

BONANZA CREEK ENERGY OPERATING

Well Name: **Pronghorn P-T-17HNB**

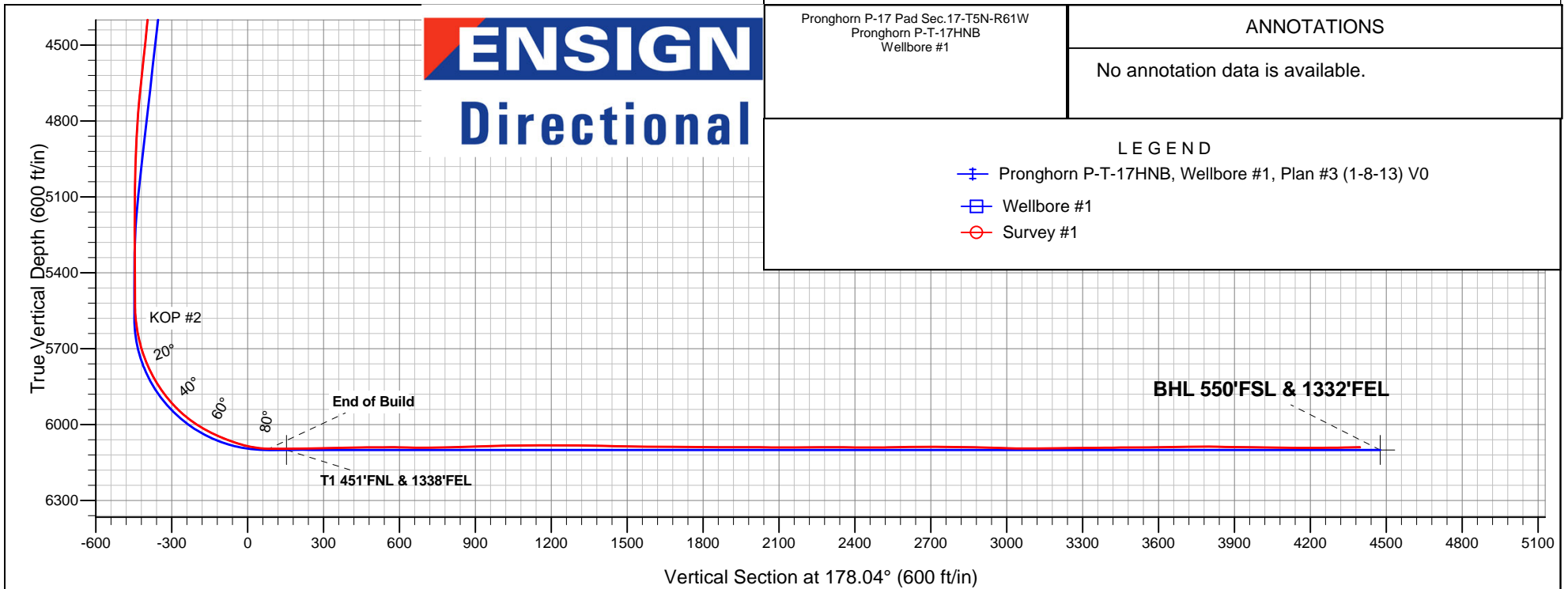
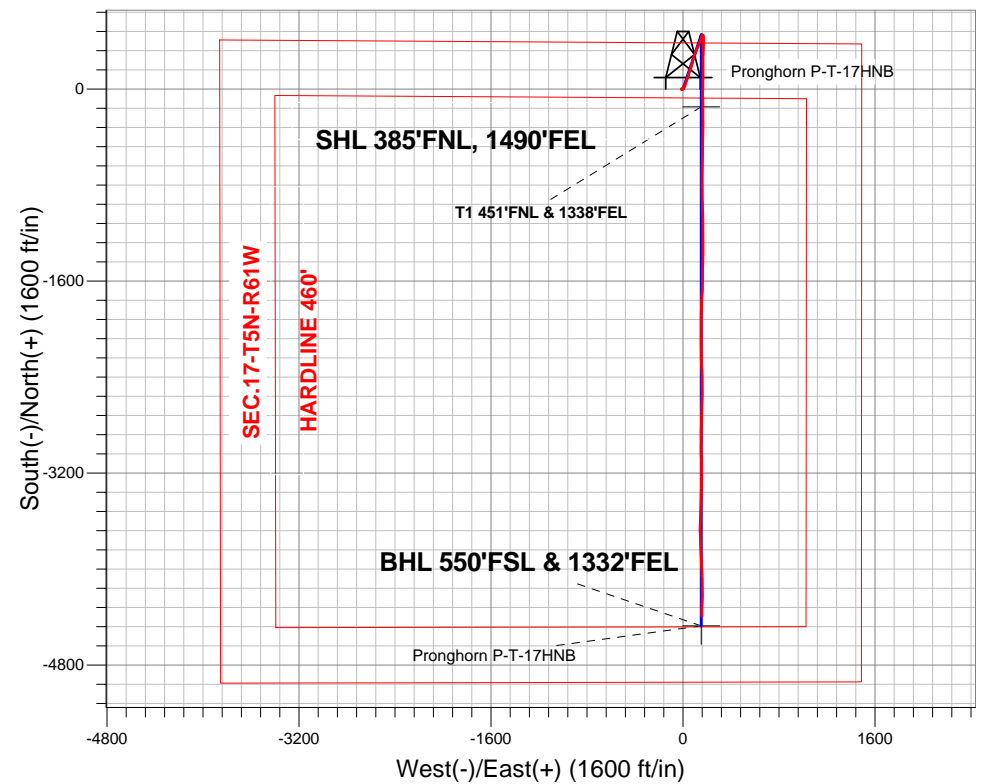
Surface Location: Pronghorn P-17 Pad Sec.17-T5N-R61W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4619.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1393799.96	3353930.23	40.407420	-104.229020	
Ensign 128 - RKB 15' WELL @ 4634.0ft (Ensign 128 - RKB 15')						

