

# Whiting Oil & Gas

Well Name: **Razor 11-0241H**

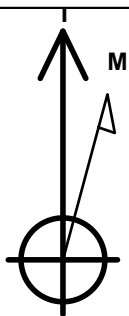
Surface Location: Razor 11-0241H Pad Sec.11-T10N-R58W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4954.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1558533.37	3463230.04	40.854544	-103.825431	
(RKB - 16.5') WELL @ 4970.7ft ((RKB - 16.5'))						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINES BHL 660'FNL	1.0	6870.0	-499.0	Polygon
HARDLINES SHL 660'FSL	1.0	230.0	-400.0	Polygon
BHL 660'FNL, 660'FEL, SEC.2	6097.0	6870.0	-99.0	Point



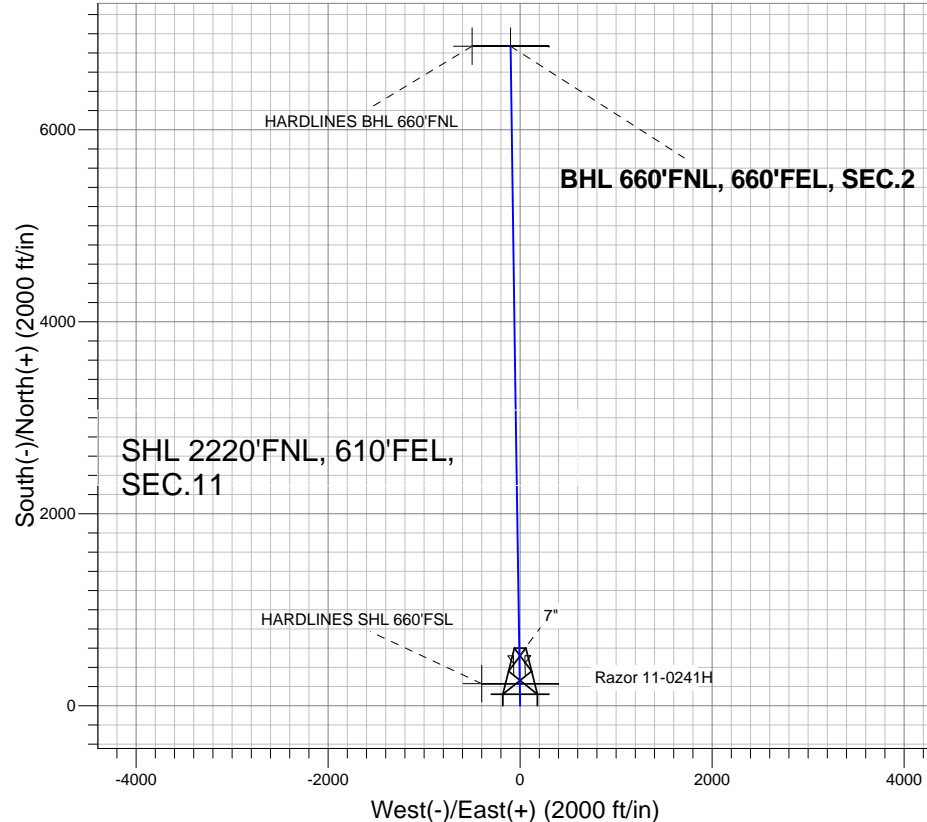
Azimuths to True North  
Magnetic North: 8.25°

Magnetic Field  
Strength: 53362.6snT  
Dip Angle: 67.53°  
Date: 5/29/2012  
Model: IGRF2010

