

BONANZA CREEK ENERGY OPERATING

Well Name: **Pronghorn K-O-10HNC**

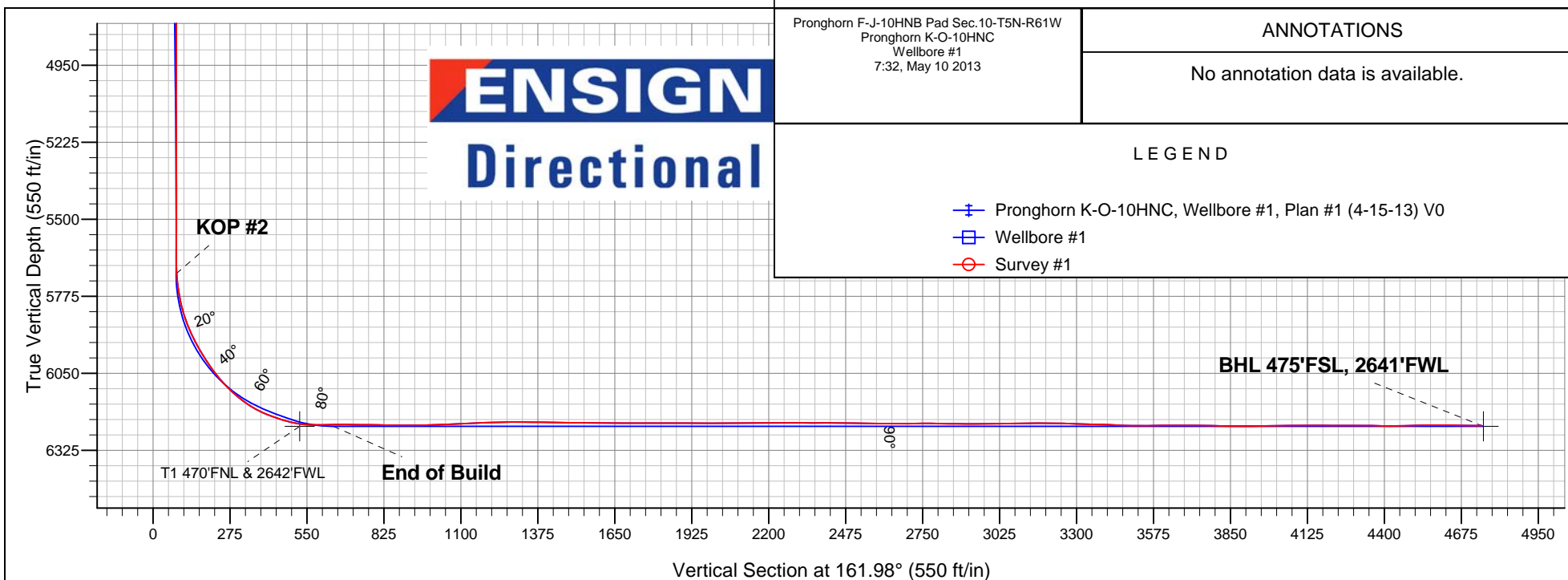
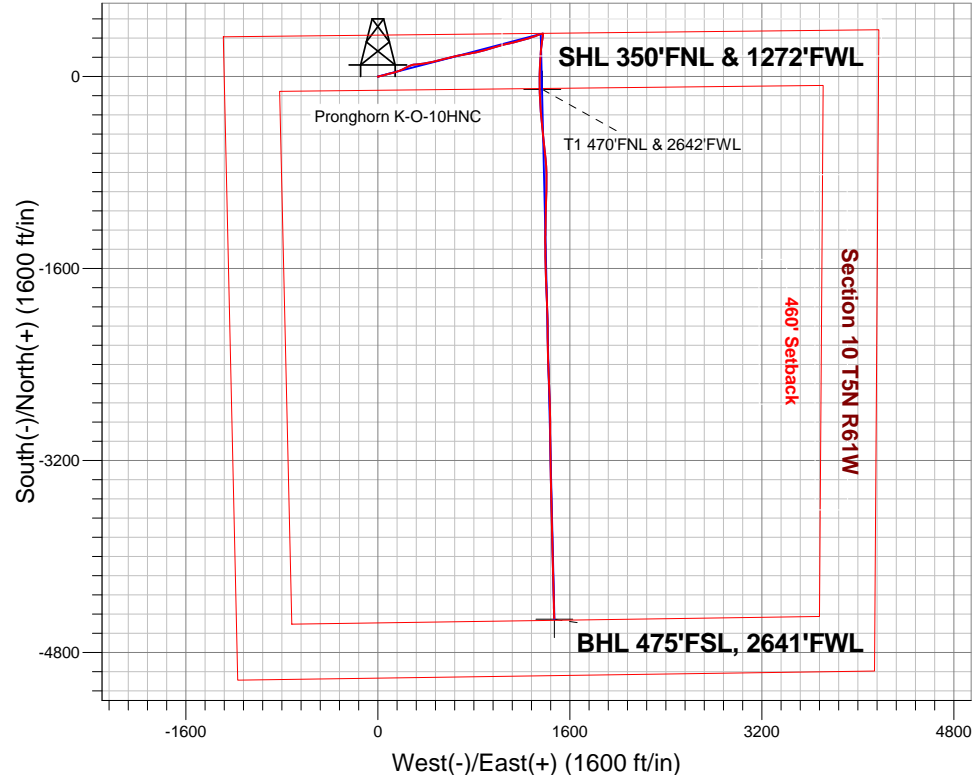
Surface Location: Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4713.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1399253.21	3361913.14	40.422070	-104.200070	

