

# BONANZA CREEK ENERGY OPERATING

Well Name: **LATHAM F-J-1HZ**

Surface Location: NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

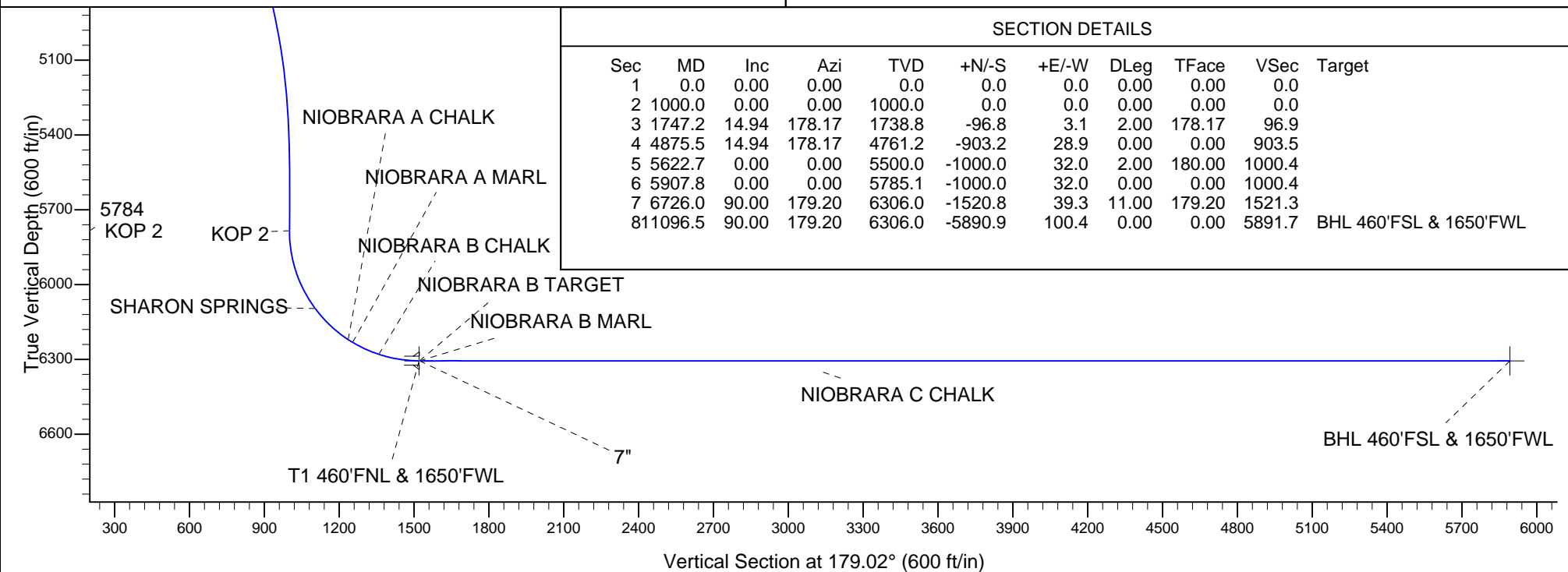
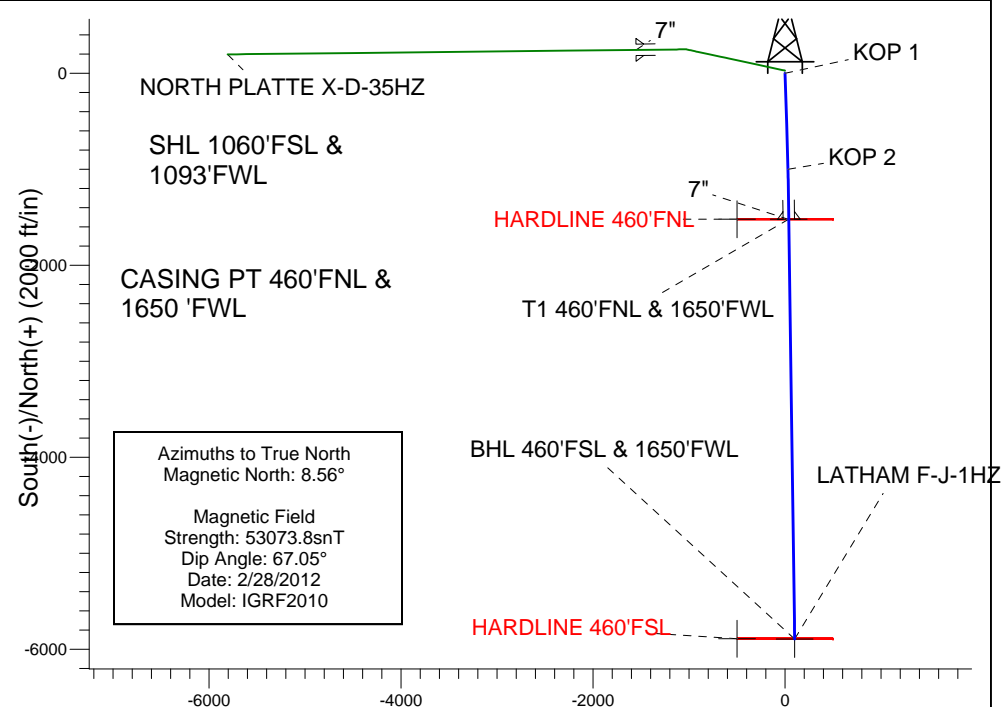
Ground Elevation: 4541.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1372969.73	3309304.85	40.351890	-104.390190	
KB 15' RKB @ 4556.0ft (KB 15')						