FINAL SURVEY

Projected Bottom Hole Location
10737' MD 6090' TVD 4393' S & 157' E of
SHL
90.9 degree Incl @ 180.7 degree AZM





Directional

BONANZA CREEK ENERGY OPERATING

SEC.17-T5N-R61W

Pronghorn P-17 Pad Sec.17-T5N-R61W

Pronghorn P-T-17HNB

Wellbore #1

Survey: Survey #1

Standard Survey Report

22 February, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn P-T-17HNB
Project:	SEC.17-T5N-R61W	TVD Reference:	WELL @ 4634.0ft (Ensign 128 - RKB 15')
Site:	Pronghorn P-17 Pad Sec.17-T5N-R61W	MD Reference:	WELL @ 4634.0ft (Ensign 128 - RKB 15')
Well:	Pronghorn P-T-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.17-T5N-R61W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Pronghorn P-17 Pad Sec.17-T5N-R61W				
Site Position:		Northing:	1,393,778.11 ft	Latitude:	40.407360
From:	Lat/Long	Easting:	3,353,930.54 ft	Longitude:	-104.229020
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.82 °

Well	Pronghorn P-T-17HNB					
Well Position	+N/-S	0.0 ft	Northing:	1,393,719.82 ft	Latitude:	40.407200
	+E/-W	0.0 ft	Easting:	3,353,931.38 ft	Longitude:	-104.229020
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,619.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/25/2012	8.39	67.10	53,049

