

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope 41-44-16HNB**

Surface Location: State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

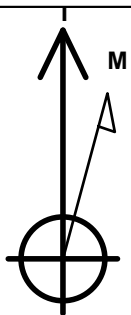
Ground Elevation: 4773.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392691.48	3327183.44	40.405390	-104.325110	

Original Well Elev WELL @ 4788.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FSL, 650'FEL	6409.0	-4207.8	972.1	Point
LANDING PT. 531'FNL & 654'FEL	6409.0	116.6	1077.8	Point



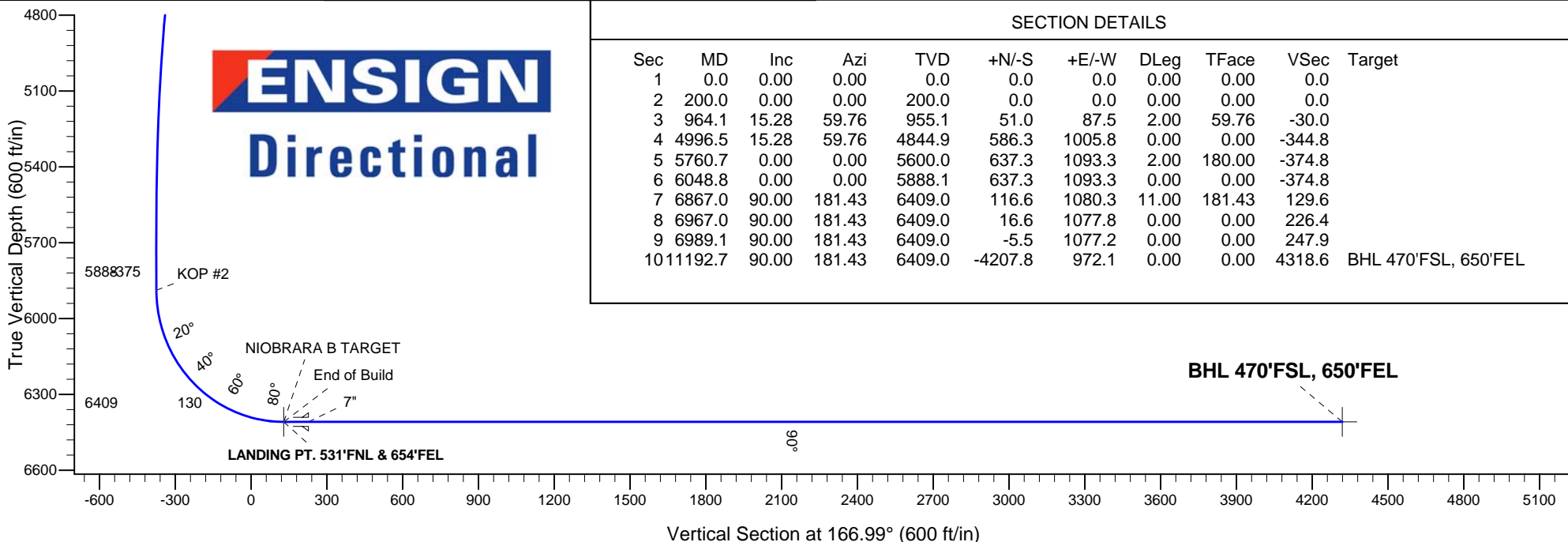
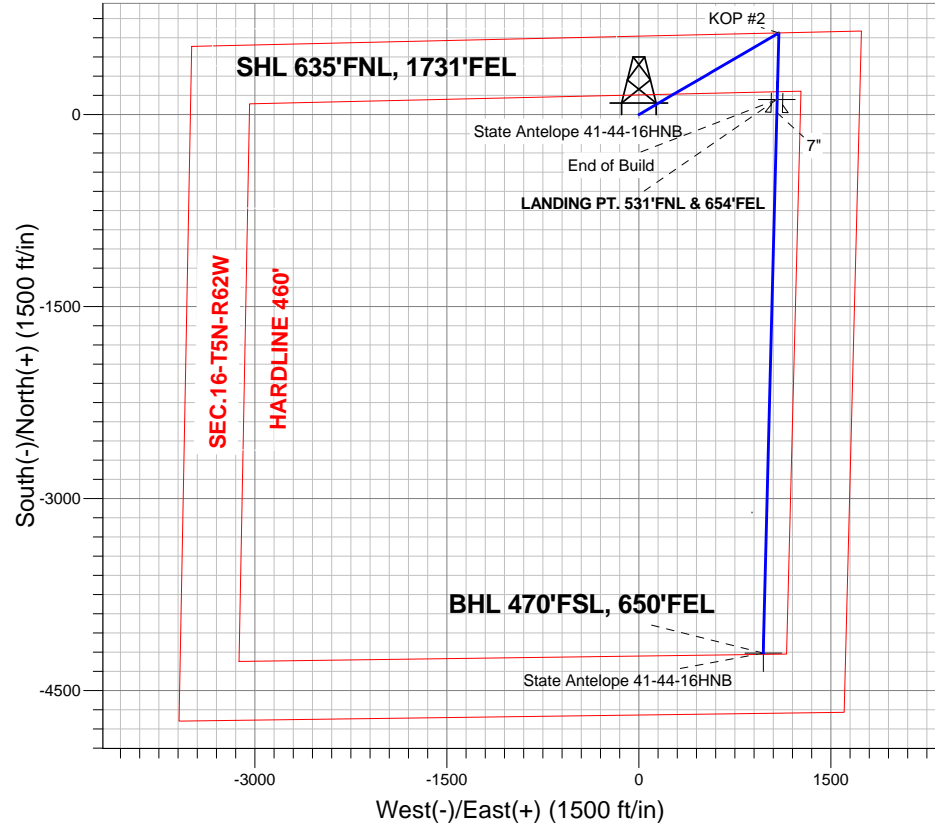
Azimuths to True North
 Magnetic North: 8.38°

