

Whiting Oil & Gas

Well Name: **Razor 27-3414H**

Surface Location: Razor 27-3414H Pad Sec.27-T10N-R58W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

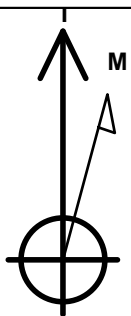
Ground Elevation: 4754.4

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1541603.26	3454431.26	40.808536	-103.858364	

RKB - 16.5' WELL @ 4770.9ft (RKB - 16.5')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINES BHL 660'FSL	1.0	-6937.7	-480.0	Polygon
HARDLINES SHL 660'FNL	1.0	-330.0	-400.0	Polygon
BHL 660'FSL, 660'FWL, SEC.34	5721.0	-6937.7	80.0	Point



Azimuths to True North
Magnetic North: 8.27°

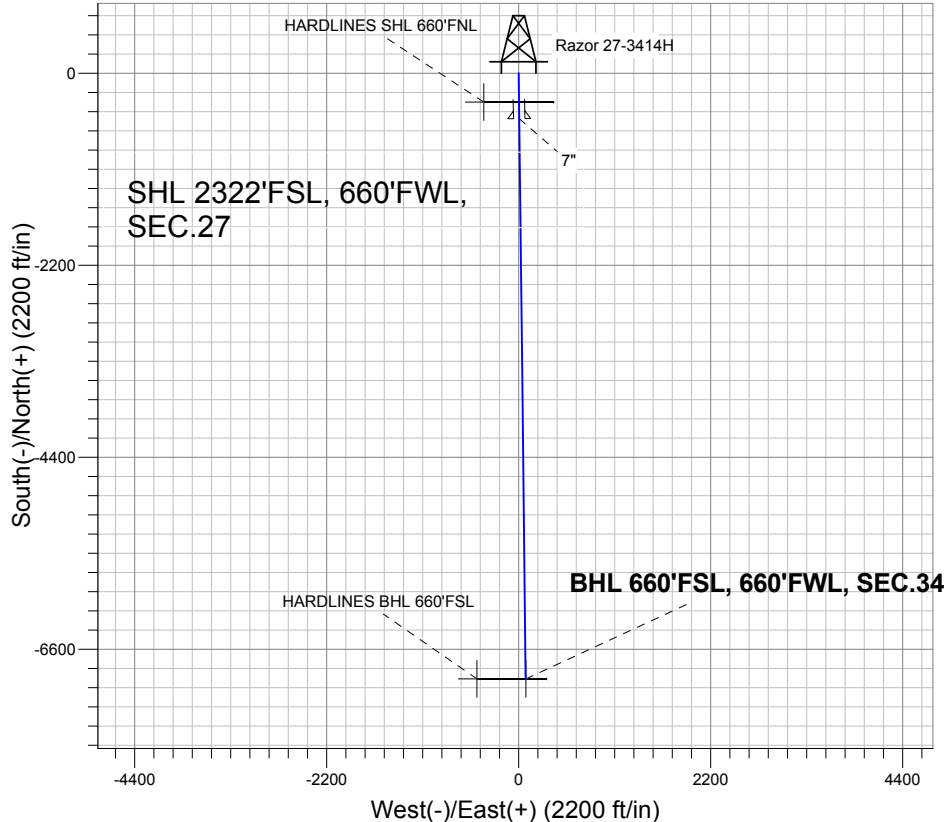
Magnetic Field
Strength: 53337.3nT
Dip Angle: 67.49°
Date: 5/29/2012
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
5721.0	6018.3	End of Build