## ANNOTATIONS

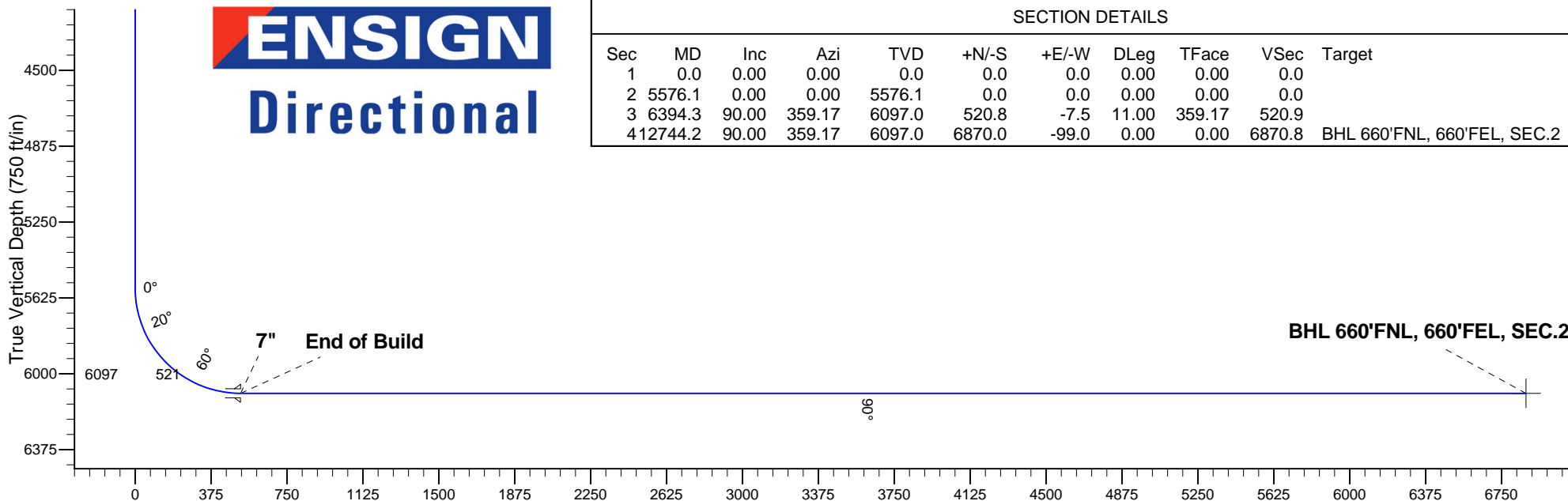
TVD	MD	Annotation
6097.0	6394.3	End of Build

Razor 11-0241H Pad Sec.11-T10N-R58W  
Razor 11-0241H  
Plan #1 (5-29-12)  
12:40, May 29 2012



## 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	5576.1	0.00	0.00	5576.1	0.0	0.0	0.00	0.00	0.0	
3	6394.3	90.00	359.17	6097.0	520.8	-7.5	11.00	359.17	520.9	
4	12744.2	90.00	359.17	6097.0	6870.0	-99.0	0.00	0.00	6870.8	BHL 660'FNL, 660'FEL, SEC.2



Vertical Section at 359.17° (750 ft/in)



## **Directional**

### **Whiting Oil & Gas**

**SEC.11-T10N-R58W**

**Razor 11-0241H Pad Sec.11-T10N-R58W**

**Razor 11-0241H**

**Wellbore #1**

**Plan: Plan #1 (5-29-12)**

### **Standard Planning Report**

**29 May, 2012**

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	
5,576.1	0.00	0.00	5,576.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,394.3	90.00	359.17	6,097.0	520.8	-7.5	11.00	11.00	0.00	359.17	
12,744.2	90.00	359.17	6,097.0	6,870.0	-99.0	0.00	0.00	0.00	0.00	BHL 660'FNL, 660'

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Project:</b>	SEC.11-T10N-R58W	<b>MD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>HARDLINES SHL 660'FSL</b>									
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

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<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)
2,080.0	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
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