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HARDLINE 460'FSL	1.0	-5890.0	-500.0	40.335722	-104.391983	Polygon
HARDLINE 460'FNL	2.0	-1520.0	-500.0	40.347718	-104.391984	Polygon
BHL 460'FSL & 1650'FWL	6306.0	-5890.9	100.4	40.335720	-104.389830	Point
T1 460'FNL & 1650'FWL	6306.0	-1519.2	39.0	40.347720	-104.390050	Point

NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W  
LATHAM F-J-1HZ  
PLAN 1 (FEB 28 2012) PROG 2/23  
14:49, February 28 2012





**Directional**

## **BONANZA CREEK ENERGY OPERATING**

**SEC.36-T5N-R63W**

**NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W**

**LATHAM F-J-1HZ**

**Wellbore #1**

**Plan: PLAN 1 (FEB 28 2012) PROG 2/23**

## **Standard Planning Report**

**28 February, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Project:</b>	SEC.36-T5N-R63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site:</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W	<b>North Reference:</b>	True
<b>Well:</b>	LATHAM F-J-1HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (FEB 28 2012) PROG 2/23		

<b>Project</b>	SEC.36-T5N-R63W		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W											
Site Position:						Northing:			1,372,998.88 ft			Latitude:			40.351970		
From:			Lat/Long			Easting:			3,309,304.49 ft			Longitude:			-104.390190		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.72 °		

Well	LATHAM F-J-1HZ					
Well Position	+N/-S	-29.2 ft	Northing:	1,372,969.73 ft	Latitude:	40.351890
	+E/-W	0.0 ft	Easting:	3,309,304.85 ft	Longitude:	-104.390190
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,541.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2/28/2012	8.56	67.05	53,074

<b>Design</b>	PLAN 1 (FEB 28 2012) PROG 2/23			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	179.02

<b>Plan Sections</b>										
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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,747.2	14.94	178.17	1,738.8	-96.8	3.1	2.00	2.00	0.00	178.17	
4,875.5	14.94	178.17	4,761.2	-903.2	28.9	0.00	0.00	0.00	0.00	
5,622.7	0.00	0.00	5,500.0	-1,000.0	32.0	2.00	-2.00	0.00	180.00	
5,907.8	0.00	0.00	5,785.1	-1,000.0	32.0	0.00	0.00	0.00	0.00	
6,726.0	90.00	179.20	6,306.0	-1,520.8	39.3	11.00	11.00	0.00	179.20	
11,096.5	90.00	179.20	6,306.0	-5,890.9	100.4	0.00	0.00	0.00	0.00	BHL 460'FSL & 165

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Project:</b>	SEC.36-T5N-R63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site:</b>	NORTH PLATTE X-D-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	LATHAM F-J-1HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (FEB 28 2012) PROG 2/23		

