

# BONANZA CREEK ENERGY OPERATING

Well Name: **PRONGHORN 14-44-7HZ**

Surface Location: PRONGHORN 14-11-07HZ PAD 7-5N-61W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4605.0

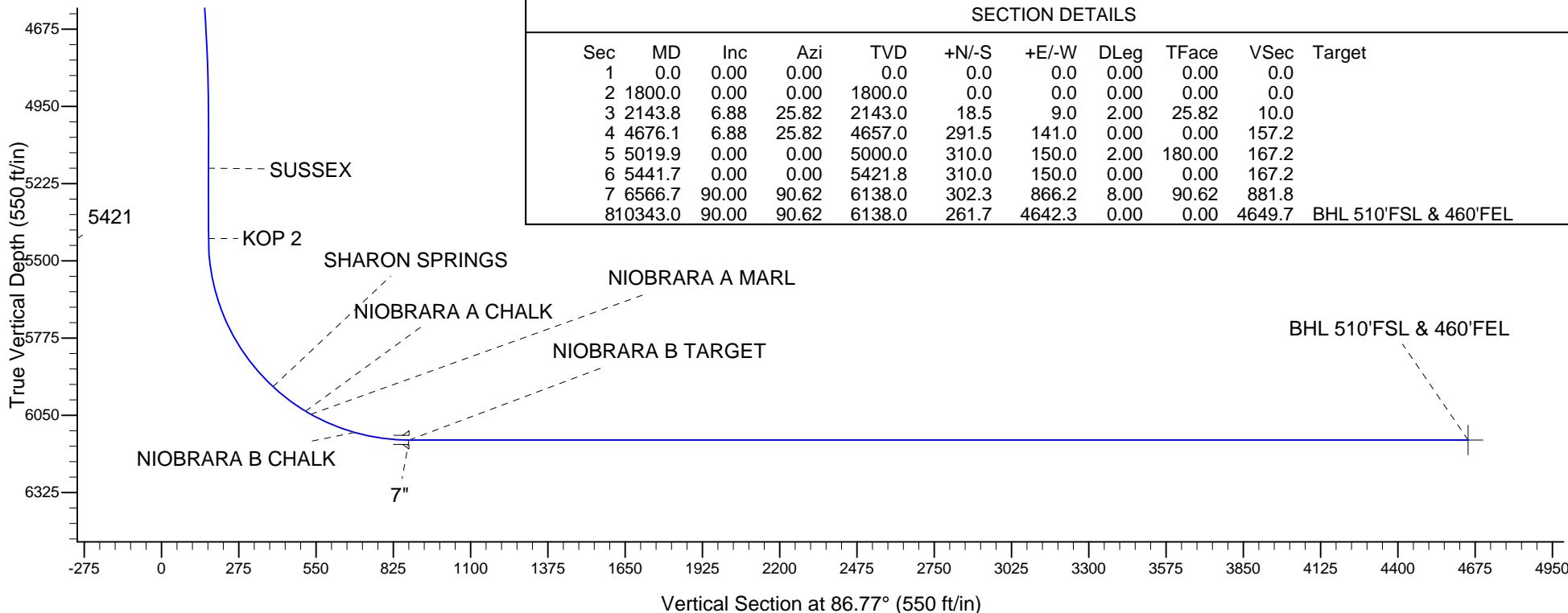
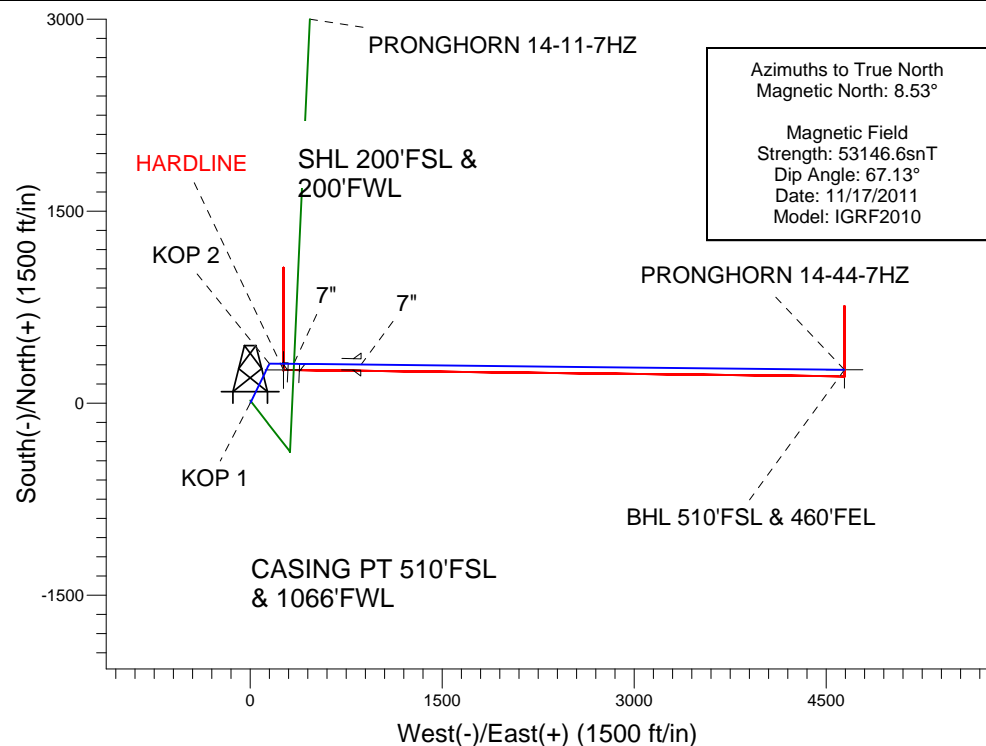
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1394263.33	3344966.97	40.409040	-104.261180	