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
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<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)
4,240.0	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
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
5,280.0	0.00	0.00	5,280.0	0.0	0.0	0.0	0.00	0.00	0.00
5,320.0	0.00	0.00	5,320.0	0.0	0.0	0.0	0.00	0.00	0.00
5,360.0	0.00	0.00	5,360.0	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
5,440.0	0.00	0.00	5,440.0	0.0	0.0	0.0	0.00	0.00	0.00
5,480.0	0.00	0.00	5,480.0	0.0	0.0	0.0	0.00	0.00	0.00
5,520.0	0.00	0.00	5,520.0	0.0	0.0	0.0	0.00	0.00	0.00
5,560.0	0.00	0.00	5,560.0	0.0	0.0	0.0	0.00	0.00	0.00
5,576.1	0.00	0.00	5,576.1	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	2.63	359.17	5,600.0	0.5	0.0	0.5	11.00	11.00	0.00
5,640.0	7.03	359.17	5,639.8	3.9	-0.1	3.9	11.00	11.00	0.00
5,680.0	11.43	359.17	5,679.3	10.3	-0.1	10.3	11.00	11.00	0.00
5,720.0	15.83	359.17	5,718.2	19.7	-0.3	19.7	11.00	11.00	0.00
5,760.0	20.23	359.17	5,756.2	32.1	-0.5	32.1	11.00	11.00	0.00
5,800.0	24.63	359.17	5,793.2	47.4	-0.7	47.4	11.00	11.00	0.00
5,840.0	29.03	359.17	5,828.9	65.4	-0.9	65.4	11.00	11.00	0.00
5,880.0	33.43	359.17	5,863.1	86.1	-1.2	86.2	11.00	11.00	0.00
5,914.0	37.17	359.17	5,890.8	105.8	-1.5	105.8	11.00	11.00	0.00
<b>NIOBRARA</b>									
5,920.0	37.83	359.17	5,895.6	109.4	-1.6	109.4	11.00	11.00	0.00
5,960.0	42.23	359.17	5,926.2	135.2	-1.9	135.2	11.00	11.00	0.00
6,000.0	46.63	359.17	5,954.7	163.1	-2.4	163.2	11.00	11.00	0.00
6,040.0	51.03	359.17	5,981.1	193.2	-2.8	193.3	11.00	11.00	0.00
6,080.0	55.43	359.17	6,005.0	225.3	-3.2	225.3	11.00	11.00	0.00
6,120.0	59.83	359.17	6,026.4	259.0	-3.7	259.1	11.00	11.00	0.00
6,160.0	64.23	359.17	6,045.2	294.4	-4.2	294.4	11.00	11.00	0.00
6,200.0	68.63	359.17	6,061.2	331.0	-4.8	331.0	11.00	11.00	0.00
6,240.0	73.03	359.17	6,074.3	368.8	-5.3	368.8	11.00	11.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Project:</b>	SEC.11-T10N-R58W	<b>MD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)
6,280.0	77.43	359.17	6,084.5	407.4	-5.9	407.5	11.00	11.00	0.00
6,320.0	81.83	359.17	6,091.7	446.8	-6.4	446.8	11.00	11.00	0.00
6,360.0	86.23	359.17	6,095.9	486.5	-7.0	486.6	11.00	11.00	0.00
6,394.3	90.00	359.17	6,097.0	520.8	-7.5	520.9	11.00	11.00	0.00
<b>End of Build - 7"</b>									
