

# Whiting Oil & Gas

Well Name: **Wildhorse #16-1613H**

Surface Location: Wildhorse #16-1613H Pad Sec.16-T9N-R59W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

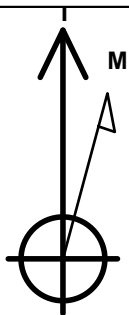
Ground Elevation: 5068.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1517491.15	3418284.73	40.744128	-103.990400	

RKB - 16.5' WELL @ 5084.5ft (RKB - 16.5')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
HARDLINES BHL 660'FEL	1.0	4079.0	3930.3	Polygon
HARDLINES SHL 660'FSL, 660'FWL	1.0	320.0	53.0	Polygon
SHL 340'FSL, 607'FWL	1.0	0.0	0.0	Point
BHL 1467'FNL, 660'FEL	6264.0	3679.0	3930.3	Point



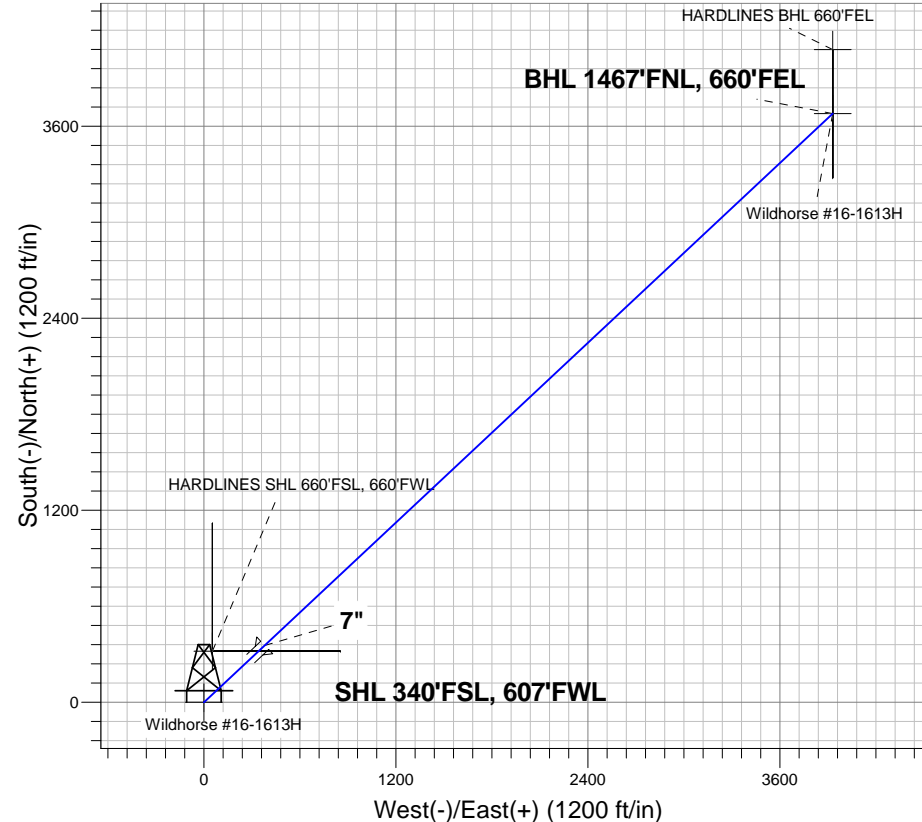
Azimuths to True North  
Magnetic North: 8.33°

Magnetic Field  
Strength: 53279.8nT  
Dip Angle: 67.42°  
Date: 6/27/2012  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
6264.0	6561.3	End of Build