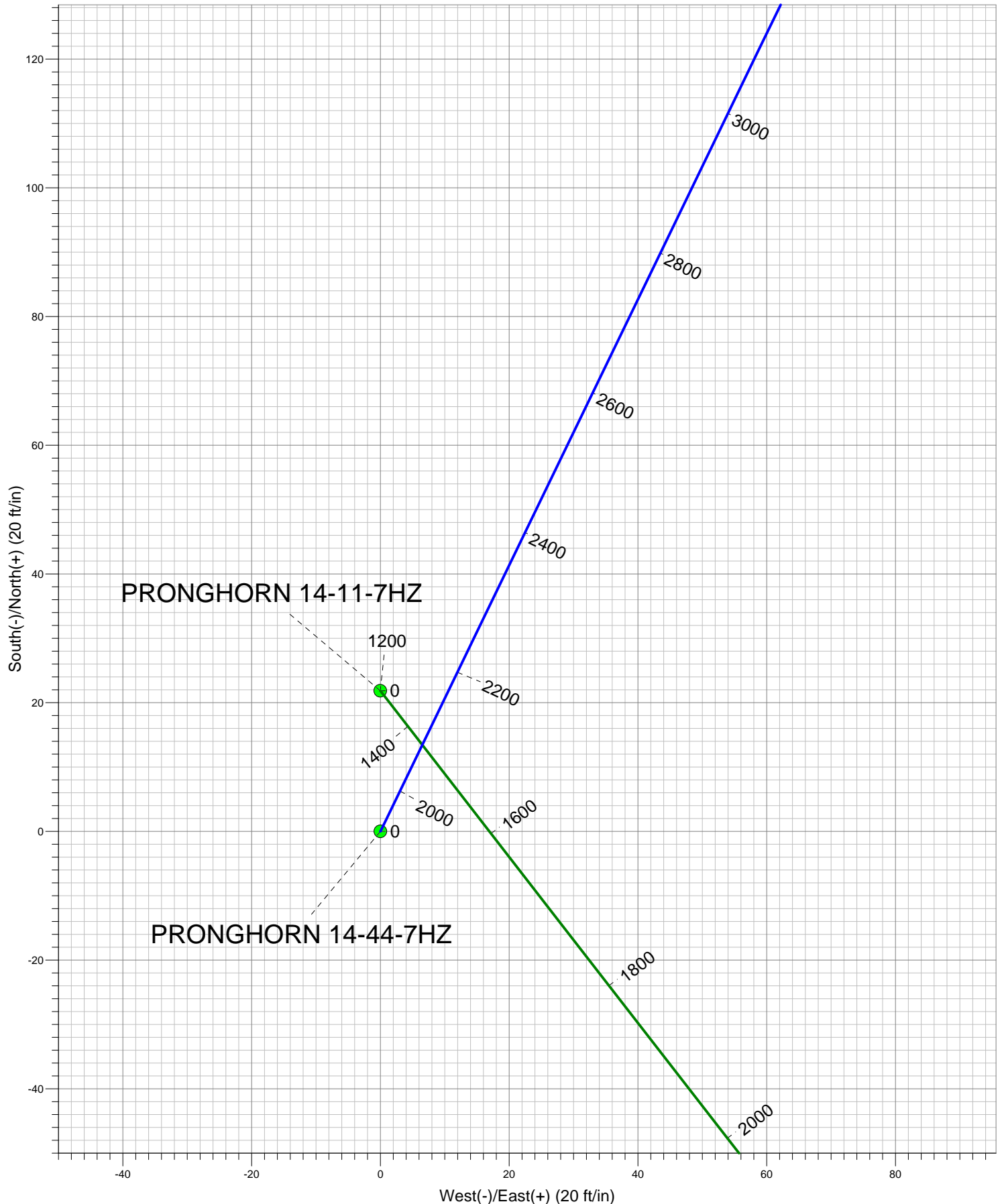
ENSIGN RIG 14 - 15' RKB @ 4620.0ft (ENSIGN RIG 14 - 15')

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HARDLINE	1.0	260.0	260.0	40.409754	-104.260246	Polygon
BHL 510'FSL & 460'FEL	6138.0	261.7	4642.3	40.409757	-104.244510	Point

PRONGHORN 14-11-07HZ PAD 7-5N-61W  
PRONGHORN 14-44-7HZ  
PLAN 1 (NOV 17 2011)  
13:52, November 17 2011







**Directional**

# **BONANZA CREEK ENERGY OPERATING**

**SEC.7-T5N-R61W**

**PRONHORN 14-11-07HZ PAD 7-5N-61W**

**PRONGHORN 14-44-7HZ**

**Wellbore #1**

**Plan: PLAN 1 (NOV 17 2011)**

## **Standard Planning Report**

**17 November, 2011**

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,143.8	6.88	25.82	2,143.0	18.5	9.0	2.00	2.00	0.00	25.82	
4,676.1	6.88	25.82	4,657.0	291.5	141.0	0.00	0.00	0.00	0.00	
5,019.9	0.00	0.00	5,000.0	310.0	150.0	2.00	-2.00	0.00	180.00	
5,441.7	0.00	0.00	5,421.8	310.0	150.0	0.00	0.00	0.00	0.00	
6,566.7	90.00	90.62	6,138.0	302.3	866.2	8.00	8.00	0.00	90.62	
10,343.0	90.00	90.62	6,138.0	261.7	4,642.3	0.00	0.00	0.00	0.00	BHL 510'FSL & 46C

