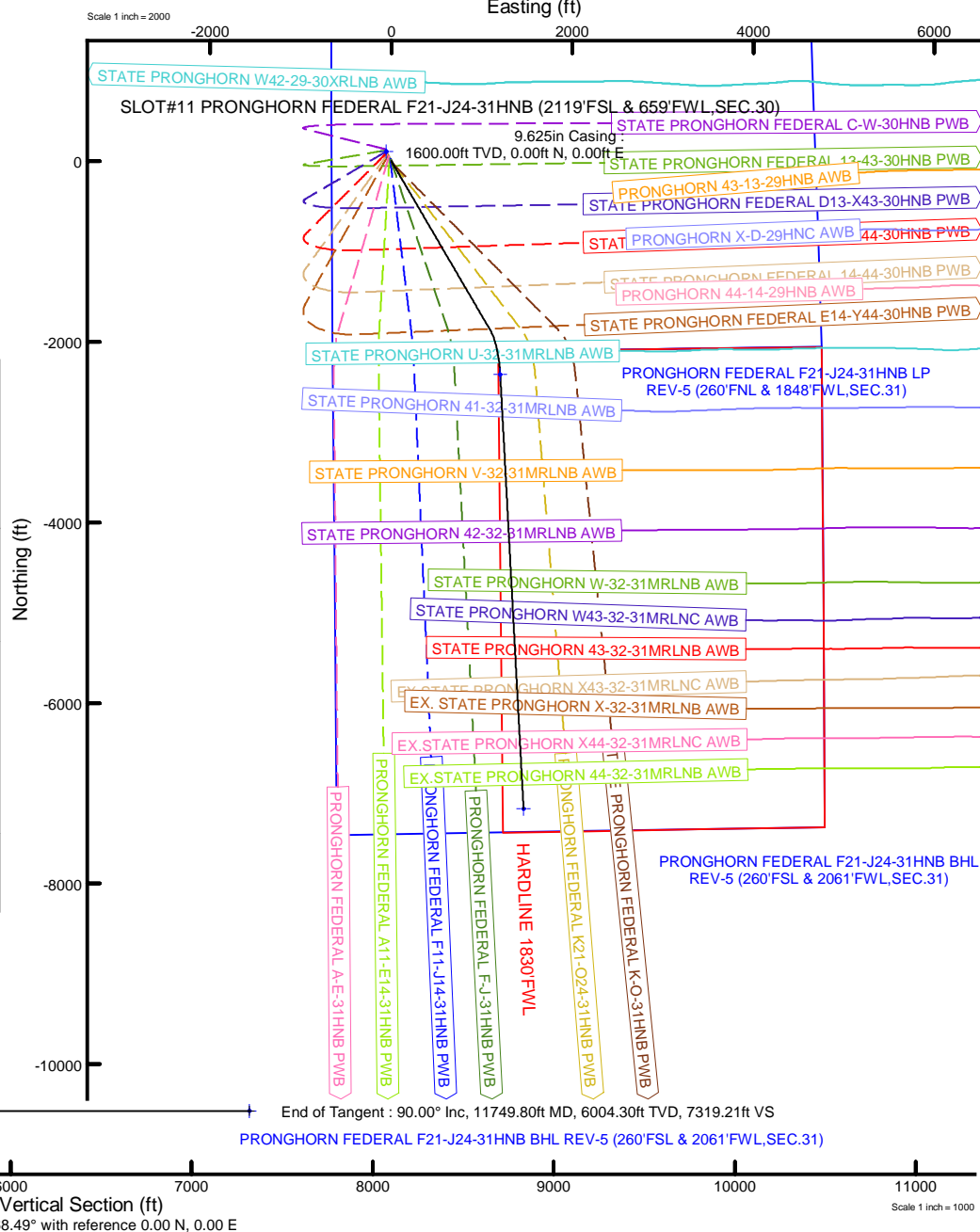
## Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
11749.80	90.000	176.933	6004.30	-7172.04	1460.36	3347262.24	1372959.61	40°21'1.7215"N	104°15'14.4482"W



BGM (1900.0 to 2021.0) Dip: 66.90° Field: 62012.2 nT  
Magnetic North is 7.78 degrees East of True North (at 2/26/2020)

