

BONANZA CREEK ENERGY OPERATING

Well Name: **PRONGHORN 31-44-06HZ**

Surface Location: PRONGHORN 31-44-6HZ PAD 6-5N-61W
North American Datum 1983 , US State Plane 1983 , New Mexico Western Zone
Ground Elevation: 4613.0

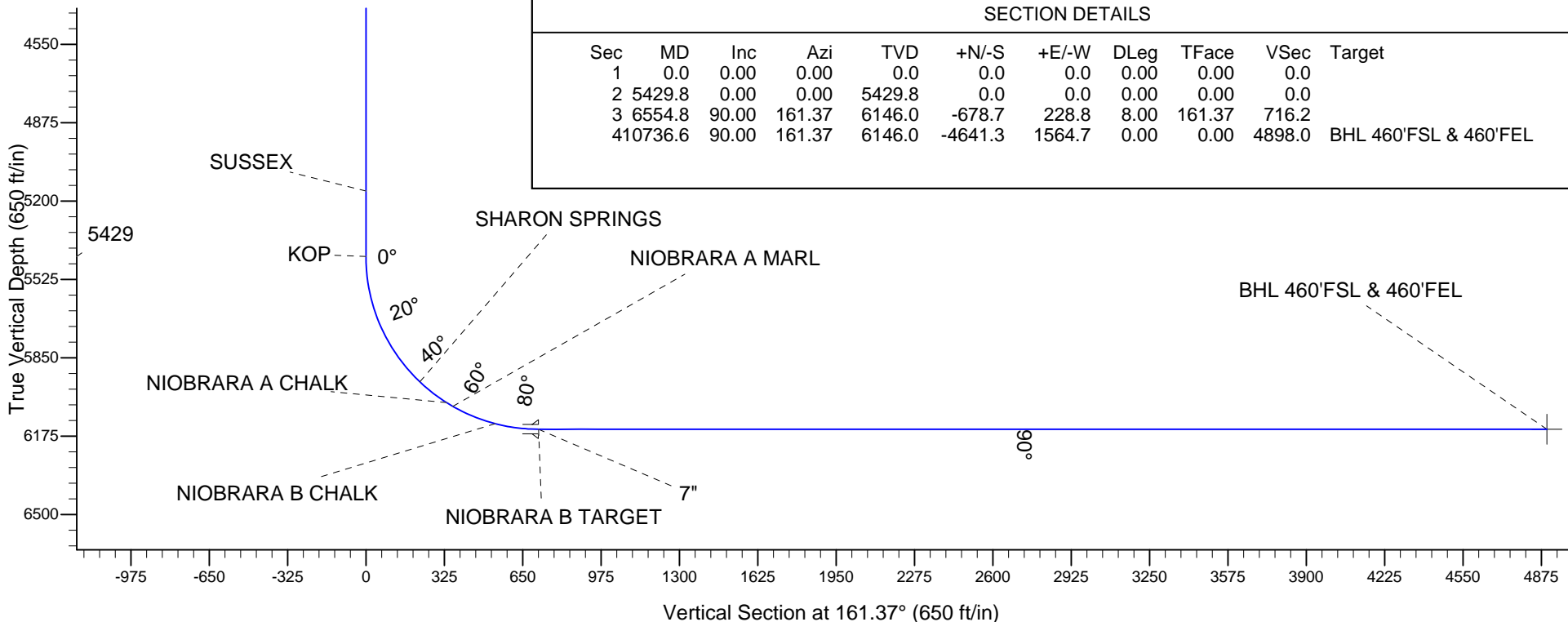
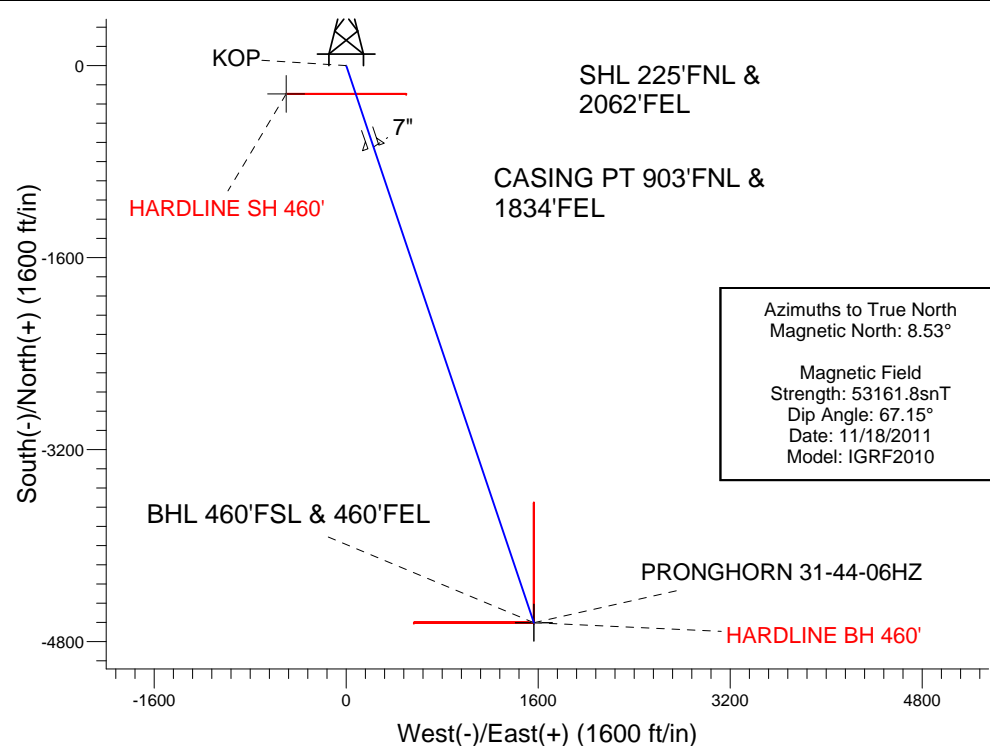
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	3455180.36	3720489.86	40.436820	-104.250410	

