

# Whiting Oil & Gas

Well Name: **Razor 33-2813H**

Surface Location: Razor 33-2813H Pad Sec.33-T10N-R58W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

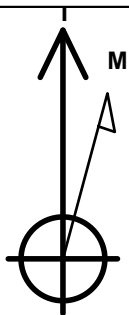
Ground Elevation: 4729.7

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1534459.92	3449422.89	40.789186	-103.876925	

RKB - 16.5' WELL @ 4746.2ft (RKB - 16.5')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 1980'FSL, 660'FWL, SEC.28	5775.0	6691.8	-152.3	Point



Azimuths to True North  
Magnetic North: 8.21°

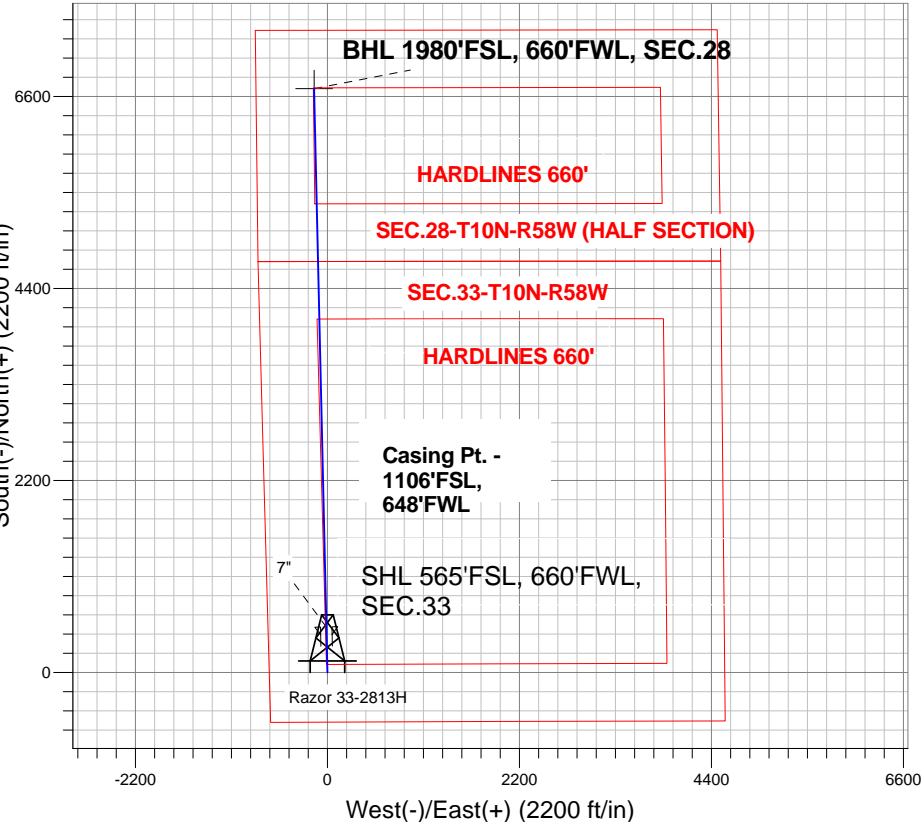
Magnetic Field  
Strength: 53268.3nT  
Dip Angle: 67.45°  
Date: 12/12/2012  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
5254.1	5254.1	KOP
5775.0	6072.3	End of Build

Razor 33-2813H Pad Sec.33-T10N-R58W  
Razor 33-2813H  
Plan #2 (12-12-12)