To correct azimuth from Magnetic to True add 7.78 degrees



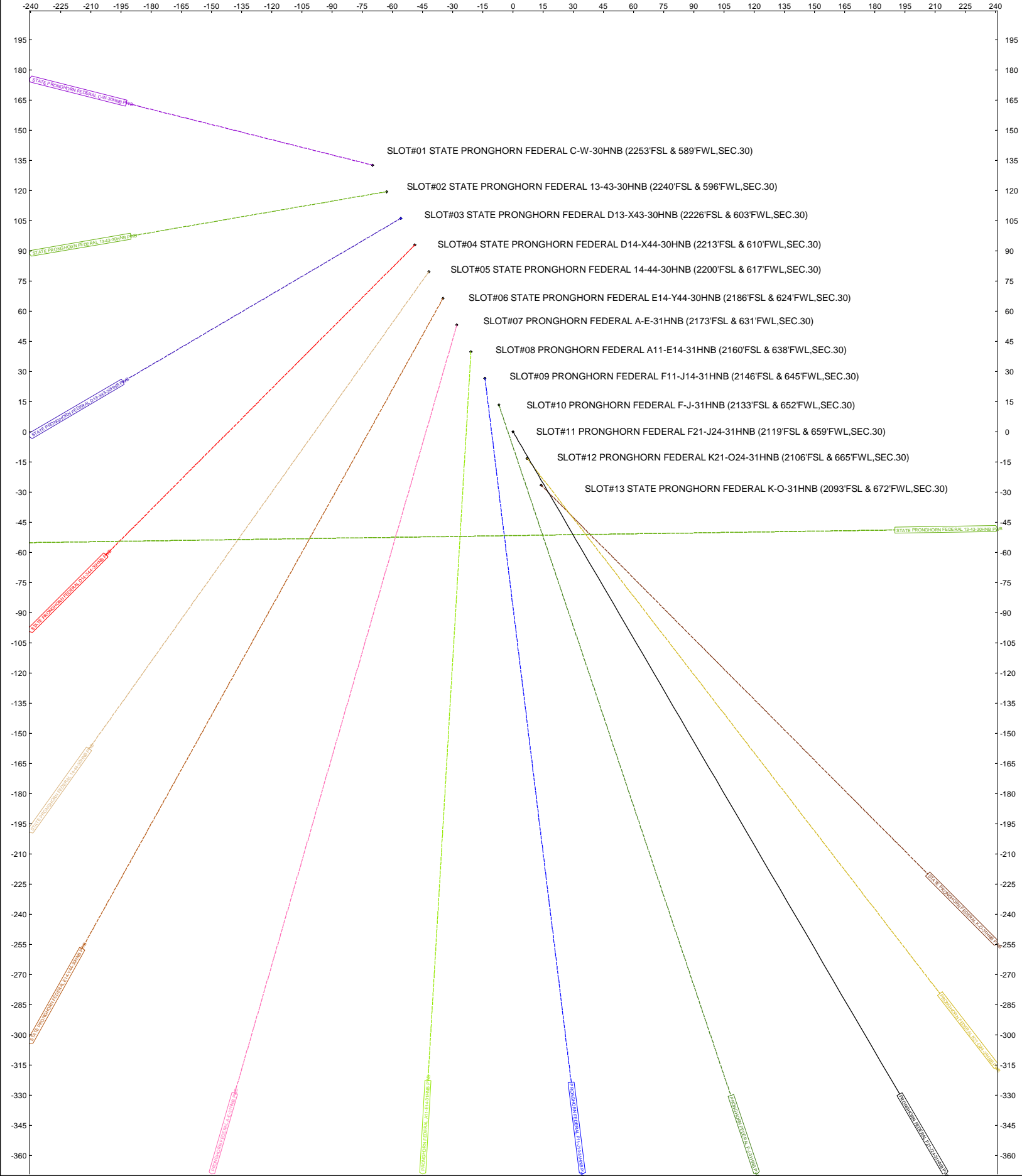
Location: COLORADO Slot: SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)

Field: WELD COUNTY (NAD83/TRUE) Well: PRONGHORN FEDERAL F21-J24-31HNB

Facility: SEC.30-T05N-R61W Wellbore: PRONGHORN FEDERAL F21-J24-31HNB PWB

Scale 1 inch = 15

Easting (ft)







Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 6.0
North Reference	True	User	Robiale01
Scale	0.999959	Report Generated	2/26/2020 at 1:07:57 PM
Convergence at slot	0.80° East	Database	WA_DENVER

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-141.57	74.51	3345701.74	1380110.21	40°22'12.5940"N	104°15'33.3101"W
Facility Reference Pt			3345625.26	1380250.73	40°22'13.9930"N	104°15'34.2727"W
Field Reference Pt			3224525.77	1254425.87	40°01'44.4000"N	104°41'53.5560"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (17') (4527.3'GL+17'KB@4544.3') (RKB) to Facility Vertical Datum	4544.30ft
Horizontal Reference Pt	Slot	RIG (17') (4527.3'GL+17'KB@4544.3') (RKB) to Mean Sea Level	4544.30ft
Vertical Reference Pt	RIG (17') (4527.3'GL+17'KB@4544.3') (RKB)	RIG (17') (4527.3'GL+17'KB@4544.3') (RKB) to Ground Level at Slot (SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30))	4544.30ft
MD Reference Pt	RIG (17') (4527.3'GL+17'KB@4544.3') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	168.49°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

WELLPATH DATA (124 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	149.731	0.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
17.00	0.000	149.731	17.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	Tie On
117.00†	0.000	149.731	117.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
217.00†	0.000	149.731	217.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
317.00†	0.000	149.731	317.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
417.00†	0.000	149.731	417.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
517.00†	0.000	149.731	517.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
617.00†	0.000	149.731	617.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
717.00†	0.000	149.731	717.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
817.00†	0.000	149.731	817.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
917.00†	0.000	149.731	917.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1017.00†	0.000	149.731	1017.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1117.00†	0.000	149.731	1117.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1217.00†	0.000	149.731	1217.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1317.00†	0.000	149.731	1317.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1417.00†	0.000	149.731	1417.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1517.00†	0.000	149.731	1517.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	
1600.00	0.000	149.731	1600.00	0.00	0.00	0.00	40°22'12.5940"N	104°15'33.3101"W	0.00	End of Tangent
1617.00†	0.340	149.731	1617.00	0.05	-0.04	0.03	40°22'12.5936"N	104°15'33.3098"W	2.00	
1717.00†	2.340	149.731	1716.97	2.26	-2.06	1.20	40°22'12.5736"N	104°15'33.2945"W	2.00	
1817.00†	4.340	149.731	1816.79	7.78	-7.09	4.14	40°22'12.5239"N	104°15'33.2566"W	2.00	
1917.00†	6.340	149.731	1916.35	16.59	-15.13	8.83	40°22'12.4445"N	104°15'33.1960"W	2.00	
2017.00†	8.340	149.731	2015.53	28.69	-26.17	15.27	40°22'12.3354"N	104°15'33.1128"W	2.00	
2117.00†	10.340	149.731	2114.20	44.05	-40.18	23.45	40°22'12.1969"N	104°15'33.0071"W	2.00	
2217.00†	12.340	149.731	2212.24	62.67	-57.16	33.36	40°22'12.0291"N	104°15'32.8791"W	2.00	
2317.00†	14.340	149.731	2309.54	84.52	-77.09	44.99	40°22'11.8322"N	104°15'32.7288"W	2.00	
2417.00†	16.340	149.731	2405.97	109.56	-99.94	58.33	40°22'11.6065"N	104°15'32.5565"W	2.00	
2517.00†	18.340	149.731	2501.42	137.78	-125.68	73.35	40°22'11.3521"N	104°15'32.3624"W	2.00	
2617.00†	20.340	149.731	2595.77	169.14	-154.28	90.04	40°22'11.0695"N	104°15'32.1468"W	2.00	
2717.00†	22.340	149.731	2688.91	203.59	-185.70	108.38	40°22'10.7589"N	104°15'31.9098"W	2.00	



Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

WELLPATH DATA (124 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	149.731	2780.72	241.11	-219.92	128.35	40°22'10.4208"N	104°15'31.6518"W	2.00	
2917.00†	26.340	149.731	2871.10	281.63	-256.88	149.92	40°22'10.0556"N	104°15'31.3731"W	2.00	
3017.00†	28.340	149.731	2959.92	325.11	-296.54	173.07	40°22'9.6636"N	104°15'31.0740"W	2.00	
3117.00†	30.340	149.731	3047.09	371.51	-338.86	197.77	40°22'9.2455"N	104°15'30.7550"W	2.00	
3217.00†	32.340	149.731	3132.50	420.75	-383.78	223.99	40°22'8.8016"N	104°15'30.4163"W	2.00	
3279.33	33.587	149.731	3184.79	452.87	-413.07	241.08	40°22'8.5122"N	104°15'30.1954"W	2.00	End of Build
3317.00†	33.587	149.731	3216.17	472.60	-431.07	251.59	40°22'8.3343"N	104°15'30.0597"W	0.00	
3417.00†	33.587	149.731	3299.48	524.98	-478.84	279.47	40°22'7.8622"N	104°15'29.6995"W	0.00	
3517.00†	33.587	149.731	3382.78	577.36	-526.62	307.36	40°22'7.3901"N	104°15'29.3392"W	0.00	
3617.00†	33.587	149.731	3466.09	629.74	-574.40	335.24	40°22'6.9179"N	104°15'28.9790"W	0.00	
3717.00†	33.587	149.731	3549.39	682.12	-622.18	363.13	40°22'6.4458"N	104°15'28.6187"W	0.00	
3817.00†	33.587	149.731	3632.70	734.50	-669.96	391.01	40°22'5.9737"N	104°15'28.2585"W	0.00	
3917.00†	33.587	149.731	3716.00	786.88	-717.73	418.89	40°22'5.5015"N	104°15'27.8983"W	0.00	
4017.00†	33.587	149.731	3799.31	839.26	-765.51	446.78	40°22'5.0294"N	104°15'27.5380"W	0.00	
4117.00†	33.587	149.731	3882.61	891.64	-813.29	474.66	40°22'4.5573"N	104°15'27.1778"W	0.00	
4217.00†	33.587	149.731	3965.92	944.02	-861.07	502.55	40°22'4.0852"N	104°15'26.8175"W	0.00	
4317.00†	33.587	149.731	4049.22	996.40	-908.84	530.43	40°22'3.6130"N	104°15'26.4573"W	0.00	
4417.00†	33.587	149.731	4132.53	1048.79	-956.62	558.32	40°22'3.1409"N	104°15'26.0971"W	0.00	
4517.00†	33.587	149.731	4215.83	1101.17	-1004.40	586.20	40°22'2.6688"N	104°15'25.7368"W	0.00	
4617.00†	33.587	149.731	4299.14	1153.55	-1052.18	614.09	40°22'2.1966"N	104°15'25.3766"W	0.00	
4717.00†	33.587	149.731	4382.44	1205.93	-1099.96	641.97	40°22'1.7245"N	104°15'25.0164"W	0.00	
4817.00†	33.587	149.731	4465.75	1258.31	-1147.73	669.86	40°22'1.2524"N	104°15'24.6561"W	0.00	
4917.00†	33.587	149.731	4549.05	1310.69	-1195.51	697.74	40°22'0.7802"N	104°15'24.2959"W	0.00	
5017.00†	33.587	149.731	4632.36	1363.07	-1243.29	725.63	40°22'0.3081"N	104°15'23.9357"W	0.00	
5117.00†	33.587	149.731	4715.66	1415.45	-1291.07	753.51	40°21'59.8360"N	104°15'23.5755"W	0.00	
5217.00†	33.587	149.731	4798.97	1467.83	-1338.84	781.40	40°21'59.3638"N	104°15'23.2152"W	0.00	
5317.00†	33.587	149.731	4882.27	1520.21	-1386.62	809.28	40°21'58.8917"N	104°15'22.8550"W	0.00	
5417.00†	33.587	149.731	4965.58	1572.59	-1434.40	837.17	40°21'58.4196"N	104°15'22.4948"W	0.00	
5517.00†	33.587	149.731	5048.88	1624.97	-1482.18	865.05	40°21'57.9474"N	104°15'22.1346"W	0.00	
5617.00†	33.587	149.731	5132.19	1677.35	-1529.96	892.94	40°21'57.4753"N	104°15'21.7744"W	0.00	





Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

WELLPATH DATA (124 stations) † = interpolated, ‡ = extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5717.00†	33.587	149.731	5215.49	1729.74	-1577.73	920.82	40°21'57.0032"N	104°15'21.4141"W	0.00	
5817.00†	33.587	149.731	5298.80	1782.12	-1625.51	948.71	40°21'56.5310"N	104°15'21.0539"W	0.00	
5917.00†	33.587	149.731	5382.10	1834.50	-1673.29	976.59	40°21'56.0589"N	104°15'20.6937"W	0.00	
6017.00†	33.587	149.731	5465.41	1886.88	-1721.07	1004.48	40°21'55.5867"N	104°15'20.3335"W	0.00	
6117.00†	33.587	149.731	5548.71	1939.26	-1768.84	1032.36	40°21'55.1146"N	104°15'19.9733"W	0.00	
6217.00†	33.587	149.731	5632.02	1991.64	-1816.62	1060.25	40°21'54.6425"N	104°15'19.6131"W	0.00	
6317.00†	33.587	149.731	5715.32	2044.02	-1864.40	1088.13	40°21'54.1703"N	104°15'19.2529"W	0.00	
6329.57	33.587	149.731	5725.79	2050.60	-1870.41	1091.64	40°21'54.1110"N	104°15'19.2076"W	0.00	End of Tangent
6417.00†	41.253	156.683	5795.21	2101.82	-1917.85	1115.28	40°21'53.6421"N	104°15'18.9021"W	10.00	
6517.00†	50.387	162.382	5864.86	2172.57	-1985.01	1140.05	40°21'52.9784"N	104°15'18.5822"W	10.00	
6617.00†	59.734	166.730	5922.08	2254.24	-2063.96	1161.68	40°21'52.1983"N	104°15'18.3028"W	10.00	
6717.00†	69.200	170.311	5965.15	2344.35	-2152.29	1179.50	40°21'51.3255"N	104°15'18.0726"W	10.00	
6817.00†	78.731	173.465	5992.75	2440.16	-2247.32	1192.98	40°21'50.3864"N	104°15'17.8985"W	10.00	
6917.00†	88.293	176.415	6004.03	2538.77	-2346.17	1201.71	40°21'49.4096"N	104°15'17.7858"W	10.00	
6934.84	90.000	176.933	6004.30†	2556.42	-2363.98	1202.75	40°21'49.2336"N	104°15'17.7725"W	10.00	End of 3D Arc
7017.00†	90.000	176.933	6004.30	2637.69	-2446.02	1207.14	40°21'48.4229"N	104°15'17.7157"W	0.00	
7117.00†	90.000	176.933	6004.30	2736.61	-2545.88	1212.49	40°21'47.4361"N	104°15'17.6467"W	0.00	
7217.00†	90.000	176.933	6004.30	2835.52	-2645.73	1217.84	40°21'46.4494"N	104°15'17.5776"W	0.00	
7317.00†	90.000	176.933	6004.30	2934.44	-2745.59	1223.19	40°21'45.4626"N	104°15'17.5086"W	0.00	
7417.00†	90.000	176.933	6004.30	3033.36	-2845.45	1228.54	40°21'44.4759"N	104°15'17.4395"W	0.00	
7517.00†	90.000	176.933	6004.30	3132.27	-2945.30	1233.89	40°21'43.4891"N	104°15'17.3705"W	0.00	
7617.00†	90.000	176.933	6004.30	3231.19	-3045.16	1239.24	40°21'42.5023"N	104°15'17.3014"W	0.00	
7717.00†	90.000	176.933	6004.30	3330.11	-3145.02	1244.59	40°21'41.5156"N	104°15'17.2324"W	0.00	
7817.00†	90.000	176.933	6004.30	3429.02	-3244.87	1249.94	40°21'40.5288"N	104°15'17.1633"W	0.00	
7917.00†	90.000	176.933	6004.30	3527.94	-3344.73	1255.29	40°21'39.5421"N	104°15'17.0943"W	0.00	
8017.00†	90.000	176.933	6004.30	3626.86	-3444.59	1260.64	40°21'38.5553"N	104°15'17.0252"W	0.00	
8117.00†	90.000	176.933	6004.30	3725.77	-3544.44	1265.99	40°21'37.5685"N	104°15'16.9562"W	0.00	
8217.00†	90.000	176.933	6004.30	3824.69	-3644.30	1271.34	40°21'36.5818"N	104°15'16.8872"W	0.00	
8317.00†	90.000	176.933	6004.30	3923.61	-3744.16	1276.69	40°21'35.5950"N	104°15'16.8181"W	0.00	
8417.00†	90.000	176.933	6004.30	4022.52	-3844.01	1282.04	40°21'34.6083"N	104°15'16.7491"W	0.00	



Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

WELLPATH DATA (124 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	176.933	6004.30	4121.44	-3943.87	1287.39	40°21'33.6215"N	104°15'16.6800"W	0.00	
8617.00†	90.000	176.933	6004.30	4220.35	-4043.73	1292.75	40°21'32.6348"N	104°15'16.6110"W	0.00	
8717.00†	90.000	176.933	6004.30	4319.27	-4143.59	1298.10	40°21'31.6480"N	104°15'16.5419"W	0.00	
8817.00†	90.000	176.933	6004.30	4418.19	-4243.44	1303.45	40°21'30.6612"N	104°15'16.4729"W	0.00	
8917.00†	90.000	176.933	6004.30	4517.10	-4343.30	1308.80	40°21'29.6745"N	104°15'16.4038"W	0.00	
9017.00†	90.000	176.933	6004.30	4616.02	-4443.16	1314.15	40°21'28.6877"N	104°15'16.3348"W	0.00	
9117.00†	90.000	176.933	6004.30	4714.94	-4543.01	1319.50	40°21'27.7010"N	104°15'16.2658"W	0.00	
9217.00†	90.000	176.933	6004.30	4813.85	-4642.87	1324.85	40°21'26.7142"N	104°15'16.1967"W	0.00	
9317.00†	90.000	176.933	6004.30	4912.77	-4742.73	1330.20	40°21'25.7274"N	104°15'16.1277"W	0.00	
9417.00†	90.000	176.933	6004.30	5011.69	-4842.58	1335.55	40°21'24.7407"N	104°15'16.0586"W	0.00	
9517.00†	90.000	176.933	6004.30	5110.60	-4942.44	1340.90	40°21'23.7539"N	104°15'15.9896"W	0.00	
9617.00†	90.000	176.933	6004.30	5209.52	-5042.30	1346.25	40°21'22.7672"N	104°15'15.9206"W	0.00	
9717.00†	90.000	176.933	6004.30	5308.44	-5142.15	1351.60	40°21'21.7804"N	104°15'15.8515"W	0.00	
9817.00†	90.000	176.933	6004.30	5407.35	-5242.01	1356.95	40°21'20.7936"N	104°15'15.7825"W	0.00	
9917.00†	90.000	176.933	6004.30	5506.27	-5341.87	1362.30	40°21'19.8069"N	104°15'15.7135"W	0.00	
10017.00†	90.000	176.933	6004.30	5605.18	-5441.72	1367.65	40°21'18.8201"N	104°15'15.6444"W	0.00	
10117.00†	90.000	176.933	6004.30	5704.10	-5541.58	1373.00	40°21'17.8334"N	104°15'15.5754"W	0.00	
10217.00†	90.000	176.933	6004.30	5803.02	-5641.44	1378.35	40°21'16.8466"N	104°15'15.5063"W	0.00	
10317.00†	90.000	176.933	6004.30	5901.93	-5741.29	1383.70	40°21'15.8599"N	104°15'15.4373"W	0.00	
10417.00†	90.000	176.933	6004.30	6000.85	-5841.15	1389.05	40°21'14.8731"N	104°15'15.3683"W	0.00	
10517.00†	90.000	176.933	6004.30	6099.77	-5941.01	1394.40	40°21'13.8863"N	104°15'15.2992"W	0.00	
10617.00†	90.000	176.933	6004.30	6198.68	-6040.86	1399.75	40°21'12.8996"N	104°15'15.2302"W	0.00	
10717.00†	90.000	176.933	6004.30	6297.60	-6140.72	1405.10	40°21'11.9128"N	104°15'15.1612"W	0.00	
10817.00†	90.000	176.933	6004.30	6396.52	-6240.58	1410.45	40°21'10.9261"N	104°15'15.0921"W	0.00	
10917.00†	90.000	176.933	6004.30	6495.43	-6340.43	1415.80	40°21'9.9393"N	104°15'15.0231"W	0.00	
11017.00†	90.000	176.933	6004.30	6594.35	-6440.29	1421.15	40°21'8.9525"N	104°15'14.9541"W	0.00	
11117.00†	90.000	176.933	6004.30	6693.27	-6540.15	1426.50	40°21'7.9658"N	104°15'14.8851"W	0.00	
11217.00†	90.000	176.933	6004.30	6792.18	-6640.00	1431.85	40°21'6.9790"N	104°15'14.8160"W	0.00	
11317.00†	90.000	176.933	6004.30	6891.10	-6739.86	1437.20	40°21'5.9923"N	104°15'14.7470"W	0.00	
11417.00†	90.000	176.933	6004.30	6990.01	-6839.72	1442.55	40°21'5.0055"N	104°15'14.6780"W	0.00	





Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

WELLPATH DATA (124 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	176.933	6004.30	7088.93	-6939.57	1447.90	40°21'4.0187"N	104°15'14.6089"W	0.00	
11617.00†	90.000	176.933	6004.30	7187.85	-7039.43	1453.25	40°21'3.0320"N	104°15'14.5399"W	0.00	
11717.00†	90.000	176.933	6004.30	7286.76	-7139.29	1458.60	40°21'2.0452"N	104°15'14.4709"W	0.00	
11749.80	90.000	176.933	6004.30‡	7319.21	-7172.04	1460.36	40°21'1.7215"N	104°15'14.4482"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: PRONGHORN FEDERAL F21-J24-31HNB PWB      Ref Wellpath: PRONGHORN FEDERAL F21-J24-31HNB (REV-F.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	11749.80	10149.80	1600.00	6004.30	0.00	0.00	-7172.04	1460.36



Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

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 1830'FWL	N/A	1.70	106.20	-55.87	3345644.39	1380215.61	40°22'13.6434"N	104°15'34.0319"W	polygon
	2D Polygon: dimensions not calculated								
2) PRONGHORN FEDERAL F21-J24-31HNB BHL REV-5 (260'FSL & 2061'FWL,SEC.31)	11749.80	6004.30	-7172.04	1460.36	3347262.24	1372959.61	40°21'1.7215"N	104°15'14.4482"W	point
1) PRONGHORN FEDERAL F21-J24-31HNB LP REV-5 (260'FNL & 1848'FWL,SEC.31)	6934.84	6004.30	-2363.98	1202.75	3346937.39	1377763.40	40°21'49.2336"N	104°15'17.7725"W	point
SEC.30-T05N-R61W	N/A	12000.30	1954.01	10476.30	3356149.23	1382210.53	40°22'31.8810"N	104°13'17.9490"W	polygon
	2D Polygon: dimensions not calculated								
SEC.31-T05N-R61W	N/A	12000.30	-3286.18	9214.01	3354960.43	1376953.41	40°21'40.1040"N	104°13'34.2840"W	polygon
	2D Polygon: dimensions not calculated								

SURVEY PROGRAM - Ref Wellbore: PRONGHORN FEDERAL F21-J24-31HNB PWB      Ref Wellpath: PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1600.00	BHI NaviTrak (Rotating+Axial Corr)		PRONGHORN FEDERAL F21-J24-31HNB PWB
1600.00	11749.80	BH AutoTrak Curve (Short)		PRONGHORN FEDERAL F21-J24-31HNB PWB



Planned Wellpath Report

PRONGHORN FEDERAL F21-J24-31HNB (REV-F.0) PWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BONANZA CREEK ENERGY	Well	PRONGHORN FEDERAL F21-J24-31HNB
Field	WELD COUNTY (NAD83/TRUE)	API/Legal	
Facility	SEC.30-T05N-R61W	Wellbore	PRONGHORN FEDERAL F21-J24-31HNB PWB
Slot	SLOT#11 PRONGHORN FEDERAL F21-J24-31HNB (2119'FSL & 659'FWL,SEC.30)		

DESIGN COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
17.00	0.000	149.731	17.00	Tie On
1600.00	0.000	149.731	1600.00	End of Tangent
3279.33	33.587	149.731	3184.79	End of Build
6329.57	33.587	149.731	5725.79	End of Tangent
6934.84	90.000	176.933	6004.30	End of 3D Arc
11749.80	90.000	176.933	6004.30	End of Tangent