

BONANZA CREEK ENERGY OPERATING

Well Name: **State Antelope F-J-30HNB**

Surface Location: State Antelope F-J-30HNB Pad Sec.30-T5N-R62W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

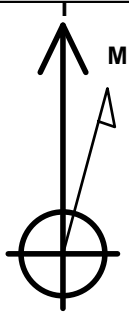
Ground Elevation: 4609.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1381792.79	3314719.68	40.375920	-104.370360	

RKB -15' WELL @ 4624.0ft (RKB -15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 470'FSL, 1275'FWL	6370.0	-4124.0	-64.1	Point
LANDING PT. 531'FNL & 1256'FWL	6370.0	47.4	16.7	Point



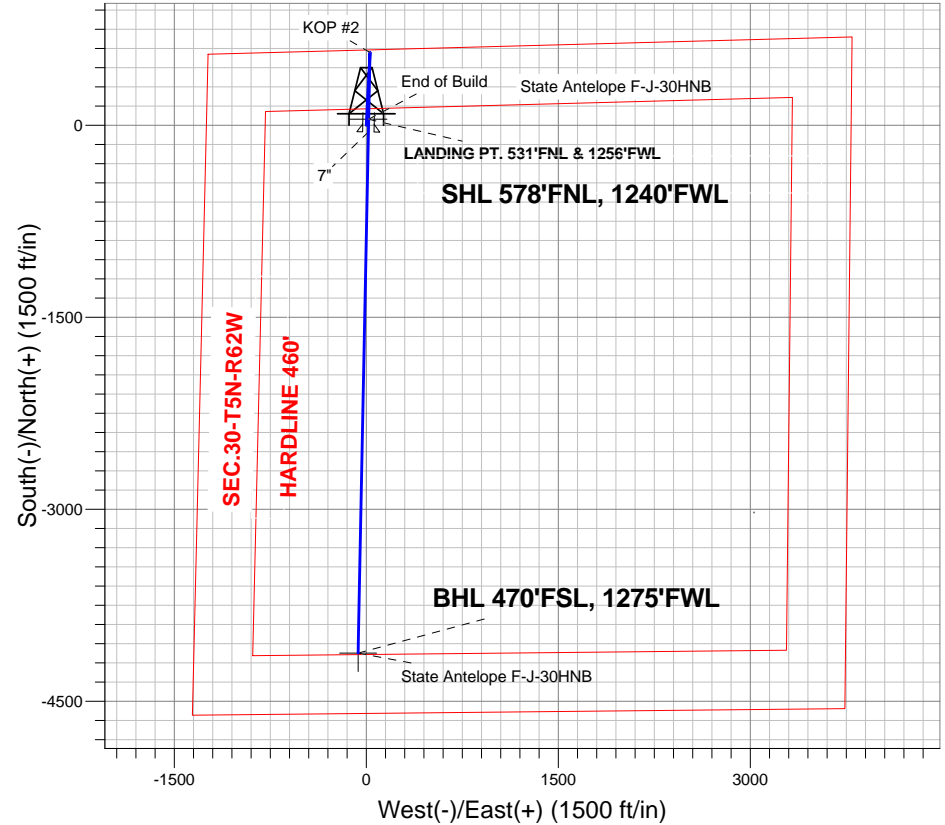
Azimuths to True North
Magnetic North: 8.41°

Magnetic Field
Strength: 52972.1nT
Dip Angle: 67.03°
Date: 4/3/2013
Model: IGRF2010