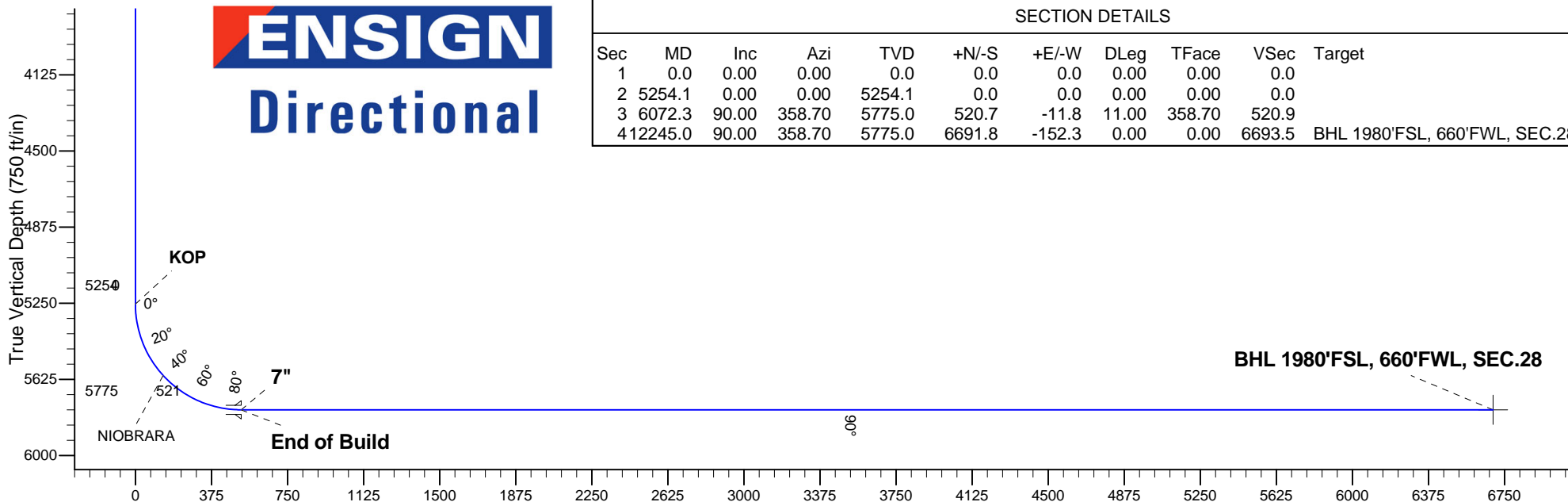
South(-)/North(+) (2200 ft/in)



**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	5254.1	0.00	0.00	5254.1	0.0	0.0	0.00	0.00	0.0	
3	6072.3	90.00	358.70	5775.0	520.7	-11.8	11.00	358.70	520.9	
4	12245.0	90.00	358.70	5775.0	6691.8	-152.3	0.00	0.00	6693.5	BHL 1980'FSL, 660'FWL, SEC.28



Vertical Section at 358.70° (750 ft/in)



## **Directional**

### **Whiting Oil & Gas**

**SEC.33-T10N-R58W**

**Razor 33-2813H Pad Sec.33-T10N-R58W**

**Razor 33-2813H**

**Wellbore #1**

**Plan: Plan #2 (12-12-12)**

### **Standard Planning Report**

**12 December, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 33-2813H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

<b>Project</b>	SEC.33-T10N-R58W		
<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						Razor 33-2813H Pad Sec.33-T10N-R58W											
Site Position:						Northing:			1,534,459.93ft			Latitude:			40.789186		
From:			Lat/Long			Easting:			3,449,422.89ft			Longitude:			-103.876925		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			1.05 °		

Well	Razor 33-2813H					
Well Position	+N/-S	0.0 ft	Northing:	1,534,459.92 ft	Latitude:	40.789186
	+E/-W	0.0 ft	Easting:	3,449,422.89 ft	Longitude:	-103.876925
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,729.7 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	12/12/2012	8.21	67.45	53,268

<b>Design</b>	Plan #2 (12-12-12)			
<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	358.70

<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	
5,254.1	0.00	0.00	5,254.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,072.3	90.00	358.70	5,775.0	520.7	-11.8	11.00	11.00	0.00	358.70	
12,245.0	90.00	358.70	5,775.0	6,691.8	-152.3	0.00	0.00	0.00	0.00	BHL 1980'FSL, 660

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 33-2813H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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
2,040.0	0.00	0.00	2,040.0	0.0	0.0	0.0	0.00	0.00	0.00
2,080.0	0.00	0.00	2,080.0	0.0	0.0	0.0	0.00	0.00	0.00
2,120.0	0.00	0.00	2,120.0	0.0	0.0	0.0	0.00	0.00	0.00

