

Whiting Oil & Gas

Well Name: **Razor 27-3424H**

Surface Location: Razor 27-3424H Pad Sec.27-T10N-R58W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

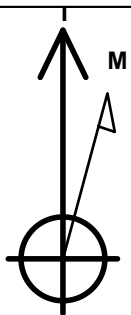
Ground Elevation: 4752.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1541648.85	3455750.30	40.808594	-103.853597	

Original Well Elev WELL @ 4768.5ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 660'FSL, 1980'FWL, SEC.34	5760.0	-6954.5	80.0	Point



Azimuths to True North
Magnetic North: 8.19°

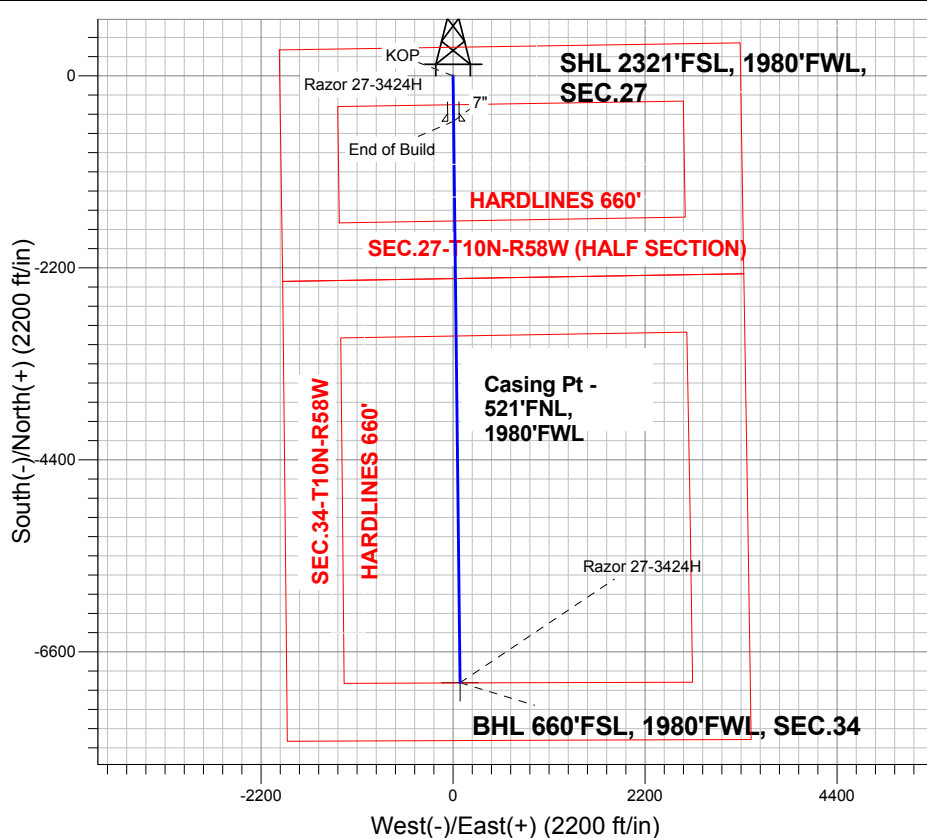
Magnetic Field
Strength: 53278.9nT
Dip Angle: 67.47°
Date: 12/17/2012
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
5239.1	5239.1	KOP
5760.0	6057.3	End of Build

Razor 27-3424H Pad Sec.27-T10N-R58W
Razor 27-3424H
Plan #1 (12-12-12)

