

# Whiting Oil & Gas

Well Name: **Wildhorse #02-0224H**

Surface Location: Wildhorse #02-0224H Pad Sec.2-T9N-R59W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

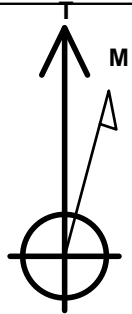
Ground Elevation: 4992.6

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1533083.81	3429774.67	40.786375	-103.947956	

RKB Ensign 14 - 15' WELL @ 5007.6ft (RKB Ensign 14 - 15')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL HARDLINE 660'FSL	1.0	-4317.4	547.1	Polygon
SHL HARDLINE 660'FNL	1.0	-340.0	-400.0	Polygon
BHL 660'FSL & 1981'FWL	6125.0	-4317.4	47.1	Point



Azimuths to True North  
Magnetic North: 8.39°

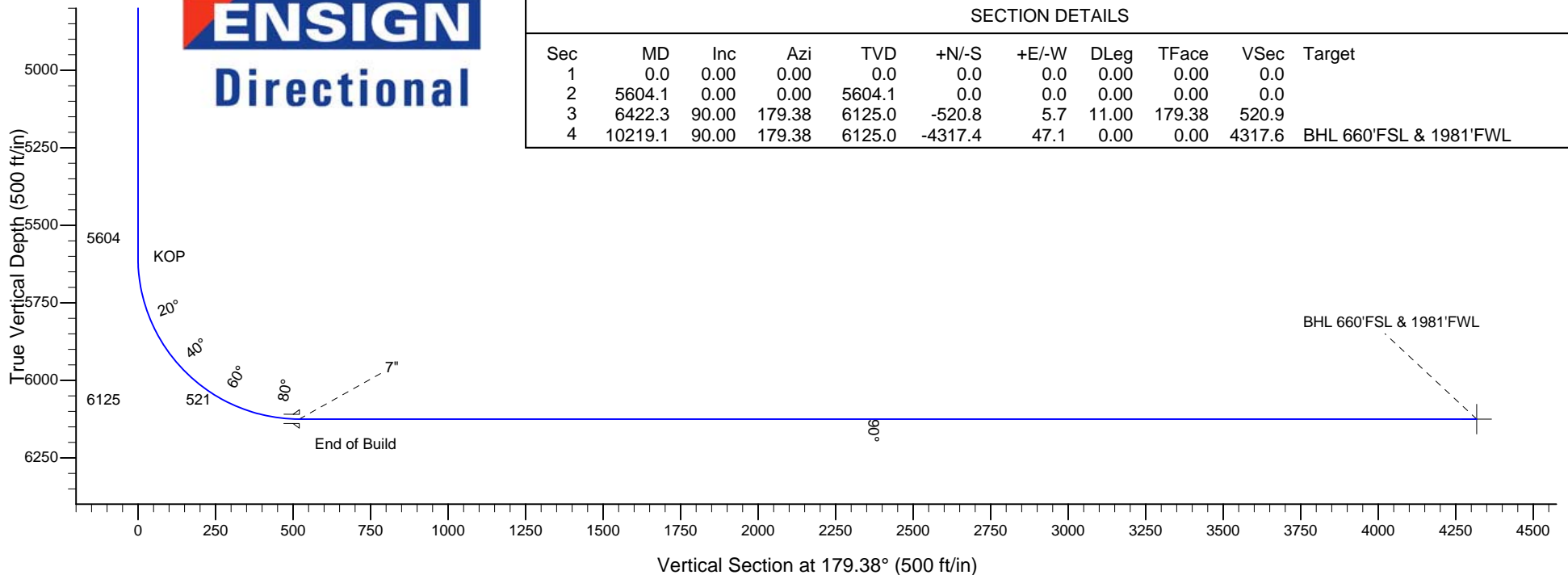
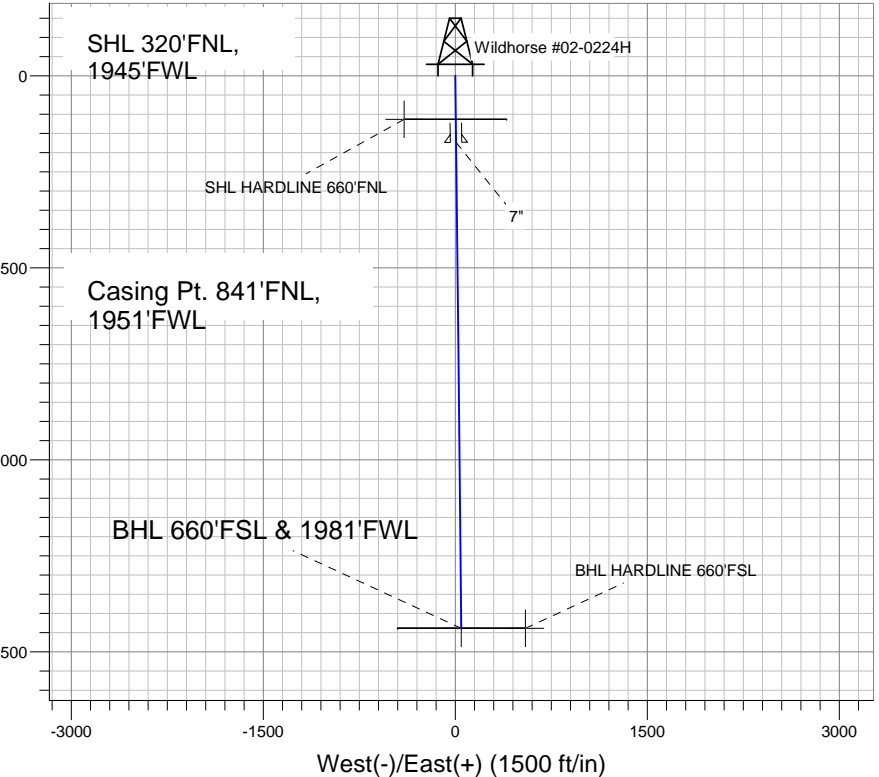
Magnetic Field  
Strength: 53373.5nT  
Dip Angle: 67.48°  
Date: 11/10/2011  
Model: IGRF2010

