

# BONANZA CREEK ENERGY OPERATING

Well Name: **North Platte Federal K-O-22HNB**

Surface Location: North Platte Federal 31-22 Pad Sec.22-T5N-R63W  
North American Datum 1983, US State Plane 1983, Colorado Northern Zone

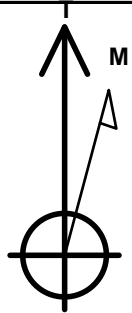
Ground Elevation: 4649.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1387189.04	3300285.41	40.391225	-104.421929	

RKB - 15' WELL @ 4664.0ft (RKB - 15')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINE BH 460'	1.0	-4501.5	-40.0	Polygon
HARDLINE SH 460'	1.0	-136.0	-200.0	Polygon
SECTIONLINE 324'N OF SHL	1.0	324.0	-200.0	Polygon
BHL 470'FSL & 2600'FEL	6484.0	-4491.5	39.8	Point
T1 470'FNL & 2550'FEL	6484.0	-146.2	15.0	Point



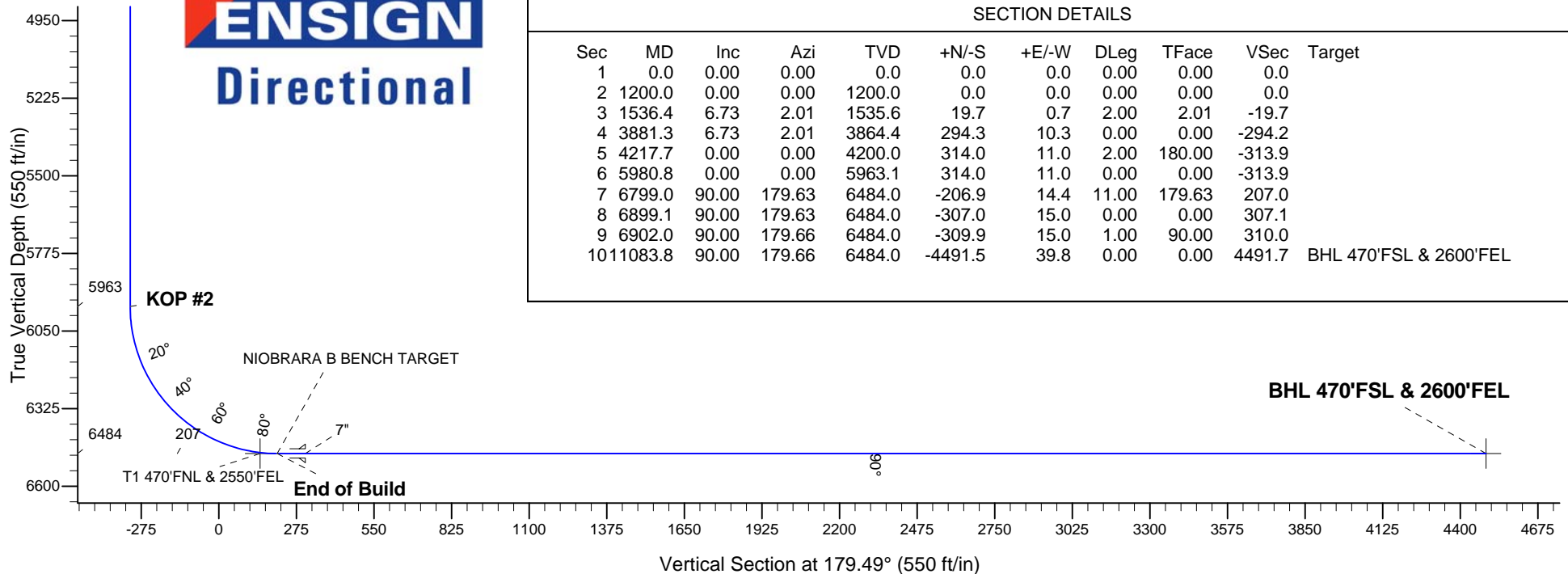
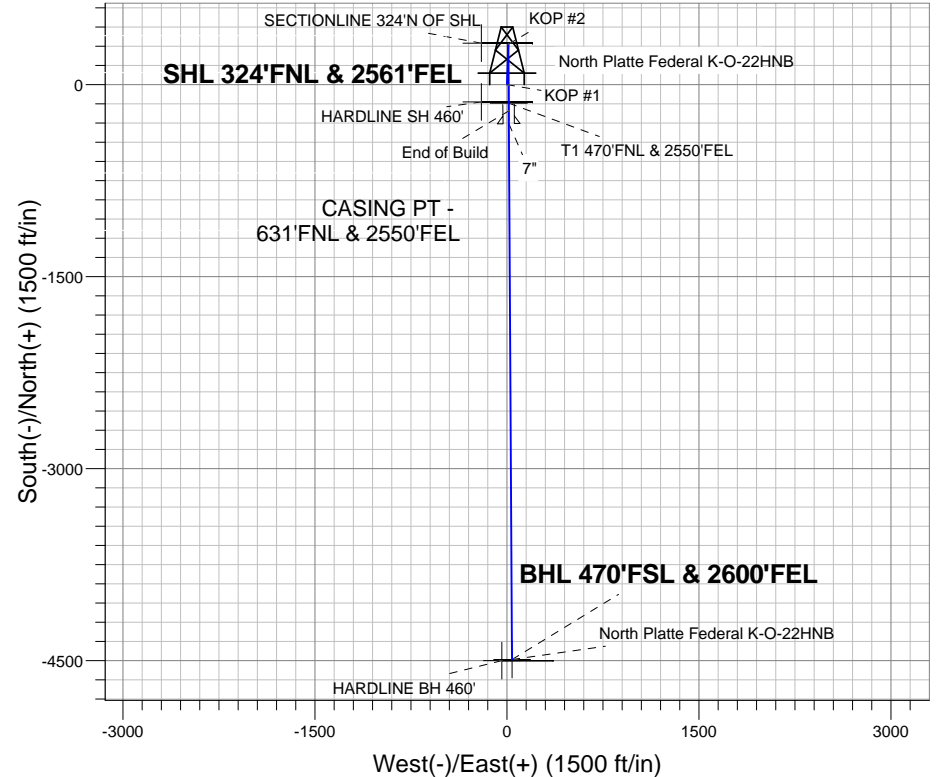
Azimuths to True North  
Magnetic North: 8.47°