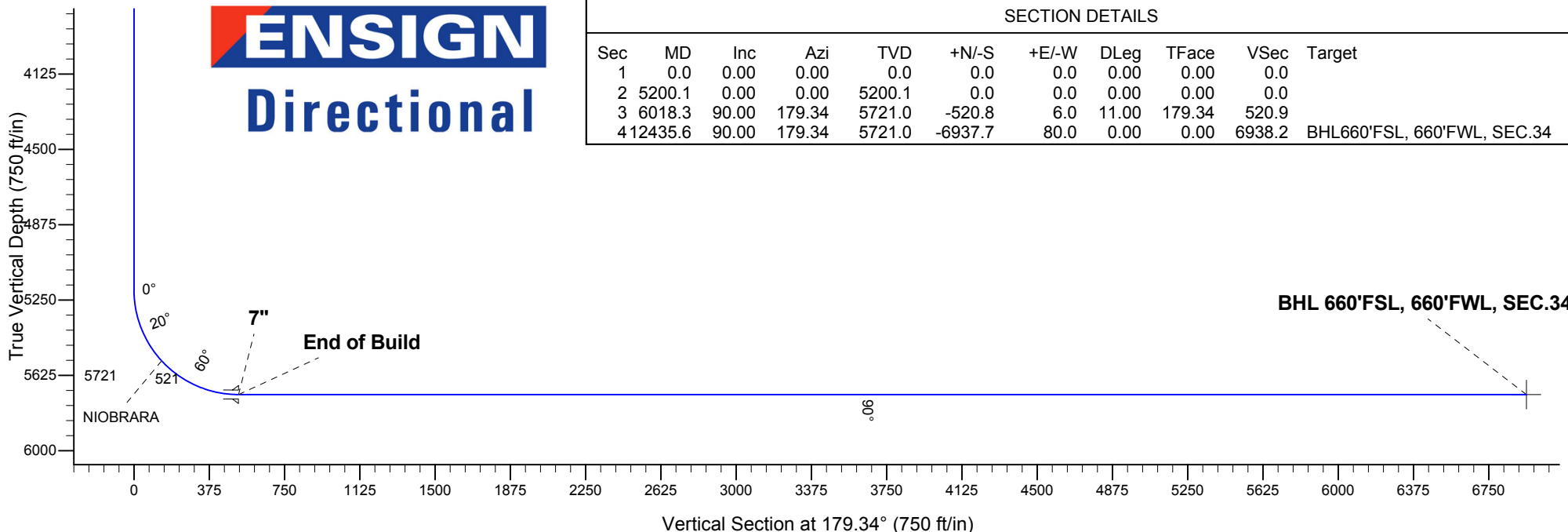
Razor 27-3414H Pad Sec.27-T10N-R58W
Razor 27-3414H
Plan #1 (5-29-12)
15:26, May 29 2012

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



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	5200.1	0.00	0.00	5200.1	0.0	0.0	0.00	0.00	0.0	
3	6018.3	90.00	179.34	5721.0	-520.8	6.0	11.00	179.34	520.9	
4	12435.6	90.00	179.34	5721.0	-6937.7	80.0	0.00	0.00	6938.2	BHL660'FSL, 660'FWL, SEC.34





Directional

Whiting Oil & Gas

SEC.27-T10N-R58W

Razor 27-3414H Pad Sec.27-T10N-R58W

Razor 27-3414H

Wellbore #1

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

Standard Planning Report

29 May, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-29-12)		

Project	SEC.27-T10N-R58W		
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		Razor 27-3414H Pad Sec.27-T10N-R58W			
Site Position:		Northing:	1,541,603.26 ft	Latitude:	40.808536
From:	Lat/Long	Easting:	3,454,431.26 ft	Longitude:	-103.858364
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	1.06 °

Well		Razor 27-3414H				
Well Position	+N/-S	0.0 ft	Northing:	1,541,603.26 ft	Latitude:	40.808536
	+E/-W	0.0 ft	Easting:	3,454,431.26 ft	Longitude:	-103.858364
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,754.4 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/29/2012	8.27	67.49	53,337

Design	Plan #1 (5-29-12)			
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	179.34

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	
5,200.1	0.00	0.00	5,200.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,018.3	90.00	179.34	5,721.0	-520.8	6.0	11.00	11.00	0.00	179.34	
12,435.6	90.00	179.34	5,721.0	-6,937.7	80.0	0.00	0.00	0.00	0.00	BHL 660°FSL, 660°F

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Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
HARDLINES SHL 660°FNL									
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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Wellbore:	Wellbore #1		
Design:	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