Planned Survey		Actual 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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 1									
1,900.0	2.00	25.82	1,900.0	1.6	0.8	0.8	2.00	2.00	0.00
2,000.0	4.00	25.82	1,999.8	6.3	3.0	3.4	2.00	2.00	0.00
2,100.0	6.00	25.82	2,099.5	14.1	6.8	7.6	2.00	2.00	0.00
2,143.8	6.88	25.82	2,143.0	18.5	9.0	10.0	2.00	2.00	0.00
2,200.0	6.88	25.82	2,198.8	24.6	11.9	13.3	0.00	0.00	0.00
2,300.0	6.88	25.82	2,298.1	35.4	17.1	19.1	0.00	0.00	0.00
2,400.0	6.88	25.82	2,397.3	46.2	22.3	24.9	0.00	0.00	0.00
2,500.0	6.88	25.82	2,496.6	56.9	27.5	30.7	0.00	0.00	0.00
2,600.0	6.88	25.82	2,595.9	67.7	32.8	36.5	0.00	0.00	0.00
2,700.0	6.88	25.82	2,695.2	78.5	38.0	42.3	0.00	0.00	0.00
2,800.0	6.88	25.82	2,794.5	89.3	43.2	48.1	0.00	0.00	0.00
2,900.0	6.88	25.82	2,893.7	100.0	48.4	54.0	0.00	0.00	0.00
3,000.0	6.88	25.82	2,993.0	110.8	53.6	59.8	0.00	0.00	0.00
3,100.0	6.88	25.82	3,092.3	121.6	58.8	65.6	0.00	0.00	0.00
3,200.0	6.88	25.82	3,191.6	132.4	64.1	71.4	0.00	0.00	0.00
3,248.8	6.88	25.82	3,240.0	137.6	66.6	74.2	0.00	0.00	0.00
PARKMAN									
3,300.0	6.88	25.82	3,290.9	143.2	69.3	77.2	0.00	0.00	0.00
3,400.0	6.88	25.82	3,390.1	153.9	74.5	83.0	0.00	0.00	0.00
3,500.0	6.88	25.82	3,489.4	164.7	79.7	88.8	0.00	0.00	0.00
3,600.0	6.88	25.82	3,588.7	175.5	84.9	94.7	0.00	0.00	0.00
3,700.0	6.88	25.82	3,688.0	186.3	90.1	100.5	0.00	0.00	0.00
3,800.0	6.88	25.82	3,787.3	197.0	95.3	106.3	0.00	0.00	0.00
3,900.0	6.88	25.82	3,886.5	207.8	100.6	112.1	0.00	0.00	0.00
4,000.0	6.88	25.82	3,985.8	218.6	105.8	117.9	0.00	0.00	0.00
4,100.0	6.88	25.82	4,085.1	229.4	111.0	123.7	0.00	0.00	0.00
4,200.0	6.88	25.82	4,184.4	240.1	116.2	129.5	0.00	0.00	0.00
4,300.0	6.88	25.82	4,283.7	250.9	121.4	135.3	0.00	0.00	0.00
4,400.0	6.88	25.82	4,382.9	261.7	126.6	141.2	0.00	0.00	0.00
4,500.0	6.88	25.82	4,482.2	272.5	131.8	147.0	0.00	0.00	0.00
4,600.0	6.88	25.82	4,581.5	283.3	137.1	152.8	0.00	0.00	0.00
4,676.1	6.88	25.82	4,657.0	291.5	141.0	157.2	0.00	0.00	0.00
4,700.0	6.40	25.82	4,680.8	293.9	142.2	158.5	2.00	-2.00	0.00
4,800.0	4.40	25.82	4,780.4	302.4	146.3	163.1	2.00	-2.00	0.00