Magnetic Field  
Strength: 53002.9nT  
Dip Angle: 67.05°  
Date: 12/26/2012  
Model: IGRF2010

North Platte Federal 31-22 Pad Sec.22-T5N-R63W  
North Platte Federal K-O-22HNB  
Plan #4 (1-8-13)  
13:29, January 08 2013

## ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP #1
5963.1	5980.8	KOP #2
6484.0	6799.0	End of Build



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1536.4	6.73	2.01	1535.6	19.7	0.7	2.00	2.01	-19.7	
4	3881.3	6.73	2.01	3864.4	294.3	10.3	0.00	0.00	-294.2	
5	4217.7	0.00	0.00	4200.0	314.0	11.0	2.00	180.00	-313.9	
6	5980.8	0.00	0.00	5963.1	314.0	11.0	0.00	0.00	-313.9	
7	6799.0	90.00	179.63	6484.0	-206.9	14.4	11.00	179.63	207.0	
8	6899.1	90.00	179.63	6484.0	-307.0	15.0	0.00	0.00	307.1	
9	6902.0	90.00	179.66	6484.0	-309.9	15.0	1.00	90.00	310.0	
10	11083.8	90.00	179.66	6484.0	-4491.5	39.8	0.00	0.00	4491.7	BHL 470'FSL & 2600'FEL



# **BONANZA CREEK ENERGY OPERATING**

**SEC.22-T5N-R63W**

**North Platte Federal 31-22 Pad Sec.22-T5N-R63W**

**North Platte Federal K-O-22HNB**

**Wellbore #1**

**Plan: Plan #4 (1-8-13)**

## **Standard Planning Report**

**08 January, 2013**

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,536.4	6.73	2.01	1,535.6	19.7	0.7	2.00	2.00	0.00	2.01	
3,881.3	6.73	2.01	3,864.4	294.3	10.3	0.00	0.00	0.00	0.00	
4,217.7	0.00	0.00	4,200.0	314.0	11.0	2.00	-2.00	0.00	180.00	
5,980.8	0.00	0.00	5,963.1	314.0	11.0	0.00	0.00	0.00	0.00	
6,799.0	90.00	179.63	6,484.0	-206.9	14.4	11.00	11.00	0.00	179.63	
6,899.1	90.00	179.63	6,484.0	-307.0	15.0	0.00	0.00	0.00	0.00	
6,902.0	90.00	179.66	6,484.0	-309.9	15.0	1.00	0.00	1.00	90.00	
11,083.8	90.00	179.66	6,484.0	-4,491.5	39.8	0.00	0.00	0.00	0.00	BHL 470'FSL & 260'