Wildhorse #02-0224H Pad Sec.2-T9N-R59W  
Wildhorse #02-0224H  
Plan #1 (11-10-11)  
14:25, November 14 2011

## ANNOTATIONS

TVD	MD	Annotation
5604.1	5604.1	KOP
6125.0	6422.3	End of Build

South(-)/North(+) (1500 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	5604.1	0.00	0.00	5604.1	0.0	0.0	0.00	0.00	0.0	
3	6422.3	90.00	179.38	6125.0	-520.8	5.7	11.00	179.38	520.9	
4	10219.1	90.00	179.38	6125.0	-4317.4	47.1	0.00	0.00	4317.6	BHL 660'FSL & 1981'FWL



## **Whiting Oil & Gas**

**SEC.2-T9N-R59W**

**Wildhorse #02-0224H Pad Sec.2-T9N-R59W**

**Wildhorse #02-0224H**

**Wellbore #1**

**Plan: Plan #1 (11-10-11)**

## **Standard Planning Report**

**14 November, 2011**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

<b>Project</b>	SEC.2-T9N-R59W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site		Wildhorse #02-0224H Pad Sec.2-T9N-R59W			
Site Position:		Northing:	1,533,083.81 ft	Latitude:	40.786375
From:	Lat/Long	Easting:	3,429,774.67 ft	Longitude:	-103.947956
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	1.00 °

Well	Wildhorse #02-0224H					
Well Position	+N-S	0.0 ft	Northing:	1,533,083.81 ft	Latitude:	40.786375
	+E-W	0.0 ft	Easting:	3,429,774.67 ft	Longitude:	-103.947956
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,992.6 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	11/10/2011	8.39	67.48	53,374

<b>Design</b>	Plan #1 (11-10-11)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	179.38