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Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
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Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
5,200.1	0.00	0.00	5,200.1	0.0	0.0	0.0	0.00	0.00	0.00
5,240.0	4.39	179.34	5,240.0	-1.5	0.0	1.5	11.00	11.00	0.00
5,280.0	8.79	179.34	5,279.7	-6.1	0.1	6.1	11.00	11.00	0.00
5,320.0	13.19	179.34	5,318.9	-13.7	0.2	13.7	11.00	11.00	0.00
5,360.0	17.59	179.34	5,357.5	-24.3	0.3	24.3	11.00	11.00	0.00
5,400.0	21.99	179.34	5,395.1	-37.9	0.4	37.9	11.00	11.00	0.00
5,440.0	26.39	179.34	5,431.6	-54.3	0.6	54.3	11.00	11.00	0.00
5,480.0	30.79	179.34	5,466.7	-73.4	0.8	73.4	11.00	11.00	0.00
5,520.0	35.19	179.34	5,500.3	-95.2	1.1	95.2	11.00	11.00	0.00
5,560.0	39.59	179.34	5,532.0	-119.4	1.4	119.5	11.00	11.00	0.00
5,588.0	42.67	179.34	5,553.1	-137.9	1.6	137.9	11.00	11.00	0.00
NIORARA									
5,600.0	43.99	179.34	5,561.9	-146.1	1.7	146.1	11.00	11.00	0.00
5,640.0	48.39	179.34	5,589.5	-174.9	2.0	175.0	11.00	11.00	0.00
5,680.0	52.79	179.34	5,614.9	-205.8	2.4	205.9	11.00	11.00	0.00
5,720.0	57.19	179.34	5,637.9	-238.6	2.8	238.6	11.00	11.00	0.00
5,760.0	61.59	179.34	5,658.3	-273.0	3.1	273.0	11.00	11.00	0.00
5,800.0	65.99	179.34	5,675.9	-308.9	3.6	308.9	11.00	11.00	0.00
5,840.0	70.39	179.34	5,690.8	-346.0	4.0	346.0	11.00	11.00	0.00
5,880.0	74.79	179.34	5,702.7	-384.2	4.4	384.2	11.00	11.00	0.00
5,920.0	79.19	179.34	5,711.7	-423.1	4.9	423.1	11.00	11.00	0.00
5,960.0	83.59	179.34	5,717.7	-462.7	5.3	462.7	11.00	11.00	0.00
6,000.0	87.99	179.34	5,720.7	-502.5	5.8	502.6	11.00	11.00	0.00
6,018.3	90.00	179.34	5,721.0	-520.8	6.0	520.9	11.00	11.00	0.00
End of Build - 7"									
6,040.0	90.00	179.34	5,721.0	-542.5	6.3	542.6	0.01	0.01	0.00
6,080.0	90.00	179.34	5,721.0	-582.5	6.7	582.6	0.00	0.00	0.00
6,120.0	90.00	179.34	5,721.0	-622.5	7.2	622.6	0.00	0.00	0.00
6,160.0	90.00	179.34	5,721.0	-662.5	7.6	662.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
6,200.0	90.00	179.34	5,721.0	-702.5	8.1	702.6	0.00	0.00	0.00
6,240.0	90.00	179.34	5,721.0	-742.5	8.6	742.6	0.00	0.00	0.00
6,280.0	90.00	179.34	5,721.0	-782.5	9.0	782.6	0.00	0.00	0.00
6,320.0	90.00	179.34	5,721.0	-822.5	9.5	822.6	0.00	0.00	0.00
6,360.0	90.00	179.34	5,721.0	-862.5	9.9	862.6	0.00	0.00	0.00
6,400.0	90.00	179.34	5,721.0	-902.5	10.4	902.6	0.00	0.00	0.00
6,440.0	90.00	179.34	5,721.0	-942.5	10.9	942.6	0.00	0.00	0.00
6,480.0	90.00	179.34	5,721.0	-982.5	11.3	982.6	0.00	0.00	0.00
6,520.0	90.00	179.34	5,721.0	-1,022.5	11.8	1,022.6	0.00	0.00	0.00
6,560.0	90.00	179.34	5,721.0	-1,062.5	12.3	1,062.6	0.00	0.00	0.00