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Project:</b>	SEC.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site:</b>	North Platte Federal 31-22 Pad	<b>North Reference:</b>	True
	Sec.22-T5N-R63W		
<b>Well:</b>	North Platte Federal K-O-22HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #4 (1-8-13)		

Planned 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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
HARDLINE BH 460' - HARDLINE SH 460' - SECTIONLINE 324'N OF SHL									
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
KOP #1									
1,300.0	2.00	2.01	1,300.0	1.7	0.1	-1.7	2.00	2.00	0.00
1,400.0	4.00	2.01	1,399.8	7.0	0.2	-7.0	2.00	2.00	0.00
1,500.0	6.00	2.01	1,499.5	15.7	0.5	-15.7	2.00	2.00	0.00
1,536.4	6.73	2.01	1,535.6	19.7	0.7	-19.7	2.00	2.00	0.00
1,600.0	6.73	2.01	1,598.8	27.2	1.0	-27.2	0.00	0.00	0.00
1,700.0	6.73	2.01	1,698.1	38.9	1.4	-38.9	0.00	0.00	0.00
1,800.0	6.73	2.01	1,797.4	50.6	1.8	-50.6	0.00	0.00	0.00
1,900.0	6.73	2.01	1,896.7	62.3	2.2	-62.3	0.00	0.00	0.00
2,000.0	6.73	2.01	1,996.0	74.0	2.6	-74.0	0.00	0.00	0.00
2,100.0	6.73	2.01	2,095.3	85.7	3.0	-85.7	0.00	0.00	0.00
2,200.0	6.73	2.01	2,194.7	97.4	3.4	-97.4	0.00	0.00	0.00
2,300.0	6.73	2.01	2,294.0	109.1	3.8	-109.1	0.00	0.00	0.00
2,400.0	6.73	2.01	2,393.3	120.8	4.2	-120.8	0.00	0.00	0.00
2,500.0	6.73	2.01	2,492.6	132.5	4.6	-132.5	0.00	0.00	0.00
2,600.0	6.73	2.01	2,591.9	144.3	5.1	-144.2	0.00	0.00	0.00
2,700.0	6.73	2.01	2,691.2	156.0	5.5	-155.9	0.00	0.00	0.00
2,800.0	6.73	2.01	2,790.5	167.7	5.9	-167.6	0.00	0.00	0.00
2,900.0	6.73	2.01	2,889.8	179.4	6.3	-179.3	0.00	0.00	0.00
3,000.0	6.73	2.01	2,989.1	191.1	6.7	-191.0	0.00	0.00	0.00
3,100.0	6.73	2.01	3,088.5	202.8	7.1	-202.7	0.00	0.00	0.00
3,200.0	6.73	2.01	3,187.8	214.5	7.5	-214.4	0.00	0.00	0.00
3,300.0	6.73	2.01	3,287.1	226.2	7.9	-226.1	0.00	0.00	0.00
3,400.0	6.73	2.01	3,386.4	237.9	8.3	-237.8	0.00	0.00	0.00
3,500.0	6.73	2.01	3,485.7	249.6	8.7	-249.5	0.00	0.00	0.00
3,600.0	6.73	2.01	3,585.0	261.3	9.2	-261.3	0.00	0.00	0.00
3,700.0	6.73	2.01	3,684.3	273.1	9.6	-273.0	0.00	0.00	0.00
3,800.0	6.73	2.01	3,783.6	284.8	10.0	-284.7	0.00	0.00	0.00
3,881.3	6.73	2.01	3,864.4	294.3	10.3	-294.2	0.00	0.00	0.00
3,900.0	6.35	2.01	3,883.0	296.4	10.4	-296.3	2.00	-2.00	0.00
4,000.0	4.35	2.01	3,982.5	305.7	10.7	-305.6	2.00	-2.00	0.00
4,100.0	2.35	2.01	4,082.3	311.6	10.9	-311.5	2.00	-2.00	0.00
4,200.0	0.35	2.01	4,182.3	313.9	11.0	-313.8	2.00	-2.00	0.00
4,217.7	0.00	0.00	4,200.0	314.0	11.0	-313.9	2.00	-2.00	0.00
4,300.0	0.00	0.00	4,282.3	314.0	11.0	-313.9	0.00	0.00	0.00
4,400.0	0.00	0.00	4,382.3	314.0	11.0	-313.9	0.00	0.00	0.00
4,500.0	0.00	0.00	4,482.3	314.0	11.0	-313.9	0.00	0.00	0.00
4,600.0	0.00	0.00	4,582.3	314.0	11.0	-313.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Project:</b>	SEC.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site:</b>	North Platte Federal 31-22 Pad	<b>North Reference:</b>	True
	Sec.22-T5N-R63W		
<b>Well:</b>	North Platte Federal K-O-22HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #4 (1-8-13)		