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	178.00	

Survey Program	Date	2/22/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
455.0	10,737.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
455.0	1.20	293.00	455.0	1.9	-4.4	-2.0	0.26	0.26	0.00	
579.0	1.70	285.80	578.9	2.9	-7.4	-3.1	0.43	0.40	-5.81	
703.0	1.20	243.10	702.9	2.8	-10.3	-3.1	0.93	-0.40	-34.44	
827.0	1.40	215.60	826.9	1.0	-12.3	-1.4	0.52	0.16	-22.18	
950.0	1.10	175.60	949.8	-1.4	-13.1	1.0	0.73	-0.24	-32.52	
1,074.0	1.80	105.90	1,073.8	-3.2	-11.1	2.8	1.41	0.56	-56.21	
1,199.0	3.30	65.20	1,198.7	-2.2	-6.0	2.0	1.81	1.20	-32.56	
1,322.0	5.40	51.80	1,321.3	2.9	1.8	-2.8	1.89	1.71	-10.89	
1,446.0	6.70	32.60	1,444.6	12.6	10.3	-12.2	1.93	1.05	-15.48	
1,568.0	6.90	15.60	1,565.8	25.6	16.1	-25.1	1.65	0.16	-13.93	
1,692.0	7.10	17.20	1,688.9	40.1	20.3	-39.4	0.23	0.16	1.29	
1,814.0	6.60	17.50	1,810.0	54.0	24.7	-53.1	0.41	-0.41	0.25	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn P-T-17HNB
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Site:	Pronghorn P-17 Pad Sec.17-T5N-R61W	MD Reference:	WELL @ 4634.0ft (Ensign 128 - RKB 15')
Well:	Pronghorn P-T-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,937.0	6.20	21.90	1,932.2	66.9	29.3	-65.9	0.51	-0.33	3.58
2,060.0	6.90	19.80	2,054.4	80.0	34.3	-78.8	0.60	0.57	-1.71
2,183.0	6.60	17.50	2,176.6	93.7	38.9	-92.3	0.33	-0.24	-1.87
2,306.0	6.60	18.10	2,298.8	107.2	43.2	-105.6	0.06	0.00	0.49
2,430.0	6.50	18.20	2,422.0	120.6	47.6	-118.9	0.08	-0.08	0.08
2,554.0	6.90	17.50	2,545.1	134.4	52.0	-132.5	0.33	0.32	-0.56
2,678.0	7.10	17.20	2,668.2	148.8	56.6	-146.8	0.16	0.16	-0.24
2,805.0	6.40	10.90	2,794.3	163.3	60.2	-161.1	0.80	-0.55	-4.96
2,932.0	5.50	23.20	2,920.6	175.8	63.9	-173.5	1.22	-0.71	9.69
3,059.0	6.50	23.70	3,046.9	188.0	69.2	-185.5	0.79	0.79	0.39
3,185.0	8.10	15.80	3,171.9	203.1	74.5	-200.4	1.50	1.27	-6.27
3,312.0	10.10	12.10	3,297.3	222.6	79.3	-219.7	1.64	1.57	-2.91
3,439.0	12.20	14.90	3,421.9	246.4	85.1	-243.3	1.71	1.65	2.20
3,566.0	12.50	19.10	3,546.0	272.4	93.0	-269.0	0.75	0.24	3.31
3,693.0	12.60	19.80	3,669.9	298.4	102.2	-294.7	0.14	0.08	0.55
3,820.0	11.40	23.00	3,794.2	323.0	111.8	-318.9	1.08	-0.94	2.52
3,948.0	9.10	25.10	3,920.1	343.8	121.0	-339.4	1.82	-1.80	1.64
4,074.0	8.70	21.60	4,044.6	361.7	128.8	-357.0	0.53	-0.32	-2.78