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
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
<b>KOP 1</b>									
1,100.0	2.00	178.17	1,100.0	-1.7	0.1	1.7	2.00	2.00	0.00
1,200.0	4.00	178.17	1,199.8	-7.0	0.2	7.0	2.00	2.00	0.00
1,300.0	6.00	178.17	1,299.5	-15.7	0.5	15.7	2.00	2.00	0.00
1,400.0	8.00	178.17	1,398.7	-27.9	0.9	27.9	2.00	2.00	0.00
1,500.0	10.00	178.17	1,497.5	-43.5	1.4	43.5	2.00	2.00	0.00
1,600.0	12.00	178.17	1,595.6	-62.6	2.0	62.6	2.00	2.00	0.00
1,700.0	14.00	178.17	1,693.1	-85.1	2.7	85.1	2.00	2.00	0.00
1,747.2	14.94	178.17	1,738.8	-96.8	3.1	96.9	2.00	2.00	0.00
1,800.0	14.94	178.17	1,789.8	-110.5	3.5	110.5	0.00	0.00	0.00
1,900.0	14.94	178.17	1,886.4	-136.2	4.4	136.3	0.00	0.00	0.00
2,000.0	14.94	178.17	1,983.0	-162.0	5.2	162.1	0.00	0.00	0.00
2,100.0	14.94	178.17	2,079.6	-187.8	6.0	187.9	0.00	0.00	0.00
2,200.0	14.94	178.17	2,176.2	-213.6	6.8	213.6	0.00	0.00	0.00
2,300.0	14.94	178.17	2,272.9	-239.3	7.7	239.4	0.00	0.00	0.00
2,400.0	14.94	178.17	2,369.5	-265.1	8.5	265.2	0.00	0.00	0.00
2,500.0	14.94	178.17	2,466.1	-290.9	9.3	291.0	0.00	0.00	0.00
2,600.0	14.94	178.17	2,562.7	-316.7	10.1	316.8	0.00	0.00	0.00
2,700.0	14.94	178.17	2,659.3	-342.4	11.0	342.6	0.00	0.00	0.00
2,800.0	14.94	178.17	2,755.9	-368.2	11.8	368.3	0.00	0.00	0.00
2,900.0	14.94	178.17	2,852.6	-394.0	12.6	394.1	0.00	0.00	0.00
3,000.0	14.94	178.17	2,949.2	-419.8	13.4	419.9	0.00	0.00	0.00
3,100.0	14.94	178.17	3,045.8	-445.5	14.3	445.7	0.00	0.00	0.00
3,200.0	14.94	178.17	3,142.4	-471.3	15.1	471.5	0.00	0.00	0.00
3,300.0	14.94	178.17	3,239.0	-497.1	15.9	497.3	0.00	0.00	0.00
3,348.6	14.94	178.17	3,286.0	-509.6	16.3	509.8	0.00	0.00	0.00
<b>PARKMAN</b>									
3,400.0	14.94	178.17	3,335.7	-522.9	16.7	523.1	0.00	0.00	0.00
3,500.0	14.94	178.17	3,432.3	-548.6	17.6	548.8	0.00	0.00	0.00
3,600.0	14.94	178.17	3,528.9	-574.4	18.4	574.6	0.00	0.00	0.00
3,700.0	14.94	178.17	3,625.5	-600.2	19.2	600.4	0.00	0.00	0.00
3,800.0	14.94	178.17	3,722.1	-625.9	20.0	626.2	0.00	0.00	0.00
3,900.0	14.94	178.17	3,818.7	-651.7	20.9	652.0	0.00	0.00	0.00
4,000.0	14.94	178.17	3,915.4	-677.5	21.7	677.8	0.00	0.00	0.00
4,093.8	14.94	178.17	4,006.0	-701.7	22.5	702.0	0.00	0.00	0.00
<b>SUSSEX</b>									
4,100.0	14.94	178.17	4,012.0	-703.3	22.5	703.6	0.00	0.00	0.00
4,200.0	14.94	178.17	4,108.6	-729.0	23.3	729.3	0.00	0.00	0.00
4,300.0	14.94	178.17	4,205.2	-754.8	24.2	755.1	0.00	0.00	0.00
4,400.0	14.94	178.17	4,301.8	-780.6	25.0	780.9	0.00	0.00	0.00
4,500.0	14.94	178.17	4,398.4	-806.4	25.8	806.7	0.00	0.00	0.00
4,600.0	14.94	178.17	4,495.1	-832.1	26.6	832.5	0.00	0.00	0.00