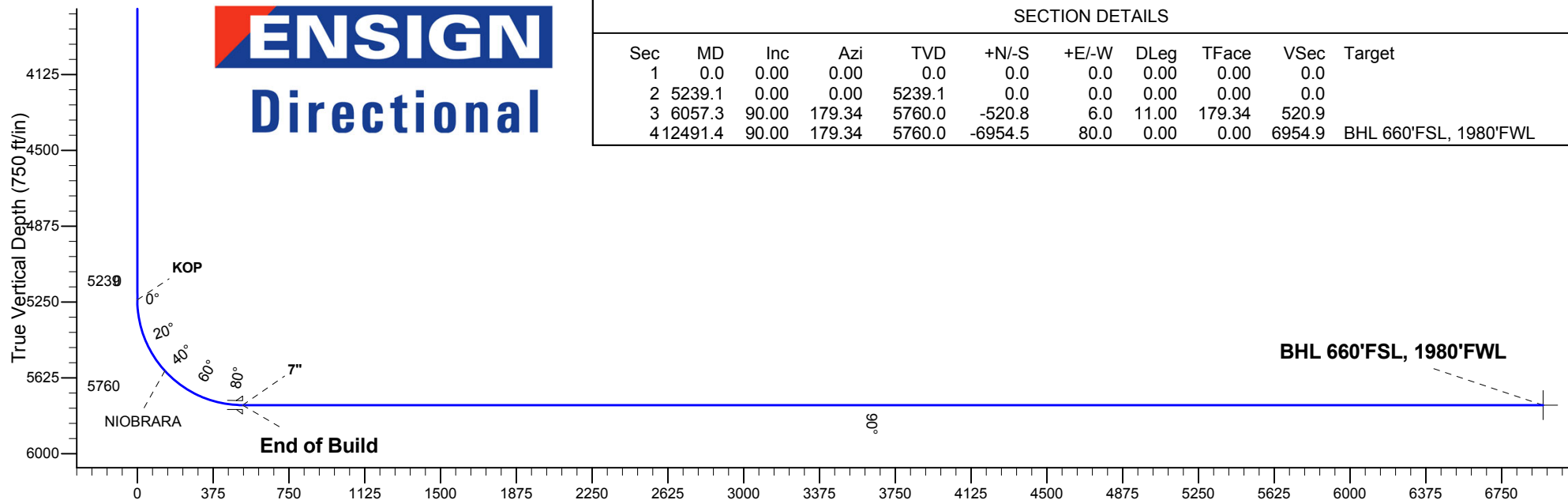
South(-)/North(+) (2200 ft/in)



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	5239.1	0.00	0.00	5239.1	0.0	0.0	0.00	0.00	0.0	
3	6057.3	90.00	179.34	5760.0	-520.8	6.0	11.00	179.34	520.9	
4	12491.4	90.00	179.34	5760.0	-6954.5	80.0	0.00	0.00	6954.9	BHL 660'FSL, 1980'FWL



Vertical Section at 179.34° (750 ft/in)



Directional

Whiting Oil & Gas

SEC.27-T10N-R58W

Razor 27-3424H Pad Sec.27-T10N-R58W

Razor 27-3424H

Wellbore #1

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

Standard Planning Report

17 December, 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	
5,239.1	0.00	0.00	5,239.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,057.3	90.00	179.34	5,760.0	-520.8	6.0	11.00	11.00	0.00	179.34	
12,491.4	90.00	179.34	5,760.0	-6,954.5	80.0	0.00	0.00	0.00	0.00	BHL 660'FSL, 1980