Ensign 128 RKB - 15' WELL @ 4728.0ft (Ensign 128 RKB - 15')

FINAL SURVEY

Projected Bottom Hole Location
11084' MD 6237' TVD 4516' S & 1469' E of SHL
89.3 degree Incl @ 177.9 degree AZM



Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W
Pronghorn K-O-10HNC
Wellbore #1
7:32, May 10 2013

ANNOTATIONS

No annotation data is available.

LEGEND

- Pronghorn K-O-10HNC, Wellbore #1, Plan #1 (4-15-13) V0
- Wellbore #1
- Survey #1



Directional

BONANZA CREEK ENERGY OPERATING

SEC.10-T5N-R61W

Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W

Pronghorn K-O-10HNC

Wellbore #1

Survey: Survey #1

Standard Survey Report

03 June, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn K-O-10HNC
Project:	SEC.10-T5N-R61W	TVD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Site:	Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W	MD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Well:	Pronghorn K-O-10HNC	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.10-T5N-R61W, Weld County, Colorado		
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 F-J-10HNB Pad Sec.10-T5N-R61W				
Site Position:		Northing:	1,399,231.37 ft	Latitude:	40.422010
From:	Lat/Long	Easting:	3,361,913.46 ft	Longitude:	-104.200070
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.84 °

Well	Pronghorn K-O-10HNC					
Well Position	+N-S	0.0 ft	Northing:	1,399,253.21 ft	Latitude:	40.422070
	+E-W	0.0 ft	Easting:	3,361,913.14 ft	Longitude:	-104.200070
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,713.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/15/2013	8.31	67.10	53,009

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	161.98	

Survey Program	Date	6/3/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
205.0	11,084.0	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	
200.0	0.39	204.30	200.0	-0.6	-0.3	0.5	0.20	0.20	0.00	
KOP #1										
205.0	0.40	204.30	205.0	-0.7	-0.3	0.5	0.20	0.20	0.00	
297.0	1.30	74.90	297.0	-0.7	0.6	0.8	1.72	0.98	-140.65	
413.0	5.90	72.60	412.7	1.5	7.5	1.0	3.97	3.97	-1.98	
460.0	6.57	74.20	459.5	2.9	12.4	1.1	1.48	1.43	3.40	
9 5/8"										
607.0	8.70	77.60	605.1	7.6	31.4	2.5	1.48	1.45	2.31	
730.0	11.00	75.50	726.3	12.5	51.8	4.1	1.89	1.87	-1.71	
853.0	13.90	74.40	846.4	19.4	77.4	5.5	2.37	2.36	-0.89	
977.0	16.80	74.20	966.0	28.3	109.0	6.8	2.34	2.34	-0.16	
1,101.0	18.20	74.60	1,084.2	38.3	144.9	8.4	1.13	1.13	0.32	