6,400.0	90.00	359.17	6,097.0	526.5	-7.6	526.6	0.02	0.02	0.00
6,440.0	90.00	359.17	6,097.0	566.5	-8.2	566.6	0.00	0.00	0.00
6,480.0	90.00	359.17	6,097.0	606.5	-8.7	606.6	0.00	0.00	0.00
6,520.0	90.00	359.17	6,097.0	646.5	-9.3	646.6	0.00	0.00	0.00
6,560.0	90.00	359.17	6,097.0	686.5	-9.9	686.6	0.00	0.00	0.00
6,600.0	90.00	359.17	6,097.0	726.5	-10.5	726.6	0.00	0.00	0.00
6,640.0	90.00	359.17	6,097.0	766.5	-11.0	766.6	0.00	0.00	0.00
6,680.0	90.00	359.17	6,097.0	806.5	-11.6	806.6	0.00	0.00	0.00
6,720.0	90.00	359.17	6,097.0	846.5	-12.2	846.6	0.00	0.00	0.00
6,760.0	90.00	359.17	6,097.0	886.5	-12.8	886.6	0.00	0.00	0.00
6,800.0	90.00	359.17	6,097.0	926.5	-13.4	926.6	0.00	0.00	0.00
6,840.0	90.00	359.17	6,097.0	966.5	-13.9	966.6	0.00	0.00	0.00
6,880.0	90.00	359.17	6,097.0	1,006.5	-14.5	1,006.6	0.00	0.00	0.00
6,920.0	90.00	359.17	6,097.0	1,046.5	-15.1	1,046.6	0.00	0.00	0.00
6,960.0	90.00	359.17	6,097.0	1,086.4	-15.7	1,086.6	0.00	0.00	0.00
7,000.0	90.00	359.17	6,097.0	1,126.4	-16.2	1,126.6	0.00	0.00	0.00
7,040.0	90.00	359.17	6,097.0	1,166.4	-16.8	1,166.6	0.00	0.00	0.00
7,080.0	90.00	359.17	6,097.0	1,206.4	-17.4	1,206.6	0.00	0.00	0.00
7,120.0	90.00	359.17	6,097.0	1,246.4	-18.0	1,246.6	0.00	0.00	0.00
7,160.0	90.00	359.17	6,097.0	1,286.4	-18.5	1,286.6	0.00	0.00	0.00
7,200.0	90.00	359.17	6,097.0	1,326.4	-19.1	1,326.6	0.00	0.00	0.00
7,240.0	90.00	359.17	6,097.0	1,366.4	-19.7	1,366.6	0.00	0.00	0.00
7,280.0	90.00	359.17	6,097.0	1,406.4	-20.3	1,406.6	0.00	0.00	0.00
7,320.0	90.00	359.17	6,097.0	1,446.4	-20.8	1,446.6	0.00	0.00	0.00
7,360.0	90.00	359.17	6,097.0	1,486.4	-21.4	1,486.6	0.00	0.00	0.00
7,400.0	90.00	359.17	6,097.0	1,526.4	-22.0	1,526.6	0.00	0.00	0.00
7,440.0	90.00	359.17	6,097.0	1,566.4	-22.6	1,566.6	0.00	0.00	0.00
7,480.0	90.00	359.17	6,097.0	1,606.4	-23.2	1,606.6	0.00	0.00	0.00
7,520.0	90.00	359.17	6,097.0	1,646.4	-23.7	1,646.6	0.00	0.00	0.00
7,560.0	90.00	359.17	6,097.0	1,686.4	-24.3	1,686.6	0.00	0.00	0.00
7,600.0	90.00	359.17	6,097.0	1,726.4	-24.9	1,726.6	0.00	0.00	0.00
7,640.0	90.00	359.17	6,097.0	1,766.4	-25.5	1,766.6	0.00	0.00	0.00
7,680.0	90.00	359.17	6,097.0	1,806.4	-26.0	1,806.6	0.00	0.00	0.00
7,720.0	90.00	359.17	6,097.0	1,846.4	-26.6	1,846.6	0.00	0.00	0.00
7,760.0	90.00	359.17	6,097.0	1,886.4	-27.2	1,886.6	0.00	0.00	0.00
7,800.0	90.00	359.17	6,097.0	1,926.4	-27.8	1,926.6	0.00	0.00	0.00