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3424H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4768.5ft (Original Well Elev)
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4768.5ft (Original Well Elev)
Site:	Razor 27-3424H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3424H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (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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Wellbore:	Wellbore #1		
Design:	Plan #1 (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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Wellbore:	Wellbore #1		
Design:	Plan #1 (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
5,239.1	0.00	0.00	5,239.1	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
5,240.0	0.10	179.34	5,240.0	0.0	0.0	0.0	10.65	10.65	0.00
5,280.0	4.50	179.34	5,280.0	-1.6	0.0	1.6	11.00	11.00	0.00
5,320.0	8.90	179.34	5,319.7	-6.3	0.1	6.3	11.00	11.00	0.00
5,360.0	13.30	179.34	5,358.9	-14.0	0.2	14.0	11.00	11.00	0.00
5,400.0	17.70	179.34	5,397.5	-24.6	0.3	24.6	11.00	11.00	0.00
5,440.0	22.10	179.34	5,435.1	-38.3	0.4	38.3	11.00	11.00	0.00
5,480.0	26.50	179.34	5,471.5	-54.7	0.6	54.7	11.00	11.00	0.00
5,520.0	30.90	179.34	5,506.6	-73.9	0.9	73.9	11.00	11.00	0.00
5,560.0	35.30	179.34	5,540.1	-95.7	1.1	95.7	11.00	11.00	0.00
5,600.0	39.70	179.34	5,571.8	-120.1	1.4	120.1	11.00	11.00	0.00
5,625.0	42.45	179.34	5,590.7	-136.5	1.6	136.5	11.00	11.00	0.00
NIOBRARA									
5,640.0	44.10	179.34	5,601.6	-146.8	1.7	146.8	11.00	11.00	0.00
5,680.0	48.50	179.34	5,629.2	-175.7	2.0	175.7	11.00	11.00	0.00
5,720.0	52.90	179.34	5,654.5	-206.6	2.4	206.6	11.00	11.00	0.00
5,760.0	57.30	179.34	5,677.4	-239.4	2.8	239.4	11.00	11.00	0.00
5,800.0	61.70	179.34	5,697.7	-273.9	3.2	273.9	11.00	11.00	0.00
5,840.0	66.10	179.34	5,715.3	-309.8	3.6	309.8	11.00	11.00	0.00
5,880.0	70.50	179.34	5,730.1	-346.9	4.0	347.0	11.00	11.00	0.00
5,920.0	74.90	179.34	5,742.0	-385.1	4.4	385.1	11.00	11.00	0.00
5,960.0	79.30	179.34	5,750.9	-424.1	4.9	424.1	11.00	11.00	0.00
6,000.0	83.70	179.34	5,756.9	-463.6	5.3	463.7	11.00	11.00	0.00
6,040.0	88.10	179.34	5,759.7	-503.5	5.8	503.6	11.00	11.00	0.00
6,057.3	90.00	179.34	5,760.0	-520.8	6.0	520.9	11.00	11.00	0.00
End of Build - 7"									
6,080.0	90.00	179.34	5,760.0	-543.5	6.3	543.6	0.01	0.01	0.00
6,120.0	90.00	179.34	5,760.0	-583.5	6.7	583.6	0.00	0.00	0.00
6,160.0	90.00	179.34	5,760.0	-623.5	7.2	623.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3424H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4768.5ft (Original Well Elev)
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4768.5ft (Original Well Elev)
Site:	Razor 27-3424H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3424H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (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)
6,200.0	90.00	179.34	5,760.0	-663.5	7.6	663.6	0.00	0.00	0.00
6,240.0	90.00	179.34	5,760.0	-703.5	8.1	703.6	0.00	0.00	0.00