Planned 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)
4,700.0	0.00	0.00	4,682.3	314.0	11.0	-313.9	0.00	0.00	0.00
4,800.0	0.00	0.00	4,782.3	314.0	11.0	-313.9	0.00	0.00	0.00
4,900.0	0.00	0.00	4,882.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,982.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,082.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,182.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,282.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,382.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,482.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,582.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,682.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,782.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,882.3	314.0	11.0	-313.9	0.00	0.00	0.00
5,980.8	0.00	0.00	5,963.1	314.0	11.0	-313.9	0.00	0.00	0.00
<b>KOP #2</b>									
6,000.0	2.11	179.63	5,982.3	313.6	11.0	-313.5	10.99	10.99	0.00
6,100.0	13.11	179.63	6,081.3	300.4	11.1	-300.3	11.00	11.00	0.00
6,200.0	24.11	179.63	6,175.9	268.6	11.3	-268.5	11.00	11.00	0.00
6,300.0	35.11	179.63	6,262.7	219.2	11.6	-219.1	11.00	11.00	0.00
6,400.0	46.11	179.63	6,338.5	154.2	12.0	-154.1	11.00	11.00	0.00
6,500.0	57.11	179.63	6,400.5	76.0	12.5	-75.9	11.00	11.00	0.00
6,600.0	68.11	179.63	6,446.4	-12.7	13.1	12.8	11.00	11.00	0.00
6,700.0	79.11	179.63	6,474.6	-108.5	13.7	108.6	11.00	11.00	0.00
6,738.6	83.35	179.63	6,480.5	-146.5	14.0	146.7	11.00	11.00	0.00
<b>T1 470'FNL &amp; 2550'FEL</b>									
6,799.0	90.00	179.63	6,484.0	-206.9	14.4	207.0	11.00	11.00	0.00
<b>End of Build - NIOBRARA B BENCH TARGET</b>									
6,800.0	90.00	179.63	6,484.0	-207.9	14.4	208.0	0.00	0.00	0.00
6,899.1	90.00	179.63	6,484.0	-307.0	15.0	307.1	0.00	0.00	0.00
<b>7"</b>									
6,900.0	90.00	179.64	6,484.0	-307.9	15.0	308.0	0.95	0.00	0.95
6,902.0	90.00	179.66	6,484.0	-309.9	15.0	310.0	1.00	0.00	1.00
7,000.0	90.00	179.66	6,484.0	-407.9	15.6	408.0	0.00	0.00	0.00
7,100.0	90.00	179.66	6,484.0	-507.8	16.2	508.0	0.00	0.00	0.00
7,200.0	90.00	179.66	6,484.0	-607.8	16.8	608.0	0.00	0.00	0.00
7,300.0	90.00	179.66	6,484.0	-707.8	17.4	708.0	0.00	0.00	0.00
7,400.0	90.00	179.66	6,484.0	-807.8	18.0	808.0	0.00	0.00	0.00
7,500.0	90.00	179.66	6,484.0	-907.8	18.6	908.0	0.00	0.00	0.00
7,600.0	90.00	179.66	6,484.0	-1,007.8	19.2	1,008.0	0.00	0.00	0.00
7,700.0	90.00	179.66	6,484.0	-1,107.8	19.8	1,108.0	0.00	0.00	0.00
7,800.0	90.00	179.66	6,484.0	-1,207.8	20.3	1,208.0	0.00	0.00	0.00
7,900.0	90.00	179.66	6,484.0	-1,307.8	20.9	1,308.0	0.00	0.00	0.00
8,000.0	90.00	179.66	6,484.0	-1,407.8	21.5	1,408.0	0.00	0.00	0.00
8,100.0	90.00	179.66	6,484.0	-1,507.8	22.1	1,508.0	0.00	0.00	0.00
8,200.0	90.00	179.66	6,484.0	-1,607.8	22.7	1,608.0	0.00	0.00	0.00
8,300.0	90.00	179.66	6,484.0	-1,707.8	23.3	1,708.0	0.00	0.00	0.00
8,400.0	90.00	179.66	6,484.0	-1,807.8	23.9	1,808.0	0.00	0.00	0.00
8,500.0	90.00	179.66	6,484.0	-1,907.8	24.5	1,908.0	0.00	0.00	0.00
8,600.0	90.00	179.66	6,484.0	-2,007.8	25.1	2,008.0	0.00	0.00	0.00
8,700.0	90.00	179.66	6,484.0	-2,107.8	25.7	2,108.0	0.00	0.00	0.00
8,800.0	90.00	179.66	6,484.0	-2,207.8	26.3	2,208.0	0.00	0.00	0.00
8,900.0	90.00	179.66	6,484.0	-2,307.8	26.9	2,308.0	0.00	0.00	0.00
9,000.0	90.00	179.66	6,484.0	-2,407.8	27.5	2,408.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Project:</b>	SEC.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site:</b>	North Platte Federal 31-22 Pad	<b>North Reference:</b>	True
	Sec.22-T5N-R63W		
<b>Well:</b>	North Platte Federal K-O-22HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #4 (1-8-13)		