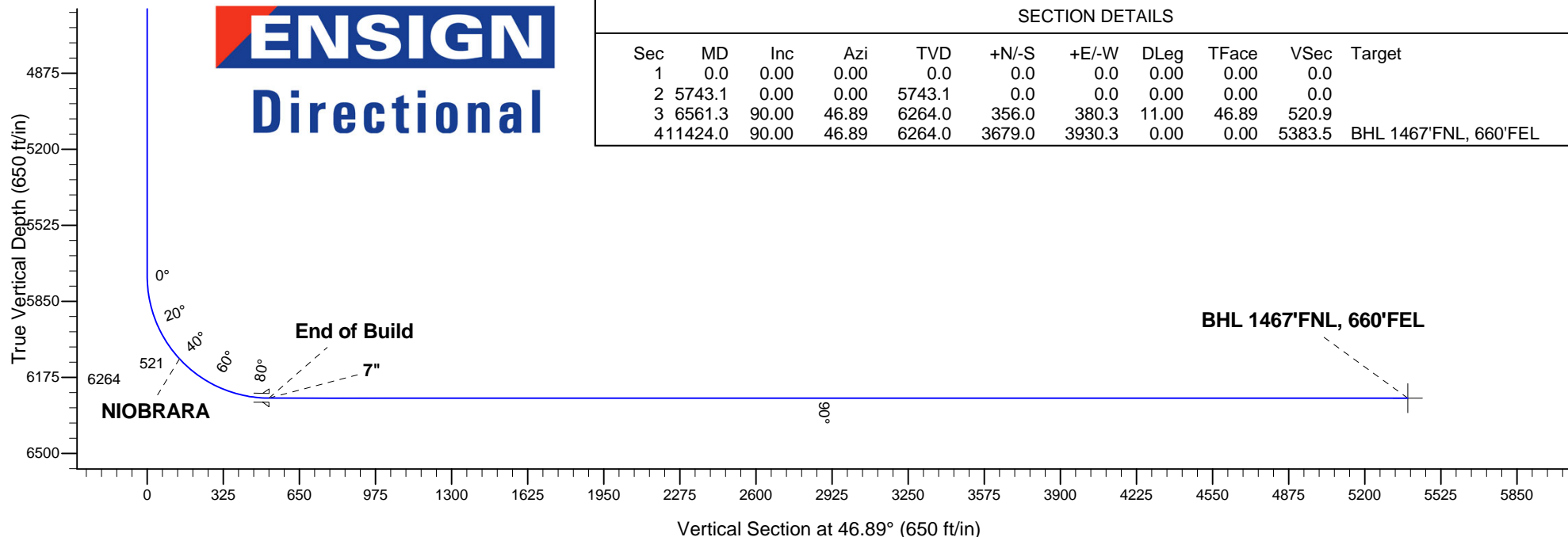
Wildhorse #16-1613H Pad Sec.16-T9N-R59W  
Wildhorse #16-1613H  
Plan #1 (6-27-12)  
10:27, June 27 2012



**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	5743.1	0.00	0.00	5743.1	0.0	0.0	0.00	0.00	0.0	
3	6561.3	90.00	46.89	6264.0	356.0	380.3	11.00	46.89	520.9	
4	11424.0	90.00	46.89	6264.0	3679.0	3930.3	0.00	0.00	5383.5	BHL 1467'FNL, 660'FEL





## **Directional**

### **Whiting Oil & Gas**

**SEC.16-T9N-R59W**

**Wildhorse #16-1613H Pad Sec.16-T9N-R59W**

**Wildhorse #16-1613H**

**Wellbore #1**

**Plan: Plan #1 (6-27-12)**

### **Standard Planning Report**

**27 June, 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	
5,743.1	0.00	0.00	5,743.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,561.3	90.00	46.89	6,264.0	356.0	380.3	11.00	11.00	0.00	46.89	
11,424.0	90.00	46.89	6,264.0	3,679.0	3,930.3	0.00	0.00	0.00	0.00	BHL 1467'FNL, 660

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #16-1613H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Project:</b>	SEC.16-T9N-R59W	<b>MD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Site:</b>	Wildhorse #16-1613H Pad Sec.16-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #16-1613H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-27-12)		

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>Wellbore:</b>	Wellbore #1		
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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>Well:</b>	Wildhorse #16-1613H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-27-12)		