Magnetic Field
 Strength: 52990.9nT
 Dip Angle: 67.06°
 Date: 4/3/2013
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP #1
5888.1	6048.8	KOP #2
6409.0	6867.0	End of Build

State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W
 State Antelope 41-44-16HNB
 Plan #1 (4-03-13)



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	964.1	15.28	59.76	955.1	51.0	87.5	2.00	59.76	-30.0	
4	4996.5	15.28	59.76	4844.9	586.3	1005.8	0.00	0.00	-344.8	
5	5760.7	0.00	0.00	5600.0	637.3	1093.3	2.00	180.00	-374.8	
6	6048.8	0.00	0.00	5888.1	637.3	1093.3	0.00	0.00	-374.8	
7	6867.0	90.00	181.43	6409.0	116.6	1080.3	11.00	181.43	129.6	
8	6967.0	90.00	181.43	6409.0	16.6	1077.8	0.00	0.00	226.4	
9	6989.1	90.00	181.43	6409.0	-5.5	1077.2	0.00	0.00	247.9	
10	11192.7	90.00	181.43	6409.0	-4207.8	972.1	0.00	0.00	4318.6	BHL 470'FSL, 650'FEL



Directional

BONANZA CREEK ENERGY OPERATING

SEC.16-T5N-R62W

State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W

State Antelope 41-44-16HNB

Wellbore #1

Plan: Plan #1 (4-03-13)

Standard Planning Report

04 April, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 41-44-16HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4788.0ft (Original Well Elev)
Project:	SEC.16-T5N-R62W	MD Reference:	WELL @ 4788.0ft (Original Well Elev)
Site:	State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W	North Reference:	True
Well:	State Antelope 41-44-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

Project	SEC.16-T5N-R62W, 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	State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W				
Site Position:		Northing:	1,392,691.48 ft	Latitude:	40.405390
From:	Lat/Long	Easting:	3,327,183.44 ft	Longitude:	-104.325110
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.76 °

Well	State Antelope 41-44-16HNB					
Well Position	+N/-S	0.0 ft	Northing:	1,392,691.48 ft	Latitude:	40.405390
	+E/-W	0.0 ft	Easting:	3,327,183.44 ft	Longitude:	-104.325110
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,773.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/3/2013	8.38	67.06	52,991

Design	Plan #1 (4-03-13)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	166.99

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
964.1	15.28	59.76	955.1	51.0	87.5	2.00	2.00	0.00	59.76	
4,996.5	15.28	59.76	4,844.9	586.3	1,005.8	0.00	0.00	0.00	0.00	
5,760.7	0.00	0.00	5,600.0	637.3	1,093.3	2.00	-2.00	0.00	180.00	
6,048.8	0.00	0.00	5,888.1	637.3	1,093.3	0.00	0.00	0.00	0.00	
6,867.0	90.00	181.43	6,409.0	116.6	1,080.3	11.00	11.00	0.00	181.43	
6,967.0	90.00	181.43	6,409.0	16.6	1,077.8	0.00	0.00	0.00	0.00	
6,989.1	90.00	181.43	6,409.0	-5.5	1,077.2	0.00	0.00	0.00	0.00	
11,192.7	90.00	181.43	6,409.0	-4,207.8	972.1	0.00	0.00	0.00	0.00	BHL 470'FSL, 650'F