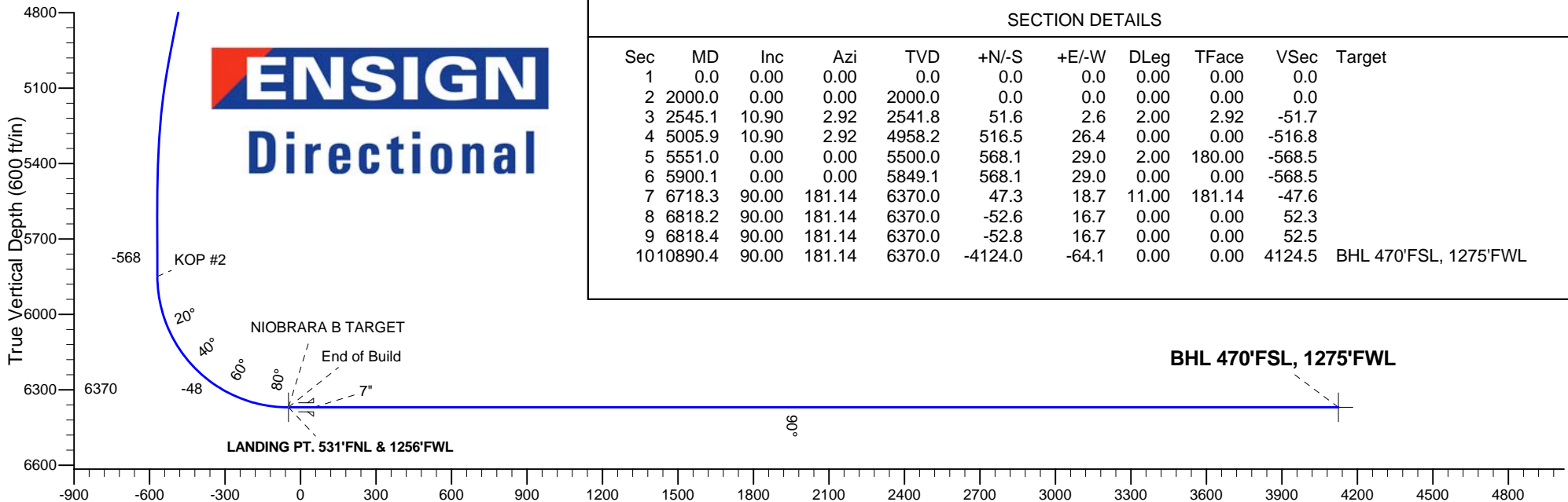
ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
5849.1	5900.1	KOP #2
6370.0	6718.3	End of Build

State Antelope F-J-30HNB Pad Sec.30-T5N-R62W
State Antelope F-J-30HNB
Plan #1 (4-03-13)



ENSIGN
Directional



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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2545.1	10.90	2.92	2541.8	51.6	2.6	2.00	2.92	-51.7	
4	5005.9	10.90	2.92	4958.2	516.5	26.4	0.00	0.00	-516.8	
5	5551.0	0.00	0.00	5500.0	568.1	29.0	2.00	180.00	-568.5	
6	5900.1	0.00	0.00	5849.1	568.1	29.0	0.00	0.00	-568.5	
7	6718.3	90.00	181.14	6370.0	47.3	18.7	11.00	181.14	-47.6	
8	6818.2	90.00	181.14	6370.0	-52.6	16.7	0.00	0.00	52.3	
9	6818.4	90.00	181.14	6370.0	-52.8	16.7	0.00	0.00	52.5	
10	10890.4	90.00	181.14	6370.0	-4124.0	-64.1	0.00	0.00	4124.5	BHL 470'FSL, 1275'FWL

Vertical Section at 180.89° (600 ft/in)



Directional

BONANZA CREEK ENERGY OPERATING

SEC.30-T5N-R62W

State Antelope F-J-30HNB Pad Sec.30-T5N-R62W

State Antelope F-J-30HNB

Wellbore #1

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

Standard Planning Report

03 April, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope F-J-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4624.0ft (RKB -15')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4624.0ft (RKB -15')
Site:	State Antelope F-J-30HNB Pad Sec.30-T5N-R62W	North Reference:	True
Well:	State Antelope F-J-30HNB	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-03-13)		

Project	SEC.30-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 F-J-30HNB Pad Sec.30-T5N-R62W											
Site Position:						Northing:			1,381,792.80ft			Latitude:			40.375920		
From:			Lat/Long			Easting:			3,314,719.68ft			Longitude:			-104.370360		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.73 °		

Well	State Antelope F-J-30HNB					
Well Position	+N-S	0.0 ft	Northing:	1,381,792.79 ft	Latitude:	40.375920
	+E-W	0.0 ft	Easting:	3,314,719.68 ft	Longitude:	-104.370360
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,609.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/3/2013	8.41	67.03	52,972

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	180.89

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,545.1	10.90	2.92	2,541.8	51.6	2.6	2.00	2.00	0.00	2.92	
5,005.9	10.90	2.92	4,958.2	516.5	26.4	0.00	0.00	0.00	0.00	
5,551.0	0.00	0.00	5,500.0	568.1	29.0	2.00	-2.00	0.00	180.00	
5,900.1	0.00	0.00	5,849.1	568.1	29.0	0.00	0.00	0.00	0.00	
6,718.3	90.00	181.14	6,370.0	47.3	18.7	11.00	11.00	0.00	181.14	
6,818.2	90.00	181.14	6,370.0	-52.6	16.7	0.00	0.00	0.00	0.00	
6,845.9	90.00	181.14	6,370.0	-80.2	16.2	0.00	0.00	0.00	0.00	
10,890.4	90.00	181.14	6,370.0	-4,124.0	-64.1	0.00	0.00	0.00	0.00	BHL 470'FSL, 1275