4,202.0	6.90	19.60	4,171.4	377.9	134.9	-373.0	1.42	-1.41	-1.56
4,329.0	5.60	19.50	4,297.6	391.0	139.6	-385.9	1.02	-1.02	-0.08
4,456.0	5.90	24.20	4,424.0	402.8	144.3	-397.5	0.44	0.24	3.70
4,583.0	7.10	20.70	4,550.2	416.1	149.7	-410.6	0.99	0.94	-2.76
4,709.0	6.20	20.20	4,675.3	429.7	154.9	-424.1	0.72	-0.71	-0.40
4,836.0	4.20	13.80	4,801.8	440.7	158.3	-434.9	1.64	-1.57	-5.04
4,964.0	1.90	4.50	4,929.6	447.4	159.6	-441.5	1.83	-1.80	-7.27
5,091.0	0.70	5.80	5,056.6	450.2	159.9	-444.4	0.95	-0.94	1.02
5,217.0	1.00	84.70	5,182.6	451.1	161.0	-445.2	0.88	0.24	62.62
5,344.0	0.80	76.10	5,309.6	451.4	163.0	-445.5	0.19	-0.16	-6.77
5,472.0	1.20	93.80	5,437.5	451.5	165.2	-445.5	0.39	0.31	13.83
5,503.0	1.30	91.50	5,468.5	451.5	165.9	-445.4	0.36	0.32	-7.42
5,539.0	1.30	96.50	5,504.5	451.4	166.7	-445.4	0.32	0.00	13.89
5,571.0	2.10	138.30	5,536.5	451.0	167.4	-444.9	4.45	2.50	130.63
5,602.0	4.50	160.40	5,567.5	449.4	168.2	-443.3	8.62	7.74	71.29
5,634.0	7.40	169.40	5,599.3	446.2	169.0	-440.0	9.49	9.06	28.13
5,666.0	10.00	172.70	5,630.9	441.4	169.8	-435.2	8.27	8.13	10.31
5,697.0	12.80	172.90	5,661.3	435.3	170.5	-429.1	9.03	9.03	0.65
5,729.0	15.70	175.00	5,692.3	427.5	171.3	-421.3	9.20	9.06	6.56
5,761.0	19.30	179.40	5,722.8	417.9	171.8	-411.6	11.98	11.25	13.75
5,793.0	22.30	180.60	5,752.7	406.5	171.8	-400.3	9.47	9.38	3.75
5,825.0	25.60	180.30	5,782.0	393.5	171.7	-387.3	10.32	10.31	-0.94
5,856.0	28.80	180.50	5,809.5	379.4	171.6	-373.2	10.33	10.32	0.65
5,888.0	31.30	181.70	5,837.2	363.4	171.3	-357.2	8.03	7.81	3.75
5,920.0	34.80	182.20	5,864.1	345.9	170.7	-339.8	10.97	10.94	1.56
5,951.0	38.40	183.10	5,888.9	327.5	169.8	-321.3	11.74	11.61	2.90
5,983.0	41.80	182.60	5,913.4	306.9	168.8	-300.8	10.67	10.63	-1.56
6,015.0	45.50	182.20	5,936.6	284.8	167.8	-278.8	11.59	11.56	-1.25
6,047.0	49.00	181.20	5,958.3	261.3	167.2	-255.3	11.18	10.94	-3.13
6,079.0	52.60	180.10	5,978.5	236.5	166.9	-230.6	11.56	11.25	-3.44
6,110.0	56.30	179.60	5,996.5	211.3	167.0	-205.4	12.01	11.94	-1.61
6,142.0	59.70	179.20	6,013.5	184.2	167.2	-178.2	10.68	10.63	-1.25
6,174.0	63.10	180.50	6,028.8	156.1	167.3	-150.2	11.21	10.63	4.06
6,206.0	65.60	181.00	6,042.6	127.2	166.9	-121.4	7.94	7.81	1.56
6,237.0	68.00	181.00	6,054.9	98.8	166.4	-92.9	7.74	7.74	0.00
6,269.0	70.40	181.20	6,066.2	68.9	165.9	-63.0	7.52	7.50	0.63