Planned 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)
9,100.0	90.00	179.66	6,484.0	-2,507.8	28.1	2,508.0	0.00	0.00	0.00
9,200.0	90.00	179.66	6,484.0	-2,607.8	28.7	2,608.0	0.00	0.00	0.00
9,300.0	90.00	179.66	6,484.0	-2,707.8	29.3	2,708.0	0.00	0.00	0.00
9,400.0	90.00	179.66	6,484.0	-2,807.8	29.8	2,808.0	0.00	0.00	0.00
9,500.0	90.00	179.66	6,484.0	-2,907.8	30.4	2,908.0	0.00	0.00	0.00
9,600.0	90.00	179.66	6,484.0	-3,007.8	31.0	3,008.0	0.00	0.00	0.00
9,700.0	90.00	179.66	6,484.0	-3,107.8	31.6	3,108.0	0.00	0.00	0.00
9,800.0	90.00	179.66	6,484.0	-3,207.8	32.2	3,208.0	0.00	0.00	0.00
9,900.0	90.00	179.66	6,484.0	-3,307.8	32.8	3,308.0	0.00	0.00	0.00
10,000.0	90.00	179.66	6,484.0	-3,407.8	33.4	3,408.0	0.00	0.00	0.00
10,100.0	90.00	179.66	6,484.0	-3,507.8	34.0	3,508.0	0.00	0.00	0.00
10,200.0	90.00	179.66	6,484.0	-3,607.8	34.6	3,608.0	0.00	0.00	0.00
10,300.0	90.00	179.66	6,484.0	-3,707.8	35.2	3,708.0	0.00	0.00	0.00
10,400.0	90.00	179.66	6,484.0	-3,807.8	35.8	3,808.0	0.00	0.00	0.00
10,500.0	90.00	179.66	6,484.0	-3,907.8	36.4	3,908.0	0.00	0.00	0.00
10,600.0	90.00	179.66	6,484.0	-4,007.8	37.0	4,008.0	0.00	0.00	0.00
10,700.0	90.00	179.66	6,484.0	-4,107.8	37.6	4,108.0	0.00	0.00	0.00
10,800.0	90.00	179.66	6,484.0	-4,207.8	38.2	4,208.0	0.00	0.00	0.00
10,900.0	90.00	179.66	6,484.0	-4,307.8	38.8	4,308.0	0.00	0.00	0.00
11,000.0	90.00	179.66	6,484.0	-4,407.8	39.3	4,408.0	0.00	0.00	0.00
11,083.8	90.00	179.66	6,484.0	-4,491.5	39.8	4,491.7	0.00	0.00	0.00
BHL 470'FSL & 2600'FEL									

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									
HARDLINE BH 460'	0.00	0.00	1.0	-4,501.5	-40.0	1,382,687.57	3,300,300.13	40.378869	-104.422073
- plan misses target center by 4501.7ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,382,687.57	3,300,300.13		
Point 2			1.0	0.0	400.0	1,382,692.44	3,300,700.09		
T1 470'FNL & 2550'FEL	0.00	0.00	6,484.0	-146.2	15.0	1,387,043.02	3,300,302.15	40.390824	-104.421875
- plan misses target center by 3.7ft at 6738.6ft MD (6480.5 TVD, -146.5 N, 14.0 E)									
- Point									
HARDLINE SH 460'	0.00	0.00	1.0	-136.0	-200.0	1,387,050.66	3,300,087.08	40.390852	-104.422647
- plan misses target center by 241.8ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,387,050.66	3,300,087.08		
Point 2			1.0	0.0	400.0	1,387,055.52	3,300,487.04		
SECTIONLINE 324'N	0.00	0.00	1.0	324.0	-200.0	1,387,510.57	3,300,081.49	40.392114	-104.422647
- plan misses target center by 380.8ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,387,510.57	3,300,081.49		
Point 2			1.0	0.0	400.0	1,387,515.43	3,300,481.44		
BHL 470'FSL & 2600'FEL	0.00	0.00	6,484.0	-4,491.5	39.8	1,382,698.50	3,300,379.84	40.378896	-104.421786
- plan hits target center									
- Point									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Project:</b>	SEC.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>North Reference:</b>	True
<b>Well:</b>	North Platte Federal K-O-22HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #4 (1-8-13)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,899.1	6,484.0	7"	7	7-1/2	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,799.0	6,484.0	NIOBRARA B BENCH TARGET		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,200.0	1,200.0	0.0	0.0	KOP #1	
5,980.8	5,963.1	314.0	11.0	KOP #2	
6,799.0	6,484.0	-206.9	14.4	End of Build	