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Site:	Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W	MD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Well:	Pronghorn K-O-10HNC	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)	
1,222.0	18.40	71.10	1,199.1	49.5	181.2	8.9	0.92	0.17	-2.89	
1,345.0	20.20	61.90	1,315.2	65.8	218.3	4.9	2.87	1.46	-7.48	
1,469.0	17.30	62.30	1,432.6	84.5	253.6	-1.9	2.34	-2.34	0.32	
1,592.0	17.00	75.30	1,550.2	97.6	287.2	-4.0	3.12	-0.24	10.57	
1,715.0	14.70	84.80	1,668.5	103.6	320.1	0.5	2.81	-1.87	7.72	
1,839.0	17.00	84.80	1,787.8	106.6	353.8	8.0	1.85	1.85	0.00	
1,962.0	18.70	82.30	1,904.9	110.9	391.3	15.6	1.52	1.38	-2.03	
2,086.0	17.70	79.70	2,022.7	116.9	429.5	21.7	1.04	-0.81	-2.10	
2,209.0	17.90	76.70	2,139.8	124.6	466.3	25.7	0.76	0.16	-2.44	
2,332.0	18.20	76.70	2,256.8	133.4	503.4	28.9	0.24	0.24	0.00	
2,456.0	18.50	73.30	2,374.5	143.5	541.1	30.9	0.90	0.24	-2.74	
2,579.0	16.70	74.80	2,491.7	153.7	576.8	32.2	1.51	-1.46	1.22	
2,705.0	17.80	75.10	2,612.0	163.4	612.9	34.1	0.88	0.87	0.24	
2,832.0	17.80	81.30	2,733.0	171.4	650.9	38.3	1.49	0.00	4.88	
2,958.0	18.00	79.70	2,852.9	177.8	689.1	44.1	0.42	0.16	-1.27	
3,085.0	15.80	77.90	2,974.4	184.9	725.3	48.5	1.78	-1.73	-1.42	
3,212.0	15.10	79.50	3,096.8	191.5	758.5	52.4	0.65	-0.55	1.26	
3,339.0	17.10	82.10	3,218.8	197.1	793.2	57.9	1.67	1.57	2.05	
3,467.0	20.30	74.80	3,340.0	205.5	833.3	62.3	3.09	2.50	-5.70	
3,594.0	22.30	73.20	3,458.4	218.3	877.6	63.9	1.64	1.57	-1.26	
3,721.0	22.60	74.20	3,575.7	231.9	924.2	65.3	0.38	0.24	0.79	
3,848.0	20.70	75.10	3,693.8	244.3	969.4	67.5	1.52	-1.50	0.71	
3,975.0	18.10	72.50	3,813.5	256.0	1,009.9	68.9	2.16	-2.05	-2.05	
4,102.0	14.20	75.30	3,935.5	265.9	1,043.8	70.0	3.13	-3.07	2.20	
4,229.0	14.20	79.10	4,058.6	272.8	1,074.1	72.8	0.73	0.00	2.99	
4,356.0	18.00	77.20	4,180.6	280.1	1,108.6	76.5	3.02	2.99	-1.50	
4,483.0	17.10	75.50	4,301.7	289.1	1,145.8	79.4	0.82	-0.71	-1.34	
4,610.0	18.70	74.10	4,422.6	299.4	1,183.5	81.3	1.30	1.26	-1.10	
4,737.0	16.50	76.30	4,543.6	309.2	1,220.6	83.5	1.81	-1.73	1.73	
4,863.0	18.40	70.90	4,663.8	320.0	1,256.7	84.4	1.98	1.51	-4.29	
4,990.0	15.60	70.40	4,785.3	332.2	1,291.8	83.6	2.21	-2.20	-0.39	
5,117.0	11.30	71.10	4,908.8	342.0	1,319.6	82.9	3.39	-3.39	0.55	
5,245.0	7.80	70.20	5,035.0	349.0	1,339.7	82.4	2.74	-2.73	-0.70	
5,372.0	5.20	72.50	5,161.1	353.7	1,353.3	82.2	2.06	-2.05	1.81	
5,499.0	4.70	80.60	5,287.7	356.2	1,363.9	83.1	0.68	-0.39	6.38	
5,535.0	3.92	78.83	5,323.6	356.7	1,366.6	83.4	2.19	-2.16	-4.90	
KOP #2										
5,626.0	2.00	68.30	5,414.4	357.9	1,371.1	83.7	2.19	-2.11	-11.58	
5,753.0	0.90	57.20	5,541.4	359.3	1,374.0	83.3	0.89	-0.87	-8.74	
5,822.0	0.70	51.60	5,610.4	359.8	1,374.8	83.0	0.31	-0.29	-8.12	
5,854.0	0.50	78.60	5,642.4	360.0	1,375.1	83.0	1.07	-0.63	84.38	
5,885.0	1.70	156.10	5,673.4	359.6	1,375.4	83.4	5.37	3.87	250.00	
5,917.0	4.50	166.30	5,705.3	357.9	1,375.9	85.2	8.88	8.75	31.88	
5,949.0	7.70	176.40	5,737.1	354.6	1,376.3	88.5	10.51	10.00	31.56	
5,981.0	11.30	185.10	5,768.7	349.3	1,376.2	93.4	12.08	11.25	27.19	
6,012.0	14.50	188.70	5,798.9	342.4	1,375.3	99.7	10.64	10.32	11.61	
6,044.0	17.90	190.80	5,829.6	333.6	1,373.8	107.6	10.78	10.63	6.56	
6,076.0	21.30	191.10	5,859.8	323.1	1,371.7	117.0	10.63	10.63	0.94	
6,107.0	24.60	188.10	5,888.3	311.2	1,369.8	127.7	11.29	10.65	-9.68	
6,139.0	28.30	186.60	5,917.0	297.1	1,367.9	140.6	11.75	11.56	-4.69	
6,171.0	31.50	187.80	5,944.7	281.2	1,365.9	155.0	10.17	10.00	3.75	
6,203.0	33.60	188.70	5,971.7	264.2	1,363.5	170.4	6.73	6.56	2.81	
6,234.0	34.90	188.00	5,997.3	246.9	1,360.9	186.1	4.38	4.19	-2.26	
6,266.0	36.80	185.10	6,023.2	228.3	1,358.8	203.1	7.96	5.94	-9.06	