Planned Survey		Actual 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)	
4,900.0	2.40	25.82	4,880.2	307.7	148.9	166.0	2.00	-2.00	0.00	
5,000.0	0.40	25.82	4,980.1	309.9	150.0	167.2	2.00	-2.00	0.00	
5,019.9	0.00	0.00	5,000.0	310.0	150.0	167.2	2.00	-2.00	0.00	
5,100.0	0.00	0.00	5,080.1	310.0	150.0	167.2	0.00	0.00	0.00	
5,189.9	0.00	0.00	5,170.0	310.0	150.0	167.2	0.00	0.00	0.00	
SUSSEX										
5,200.0	0.00	0.00	5,180.1	310.0	150.0	167.2	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,280.1	310.0	150.0	167.2	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,380.1	310.0	150.0	167.2	0.00	0.00	0.00	
5,441.0	0.00	0.00	5,421.1	310.0	150.0	167.2	0.00	0.00	0.00	
KOP 2										
5,441.7	0.00	0.00	5,421.8	310.0	150.0	167.2	0.00	0.00	0.00	
5,500.0	4.67	90.62	5,480.1	310.0	152.4	169.6	8.00	8.00	0.00	
5,600.0	12.67	90.62	5,578.8	309.8	167.4	184.6	8.00	8.00	0.00	
5,700.0	20.67	90.62	5,674.6	309.5	196.1	213.2	8.00	8.00	0.00	
5,800.0	28.67	90.62	5,765.4	309.1	237.8	254.8	8.00	8.00	0.00	
5,900.0	36.67	90.62	5,849.5	308.5	291.7	308.6	8.00	8.00	0.00	
6,000.0	44.67	90.62	5,925.3	307.8	356.8	373.6	8.00	8.00	0.00	
6,032.7	47.28	90.62	5,948.0	307.5	380.3	397.0	8.00	8.00	0.00	
SHARON SPRINGS										
6,100.0	52.67	90.62	5,991.3	307.0	431.8	448.4	8.00	8.00	0.00	
6,177.8	58.89	90.62	6,035.0	306.3	496.1	512.6	8.00	8.00	0.00	
NIOBRARA A CHALK										
6,199.6	60.64	90.62	6,046.0	306.1	515.0	531.4	8.00	8.00	0.00	
NIOBRARA A MARL										
6,200.0	60.67	90.62	6,046.2	306.1	515.3	531.7	8.00	8.00	0.00	
6,300.0	68.67	90.62	6,088.9	305.1	605.6	621.8	8.00	8.00	0.00	
6,369.4	74.22	90.62	6,111.0	304.4	671.4	687.4	8.00	8.00	0.00	
NIOBRARA B CHALK										
6,400.0	76.67	90.62	6,118.7	304.1	701.0	717.0	8.00	8.00	0.00	
6,500.0	84.67	90.62	6,134.9	303.0	799.6	815.4	8.00	8.00	0.00	
6,566.0	89.95	90.62	6,138.0	302.3	865.5	881.1	8.00	8.00	0.00	
7"										
6,566.7	90.00	90.62	6,138.0	302.3	866.2	881.8	8.00	8.00	0.00	
NIOBRARA B TARGET										
6,600.0	90.00	90.62	6,138.0	301.9	899.5	915.1	0.00	0.00	0.00	
6,700.0	90.00	90.62	6,138.0	300.9	999.5	1,014.8	0.00	0.00	0.00	
6,800.0	90.00	90.62	6,138.0	299.8	1,099.5	1,114.6	0.00	0.00	0.00	
6,900.0	90.00	90.62	6,138.0	298.7	1,199.5	1,214.4	0.00	0.00	0.00	
7,000.0	90.00	90.62	6,138.0	297.6	1,299.5	1,314.2	0.00	0.00	0.00	
7,100.0	90.00	90.62	6,138.0	296.6	1,399.5	1,413.9	0.00	0.00	0.00	
7,200.0	90.00	90.62	6,138.0	295.5	1,499.5	1,513.7	0.00	0.00	0.00	
7,300.0	90.00	90.62	6,138.0	294.4	1,599.4	1,613.5	0.00	0.00	0.00	
7,400.0	90.00	90.62	6,138.0	293.3	1,699.4	1,713.3	0.00	0.00	0.00	
7,500.0	90.00	90.62	6,138.0	292.3	1,799.4	1,813.0	0.00	0.00	0.00	
7,600.0	90.00	90.62	6,138.0	291.2	1,899.4	1,912.8	0.00	0.00	0.00	
7,700.0	90.00	90.62	6,138.0	290.1	1,999.4	2,012.6	0.00	0.00	0.00	
7,800.0	90.00	90.62	6,138.0	289.0	2,099.4	2,112.4	0.00	0.00	0.00	
7,900.0	90.00	90.62	6,138.0	288.0	2,199.4	2,212.1	0.00	0.00	0.00	
8,000.0	90.00	90.62	6,138.0	286.9	2,299.4	2,311.9	0.00	0.00	0.00	
8,100.0	90.00	90.62	6,138.0	285.8	2,399.4	2,411.7	0.00	0.00	0.00	
8,200.0	90.00	90.62	6,138.0	284.7	2,499.4	2,511.5	0.00	0.00	0.00	
8,300.0	90.00	90.62	6,138.0	283.7	2,599.4	2,611.2	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
6,566.0	6,138.0	7"		7	8-3/4

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN 14-44-7HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Project:</b>	SEC.7-T5N-R61W	<b>MD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Site:</b>	PRONGHORN 14-11-07HZ PAD 7-5N-61W	<b>North Reference:</b>	True
<b>Well:</b>	PRONGHORN 14-44-7HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (NOV 17 2011)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,248.8	3,240.0	PARKMAN		0.00	
5,189.9	5,170.0	SUSSEX		0.00	
6,032.7	5,948.0	SHARON SPRINGS		0.00	
6,177.8	6,035.0	NIOBRARA A CHALK		0.00	
6,199.6	6,046.0	NIOBRARA A MARL		0.00	
6,369.4	6,111.0	NIOBRARA B CHALK		0.00	
6,566.7	6,138.0	NIOBRARA B TARGET		0.00	
	6,140.0	NIOBRARA B MARL		0.00	
	6,187.0	NIOBRARA C CHALK		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,800.0	1,800.0	0.0	0.0	KOP 1
5,441.0	5,421.1	310.0	150.0	KOP 2