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Well:	State Antelope 41-44-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	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
KOP #1									
240.0	0.80	59.76	240.0	0.1	0.2	-0.1	2.00	2.00	0.00
280.0	1.60	59.76	280.0	0.6	1.0	-0.3	2.00	2.00	0.00
320.0	2.40	59.76	320.0	1.3	2.2	-0.7	2.00	2.00	0.00
360.0	3.20	59.76	359.9	2.2	3.9	-1.3	2.00	2.00	0.00
400.0	4.00	59.76	399.8	3.5	6.0	-2.1	2.00	2.00	0.00
440.0	4.80	59.76	439.7	5.1	8.7	-3.0	2.00	2.00	0.00
480.0	5.60	59.76	479.6	6.9	11.8	-4.0	2.00	2.00	0.00
520.0	6.40	59.76	519.3	9.0	15.4	-5.3	2.00	2.00	0.00
560.0	7.20	59.76	559.1	11.4	19.5	-6.7	2.00	2.00	0.00
600.0	8.00	59.76	598.7	14.0	24.1	-8.3	2.00	2.00	0.00
640.0	8.80	59.76	638.3	17.0	29.1	-10.0	2.00	2.00	0.00
680.0	9.60	59.76	677.8	20.2	34.7	-11.9	2.00	2.00	0.00
720.0	10.40	59.76	717.1	23.7	40.7	-13.9	2.00	2.00	0.00
760.0	11.20	59.76	756.4	27.5	47.1	-16.2	2.00	2.00	0.00
800.0	12.00	59.76	795.6	31.5	54.1	-18.5	2.00	2.00	0.00
840.0	12.80	59.76	834.7	35.9	61.5	-21.1	2.00	2.00	0.00
880.0	13.60	59.76	873.6	40.5	69.4	-23.8	2.00	2.00	0.00
920.0	14.40	59.76	912.4	45.3	77.8	-26.7	2.00	2.00	0.00
960.0	15.20	59.76	951.1	50.5	86.6	-29.7	2.00	2.00	0.00
964.1	15.28	59.76	955.1	51.0	87.5	-30.0	2.00	2.00	0.00
1,000.0	15.28	59.76	989.7	55.8	95.7	-32.8	0.00	0.00	0.00
1,040.0	15.28	59.76	1,028.3	61.1	104.8	-35.9	0.00	0.00	0.00
1,080.0	15.28	59.76	1,066.9	66.4	113.9	-39.1	0.00	0.00	0.00
1,120.0	15.28	59.76	1,105.5	71.7	123.0	-42.2	0.00	0.00	0.00
1,160.0	15.28	59.76	1,144.0	77.0	132.1	-45.3	0.00	0.00	0.00
1,200.0	15.28	59.76	1,182.6	82.3	141.2	-48.4	0.00	0.00	0.00
1,240.0	15.28	59.76	1,221.2	87.6	150.3	-51.5	0.00	0.00	0.00
1,280.0	15.28	59.76	1,259.8	92.9	159.5	-54.7	0.00	0.00	0.00
1,320.0	15.28	59.76	1,298.4	98.3	168.6	-57.8	0.00	0.00	0.00
1,360.0	15.28	59.76	1,337.0	103.6	177.7	-60.9	0.00	0.00	0.00
1,400.0	15.28	59.76	1,375.6	108.9	186.8	-64.0	0.00	0.00	0.00
1,440.0	15.28	59.76	1,414.1	114.2	195.9	-67.2	0.00	0.00	0.00
1,480.0	15.28	59.76	1,452.7	119.5	205.0	-70.3	0.00	0.00	0.00
1,520.0	15.28	59.76	1,491.3	124.8	214.1	-73.4	0.00	0.00	0.00
1,560.0	15.28	59.76	1,529.9	130.1	223.2	-76.5	0.00	0.00	0.00
1,600.0	15.28	59.76	1,568.5	135.4	232.3	-79.7	0.00	0.00	0.00
1,640.0	15.28	59.76	1,607.1	140.7	241.4	-82.8	0.00	0.00	0.00
1,680.0	15.28	59.76	1,645.7	146.0	250.5	-85.9	0.00	0.00	0.00
1,720.0	15.28	59.76	1,684.2	151.4	259.6	-89.0	0.00	0.00	0.00
1,760.0	15.28	59.76	1,722.8	156.7	268.8	-92.1	0.00	0.00	0.00
1,800.0	15.28	59.76	1,761.4	162.0	277.9	-95.3	0.00	0.00	0.00
1,840.0	15.28	59.76	1,800.0	167.3	287.0	-98.4	0.00	0.00	0.00
1,880.0	15.28	59.76	1,838.6	172.6	296.1	-101.5	0.00	0.00	0.00
1,920.0	15.28	59.76	1,877.2	177.9	305.2	-104.6	0.00	0.00	0.00
1,960.0	15.28	59.76	1,915.8	183.2	314.3	-107.8	0.00	0.00	0.00
2,000.0	15.28	59.76	1,954.3	188.5	323.4	-110.9	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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)
2,040.0	15.28	59.76	1,992.9	193.8	332.5	-114.0	0.00	0.00	0.00
2,080.0	15.28	59.76	2,031.5	199.1	341.6	-117.1	0.00	0.00	0.00
2,120.0	15.28	59.76	2,070.1	204.4	350.7	-120.3	0.00	0.00	0.00
2,160.0	15.28	59.76	2,108.7	209.8	359.8	-123.4	0.00	0.00	0.00
2,200.0	15.28	59.76	2,147.3	215.1	369.0	-126.5	0.00	0.00	0.00
2,240.0	15.28	59.76	2,185.9	220.4	378.1	-129.6	0.00	0.00	0.00
2,280.0	15.28	59.76	2,224.4	225.7	387.2	-132.7	0.00	0.00	0.00
2,320.0	15.28	59.76	2,263.0	231.0	396.3	-135.9	0.00	0.00	0.00
2,360.0	15.28	59.76	2,301.6	236.3	405.4	-139.0	0.00	0.00	0.00
2,400.0	15.28	59.76	2,340.2	241.6	414.5	-142.1	0.00	0.00	0.00
2,440.0	15.28	59.76	2,378.8	246.9	423.6	-145.2	0.00	0.00	0.00