KB ENSIGN 14 RKB @ 4628.0ft (KB ENSIGN 14)

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HARDLINE BH 460'	1.0	-4641.0	1564.0	40.424081	-104.244793	Polygon
HARDLINE SH 460'	1.0	-235.0	-500.0	40.436175	-104.252206	Polygon
BHL 460'FSL & 460'FEL	6146.0	-4641.3	1564.7	40.424080	-104.244790	Point

PRONGHORN 31-44-6HZ PAD 6-5N-61W
PRONGHORN 31-44-06HZ
PLAN 1 (NOV 18, 2011)
12:31, November 18 2011





Directional

BONANZA CREEK ENERGY OPERATING

SEC.6-T5N-R61W

PRONGHORN 31-44-6HZ PAD 6-5N-61W

PRONGHORN 31-44-06HZ

Wellbore #1

Plan: PLAN 1 (NOV 18, 2011)

Standard Planning Report

18 November, 2011

Database:	Landmark	Local Co-ordinate Reference:	Well PRONGHORN 31-44-06HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Project:	SEC.6-T5N-R61W	MD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Site:	PRONGHORN 31-44-6HZ PAD 6-5N-61W	North Reference:	True
Well:	PRONGHORN 31-44-06HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (NOV 18, 2011)		

Project	SEC.6-T5N-R61W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	New Mexico Western Zone		Using geodetic scale factor

Site PRONGHORN 31-44-6HZ PAD 6-5N-61W					
Site Position:		Northing:		Latitude:	
From:	Lat/Long	Easting:		Longitude:	
Position Uncertainty:	0.0 ft	Slot Radius:		Grid Convergence:	
		3,455,180.36ft		40.436820	
		3,720,489.86ft		-104.250410	
		"		2.33 °	

Well	PRONGHORN 31-44-06HZ					
Well Position	+N-S	0.0 ft	Northing:	3,455,180.36 ft	Latitude:	40.436820
	+E-W	0.0 ft	Easting:	3,720,489.86 ft	Longitude:	-104.250410
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,613.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/18/2011	8.53	67.15	53,162

Design	PLAN 1 (NOV 18, 2011)			
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	161.37

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	
5,429.8	0.00	0.00	5,429.8	0.0	0.0	0.00	0.00	0.00	0.00	
6,554.8	90.00	161.37	6,146.0	-678.7	228.8	8.00	8.00	0.00	161.37	
10,736.6	90.00	161.37	6,146.0	-4,641.3	1,564.7	0.00	0.00	0.00	0.00	BHL 460'FSL & 460'

Planned Survey		Actual Survey							
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	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
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,270.0	0.00	0.00	3,270.0	0.0	0.0	0.0	0.00	0.00	0.00
PARKMAN									
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well PRONGHORN 31-44-06HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Project:	SEC.6-T5N-R61W	MD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Site:	PRONGHORN 31-44-6HZ PAD 6-5N-61W	North Reference:	True
Well:	PRONGHORN 31-44-06HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (NOV 18, 2011)		