6,280.0	90.00	179.34	5,760.0	-743.5	8.6	743.6	0.00	0.00	0.00
6,320.0	90.00	179.34	5,760.0	-783.5	9.0	783.6	0.00	0.00	0.00
6,360.0	90.00	179.34	5,760.0	-823.5	9.5	823.6	0.00	0.00	0.00
6,400.0	90.00	179.34	5,760.0	-863.5	9.9	863.6	0.00	0.00	0.00
6,440.0	90.00	179.34	5,760.0	-903.5	10.4	903.6	0.00	0.00	0.00
6,480.0	90.00	179.34	5,760.0	-943.5	10.9	943.6	0.00	0.00	0.00
6,520.0	90.00	179.34	5,760.0	-983.5	11.3	983.6	0.00	0.00	0.00
6,560.0	90.00	179.34	5,760.0	-1,023.5	11.8	1,023.6	0.00	0.00	0.00
6,600.0	90.00	179.34	5,760.0	-1,063.5	12.2	1,063.6	0.00	0.00	0.00
6,640.0	90.00	179.34	5,760.0	-1,103.5	12.7	1,103.6	0.00	0.00	0.00
6,680.0	90.00	179.34	5,760.0	-1,143.5	13.2	1,143.6	0.00	0.00	0.00
6,720.0	90.00	179.34	5,760.0	-1,183.5	13.6	1,183.6	0.00	0.00	0.00
6,760.0	90.00	179.34	5,760.0	-1,223.5	14.1	1,223.6	0.00	0.00	0.00
6,800.0	90.00	179.34	5,760.0	-1,263.5	14.5	1,263.6	0.00	0.00	0.00
6,840.0	90.00	179.34	5,760.0	-1,303.5	15.0	1,303.6	0.00	0.00	0.00
6,880.0	90.00	179.34	5,760.0	-1,343.5	15.5	1,343.6	0.00	0.00	0.00
6,920.0	90.00	179.34	5,760.0	-1,383.5	15.9	1,383.6	0.00	0.00	0.00
6,960.0	90.00	179.34	5,760.0	-1,423.5	16.4	1,423.6	0.00	0.00	0.00
7,000.0	90.00	179.34	5,760.0	-1,463.5	16.8	1,463.6	0.00	0.00	0.00
7,040.0	90.00	179.34	5,760.0	-1,503.5	17.3	1,503.6	0.00	0.00	0.00
7,080.0	90.00	179.34	5,760.0	-1,543.5	17.8	1,543.6	0.00	0.00	0.00
7,120.0	90.00	179.34	5,760.0	-1,583.5	18.2	1,583.6	0.00	0.00	0.00
7,160.0	90.00	179.34	5,760.0	-1,623.5	18.7	1,623.6	0.00	0.00	0.00
7,200.0	90.00	179.34	5,760.0	-1,663.4	19.1	1,663.6	0.00	0.00	0.00
7,240.0	90.00	179.34	5,760.0	-1,703.4	19.6	1,703.6	0.00	0.00	0.00
7,280.0	90.00	179.34	5,760.0	-1,743.4	20.1	1,743.6	0.00	0.00	0.00
7,320.0	90.00	179.34	5,760.0	-1,783.4	20.5	1,783.6	0.00	0.00	0.00
7,360.0	90.00	179.34	5,760.0	-1,823.4	21.0	1,823.6	0.00	0.00	0.00
7,400.0	90.00	179.34	5,760.0	-1,863.4	21.4	1,863.6	0.00	0.00	0.00
7,440.0	90.00	179.34	5,760.0	-1,903.4	21.9	1,903.6	0.00	0.00	0.00
7,480.0	90.00	179.34	5,760.0	-1,943.4	22.4	1,943.6	0.00	0.00	0.00
7,520.0	90.00	179.34	5,760.0	-1,983.4	22.8	1,983.6	0.00	0.00	0.00
7,560.0	90.00	179.34	5,760.0	-2,023.4	23.3	2,023.6	0.00	0.00	0.00
7,600.0	90.00	179.34	5,760.0	-2,063.4	23.7	2,063.6	0.00	0.00	0.00
7,640.0	90.00	179.34	5,760.0	-2,103.4	24.2	2,103.6	0.00	0.00	0.00
7,680.0	90.00	179.34	5,760.0	-2,143.4	24.7	2,143.6	0.00	0.00	0.00
7,720.0	90.00	179.34	5,760.0	-2,183.4	25.1	2,183.6	0.00	0.00	0.00
7,760.0	90.00	179.34	5,760.0	-2,223.4	25.6	2,223.6	0.00	0.00	0.00
7,800.0	90.00	179.34	5,760.0	-2,263.4	26.0	2,263.6	0.00	0.00	0.00
7,840.0	90.00	179.34	5,760.0	-2,303.4	26.5	2,303.6	0.00	0.00	0.00
7,880.0	90.00	179.34	5,760.0	-2,343.4	27.0	2,343.6	0.00	0.00	0.00
7,920.0	90.00	179.34	5,760.0	-2,383.4	27.4	2,383.6	0.00	0.00	0.00
7,960.0	90.00	179.34	5,760.0	-2,423.4	27.9	2,423.6	0.00	0.00	0.00
8,000.0	90.00	179.34	5,760.0	-2,463.4	28.3	2,463.6	0.00	0.00	0.00
8,040.0	90.00	179.34	5,760.0	-2,503.4	28.8	2,503.6	0.00	0.00	0.00