2,480.0	15.28	59.76	2,417.4	252.2	432.7	-148.4	0.00	0.00	0.00
2,520.0	15.28	59.76	2,456.0	257.5	441.8	-151.5	0.00	0.00	0.00
2,560.0	15.28	59.76	2,494.5	262.9	450.9	-154.6	0.00	0.00	0.00
2,600.0	15.28	59.76	2,533.1	268.2	460.0	-157.7	0.00	0.00	0.00
2,640.0	15.28	59.76	2,571.7	273.5	469.2	-160.8	0.00	0.00	0.00
2,680.0	15.28	59.76	2,610.3	278.8	478.3	-164.0	0.00	0.00	0.00
2,720.0	15.28	59.76	2,648.9	284.1	487.4	-167.1	0.00	0.00	0.00
2,760.0	15.28	59.76	2,687.5	289.4	496.5	-170.2	0.00	0.00	0.00
2,800.0	15.28	59.76	2,726.0	294.7	505.6	-173.3	0.00	0.00	0.00
2,840.0	15.28	59.76	2,764.6	300.0	514.7	-176.5	0.00	0.00	0.00
2,880.0	15.28	59.76	2,803.2	305.3	523.8	-179.6	0.00	0.00	0.00
2,920.0	15.28	59.76	2,841.8	310.6	532.9	-182.7	0.00	0.00	0.00
2,960.0	15.28	59.76	2,880.4	316.0	542.0	-185.8	0.00	0.00	0.00
3,000.0	15.28	59.76	2,919.0	321.3	551.1	-189.0	0.00	0.00	0.00
3,040.0	15.28	59.76	2,957.6	326.6	560.2	-192.1	0.00	0.00	0.00
3,080.0	15.28	59.76	2,996.1	331.9	569.3	-195.2	0.00	0.00	0.00
3,120.0	15.28	59.76	3,034.7	337.2	578.5	-198.3	0.00	0.00	0.00
3,160.0	15.28	59.76	3,073.3	342.5	587.6	-201.4	0.00	0.00	0.00
3,200.0	15.28	59.76	3,111.9	347.8	596.7	-204.6	0.00	0.00	0.00
3,240.0	15.28	59.76	3,150.5	353.1	605.8	-207.7	0.00	0.00	0.00
3,280.0	15.28	59.76	3,189.1	358.4	614.9	-210.8	0.00	0.00	0.00
3,320.0	15.28	59.76	3,227.7	363.7	624.0	-213.9	0.00	0.00	0.00
3,360.0	15.28	59.76	3,266.2	369.0	633.1	-217.1	0.00	0.00	0.00
3,400.0	15.28	59.76	3,304.8	374.4	642.2	-220.2	0.00	0.00	0.00
3,440.0	15.28	59.76	3,343.4	379.7	651.3	-223.3	0.00	0.00	0.00
3,480.0	15.28	59.76	3,382.0	385.0	660.4	-226.4	0.00	0.00	0.00
3,520.0	15.28	59.76	3,420.6	390.3	669.5	-229.6	0.00	0.00	0.00
3,560.0	15.28	59.76	3,459.2	395.6	678.7	-232.7	0.00	0.00	0.00
3,600.0	15.28	59.76	3,497.8	400.9	687.8	-235.8	0.00	0.00	0.00
3,640.0	15.28	59.76	3,536.3	406.2	696.9	-238.9	0.00	0.00	0.00
3,680.0	15.28	59.76	3,574.9	411.5	706.0	-242.0	0.00	0.00	0.00
3,720.0	15.28	59.76	3,613.5	416.8	715.1	-245.2	0.00	0.00	0.00
3,760.0	15.28	59.76	3,652.1	422.1	724.2	-248.3	0.00	0.00	0.00
3,800.0	15.28	59.76	3,690.7	427.5	733.3	-251.4	0.00	0.00	0.00
3,840.0	15.28	59.76	3,729.3	432.8	742.4	-254.5	0.00	0.00	0.00
3,880.0	15.28	59.76	3,767.9	438.1	751.5	-257.7	0.00	0.00	0.00
3,920.0	15.28	59.76	3,806.4	443.4	760.6	-260.8	0.00	0.00	0.00
3,960.0	15.28	59.76	3,845.0	448.7	769.7	-263.9	0.00	0.00	0.00
4,000.0	15.28	59.76	3,883.6	454.0	778.8	-267.0	0.00	0.00	0.00
4,040.0	15.28	59.76	3,922.2	459.3	788.0	-270.2	0.00	0.00	0.00
4,080.0	15.28	59.76	3,960.8	464.6	797.1	-273.3	0.00	0.00	0.00
4,120.0	15.28	59.76	3,999.4	469.9	806.2	-276.4	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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)
4,160.0	15.28	59.76	4,038.0	475.2	815.3	-279.5	0.00	0.00	0.00
4,200.0	15.28	59.76	4,076.5	480.6	824.4	-282.6	0.00	0.00	0.00
4,240.0	15.28	59.76	4,115.1	485.9	833.5	-285.8	0.00	0.00	0.00
4,280.0	15.28	59.76	4,153.7	491.2	842.6	-288.9	0.00	0.00	0.00
4,320.0	15.28	59.76	4,192.3	496.5	851.7	-292.0	0.00	0.00	0.00
4,360.0	15.28	59.76	4,230.9	501.8	860.8	-295.1	0.00	0.00	0.00
4,400.0	15.28	59.76	4,269.5	507.1	869.9	-298.3	0.00	0.00	0.00
4,440.0	15.28	59.76	4,308.1	512.4	879.0	-301.4	0.00	0.00	0.00
4,480.0	15.28	59.76	4,346.6	517.7	888.2	-304.5	0.00	0.00	0.00
4,520.0	15.28	59.76	4,385.2	523.0	897.3	-307.6	0.00	0.00	0.00
4,560.0	15.28	59.76	4,423.8	528.3	906.4	-310.8	0.00	0.00	0.00
4,600.0	15.28	59.76	4,462.4	533.6	915.5	-313.9	0.00	0.00	0.00
4,640.0	15.28	59.76	4,501.0	539.0	924.6	-317.0	0.00	0.00	0.00
4,680.0	15.28	59.76	4,539.6	544.3	933.7	-320.1	0.00	0.00	0.00