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<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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)
2,160.0	0.00	0.00	2,160.0	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
2,240.0	0.00	0.00	2,240.0	0.0	0.0	0.0	0.00	0.00	0.00
2,280.0	0.00	0.00	2,280.0	0.0	0.0	0.0	0.00	0.00	0.00
2,320.0	0.00	0.00	2,320.0	0.0	0.0	0.0	0.00	0.00	0.00
2,360.0	0.00	0.00	2,360.0	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
2,440.0	0.00	0.00	2,440.0	0.0	0.0	0.0	0.00	0.00	0.00
2,480.0	0.00	0.00	2,480.0	0.0	0.0	0.0	0.00	0.00	0.00
2,520.0	0.00	0.00	2,520.0	0.0	0.0	0.0	0.00	0.00	0.00
2,560.0	0.00	0.00	2,560.0	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
2,640.0	0.00	0.00	2,640.0	0.0	0.0	0.0	0.00	0.00	0.00
2,680.0	0.00	0.00	2,680.0	0.0	0.0	0.0	0.00	0.00	0.00
2,720.0	0.00	0.00	2,720.0	0.0	0.0	0.0	0.00	0.00	0.00
2,760.0	0.00	0.00	2,760.0	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
2,840.0	0.00	0.00	2,840.0	0.0	0.0	0.0	0.00	0.00	0.00
2,880.0	0.00	0.00	2,880.0	0.0	0.0	0.0	0.00	0.00	0.00
2,920.0	0.00	0.00	2,920.0	0.0	0.0	0.0	0.00	0.00	0.00
2,960.0	0.00	0.00	2,960.0	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
3,040.0	0.00	0.00	3,040.0	0.0	0.0	0.0	0.00	0.00	0.00
3,080.0	0.00	0.00	3,080.0	0.0	0.0	0.0	0.00	0.00	0.00
3,120.0	0.00	0.00	3,120.0	0.0	0.0	0.0	0.00	0.00	0.00
3,160.0	0.00	0.00	3,160.0	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
3,240.0	0.00	0.00	3,240.0	0.0	0.0	0.0	0.00	0.00	0.00
3,280.0	0.00	0.00	3,280.0	0.0	0.0	0.0	0.00	0.00	0.00
3,320.0	0.00	0.00	3,320.0	0.0	0.0	0.0	0.00	0.00	0.00
3,360.0	0.00	0.00	3,360.0	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
3,440.0	0.00	0.00	3,440.0	0.0	0.0	0.0	0.00	0.00	0.00
3,480.0	0.00	0.00	3,480.0	0.0	0.0	0.0	0.00	0.00	0.00
3,520.0	0.00	0.00	3,520.0	0.0	0.0	0.0	0.00	0.00	0.00
3,560.0	0.00	0.00	3,560.0	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
3,640.0	0.00	0.00	3,640.0	0.0	0.0	0.0	0.00	0.00	0.00
3,680.0	0.00	0.00	3,680.0	0.0	0.0	0.0	0.00	0.00	0.00
3,720.0	0.00	0.00	3,720.0	0.0	0.0	0.0	0.00	0.00	0.00
3,760.0	0.00	0.00	3,760.0	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
3,840.0	0.00	0.00	3,840.0	0.0	0.0	0.0	0.00	0.00	0.00
3,880.0	0.00	0.00	3,880.0	0.0	0.0	0.0	0.00	0.00	0.00
3,920.0	0.00	0.00	3,920.0	0.0	0.0	0.0	0.00	0.00	0.00
3,960.0	0.00	0.00	3,960.0	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
4,040.0	0.00	0.00	4,040.0	0.0	0.0	0.0	0.00	0.00	0.00
4,080.0	0.00	0.00	4,080.0	0.0	0.0	0.0	0.00	0.00	0.00
4,120.0	0.00	0.00	4,120.0	0.0	0.0	0.0	0.00	0.00	0.00
4,160.0	0.00	0.00	4,160.0	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
4,240.0	0.00	0.00	4,240.0	0.0	0.0	0.0	0.00	0.00	0.00
4,280.0	0.00	0.00	4,280.0	0.0	0.0	0.0	0.00	0.00	0.00