8,080.0	90.00	179.34	5,760.0	-2,543.4	29.3	2,543.6	0.00	0.00	0.00
8,120.0	90.00	179.34	5,760.0	-2,583.4	29.7	2,583.6	0.00	0.00	0.00
8,160.0	90.00	179.34	5,760.0	-2,623.4	30.2	2,623.6	0.00	0.00	0.00
8,200.0	90.00	179.34	5,760.0	-2,663.4	30.6	2,663.6	0.00	0.00	0.00
8,240.0	90.00	179.34	5,760.0	-2,703.4	31.1	2,703.6	0.00	0.00	0.00
8,280.0	90.00	179.34	5,760.0	-2,743.4	31.6	2,743.6	0.00	0.00	0.00
8,320.0	90.00	179.34	5,760.0	-2,783.4	32.0	2,783.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3424H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4768.5ft (Original Well Elev)
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4768.5ft (Original Well Elev)
Site:	Razor 27-3424H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3424H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (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)
8,360.0	90.00	179.34	5,760.0	-2,823.4	32.5	2,823.6	0.00	0.00	0.00
8,400.0	90.00	179.34	5,760.0	-2,863.4	32.9	2,863.6	0.00	0.00	0.00
8,440.0	90.00	179.34	5,760.0	-2,903.4	33.4	2,903.6	0.00	0.00	0.00
8,480.0	90.00	179.34	5,760.0	-2,943.4	33.9	2,943.6	0.00	0.00	0.00
8,520.0	90.00	179.34	5,760.0	-2,983.4	34.3	2,983.6	0.00	0.00	0.00
8,560.0	90.00	179.34	5,760.0	-3,023.4	34.8	3,023.6	0.00	0.00	0.00
8,600.0	90.00	179.34	5,760.0	-3,063.4	35.3	3,063.6	0.00	0.00	0.00
8,640.0	90.00	179.34	5,760.0	-3,103.4	35.7	3,103.6	0.00	0.00	0.00
8,680.0	90.00	179.34	5,760.0	-3,143.4	36.2	3,143.6	0.00	0.00	0.00
8,720.0	90.00	179.34	5,760.0	-3,183.3	36.6	3,183.6	0.00	0.00	0.00
8,760.0	90.00	179.34	5,760.0	-3,223.3	37.1	3,223.6	0.00	0.00	0.00
8,800.0	90.00	179.34	5,760.0	-3,263.3	37.6	3,263.6	0.00	0.00	0.00
8,840.0	90.00	179.34	5,760.0	-3,303.3	38.0	3,303.6	0.00	0.00	0.00
8,880.0	90.00	179.34	5,760.0	-3,343.3	38.5	3,343.6	0.00	0.00	0.00
8,920.0	90.00	179.34	5,760.0	-3,383.3	38.9	3,383.6	0.00	0.00	0.00
8,960.0	90.00	179.34	5,760.0	-3,423.3	39.4	3,423.6	0.00	0.00	0.00
9,000.0	90.00	179.34	5,760.0	-3,463.3	39.9	3,463.6	0.00	0.00	0.00
9,040.0	90.00	179.34	5,760.0	-3,503.3	40.3	3,503.6	0.00	0.00	0.00
9,080.0	90.00	179.34	5,760.0	-3,543.3	40.8	3,543.6	0.00	0.00	0.00
9,120.0	90.00	179.34	5,760.0	-3,583.3	41.2	3,583.6	0.00	0.00	0.00
9,160.0	90.00	179.34	5,760.0	-3,623.3	41.7	3,623.6	0.00	0.00	0.00
9,200.0	90.00	179.34	5,760.0	-3,663.3	42.2	3,663.6	0.00	0.00	0.00
9,240.0	90.00	179.34	5,760.0	-3,703.3	42.6	3,703.6	0.00	0.00	0.00
9,280.0	90.00	179.34	5,760.0	-3,743.3	43.1	3,743.6	0.00	0.00	0.00
9,320.0	90.00	179.34	5,760.0	-3,783.3	43.5	3,783.6	0.00	0.00	0.00
9,360.0	90.00	179.34	5,760.0	-3,823.3	44.0	3,823.6	0.00	0.00	0.00
9,400.0	90.00	179.34	5,760.0	-3,863.3	44.5	3,863.6	0.00	0.00	0.00
9,440.0	90.00	179.34	5,760.0	-3,903.3	44.9	3,903.6	0.00	0.00	0.00
9,480.0	90.00	179.34	5,760.0	-3,943.3	45.4	3,943.6	0.00	0.00	0.00
9,520.0	90.00	179.34	5,760.0	-3,983.3	45.8	3,983.6	0.00	0.00	0.00
9,560.0	90.00	179.34	5,760.0	-4,023.3	46.3	4,023.6	0.00	0.00	0.00
9,600.0	90.00	179.34	5,760.0	-4,063.3	46.8	4,063.6	0.00	0.00	0.00