7,840.0	90.00	359.17	6,097.0	1,966.4	-28.3	1,966.6	0.00	0.00	0.00
7,880.0	90.00	359.17	6,097.0	2,006.4	-28.9	2,006.6	0.00	0.00	0.00
7,920.0	90.00	359.17	6,097.0	2,046.3	-29.5	2,046.6	0.00	0.00	0.00
7,960.0	90.00	359.17	6,097.0	2,086.3	-30.1	2,086.6	0.00	0.00	0.00
8,000.0	90.00	359.17	6,097.0	2,126.3	-30.6	2,126.6	0.00	0.00	0.00
8,040.0	90.00	359.17	6,097.0	2,166.3	-31.2	2,166.6	0.00	0.00	0.00
8,080.0	90.00	359.17	6,097.0	2,206.3	-31.8	2,206.6	0.00	0.00	0.00
8,120.0	90.00	359.17	6,097.0	2,246.3	-32.4	2,246.6	0.00	0.00	0.00
8,160.0	90.00	359.17	6,097.0	2,286.3	-32.9	2,286.6	0.00	0.00	0.00
8,200.0	90.00	359.17	6,097.0	2,326.3	-33.5	2,326.6	0.00	0.00	0.00
8,240.0	90.00	359.17	6,097.0	2,366.3	-34.1	2,366.6	0.00	0.00	0.00
8,280.0	90.00	359.17	6,097.0	2,406.3	-34.7	2,406.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Project:</b>	SEC.11-T10N-R58W	<b>MD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)
8,320.0	90.00	359.17	6,097.0	2,446.3	-35.3	2,446.6	0.00	0.00	0.00
8,360.0	90.00	359.17	6,097.0	2,486.3	-35.8	2,486.6	0.00	0.00	0.00
8,400.0	90.00	359.17	6,097.0	2,526.3	-36.4	2,526.6	0.00	0.00	0.00
8,440.0	90.00	359.17	6,097.0	2,566.3	-37.0	2,566.6	0.00	0.00	0.00
8,480.0	90.00	359.17	6,097.0	2,606.3	-37.6	2,606.6	0.00	0.00	0.00
8,520.0	90.00	359.17	6,097.0	2,646.3	-38.1	2,646.6	0.00	0.00	0.00
8,560.0	90.00	359.17	6,097.0	2,686.3	-38.7	2,686.6	0.00	0.00	0.00
8,600.0	90.00	359.17	6,097.0	2,726.3	-39.3	2,726.6	0.00	0.00	0.00
8,640.0	90.00	359.17	6,097.0	2,766.3	-39.9	2,766.6	0.00	0.00	0.00
8,680.0	90.00	359.17	6,097.0	2,806.3	-40.4	2,806.6	0.00	0.00	0.00
8,720.0	90.00	359.17	6,097.0	2,846.3	-41.0	2,846.6	0.00	0.00	0.00
8,760.0	90.00	359.17	6,097.0	2,886.3	-41.6	2,886.6	0.00	0.00	0.00
8,800.0	90.00	359.17	6,097.0	2,926.3	-42.2	2,926.6	0.00	0.00	0.00
8,840.0	90.00	359.17	6,097.0	2,966.3	-42.7	2,966.6	0.00	0.00	0.00
8,880.0	90.00	359.17	6,097.0	3,006.2	-43.3	3,006.6	0.00	0.00	0.00
8,920.0	90.00	359.17	6,097.0	3,046.2	-43.9	3,046.6	0.00	0.00	0.00
8,960.0	90.00	359.17	6,097.0	3,086.2	-44.5	3,086.6	0.00	0.00	0.00
9,000.0	90.00	359.17	6,097.0	3,126.2	-45.1	3,126.6	0.00	0.00	0.00
9,040.0	90.00	359.17	6,097.0	3,166.2	-45.6	3,166.6	0.00	0.00	0.00
9,080.0	90.00	359.17	6,097.0	3,206.2	-46.2	3,206.6	0.00	0.00	0.00
9,120.0	90.00	359.17	6,097.0	3,246.2	-46.8	3,246.6	0.00	0.00	0.00