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Well:	Pronghorn P-T-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
6,301.0	73.10	181.40	6,076.2	38.5	165.2	-32.7	8.46	8.44	0.63	
6,333.0	76.90	180.70	6,084.5	7.6	164.6	-1.8	12.06	11.88	-2.19	
6,364.0	80.80	180.30	6,090.5	-22.8	164.3	28.5	12.64	12.58	-1.29	
6,396.0	85.50	179.60	6,094.3	-54.6	164.4	60.3	14.85	14.69	-2.19	
6,409.7	87.47	179.13	6,095.2	-68.3	164.5	74.0	14.78	14.37	-3.44	
T1 531'FNL & 1338'FEL										
6,428.0	90.10	178.50	6,095.6	-86.6	164.9	92.2	14.78	14.38	-3.43	
6,460.0	91.30	179.80	6,095.2	-118.5	165.4	124.2	5.53	3.75	4.06	
6,491.0	89.90	179.60	6,094.8	-149.5	165.5	155.2	4.56	-4.52	-0.65	
6,503.0	89.90	180.00	6,094.9	-161.5	165.6	167.2	3.33	0.00	3.33	
6,561.0	90.20	179.60	6,094.8	-219.5	165.8	225.2	0.86	0.52	-0.69	
6,592.0	90.80	178.90	6,094.5	-250.5	166.2	256.2	2.97	1.94	-2.26	
6,623.0	91.50	179.40	6,093.9	-281.5	166.6	287.2	2.77	2.26	1.61	
6,654.0	91.60	180.00	6,093.1	-312.5	166.8	318.1	1.96	0.32	1.94	
6,685.0	91.50	181.00	6,092.2	-343.5	166.5	349.1	3.24	-0.32	3.23	
6,716.0	92.00	180.70	6,091.3	-374.5	166.1	380.0	1.88	1.61	-0.97	
6,747.0	91.20	181.20	6,090.4	-405.5	165.6	411.0	3.04	-2.58	1.61	
6,778.0	90.40	181.40	6,090.0	-436.5	164.9	441.9	2.66	-2.58	0.65	
6,809.0	89.80	181.40	6,089.9	-467.5	164.1	472.9	1.94	-1.94	0.00	
6,840.0	90.20	181.70	6,089.9	-498.4	163.3	503.8	1.61	1.29	0.97	
6,871.0	90.70	182.10	6,089.7	-529.4	162.2	534.8	2.07	1.61	1.29	
6,903.0	90.00	181.40	6,089.5	-561.4	161.3	566.7	3.09	-2.19	-2.19	
6,934.0	89.00	181.00	6,089.8	-592.4	160.6	597.6	3.47	-3.23	-1.29	
6,966.0	88.80	179.40	6,090.4	-624.4	160.5	629.6	5.04	-0.63	-5.00	
6,998.0	89.10	180.50	6,091.0	-656.4	160.5	661.6	3.56	0.94	3.44	
7,030.0	90.10	179.10	6,091.2	-688.4	160.6	693.6	5.38	3.13	-4.38	
7,061.0	90.40	178.70	6,091.1	-719.4	161.2	724.6	1.61	0.97	-1.29	
7,093.0	91.40	180.80	6,090.6	-751.4	161.4	756.5	7.27	3.13	6.56	
7,125.0	91.10	180.10	6,089.9	-783.4	161.1	788.5	2.38	-0.94	-2.19	
7,157.0	91.70	180.70	6,089.1	-815.3	160.9	820.5	2.65	1.88	1.88	
7,188.0	91.80	179.40	6,088.1	-846.3	160.9	851.4	4.20	0.32	-4.19	
7,220.0	91.70	180.00	6,087.2	-878.3	161.0	883.4	1.90	-0.31	1.88	
7,252.0	91.50	179.20	6,086.3	-910.3	161.3	915.4	2.58	-0.63	-2.50	
7,283.0	92.00	180.00	6,085.3	-941.3	161.5	946.3	3.04	1.61	2.58	
7,315.0	91.80	179.40	6,084.3	-973.3	161.6	978.3	1.98	-0.63	-1.88	
7,347.0	91.40	178.00	6,083.4	-1,005.3	162.4	1,010.3	4.55	-1.25	-4.38	
7,379.0	91.00	178.40	6,082.7	-1,037.2	163.4	1,042.3	1.77	-1.25	1.25	
7,410.0	90.00	177.00	6,082.4	-1,068.2	164.6	1,073.3	5.55	-3.23	-4.52	
7,442.0	89.90	179.10	6,082.4	-1,100.2	165.7	1,105.3	6.57	-0.31	6.56	
7,474.0	90.60	178.90	6,082.3	-1,132.2	166.3	1,137.3	2.28	2.19	-0.63	