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
5,280.0	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
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,640.0	0.00	0.00	5,640.0	0.0	0.0	0.0	0.00	0.00	0.00
5,680.0	0.00	0.00	5,680.0	0.0	0.0	0.0	0.00	0.00	0.00
5,720.0	0.00	0.00	5,720.0	0.0	0.0	0.0	0.00	0.00	0.00
5,743.1	0.00	0.00	5,743.1	0.0	0.0	0.0	0.00	0.00	0.00
5,760.0	1.86	46.89	5,760.0	0.2	0.2	0.3	11.00	11.00	0.00
5,800.0	6.26	46.89	5,799.9	2.1	2.3	3.1	11.00	11.00	0.00
5,840.0	10.66	46.89	5,839.4	6.1	6.6	9.0	11.00	11.00	0.00
5,880.0	15.06	46.89	5,878.4	12.2	13.1	17.9	11.00	11.00	0.00
5,920.0	19.46	46.89	5,916.6	20.3	21.7	29.7	11.00	11.00	0.00
5,960.0	23.86	46.89	5,953.8	30.4	32.5	44.5	11.00	11.00	0.00
6,000.0	28.26	46.89	5,989.7	42.4	45.3	62.1	11.00	11.00	0.00
6,040.0	32.66	46.89	6,024.2	56.3	60.1	82.3	11.00	11.00	0.00
6,080.0	37.06	46.89	6,057.0	71.9	76.8	105.2	11.00	11.00	0.00
6,120.0	41.46	46.89	6,088.0	89.2	95.3	130.5	11.00	11.00	0.00
6,131.0	42.67	46.89	6,096.1	94.2	100.7	137.9	11.00	11.00	0.00
<b>NIORARA</b>									
6,160.0	45.86	46.89	6,116.9	108.0	115.4	158.1	11.00	11.00	0.00
6,200.0	50.26	46.89	6,143.6	128.4	137.1	187.8	11.00	11.00	0.00
6,240.0	54.66	46.89	6,168.0	150.0	160.3	219.6	11.00	11.00	0.00
6,280.0	59.06	46.89	6,189.9	172.9	184.7	253.0	11.00	11.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #16-1613H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Project:</b>	SEC.16-T9N-R59W	<b>MD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Site:</b>	Wildhorse #16-1613H Pad Sec.16-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #16-1613H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-27-12)		