6,600.0	90.00	179.34	5,721.0	-1,102.5	12.7	1,102.6	0.00	0.00	0.00
6,640.0	90.00	179.34	5,721.0	-1,142.5	13.2	1,142.6	0.00	0.00	0.00
6,680.0	90.00	179.34	5,721.0	-1,182.5	13.6	1,182.6	0.00	0.00	0.00
6,720.0	90.00	179.34	5,721.0	-1,222.5	14.1	1,222.6	0.00	0.00	0.00
6,760.0	90.00	179.34	5,721.0	-1,262.5	14.6	1,262.6	0.00	0.00	0.00
6,800.0	90.00	179.34	5,721.0	-1,302.5	15.0	1,302.6	0.00	0.00	0.00
6,840.0	90.00	179.34	5,721.0	-1,342.5	15.5	1,342.6	0.00	0.00	0.00
6,880.0	90.00	179.34	5,721.0	-1,382.5	15.9	1,382.6	0.00	0.00	0.00
6,920.0	90.00	179.34	5,721.0	-1,422.5	16.4	1,422.6	0.00	0.00	0.00
6,960.0	90.00	179.34	5,721.0	-1,462.5	16.9	1,462.6	0.00	0.00	0.00
7,000.0	90.00	179.34	5,721.0	-1,502.5	17.3	1,502.6	0.00	0.00	0.00
7,040.0	90.00	179.34	5,721.0	-1,542.5	17.8	1,542.6	0.00	0.00	0.00
7,080.0	90.00	179.34	5,721.0	-1,582.5	18.3	1,582.6	0.00	0.00	0.00
7,120.0	90.00	179.34	5,721.0	-1,622.5	18.7	1,622.6	0.00	0.00	0.00
7,160.0	90.00	179.34	5,721.0	-1,662.4	19.2	1,662.6	0.00	0.00	0.00
7,200.0	90.00	179.34	5,721.0	-1,702.4	19.6	1,702.6	0.00	0.00	0.00
7,240.0	90.00	179.34	5,721.0	-1,742.4	20.1	1,742.6	0.00	0.00	0.00
7,280.0	90.00	179.34	5,721.0	-1,782.4	20.6	1,782.6	0.00	0.00	0.00
7,320.0	90.00	179.34	5,721.0	-1,822.4	21.0	1,822.6	0.00	0.00	0.00
7,360.0	90.00	179.34	5,721.0	-1,862.4	21.5	1,862.6	0.00	0.00	0.00
7,400.0	90.00	179.34	5,721.0	-1,902.4	21.9	1,902.6	0.00	0.00	0.00
7,440.0	90.00	179.34	5,721.0	-1,942.4	22.4	1,942.6	0.00	0.00	0.00
7,480.0	90.00	179.34	5,721.0	-1,982.4	22.9	1,982.6	0.00	0.00	0.00
7,520.0	90.00	179.34	5,721.0	-2,022.4	23.3	2,022.6	0.00	0.00	0.00
7,560.0	90.00	179.34	5,721.0	-2,062.4	23.8	2,062.6	0.00	0.00	0.00
7,600.0	90.00	179.34	5,721.0	-2,102.4	24.3	2,102.6	0.00	0.00	0.00
7,640.0	90.00	179.34	5,721.0	-2,142.4	24.7	2,142.6	0.00	0.00	0.00
7,680.0	90.00	179.34	5,721.0	-2,182.4	25.2	2,182.6	0.00	0.00	0.00
7,720.0	90.00	179.34	5,721.0	-2,222.4	25.6	2,222.6	0.00	0.00	0.00
7,760.0	90.00	179.34	5,721.0	-2,262.4	26.1	2,262.6	0.00	0.00	0.00
7,800.0	90.00	179.34	5,721.0	-2,302.4	26.6	2,302.6	0.00	0.00	0.00
7,840.0	90.00	179.34	5,721.0	-2,342.4	27.0	2,342.6	0.00	0.00	0.00
7,880.0	90.00	179.34	5,721.0	-2,382.4	27.5	2,382.6	0.00	0.00	0.00
7,920.0	90.00	179.34	5,721.0	-2,422.4	27.9	2,422.6	0.00	0.00	0.00
7,960.0	90.00	179.34	5,721.0	-2,462.4	28.4	2,462.6	0.00	0.00	0.00
8,000.0	90.00	179.34	5,721.0	-2,502.4	28.9	2,502.6	0.00	0.00	0.00
8,040.0	90.00	179.34	5,721.0	-2,542.4	29.3	2,542.6	0.00	0.00	0.00
8,080.0	90.00	179.34	5,721.0	-2,582.4	29.8	2,582.6	0.00	0.00	0.00
8,120.0	90.00	179.34	5,721.0	-2,622.4	30.2	2,622.6	0.00	0.00	0.00