7,506.0	90.90	180.50	6,081.9	-1,164.2	166.4	1,169.3	5.09	0.94	5.00	
7,539.0	90.40	179.40	6,081.5	-1,197.2	166.5	1,202.2	3.66	-1.52	-3.33	
7,569.0	89.90	180.30	6,081.4	-1,227.2	166.5	1,232.2	3.43	-1.67	3.00	
7,601.0	89.30	179.40	6,081.7	-1,259.2	166.6	1,264.2	3.38	-1.88	-2.81	
7,632.0	89.10	180.50	6,082.1	-1,290.2	166.6	1,295.2	3.61	-0.65	3.55	
7,664.0	88.90	180.50	6,082.7	-1,322.2	166.4	1,327.1	0.63	-0.63	0.00	
7,694.0	89.30	181.50	6,083.1	-1,352.1	165.8	1,357.1	3.59	1.33	3.33	
7,728.0	88.80	180.70	6,083.7	-1,386.1	165.2	1,391.1	2.77	-1.47	-2.35	
7,759.0	88.90	180.50	6,084.3	-1,417.1	164.9	1,422.0	0.72	0.32	-0.65	
7,791.0	88.90	180.30	6,084.9	-1,449.1	164.6	1,454.0	0.62	0.00	-0.63	
7,823.0	89.00	180.50	6,085.5	-1,481.1	164.4	1,485.9	0.70	0.31	0.63	
7,854.0	88.80	180.50	6,086.1	-1,512.1	164.2	1,516.9	0.65	-0.65	0.00	
7,886.0	89.00	179.80	6,086.7	-1,544.1	164.1	1,548.9	2.27	0.63	-2.19	
7,917.0	89.20	181.20	6,087.2	-1,575.1	163.8	1,579.8	4.56	0.65	4.52	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
7,949.0	89.60	181.40	6,087.5	-1,607.1	163.1	1,611.8	1.40	1.25	0.63	
7,981.0	89.60	181.70	6,087.8	-1,639.1	162.2	1,643.7	0.94	0.00	0.94	
8,013.0	89.60	181.20	6,088.0	-1,671.1	161.4	1,675.7	1.56	0.00	-1.56	
8,044.0	89.50	182.40	6,088.2	-1,702.0	160.4	1,706.6	3.88	-0.32	3.87	
8,076.0	90.00	183.30	6,088.4	-1,734.0	158.8	1,738.5	3.22	1.56	2.81	
8,108.0	90.30	184.00	6,088.3	-1,765.9	156.8	1,770.3	2.38	0.94	2.19	
8,140.0	89.50	182.60	6,088.3	-1,797.9	155.0	1,802.2	5.04	-2.50	-4.38	
8,172.0	88.90	182.40	6,088.8	-1,829.9	153.6	1,834.1	1.98	-1.88	-0.63	
8,203.0	88.90	180.80	6,089.4	-1,860.8	152.7	1,865.0	5.16	0.00	-5.16	
8,235.0	89.90	180.50	6,089.7	-1,892.8	152.3	1,897.0	3.26	3.13	-0.94	
8,267.0	90.80	181.50	6,089.5	-1,924.8	151.8	1,928.9	4.20	2.81	3.13	
8,298.0	90.40	180.30	6,089.2	-1,955.8	151.3	1,959.9	4.08	-1.29	-3.87	
8,330.0	89.60	181.20	6,089.2	-1,987.8	150.9	1,991.9	3.76	-2.50	2.81	
8,362.0	89.30	180.80	6,089.5	-2,019.8	150.3	2,023.8	1.56	-0.94	-1.25	
8,394.0	89.20	179.20	6,089.9	-2,051.8	150.3	2,055.8	5.01	-0.31	-5.00	
8,425.0	89.50	178.50	6,090.3	-2,082.8	150.9	2,086.8	2.46	0.97	-2.26	
8,457.0	90.00	178.70	6,090.4	-2,114.8	151.7	2,118.8	1.68	1.56	0.63	
8,489.0	89.90	178.90	6,090.4	-2,146.8	152.4	2,150.8	0.70	-0.31	0.63	
8,520.0	90.70	178.50	6,090.3	-2,177.8	153.1	2,181.8	2.89	2.58	-1.29	
8,552.0	90.80	178.90	6,089.9	-2,209.8	153.8	2,213.8	1.29	0.31	1.25	
8,584.0	91.20	179.80	6,089.3	-2,241.8	154.2	2,245.8	3.08	1.25	2.81	
8,616.0	90.00	178.70	6,089.0	-2,273.7	154.6	2,277.8	5.09	-3.75	-3.44	
8,647.0	89.00	177.50	6,089.2	-2,304.7	155.6	2,308.7	5.04	-3.23	-3.87	
8,679.0	88.90	178.20	6,089.8	-2,336.7	156.8	2,340.7	2.21	-0.31	2.19	