9,640.0	90.00	179.34	5,760.0	-4,103.3	47.2	4,103.6	0.00	0.00	0.00
9,680.0	90.00	179.34	5,760.0	-4,143.3	47.7	4,143.6	0.00	0.00	0.00
9,720.0	90.00	179.34	5,760.0	-4,183.3	48.1	4,183.6	0.00	0.00	0.00
9,760.0	90.00	179.34	5,760.0	-4,223.3	48.6	4,223.6	0.00	0.00	0.00
9,800.0	90.00	179.34	5,760.0	-4,263.3	49.1	4,263.6	0.00	0.00	0.00
9,840.0	90.00	179.34	5,760.0	-4,303.3	49.5	4,303.6	0.00	0.00	0.00
9,880.0	90.00	179.34	5,760.0	-4,343.3	50.0	4,343.6	0.00	0.00	0.00
9,920.0	90.00	179.34	5,760.0	-4,383.3	50.4	4,383.6	0.00	0.00	0.00
9,960.0	90.00	179.34	5,760.0	-4,423.3	50.9	4,423.6	0.00	0.00	0.00
10,000.0	90.00	179.34	5,760.0	-4,463.3	51.4	4,463.6	0.00	0.00	0.00
10,040.0	90.00	179.34	5,760.0	-4,503.3	51.8	4,503.6	0.00	0.00	0.00
10,080.0	90.00	179.34	5,760.0	-4,543.3	52.3	4,543.6	0.00	0.00	0.00
10,120.0	90.00	179.34	5,760.0	-4,583.3	52.7	4,583.6	0.00	0.00	0.00
10,160.0	90.00	179.34	5,760.0	-4,623.3	53.2	4,623.6	0.00	0.00	0.00
10,200.0	90.00	179.34	5,760.0	-4,663.3	53.7	4,663.6	0.00	0.00	0.00
10,240.0	90.00	179.34	5,760.0	-4,703.2	54.1	4,703.6	0.00	0.00	0.00
10,280.0	90.00	179.34	5,760.0	-4,743.2	54.6	4,743.6	0.00	0.00	0.00
10,320.0	90.00	179.34	5,760.0	-4,783.2	55.0	4,783.6	0.00	0.00	0.00
10,360.0	90.00	179.34	5,760.0	-4,823.2	55.5	4,823.6	0.00	0.00	0.00
10,400.0	90.00	179.34	5,760.0	-4,863.2	56.0	4,863.6	0.00	0.00	0.00
10,440.0	90.00	179.34	5,760.0	-4,903.2	56.4	4,903.6	0.00	0.00	0.00
10,480.0	90.00	179.34	5,760.0	-4,943.2	56.9	4,943.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3424H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4768.5ft (Original Well Elev)
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4768.5ft (Original Well Elev)
Site:	Razor 27-3424H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3424H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (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)
10,520.0	90.00	179.34	5,760.0	-4,983.2	57.3	4,983.6	0.00	0.00	0.00
10,560.0	90.00	179.34	5,760.0	-5,023.2	57.8	5,023.6	0.00	0.00	0.00
10,600.0	90.00	179.34	5,760.0	-5,063.2	58.3	5,063.6	0.00	0.00	0.00
10,640.0	90.00	179.34	5,760.0	-5,103.2	58.7	5,103.6	0.00	0.00	0.00
10,680.0	90.00	179.34	5,760.0	-5,143.2	59.2	5,143.6	0.00	0.00	0.00
10,720.0	90.00	179.34	5,760.0	-5,183.2	59.6	5,183.6	0.00	0.00	0.00
10,760.0	90.00	179.34	5,760.0	-5,223.2	60.1	5,223.6	0.00	0.00	0.00
10,800.0	90.00	179.34	5,760.0	-5,263.2	60.6	5,263.6	0.00	0.00	0.00
10,840.0	90.00	179.34	5,760.0	-5,303.2	61.0	5,303.6	0.00	0.00	0.00
10,880.0	90.00	179.34	5,760.0	-5,343.2	61.5	5,343.6	0.00	0.00	0.00
10,920.0	90.00	179.34	5,760.0	-5,383.2	61.9	5,383.6	0.00	0.00	0.00
10,960.0	90.00	179.34	5,760.0	-5,423.2	62.4	5,423.6	0.00	0.00	0.00
11,000.0	90.00	179.34	5,760.0	-5,463.2	62.9	5,463.6	0.00	0.00	0.00
11,040.0	90.00	179.34	5,760.0	-5,503.2	63.3	5,503.6	0.00	0.00	0.00
11,080.0	90.00	179.34	5,760.0	-5,543.2	63.8	5,543.6	0.00	0.00	0.00
11,120.0	90.00	179.34	5,760.0	-5,583.2	64.2	5,583.6	0.00	0.00	0.00