9,160.0	90.00	359.17	6,097.0	3,286.2	-47.4	3,286.6	0.00	0.00	0.00
9,200.0	90.00	359.17	6,097.0	3,326.2	-47.9	3,326.6	0.00	0.00	0.00
9,240.0	90.00	359.17	6,097.0	3,366.2	-48.5	3,366.6	0.00	0.00	0.00
9,280.0	90.00	359.17	6,097.0	3,406.2	-49.1	3,406.6	0.00	0.00	0.00
9,320.0	90.00	359.17	6,097.0	3,446.2	-49.7	3,446.6	0.00	0.00	0.00
9,360.0	90.00	359.17	6,097.0	3,486.2	-50.2	3,486.6	0.00	0.00	0.00
9,400.0	90.00	359.17	6,097.0	3,526.2	-50.8	3,526.6	0.00	0.00	0.00
9,440.0	90.00	359.17	6,097.0	3,566.2	-51.4	3,566.6	0.00	0.00	0.00
9,480.0	90.00	359.17	6,097.0	3,606.2	-52.0	3,606.6	0.00	0.00	0.00
9,520.0	90.00	359.17	6,097.0	3,646.2	-52.5	3,646.6	0.00	0.00	0.00
9,560.0	90.00	359.17	6,097.0	3,686.2	-53.1	3,686.6	0.00	0.00	0.00
9,600.0	90.00	359.17	6,097.0	3,726.2	-53.7	3,726.6	0.00	0.00	0.00
9,640.0	90.00	359.17	6,097.0	3,766.2	-54.3	3,766.6	0.00	0.00	0.00
9,680.0	90.00	359.17	6,097.0	3,806.2	-54.9	3,806.6	0.00	0.00	0.00
9,720.0	90.00	359.17	6,097.0	3,846.2	-55.4	3,846.6	0.00	0.00	0.00
9,760.0	90.00	359.17	6,097.0	3,886.2	-56.0	3,886.6	0.00	0.00	0.00
9,800.0	90.00	359.17	6,097.0	3,926.2	-56.6	3,926.6	0.00	0.00	0.00
9,840.0	90.00	359.17	6,097.0	3,966.1	-57.2	3,966.6	0.00	0.00	0.00
9,880.0	90.00	359.17	6,097.0	4,006.1	-57.7	4,006.6	0.00	0.00	0.00
9,920.0	90.00	359.17	6,097.0	4,046.1	-58.3	4,046.6	0.00	0.00	0.00
9,960.0	90.00	359.17	6,097.0	4,086.1	-58.9	4,086.6	0.00	0.00	0.00
10,000.0	90.00	359.17	6,097.0	4,126.1	-59.5	4,126.6	0.00	0.00	0.00
10,040.0	90.00	359.17	6,097.0	4,166.1	-60.0	4,166.6	0.00	0.00	0.00
10,080.0	90.00	359.17	6,097.0	4,206.1	-60.6	4,206.6	0.00	0.00	0.00
10,120.0	90.00	359.17	6,097.0	4,246.1	-61.2	4,246.6	0.00	0.00	0.00
10,160.0	90.00	359.17	6,097.0	4,286.1	-61.8	4,286.6	0.00	0.00	0.00
10,200.0	90.00	359.17	6,097.0	4,326.1	-62.3	4,326.6	0.00	0.00	0.00
10,240.0	90.00	359.17	6,097.0	4,366.1	-62.9	4,366.6	0.00	0.00	0.00
10,280.0	90.00	359.17	6,097.0	4,406.1	-63.5	4,406.6	0.00	0.00	0.00
10,320.0	90.00	359.17	6,097.0	4,446.1	-64.1	4,446.6	0.00	0.00	0.00
10,360.0	90.00	359.17	6,097.0	4,486.1	-64.7	4,486.6	0.00	0.00	0.00
10,400.0	90.00	359.17	6,097.0	4,526.1	-65.2	4,526.6	0.00	0.00	0.00
10,440.0	90.00	359.17	6,097.0	4,566.1	-65.8	4,566.6	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Project:</b>	SEC.11-T10N-R58W	<b>MD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)