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)
6,320.0	63.46	46.89	6,209.1	196.9	210.3	288.1	11.00	11.00	0.00
6,360.0	67.86	46.89	6,225.6	221.8	236.9	324.5	11.00	11.00	0.00
6,400.0	72.26	46.89	6,239.2	247.5	264.4	362.1	11.00	11.00	0.00
6,440.0	76.66	46.89	6,249.9	273.8	292.5	400.7	11.00	11.00	0.00
6,480.0	81.06	46.89	6,257.7	300.6	321.1	439.9	11.00	11.00	0.00
6,520.0	85.46	46.89	6,262.4	327.8	350.1	479.6	11.00	11.00	0.00
6,560.0	89.86	46.89	6,264.0	355.1	379.3	519.6	11.00	11.00	0.00
6,561.3	90.00	46.89	6,264.0	355.9	380.3	520.9	11.00	11.00	0.00
End of Build - 7"									
6,600.0	90.00	46.89	6,264.0	382.4	408.5	559.6	0.00	0.00	0.00
6,640.0	90.00	46.89	6,264.0	409.7	437.7	599.6	0.00	0.00	0.00
6,680.0	90.00	46.89	6,264.0	437.1	466.9	639.6	0.00	0.00	0.00
6,720.0	90.00	46.89	6,264.0	464.4	496.1	679.6	0.00	0.00	0.00
6,760.0	90.00	46.89	6,264.0	491.7	525.3	719.6	0.00	0.00	0.00
6,800.0	90.00	46.89	6,264.0	519.1	554.5	759.6	0.00	0.00	0.00
6,840.0	90.00	46.89	6,264.0	546.4	583.7	799.6	0.00	0.00	0.00
6,880.0	90.00	46.89	6,264.0	573.7	612.9	839.6	0.00	0.00	0.00
6,920.0	90.00	46.89	6,264.0	601.1	642.1	879.6	0.00	0.00	0.00
6,960.0	90.00	46.89	6,264.0	628.4	671.3	919.6	0.00	0.00	0.00
7,000.0	90.00	46.89	6,264.0	655.7	700.5	959.6	0.00	0.00	0.00
7,040.0	90.00	46.89	6,264.0	683.1	729.7	999.6	0.00	0.00	0.00
7,080.0	90.00	46.89	6,264.0	710.4	758.9	1,039.6	0.00	0.00	0.00
7,120.0	90.00	46.89	6,264.0	737.7	788.1	1,079.6	0.00	0.00	0.00
7,160.0	90.00	46.89	6,264.0	765.1	817.4	1,119.6	0.00	0.00	0.00
7,200.0	90.00	46.89	6,264.0	792.4	846.6	1,159.6	0.00	0.00	0.00
7,240.0	90.00	46.89	6,264.0	819.8	875.8	1,199.6	0.00	0.00	0.00
7,280.0	90.00	46.89	6,264.0	847.1	905.0	1,239.6	0.00	0.00	0.00
7,320.0	90.00	46.89	6,264.0	874.4	934.2	1,279.6	0.00	0.00	0.00
7,360.0	90.00	46.89	6,264.0	901.8	963.4	1,319.6	0.00	0.00	0.00
7,400.0	90.00	46.89	6,264.0	929.1	992.6	1,359.6	0.00	0.00	0.00
7,440.0	90.00	46.89	6,264.0	956.4	1,021.8	1,399.6	0.00	0.00	0.00
7,480.0	90.00	46.89	6,264.0	983.8	1,051.0	1,439.6	0.00	0.00	0.00
7,520.0	90.00	46.89	6,264.0	1,011.1	1,080.2	1,479.6	0.00	0.00	0.00
7,560.0	90.00	46.89	6,264.0	1,038.4	1,109.4	1,519.6	0.00	0.00	0.00
7,600.0	90.00	46.89	6,264.0	1,065.8	1,138.6	1,559.6	0.00	0.00	0.00
7,640.0	90.00	46.89	6,264.0	1,093.1	1,167.8	1,599.6	0.00	0.00	0.00
7,680.0	90.00	46.89	6,264.0	1,120.4	1,197.0	1,639.6	0.00	0.00	0.00
7,720.0	90.00	46.89	6,264.0	1,147.8	1,226.2	1,679.6	0.00	0.00	0.00
7,760.0	90.00	46.89	6,264.0	1,175.1	1,255.4	1,719.6	0.00	0.00	0.00
7,800.0	90.00	46.89	6,264.0	1,202.4	1,284.6	1,759.6	0.00	0.00	0.00
7,840.0	90.00	46.89	6,264.0	1,229.8	1,313.8	1,799.6	0.00	0.00	0.00
7,880.0	90.00	46.89	6,264.0	1,257.1	1,343.0	1,839.6	0.00	0.00	0.00
7,920.0	90.00	46.89	6,264.0	1,284.5	1,372.2	1,879.6	0.00	0.00	0.00
7,960.0	90.00	46.89	6,264.0	1,311.8	1,401.4	1,919.6	0.00	0.00	0.00
8,000.0	90.00	46.89	6,264.0	1,339.1	1,430.6	1,959.6	0.00	0.00	0.00
8,040.0	90.00	46.89	6,264.0	1,366.5	1,459.8	1,999.6	0.00	0.00	0.00
8,080.0	90.00	46.89	6,264.0	1,393.8	1,489.0	2,039.6	0.00	0.00	0.00
8,120.0	90.00	46.89	6,264.0	1,421.1	1,518.2	2,079.6	0.00	0.00	0.00
8,160.0	90.00	46.89	6,264.0	1,448.5	1,547.4	2,119.6	0.00	0.00	0.00
8,200.0	90.00	46.89	6,264.0	1,475.8	1,576.6	2,159.6	0.00	0.00	0.00
8,240.0	90.00	46.89	6,264.0	1,503.1	1,605.8	2,199.6	0.00	0.00	0.00
8,280.0	90.00	46.89	6,264.0	1,530.5	1,635.0	2,239.6	0.00	0.00	0.00
8,320.0	90.00	46.89	6,264.0	1,557.8	1,664.2	2,279.6	0.00	0.00	0.00
8,360.0	90.00	46.89	6,264.0	1,585.1	1,693.4	2,319.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #16-1613H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Project:</b>	SEC.16-T9N-R59W	<b>MD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Site:</b>	Wildhorse #16-1613H Pad Sec.16-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #16-1613H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-27-12)		