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,604.1	0.00	0.00	5,604.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,422.3	90.00	179.38	6,125.0	-520.8	5.7	11.00	11.00	0.00	179.38	
10,219.1	90.00	179.38	6,125.0	-4,317.4	47.1	0.00	0.00	0.00	0.00	BHL 660'FSL & 19E

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

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>SHL HARDLINE 660'FNL - BHL HARDLINE 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

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

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 Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

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
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,604.1	0.00	0.00	5,604.1	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP</b>									
5,640.0	3.95	179.38	5,640.0	-1.2	0.0	1.2	10.99	10.99	0.00
5,680.0	8.35	179.38	5,679.7	-5.5	0.1	5.5	11.00	11.00	0.00
5,720.0	12.75	179.38	5,719.0	-12.8	0.1	12.8	11.00	11.00	0.00
5,760.0	17.15	179.38	5,757.7	-23.1	0.3	23.1	11.00	11.00	0.00
5,800.0	21.55	179.38	5,795.4	-36.4	0.4	36.4	11.00	11.00	0.00
5,840.0	25.95	179.38	5,832.0	-52.5	0.6	52.5	11.00	11.00	0.00
5,880.0	30.35	179.38	5,867.3	-71.4	0.8	71.4	11.00	11.00	0.00
5,920.0	34.75	179.38	5,901.0	-92.9	1.0	92.9	11.00	11.00	0.00
5,960.0	39.15	179.38	5,933.0	-116.9	1.3	116.9	11.00	11.00	0.00
6,000.0	43.55	179.38	5,963.0	-143.3	1.6	143.3	11.00	11.00	0.00
6,040.0	47.95	179.38	5,990.9	-172.0	1.9	172.0	11.00	11.00	0.00
6,050.8	49.13	179.38	5,998.0	-180.0	2.0	180.0	11.00	11.00	0.00
<b>NIOBRARA</b>									
6,080.0	52.35	179.38	6,016.5	-202.7	2.2	202.7	11.00	11.00	0.00
6,120.0	56.75	179.38	6,039.7	-235.2	2.6	235.2	11.00	11.00	0.00
6,160.0	61.15	179.38	6,060.3	-269.5	2.9	269.5	11.00	11.00	0.00
6,200.0	65.55	179.38	6,078.3	-305.2	3.3	305.2	11.00	11.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