11,160.0	90.00	179.34	5,760.0	-5,623.2	64.7	5,623.6	0.00	0.00	0.00
11,200.0	90.00	179.34	5,760.0	-5,663.2	65.2	5,663.6	0.00	0.00	0.00
11,240.0	90.00	179.34	5,760.0	-5,703.2	65.6	5,703.6	0.00	0.00	0.00
11,280.0	90.00	179.34	5,760.0	-5,743.2	66.1	5,743.6	0.00	0.00	0.00
11,320.0	90.00	179.34	5,760.0	-5,783.2	66.5	5,783.6	0.00	0.00	0.00
11,360.0	90.00	179.34	5,760.0	-5,823.2	67.0	5,823.6	0.00	0.00	0.00
11,400.0	90.00	179.34	5,760.0	-5,863.2	67.5	5,863.6	0.00	0.00	0.00
11,440.0	90.00	179.34	5,760.0	-5,903.2	67.9	5,903.6	0.00	0.00	0.00
11,480.0	90.00	179.34	5,760.0	-5,943.2	68.4	5,943.6	0.00	0.00	0.00
11,520.0	90.00	179.34	5,760.0	-5,983.2	68.8	5,983.6	0.00	0.00	0.00
11,560.0	90.00	179.34	5,760.0	-6,023.2	69.3	6,023.6	0.00	0.00	0.00
11,600.0	90.00	179.34	5,760.0	-6,063.2	69.8	6,063.6	0.00	0.00	0.00
11,640.0	90.00	179.34	5,760.0	-6,103.2	70.2	6,103.6	0.00	0.00	0.00
11,680.0	90.00	179.34	5,760.0	-6,143.2	70.7	6,143.6	0.00	0.00	0.00
11,720.0	90.00	179.34	5,760.0	-6,183.2	71.2	6,183.6	0.00	0.00	0.00
11,760.0	90.00	179.34	5,760.0	-6,223.1	71.6	6,223.6	0.00	0.00	0.00
11,800.0	90.00	179.34	5,760.0	-6,263.1	72.1	6,263.6	0.00	0.00	0.00
11,840.0	90.00	179.34	5,760.0	-6,303.1	72.5	6,303.6	0.00	0.00	0.00
11,880.0	90.00	179.34	5,760.0	-6,343.1	73.0	6,343.6	0.00	0.00	0.00
11,920.0	90.00	179.34	5,760.0	-6,383.1	73.5	6,383.6	0.00	0.00	0.00
11,960.0	90.00	179.34	5,760.0	-6,423.1	73.9	6,423.6	0.00	0.00	0.00
12,000.0	90.00	179.34	5,760.0	-6,463.1	74.4	6,463.6	0.00	0.00	0.00
12,040.0	90.00	179.34	5,760.0	-6,503.1	74.8	6,503.6	0.00	0.00	0.00
12,080.0	90.00	179.34	5,760.0	-6,543.1	75.3	6,543.6	0.00	0.00	0.00
12,120.0	90.00	179.34	5,760.0	-6,583.1	75.8	6,583.6	0.00	0.00	0.00
12,160.0	90.00	179.34	5,760.0	-6,623.1	76.2	6,623.6	0.00	0.00	0.00
12,200.0	90.00	179.34	5,760.0	-6,663.1	76.7	6,663.6	0.00	0.00	0.00
12,240.0	90.00	179.34	5,760.0	-6,703.1	77.1	6,703.6	0.00	0.00	0.00
12,280.0	90.00	179.34	5,760.0	-6,743.1	77.6	6,743.6	0.00	0.00	0.00
12,320.0	90.00	179.34	5,760.0	-6,783.1	78.1	6,783.6	0.00	0.00	0.00
12,360.0	90.00	179.34	5,760.0	-6,823.1	78.5	6,823.6	0.00	0.00	0.00
12,400.0	90.00	179.34	5,760.0	-6,863.1	79.0	6,863.6	0.00	0.00	0.00
12,440.0	90.00	179.34	5,760.0	-6,903.1	79.4	6,903.6	0.00	0.00	0.00
12,480.0	90.00	179.34	5,760.0	-6,943.1	79.9	6,943.6	0.00	0.00	0.00
12,491.4	90.00	179.34	5,760.0	-6,954.5	80.0	6,954.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 27-3424H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4768.5ft (Original Well Elev)
Project:	SEC.27-T10N-R58W	MD Reference:	WELL @ 4768.5ft (Original Well Elev)
Site:	Razor 27-3424H Pad Sec.27-T10N-R58W	North Reference:	True
Well:	Razor 27-3424H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-12-12)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
6,057.3	5,760.0	7"		7	8-3/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,625.0	5,590.7	NIOBRARA		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
5,239.1	5,239.1	0.0	0.0	KOP	
6,057.3	5,760.0	-520.8	6.0	End of Build	