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Site:	Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W	MD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Well:	Pronghorn K-O-10HNC	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)
6,298.0	39.50	183.70	6,048.4	208.6	1,357.3	221.4	8.86	8.44	-4.38
6,329.0	42.70	183.40	6,071.8	188.3	1,356.0	240.3	10.34	10.32	-0.97
6,361.0	45.70	183.40	6,094.7	166.0	1,354.7	261.1	9.38	9.38	0.00
6,381.0	47.89	183.14	6,108.4	151.5	1,353.9	274.7	10.98	10.94	-1.28
4 1/2									
6,393.0	49.20	183.00	6,116.3	142.5	1,353.4	283.1	10.98	10.94	-1.21
6,424.0	52.80	182.90	6,135.8	118.4	1,352.2	305.6	11.62	11.61	-0.32
6,456.0	56.60	183.40	6,154.3	92.4	1,350.7	329.9	11.94	11.88	1.56
6,488.0	60.90	183.90	6,170.9	65.1	1,349.0	355.3	13.50	13.44	1.56
6,520.0	65.20	182.50	6,185.4	36.6	1,347.4	381.9	13.99	13.44	-4.38
6,551.0	69.80	180.40	6,197.3	8.0	1,346.7	408.9	16.10	14.84	-6.77
6,582.0	71.54	179.53	6,207.5	-21.3	1,346.7	436.8	6.22	5.62	-2.81
7"									
6,583.0	71.60	179.50	6,207.9	-22.2	1,346.7	437.7	6.22	5.63	-2.78
6,615.0	73.90	178.60	6,217.4	-52.8	1,347.2	466.9	7.67	7.19	-2.81
6,646.0	77.60	178.30	6,225.0	-82.8	1,348.0	495.7	11.97	11.94	-0.97
6,671.5	81.18	178.54	6,229.7	-107.8	1,348.7	519.7	14.09	14.06	0.94
T1 470'FNL & 2642'FWL									
6,678.0	82.10	178.60	6,230.6	-114.3	1,348.9	525.9	14.09	14.06	0.93
6,710.0	87.10	178.30	6,233.6	-146.1	1,349.7	556.4	15.65	15.63	-0.94
6,723.0	89.20	178.10	6,234.1	-159.1	1,350.1	568.9	16.23	16.15	-1.54
6,775.0	91.90	177.60	6,233.6	-211.1	1,352.1	618.9	5.28	5.19	-0.96
6,807.0	91.20	177.10	6,232.7	-243.0	1,353.6	649.8	2.69	-2.19	-1.56
6,839.0	89.10	175.70	6,232.6	-275.0	1,355.6	680.7	7.89	-6.56	-4.38
6,871.0	89.20	175.30	6,233.1	-306.9	1,358.1	711.9	1.29	0.31	-1.25
6,902.0	89.50	175.10	6,233.4	-337.8	1,360.7	742.0	1.16	0.97	-0.65
6,933.0	89.30	174.80	6,233.8	-368.6	1,363.4	772.2	1.16	-0.65	-0.97
6,965.0	89.10	174.10	6,234.2	-400.5	1,366.5	803.5	2.27	-0.63	-2.19
6,996.0	89.30	174.20	6,234.6	-431.3	1,369.7	833.8	0.72	0.65	0.32
7,028.0	89.30	173.90	6,235.0	-463.1	1,373.0	865.1	0.94	0.00	-0.94
7,060.0	89.80	173.70	6,235.3	-495.0	1,376.4	896.4	1.68	1.56	-0.63
7,092.0	90.50	173.00	6,235.2	-526.7	1,380.1	927.8	3.09	2.19	-2.19
7,124.0	90.30	173.20	6,235.0	-558.5	1,384.0	959.2	0.88	-0.63	0.63
7,155.0	91.50	173.20	6,234.5	-589.3	1,387.7	989.6	3.87	3.87	0.00
7,187.0	92.20	173.90	6,233.4	-621.1	1,391.3	1,020.9	3.09	2.19	2.19
7,219.0	92.80	174.80	6,232.1	-652.9	1,394.4	1,052.1	3.38	1.88	2.81
7,251.0	93.10	175.50	6,230.4	-684.7	1,397.1	1,083.2	2.38	0.94	2.19
7,282.0	92.60	176.20	6,228.9	-715.6	1,399.3	1,113.3	2.77	-1.61	2.26
7,314.0	92.20	176.50	6,227.5	-747.5	1,401.4	1,144.3	1.56	-1.25	0.94
7,346.0	92.10	178.30	6,226.3	-779.4	1,402.8	1,175.1	5.63	-0.31	5.63
7,378.0	91.50	177.80	6,225.3	-811.4	1,403.9	1,205.8	2.44	-1.88	-1.56
7,409.0	91.40	178.50	6,224.5	-842.4	1,404.9	1,235.6	2.28	-0.32	2.26
7,441.0	90.90	179.70	6,223.9	-874.4	1,405.4	1,266.2	4.06	-1.56	3.75
7,473.0	90.00	180.80	6,223.6	-906.4	1,405.3	1,296.6	4.44	-2.81	3.44
7,505.0	89.40	181.30	6,223.8	-938.4	1,404.7	1,326.8	2.44	-1.88	1.56
7,537.0	89.60	182.70	6,224.1	-970.3	1,403.6	1,356.9	4.42	0.63	4.38
7,569.0	89.80	183.00	6,224.3	-1,002.3	1,402.0	1,386.8	1.13	0.63	0.94
7,600.0	89.40	181.60	6,224.5	-1,033.3	1,400.7	1,415.8	4.70	-1.29	-4.52
7,632.0	89.00	179.90	6,224.9	-1,065.3	1,400.3	1,446.1	5.46	-1.25	-5.31
7,664.0	88.40	180.20	6,225.6	-1,097.3	1,400.3	1,476.6	2.10	-1.88	0.94
7,696.0	88.50	180.40	6,226.5	-1,129.3	1,400.1	1,506.9	0.70	0.31	0.63
7,727.0	89.30	181.10	6,227.1	-1,160.2	1,399.7	1,536.3	3.43	2.58	2.26
7,759.0	90.00	181.80	6,227.3	-1,192.2	1,398.9	1,566.4	3.09	2.19	2.19
7,791.0	90.50	182.70	6,227.2	-1,224.2	1,397.7	1,596.5	3.22	1.56	2.81