10,480.0	90.00	359.17	6,097.0	4,606.1	-66.4	4,606.6	0.00	0.00	0.00
10,520.0	90.00	359.17	6,097.0	4,646.1	-67.0	4,646.6	0.00	0.00	0.00
10,560.0	90.00	359.17	6,097.0	4,686.1	-67.5	4,686.6	0.00	0.00	0.00
10,600.0	90.00	359.17	6,097.0	4,726.1	-68.1	4,726.6	0.00	0.00	0.00
10,640.0	90.00	359.17	6,097.0	4,766.1	-68.7	4,766.6	0.00	0.00	0.00
10,680.0	90.00	359.17	6,097.0	4,806.1	-69.3	4,806.6	0.00	0.00	0.00
10,720.0	90.00	359.17	6,097.0	4,846.1	-69.8	4,846.6	0.00	0.00	0.00
10,760.0	90.00	359.17	6,097.0	4,886.1	-70.4	4,886.6	0.00	0.00	0.00
10,800.0	90.00	359.17	6,097.0	4,926.0	-71.0	4,926.6	0.00	0.00	0.00
10,840.0	90.00	359.17	6,097.0	4,966.0	-71.6	4,966.6	0.00	0.00	0.00
10,880.0	90.00	359.17	6,097.0	5,006.0	-72.1	5,006.6	0.00	0.00	0.00
10,920.0	90.00	359.17	6,097.0	5,046.0	-72.7	5,046.6	0.00	0.00	0.00
10,960.0	90.00	359.17	6,097.0	5,086.0	-73.3	5,086.6	0.00	0.00	0.00
11,000.0	90.00	359.17	6,097.0	5,126.0	-73.9	5,126.6	0.00	0.00	0.00
11,040.0	90.00	359.17	6,097.0	5,166.0	-74.5	5,166.6	0.00	0.00	0.00
11,080.0	90.00	359.17	6,097.0	5,206.0	-75.0	5,206.6	0.00	0.00	0.00
11,120.0	90.00	359.17	6,097.0	5,246.0	-75.6	5,246.6	0.00	0.00	0.00
11,160.0	90.00	359.17	6,097.0	5,286.0	-76.2	5,286.6	0.00	0.00	0.00
11,200.0	90.00	359.17	6,097.0	5,326.0	-76.8	5,326.6	0.00	0.00	0.00
11,240.0	90.00	359.17	6,097.0	5,366.0	-77.3	5,366.6	0.00	0.00	0.00
11,280.0	90.00	359.17	6,097.0	5,406.0	-77.9	5,406.6	0.00	0.00	0.00
11,320.0	90.00	359.17	6,097.0	5,446.0	-78.5	5,446.6	0.00	0.00	0.00
11,360.0	90.00	359.17	6,097.0	5,486.0	-79.1	5,486.6	0.00	0.00	0.00
11,400.0	90.00	359.17	6,097.0	5,526.0	-79.6	5,526.6	0.00	0.00	0.00
11,440.0	90.00	359.17	6,097.0	5,566.0	-80.2	5,566.6	0.00	0.00	0.00
11,480.0	90.00	359.17	6,097.0	5,606.0	-80.8	5,606.6	0.00	0.00	0.00
11,520.0	90.00	359.17	6,097.0	5,646.0	-81.4	5,646.6	0.00	0.00	0.00
11,560.0	90.00	359.17	6,097.0	5,686.0	-81.9	5,686.6	0.00	0.00	0.00
11,600.0	90.00	359.17	6,097.0	5,726.0	-82.5	5,726.6	0.00	0.00	0.00
11,640.0	90.00	359.17	6,097.0	5,766.0	-83.1	5,766.6	0.00	0.00	0.00
11,680.0	90.00	359.17	6,097.0	5,806.0	-83.7	5,806.6	0.00	0.00	0.00
11,720.0	90.00	359.17	6,097.0	5,846.0	-84.3	5,846.6	0.00	0.00	0.00
11,760.0	90.00	359.17	6,097.0	5,885.9	-84.8	5,886.6	0.00	0.00	0.00
11,800.0	90.00	359.17	6,097.0	5,925.9	-85.4	5,926.6	0.00	0.00	0.00