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<b>Site:</b>	NORTH PLATTE X-D-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	SEC.36-5N-63W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	LATHAM F-J-1HZ		
<b>Design:</b>	Wellbore #1		
	PLAN 1 (FEB 28 2012) PROG 2/23		

### 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	14.94	178.17	4,591.7	-857.9	27.5	858.3	0.00	0.00	0.00
4,800.0	14.94	178.17	4,688.3	-883.7	28.3	884.1	0.00	0.00	0.00
4,875.5	14.94	178.17	4,761.2	-903.2	28.9	903.5	0.00	0.00	0.00
4,900.0	14.45	178.17	4,784.9	-909.4	29.1	909.7	2.00	-2.00	0.00
5,000.0	12.45	178.17	4,882.2	-932.6	29.8	933.0	2.00	-2.00	0.00
5,100.0	10.45	178.17	4,980.2	-952.5	30.5	952.9	2.00	-2.00	0.00
5,200.0	8.45	178.17	5,078.8	-968.9	31.0	969.3	2.00	-2.00	0.00
5,300.0	6.45	178.17	5,178.0	-981.9	31.4	982.2	2.00	-2.00	0.00
5,400.0	4.45	178.17	5,277.5	-991.4	31.7	991.7	2.00	-2.00	0.00
5,500.0	2.45	178.17	5,377.3	-997.4	31.9	997.8	2.00	-2.00	0.00
5,600.0	0.45	178.17	5,477.3	-999.9	32.0	1,000.3	2.00	-2.00	0.00
5,622.7	0.00	0.00	5,500.0	-1,000.0	32.0	1,000.4	2.00	-2.00	0.00
5,700.0	0.00	0.00	5,577.3	-1,000.0	32.0	1,000.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,677.3	-1,000.0	32.0	1,000.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,777.3	-1,000.0	32.0	1,000.4	0.00	0.00	0.00
5,907.0	0.00	0.00	5,784.3	-1,000.0	32.0	1,000.4	0.00	0.00	0.00
<b>KOP 2</b>									
5,907.8	0.00	0.00	5,785.1	-1,000.0	32.0	1,000.4	0.00	0.00	0.00
6,000.0	10.14	179.20	5,876.8	-1,008.1	32.1	1,008.5	11.00	11.00	0.00
6,100.0	21.14	179.20	5,973.0	-1,035.0	32.5	1,035.5	11.00	11.00	0.00
6,200.0	32.14	179.20	6,062.2	-1,079.8	33.1	1,080.2	11.00	11.00	0.00
6,240.9	36.64	179.20	6,096.0	-1,102.9	33.4	1,103.3	11.00	11.00	0.00
<b>SHARON SPRINGS</b>									
6,300.0	43.14	179.20	6,141.3	-1,140.8	34.0	1,141.2	11.00	11.00	0.00
6,400.0	54.14	179.20	6,207.3	-1,215.7	35.0	1,216.1	11.00	11.00	0.00
6,424.2	56.80	179.20	6,221.0	-1,235.7	35.3	1,236.1	11.00	11.00	0.00
<b>NIORARA A CHALK</b>									
6,445.0	59.09	179.20	6,232.0	-1,253.2	35.5	1,253.7	11.00	11.00	0.00
<b>NIORARA A MARL</b>									
6,500.0	65.14	179.20	6,257.7	-1,301.9	36.2	1,302.3	11.00	11.00	0.00
6,560.7	71.82	179.20	6,280.0	-1,358.3	37.0	1,358.8	11.00	11.00	0.00
<b>NIORARA B CHALK</b>									
6,600.0	76.14	179.20	6,290.8	-1,396.1	37.5	1,396.5	11.00	11.00	0.00
6,700.0	87.14	179.20	6,305.4	-1,494.8	38.9	1,495.3	11.00	11.00	0.00
6,724.3	89.82	179.20	6,306.0	-1,519.2	39.3	1,519.6	11.00	11.00	0.00
<b>T1 460'FNL &amp; 1650'FWL</b>									
6,726.0	90.00	179.20	6,306.0	-1,520.8	39.3	1,521.3	11.00	11.00	0.00
<b>NIORARA B TARGET - NIOBRARA B MARL - 7"</b>									
6,800.0	90.00	179.20	6,306.0	-1,594.8	40.3	1,595.3	0.00	0.00	0.00
6,900.0	90.00	179.20	6,306.0	-1,694.8	41.7	1,695.3	0.00	0.00	0.00
7,000.0	90.00	179.20	6,306.0	-1,794.8	43.1	1,795.3	0.00	0.00	0.00
7,100.0	90.00	179.20	6,306.0	-1,894.8	44.5	1,895.3	0.00	0.00	0.00
7,200.0	90.00	179.20	6,306.0	-1,994.8	45.9	1,995.3	0.00	0.00	0.00
7,300.0	90.00	179.20	6,306.0	-2,094.8	47.3	2,095.3	0.00	0.00	0.00
7,400.0	90.00	179.20	6,306.0	-2,194.7	48.7	2,195.3	0.00	0.00	0.00
7,500.0	90.00	179.20	6,306.0	-2,294.7	50.1	2,295.3	0.00	0.00	0.00
7,600.0	90.00	179.20	6,306.0	-2,394.7	51.5	2,395.3	0.00	0.00	0.00
7,700.0	90.00	179.20	6,306.0	-2,494.7	52.9	2,495.3	0.00	0.00	0.00
7,800.0	90.00	179.20	6,306.0	-2,594.7	54.3	2,595.3	0.00	0.00	0.00
7,900.0	90.00	179.20	6,306.0	-2,694.7	55.7	2,695.3	0.00	0.00	0.00
8,000.0	90.00	179.20	6,306.0	-2,794.7	57.1	2,795.3	0.00	0.00	0.00
8,100.0	90.00	179.20	6,306.0	-2,894.7	58.5	2,895.3	0.00	0.00	0.00