8,711.0	89.60	178.40	6,090.2	-2,368.7	157.8	2,372.7	2.28	2.19	0.63	
8,742.0	90.00	178.40	6,090.4	-2,399.7	158.6	2,403.7	1.29	1.29	0.00	
8,774.0	90.00	178.70	6,090.4	-2,431.7	159.4	2,435.7	0.94	0.00	0.94	
8,806.0	90.10	179.20	6,090.3	-2,463.7	160.0	2,467.7	1.59	0.31	1.56	
8,838.0	90.00	178.70	6,090.3	-2,495.6	160.6	2,499.7	1.59	-0.31	-1.56	
8,869.0	91.10	180.30	6,090.0	-2,526.6	160.9	2,530.7	6.26	3.55	5.16	
8,901.0	91.00	179.80	6,089.4	-2,558.6	160.9	2,562.7	1.59	-0.31	-1.56	
8,933.0	90.70	180.00	6,088.9	-2,590.6	160.9	2,594.7	1.13	-0.94	0.63	
8,965.0	90.70	181.50	6,088.5	-2,622.6	160.5	2,626.6	4.69	0.00	4.69	
8,996.0	90.90	182.20	6,088.1	-2,653.6	159.5	2,657.6	2.35	0.65	2.26	
9,028.0	90.50	183.10	6,087.7	-2,685.6	158.0	2,689.4	3.08	-1.25	2.81	
9,060.0	90.00	183.10	6,087.6	-2,717.5	156.3	2,721.3	1.56	-1.56	0.00	
9,092.0	89.30	182.60	6,087.8	-2,749.5	154.7	2,753.2	2.69	-2.19	-1.56	
9,123.0	88.50	180.70	6,088.4	-2,780.5	153.8	2,784.1	6.65	-2.58	-6.13	
9,155.0	89.10	181.40	6,089.0	-2,812.5	153.2	2,816.1	2.88	1.88	2.19	
9,187.0	89.40	179.80	6,089.5	-2,844.4	152.9	2,848.0	5.09	0.94	-5.00	
9,219.0	89.00	180.80	6,089.9	-2,876.4	152.7	2,880.0	3.37	-1.25	3.13	
9,250.0	88.50	180.80	6,090.6	-2,907.4	152.3	2,911.0	1.61	-1.61	0.00	
9,282.0	88.00	180.70	6,091.6	-2,939.4	151.9	2,942.9	1.59	-1.56	-0.31	
9,314.0	88.50	180.80	6,092.5	-2,971.4	151.4	2,974.9	1.59	1.56	0.31	
9,345.0	88.60	179.40	6,093.3	-3,002.4	151.4	3,005.8	4.53	0.32	-4.52	
9,377.0	88.90	178.20	6,094.0	-3,034.4	152.1	3,037.8	3.86	0.94	-3.75	
9,409.0	89.10	177.80	6,094.6	-3,066.3	153.2	3,069.8	1.40	0.63	-1.25	
9,441.0	90.40	178.40	6,094.7	-3,098.3	154.2	3,101.8	4.47	4.06	1.88	
9,472.0	91.10	178.40	6,094.3	-3,129.3	155.1	3,132.8	2.26	2.26	0.00	
9,504.0	91.10	179.20	6,093.7	-3,161.3	155.8	3,164.8	2.50	0.00	2.50	
9,536.0	90.80	179.60	6,093.2	-3,193.3	156.1	3,196.8	1.56	-0.94	1.25	
9,568.0	89.70	180.00	6,093.0	-3,225.3	156.2	3,228.8	3.66	-3.44	1.25	
9,600.0	90.00	180.50	6,093.1	-3,257.3	156.1	3,260.8	1.82	0.94	1.56	
9,631.0	91.20	181.80	6,092.8	-3,288.3	155.5	3,291.7	5.71	3.87	4.19	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn P-T-17HNB
Project:	SEC.17-T5N-R61W	TVD Reference:	WELL @ 4634.0ft (Ensign 128 - RKB 15')
Site:	Pronghorn P-17 Pad Sec.17-T5N-R61W	MD Reference:	WELL @ 4634.0ft (Ensign 128 - RKB 15')
Well:	Pronghorn P-T-17HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,663.0	91.50	181.40	6,092.0	-3,320.3	154.6	3,323.6	1.56	0.94	-1.25
9,695.0	90.50	181.20	6,091.5	-3,352.2	153.8	3,355.6	3.19	-3.13	-0.63
9,727.0	90.70	180.70	6,091.1	-3,384.2	153.3	3,387.5	1.68	0.63	-1.56
9,759.0	90.50	181.70	6,090.8	-3,416.2	152.6	3,419.5	3.19	-0.63	3.13
9,791.0	90.30	182.10	6,090.6	-3,448.2	151.6	3,451.4	1.40	-0.63	1.25