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<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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)
4,320.0	0.00	0.00	4,320.0	0.0	0.0	0.0	0.00	0.00	0.00
4,360.0	0.00	0.00	4,360.0	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
4,440.0	0.00	0.00	4,440.0	0.0	0.0	0.0	0.00	0.00	0.00
4,480.0	0.00	0.00	4,480.0	0.0	0.0	0.0	0.00	0.00	0.00
4,520.0	0.00	0.00	4,520.0	0.0	0.0	0.0	0.00	0.00	0.00
4,560.0	0.00	0.00	4,560.0	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
4,640.0	0.00	0.00	4,640.0	0.0	0.0	0.0	0.00	0.00	0.00
4,680.0	0.00	0.00	4,680.0	0.0	0.0	0.0	0.00	0.00	0.00
4,720.0	0.00	0.00	4,720.0	0.0	0.0	0.0	0.00	0.00	0.00
4,760.0	0.00	0.00	4,760.0	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
4,840.0	0.00	0.00	4,840.0	0.0	0.0	0.0	0.00	0.00	0.00
4,880.0	0.00	0.00	4,880.0	0.0	0.0	0.0	0.00	0.00	0.00
4,920.0	0.00	0.00	4,920.0	0.0	0.0	0.0	0.00	0.00	0.00
4,960.0	0.00	0.00	4,960.0	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
5,040.0	0.00	0.00	5,040.0	0.0	0.0	0.0	0.00	0.00	0.00
5,080.0	0.00	0.00	5,080.0	0.0	0.0	0.0	0.00	0.00	0.00
5,120.0	0.00	0.00	5,120.0	0.0	0.0	0.0	0.00	0.00	0.00
5,160.0	0.00	0.00	5,160.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,240.0	0.00	0.00	5,240.0	0.0	0.0	0.0	0.00	0.00	0.00
5,254.1	0.00	0.00	5,254.1	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP</b>									
5,280.0	2.85	358.70	5,280.0	0.6	0.0	0.6	10.99	10.99	0.00
5,320.0	7.25	358.70	5,319.8	4.2	-0.1	4.2	11.00	11.00	0.00
5,360.0	11.65	358.70	5,359.3	10.7	-0.2	10.7	11.00	11.00	0.00
5,400.0	16.05	358.70	5,398.1	20.3	-0.5	20.3	11.00	11.00	0.00
5,440.0	20.45	358.70	5,436.1	32.8	-0.7	32.8	11.00	11.00	0.00
5,480.0	24.85	358.70	5,473.0	48.2	-1.1	48.2	11.00	11.00	0.00
5,520.0	29.25	358.70	5,508.6	66.4	-1.5	66.4	11.00	11.00	0.00
5,560.0	33.65	358.70	5,542.7	87.2	-2.0	87.3	11.00	11.00	0.00
5,600.0	38.05	358.70	5,575.1	110.6	-2.5	110.7	11.00	11.00	0.00
5,640.0	42.45	358.70	5,605.7	136.5	-3.1	136.5	11.00	11.00	0.00
5,641.0	42.56	358.70	5,606.4	137.2	-3.1	137.2	11.00	11.00	0.00
<b>NIOBRARA</b>									
5,680.0	46.85	358.70	5,634.1	164.6	-3.7	164.6	11.00	11.00	0.00
5,720.0	51.25	358.70	5,660.3	194.8	-4.4	194.8	11.00	11.00	0.00
5,760.0	55.65	358.70	5,684.1	226.9	-5.2	226.9	11.00	11.00	0.00
5,800.0	60.05	358.70	5,705.4	260.7	-5.9	260.8	11.00	11.00	0.00
5,840.0	64.45	358.70	5,724.0	296.1	-6.7	296.2	11.00	11.00	0.00
5,880.0	68.85	358.70	5,739.9	332.8	-7.6	332.9	11.00	11.00	0.00
5,920.0	73.25	358.70	5,752.9	370.6	-8.4	370.7	11.00	11.00	0.00
5,960.0	77.65	358.70	5,762.9	409.3	-9.3	409.4	11.00	11.00	0.00