## **Directional**

# **BONANZA CREEK ENERGY OPERATING**

**SEC.7-T5N-R61W**

**PRONHORN 14-11-07HZ PAD 7-5N-61W**

**PRONGHORN 14-44-7HZ**

**Wellbore #1**

**PLAN 1 (NOV 17 2011)**

## **Anticollision Report**

**17 November, 2011**



PRONGHORN 14-11-07HZ PAD 7-5N-61W - PRONGHORN 14-11-7HZ - Wellbore #1 - PLAN 2 (NOV17, 2017)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
1,300.0	1,300.0	1,300.6	1,300.5	2.8	2.8	3.02	20.5	1.1	20.5	14.9	5.60	3.665		
1,350.0	1,350.0	1,350.8	1,350.7	2.9	2.9	7.39	18.7	2.4	18.9	13.1	5.80	3.259		
1,400.0	1,400.0	1,400.9	1,400.7	3.0	3.0	14.82	16.3	4.3	16.9	10.9	6.00	2.811		
1,450.0	1,450.0	1,450.9	1,450.6	3.1	3.1	27.01	13.2	6.7	14.8	8.6	6.21	2.384		
1,500.0	1,500.0	1,500.7	1,500.2	3.3	3.2	45.77	9.4	9.7	13.5	7.1	6.42	2.099		
1,514.2	1,514.2	1,514.8	1,514.2	3.3	3.2	52.22	8.2	10.6	13.4	6.9	6.49	2.065	CC, ES, SF	
1,550.0	1,550.0	1,550.4	1,549.5	3.4	3.3	69.30	5.0	13.1	14.0	7.4	6.64	2.111		
1,600.0	1,600.0	1,599.8	1,598.5	3.5	3.4	90.50	-0.1	17.1	17.1	10.3	6.86	2.497		
1,650.0	1,650.0	1,649.2	1,647.3	3.6	3.5	105.21	-5.8	21.5	22.4	15.3	7.08	3.166		
1,700.0	1,700.0	1,698.6	1,696.2	3.7	3.6	114.14	-11.6	26.0	28.7	21.4	7.30	3.933		
1,750.0	1,750.0	1,748.1	1,745.1	3.8	3.8	119.79	-17.4	30.5	35.4	27.9	7.52	4.712		
1,800.0	1,800.0	1,797.5	1,794.0	3.9	3.9	123.61	-23.2	35.0	42.4	34.7	7.74	5.478		
1,850.0	1,850.0	1,846.9	1,842.9	4.0	4.0	100.89	-29.0	39.4	49.6	41.7	7.91	6.270		
1,900.0	1,900.0	1,896.3	1,891.7	4.2	4.2	104.01	-34.8	43.9	57.1	49.0	8.12	7.030		
1,950.0	1,949.9	1,945.5	1,940.4	4.3	4.3	107.11	-40.6	48.4	65.0	56.6	8.33	7.797		
2,000.0	1,999.8	1,994.7	1,989.0	4.4	4.4	110.14	-46.4	52.9	73.3	64.8	8.54	8.581		
2,050.0	2,049.7	2,043.7	2,037.5	4.5	4.6	113.07	-52.1	57.3	82.2	73.4	8.76	9.382		
2,100.0	2,099.5	2,092.6	2,085.9	4.6	4.7	115.89	-57.9	61.8	91.6	82.6	8.97	10.208		
2,150.0	2,149.1	2,141.4	2,134.1	4.7	4.9	118.59	-63.6	66.2	101.6	92.4	9.19	11.056		
2,200.0	2,198.8	2,190.1	2,182.2	4.8	5.0	121.08	-69.3	70.6	112.0	102.6	9.41	11.898		
2,250.0	2,248.4	2,238.7	2,230.4	5.0	5.2	123.16	-75.0	75.1	122.5	112.9	9.64	12.712		
2,300.0	2,298.1	2,287.4	2,278.6	5.1	5.4	124.90	-80.7	79.5	133.2	123.3	9.87	13.500		
2,350.0	2,347.7	2,336.1	2,326.7	5.2	5.5	126.38	-86.4	83.9	144.0	133.9	10.10	14.257		
2,400.0	2,397.3	2,384.8	2,374.9	5.3	5.7	127.66	-92.1	88.3	154.9	144.5	10.33	14.987		
2,450.0	2,447.0	2,433.5	2,423.0	5.5	5.8	128.77	-97.8	92.8	165.8	155.2	10.57	15.686		
2,500.0	2,496.6	2,482.2	2,471.2	5.6	6.0	129.75	-103.6	97.2	176.8	166.0	10.81	16.357		
2,550.0	2,546.3	2,530.9	2,519.3	5.7	6.2	130.60	-109.3	101.6	187.8	176.8	11.05	17.001		
2,600.0	2,595.9	2,579.6	2,567.5	5.8	6.3	131.37	-115.0	106.1	198.9	187.6	11.29	17.619		
2,650.0	2,645.5	2,628.3	2,615.6	6.0	6.5	132.05	-120.7	110.5	210.0	198.4	11.53	18.211		
2,700.0	2,695.2	2,677.0	2,663.8	6.1	6.6	132.67	-126.4	114.9	221.1	209.3	11.77	18.780		
2,750.0	2,744.8	2,725.7	2,712.0	6.2	6.8	133.22	-132.1	119.3	232.2	220.2	12.02	19.325		
2,800.0	2,794.5	2,774.4	2,760.1	6.4	7.0	133.73	-137.8	123.8	243.4	231.1	12.26	19.849		
2,850.0	2,844.1	2,823.1	2,808.3	6.5	7.1	134.19	-143.5	128.2	254.6	242.1	12.51	20.352		
2,900.0	2,893.7	2,871.8	2,856.4	6.7	7.3	134.61	-149.2	132.6	265.8	253.0	12.76	20.835		
2,950.0	2,943.4	2,920.5	2,904.6	6.8	7.5	135.00	-155.0	137.0	277.0	264.0	13.00	21.300		
3,000.0	2,993.0	2,969.2	2,952.7	6.9	7.6	135.36	-160.7	141.5	288.2	274.9	13.25	21.747		
3,050.0	3,042.7	3,017.9	3,000.9	7.1	7.8	135.69	-166.4	145.9	299.4	285.9	13.50	22.177		
3,100.0	3,092.3	3,066.6	3,049.1	7.2	8.0	136.00	-172.1	150.3	310.6	296.9	13.75	22.591		
3,150.0	3,141.9	3,115.3	3,097.2	7.4	8.1	136.29	-177.8	154.7	321.9	307.9	14.00	22.990		
3,200.0	3,191.6	3,164.0	3,145.4	7.5	8.3	136.55	-183.5	159.2	333.1	318.9	14.25	23.374		
3,250.0	3,241.2	3,212.7	3,193.5	7.6	8.5	136.80	-189.2	163.6	344.4	329.9	14.50	23.745		
3,300.0	3,290.9	3,261.4	3,241.7	7.8	8.7	137.03	-194.9	168.0	355.6	340.9	14.76	24.102		
3,350.0	3,340.5	3,310.1	3,289.8	7.9	8.8	137.25	-200.6	172.4	366.9	351.9	15.01	24.447		
3,400.0	3,390.1	3,358.7	3,338.0	8.1	9.0	137.46	-206.4	176.9	378.2	362.9	15.26	24.780		
3,450.0	3,439.8	3,407.4	3,386.2	8.2	9.2	137.65	-212.1	181.3	389.4	373.9	15.51	25.102		
3,500.0	3,489.4	3,456.1	3,434.3	8.4	9.3	137.84	-217.8	185.7	400.7	385.0	15.77	25.413		
3,550.0	3,539.1	3,504.8	3,482.5	8.5	9.5	138.01	-223.5	190.2	412.0	396.0	16.02	25.714		
3,600.0	3,588.7	3,553.5	3,530.6	8.6	9.7	138.17	-229.2	194.6	423.3	407.0	16.28	26.005		
3,650.0	3,638.3	3,602.2	3,578.8	8.8	9.9	138.33	-234.9	199.0	434.6	418.0	16.53	26.286		
3,700.0	3,688.0	3,650.9	3,626.9	8.9	10.0	138.48	-240.6	203.4	445.9	429.1	16.79	26.559		
3,750.0	3,737.6	3,699.6	3,675.1	9.1	10.2	138.62	-246.3	207.9	457.2	440.1	17.04	26.823		
3,800.0	3,787.3	3,748.3	3,723.2	9.2	10.4	138.75	-252.1	212.3	468.5	451.2	17.30	27.079		