8,160.0	90.00	179.34	5,721.0	-2,662.4	30.7	2,662.6	0.00	0.00	0.00
8,200.0	90.00	179.34	5,721.0	-2,702.4	31.2	2,702.6	0.00	0.00	0.00
8,240.0	90.00	179.34	5,721.0	-2,742.4	31.6	2,742.6	0.00	0.00	0.00
8,280.0	90.00	179.34	5,721.0	-2,782.4	32.1	2,782.6	0.00	0.00	0.00
8,320.0	90.00	179.34	5,721.0	-2,822.4	32.6	2,822.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
8,360.0	90.00	179.34	5,721.0	-2,862.4	33.0	2,862.6	0.00	0.00	0.00
8,400.0	90.00	179.34	5,721.0	-2,902.4	33.5	2,902.6	0.00	0.00	0.00
8,440.0	90.00	179.34	5,721.0	-2,942.4	33.9	2,942.6	0.00	0.00	0.00
8,480.0	90.00	179.34	5,721.0	-2,982.4	34.4	2,982.6	0.00	0.00	0.00
8,520.0	90.00	179.34	5,721.0	-3,022.4	34.9	3,022.6	0.00	0.00	0.00
8,560.0	90.00	179.34	5,721.0	-3,062.4	35.3	3,062.6	0.00	0.00	0.00
8,600.0	90.00	179.34	5,721.0	-3,102.4	35.8	3,102.6	0.00	0.00	0.00
8,640.0	90.00	179.34	5,721.0	-3,142.4	36.2	3,142.6	0.00	0.00	0.00
8,680.0	90.00	179.34	5,721.0	-3,182.3	36.7	3,182.6	0.00	0.00	0.00
8,720.0	90.00	179.34	5,721.0	-3,222.3	37.2	3,222.6	0.00	0.00	0.00
8,760.0	90.00	179.34	5,721.0	-3,262.3	37.6	3,262.6	0.00	0.00	0.00
8,800.0	90.00	179.34	5,721.0	-3,302.3	38.1	3,302.6	0.00	0.00	0.00
8,840.0	90.00	179.34	5,721.0	-3,342.3	38.6	3,342.6	0.00	0.00	0.00
8,880.0	90.00	179.34	5,721.0	-3,382.3	39.0	3,382.6	0.00	0.00	0.00
8,920.0	90.00	179.34	5,721.0	-3,422.3	39.5	3,422.6	0.00	0.00	0.00
8,960.0	90.00	179.34	5,721.0	-3,462.3	39.9	3,462.6	0.00	0.00	0.00
9,000.0	90.00	179.34	5,721.0	-3,502.3	40.4	3,502.6	0.00	0.00	0.00
9,040.0	90.00	179.34	5,721.0	-3,542.3	40.9	3,542.6	0.00	0.00	0.00
9,080.0	90.00	179.34	5,721.0	-3,582.3	41.3	3,582.6	0.00	0.00	0.00
9,120.0	90.00	179.34	5,721.0	-3,622.3	41.8	3,622.6	0.00	0.00	0.00
9,160.0	90.00	179.34	5,721.0	-3,662.3	42.2	3,662.6	0.00	0.00	0.00
9,200.0	90.00	179.34	5,721.0	-3,702.3	42.7	3,702.6	0.00	0.00	0.00
9,240.0	90.00	179.34	5,721.0	-3,742.3	43.2	3,742.6	0.00	0.00	0.00
9,280.0	90.00	179.34	5,721.0	-3,782.3	43.6	3,782.6	0.00	0.00	0.00
9,320.0	90.00	179.34	5,721.0	-3,822.3	44.1	3,822.6	0.00	0.00	0.00
9,360.0	90.00	179.34	5,721.0	-3,862.3	44.6	3,862.6	0.00	0.00	0.00
9,400.0	90.00	179.34	5,721.0	-3,902.3	45.0	3,902.6	0.00	0.00	0.00
9,440.0	90.00	179.34	5,721.0	-3,942.3	45.5	3,942.6	0.00	0.00	0.00
9,480.0	90.00	179.34	5,721.0	-3,982.3	45.9	3,982.6	0.00	0.00	0.00
9,520.0	90.00	179.34	5,721.0	-4,022.3	46.4	4,022.6	0.00	0.00	0.00
9,560.0	90.00	179.34	5,721.0	-4,062.3	46.9	4,062.6	0.00	0.00	0.00
9,600.0	90.00	179.34	5,721.0	-4,102.3	47.3	4,102.6	0.00	0.00	0.00
9,640.0	90.00	179.34	5,721.0	-4,142.3	47.8	4,142.6	0.00	0.00	0.00
9,680.0	90.00	179.34	5,721.0	-4,182.3	48.2	4,182.6	0.00	0.00	0.00