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)	
8,200.0	90.00	179.20	6,306.0	-2,994.7	59.9	2,995.3	0.00	0.00	0.00	
8,300.0	90.00	179.20	6,306.0	-3,094.7	61.3	3,095.3	0.00	0.00	0.00	
8,400.0	90.00	179.20	6,306.0	-3,194.7	62.7	3,195.3	0.00	0.00	0.00	
8,500.0	90.00	179.20	6,306.0	-3,294.6	64.1	3,295.3	0.00	0.00	0.00	
8,600.0	90.00	179.20	6,306.0	-3,394.6	65.5	3,395.3	0.00	0.00	0.00	
8,700.0	90.00	179.20	6,306.0	-3,494.6	66.9	3,495.3	0.00	0.00	0.00	
8,800.0	90.00	179.20	6,306.0	-3,594.6	68.3	3,595.3	0.00	0.00	0.00	
8,900.0	90.00	179.20	6,306.0	-3,694.6	69.7	3,695.3	0.00	0.00	0.00	
9,000.0	90.00	179.20	6,306.0	-3,794.6	71.1	3,795.3	0.00	0.00	0.00	
9,100.0	90.00	179.20	6,306.0	-3,894.6	72.5	3,895.3	0.00	0.00	0.00	
9,200.0	90.00	179.20	6,306.0	-3,994.6	73.9	3,995.3	0.00	0.00	0.00	
9,300.0	90.00	179.20	6,306.0	-4,094.6	75.3	4,095.3	0.00	0.00	0.00	
9,400.0	90.00	179.20	6,306.0	-4,194.6	76.7	4,195.2	0.00	0.00	0.00	
9,500.0	90.00	179.20	6,306.0	-4,294.5	78.1	4,295.2	0.00	0.00	0.00	
9,600.0	90.00	179.20	6,306.0	-4,394.5	79.4	4,395.2	0.00	0.00	0.00	
9,700.0	90.00	179.20	6,306.0	-4,494.5	80.8	4,495.2	0.00	0.00	0.00	
9,800.0	90.00	179.20	6,306.0	-4,594.5	82.2	4,595.2	0.00	0.00	0.00	
9,900.0	90.00	179.20	6,306.0	-4,694.5	83.6	4,695.2	0.00	0.00	0.00	
10,000.0	90.00	179.20	6,306.0	-4,794.5	85.0	4,795.2	0.00	0.00	0.00	
10,100.0	90.00	179.20	6,306.0	-4,894.5	86.4	4,895.2	0.00	0.00	0.00	
10,200.0	90.00	179.20	6,306.0	-4,994.5	87.8	4,995.2	0.00	0.00	0.00	
10,300.0	90.00	179.20	6,306.0	-5,094.5	89.2	5,095.2	0.00	0.00	0.00	
10,400.0	90.00	179.20	6,306.0	-5,194.5	90.6	5,195.2	0.00	0.00	0.00	
10,500.0	90.00	179.20	6,306.0	-5,294.4	92.0	5,295.2	0.00	0.00	0.00	
10,600.0	90.00	179.20	6,306.0	-5,394.4	93.4	5,395.2	0.00	0.00	0.00	
10,700.0	90.00	179.20	6,306.0	-5,494.4	94.8	5,495.2	0.00	0.00	0.00	
10,800.0	90.00	179.20	6,306.0	-5,594.4	96.2	5,595.2	0.00	0.00	0.00	
10,900.0	90.00	179.20	6,306.0	-5,694.4	97.6	5,695.2	0.00	0.00	0.00	
11,000.0	90.00	179.20	6,306.0	-5,794.4	99.0	5,795.2	0.00	0.00	0.00	
11,096.5	90.00	179.20	6,306.0	-5,890.9	100.4	5,891.7	0.00	0.00	0.00	
BHL 460'FSL & 1650'FWL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
6,726.0	6,306.0	7"		7	8-3/4