COMPASS 2003.21 Build 46

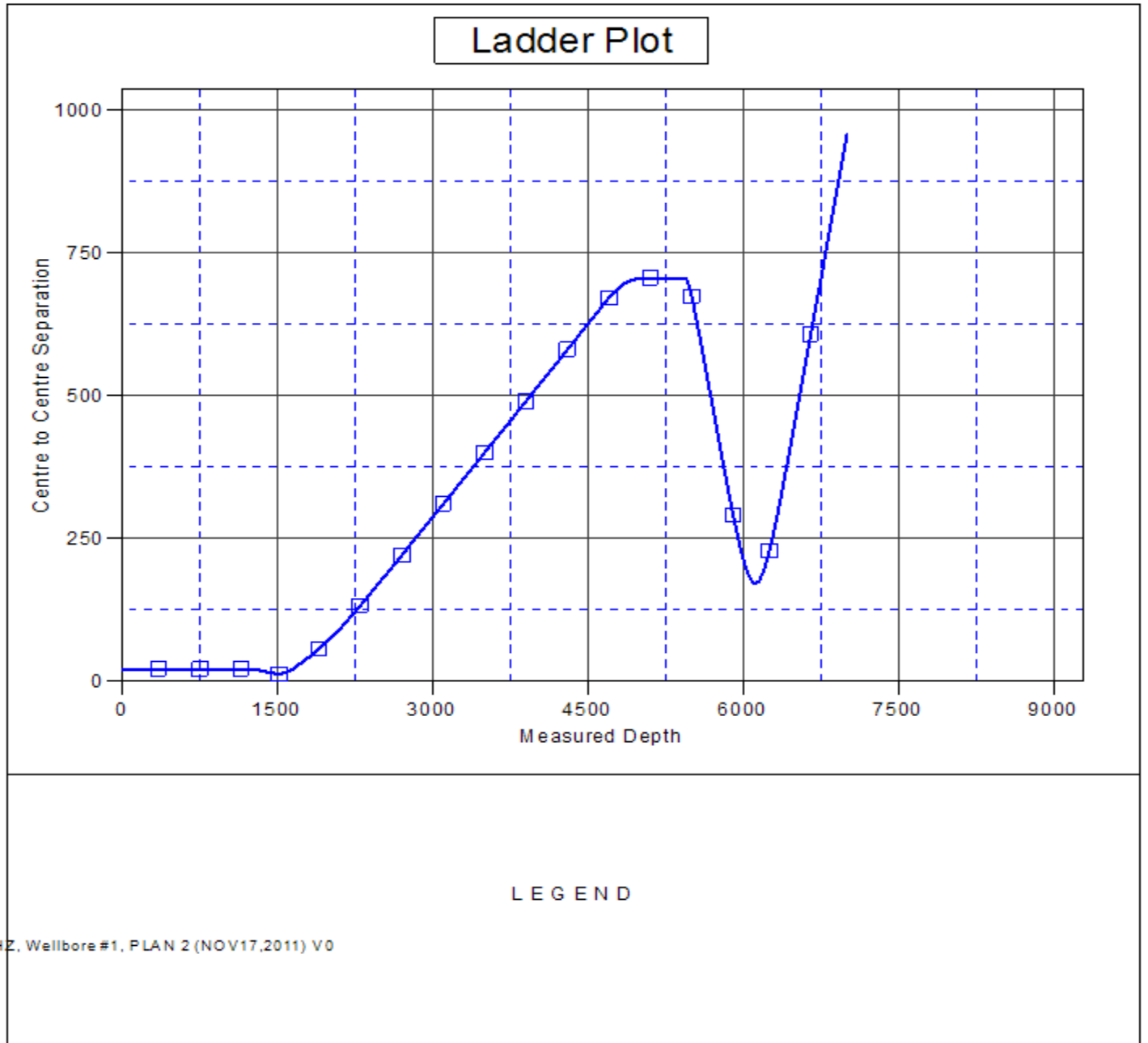
Offset Design		PRONGHORN 14-11-07HZ PAD 7-5N-61W - PRONGHORN 14-11-7HZ - Wellbore #1 - PLAN 2 (NOV17,											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
3,850.0	3,836.9	3,797.0	3,771.4	9.4	10.5	138.88	-257.8	216.7	479.8	462.2	17.56	27.327			
3,900.0	3,886.5	3,845.7	3,819.6	9.5	10.7	139.00	-263.5	221.1	491.1	473.3	17.81	27.567			
3,950.0	3,936.2	3,894.4	3,867.7	9.7	10.9	139.12	-269.2	225.6	502.4	484.3	18.07	27.801			
4,000.0	3,985.8	3,943.1	3,915.9	9.8	11.1	139.23	-274.9	230.0	513.7	495.3	18.33	28.028			
4,050.0	4,035.5	3,991.8	3,964.0	10.0	11.2	139.33	-280.6	234.4	525.0	506.4	18.58	28.248			
4,100.0	4,085.1	4,040.5	4,012.2	10.1	11.4	139.44	-286.3	238.8	536.3	517.4	18.84	28.461			
4,150.0	4,134.7	4,089.2	4,060.3	10.3	11.6	139.53	-292.0	243.3	547.6	528.5	19.10	28.669			
4,200.0	4,184.4	4,137.9	4,108.5	10.4	11.8	139.63	-297.7	247.7	558.9	539.6	19.36	28.871			
4,250.0	4,234.0	4,186.6	4,156.7	10.6	11.9	139.72	-303.5	252.1	570.2	550.6	19.62	29.067			
4,300.0	4,283.7	4,235.3	4,204.8	10.7	12.1	139.80	-309.2	256.6	581.5	561.7	19.88	29.258			
4,350.0	4,333.3	4,284.0	4,253.0	10.9	12.3	139.89	-314.9	261.0	592.9	572.7	20.14	29.444			
4,400.0	4,382.9	4,332.7	4,301.1	11.0	12.5	139.97	-320.6	265.4	604.2	583.8	20.39	29.625			
4,450.0	4,432.6	4,381.4	4,349.3	11.2	12.6	140.04	-326.3	269.8	615.5	594.8	20.65	29.801			
4,500.0	4,482.2	4,430.1	4,397.4	11.3	12.8	140.12	-332.0	274.3	626.8	605.9	20.91	29.972			
4,550.0	4,531.9	4,478.7	4,445.6	11.5	13.0	140.19	-337.7	278.7	638.1	617.0	21.17	30.139			
4,600.0	4,581.5	4,527.4	4,493.8	11.6	13.2	140.26	-343.4	283.1	649.4	628.0	21.43	30.302			
4,650.0	4,631.1	4,576.1	4,541.9	11.8	13.3	140.32	-349.2	287.5	660.8	639.1	21.69	30.461			
4,700.0	4,680.8	4,629.0	4,594.2	11.9	13.5	140.46	-355.3	292.3	672.0	650.0	21.97	30.592			
4,750.0	4,730.5	4,691.4	4,656.1	12.0	13.7	140.65	-361.8	297.3	681.9	659.6	22.24	30.660			
4,800.0	4,780.4	4,754.5	4,718.8	12.1	13.9	140.80	-367.2	301.5	690.1	667.6	22.49	30.679			
4,850.0	4,830.2	4,818.0	4,782.1	12.2	14.0	140.92	-371.6	304.9	696.7	674.0	22.74	30.642			
4,900.0	4,880.2	4,882.0	4,845.9	12.3	14.1	141.00	-374.9	307.5	701.6	678.6	22.97	30.544			
4,950.0	4,930.1	4,946.2	4,910.0	12.4	14.2	141.06	-377.0	309.1	704.8	681.6	23.19	30.395			
5,000.0	4,980.1	5,010.6	4,974.4	12.5	14.3	141.09	-378.0	309.9	706.4	683.0	23.40	30.184			
5,050.0	5,030.1	5,066.3	5,030.1	12.6	14.4	166.91	-378.1	310.0	706.5	680.5	25.97	27.203			