# **BONANZA CREEK ENERGY OPERATING**

**SEC.22-T5N-R63W**

**North Platte Federal 31-22 Pad Sec.22-T5N-R63W**

**North Platte Federal K-O-22HNB**

**Wellbore #1**

**Plan #4 (1-8-13)**

## **Anticollision Report**

**08 January, 2013**





North Platte Federal 31-22 Pad Sec.22-T5N-R63W - North Platte Federal P-T-22HNB - Wellbore #1 - P													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)			
1,600.0	1,598.8	1,560.3	1,531.4	3.5	5.9	76.08	73.2	255.2	267.3	260.0	7.28	36.735		
1,700.0	1,698.1	1,657.2	1,625.0	3.8	6.5	78.08	79.2	279.3	290.5	282.7	7.80	37.261		
1,800.0	1,797.4	1,754.0	1,718.6	4.0	7.0	79.78	85.1	303.4	313.9	305.6	8.33	37.682		
1,900.0	1,896.7	1,850.8	1,812.2	4.3	7.5	81.25	91.0	327.5	337.6	328.7	8.88	38.019		
2,000.0	1,996.0	1,947.6	1,905.8	4.5	8.0	82.53	97.0	351.6	361.4	352.0	9.44	38.290		
2,100.0	2,095.3	2,044.4	1,999.4	4.8	8.6	83.65	102.9	375.6	385.4	375.4	10.01	38.508		
2,200.0	2,194.7	2,141.2	2,092.9	5.1	9.1	84.63	108.9	399.7	409.6	399.0	10.59	38.684		
2,300.0	2,294.0	2,238.1	2,186.5	5.4	9.6	85.51	114.8	423.8	433.8	422.6	11.17	38.827		
2,400.0	2,393.3	2,334.9	2,280.1	5.7	10.1	86.30	120.7	447.9	458.1	446.3	11.76	38.944		
2,500.0	2,492.6	2,431.7	2,373.7	6.0	10.7	87.00	126.7	472.0	482.5	470.1	12.36	39.040		
2,600.0	2,591.9	2,528.5	2,467.3	6.2	11.2	87.64	132.6	496.1	506.9	494.0	12.96	39.119		
2,700.0	2,691.2	2,625.3	2,560.9	6.5	11.7	88.22	138.6	520.1	531.4	517.9	13.56	39.184		
2,800.0	2,790.5	2,722.1	2,654.5	6.8	12.2	88.75	144.5	544.2	556.0	541.8	14.17	39.238		
2,900.0	2,889.8	2,819.0	2,748.0	7.1	12.8	89.23	150.4	568.3	580.6	565.8	14.78	39.283		
3,000.0	2,989.1	2,915.8	2,841.6	7.4	13.3	89.68	156.4	592.4	605.2	589.8	15.39	39.320		
3,100.0	3,088.5	3,012.6	2,935.2	7.7	13.8	90.09	162.3	616.5	629.9	613.9	16.01	39.351		
3,200.0	3,187.8	3,109.4	3,028.8	8.0	14.4	90.47	168.3	640.5	654.6	637.9	16.62	39.377		
3,300.0	3,287.1	3,206.2	3,122.4	8.3	14.9	90.82	174.2	664.6	679.3	662.0	17.24	39.399		
3,400.0	3,386.4	3,303.0	3,216.0	8.6	15.4	91.14	180.1	688.7	704.0	686.2	17.86	39.417		
3,500.0	3,485.7	3,399.9	3,309.6	8.9	15.9	91.45	186.1	712.8	728.8	710.3	18.48	39.432		
3,600.0	3,585.0	3,496.7	3,403.1	9.2	16.5	91.73	192.0	736.9	753.5	734.4	19.10	39.444		
3,700.0	3,684.3	3,593.5	3,496.7	9.5	17.0	92.00	197.9	761.0	778.3	758.6	19.73	39.454		
3,800.0	3,783.6	3,690.3	3,590.3	9.8	17.5	92.25	203.9	785.0	803.1	782.8	20.35	39.463		
3,881.3	3,864.4	3,769.0	3,666.4	10.1	18.0	92.44	208.7	804.6	823.3	802.4	20.86	39.468		
3,900.0	3,883.0	3,787.1	3,683.9	10.1	18.1	92.58	209.8	809.1	828.0	807.0	20.98	39.463		
4,000.0	3,982.5	3,884.0	3,777.6	10.3	18.6	93.14	215.8	833.2	852.7	831.1	21.57	39.534		
4,100.0	4,082.3	3,980.9	3,871.2	10.5	19.1	93.47	221.7	857.3	877.2	855.1	22.11	39.676		
4,200.0	4,182.3	4,077.7	3,964.8	10.7	19.7	93.57	227.6	881.4	901.6	879.0	22.60	39.891		
4,217.7	4,200.0	4,094.8	3,981.3	10.7	19.7	95.57	228.7	885.7	905.9	883.1	22.73	39.861		
4,300.0	4,282.3	4,174.4	4,058.2	10.9	20.2	95.14	233.6	905.5	925.8	902.8	23.07	40.137		
4,400.0	4,382.3	4,271.0	4,151.7	11.1	20.7	94.64	239.5	929.5	950.2	926.7	23.50	40.432		
4,500.0	4,482.3	4,367.7	4,245.1	11.2	21.2	94.16	245.4	953.5	974.6	950.7	23.94	40.715		
4,600.0	4,582.3	4,464.4	4,338.5	11.4	21.8	93.71	251.4	977.6	999.1	974.7	24.37	40.988		