4,720.0	15.28	59.76	4,578.2	549.6	942.8	-323.2	0.00	0.00	0.00
4,760.0	15.28	59.76	4,616.7	554.9	951.9	-326.4	0.00	0.00	0.00
4,800.0	15.28	59.76	4,655.3	560.2	961.0	-329.5	0.00	0.00	0.00
4,840.0	15.28	59.76	4,693.9	565.5	970.1	-332.6	0.00	0.00	0.00
4,880.0	15.28	59.76	4,732.5	570.8	979.2	-335.7	0.00	0.00	0.00
4,920.0	15.28	59.76	4,771.1	576.1	988.4	-338.9	0.00	0.00	0.00
4,960.0	15.28	59.76	4,809.7	581.4	997.5	-342.0	0.00	0.00	0.00
4,996.5	15.28	59.76	4,844.9	586.3	1,005.8	-344.8	0.00	0.00	0.00
5,000.0	15.21	59.76	4,848.2	586.7	1,006.6	-345.1	2.00	-2.00	0.00
5,040.0	14.41	59.76	4,886.9	591.9	1,015.4	-348.1	2.00	-2.00	0.00
5,080.0	13.61	59.76	4,925.7	596.8	1,023.8	-351.0	2.00	-2.00	0.00
5,120.0	12.81	59.76	4,964.7	601.4	1,031.7	-353.7	2.00	-2.00	0.00
5,160.0	12.01	59.76	5,003.7	605.7	1,039.1	-356.3	2.00	-2.00	0.00
5,200.0	11.21	59.76	5,042.9	609.8	1,046.1	-358.6	2.00	-2.00	0.00
5,240.0	10.41	59.76	5,082.2	613.5	1,052.5	-360.9	2.00	-2.00	0.00
5,280.0	9.61	59.76	5,121.6	617.0	1,058.5	-362.9	2.00	-2.00	0.00
5,320.0	8.81	59.76	5,161.1	620.3	1,064.1	-364.8	2.00	-2.00	0.00
5,360.0	8.01	59.76	5,200.6	623.2	1,069.1	-366.6	2.00	-2.00	0.00
5,400.0	7.21	59.76	5,240.3	625.9	1,073.7	-368.1	2.00	-2.00	0.00
5,440.0	6.41	59.76	5,280.0	628.3	1,077.8	-369.5	2.00	-2.00	0.00
5,480.0	5.61	59.76	5,319.8	630.4	1,081.4	-370.8	2.00	-2.00	0.00
5,520.0	4.81	59.76	5,359.6	632.2	1,084.6	-371.8	2.00	-2.00	0.00
5,560.0	4.01	59.76	5,399.5	633.8	1,087.2	-372.8	2.00	-2.00	0.00
5,600.0	3.21	59.76	5,439.4	635.0	1,089.4	-373.5	2.00	-2.00	0.00
5,640.0	2.41	59.76	5,479.4	636.0	1,091.1	-374.1	2.00	-2.00	0.00
5,680.0	1.61	59.76	5,519.4	636.7	1,092.3	-374.5	2.00	-2.00	0.00
5,720.0	0.81	59.76	5,559.3	637.2	1,093.1	-374.8	2.00	-2.00	0.00
5,760.0	0.01	59.76	5,599.3	637.3	1,093.3	-374.8	2.00	-2.00	0.00
5,760.7	0.00	0.00	5,600.0	637.3	1,093.3	-374.8	2.00	-2.00	0.00
5,800.0	0.00	0.00	5,639.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
5,840.0	0.00	0.00	5,679.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
5,880.0	0.00	0.00	5,719.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
5,920.0	0.00	0.00	5,759.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
5,960.0	0.00	0.00	5,799.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
6,000.0	0.00	0.00	5,839.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
6,040.0	0.00	0.00	5,879.3	637.3	1,093.3	-374.8	0.00	0.00	0.00
6,048.8	0.00	0.00	5,888.1	637.3	1,093.3	-374.8	0.00	0.00	0.00
KOP #2									
6,080.0	3.43	181.43	5,919.3	636.4	1,093.3	-373.9	11.01	11.01	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 41-44-16HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4788.0ft (Original Well Elev)
Project:	SEC.16-T5N-R62W	MD Reference:	WELL @ 4788.0ft (Original Well Elev)
Site:	State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W	North Reference:	True
Well:	State Antelope 41-44-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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)
6,120.0	7.83	181.43	5,959.1	632.4	1,093.2	-370.1	11.00	11.00	0.00
6,160.0	12.23	181.43	5,998.5	625.5	1,093.0	-363.4	11.00	11.00	0.00
6,200.0	16.63	181.43	6,037.2	615.5	1,092.8	-353.7	11.00	11.00	0.00
6,240.0	21.03	181.43	6,075.1	602.6	1,092.4	-341.2	11.00	11.00	0.00
6,280.0	25.43	181.43	6,111.8	586.8	1,092.0	-326.0	11.00	11.00	0.00
6,320.0	29.83	181.43	6,147.3	568.3	1,091.6	-308.0	11.00	11.00	0.00
6,360.0	34.23	181.43	6,181.2	547.1	1,091.0	-287.5	11.00	11.00	0.00
6,400.0	38.63	181.43	6,213.3	523.3	1,090.5	-264.5	11.00	11.00	0.00
6,440.0	43.03	181.43	6,243.6	497.2	1,089.8	-239.1	11.00	11.00	0.00
6,480.0	47.43	181.43	6,271.7	468.8	1,089.1	-211.6	11.00	11.00	0.00