5,100.0	5,080.1	5,116.3	5,080.1	12.7	14.5	166.91	-378.1	310.0	706.5	680.3	26.14	27.028			
5,150.0	5,130.1	5,166.3	5,130.1	12.8	14.6	166.91	-378.1	310.0	706.5	680.2	26.31	26.847			
5,200.0	5,180.1	5,216.3	5,180.1	12.9	14.6	166.91	-378.1	310.0	706.5	680.0	26.49	26.669			
5,250.0	5,230.1	5,266.3	5,230.1	13.0	14.7	166.91	-378.1	310.0	706.5	679.8	26.67	26.492			
5,300.0	5,280.1	5,316.3	5,280.1	13.1	14.8	166.91	-378.1	310.0	706.5	679.6	26.85	26.317			
5,350.0	5,330.1	5,366.3	5,330.1	13.2	14.9	166.91	-378.1	310.0	706.5	679.5	27.02	26.143			
5,400.0	5,380.1	5,416.3	5,380.1	13.3	14.9	166.91	-378.1	310.0	706.5	679.3	27.20	25.972			
5,450.0	5,430.1	5,620.4	5,582.8	13.4	15.1	76.03	-359.8	310.8	705.6	680.1	25.42	27.753			
5,500.0	5,480.1	6,186.3	6,030.9	13.5	14.5	69.25	-39.0	325.6	674.7	648.2	26.54	25.418			
5,550.0	5,529.7	6,353.4	6,101.5	13.6	14.5	65.78	111.8	332.5	629.7	602.5	27.19	23.161			
5,600.0	5,578.8	6,423.7	6,120.4	13.7	14.9	70.03	179.5	335.6	581.8	554.4	27.40	21.237			
5,650.0	5,627.2	6,461.9	6,127.8	13.8	15.1	84.98	216.9	337.3	532.8	505.6	27.23	19.568			
5,700.0	5,674.6	6,485.8	6,131.4	14.0	15.3	112.11	240.5	338.4	483.4	456.6	26.81	18.030			
5,750.0	5,720.7	6,502.3	6,133.5	14.2	15.5	139.22	256.8	339.1	434.1	407.4	26.67	16.274			
5,800.0	5,765.4	6,514.3	6,134.7	14.4	15.6	155.87	268.8	339.7	385.2	358.7	26.53	14.519			
5,850.0	5,808.4	6,523.6	6,135.5	14.6	15.7	164.99	278.0	340.1	337.5	311.3	26.17	12.898			
5,900.0	5,849.5	6,530.9	6,136.1	14.9	15.8	170.27	285.3	340.5	291.7	266.0	25.61	11.387			
5,950.0	5,888.5	6,536.9	6,136.5	15.2	15.8	173.60	291.3	340.7	249.2	224.3	24.93	9.998			
6,000.0	5,925.3	6,542.0	6,136.8	15.6	15.9	175.86	296.4	341.0	212.5	188.3	24.13	8.803			
6,050.0	5,959.6	6,546.3	6,137.1	16.0	15.9	177.51	300.7	341.2	185.1	161.8	23.26	7.955			
6,100.0	5,991.3	6,550.0	6,137.2	16.6	15.9	178.81	304.4	341.3	171.8	149.4	22.33	7.692			
6,113.4	5,999.3	6,550.9	6,137.3	16.7	15.9	179.12	305.3	341.4	171.1	149.1	22.08	7.752			
6,150.0	6,020.2	6,553.3	6,137.4	17.1	16.0	179.91	307.7	341.5	175.9	154.5	21.36	8.233			
6,200.0	6,046.2	6,556.3	6,137.5	17.8	16.0	-179.06	310.6	341.6	196.3	175.9	20.38	9.632			
6,250.0	6,069.1	6,558.9	6,137.6	18.5	16.0	-178.02	313.3	341.7	228.6	209.2	19.41	11.780			
6,300.0	6,088.9	6,561.4	6,137.7	19.3	16.0	-176.84	315.7	341.8	268.5	250.0	18.48	14.525			
6,350.0	6,105.5	6,563.6	6,137.7	20.2	16.1	-175.34	318.0	342.0	312.8	295.1	17.66	17.711			