9,720.0	90.00	179.34	5,721.0	-4,222.3	48.7	4,222.6	0.00	0.00	0.00
9,760.0	90.00	179.34	5,721.0	-4,262.3	49.2	4,262.6	0.00	0.00	0.00
9,800.0	90.00	179.34	5,721.0	-4,302.3	49.6	4,302.6	0.00	0.00	0.00
9,840.0	90.00	179.34	5,721.0	-4,342.3	50.1	4,342.6	0.00	0.00	0.00
9,880.0	90.00	179.34	5,721.0	-4,382.3	50.5	4,382.6	0.00	0.00	0.00
9,920.0	90.00	179.34	5,721.0	-4,422.3	51.0	4,422.6	0.00	0.00	0.00
9,960.0	90.00	179.34	5,721.0	-4,462.3	51.5	4,462.6	0.00	0.00	0.00
10,000.0	90.00	179.34	5,721.0	-4,502.3	51.9	4,502.6	0.00	0.00	0.00
10,040.0	90.00	179.34	5,721.0	-4,542.3	52.4	4,542.6	0.00	0.00	0.00
10,080.0	90.00	179.34	5,721.0	-4,582.3	52.9	4,582.6	0.00	0.00	0.00
10,120.0	90.00	179.34	5,721.0	-4,622.3	53.3	4,622.6	0.00	0.00	0.00
10,160.0	90.00	179.34	5,721.0	-4,662.2	53.8	4,662.6	0.00	0.00	0.00
10,200.0	90.00	179.34	5,721.0	-4,702.2	54.2	4,702.6	0.00	0.00	0.00
10,240.0	90.00	179.34	5,721.0	-4,742.2	54.7	4,742.6	0.00	0.00	0.00
10,280.0	90.00	179.34	5,721.0	-4,782.2	55.2	4,782.6	0.00	0.00	0.00
10,320.0	90.00	179.34	5,721.0	-4,822.2	55.6	4,822.6	0.00	0.00	0.00
10,360.0	90.00	179.34	5,721.0	-4,862.2	56.1	4,862.6	0.00	0.00	0.00
10,400.0	90.00	179.34	5,721.0	-4,902.2	56.5	4,902.6	0.00	0.00	0.00
10,440.0	90.00	179.34	5,721.0	-4,942.2	57.0	4,942.6	0.00	0.00	0.00
10,480.0	90.00	179.34	5,721.0	-4,982.2	57.5	4,982.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
10,520.0	90.00	179.34	5,721.0	-5,022.2	57.9	5,022.6	0.00	0.00	0.00
10,560.0	90.00	179.34	5,721.0	-5,062.2	58.4	5,062.6	0.00	0.00	0.00
10,600.0	90.00	179.34	5,721.0	-5,102.2	58.9	5,102.6	0.00	0.00	0.00
10,640.0	90.00	179.34	5,721.0	-5,142.2	59.3	5,142.6	0.00	0.00	0.00
10,680.0	90.00	179.34	5,721.0	-5,182.2	59.8	5,182.6	0.00	0.00	0.00
10,720.0	90.00	179.34	5,721.0	-5,222.2	60.2	5,222.6	0.00	0.00	0.00
10,760.0	90.00	179.34	5,721.0	-5,262.2	60.7	5,262.6	0.00	0.00	0.00
10,800.0	90.00	179.34	5,721.0	-5,302.2	61.2	5,302.6	0.00	0.00	0.00
10,840.0	90.00	179.34	5,721.0	-5,342.2	61.6	5,342.6	0.00	0.00	0.00
10,880.0	90.00	179.34	5,721.0	-5,382.2	62.1	5,382.6	0.00	0.00	0.00
10,920.0	90.00	179.34	5,721.0	-5,422.2	62.5	5,422.6	0.00	0.00	0.00
10,960.0	90.00	179.34	5,721.0	-5,462.2	63.0	5,462.6	0.00	0.00	0.00
11,000.0	90.00	179.34	5,721.0	-5,502.2	63.5	5,502.6	0.00	0.00	0.00
11,040.0	90.00	179.34	5,721.0	-5,542.2	63.9	5,542.6	0.00	0.00	0.00
11,080.0	90.00	179.34	5,721.0	-5,582.2	64.4	5,582.6	0.00	0.00	0.00
11,120.0	90.00	179.34	5,721.0	-5,622.2	64.9	5,622.6	0.00	0.00	0.00
11,160.0	90.00	179.34	5,721.0	-5,662.2	65.3	5,662.6	0.00	0.00	0.00
11,200.0	90.00	179.34	5,721.0	-5,702.2	65.8	5,702.6	0.00	0.00	0.00