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Site:	State Antelope F-J-30HNB Pad	North Reference:	True
	Sec.30-T5N-R62W		
Well:	State Antelope F-J-30HNB	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
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	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
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	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
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	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
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	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
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	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
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	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
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	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
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	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
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
2,040.0	0.80	2.92	2,040.0	0.3	0.0	-0.3	2.00	2.00	0.00

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Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4624.0ft (RKB -15')
Site:	State Antelope F-J-30HNB Pad Sec.30-T5N-R62W	North Reference:	True
Well:	State Antelope F-J-30HNB	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)
2,080.0	1.60	2.92	2,080.0	1.1	0.1	-1.1	2.00	2.00	0.00
2,120.0	2.40	2.92	2,120.0	2.5	0.1	-2.5	2.00	2.00	0.00
2,160.0	3.20	2.92	2,159.9	4.5	0.2	-4.5	2.00	2.00	0.00
2,200.0	4.00	2.92	2,199.8	7.0	0.4	-7.0	2.00	2.00	0.00
2,240.0	4.80	2.92	2,239.7	10.0	0.5	-10.0	2.00	2.00	0.00
2,280.0	5.60	2.92	2,279.6	13.7	0.7	-13.7	2.00	2.00	0.00
2,320.0	6.40	2.92	2,319.3	17.8	0.9	-17.8	2.00	2.00	0.00
2,360.0	7.20	2.92	2,359.1	22.6	1.2	-22.6	2.00	2.00	0.00
2,400.0	8.00	2.92	2,398.7	27.8	1.4	-27.9	2.00	2.00	0.00
2,440.0	8.80	2.92	2,438.3	33.7	1.7	-33.7	2.00	2.00	0.00
2,480.0	9.60	2.92	2,477.8	40.1	2.0	-40.1	2.00	2.00	0.00
2,520.0	10.40	2.92	2,517.1	47.0	2.4	-47.0	2.00	2.00	0.00
2,545.1	10.90	2.92	2,541.8	51.6	2.6	-51.7	2.00	2.00	0.00
2,560.0	10.90	2.92	2,556.4	54.5	2.8	-54.5	0.00	0.00	0.00
2,600.0	10.90	2.92	2,595.7	62.0	3.2	-62.0	0.00	0.00	0.00
2,640.0	10.90	2.92	2,635.0	69.6	3.6	-69.6	0.00	0.00	0.00
2,680.0	10.90	2.92	2,674.3	77.1	3.9	-77.2	0.00	0.00	0.00
2,720.0	10.90	2.92	2,713.6	84.7	4.3	-84.7	0.00	0.00	0.00
2,760.0	10.90	2.92	2,752.8	92.2	4.7	-92.3	0.00	0.00	0.00
2,800.0	10.90	2.92	2,792.1	99.8	5.1	-99.9	0.00	0.00	0.00
2,840.0	10.90	2.92	2,831.4	107.3	5.5	-107.4	0.00	0.00	0.00
2,880.0	10.90	2.92	2,870.7	114.9	5.9	-115.0	0.00	0.00	0.00
2,920.0	10.90	2.92	2,909.9	122.5	6.3	-122.5	0.00	0.00	0.00
2,960.0	10.90	2.92	2,949.2	130.0	6.6	-130.1	0.00	0.00	0.00
3,000.0	10.90	2.92	2,988.5	137.6	7.0	-137.7	0.00	0.00	0.00
3,040.0	10.90	2.92	3,027.8	145.1	7.4	-145.2	0.00	0.00	0.00
3,080.0	10.90	2.92	3,067.1	152.7	7.8	-152.8	0.00	0.00	0.00
3,120.0	10.90	2.92	3,106.3	160.2	8.2	-160.3	0.00	0.00	0.00
3,160.0	10.90	2.92	3,145.6	167.8	8.6	-167.9	0.00	0.00	0.00
3,200.0	10.90	2.92	3,184.9	175.3	9.0	-175.5	0.00	0.00	0.00
3,240.0	10.90	2.92	3,224.2	182.9	9.3	-183.0	0.00	0.00	0.00
3,280.0	10.90	2.92	3,263.5	190.5	9.7	-190.6	0.00	0.00	0.00
3,320.0	10.90	2.92	3,302.7	198.0	10.1	-198.1	0.00	0.00	0.00
3,360.0	10.90	2.92	3,342.0	205.6	10.5	-205.7	0.00	0.00	0.00
3,400.0	10.90	2.92	3,381.3	213.1	10.9	-213.3	0.00	0.00	0.00
3,440.0	10.90	2.92	3,420.6	220.7	11.3	-220.8	0.00	0.00	0.00
3,480.0	10.90	2.92	3,459.8	228.2	11.7	-228.4	0.00	0.00	0.00
3,520.0	10.90	2.92	3,499.1	235.8	12.0	-235.9	0.00	0.00	0.00
3,560.0	10.90	2.92	3,538.4	243.3	12.4	-243.5	0.00	0.00	0.00
3,600.0	10.90	2.92	3,577.7	250.9	12.8	-251.1	0.00	0.00	0.00
3,640.0	10.90	2.92	3,617.0	258.5	13.2	-258.6	0.00	0.00	0.00
3,680.0	10.90	2.92	3,656.2	266.0	13.6	-266.2	0.00	0.00	0.00
3,720.0	10.90	2.92	3,695.5	273.6	14.0	-273.8	0.00	0.00	0.00
3,760.0	10.90	2.92	3,734.8	281.1	14.4	-281.3	0.00	0.00	0.00
3,800.0	10.90	2.92	3,774.1	288.7	14.7	-288.9	0.00	0.00	0.00
3,840.0	10.90	2.92	3,813.3	296.2	15.1	-296.4	0.00	0.00	0.00
3,880.0	10.90	2.92	3,852.6	303.8	15.5	-304.0	0.00	0.00	0.00
3,920.0	10.90	2.92	3,891.9	311.3	15.9	-311.6	0.00	0.00	0.00
3,960.0	10.90	2.92	3,931.2	318.9	16.3	-319.1	0.00	0.00	0.00
4,000.0	10.90	2.92	3,970.5	326.5	16.7	-326.7	0.00	0.00	0.00
4,040.0	10.90	2.92	4,009.7	334.0	17.1	-334.2	0.00	0.00	0.00
4,080.0	10.90	2.92	4,049.0	341.6	17.4	-341.8	0.00	0.00	0.00
4,120.0	10.90	2.92	4,088.3	349.1	17.8	-349.4	0.00	0.00	0.00