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Project:</b>	SEC.36-T5N-R63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site:</b>	NORTH PLATTE X-D-35HZ PAD	<b>North Reference:</b>	True
	SEC.36-5N-63W		
<b>Well:</b>	LATHAM F-J-1HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN 1 (FEB 28 2012) PROG 2/23		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,000.0	1,000.0	0.0	0.0	KOP 1	
5,907.0	5,784.3	-1,000.0	32.0	KOP 2	



## **Directional**

# **BONANZA CREEK ENERGY OPERATING**

**SEC.36-T5N-R63W**

**NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W**

**LATHAM F-J-1HZ**

**Wellbore #1**

**PLAN 1 (FEB 28 2012) PROG 2/23**

## **Anticollision Report**

**28 February, 2012**



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Project:</b>	SEC.36-T5N-R63W	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Reference Site:</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LATHAM F-J-1HZ	<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 (FEB 28 2012) PROG 2/23	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PLAN 1 (FEB 28 2012) PROG 2/23		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 500.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	2/28/2012		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,096.4	PLAN 1 (FEB 28 2012) PROG 2/23 (Wellb	MWD	MWD - Standard

<b>Summary</b>							
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>	
<b>Offset Well - Wellbore - Design</b>							
NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W							
NORTH PLATTE X-D-35HZ - Wellbore #1 - PLAN 1 (FE	1,000.0	999.0	29.2	24.9	6.830	CC, ES	
NORTH PLATTE X-D-35HZ - Wellbore #1 - PLAN 1 (FE	1,100.0	1,098.7	31.3	26.6	6.690	SF	