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Well:	Pronghorn K-O-10HNC	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)
7,823.0	89.80	182.50	6,227.1	-1,256.2	1,396.2	1,626.4	2.28	-2.19	-0.63
7,854.0	89.60	181.60	6,227.2	-1,287.2	1,395.1	1,655.5	2.97	-0.65	-2.90
7,886.0	90.00	180.90	6,227.4	-1,319.1	1,394.4	1,685.7	2.52	1.25	-2.19
7,918.0	89.90	179.70	6,227.4	-1,351.1	1,394.2	1,716.1	3.76	-0.31	-3.75
7,949.0	89.50	179.70	6,227.5	-1,382.1	1,394.4	1,745.6	1.29	-1.29	0.00
7,981.0	89.80	179.70	6,227.7	-1,414.1	1,394.6	1,776.1	0.94	0.94	0.00
8,013.0	90.30	179.70	6,227.7	-1,446.1	1,394.7	1,806.6	1.56	1.56	0.00
8,045.0	90.10	179.30	6,227.6	-1,478.1	1,395.0	1,837.1	1.40	-0.63	-1.25
8,077.0	90.40	179.70	6,227.5	-1,510.1	1,395.3	1,867.6	1.56	0.94	1.25
8,109.0	90.20	179.00	6,227.3	-1,542.1	1,395.7	1,898.2	2.28	-0.63	-2.19
8,140.0	90.00	178.30	6,227.2	-1,573.1	1,396.4	1,927.9	2.35	-0.65	-2.26
8,172.0	89.20	177.80	6,227.5	-1,605.1	1,397.5	1,958.6	2.95	-2.50	-1.56
8,204.0	89.50	178.10	6,227.8	-1,637.1	1,398.6	1,989.4	1.33	0.94	0.94
8,236.0	90.00	177.80	6,228.0	-1,669.1	1,399.8	2,020.2	1.82	1.56	-0.94
8,268.0	90.20	177.60	6,227.9	-1,701.0	1,401.0	2,051.0	0.88	0.63	-0.63
8,300.0	90.40	177.40	6,227.7	-1,733.0	1,402.4	2,081.8	0.88	0.63	-0.63
8,331.0	90.70	177.20	6,227.4	-1,764.0	1,403.9	2,111.7	1.16	0.97	-0.65
8,363.0	90.70	177.10	6,227.0	-1,795.9	1,405.5	2,142.6	0.31	0.00	-0.31
8,395.0	90.40	177.80	6,226.7	-1,827.9	1,406.9	2,173.4	2.38	-0.94	2.19
8,426.0	90.00	178.10	6,226.6	-1,858.9	1,408.0	2,203.2	1.61	-1.29	0.97
8,458.0	90.00	178.10	6,226.6	-1,890.9	1,409.1	2,234.0	0.00	0.00	0.00
8,490.0	90.00	178.50	6,226.6	-1,922.8	1,410.0	2,264.7	1.25	0.00	1.25
8,521.0	90.10	178.60	6,226.6	-1,953.8	1,410.8	2,294.4	0.46	0.32	0.32
8,553.0	89.60	179.20	6,226.7	-1,985.8	1,411.4	2,325.0	2.44	-1.56	1.88
8,585.0	89.70	179.00	6,226.9	-2,017.8	1,411.9	2,355.6	0.70	0.31	-0.63
8,617.0	90.00	178.60	6,227.0	-2,049.8	1,412.6	2,386.2	1.56	0.94	-1.25