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	Sec.30-T5N-R62W		
Well:	State Antelope F-J-30HNB	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)
4,160.0	10.90	2.92	4,127.6	356.7	18.2	-356.9	0.00	0.00	0.00
4,200.0	10.90	2.92	4,166.8	364.2	18.6	-364.5	0.00	0.00	0.00
4,240.0	10.90	2.92	4,206.1	371.8	19.0	-372.0	0.00	0.00	0.00
4,280.0	10.90	2.92	4,245.4	379.3	19.4	-379.6	0.00	0.00	0.00
4,320.0	10.90	2.92	4,284.7	386.9	19.8	-387.2	0.00	0.00	0.00
4,360.0	10.90	2.92	4,324.0	394.5	20.1	-394.7	0.00	0.00	0.00
4,400.0	10.90	2.92	4,363.2	402.0	20.5	-402.3	0.00	0.00	0.00
4,440.0	10.90	2.92	4,402.5	409.6	20.9	-409.8	0.00	0.00	0.00
4,480.0	10.90	2.92	4,441.8	417.1	21.3	-417.4	0.00	0.00	0.00
4,520.0	10.90	2.92	4,481.1	424.7	21.7	-425.0	0.00	0.00	0.00
4,560.0	10.90	2.92	4,520.3	432.2	22.1	-432.5	0.00	0.00	0.00
4,600.0	10.90	2.92	4,559.6	439.8	22.5	-440.1	0.00	0.00	0.00
4,640.0	10.90	2.92	4,598.9	447.4	22.8	-447.7	0.00	0.00	0.00
4,680.0	10.90	2.92	4,638.2	454.9	23.2	-455.2	0.00	0.00	0.00
4,720.0	10.90	2.92	4,677.5	462.5	23.6	-462.8	0.00	0.00	0.00
4,760.0	10.90	2.92	4,716.7	470.0	24.0	-470.3	0.00	0.00	0.00
4,800.0	10.90	2.92	4,756.0	477.6	24.4	-477.9	0.00	0.00	0.00
4,840.0	10.90	2.92	4,795.3	485.1	24.8	-485.5	0.00	0.00	0.00
4,880.0	10.90	2.92	4,834.6	492.7	25.2	-493.0	0.00	0.00	0.00
4,920.0	10.90	2.92	4,873.9	500.2	25.5	-500.6	0.00	0.00	0.00
4,960.0	10.90	2.92	4,913.1	507.8	25.9	-508.1	0.00	0.00	0.00
5,000.0	10.90	2.92	4,952.4	515.4	26.3	-515.7	0.00	0.00	0.00
5,005.9	10.90	2.92	4,958.2	516.5	26.4	-516.8	0.00	0.00	0.00
5,040.0	10.22	2.92	4,991.7	522.7	26.7	-523.1	2.00	-2.00	0.00
5,080.0	9.42	2.92	5,031.1	529.5	27.0	-529.9	2.00	-2.00	0.00
5,120.0	8.62	2.92	5,070.6	535.8	27.4	-536.1	2.00	-2.00	0.00
5,160.0	7.82	2.92	5,110.2	541.5	27.6	-541.9	2.00	-2.00	0.00
5,200.0	7.02	2.92	5,149.9	546.7	27.9	-547.0	2.00	-2.00	0.00
5,240.0	6.22	2.92	5,189.6	551.3	28.1	-551.6	2.00	-2.00	0.00
5,280.0	5.42	2.92	5,229.4	555.3	28.3	-555.7	2.00	-2.00	0.00
5,320.0	4.62	2.92	5,269.3	558.8	28.5	-559.2	2.00	-2.00	0.00
5,360.0	3.82	2.92	5,309.2	561.7	28.7	-562.1	2.00	-2.00	0.00
5,400.0	3.02	2.92	5,349.1	564.1	28.8	-564.5	2.00	-2.00	0.00
5,440.0	2.22	2.92	5,389.0	566.0	28.9	-566.3	2.00	-2.00	0.00
5,480.0	1.42	2.92	5,429.0	567.2	29.0	-567.6	2.00	-2.00	0.00
5,520.0	0.62	2.92	5,469.0	567.9	29.0	-568.3	2.00	-2.00	0.00
5,551.0	0.00	0.00	5,500.0	568.1	29.0	-568.5	2.00	-2.00	0.00