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)
6,240.0	69.95	179.38	6,093.4	-342.2	3.7	342.3	11.00	11.00	0.00
6,280.0	74.35	179.38	6,105.7	-380.3	4.1	380.3	11.00	11.00	0.00
6,320.0	78.75	179.38	6,115.0	-419.2	4.6	419.2	11.00	11.00	0.00
6,360.0	83.15	179.38	6,121.3	-458.7	5.0	458.7	11.00	11.00	0.00
6,400.0	87.55	179.38	6,124.5	-498.5	5.4	498.6	11.00	11.00	0.00
6,422.3	90.00	179.38	6,125.0	-520.8	5.7	520.9	11.00	11.00	0.00
End of Build - 7"									
6,440.0	90.00	179.38	6,125.0	-538.5	5.9	538.6	0.01	0.01	0.00
6,480.0	90.00	179.38	6,125.0	-578.5	6.3	578.6	0.00	0.00	0.00
6,520.0	90.00	179.38	6,125.0	-618.5	6.7	618.6	0.00	0.00	0.00
6,560.0	90.00	179.38	6,125.0	-658.5	7.2	658.6	0.00	0.00	0.00
6,600.0	90.00	179.38	6,125.0	-698.5	7.6	698.6	0.00	0.00	0.00
6,640.0	90.00	179.38	6,125.0	-738.5	8.1	738.6	0.00	0.00	0.00
6,680.0	90.00	179.38	6,125.0	-778.5	8.5	778.6	0.00	0.00	0.00
6,720.0	90.00	179.38	6,125.0	-818.5	8.9	818.6	0.00	0.00	0.00
6,760.0	90.00	179.38	6,125.0	-858.5	9.4	858.6	0.00	0.00	0.00
6,800.0	90.00	179.38	6,125.0	-898.5	9.8	898.6	0.00	0.00	0.00
6,840.0	90.00	179.38	6,125.0	-938.5	10.2	938.6	0.00	0.00	0.00
6,880.0	90.00	179.38	6,125.0	-978.5	10.7	978.6	0.00	0.00	0.00
6,920.0	90.00	179.38	6,125.0	-1,018.5	11.1	1,018.6	0.00	0.00	0.00
6,960.0	90.00	179.38	6,125.0	-1,058.5	11.5	1,058.6	0.00	0.00	0.00
7,000.0	90.00	179.38	6,125.0	-1,098.5	12.0	1,098.6	0.00	0.00	0.00
7,040.0	90.00	179.38	6,125.0	-1,138.5	12.4	1,138.6	0.00	0.00	0.00
7,080.0	90.00	179.38	6,125.0	-1,178.5	12.9	1,178.6	0.00	0.00	0.00
7,120.0	90.00	179.38	6,125.0	-1,218.5	13.3	1,218.6	0.00	0.00	0.00
7,160.0	90.00	179.38	6,125.0	-1,258.5	13.7	1,258.6	0.00	0.00	0.00
7,200.0	90.00	179.38	6,125.0	-1,298.5	14.2	1,298.6	0.00	0.00	0.00
7,240.0	90.00	179.38	6,125.0	-1,338.5	14.6	1,338.6	0.00	0.00	0.00
7,280.0	90.00	179.38	6,125.0	-1,378.5	15.0	1,378.6	0.00	0.00	0.00
7,320.0	90.00	179.38	6,125.0	-1,418.5	15.5	1,418.6	0.00	0.00	0.00
7,360.0	90.00	179.38	6,125.0	-1,458.5	15.9	1,458.6	0.00	0.00	0.00
7,400.0	90.00	179.38	6,125.0	-1,498.5	16.3	1,498.6	0.00	0.00	0.00
7,440.0	90.00	179.38	6,125.0	-1,538.5	16.8	1,538.6	0.00	0.00	0.00
7,480.0	90.00	179.38	6,125.0	-1,578.5	17.2	1,578.6	0.00	0.00	0.00
7,520.0	90.00	179.38	6,125.0	-1,618.5	17.7	1,618.6	0.00	0.00	0.00
7,560.0	90.00	179.38	6,125.0	-1,658.5	18.1	1,658.6	0.00	0.00	0.00
7,600.0	90.00	179.38	6,125.0	-1,698.5	18.5	1,698.6	0.00	0.00	0.00
7,640.0	90.00	179.38	6,125.0	-1,738.5	19.0	1,738.6	0.00	0.00	0.00
7,680.0	90.00	179.38	6,125.0	-1,778.5	19.4	1,778.6	0.00	0.00	0.00
7,720.0	90.00	179.38	6,125.0	-1,818.5	19.8	1,818.6	0.00	0.00	0.00
7,760.0	90.00	179.38	6,125.0	-1,858.4	20.3	1,858.6	0.00	0.00	0.00
7,800.0	90.00	179.38	6,125.0	-1,898.4	20.7	1,898.6	0.00	0.00	0.00
7,840.0	90.00	179.38	6,125.0	-1,938.4	21.1	1,938.6	0.00	0.00	0.00