6,520.0	51.83	181.43	6,297.6	438.4	1,088.3	-182.1	11.00	11.00	0.00
6,560.0	56.23	181.43	6,321.1	406.0	1,087.5	-150.8	11.00	11.00	0.00
6,600.0	60.63	181.43	6,342.1	371.9	1,086.7	-117.8	11.00	11.00	0.00
6,640.0	65.03	181.43	6,360.3	336.4	1,085.8	-83.3	11.00	11.00	0.00
6,680.0	69.43	181.43	6,375.8	299.5	1,084.9	-47.6	11.00	11.00	0.00
6,720.0	73.83	181.43	6,388.4	261.6	1,083.9	-10.9	11.00	11.00	0.00
6,760.0	78.23	181.43	6,398.1	222.8	1,082.9	26.7	11.00	11.00	0.00
6,800.0	82.63	181.43	6,404.7	183.4	1,082.0	64.9	11.00	11.00	0.00
6,840.0	87.03	181.43	6,408.3	143.5	1,081.0	103.5	11.00	11.00	0.00
6,867.0	90.00	181.43	6,409.0	116.6	1,080.3	129.6	11.00	11.00	0.00
End of Build - NIOBRARA B TARGET									
6,880.0	90.00	181.43	6,409.0	103.6	1,080.0	142.2	0.00	0.00	0.00
6,920.0	90.00	181.43	6,409.0	63.6	1,079.0	180.9	0.00	0.00	0.00
6,960.0	90.00	181.43	6,409.0	23.6	1,078.0	219.7	0.00	0.00	0.00
6,967.0	90.00	181.43	6,409.0	16.6	1,077.8	226.4	0.00	0.00	0.00
7"									
6,989.1	90.00	181.43	6,409.0	-5.5	1,077.2	247.9	0.00	0.00	0.00
7,000.0	90.00	181.43	6,409.0	-16.4	1,077.0	258.4	0.00	0.00	0.00
7,040.0	90.00	181.43	6,409.0	-56.4	1,076.0	297.1	0.00	0.00	0.00
7,080.0	90.00	181.43	6,409.0	-96.4	1,075.0	335.9	0.00	0.00	0.00
7,120.0	90.00	181.43	6,409.0	-136.4	1,074.0	374.6	0.00	0.00	0.00
7,160.0	90.00	181.43	6,409.0	-176.3	1,073.0	413.4	0.00	0.00	0.00
7,200.0	90.00	181.43	6,409.0	-216.3	1,072.0	452.1	0.00	0.00	0.00
7,240.0	90.00	181.43	6,409.0	-256.3	1,071.0	490.8	0.00	0.00	0.00
7,280.0	90.00	181.43	6,409.0	-296.3	1,070.0	529.6	0.00	0.00	0.00
7,320.0	90.00	181.43	6,409.0	-336.3	1,069.0	568.3	0.00	0.00	0.00
7,360.0	90.00	181.43	6,409.0	-376.3	1,068.0	607.0	0.00	0.00	0.00
7,400.0	90.00	181.43	6,409.0	-416.3	1,067.0	645.8	0.00	0.00	0.00
7,440.0	90.00	181.43	6,409.0	-456.3	1,066.0	684.5	0.00	0.00	0.00
7,480.0	90.00	181.43	6,409.0	-496.2	1,065.0	723.2	0.00	0.00	0.00
7,520.0	90.00	181.43	6,409.0	-536.2	1,064.0	762.0	0.00	0.00	0.00
7,560.0	90.00	181.43	6,409.0	-576.2	1,063.0	800.7	0.00	0.00	0.00
7,600.0	90.00	181.43	6,409.0	-616.2	1,062.0	839.4	0.00	0.00	0.00
7,640.0	90.00	181.43	6,409.0	-656.2	1,061.0	878.2	0.00	0.00	0.00
7,680.0	90.00	181.43	6,409.0	-696.2	1,060.0	916.9	0.00	0.00	0.00
7,720.0	90.00	181.43	6,409.0	-736.2	1,059.0	955.7	0.00	0.00	0.00
7,760.0	90.00	181.43	6,409.0	-776.2	1,058.0	994.4	0.00	0.00	0.00
7,800.0	90.00	181.43	6,409.0	-816.1	1,057.0	1,033.1	0.00	0.00	0.00
7,840.0	90.00	181.43	6,409.0	-856.1	1,056.0	1,071.9	0.00	0.00	0.00
7,880.0	90.00	181.43	6,409.0	-896.1	1,055.0	1,110.6	0.00	0.00	0.00
7,920.0	90.00	181.43	6,409.0	-936.1	1,054.0	1,149.3	0.00	0.00	0.00
7,960.0	90.00	181.43	6,409.0	-976.1	1,053.0	1,188.1	0.00	0.00	0.00
8,000.0	90.00	181.43	6,409.0	-1,016.1	1,052.0	1,226.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 41-44-16HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4788.0ft (Original Well Elev)
Project:	SEC.16-T5N-R62W	MD Reference:	WELL @ 4788.0ft (Original Well Elev)
Site:	State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W	North Reference:	True
Well:	State Antelope 41-44-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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)
8,040.0	90.00	181.43	6,409.0	-1,056.1	1,051.0	1,265.5	0.00	0.00	0.00
8,080.0	90.00	181.43	6,409.0	-1,096.1	1,050.0	1,304.3	0.00	0.00	0.00
8,120.0	90.00	181.43	6,409.0	-1,136.0	1,049.0	1,343.0	0.00	0.00	0.00
8,160.0	90.00	181.43	6,409.0	-1,176.0	1,048.0	1,381.8	0.00	0.00	0.00
8,200.0	90.00	181.43	6,409.0	-1,216.0	1,047.0	1,420.5	0.00	0.00	0.00
8,240.0	90.00	181.43	6,409.0	-1,256.0	1,046.0	1,459.2	0.00	0.00	0.00