5,560.0	0.00	0.00	5,509.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,549.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,640.0	0.00	0.00	5,589.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,680.0	0.00	0.00	5,629.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,720.0	0.00	0.00	5,669.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,760.0	0.00	0.00	5,709.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,749.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,840.0	0.00	0.00	5,789.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,829.0	568.1	29.0	-568.5	0.00	0.00	0.00
5,900.1	0.00	0.00	5,849.1	568.1	29.0	-568.5	0.00	0.00	0.00
KOP #2									
5,920.0	2.19	181.14	5,869.0	567.7	29.0	-568.1	10.99	10.99	0.00
5,960.0	6.59	181.14	5,908.9	564.7	28.9	-565.0	11.00	11.00	0.00
6,000.0	10.99	181.14	5,948.4	558.6	28.8	-558.9	11.00	11.00	0.00
6,040.0	15.39	181.14	5,987.3	549.4	28.6	-549.8	11.00	11.00	0.00
6,080.0	19.79	181.14	6,025.5	537.4	28.4	-537.7	11.00	11.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope F-J-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4624.0ft (RKB -15')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4624.0ft (RKB -15')
Site:	State Antelope F-J-30HNB Pad	North Reference:	True
	Sec.30-T5N-R62W		
Well:	State Antelope F-J-30HNB	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	24.19	181.14	6,062.5	522.4	28.1	-522.8	11.00	11.00	0.00
6,160.0	28.59	181.14	6,098.4	504.6	27.7	-505.0	11.00	11.00	0.00
6,200.0	32.99	181.14	6,132.7	484.1	27.3	-484.5	11.00	11.00	0.00
6,240.0	37.39	181.14	6,165.4	461.1	26.9	-461.5	11.00	11.00	0.00
6,280.0	41.79	181.14	6,196.2	435.6	26.4	-436.0	11.00	11.00	0.00
6,320.0	46.19	181.14	6,225.0	407.9	25.8	-408.2	11.00	11.00	0.00
6,360.0	50.59	181.14	6,251.6	378.0	25.2	-378.3	11.00	11.00	0.00
6,400.0	54.99	181.14	6,275.7	346.1	24.6	-346.5	11.00	11.00	0.00
6,440.0	59.39	181.14	6,297.4	312.5	23.9	-312.9	11.00	11.00	0.00
6,480.0	63.79	181.14	6,316.4	277.4	23.2	-277.7	11.00	11.00	0.00
6,520.0	68.19	181.14	6,332.7	240.8	22.5	-241.2	11.00	11.00	0.00
6,560.0	72.59	181.14	6,346.1	203.2	21.8	-203.5	11.00	11.00	0.00
6,600.0	76.99	181.14	6,356.6	164.6	21.0	-164.9	11.00	11.00	0.00
6,640.0	81.39	181.14	6,364.1	125.3	20.2	-125.6	11.00	11.00	0.00
6,680.0	85.79	181.14	6,368.6	85.6	19.4	-85.9	11.00	11.00	0.00
6,718.3	90.00	181.14	6,370.0	47.3	18.7	-47.6	11.00	11.00	0.00
End of Build - NIOBRARA B TARGET									
6,720.0	90.00	181.14	6,370.0	45.6	18.6	-45.9	0.00	0.00	0.00
6,760.0	90.00	181.14	6,370.0	5.6	17.9	-5.9	0.00	0.00	0.00
6,800.0	90.00	181.14	6,370.0	-34.4	17.1	34.1	0.00	0.00	0.00
6,818.2	90.00	181.14	6,370.0	-52.6	16.7	52.3	0.00	0.00	0.00
7"									
6,840.0	90.00	181.14	6,370.0	-74.4	16.3	74.1	0.00	0.00	0.00
6,845.9	90.00	181.14	6,370.0	-80.2	16.2	80.0	0.00	0.00	0.00