11,240.0	90.00	179.34	5,721.0	-5,742.2	66.2	5,742.6	0.00	0.00	0.00
11,280.0	90.00	179.34	5,721.0	-5,782.2	66.7	5,782.6	0.00	0.00	0.00
11,320.0	90.00	179.34	5,721.0	-5,822.2	67.2	5,822.6	0.00	0.00	0.00
11,360.0	90.00	179.34	5,721.0	-5,862.2	67.6	5,862.6	0.00	0.00	0.00
11,400.0	90.00	179.34	5,721.0	-5,902.2	68.1	5,902.6	0.00	0.00	0.00
11,440.0	90.00	179.34	5,721.0	-5,942.2	68.5	5,942.6	0.00	0.00	0.00
11,480.0	90.00	179.34	5,721.0	-5,982.2	69.0	5,982.6	0.00	0.00	0.00
11,520.0	90.00	179.34	5,721.0	-6,022.2	69.5	6,022.6	0.00	0.00	0.00
11,560.0	90.00	179.34	5,721.0	-6,062.2	69.9	6,062.6	0.00	0.00	0.00
11,600.0	90.00	179.34	5,721.0	-6,102.2	70.4	6,102.6	0.00	0.00	0.00
11,640.0	90.00	179.34	5,721.0	-6,142.2	70.9	6,142.6	0.00	0.00	0.00
11,680.0	90.00	179.34	5,721.0	-6,182.1	71.3	6,182.6	0.00	0.00	0.00
11,720.0	90.00	179.34	5,721.0	-6,222.1	71.8	6,222.6	0.00	0.00	0.00
11,760.0	90.00	179.34	5,721.0	-6,262.1	72.2	6,262.6	0.00	0.00	0.00
11,800.0	90.00	179.34	5,721.0	-6,302.1	72.7	6,302.6	0.00	0.00	0.00
11,840.0	90.00	179.34	5,721.0	-6,342.1	73.2	6,342.6	0.00	0.00	0.00
11,880.0	90.00	179.34	5,721.0	-6,382.1	73.6	6,382.6	0.00	0.00	0.00
11,920.0	90.00	179.34	5,721.0	-6,422.1	74.1	6,422.6	0.00	0.00	0.00
11,960.0	90.00	179.34	5,721.0	-6,462.1	74.5	6,462.6	0.00	0.00	0.00
12,000.0	90.00	179.34	5,721.0	-6,502.1	75.0	6,502.6	0.00	0.00	0.00
12,040.0	90.00	179.34	5,721.0	-6,542.1	75.5	6,542.6	0.00	0.00	0.00
12,080.0	90.00	179.34	5,721.0	-6,582.1	75.9	6,582.6	0.00	0.00	0.00
12,120.0	90.00	179.34	5,721.0	-6,622.1	76.4	6,622.6	0.00	0.00	0.00
12,160.0	90.00	179.34	5,721.0	-6,662.1	76.8	6,662.6	0.00	0.00	0.00
12,200.0	90.00	179.34	5,721.0	-6,702.1	77.3	6,702.6	0.00	0.00	0.00
12,240.0	90.00	179.34	5,721.0	-6,742.1	77.8	6,742.6	0.00	0.00	0.00
12,280.0	90.00	179.34	5,721.0	-6,782.1	78.2	6,782.6	0.00	0.00	0.00
12,320.0	90.00	179.34	5,721.0	-6,822.1	78.7	6,822.6	0.00	0.00	0.00
12,360.0	90.00	179.34	5,721.0	-6,862.1	79.2	6,862.6	0.00	0.00	0.00
12,400.0	90.00	179.34	5,721.0	-6,902.1	79.6	6,902.6	0.00	0.00	0.00
12,429.1	90.00	179.34	5,721.0	-6,931.2	80.0	6,931.7	0.00	0.00	0.00
HARDLINES BHL 660'FSL									
12,435.6	90.00	179.34	5,721.0	-6,937.7	80.0	6,938.2	0.00	0.00	0.00
BHL 660'FSL, 660'FWL, SEC.34									

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4770.9ft (RKB - 16.5')
Site:	Razor 27-3414H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-29-12)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,018.3	5,721.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,588.0	5,553.1	NIOBRARA		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,018.3	5,721.0	-520.8	6.0	End of Build	