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Project:</b>	SEC.22-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Reference Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	North Platte Federal K-O-22HNB	<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 #4 (1-8-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										North Platte Federal 31-22 Pad Sec.22-T5N-R63W - Perkins 23-22 (Exist.) - Wellbore #1 - Wellbore #1				Offset Site Error:		0.0 ft	
Survey Program: 7000-UNKNOWN														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)						
9,200.0	6,484.0	6,484.0	6,484.0	53.2	129.7	90.00	-3,076.6	-816.6	966.5	783.6	182.90	5.284					
9,300.0	6,484.0	6,484.0	6,484.0	55.1	129.7	90.00	-3,076.6	-816.6	922.7	737.9	184.75	4.994					
9,400.0	6,484.0	6,484.0	6,484.0	56.9	129.7	90.00	-3,076.6	-816.6	888.0	701.4	186.61	4.759					
9,500.0	6,484.0	6,484.0	6,484.0	58.8	129.7	90.00	-3,076.6	-816.6	863.6	675.2	188.48	4.582					
9,600.0	6,484.0	6,484.0	6,484.0	60.7	129.7	90.00	-3,076.6	-816.6	850.4	660.0	190.35	4.468					
9,663.7	6,484.0	6,484.0	6,484.0	61.9	129.7	90.00	-3,076.6	-816.6	848.0	656.4	191.54	4.427	CC, ES				
9,700.0	6,484.0	6,484.0	6,484.0	62.5	129.7	90.00	-3,076.6	-816.6	848.8	656.5	192.22	4.416	SF				
9,800.0	6,484.0	6,484.0	6,484.0	64.4	129.7	90.00	-3,076.6	-816.6	858.9	664.8	194.09	4.425					
9,900.0	6,484.0	6,484.0	6,484.0	66.3	129.7	90.00	-3,076.6	-816.6	880.3	684.3	195.97	4.492					
10,000.0	6,484.0	6,484.0	6,484.0	68.2	129.7	90.00	-3,076.6	-816.6	912.2	714.4	197.85	4.611					
10,100.0	6,484.0	6,484.0	6,484.0	70.1	129.7	90.00	-3,076.6	-816.6	953.6	753.9	199.73	4.775					