8,280.0	90.00	181.43	6,409.0	-1,296.0	1,045.0	1,498.0	0.00	0.00	0.00
8,320.0	90.00	181.43	6,409.0	-1,336.0	1,044.0	1,536.7	0.00	0.00	0.00
8,360.0	90.00	181.43	6,409.0	-1,376.0	1,043.0	1,575.4	0.00	0.00	0.00
8,400.0	90.00	181.43	6,409.0	-1,416.0	1,042.0	1,614.2	0.00	0.00	0.00
8,440.0	90.00	181.43	6,409.0	-1,455.9	1,041.0	1,652.9	0.00	0.00	0.00
8,480.0	90.00	181.43	6,409.0	-1,495.9	1,040.0	1,691.6	0.00	0.00	0.00
8,520.0	90.00	181.43	6,409.0	-1,535.9	1,039.0	1,730.4	0.00	0.00	0.00
8,560.0	90.00	181.43	6,409.0	-1,575.9	1,038.0	1,769.1	0.00	0.00	0.00
8,600.0	90.00	181.43	6,409.0	-1,615.9	1,037.0	1,807.9	0.00	0.00	0.00
8,640.0	90.00	181.43	6,409.0	-1,655.9	1,036.0	1,846.6	0.00	0.00	0.00
8,680.0	90.00	181.43	6,409.0	-1,695.9	1,035.0	1,885.3	0.00	0.00	0.00
8,720.0	90.00	181.43	6,409.0	-1,735.9	1,034.0	1,924.1	0.00	0.00	0.00
8,760.0	90.00	181.43	6,409.0	-1,775.8	1,033.0	1,962.8	0.00	0.00	0.00
8,800.0	90.00	181.43	6,409.0	-1,815.8	1,032.0	2,001.5	0.00	0.00	0.00
8,840.0	90.00	181.43	6,409.0	-1,855.8	1,031.0	2,040.3	0.00	0.00	0.00
8,880.0	90.00	181.43	6,409.0	-1,895.8	1,030.0	2,079.0	0.00	0.00	0.00
8,920.0	90.00	181.43	6,409.0	-1,935.8	1,029.0	2,117.7	0.00	0.00	0.00
8,960.0	90.00	181.43	6,409.0	-1,975.8	1,028.0	2,156.5	0.00	0.00	0.00
9,000.0	90.00	181.43	6,409.0	-2,015.8	1,027.0	2,195.2	0.00	0.00	0.00
9,040.0	90.00	181.43	6,409.0	-2,055.8	1,026.0	2,234.0	0.00	0.00	0.00
9,080.0	90.00	181.43	6,409.0	-2,095.7	1,025.0	2,272.7	0.00	0.00	0.00
9,120.0	90.00	181.43	6,409.0	-2,135.7	1,024.0	2,311.4	0.00	0.00	0.00
9,160.0	90.00	181.43	6,409.0	-2,175.7	1,023.0	2,350.2	0.00	0.00	0.00
9,200.0	90.00	181.43	6,409.0	-2,215.7	1,022.0	2,388.9	0.00	0.00	0.00
9,240.0	90.00	181.43	6,409.0	-2,255.7	1,021.0	2,427.6	0.00	0.00	0.00
9,280.0	90.00	181.43	6,409.0	-2,295.7	1,020.0	2,466.4	0.00	0.00	0.00
9,320.0	90.00	181.43	6,409.0	-2,335.7	1,019.0	2,505.1	0.00	0.00	0.00
9,360.0	90.00	181.43	6,409.0	-2,375.7	1,018.0	2,543.8	0.00	0.00	0.00
9,400.0	90.00	181.43	6,409.0	-2,415.7	1,017.0	2,582.6	0.00	0.00	0.00
9,440.0	90.00	181.43	6,409.0	-2,455.6	1,016.0	2,621.3	0.00	0.00	0.00
9,480.0	90.00	181.43	6,409.0	-2,495.6	1,015.0	2,660.1	0.00	0.00	0.00
9,520.0	90.00	181.43	6,409.0	-2,535.6	1,014.0	2,698.8	0.00	0.00	0.00
9,560.0	90.00	181.43	6,409.0	-2,575.6	1,013.0	2,737.5	0.00	0.00	0.00
9,600.0	90.00	181.43	6,409.0	-2,615.6	1,012.0	2,776.3	0.00	0.00	0.00
9,640.0	90.00	181.43	6,409.0	-2,655.6	1,011.0	2,815.0	0.00	0.00	0.00
9,680.0	90.00	181.43	6,409.0	-2,695.6	1,010.0	2,853.7	0.00	0.00	0.00
9,720.0	90.00	181.43	6,409.0	-2,735.6	1,009.0	2,892.5	0.00	0.00	0.00
9,760.0	90.00	181.43	6,409.0	-2,775.5	1,008.0	2,931.2	0.00	0.00	0.00
9,800.0	90.00	181.43	6,409.0	-2,815.5	1,007.0	2,969.9	0.00	0.00	0.00
9,840.0	90.00	181.43	6,409.0	-2,855.5	1,006.0	3,008.7	0.00	0.00	0.00
9,880.0	90.00	181.43	6,409.0	-2,895.5	1,005.0	3,047.4	0.00	0.00	0.00
9,920.0	90.00	181.43	6,409.0	-2,935.5	1,004.0	3,086.2	0.00	0.00	0.00
9,960.0	90.00	181.43	6,409.0	-2,975.5	1,003.0	3,124.9	0.00	0.00	0.00
10,000.0	90.00	181.43	6,409.0	-3,015.5	1,002.0	3,163.6	0.00	0.00	0.00
10,040.0	90.00	181.43	6,409.0	-3,055.5	1,001.0	3,202.4	0.00	0.00	0.00
10,080.0	90.00	181.43	6,409.0	-3,095.4	1,000.0	3,241.1	0.00	0.00	0.00
10,120.0	90.00	181.43	6,409.0	-3,135.4	999.0	3,279.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope 41-44-16HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4788.0ft (Original Well Elev)
Project:	SEC.16-T5N-R62W	MD Reference:	WELL @ 4788.0ft (Original Well Elev)
Site:	State Antelope 41-44-16HNB Pad Sec.16-T5N-R62W	North Reference:	True
Well:	State Antelope 41-44-16HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