6,000.0	82.05	358.70	5,770.0	448.7	-10.2	448.8	11.00	11.00	0.00
6,040.0	86.45	358.70	5,774.0	488.5	-11.1	488.6	11.00	11.00	0.00
6,072.3	90.00	358.70	5,775.0	520.7	-11.8	520.9	11.00	11.00	0.00
<b>End of Build</b>									
6,073.3	90.00	358.70	5,775.0	521.7	-11.9	521.9	0.13	0.13	0.00
<b>7"</b>									
6,080.0	90.00	358.70	5,775.0	528.4	-12.0	528.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 33-2813H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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	90.00	358.70	5,775.0	568.4	-12.9	568.6	0.00	0.00	0.00
6,160.0	90.00	358.70	5,775.0	608.4	-13.8	608.6	0.00	0.00	0.00
6,200.0	90.00	358.70	5,775.0	648.4	-14.8	648.6	0.00	0.00	0.00
6,240.0	90.00	358.70	5,775.0	688.4	-15.7	688.6	0.00	0.00	0.00
6,280.0	90.00	358.70	5,775.0	728.4	-16.6	728.6	0.00	0.00	0.00
6,320.0	90.00	358.70	5,775.0	768.4	-17.5	768.6	0.00	0.00	0.00
6,360.0	90.00	358.70	5,775.0	808.4	-18.4	808.6	0.00	0.00	0.00
6,400.0	90.00	358.70	5,775.0	848.3	-19.3	848.6	0.00	0.00	0.00
6,440.0	90.00	358.70	5,775.0	888.3	-20.2	888.6	0.00	0.00	0.00
6,480.0	90.00	358.70	5,775.0	928.3	-21.1	928.6	0.00	0.00	0.00
6,520.0	90.00	358.70	5,775.0	968.3	-22.0	968.6	0.00	0.00	0.00
6,560.0	90.00	358.70	5,775.0	1,008.3	-22.9	1,008.6	0.00	0.00	0.00
6,600.0	90.00	358.70	5,775.0	1,048.3	-23.9	1,048.6	0.00	0.00	0.00
6,640.0	90.00	358.70	5,775.0	1,088.3	-24.8	1,088.6	0.00	0.00	0.00
6,680.0	90.00	358.70	5,775.0	1,128.3	-25.7	1,128.6	0.00	0.00	0.00
6,720.0	90.00	358.70	5,775.0	1,168.3	-26.6	1,168.6	0.00	0.00	0.00
6,760.0	90.00	358.70	5,775.0	1,208.2	-27.5	1,208.6	0.00	0.00	0.00
6,800.0	90.00	358.70	5,775.0	1,248.2	-28.4	1,248.6	0.00	0.00	0.00
6,840.0	90.00	358.70	5,775.0	1,288.2	-29.3	1,288.6	0.00	0.00	0.00
6,880.0	90.00	358.70	5,775.0	1,328.2	-30.2	1,328.6	0.00	0.00	0.00
6,920.0	90.00	358.70	5,775.0	1,368.2	-31.1	1,368.6	0.00	0.00	0.00
6,960.0	90.00	358.70	5,775.0	1,408.2	-32.0	1,408.6	0.00	0.00	0.00
7,000.0	90.00	358.70	5,775.0	1,448.2	-33.0	1,448.6	0.00	0.00	0.00
7,040.0	90.00	358.70	5,775.0	1,488.2	-33.9	1,488.6	0.00	0.00	0.00
7,080.0	90.00	358.70	5,775.0	1,528.2	-34.8	1,528.6	0.00	0.00	0.00
7,120.0	90.00	358.70	5,775.0	1,568.2	-35.7	1,568.6	0.00	0.00	0.00
7,160.0	90.00	358.70	5,775.0	1,608.1	-36.6	1,608.6	0.00	0.00	0.00
7,200.0	90.00	358.70	5,775.0	1,648.1	-37.5	1,648.6	0.00	0.00	0.00
7,240.0	90.00	358.70	5,775.0	1,688.1	-38.4	1,688.6	0.00	0.00	0.00
7,280.0	90.00	358.70	5,775.0	1,728.1	-39.3	1,728.6	0.00	0.00	0.00
7,320.0	90.00	358.70	5,775.0	1,768.1	-40.2	1,768.6	0.00	0.00	0.00
7,360.0	90.00	358.70	5,775.0	1,808.1	-41.1	1,808.6	0.00	0.00	0.00
7,400.0	90.00	358.70	5,775.0	1,848.1	-42.0	1,848.6	0.00	0.00	0.00