8,649.0	90.40	178.80	6,226.9	-2,081.8	1,413.3	2,416.9	1.40	1.25	0.63
8,680.0	90.10	179.00	6,226.7	-2,112.8	1,413.9	2,446.5	1.16	-0.97	0.65
8,712.0	89.10	179.30	6,226.9	-2,144.8	1,414.4	2,477.1	3.26	-3.13	0.94
8,744.0	88.90	179.20	6,227.5	-2,176.8	1,414.8	2,507.6	0.70	-0.63	-0.31
8,776.0	89.00	179.50	6,228.1	-2,208.8	1,415.2	2,538.2	0.99	0.31	0.94
8,807.0	89.10	179.50	6,228.6	-2,239.8	1,415.5	2,567.7	0.32	0.32	0.00
8,839.0	89.10	178.60	6,229.1	-2,271.8	1,416.0	2,598.3	2.81	0.00	-2.81
8,871.0	89.60	179.00	6,229.5	-2,303.8	1,416.7	2,629.0	2.00	1.56	1.25
8,903.0	90.30	178.80	6,229.5	-2,335.8	1,417.3	2,659.6	2.28	2.19	-0.63
8,935.0	90.70	178.80	6,229.2	-2,367.7	1,417.9	2,690.2	1.25	1.25	0.00
8,966.0	90.70	178.10	6,228.8	-2,398.7	1,418.8	2,719.9	2.26	0.00	-2.26
8,998.0	90.00	177.60	6,228.6	-2,430.7	1,420.0	2,750.7	2.69	-2.19	-1.56
9,030.0	89.30	176.90	6,228.8	-2,462.7	1,421.5	2,781.6	3.09	-2.19	-2.19
9,062.0	89.30	176.70	6,229.2	-2,494.6	1,423.3	2,812.5	0.62	0.00	-0.63
9,094.0	89.30	177.10	6,229.6	-2,526.6	1,425.0	2,843.4	1.25	0.00	1.25
9,125.0	89.50	177.40	6,229.9	-2,557.5	1,426.5	2,873.3	1.16	0.65	0.97
9,157.0	89.90	178.10	6,230.1	-2,589.5	1,427.8	2,904.1	2.52	1.25	2.19
9,189.0	90.20	178.60	6,230.1	-2,621.5	1,428.7	2,934.8	1.82	0.94	1.56
9,221.0	90.60	178.30	6,229.9	-2,653.5	1,429.6	2,965.5	1.56	1.25	-0.94
9,253.0	90.40	178.10	6,229.6	-2,685.5	1,430.6	2,996.2	0.88	-0.63	-0.63
9,284.0	90.30	178.10	6,229.4	-2,716.4	1,431.6	3,026.0	0.32	-0.32	0.00
9,316.0	90.40	178.30	6,229.2	-2,748.4	1,432.6	3,056.7	0.70	0.31	0.63
9,348.0	90.90	179.00	6,228.8	-2,780.4	1,433.4	3,087.4	2.69	1.56	2.19
9,380.0	91.00	179.00	6,228.3	-2,812.4	1,433.9	3,118.0	0.31	0.31	0.00
9,411.0	90.80	179.30	6,227.8	-2,843.4	1,434.4	3,147.6	1.16	-0.65	0.97
9,443.0	90.10	179.70	6,227.6	-2,875.4	1,434.7	3,178.1	2.52	-2.19	1.25
9,475.0	88.80	179.50	6,227.9	-2,907.4	1,434.9	3,208.6	4.11	-4.06	-0.63
9,507.0	88.50	179.00	6,228.6	-2,939.4	1,435.3	3,239.2	1.82	-0.94	-1.56