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Project:</b>	SEC.22-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Reference Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	North Platte Federal K-O-22HNB	<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 #4 (1-8-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		North Platte Federal 31-22 Pad Sec.22-T5N-R63W - Perkins 32-22 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program: 7000-UNKNOWN												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
7,600.0	6,484.0	6,484.0	6,484.0	24.9	129.7	-90.00	-1,721.3	693.4	981.6	827.0	154.63	6.349			
7,700.0	6,484.0	6,484.0	6,484.0	26.5	129.7	-90.00	-1,721.3	693.4	911.1	754.9	156.23	5.832			
7,800.0	6,484.0	6,484.0	6,484.0	28.2	129.7	-90.00	-1,721.3	693.4	846.5	688.7	157.87	5.362			
7,900.0	6,484.0	6,484.0	6,484.0	29.9	129.7	-90.00	-1,721.3	693.4	789.4	629.8	159.55	4.948			
8,000.0	6,484.0	6,484.0	6,484.0	31.6	129.7	-90.00	-1,721.3	693.4	741.4	580.1	161.26	4.598			
8,100.0	6,484.0	6,484.0	6,484.0	33.3	129.7	-90.00	-1,721.3	693.4	704.4	541.4	162.99	4.322			
8,200.0	6,484.0	6,484.0	6,484.0	35.1	129.7	-90.00	-1,721.3	693.4	680.2	515.5	164.73	4.129			
8,300.0	6,484.0	6,484.0	6,484.0	36.8	129.7	-90.00	-1,721.3	693.4	670.2	503.7	166.50	4.025			
8,317.5	6,484.0	6,484.0	6,484.0	37.1	129.7	-90.00	-1,721.3	693.4	670.0	503.2	166.81	4.016 CC, ES			
8,400.0	6,484.0	6,484.0	6,484.0	38.6	129.7	-90.00	-1,721.3	693.4	675.0	506.8	168.28	4.011 SF			
8,500.0	6,484.0	6,484.0	6,484.0	40.4	129.7	-90.00	-1,721.3	693.4	694.4	524.3	170.08	4.083			
8,600.0	6,484.0	6,484.0	6,484.0	42.2	129.7	-90.00	-1,721.3	693.4	727.1	555.2	171.88	4.230			
8,700.0	6,484.0	6,484.0	6,484.0	44.0	129.7	-90.00	-1,721.3	693.4	771.5	597.8	173.70	4.441			
8,800.0	6,484.0	6,484.0	6,484.0	45.8	129.7	-90.00	-1,721.3	693.4	825.6	650.1	175.53	4.704			
8,900.0	6,484.0	6,484.0	6,484.0	47.7	129.7	-90.00	-1,721.3	693.4	887.8	710.4	177.36	5.006			
9,000.0	6,484.0	6,484.0	6,484.0	49.5	129.7	-90.00	-1,721.3	693.4	956.4	777.2	179.20	5.337			

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Project:</b>	SEC.22-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Reference Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	North Platte Federal K-O-22HNB	<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 #4 (1-8-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design North Platte Federal 31-22 Pad Sec.22-T5N-R63W - Perkins 34-22 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program: 7000-UNKNOWN										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
10,300.0	6,484.0	6,484.0	6,484.0	73.8	129.7	-90.00	-4,504.7	484.5	914.8	711.3	203.51	4.495	
10,400.0	6,484.0	6,484.0	6,484.0	75.7	129.7	-90.00	-4,504.7	484.5	828.8	623.4	205.39	4.035	
10,500.0	6,484.0	6,484.0	6,484.0	77.6	129.7	-90.00	-4,504.7	484.5	746.4	539.1	207.28	3.601	
10,600.0	6,484.0	6,484.0	6,484.0	79.5	129.7	-90.00	-4,504.7	484.5	668.7	459.5	209.18	3.197	
10,700.0	6,484.0	6,484.0	6,484.0	81.4	129.7	-90.00	-4,504.7	484.5	597.7	386.6	211.07	2.832	
10,800.0	6,484.0	6,484.0	6,484.0	83.3	129.7	-90.00	-4,504.7	484.5	536.1	323.1	212.97	2.517	
10,900.0	6,484.0	6,484.0	6,484.0	85.2	129.7	-90.00	-4,504.7	484.5	487.3	272.4	214.86	2.268	
11,000.0	6,484.0	6,484.0	6,484.0	87.1	129.7	-90.00	-4,504.7	484.5	455.6	238.8	216.76	2.102	
11,083.8	6,484.0	6,484.0	6,484.0	88.7	129.7	-90.00	-4,504.7	484.5	444.9	226.5	218.35	2.037 CC, ES, SF	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Project:</b>	SEC.22-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Reference Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	North Platte Federal K-O-22HNB	<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 #4 (1-8-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4664.0ft (RKB - 15')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: North Platte Federal K-O-22HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.70°



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well North Platte Federal K-O-22HNB
<b>Project:</b>	SEC.22-T5N-R63W	<b>TVD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Reference Site:</b>	North Platte Federal 31-22 Pad Sec.22-T5N-R63W	<b>MD Reference:</b>	WELL @ 4664.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	North Platte Federal K-O-22HNB	<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 #4 (1-8-13)	<b>Offset TVD Reference:</b>	Offset Datum

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