7,440.0	90.00	358.70	5,775.0	1,888.1	-43.0	1,888.6	0.00	0.00	0.00
7,480.0	90.00	358.70	5,775.0	1,928.1	-43.9	1,928.6	0.00	0.00	0.00
7,520.0	90.00	358.70	5,775.0	1,968.1	-44.8	1,968.6	0.00	0.00	0.00
7,560.0	90.00	358.70	5,775.0	2,008.0	-45.7	2,008.6	0.00	0.00	0.00
7,600.0	90.00	358.70	5,775.0	2,048.0	-46.6	2,048.6	0.00	0.00	0.00
7,640.0	90.00	358.70	5,775.0	2,088.0	-47.5	2,088.6	0.00	0.00	0.00
7,680.0	90.00	358.70	5,775.0	2,128.0	-48.4	2,128.6	0.00	0.00	0.00
7,720.0	90.00	358.70	5,775.0	2,168.0	-49.3	2,168.6	0.00	0.00	0.00
7,760.0	90.00	358.70	5,775.0	2,208.0	-50.2	2,208.6	0.00	0.00	0.00
7,800.0	90.00	358.70	5,775.0	2,248.0	-51.1	2,248.6	0.00	0.00	0.00
7,840.0	90.00	358.70	5,775.0	2,288.0	-52.1	2,288.6	0.00	0.00	0.00
7,880.0	90.00	358.70	5,775.0	2,328.0	-53.0	2,328.6	0.00	0.00	0.00
7,920.0	90.00	358.70	5,775.0	2,367.9	-53.9	2,368.6	0.00	0.00	0.00
7,960.0	90.00	358.70	5,775.0	2,407.9	-54.8	2,408.6	0.00	0.00	0.00
8,000.0	90.00	358.70	5,775.0	2,447.9	-55.7	2,448.6	0.00	0.00	0.00
8,040.0	90.00	358.70	5,775.0	2,487.9	-56.6	2,488.6	0.00	0.00	0.00
8,080.0	90.00	358.70	5,775.0	2,527.9	-57.5	2,528.6	0.00	0.00	0.00
8,120.0	90.00	358.70	5,775.0	2,567.9	-58.4	2,568.6	0.00	0.00	0.00
8,160.0	90.00	358.70	5,775.0	2,607.9	-59.3	2,608.6	0.00	0.00	0.00
8,200.0	90.00	358.70	5,775.0	2,647.9	-60.2	2,648.6	0.00	0.00	0.00
8,240.0	90.00	358.70	5,775.0	2,687.9	-61.2	2,688.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 33-2813H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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)
8,280.0	90.00	358.70	5,775.0	2,727.9	-62.1	2,728.6	0.00	0.00	0.00
8,320.0	90.00	358.70	5,775.0	2,767.8	-63.0	2,768.6	0.00	0.00	0.00
8,360.0	90.00	358.70	5,775.0	2,807.8	-63.9	2,808.6	0.00	0.00	0.00
8,400.0	90.00	358.70	5,775.0	2,847.8	-64.8	2,848.6	0.00	0.00	0.00
8,440.0	90.00	358.70	5,775.0	2,887.8	-65.7	2,888.6	0.00	0.00	0.00
8,480.0	90.00	358.70	5,775.0	2,927.8	-66.6	2,928.6	0.00	0.00	0.00
8,520.0	90.00	358.70	5,775.0	2,967.8	-67.5	2,968.6	0.00	0.00	0.00
8,560.0	90.00	358.70	5,775.0	3,007.8	-68.4	3,008.6	0.00	0.00	0.00
8,600.0	90.00	358.70	5,775.0	3,047.8	-69.3	3,048.6	0.00	0.00	0.00
8,640.0	90.00	358.70	5,775.0	3,087.8	-70.3	3,088.6	0.00	0.00	0.00
8,680.0	90.00	358.70	5,775.0	3,127.8	-71.2	3,128.6	0.00	0.00	0.00
8,720.0	90.00	358.70	5,775.0	3,167.7	-72.1	3,168.6	0.00	0.00	0.00
8,760.0	90.00	358.70	5,775.0	3,207.7	-73.0	3,208.6	0.00	0.00	0.00
8,800.0	90.00	358.70	5,775.0	3,247.7	-73.9	3,248.6	0.00	0.00	0.00
8,840.0	90.00	358.70	5,775.0	3,287.7	-74.8	3,288.6	0.00	0.00	0.00
8,880.0	90.00	358.70	5,775.0	3,327.7	-75.7	3,328.6	0.00	0.00	0.00