6,880.0	90.00	181.14	6,370.0	-114.3	15.5	114.1	0.00	0.00	0.00
6,920.0	90.00	181.14	6,370.0	-154.3	14.7	154.1	0.00	0.00	0.00
6,960.0	90.00	181.14	6,370.0	-194.3	13.9	194.1	0.00	0.00	0.00
7,000.0	90.00	181.14	6,370.0	-234.3	13.1	234.1	0.00	0.00	0.00
7,040.0	90.00	181.14	6,370.0	-274.3	12.3	274.1	0.00	0.00	0.00
7,080.0	90.00	181.14	6,370.0	-314.3	11.5	314.1	0.00	0.00	0.00
7,120.0	90.00	181.14	6,370.0	-354.3	10.7	354.1	0.00	0.00	0.00
7,160.0	90.00	181.14	6,370.0	-394.3	9.9	394.1	0.00	0.00	0.00
7,200.0	90.00	181.14	6,370.0	-434.3	9.1	434.1	0.00	0.00	0.00
7,240.0	90.00	181.14	6,370.0	-474.3	8.3	474.1	0.00	0.00	0.00
7,280.0	90.00	181.14	6,370.0	-514.3	7.6	514.1	0.00	0.00	0.00
7,320.0	90.00	181.14	6,370.0	-554.3	6.8	554.1	0.00	0.00	0.00
7,360.0	90.00	181.14	6,370.0	-594.2	6.0	594.1	0.00	0.00	0.00
7,400.0	90.00	181.14	6,370.0	-634.2	5.2	634.1	0.00	0.00	0.00
7,440.0	90.00	181.14	6,370.0	-674.2	4.4	674.1	0.00	0.00	0.00
7,480.0	90.00	181.14	6,370.0	-714.2	3.6	714.1	0.00	0.00	0.00
7,520.0	90.00	181.14	6,370.0	-754.2	2.8	754.1	0.00	0.00	0.00
7,560.0	90.00	181.14	6,370.0	-794.2	2.0	794.1	0.00	0.00	0.00
7,600.0	90.00	181.14	6,370.0	-834.2	1.2	834.1	0.00	0.00	0.00
7,640.0	90.00	181.14	6,370.0	-874.2	0.4	874.1	0.00	0.00	0.00
7,680.0	90.00	181.14	6,370.0	-914.2	-0.4	914.1	0.00	0.00	0.00
7,720.0	90.00	181.14	6,370.0	-954.2	-1.2	954.1	0.00	0.00	0.00
7,760.0	90.00	181.14	6,370.0	-994.2	-2.0	994.1	0.00	0.00	0.00
7,800.0	90.00	181.14	6,370.0	-1,034.2	-2.8	1,034.1	0.00	0.00	0.00
7,840.0	90.00	181.14	6,370.0	-1,074.2	-3.5	1,074.1	0.00	0.00	0.00
7,880.0	90.00	181.14	6,370.0	-1,114.1	-4.3	1,114.1	0.00	0.00	0.00
7,920.0	90.00	181.14	6,370.0	-1,154.1	-5.1	1,154.1	0.00	0.00	0.00
7,960.0	90.00	181.14	6,370.0	-1,194.1	-5.9	1,194.1	0.00	0.00	0.00
8,000.0	90.00	181.14	6,370.0	-1,234.1	-6.7	1,234.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope F-J-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4624.0ft (RKB -15')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4624.0ft (RKB -15')
Site:	State Antelope F-J-30HNB Pad	North Reference:	True
	Sec.30-T5N-R62W		
Well:	State Antelope F-J-30HNB	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	181.14	6,370.0	-1,274.1	-7.5	1,274.1	0.00	0.00	0.00
8,080.0	90.00	181.14	6,370.0	-1,314.1	-8.3	1,314.1	0.00	0.00	0.00
8,120.0	90.00	181.14	6,370.0	-1,354.1	-9.1	1,354.1	0.00	0.00	0.00
8,160.0	90.00	181.14	6,370.0	-1,394.1	-9.9	1,394.1	0.00	0.00	0.00
8,200.0	90.00	181.14	6,370.0	-1,434.1	-10.7	1,434.1	0.00	0.00	0.00
8,240.0	90.00	181.14	6,370.0	-1,474.1	-11.5	1,474.1	0.00	0.00	0.00