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)
8,400.0	90.00	46.89	6,264.0	1,612.5	1,722.6	2,359.6	0.00	0.00	0.00
8,440.0	90.00	46.89	6,264.0	1,639.8	1,751.8	2,399.6	0.00	0.00	0.00
8,480.0	90.00	46.89	6,264.0	1,667.1	1,781.0	2,439.6	0.00	0.00	0.00
8,520.0	90.00	46.89	6,264.0	1,694.5	1,810.2	2,479.6	0.00	0.00	0.00
8,560.0	90.00	46.89	6,264.0	1,721.8	1,839.4	2,519.6	0.00	0.00	0.00
8,600.0	90.00	46.89	6,264.0	1,749.1	1,868.6	2,559.6	0.00	0.00	0.00
8,640.0	90.00	46.89	6,264.0	1,776.5	1,897.8	2,599.6	0.00	0.00	0.00
8,680.0	90.00	46.89	6,264.0	1,803.8	1,927.0	2,639.6	0.00	0.00	0.00
8,720.0	90.00	46.89	6,264.0	1,831.2	1,956.3	2,679.6	0.00	0.00	0.00
8,760.0	90.00	46.89	6,264.0	1,858.5	1,985.5	2,719.6	0.00	0.00	0.00
8,800.0	90.00	46.89	6,264.0	1,885.8	2,014.7	2,759.6	0.00	0.00	0.00
8,840.0	90.00	46.89	6,264.0	1,913.2	2,043.9	2,799.6	0.00	0.00	0.00
8,880.0	90.00	46.89	6,264.0	1,940.5	2,073.1	2,839.6	0.00	0.00	0.00
8,920.0	90.00	46.89	6,264.0	1,967.8	2,102.3	2,879.6	0.00	0.00	0.00
8,960.0	90.00	46.89	6,264.0	1,995.2	2,131.5	2,919.6	0.00	0.00	0.00
9,000.0	90.00	46.89	6,264.0	2,022.5	2,160.7	2,959.6	0.00	0.00	0.00
9,040.0	90.00	46.89	6,264.0	2,049.8	2,189.9	2,999.6	0.00	0.00	0.00
9,080.0	90.00	46.89	6,264.0	2,077.2	2,219.1	3,039.6	0.00	0.00	0.00
9,120.0	90.00	46.89	6,264.0	2,104.5	2,248.3	3,079.6	0.00	0.00	0.00
9,160.0	90.00	46.89	6,264.0	2,131.8	2,277.5	3,119.6	0.00	0.00	0.00
9,200.0	90.00	46.89	6,264.0	2,159.2	2,306.7	3,159.6	0.00	0.00	0.00
9,240.0	90.00	46.89	6,264.0	2,186.5	2,335.9	3,199.6	0.00	0.00	0.00
9,280.0	90.00	46.89	6,264.0	2,213.8	2,365.1	3,239.6	0.00	0.00	0.00
9,320.0	90.00	46.89	6,264.0	2,241.2	2,394.3	3,279.6	0.00	0.00	0.00
9,360.0	90.00	46.89	6,264.0	2,268.5	2,423.5	3,319.6	0.00	0.00	0.00
9,400.0	90.00	46.89	6,264.0	2,295.9	2,452.7	3,359.6	0.00	0.00	0.00
9,440.0	90.00	46.89	6,264.0	2,323.2	2,481.9	3,399.6	0.00	0.00	0.00
9,480.0	90.00	46.89	6,264.0	2,350.5	2,511.1	3,439.6	0.00	0.00	0.00
9,520.0	90.00	46.89	6,264.0	2,377.9	2,540.3	3,479.6	0.00	0.00	0.00
9,560.0	90.00	46.89	6,264.0	2,405.2	2,569.5	3,519.6	0.00	0.00	0.00
9,600.0	90.00	46.89	6,264.0	2,432.5	2,598.7	3,559.6	0.00	0.00	0.00
9,640.0	90.00	46.89	6,264.0	2,459.9	2,627.9	3,599.6	0.00	0.00	0.00
9,680.0	90.00	46.89	6,264.0	2,487.2	2,657.1	3,639.6	0.00	0.00	0.00
9,720.0	90.00	46.89	6,264.0	2,514.5	2,686.3	3,679.6	0.00	0.00	0.00
9,760.0	90.00	46.89	6,264.0	2,541.9	2,715.5	3,719.6	0.00	0.00	0.00
9,800.0	90.00	46.89	6,264.0	2,569.2	2,744.7	3,759.6	0.00	0.00	0.00
9,840.0	90.00	46.89	6,264.0	2,596.5	2,773.9	3,799.6	0.00	0.00	0.00
9,880.0	90.00	46.89	6,264.0	2,623.9	2,803.1	3,839.6	0.00	0.00	0.00
9,920.0	90.00	46.89	6,264.0	2,651.2	2,832.3	3,879.6	0.00	0.00	0.00
9,960.0	90.00	46.89	6,264.0	2,678.5	2,861.5	3,919.6	0.00	0.00	0.00
10,000.0	90.00	46.89	6,264.0	2,705.9	2,890.7	3,959.6	0.00	0.00	0.00
10,040.0	90.00	46.89	6,264.0	2,733.2	2,919.9	3,999.6	0.00	0.00	0.00
10,080.0	90.00	46.89	6,264.0	2,760.5	2,949.1	4,039.6	0.00	0.00	0.00
10,120.0	90.00	46.89	6,264.0	2,787.9	2,978.3	4,079.6	0.00	0.00	0.00
10,160.0	90.00	46.89	6,264.0	2,815.2	3,007.5	4,119.6	0.00	0.00	0.00
10,200.0	90.00	46.89	6,264.0	2,842.6	3,036.7	4,159.6	0.00	0.00	0.00
10,240.0	90.00	46.89	6,264.0	2,869.9	3,065.9	4,199.6	0.00	0.00	0.00
10,280.0	90.00	46.89	6,264.0	2,897.2	3,095.1	4,239.6	0.00	0.00	0.00
10,320.0	90.00	46.89	6,264.0	2,924.6	3,124.4	4,279.6	0.00	0.00	0.00
10,360.0	90.00	46.89	6,264.0	2,951.9	3,153.6	4,319.6	0.00	0.00	0.00
10,400.0	90.00	46.89	6,264.0	2,979.2	3,182.8	4,359.6	0.00	0.00	0.00
10,440.0	90.00	46.89	6,264.0	3,006.6	3,212.0	4,399.6	0.00	0.00	0.00
10,480.0	90.00	46.89	6,264.0	3,033.9	3,241.2	4,439.6	0.00	0.00	0.00
10,520.0	90.00	46.89	6,264.0	3,061.2	3,270.4	4,479.6	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #16-1613H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Project:</b>	SEC.16-T9N-R59W	<b>MD Reference:</b>	WELL @ 5084.5ft (RKB - 16.5')
<b>Site:</b>	Wildhorse #16-1613H Pad Sec.16-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #16-1613H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-27-12)		