<b>Offset Design</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W - NORTH PLATTE X-D-35HZ - Wellbore #1 - PLAN 1												<b>Offset Site Error:</b>	0.0ft
<b>Survey Program:</b>	0-MWD												<b>Offset Well Error:</b>	0.0ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Distance</b>		<b>Minimum</b>		<b>Separation</b>		<b>Warning</b>				
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Separation (ft)</b>	<b>Factor</b>		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.2	0.0	29.2					
100.0	100.0	99.0	99.0	0.1	0.1	0.00	29.2	0.0	29.2	28.9	0.22	130.354		
200.0	200.0	199.0	199.0	0.3	0.3	0.00	29.2	0.0	29.2	28.5	0.67	43.379		
300.0	300.0	299.0	299.0	0.6	0.6	0.00	29.2	0.0	29.2	28.0	1.12	25.993		
400.0	400.0	399.0	399.0	0.8	0.8	0.00	29.2	0.0	29.2	27.6	1.57	18.556		
500.0	500.0	499.0	499.0	1.0	1.0	0.00	29.2	0.0	29.2	27.1	2.02	14.428		
600.0	600.0	599.0	599.0	1.2	1.2	0.00	29.2	0.0	29.2	26.7	2.47	11.802		
700.0	700.0	699.0	699.0	1.5	1.5	0.00	29.2	0.0	29.2	26.2	2.92	9.985		
800.0	800.0	799.0	799.0	1.7	1.7	0.00	29.2	0.0	29.2	25.8	3.37	8.653		
900.0	900.0	899.0	899.0	1.9	1.9	0.00	29.2	0.0	29.2	25.3	3.82	7.634		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	0.00	29.2	0.0	29.2	24.9	4.27	6.830	CC, ES	
1,100.0	1,100.0	1,098.7	1,098.7	2.3	2.3	178.68	29.5	-1.7	31.3	26.6	4.68	6.690	SF	
1,200.0	1,199.8	1,198.0	1,197.8	2.5	2.6	171.37	30.6	-6.7	38.2	33.1	5.06	7.548		
1,300.0	1,299.5	1,296.4	1,295.8	2.7	2.8	163.81	32.4	-15.0	50.6	45.1	5.46	9.257		
1,400.0	1,398.7	1,393.4	1,392.2	2.9	3.0	157.89	34.8	-26.4	68.6	62.7	5.88	11.666		
1,500.0	1,497.5	1,488.8	1,486.4	3.2	3.3	153.67	37.9	-40.7	92.2	85.8	6.32	14.589		
1,600.0	1,595.6	1,582.1	1,578.1	3.5	3.6	150.68	41.5	-57.6	121.1	114.3	6.78	17.851		
1,700.0	1,693.1	1,673.0	1,666.8	3.8	3.9	148.51	45.7	-76.9	155.1	147.9	7.28	21.307		
1,800.0	1,789.8	1,761.4	1,752.5	4.2	4.2	147.01	50.3	-98.4	193.7	185.9	7.83	24.747		
1,900.0	1,886.4	1,851.0	1,838.7	4.6	4.7	145.77	55.4	-122.2	234.3	225.9	8.43	27.790		
2,000.0	1,983.0	1,942.3	1,926.5	5.1	5.1	144.85	60.6	-146.6	275.1	266.0	9.06	30.369		
2,100.0	2,079.6	2,033.5	2,014.2	5.6	5.5	144.17	65.8	-171.0	315.9	306.2	9.71	32.551		
2,200.0	2,176.2	2,124.7	2,101.9	6.0	6.0	143.64	71.1	-195.4	356.8	346.4	10.37	34.402		
2,300.0	2,272.9	2,215.9	2,189.7	6.5	6.5	143.22	76.3	-219.9	397.7	386.6	11.05	35.981		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