8,920.0	90.00	358.70	5,775.0	3,367.7	-76.6	3,368.6	0.00	0.00	0.00
8,960.0	90.00	358.70	5,775.0	3,407.7	-77.5	3,408.6	0.00	0.00	0.00
9,000.0	90.00	358.70	5,775.0	3,447.7	-78.4	3,448.6	0.00	0.00	0.00
9,040.0	90.00	358.70	5,775.0	3,487.7	-79.4	3,488.6	0.00	0.00	0.00
9,080.0	90.00	358.70	5,775.0	3,527.6	-80.3	3,528.6	0.00	0.00	0.00
9,120.0	90.00	358.70	5,775.0	3,567.6	-81.2	3,568.6	0.00	0.00	0.00
9,160.0	90.00	358.70	5,775.0	3,607.6	-82.1	3,608.6	0.00	0.00	0.00
9,200.0	90.00	358.70	5,775.0	3,647.6	-83.0	3,648.6	0.00	0.00	0.00
9,240.0	90.00	358.70	5,775.0	3,687.6	-83.9	3,688.6	0.00	0.00	0.00
9,280.0	90.00	358.70	5,775.0	3,727.6	-84.8	3,728.6	0.00	0.00	0.00
9,320.0	90.00	358.70	5,775.0	3,767.6	-85.7	3,768.6	0.00	0.00	0.00
9,360.0	90.00	358.70	5,775.0	3,807.6	-86.6	3,808.6	0.00	0.00	0.00
9,400.0	90.00	358.70	5,775.0	3,847.6	-87.5	3,848.6	0.00	0.00	0.00
9,440.0	90.00	358.70	5,775.0	3,887.6	-88.5	3,888.6	0.00	0.00	0.00
9,480.0	90.00	358.70	5,775.0	3,927.5	-89.4	3,928.6	0.00	0.00	0.00
9,520.0	90.00	358.70	5,775.0	3,967.5	-90.3	3,968.6	0.00	0.00	0.00
9,560.0	90.00	358.70	5,775.0	4,007.5	-91.2	4,008.6	0.00	0.00	0.00
9,600.0	90.00	358.70	5,775.0	4,047.5	-92.1	4,048.6	0.00	0.00	0.00
9,640.0	90.00	358.70	5,775.0	4,087.5	-93.0	4,088.6	0.00	0.00	0.00
9,680.0	90.00	358.70	5,775.0	4,127.5	-93.9	4,128.6	0.00	0.00	0.00
9,720.0	90.00	358.70	5,775.0	4,167.5	-94.8	4,168.6	0.00	0.00	0.00
9,760.0	90.00	358.70	5,775.0	4,207.5	-95.7	4,208.6	0.00	0.00	0.00
9,800.0	90.00	358.70	5,775.0	4,247.5	-96.6	4,248.6	0.00	0.00	0.00
9,840.0	90.00	358.70	5,775.0	4,287.5	-97.6	4,288.6	0.00	0.00	0.00
9,880.0	90.00	358.70	5,775.0	4,327.4	-98.5	4,328.6	0.00	0.00	0.00
9,920.0	90.00	358.70	5,775.0	4,367.4	-99.4	4,368.6	0.00	0.00	0.00
9,960.0	90.00	358.70	5,775.0	4,407.4	-100.3	4,408.6	0.00	0.00	0.00
10,000.0	90.00	358.70	5,775.0	4,447.4	-101.2	4,448.6	0.00	0.00	0.00
10,040.0	90.00	358.70	5,775.0	4,487.4	-102.1	4,488.6	0.00	0.00	0.00
10,080.0	90.00	358.70	5,775.0	4,527.4	-103.0	4,528.6	0.00	0.00	0.00
10,120.0	90.00	358.70	5,775.0	4,567.4	-103.9	4,568.6	0.00	0.00	0.00
10,160.0	90.00	358.70	5,775.0	4,607.4	-104.8	4,608.6	0.00	0.00	0.00
10,200.0	90.00	358.70	5,775.0	4,647.4	-105.7	4,648.6	0.00	0.00	0.00
10,240.0	90.00	358.70	5,775.0	4,687.3	-106.7	4,688.6	0.00	0.00	0.00
10,280.0	90.00	358.70	5,775.0	4,727.3	-107.6	4,728.6	0.00	0.00	0.00
10,320.0	90.00	358.70	5,775.0	4,767.3	-108.5	4,768.6	0.00	0.00	0.00
10,360.0	90.00	358.70	5,775.0	4,807.3	-109.4	4,808.6	0.00	0.00	0.00
10,400.0	90.00	358.70	5,775.0	4,847.3	-110.3	4,848.6	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 33-2813H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