11,840.0	90.00	359.17	6,097.0	5,965.9	-86.0	5,966.6	0.00	0.00	0.00
11,880.0	90.00	359.17	6,097.0	6,005.9	-86.6	6,006.6	0.00	0.00	0.00
11,920.0	90.00	359.17	6,097.0	6,045.9	-87.1	6,046.6	0.00	0.00	0.00
11,960.0	90.00	359.17	6,097.0	6,085.9	-87.7	6,086.6	0.00	0.00	0.00
12,000.0	90.00	359.17	6,097.0	6,125.9	-88.3	6,126.6	0.00	0.00	0.00
12,040.0	90.00	359.17	6,097.0	6,165.9	-88.9	6,166.6	0.00	0.00	0.00
12,080.0	90.00	359.17	6,097.0	6,205.9	-89.4	6,206.6	0.00	0.00	0.00
12,120.0	90.00	359.17	6,097.0	6,245.9	-90.0	6,246.6	0.00	0.00	0.00
12,160.0	90.00	359.17	6,097.0	6,285.9	-90.6	6,286.6	0.00	0.00	0.00
12,200.0	90.00	359.17	6,097.0	6,325.9	-91.2	6,326.6	0.00	0.00	0.00
12,240.0	90.00	359.17	6,097.0	6,365.9	-91.7	6,366.6	0.00	0.00	0.00
12,280.0	90.00	359.17	6,097.0	6,405.9	-92.3	6,406.6	0.00	0.00	0.00
12,320.0	90.00	359.17	6,097.0	6,445.9	-92.9	6,446.6	0.00	0.00	0.00
12,360.0	90.00	359.17	6,097.0	6,485.9	-93.5	6,486.6	0.00	0.00	0.00
12,400.0	90.00	359.17	6,097.0	6,525.9	-94.0	6,526.6	0.00	0.00	0.00
12,440.0	90.00	359.17	6,097.0	6,565.9	-94.6	6,566.6	0.00	0.00	0.00
12,480.0	90.00	359.17	6,097.0	6,605.9	-95.2	6,606.6	0.00	0.00	0.00
12,520.0	90.00	359.17	6,097.0	6,645.9	-95.8	6,646.6	0.00	0.00	0.00
12,560.0	90.00	359.17	6,097.0	6,685.9	-96.4	6,686.6	0.00	0.00	0.00
12,600.0	90.00	359.17	6,097.0	6,725.9	-96.9	6,726.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Razor 11-0241H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Project:</b>	SEC.11-T10N-R58W	<b>MD Reference:</b>	WELL @ 4970.7ft ((RKB - 16.5'))
<b>Site:</b>	Razor 11-0241H Pad Sec.11-T10N-R58W	<b>North Reference:</b>	True
<b>Well:</b>	Razor 11-0241H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (5-29-12)		

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)	
12,640.0	90.00	359.17	6,097.0	6,765.9	-97.5	6,766.6	0.00	0.00	0.00	
12,680.0	90.00	359.17	6,097.0	6,805.9	-98.1	6,806.6	0.00	0.00	0.00	
12,720.0	90.00	359.17	6,097.0	6,845.8	-98.7	6,846.6	0.00	0.00	0.00	
12,744.2	90.00	359.17	6,097.0	6,870.0	-99.0	6,870.8	0.00	0.00	0.00	
HARDLINES BHL 660'FNL - BHL 660'FNL, 660'FEL, SEC.2										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,394.3	6,097.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,914.0	5,890.8	NIOBRARA		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
6,394.3	6,097.0	520.8	-7.5	End of Build	