9,822.0	90.60	182.20	6,090.3	-3,479.2	150.4	3,482.3	1.02	0.97	0.32
9,854.0	90.50	183.80	6,090.0	-3,511.1	148.7	3,514.2	5.01	-0.31	5.00
9,886.0	90.70	183.60	6,089.7	-3,543.1	146.7	3,546.0	0.88	0.63	-0.63
9,918.0	90.40	181.70	6,089.4	-3,575.0	145.2	3,577.9	6.01	-0.94	-5.94
9,949.0	89.70	181.40	6,089.4	-3,606.0	144.4	3,608.9	2.46	-2.26	-0.97
9,981.0	91.00	181.00	6,089.2	-3,638.0	143.7	3,640.8	4.25	4.06	-1.25
10,013.0	90.80	179.80	6,088.7	-3,670.0	143.5	3,672.8	3.80	-0.63	-3.75
10,045.0	91.60	178.70	6,088.0	-3,702.0	143.9	3,704.8	4.25	2.50	-3.44
10,077.0	91.60	178.20	6,087.1	-3,734.0	144.7	3,736.8	1.56	0.00	-1.56
10,108.0	90.50	177.30	6,086.5	-3,764.9	146.0	3,767.7	4.58	-3.55	-2.90
10,140.0	89.20	177.50	6,086.6	-3,796.9	147.4	3,799.7	4.11	-4.06	0.63
10,172.0	88.50	177.30	6,087.3	-3,828.9	148.9	3,831.7	2.28	-2.19	-0.63
10,204.0	89.00	177.30	6,088.0	-3,860.8	150.4	3,863.7	1.56	1.56	0.00
10,236.0	89.50	177.10	6,088.4	-3,892.8	151.9	3,895.7	1.68	1.56	-0.63
10,267.0	88.70	177.00	6,088.9	-3,923.7	153.5	3,926.7	2.60	-2.58	-0.32
10,299.0	89.10	177.80	6,089.5	-3,955.7	155.0	3,958.7	2.79	1.25	2.50
10,331.0	89.20	177.70	6,090.0	-3,987.7	156.2	3,990.7	0.44	0.31	-0.31
10,362.0	88.80	177.30	6,090.5	-4,018.6	157.6	4,021.7	1.82	-1.29	-1.29
10,394.0	89.40	178.00	6,091.0	-4,050.6	158.9	4,053.7	2.88	1.88	2.19
10,426.0	89.40	177.30	6,091.3	-4,082.6	160.2	4,085.7	2.19	0.00	-2.19
10,458.0	89.60	178.40	6,091.6	-4,114.6	161.4	4,117.7	3.49	0.63	3.44
10,490.0	89.40	179.40	6,091.9	-4,146.6	162.0	4,149.7	3.19	-0.63	3.13
10,521.0	90.50	181.50	6,091.9	-4,177.5	161.8	4,180.6	7.65	3.55	6.77
10,553.0	90.20	180.80	6,091.7	-4,209.5	161.1	4,212.6	2.38	-0.94	-2.19
10,585.0	90.30	182.20	6,091.6	-4,241.5	160.3	4,244.5	4.39	0.31	4.38
10,617.0	90.60	181.00	6,091.3	-4,273.5	159.4	4,276.5	3.87	0.94	-3.75
10,648.0	90.80	182.10	6,091.0	-4,304.5	158.6	4,307.4	3.61	0.65	3.55
10,680.0	90.90	180.70	6,090.5	-4,336.5	157.8	4,339.4	4.39	0.31	-4.38
10,685.0	90.90	180.70	6,090.4	-4,341.5	157.7	4,344.3	0.00	0.00	0.00
10,737.0	90.90	180.70	6,089.6	-4,393.5	157.1	4,396.3	0.00	0.00	0.00
BHL 470'FSL & 1336'FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BHL 470'FSL & 1336'FEL - hit/miss target - Shape	0.00	0.00	6,100.0	-4,393.6	153.2	1,389,329.06	3,354,147.52	40.395140	-104.228470
- survey misses target center by 11.1ft at 10737.0ft MD (6089.6 TVD, -4393.5 N, 157.1 E)									
- Point									
T1 531'FNL & 1338'FEL - hit/miss target - Shape	0.00	0.00	6,100.0	-68.3	153.2	1,393,653.72	3,354,085.51	40.407012	-104.228470
- survey misses target center by 12.3ft at 6409.7ft MD (6095.2 TVD, -68.3 N, 164.5 E)									
- Point									

Checked By: _____	Approved By: _____	Date: _____
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