8,280.0	90.00	181.14	6,370.0	-1,514.1	-12.3	1,514.1	0.00	0.00	0.00
8,320.0	90.00	181.14	6,370.0	-1,554.1	-13.1	1,554.1	0.00	0.00	0.00
8,360.0	90.00	181.14	6,370.0	-1,594.1	-13.8	1,594.1	0.00	0.00	0.00
8,400.0	90.00	181.14	6,370.0	-1,634.0	-14.6	1,634.1	0.00	0.00	0.00
8,440.0	90.00	181.14	6,370.0	-1,674.0	-15.4	1,674.1	0.00	0.00	0.00
8,480.0	90.00	181.14	6,370.0	-1,714.0	-16.2	1,714.1	0.00	0.00	0.00
8,520.0	90.00	181.14	6,370.0	-1,754.0	-17.0	1,754.1	0.00	0.00	0.00
8,560.0	90.00	181.14	6,370.0	-1,794.0	-17.8	1,794.1	0.00	0.00	0.00
8,600.0	90.00	181.14	6,370.0	-1,834.0	-18.6	1,834.1	0.00	0.00	0.00
8,640.0	90.00	181.14	6,370.0	-1,874.0	-19.4	1,874.1	0.00	0.00	0.00
8,680.0	90.00	181.14	6,370.0	-1,914.0	-20.2	1,914.1	0.00	0.00	0.00
8,720.0	90.00	181.14	6,370.0	-1,954.0	-21.0	1,954.1	0.00	0.00	0.00
8,760.0	90.00	181.14	6,370.0	-1,994.0	-21.8	1,994.1	0.00	0.00	0.00
8,800.0	90.00	181.14	6,370.0	-2,034.0	-22.6	2,034.1	0.00	0.00	0.00
8,840.0	90.00	181.14	6,370.0	-2,074.0	-23.4	2,074.1	0.00	0.00	0.00
8,880.0	90.00	181.14	6,370.0	-2,114.0	-24.1	2,114.1	0.00	0.00	0.00
8,920.0	90.00	181.14	6,370.0	-2,153.9	-24.9	2,154.1	0.00	0.00	0.00
8,960.0	90.00	181.14	6,370.0	-2,193.9	-25.7	2,194.1	0.00	0.00	0.00
9,000.0	90.00	181.14	6,370.0	-2,233.9	-26.5	2,234.1	0.00	0.00	0.00
9,040.0	90.00	181.14	6,370.0	-2,273.9	-27.3	2,274.1	0.00	0.00	0.00
9,080.0	90.00	181.14	6,370.0	-2,313.9	-28.1	2,314.1	0.00	0.00	0.00
9,120.0	90.00	181.14	6,370.0	-2,353.9	-28.9	2,354.1	0.00	0.00	0.00
9,160.0	90.00	181.14	6,370.0	-2,393.9	-29.7	2,394.1	0.00	0.00	0.00
9,200.0	90.00	181.14	6,370.0	-2,433.9	-30.5	2,434.1	0.00	0.00	0.00
9,240.0	90.00	181.14	6,370.0	-2,473.9	-31.3	2,474.1	0.00	0.00	0.00
9,280.0	90.00	181.14	6,370.0	-2,513.9	-32.1	2,514.1	0.00	0.00	0.00
9,320.0	90.00	181.14	6,370.0	-2,553.9	-32.9	2,554.1	0.00	0.00	0.00
9,360.0	90.00	181.14	6,370.0	-2,593.9	-33.7	2,594.1	0.00	0.00	0.00
9,400.0	90.00	181.14	6,370.0	-2,633.8	-34.5	2,634.1	0.00	0.00	0.00
9,440.0	90.00	181.14	6,370.0	-2,673.8	-35.2	2,674.1	0.00	0.00	0.00
9,480.0	90.00	181.14	6,370.0	-2,713.8	-36.0	2,714.1	0.00	0.00	0.00
9,520.0	90.00	181.14	6,370.0	-2,753.8	-36.8	2,754.1	0.00	0.00	0.00
9,560.0	90.00	181.14	6,370.0	-2,793.8	-37.6	2,794.1	0.00	0.00	0.00
9,600.0	90.00	181.14	6,370.0	-2,833.8	-38.4	2,834.1	0.00	0.00	0.00
9,640.0	90.00	181.14	6,370.0	-2,873.8	-39.2	2,874.1	0.00	0.00	0.00
9,680.0	90.00	181.14	6,370.0	-2,913.8	-40.0	2,914.1	0.00	0.00	0.00
9,720.0	90.00	181.14	6,370.0	-2,953.8	-40.8	2,954.1	0.00	0.00	0.00
9,760.0	90.00	181.14	6,370.0	-2,993.8	-41.6	2,994.1	0.00	0.00	0.00
9,800.0	90.00	181.14	6,370.0	-3,033.8	-42.4	3,034.1	0.00	0.00	0.00