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)
10,160.0	90.00	181.43	6,409.0	-3,175.4	998.0	3,318.6	0.00	0.00	0.00
10,200.0	90.00	181.43	6,409.0	-3,215.4	997.0	3,357.3	0.00	0.00	0.00
10,240.0	90.00	181.43	6,409.0	-3,255.4	996.0	3,396.0	0.00	0.00	0.00
10,280.0	90.00	181.43	6,409.0	-3,295.4	995.0	3,434.8	0.00	0.00	0.00
10,320.0	90.00	181.43	6,409.0	-3,335.4	994.0	3,473.5	0.00	0.00	0.00
10,360.0	90.00	181.43	6,409.0	-3,375.4	993.0	3,512.3	0.00	0.00	0.00
10,400.0	90.00	181.43	6,409.0	-3,415.3	992.0	3,551.0	0.00	0.00	0.00
10,440.0	90.00	181.43	6,409.0	-3,455.3	991.0	3,589.7	0.00	0.00	0.00
10,480.0	90.00	181.43	6,409.0	-3,495.3	990.0	3,628.5	0.00	0.00	0.00
10,520.0	90.00	181.43	6,409.0	-3,535.3	989.0	3,667.2	0.00	0.00	0.00
10,560.0	90.00	181.43	6,409.0	-3,575.3	988.0	3,705.9	0.00	0.00	0.00
10,600.0	90.00	181.43	6,409.0	-3,615.3	987.0	3,744.7	0.00	0.00	0.00
10,640.0	90.00	181.43	6,409.0	-3,655.3	986.0	3,783.4	0.00	0.00	0.00
10,680.0	90.00	181.43	6,409.0	-3,695.3	985.0	3,822.1	0.00	0.00	0.00
10,720.0	90.00	181.43	6,409.0	-3,735.2	984.0	3,860.9	0.00	0.00	0.00
10,760.0	90.00	181.43	6,409.0	-3,775.2	983.0	3,899.6	0.00	0.00	0.00
10,800.0	90.00	181.43	6,409.0	-3,815.2	982.0	3,938.4	0.00	0.00	0.00
10,840.0	90.00	181.43	6,409.0	-3,855.2	981.0	3,977.1	0.00	0.00	0.00
10,880.0	90.00	181.43	6,409.0	-3,895.2	980.0	4,015.8	0.00	0.00	0.00
10,920.0	90.00	181.43	6,409.0	-3,935.2	979.0	4,054.6	0.00	0.00	0.00
10,960.0	90.00	181.43	6,409.0	-3,975.2	978.0	4,093.3	0.00	0.00	0.00
11,000.0	90.00	181.43	6,409.0	-4,015.2	977.0	4,132.0	0.00	0.00	0.00
11,040.0	90.00	181.43	6,409.0	-4,055.1	976.0	4,170.8	0.00	0.00	0.00
11,080.0	90.00	181.43	6,409.0	-4,095.1	975.0	4,209.5	0.00	0.00	0.00
11,120.0	90.00	181.43	6,409.0	-4,135.1	974.0	4,248.2	0.00	0.00	0.00
11,160.0	90.00	181.43	6,409.0	-4,175.1	973.0	4,287.0	0.00	0.00	0.00
11,192.7	90.00	181.43	6,409.0	-4,207.8	972.1	4,318.6	0.00	0.00	0.00

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,967.0	6,409.0	7"	7	8-3/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,867.0	6,409.0	NIOBRARA B TARGET		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP #1
6,048.8	5,888.1	637.3	1,093.3	KOP #2
6,867.0	6,409.0	116.6	1,080.3	End of Build