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)
5,158.0	0.00	0.00	5,158.0	0.0	0.0	0.0	0.00	0.00	0.00
SUSSEX									
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,429.0	0.00	0.00	5,429.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
5,429.8	0.00	0.00	5,429.8	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	5.62	161.37	5,499.9	-3.3	1.1	3.4	8.00	8.00	0.00
5,600.0	13.62	161.37	5,598.4	-19.1	6.4	20.1	8.00	8.00	0.00
5,700.0	21.62	161.37	5,693.6	-47.7	16.1	50.4	8.00	8.00	0.00
5,800.0	29.62	161.37	5,783.7	-88.7	29.9	93.6	8.00	8.00	0.00
5,900.0	37.62	161.37	5,866.9	-141.1	47.6	148.9	8.00	8.00	0.00
6,000.0	45.62	161.37	5,941.6	-204.0	68.8	215.2	8.00	8.00	0.00
6,010.6	46.46	161.37	5,949.0	-211.2	71.2	222.9	8.00	8.00	0.00
SHARON SPRINGS									
6,100.0	53.62	161.37	6,006.4	-276.1	93.1	291.4	8.00	8.00	0.00
6,152.6	57.82	161.37	6,036.0	-317.3	107.0	334.8	8.00	8.00	0.00
NIORARA A CHALK									
6,181.7	60.15	161.37	6,051.0	-340.9	114.9	359.8	8.00	8.00	0.00
NIORARA A MARL									
6,200.0	61.62	161.37	6,059.9	-356.0	120.0	375.7	8.00	8.00	0.00
6,300.0	69.62	161.37	6,101.2	-442.3	149.1	466.7	8.00	8.00	0.00
6,372.8	75.44	161.37	6,123.0	-508.1	171.3	536.2	8.00	8.00	0.00
NIORARA B CHALK									
6,400.0	77.62	161.37	6,129.3	-533.1	179.7	562.6	8.00	8.00	0.00
6,500.0	85.62	161.37	6,143.9	-626.8	211.3	661.4	8.00	8.00	0.00
6,554.0	89.94	161.37	6,146.0	-677.9	228.5	715.4	8.00	8.00	0.00
7"									
6,554.8	90.00	161.37	6,146.0	-678.7	228.8	716.2	8.00	8.00	0.00
NIORARA B TARGET									
6,600.0	90.00	161.37	6,146.0	-721.5	243.2	761.4	0.00	0.00	0.00
6,700.0	90.00	161.37	6,146.0	-816.3	275.2	861.4	0.00	0.00	0.00
6,800.0	90.00	161.37	6,146.0	-911.0	307.1	961.4	0.00	0.00	0.00
6,900.0	90.00	161.37	6,146.0	-1,005.8	339.1	1,061.4	0.00	0.00	0.00
7,000.0	90.00	161.37	6,146.0	-1,100.5	371.0	1,161.4	0.00	0.00	0.00
7,100.0	90.00	161.37	6,146.0	-1,195.3	403.0	1,261.4	0.00	0.00	0.00
7,200.0	90.00	161.37	6,146.0	-1,290.1	434.9	1,361.4	0.00	0.00	0.00
7,300.0	90.00	161.37	6,146.0	-1,384.8	466.9	1,461.4	0.00	0.00	0.00
7,400.0	90.00	161.37	6,146.0	-1,479.6	498.8	1,561.4	0.00	0.00	0.00
7,500.0	90.00	161.37	6,146.0	-1,574.3	530.7	1,661.4	0.00	0.00	0.00
7,600.0	90.00	161.37	6,146.0	-1,669.1	562.7	1,761.4	0.00	0.00	0.00
7,700.0	90.00	161.37	6,146.0	-1,763.9	594.6	1,861.4	0.00	0.00	0.00
7,800.0	90.00	161.37	6,146.0	-1,858.6	626.6	1,961.4	0.00	0.00	0.00
7,900.0	90.00	161.37	6,146.0	-1,953.4	658.5	2,061.4	0.00	0.00	0.00
8,000.0	90.00	161.37	6,146.0	-2,048.1	690.5	2,161.4	0.00	0.00	0.00
8,100.0	90.00	161.37	6,146.0	-2,142.9	722.4	2,261.4	0.00	0.00	0.00
8,200.0	90.00	161.37	6,146.0	-2,237.7	754.4	2,361.4	0.00	0.00	0.00
8,300.0	90.00	161.37	6,146.0	-2,332.4	786.3	2,461.4	0.00	0.00	0.00
8,400.0	90.00	161.37	6,146.0	-2,427.2	818.3	2,561.4	0.00	0.00	0.00
8,500.0	90.00	161.37	6,146.0	-2,521.9	850.2	2,661.4	0.00	0.00	0.00
8,600.0	90.00	161.37	6,146.0	-2,616.7	882.2	2,761.4	0.00	0.00	0.00
8,700.0	90.00	161.37	6,146.0	-2,711.5	914.1	2,861.4	0.00	0.00	0.00

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
6,554.0	6,146.0	7"		7	8-3/4

Database:	Landmark	Local Co-ordinate Reference:	Well PRONGHORN 31-44-06HZ
Company:	BONANZA CREEK ENERGY OPERATING	TVD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Project:	SEC.6-T5N-R61W	MD Reference:	RKB @ 4628.0ft (KB ENSIGN 14)
Site:	PRONGHORN 31-44-6HZ PAD 6-5N-61W	North Reference:	True
Well:	PRONGHORN 31-44-06HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN 1 (NOV 18, 2011)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,270.0	3,270.0	PARKMAN		0.00		
5,158.0	5,158.0	SUSSEX		0.00		
6,010.6	5,949.0	SHARON SPRINGS		0.00		
6,152.6	6,036.0	NIOBRARA A CHALK		0.00		
6,181.7	6,051.0	NIOBRARA A MARL		0.00		
6,372.8	6,123.0	NIOBRARA B CHALK		0.00		
6,554.8	6,146.0	NIOBRARA B TARGET		0.00		
	6,148.0	NIOBRARA B MARL		0.00		
	6,186.0	NIOBRARA C CHALK		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,429.0	5,429.0	0.0	0.0	KOP	