9,840.0	90.00	181.14	6,370.0	-3,073.8	-43.2	3,074.1	0.00	0.00	0.00
9,880.0	90.00	181.14	6,370.0	-3,113.8	-44.0	3,114.1	0.00	0.00	0.00
9,920.0	90.00	181.14	6,370.0	-3,153.7	-44.8	3,154.1	0.00	0.00	0.00
9,960.0	90.00	181.14	6,370.0	-3,193.7	-45.5	3,194.1	0.00	0.00	0.00
10,000.0	90.00	181.14	6,370.0	-3,233.7	-46.3	3,234.1	0.00	0.00	0.00
10,040.0	90.00	181.14	6,370.0	-3,273.7	-47.1	3,274.1	0.00	0.00	0.00
10,080.0	90.00	181.14	6,370.0	-3,313.7	-47.9	3,314.1	0.00	0.00	0.00
10,120.0	90.00	181.14	6,370.0	-3,353.7	-48.7	3,354.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Antelope F-J-30HNB
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	WELL @ 4624.0ft (RKB -15')
Project:	SEC.30-T5N-R62W	MD Reference:	WELL @ 4624.0ft (RKB -15')
Site:	State Antelope F-J-30HNB Pad	North Reference:	True
	Sec.30-T5N-R62W		
Well:	State Antelope F-J-30HNB	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	181.14	6,370.0	-3,393.7	-49.5	3,394.1	0.00	0.00	0.00
10,200.0	90.00	181.14	6,370.0	-3,433.7	-50.3	3,434.1	0.00	0.00	0.00
10,240.0	90.00	181.14	6,370.0	-3,473.7	-51.1	3,474.1	0.00	0.00	0.00
10,280.0	90.00	181.14	6,370.0	-3,513.7	-51.9	3,514.1	0.00	0.00	0.00
10,320.0	90.00	181.14	6,370.0	-3,553.7	-52.7	3,554.1	0.00	0.00	0.00
10,360.0	90.00	181.14	6,370.0	-3,593.7	-53.5	3,594.1	0.00	0.00	0.00
10,400.0	90.00	181.14	6,370.0	-3,633.7	-54.3	3,634.1	0.00	0.00	0.00
10,440.0	90.00	181.14	6,370.0	-3,673.6	-55.1	3,674.1	0.00	0.00	0.00
10,480.0	90.00	181.14	6,370.0	-3,713.6	-55.8	3,714.1	0.00	0.00	0.00
10,520.0	90.00	181.14	6,370.0	-3,753.6	-56.6	3,754.1	0.00	0.00	0.00
10,560.0	90.00	181.14	6,370.0	-3,793.6	-57.4	3,794.1	0.00	0.00	0.00
10,600.0	90.00	181.14	6,370.0	-3,833.6	-58.2	3,834.1	0.00	0.00	0.00
10,640.0	90.00	181.14	6,370.0	-3,873.6	-59.0	3,874.1	0.00	0.00	0.00
10,680.0	90.00	181.14	6,370.0	-3,913.6	-59.8	3,914.1	0.00	0.00	0.00
10,720.0	90.00	181.14	6,370.0	-3,953.6	-60.6	3,954.1	0.00	0.00	0.00
10,760.0	90.00	181.14	6,370.0	-3,993.6	-61.4	3,994.1	0.00	0.00	0.00
10,800.0	90.00	181.14	6,370.0	-4,033.6	-62.2	4,034.1	0.00	0.00	0.00
10,840.0	90.00	181.14	6,370.0	-4,073.6	-63.0	4,074.1	0.00	0.00	0.00
10,880.0	90.00	181.14	6,370.0	-4,113.6	-63.8	4,114.1	0.00	0.00	0.00
10,890.4	90.00	181.14	6,370.0	-4,124.0	-64.1	4,124.5	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
6,818.2	6,370.0	7"	7	8-3/4

Formations				
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)
6,718.3	6,370.0	NIOBARRA B TARGET		0.00

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.0	2,000.0	0.0	0.0	KOP #1
5,900.1	5,849.1	568.1	29.0	KOP #2
6,718.3	6,370.0	47.3	18.7	End of Build