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN 14-44-7HZ
<b>Project:</b>	SEC.7-T5N-R61W	<b>TVD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Reference Site:</b>	PRONGHORN 14-11-07HZ PAD 7-5N-61W	<b>MD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PRONGHORN 14-44-7HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	PLAN 1 (NOV 17 2011)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
PRONGHORN 14-11-07HZ PAD 7-5N-61W - PRONGHORN 14-11-7HZ - Wellbore #1 - PLAN 2 (NOV17,												<b>Offset Well Error:</b>	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,400.0	6,118.7	6,565.7	6,137.8	21.1	16.1	-173.16	320.1	342.0	359.8	342.8	17.06	21.094	
6,450.0	6,128.5	6,567.7	6,137.8	22.1	16.1	-169.38	322.1	342.1	408.4	391.4	16.99	24.031	
6,500.0	6,134.9	6,569.6	6,137.9	23.2	16.1	-160.60	324.0	342.2	457.9	438.9	18.96	24.150	
6,550.0	6,137.8	6,571.4	6,137.9	24.3	16.1	-123.75	325.8	342.3	507.7	475.1	32.66	15.548	
6,600.0	6,138.0	6,573.2	6,137.9	25.4	16.2	-89.80	327.5	342.4	557.7	518.4	39.28	14.196	
6,650.0	6,138.0	6,574.9	6,138.0	26.5	16.2	-89.88	329.3	342.5	607.7	567.2	40.44	15.025	
6,700.0	6,138.0	6,576.7	6,138.0	27.6	16.2	-89.93	331.0	342.5	657.6	616.0	41.60	15.807	
6,750.0	6,138.0	6,578.4	6,138.0	28.8	16.2	-89.97	332.8	342.6	707.6	664.8	42.81	16.530	
6,800.0	6,138.0	6,580.2	6,138.0	30.0	16.2	-89.99	334.5	342.7	757.6	713.6	44.01	17.214	
6,850.0	6,138.0	6,581.9	6,138.0	31.2	16.3	-90.00	336.3	342.8	807.5	762.3	45.24	17.848	
6,900.0	6,138.0	6,583.7	6,138.0	32.5	16.3	-90.00	338.0	342.9	857.5	811.0	46.48	18.449	
6,950.0	6,138.0	6,585.5	6,138.0	33.7	16.3	-90.00	339.8	343.0	907.5	859.7	47.74	19.008	
7,000.0	6,138.0	6,587.2	6,138.0	35.0	16.3	-90.00	341.5	343.0	957.4	908.4	49.00	19.538	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN 14-44-7HZ
<b>Project:</b>	SEC.7-T5N-R61W	<b>TVD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Reference Site:</b>	PRONGHORN 14-11-07HZ PAD 7-5N-61W	<b>MD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PRONGHORN 14-44-7HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	PLAN 1 (NOV 17 2011)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB @ 4620.0ft (ENSIGN RIG 14 - 15') Coordinates are relative to: PRONGHORN 14-44-7HZ  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.80°



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well PRONGHORN 14-44-7HZ
<b>Project:</b>	SEC.7-T5N-R61W	<b>TVD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Reference Site:</b>	PRONGHORN 14-11-07HZ PAD 7-5N-61W	<b>MD Reference:</b>	RKB @ 4620.0ft (ENSIGN RIG 14 - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	PRONGHORN 14-44-7HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	PLAN 1 (NOV 17 2011)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB @ 4620.0ft (ENSIGN RIG 14 - 15') Coordinates are relative to: PRONGHORN 14-44-7HZ  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.80°