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)	
10,560.0	90.00	46.89	6,264.0	3,088.6	3,299.6	4,519.6	0.00	0.00	0.00	
10,600.0	90.00	46.89	6,264.0	3,115.9	3,328.8	4,559.6	0.00	0.00	0.00	
10,640.0	90.00	46.89	6,264.0	3,143.2	3,358.0	4,599.6	0.00	0.00	0.00	
10,680.0	90.00	46.89	6,264.0	3,170.6	3,387.2	4,639.6	0.00	0.00	0.00	
10,720.0	90.00	46.89	6,264.0	3,197.9	3,416.4	4,679.6	0.00	0.00	0.00	
10,760.0	90.00	46.89	6,264.0	3,225.2	3,445.6	4,719.6	0.00	0.00	0.00	
10,800.0	90.00	46.89	6,264.0	3,252.6	3,474.8	4,759.6	0.00	0.00	0.00	
10,840.0	90.00	46.89	6,264.0	3,279.9	3,504.0	4,799.6	0.00	0.00	0.00	
10,880.0	90.00	46.89	6,264.0	3,307.3	3,533.2	4,839.6	0.00	0.00	0.00	
10,920.0	90.00	46.89	6,264.0	3,334.6	3,562.4	4,879.6	0.00	0.00	0.00	
10,960.0	90.00	46.89	6,264.0	3,361.9	3,591.6	4,919.6	0.00	0.00	0.00	
11,000.0	90.00	46.89	6,264.0	3,389.3	3,620.8	4,959.6	0.00	0.00	0.00	
11,040.0	90.00	46.89	6,264.0	3,416.6	3,650.0	4,999.6	0.00	0.00	0.00	
11,080.0	90.00	46.89	6,264.0	3,443.9	3,679.2	5,039.6	0.00	0.00	0.00	
11,120.0	90.00	46.89	6,264.0	3,471.3	3,708.4	5,079.6	0.00	0.00	0.00	
11,160.0	90.00	46.89	6,264.0	3,498.6	3,737.6	5,119.6	0.00	0.00	0.00	
11,200.0	90.00	46.89	6,264.0	3,525.9	3,766.8	5,159.6	0.00	0.00	0.00	
11,240.0	90.00	46.89	6,264.0	3,553.3	3,796.0	5,199.6	0.00	0.00	0.00	
11,280.0	90.00	46.89	6,264.0	3,580.6	3,825.2	5,239.6	0.00	0.00	0.00	
11,320.0	90.00	46.89	6,264.0	3,607.9	3,854.4	5,279.6	0.00	0.00	0.00	
11,360.0	90.00	46.89	6,264.0	3,635.3	3,883.6	5,319.6	0.00	0.00	0.00	
11,400.0	90.00	46.89	6,264.0	3,662.6	3,912.8	5,359.6	0.00	0.00	0.00	
11,424.0	90.00	46.89	6,264.0	3,679.0	3,930.3	5,383.5	0.00	0.00	0.00	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,561.3	6,264.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,131.0	6,096.1	NIORARA		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
6,561.3	6,264.0	355.9	380.3	End of Build	