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn K-O-10HNC
Project:	SEC.10-T5N-R61W	TVD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Site:	Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W	MD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Well:	Pronghorn K-O-10HNC	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)
9,538.0	88.50	178.80	6,229.4	-2,970.4	1,435.9	3,268.8	0.64	0.00	-0.65
9,570.0	88.50	178.80	6,230.3	-3,002.3	1,436.6	3,299.4	0.00	0.00	0.00
9,602.0	88.50	179.50	6,231.1	-3,034.3	1,437.0	3,330.0	2.19	0.00	2.19
9,633.0	89.20	180.00	6,231.7	-3,065.3	1,437.2	3,359.5	2.77	2.26	1.61
9,665.0	88.50	180.00	6,232.4	-3,097.3	1,437.2	3,389.9	2.19	-2.19	0.00
9,697.0	87.30	179.30	6,233.6	-3,129.3	1,437.4	3,420.4	4.34	-3.75	-2.19
9,728.0	87.40	179.00	6,235.0	-3,160.3	1,437.8	3,450.0	1.02	0.32	-0.97
9,760.0	88.10	179.30	6,236.2	-3,192.2	1,438.3	3,480.6	2.38	2.19	0.94
9,792.0	89.20	178.80	6,237.0	-3,224.2	1,438.8	3,511.1	3.78	3.44	-1.56
9,823.0	90.30	178.50	6,237.1	-3,255.2	1,439.6	3,540.8	3.68	3.55	-0.97
9,855.0	91.40	178.10	6,236.7	-3,287.2	1,440.5	3,571.5	3.66	3.44	-1.25
9,887.0	90.80	178.80	6,236.0	-3,319.2	1,441.4	3,602.2	2.88	-1.88	2.19
9,918.0	90.00	179.00	6,235.8	-3,350.2	1,442.0	3,631.9	2.66	-2.58	0.65
9,950.0	90.00	179.20	6,235.8	-3,382.2	1,442.5	3,662.5	0.63	0.00	0.63
9,982.0	90.00	179.50	6,235.8	-3,414.2	1,442.8	3,693.0	0.94	0.00	0.94
10,013.0	89.90	180.00	6,235.9	-3,445.2	1,443.0	3,722.5	1.64	-0.32	1.61
10,045.0	89.10	179.00	6,236.1	-3,477.2	1,443.2	3,753.0	4.00	-2.50	-3.13
10,077.0	89.00	178.60	6,236.7	-3,509.1	1,443.9	3,783.7	1.29	-0.31	-1.25
10,109.0	88.90	178.60	6,237.2	-3,541.1	1,444.7	3,814.3	0.31	-0.31	0.00
10,140.0	89.40	179.50	6,237.7	-3,572.1	1,445.2	3,844.0	3.32	1.61	2.90
10,172.0	89.90	178.80	6,237.9	-3,604.1	1,445.7	3,874.5	2.69	1.56	-2.19
10,204.0	89.20	177.80	6,238.2	-3,636.1	1,446.6	3,905.2	3.81	-2.19	-3.13
10,236.0	89.90	178.30	6,238.4	-3,668.1	1,447.7	3,936.0	2.69	2.19	1.56
10,267.0	91.10	179.30	6,238.1	-3,699.1	1,448.4	3,965.7	5.04	3.87	3.23
10,299.0	91.60	179.70	6,237.4	-3,731.1	1,448.7	3,996.2	2.00	1.56	1.25
10,331.0	91.00	179.30	6,236.7	-3,763.1	1,448.9	4,026.7	2.25	-1.88	-1.25
10,363.0	90.50	179.20	6,236.2	-3,795.0	1,449.4	4,057.2	1.59	-1.56	-0.31
10,395.0	90.50	179.00	6,236.0	-3,827.0	1,449.9	4,087.8	0.62	0.00	-0.63
10,426.0	90.60	178.30	6,235.7	-3,858.0	1,450.6	4,117.5	2.28	0.32	-2.26
10,458.0	89.70	177.20	6,235.6	-3,890.0	1,451.8	4,148.3	4.44	-2.81	-3.44
10,490.0	89.30	176.90	6,235.9	-3,922.0	1,453.5	4,179.2	1.56	-1.25	-0.94
10,522.0	89.80	177.20	6,236.1	-3,953.9	1,455.1	4,210.1	1.82	1.56	0.94
10,553.0	90.10	177.40	6,236.1	-3,984.9	1,456.6	4,240.0	1.16	0.97	0.65
10,585.0	90.00	178.30	6,236.1	-4,016.9	1,457.8	4,270.8	2.83	-0.31	2.81
10,617.0	89.60	178.30	6,236.2	-4,048.8	1,458.7	4,301.5	1.25	-1.25	0.00
10,648.0	89.30	177.90	6,236.5	-4,079.8	1,459.8	4,331.3	1.61	-0.97	-1.29
10,680.0	88.80	178.80	6,237.0	-4,111.8	1,460.7	4,362.0	3.22	-1.56	2.81
10,712.0	89.30	178.60	6,237.6	-4,143.8	1,461.4	4,392.6	1.68	1.56	-0.63
10,744.0	90.10	179.20	6,237.7	-4,175.8	1,462.0	4,423.2	3.12	2.50	1.88
10,775.0	91.20	179.20	6,237.4	-4,206.8	1,462.5	4,452.8	3.55	3.55	0.00
10,807.0	91.40	179.20	6,236.7	-4,238.8	1,462.9	4,483.4	0.63	0.63	0.00
10,826.0	91.46	178.96	6,236.2	-4,257.8	1,463.2	4,501.6	1.29	0.31	-1.25
4 1/2									
10,831.0	91.48	178.90	6,236.1	-4,262.8	1,463.3	4,506.3	1.29	0.31	-1.25
TD Depth									
10,839.0	91.50	178.80	6,235.9	-4,270.8	1,463.5	4,514.0	1.29	0.31	-1.25
10,870.0	91.20	179.70	6,235.1	-4,301.7	1,463.9	4,543.6	3.06	-0.97	2.90
10,902.0	90.60	179.50	6,234.6	-4,333.7	1,464.1	4,574.1	1.98	-1.88	-0.63
10,934.0	89.60	179.30	6,234.6	-4,365.7	1,464.4	4,604.6	3.19	-3.13	-0.63
10,965.0	89.00	178.10	6,234.9	-4,396.7	1,465.1	4,634.3	4.33	-1.94	-3.87
10,997.0	88.80	178.30	6,235.6	-4,428.7	1,466.1	4,665.0	0.88	-0.63	0.63
11,029.0	89.30	177.90	6,236.1	-4,460.7	1,467.2	4,695.8	2.00	1.56	-1.25
11,084.0	89.30	177.90	6,236.8	-4,515.6	1,469.2	4,748.6	0.00	0.00	0.00
BHL 470'FSL, 2642'FWL									