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)
10,440.0	90.00	358.70	5,775.0	4,887.3	-111.2	4,888.6	0.00	0.00	0.00
10,480.0	90.00	358.70	5,775.0	4,927.3	-112.1	4,928.6	0.00	0.00	0.00
10,520.0	90.00	358.70	5,775.0	4,967.3	-113.0	4,968.6	0.00	0.00	0.00
10,560.0	90.00	358.70	5,775.0	5,007.3	-113.9	5,008.6	0.00	0.00	0.00
10,600.0	90.00	358.70	5,775.0	5,047.3	-114.8	5,048.6	0.00	0.00	0.00
10,640.0	90.00	358.70	5,775.0	5,087.2	-115.8	5,088.6	0.00	0.00	0.00
10,680.0	90.00	358.70	5,775.0	5,127.2	-116.7	5,128.6	0.00	0.00	0.00
10,720.0	90.00	358.70	5,775.0	5,167.2	-117.6	5,168.6	0.00	0.00	0.00
10,760.0	90.00	358.70	5,775.0	5,207.2	-118.5	5,208.6	0.00	0.00	0.00
10,800.0	90.00	358.70	5,775.0	5,247.2	-119.4	5,248.6	0.00	0.00	0.00
10,840.0	90.00	358.70	5,775.0	5,287.2	-120.3	5,288.6	0.00	0.00	0.00
10,880.0	90.00	358.70	5,775.0	5,327.2	-121.2	5,328.6	0.00	0.00	0.00
10,920.0	90.00	358.70	5,775.0	5,367.2	-122.1	5,368.6	0.00	0.00	0.00
10,960.0	90.00	358.70	5,775.0	5,407.2	-123.0	5,408.6	0.00	0.00	0.00
11,000.0	90.00	358.70	5,775.0	5,447.2	-123.9	5,448.6	0.00	0.00	0.00
11,040.0	90.00	358.70	5,775.0	5,487.1	-124.9	5,488.6	0.00	0.00	0.00
11,080.0	90.00	358.70	5,775.0	5,527.1	-125.8	5,528.6	0.00	0.00	0.00
11,120.0	90.00	358.70	5,775.0	5,567.1	-126.7	5,568.6	0.00	0.00	0.00
11,160.0	90.00	358.70	5,775.0	5,607.1	-127.6	5,608.6	0.00	0.00	0.00
11,200.0	90.00	358.70	5,775.0	5,647.1	-128.5	5,648.6	0.00	0.00	0.00
11,240.0	90.00	358.70	5,775.0	5,687.1	-129.4	5,688.6	0.00	0.00	0.00
11,280.0	90.00	358.70	5,775.0	5,727.1	-130.3	5,728.6	0.00	0.00	0.00
11,320.0	90.00	358.70	5,775.0	5,767.1	-131.2	5,768.6	0.00	0.00	0.00
11,360.0	90.00	358.70	5,775.0	5,807.1	-132.1	5,808.6	0.00	0.00	0.00
11,400.0	90.00	358.70	5,775.0	5,847.0	-133.0	5,848.6	0.00	0.00	0.00
11,440.0	90.00	358.70	5,775.0	5,887.0	-133.9	5,888.6	0.00	0.00	0.00
11,480.0	90.00	358.70	5,775.0	5,927.0	-134.9	5,928.6	0.00	0.00	0.00
11,520.0	90.00	358.70	5,775.0	5,967.0	-135.8	5,968.6	0.00	0.00	0.00
11,560.0	90.00	358.70	5,775.0	6,007.0	-136.7	6,008.6	0.00	0.00	0.00
11,600.0	90.00	358.70	5,775.0	6,047.0	-137.6	6,048.6	0.00	0.00	0.00
11,640.0	90.00	358.70	5,775.0	6,087.0	-138.5	6,088.6	0.00	0.00	0.00
11,680.0	90.00	358.70	5,775.0	6,127.0	-139.4	6,128.6	0.00	0.00	0.00
11,720.0	90.00	358.70	5,775.0	6,167.0	-140.3	6,168.6	0.00	0.00	0.00
11,760.0	90.00	358.70	5,775.0	6,207.0	-141.2	6,208.6	0.00	0.00	0.00
11,800.0	90.00	358.70	5,775.0	6,246.9	-142.1	6,248.6	0.00	0.00	0.00
11,840.0	90.00	358.70	5,775.0	6,286.9	-143.0	6,288.6	0.00	0.00	0.00
11,880.0	90.00	358.70	5,775.0	6,326.9	-144.0	6,328.6	0.00	0.00	0.00
11,920.0	90.00	358.70	5,775.0	6,366.9	-144.9	6,368.6	0.00	0.00	0.00
11,960.0	90.00	358.70	5,775.0	6,406.9	-145.8	6,408.6	0.00	0.00	0.00
12,000.0	90.00	358.70	5,775.0	6,446.9	-146.7	6,448.6	0.00	0.00	0.00
12,040.0	90.00	358.70	5,775.0	6,486.9	-147.6	6,488.6	0.00	0.00	0.00
12,080.0	90.00	358.70	5,775.0	6,526.9	-148.5	6,528.6	0.00	0.00	0.00
12,120.0	90.00	358.70	5,775.0	6,566.9	-149.4	6,568.6	0.00	0.00	0.00
12,160.0	90.00	358.70	5,775.0	6,606.9	-150.3	6,608.6	0.00	0.00	0.00
12,200.0	90.00	358.70	5,775.0	6,646.8	-151.2	6,648.6	0.00	0.00	0.00
12,240.0	90.00	358.70	5,775.0	6,686.8	-152.1	6,688.6	0.00	0.00	0.00
12,245.0	90.00	358.70	5,775.0	6,691.8	-152.3	6,693.5	0.00	0.00	0.00

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<b>Project:</b>	SEC.33-T10N-R58W	<b>MD Reference:</b>	WELL @ 4746.2ft (RKB - 16.5')
<b>Site:</b>	Razor 33-2813H Pad Sec.33-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 33-2813H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (12-12-12)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,073.3	5,775.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,641.0	5,606.4	NIOBRARA		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,254.1	5,254.1	0.0	0.0	KOP	
6,072.3	5,775.0	520.7	-11.8	End of Build	