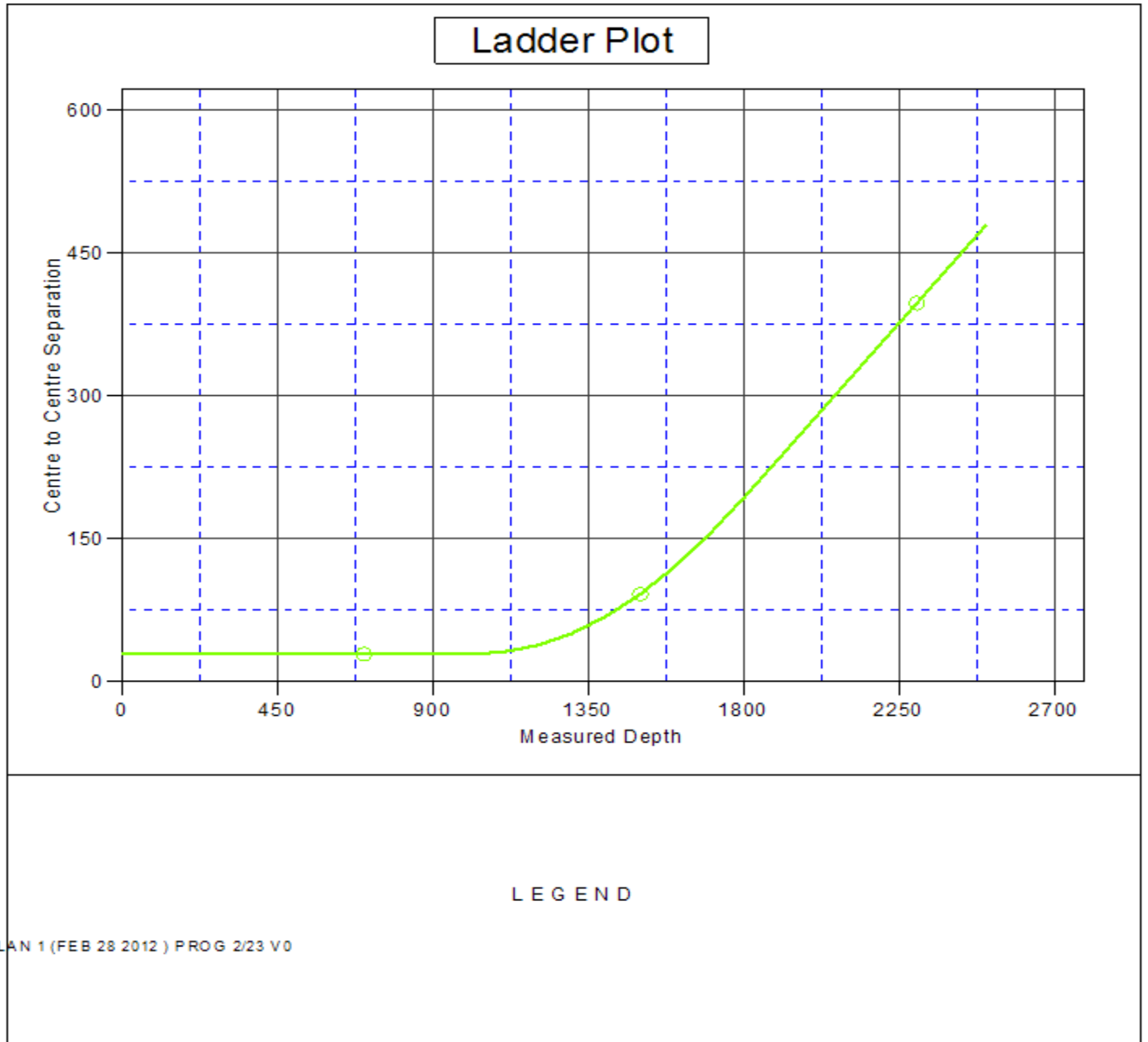
<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Project:</b>	SEC.36-T5N-R63W	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Reference Site:</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LATHAM F-J-1HZ	<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 (FEB 28 2012) PROG 2/23	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W - NORTH PLATTE X-D-35HZ - Wellbore #1 - PLAN												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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
2,400.0	2,369.5	2,307.2	2,277.4	7.0	7.0	142.88	81.6	-244.3	438.6	426.8	11.75	37.340	
2,500.0	2,466.1	2,398.4	2,365.2	7.5	7.5	142.59	86.8	-268.7	479.5	467.0	12.45	38.515	

<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Project:</b>	SEC.36-T5N-R63W	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Reference Site:</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LATHAM F-J-1HZ	<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 (FEB 28 2012) PROG 2/23	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB @ 4556.0ft (KB 15')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: LATHAM F-J-1HZ  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.72°



<b>Company:</b>	BONANZA CREEK ENERGY OPERATING	<b>Local Co-ordinate Reference:</b>	Well LATHAM F-J-1HZ
<b>Project:</b>	SEC.36-T5N-R63W	<b>TVD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Reference Site:</b>	NORTH PLATTE X-D-35HZ PAD SEC.36-5N-63W	<b>MD Reference:</b>	RKB @ 4556.0ft (KB 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LATHAM F-J-1HZ	<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 (FEB 28 2012) PROG 2/23	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to RKB @ 4556.0ft (KB 15')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: LATHAM F-J-1HZ  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.72°