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Pronghorn K-O-10HNC
Project:	SEC.10-T5N-R61W	TVD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Site:	Pronghorn F-J-10HNB Pad Sec.10-T5N-R61W	MD Reference:	WELL @ 4728.0ft (Ensign 128 RKB - 15')
Well:	Pronghorn K-O-10HNC	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)

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
T1 470'FNL & 2642'F	0.00	0.00	6,239.0	-105.6	1,369.9	1,399,167.71	3,363,284.37	40.421780	-104.195150
- survey misses target center by 23.2ft at 6671.5ft MD (6229.7 TVD, -107.8 N, 1348.7 E)									
- Point									
BHL 470'FSL, 2642'F	0.00	0.00	6,239.0	-4,521.1	1,470.4	1,394,754.37	3,363,449.58	40.409660	-104.194790
- survey misses target center by 6.0ft at 11084.0ft MD (6236.8 TVD, -4515.6 N, 1469.2 E)									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
460.0	459.5	9 5/8"	9-5/8	12-1/4	
6,582.0	6,207.5	7"	7	7-1/2	
6,381.0	6,108.4	4 1/2	4-1/2	6	
10,826.0	6,236.2	4 1/2	4-1/2	6	

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.0	200.0	-0.6	-0.3	KOP #1
5,535.0	5,323.6	356.7	1,366.6	KOP #2
10,831.0	6,236.1	-4,262.8	1,463.3	TD Depth

Checked By: _____ Approved By: _____ Date: _____