7,880.0	90.00	179.38	6,125.0	-1,978.4	21.6	1,978.6	0.00	0.00	0.00
7,920.0	90.00	179.38	6,125.0	-2,018.4	22.0	2,018.6	0.00	0.00	0.00
7,960.0	90.00	179.38	6,125.0	-2,058.4	22.4	2,058.6	0.00	0.00	0.00
8,000.0	90.00	179.38	6,125.0	-2,098.4	22.9	2,098.6	0.00	0.00	0.00
8,040.0	90.00	179.38	6,125.0	-2,138.4	23.3	2,138.6	0.00	0.00	0.00
8,080.0	90.00	179.38	6,125.0	-2,178.4	23.8	2,178.6	0.00	0.00	0.00
8,120.0	90.00	179.38	6,125.0	-2,218.4	24.2	2,218.6	0.00	0.00	0.00
8,160.0	90.00	179.38	6,125.0	-2,258.4	24.6	2,258.6	0.00	0.00	0.00
8,200.0	90.00	179.38	6,125.0	-2,298.4	25.1	2,298.6	0.00	0.00	0.00
8,240.0	90.00	179.38	6,125.0	-2,338.4	25.5	2,338.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Wildhorse #02-0224H
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Project:</b>	SEC.2-T9N-R59W	<b>MD Reference:</b>	WELL @ 5007.6ft (RKB Ensign 14 - 15')
<b>Site:</b>	Wildhorse #02-0224H Pad Sec.2-T9N-R59W	<b>North Reference:</b>	True
<b>Well:</b>	Wildhorse #02-0224H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-10-11)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,280.0	90.00	179.38	6,125.0	-2,378.4	25.9	2,378.6	0.00	0.00	0.00
8,320.0	90.00	179.38	6,125.0	-2,418.4	26.4	2,418.6	0.00	0.00	0.00
8,360.0	90.00	179.38	6,125.0	-2,458.4	26.8	2,458.6	0.00	0.00	0.00
8,400.0	90.00	179.38	6,125.0	-2,498.4	27.2	2,498.6	0.00	0.00	0.00
8,440.0	90.00	179.38	6,125.0	-2,538.4	27.7	2,538.6	0.00	0.00	0.00
8,480.0	90.00	179.38	6,125.0	-2,578.4	28.1	2,578.6	0.00	0.00	0.00
8,520.0	90.00	179.38	6,125.0	-2,618.4	28.6	2,618.6	0.00	0.00	0.00
8,560.0	90.00	179.38	6,125.0	-2,658.4	29.0	2,658.6	0.00	0.00	0.00
8,600.0	90.00	179.38	6,125.0	-2,698.4	29.4	2,698.6	0.00	0.00	0.00
8,640.0	90.00	179.38	6,125.0	-2,738.4	29.9	2,738.6	0.00	0.00	0.00
8,680.0	90.00	179.38	6,125.0	-2,778.4	30.3	2,778.6	0.00	0.00	0.00
8,720.0	90.00	179.38	6,125.0	-2,818.4	30.7	2,818.6	0.00	0.00	0.00
8,760.0	90.00	179.38	6,125.0	-2,858.4	31.2	2,858.6	0.00	0.00	0.00
8,800.0	90.00	179.38	6,125.0	-2,898.4	31.6	2,898.6	0.00	0.00	0.00
8,840.0	90.00	179.38	6,125.0	-2,938.4	32.0	2,938.6	0.00	0.00	0.00
8,880.0	90.00	179.38	6,125.0	-2,978.4	32.5	2,978.6	0.00	0.00	0.00
8,920.0	90.00	179.38	6,125.0	-3,018.4	32.9	3,018.6	0.00	0.00	0.00
8,960.0	90.00	179.38	6,125.0	-3,058.4	33.4	3,058.6	0.00	0.00	0.00
9,000.0	90.00	179.38	6,125.0	-3,098.4	33.8	3,098.6	0.00	0.00	0.00
9,040.0	90.00	179.38	6,125.0	-3,138.4	34.2	3,138.6	0.00	0.00	0.00
9,080.0	90.00	179.38	6,125.0	-3,178.4	34.7	3,178.6	0.00	0.00	0.00
9,120.0	90.00	179.38	6,125.0	-3,218.4	35.1	3,218.6	0.00	0.00	0.00
9,160.0	90.00	179.38	6,125.0	-3,258.4	35.5	3,258.6	0.00	0.00	0.00
9,200.0	90.00	179.38	6,125.0	-3,298.4	36.0	3,298.6	0.00	0.00	0.00
9,240.0	90.00	179.38	6,125.0	-3,338.4	36.4	3,338.6	0.00	0.00	0.00
9,280.0	90.00	179.38	6,125.0	-3,378.4	36.8	3,378.6	0.00	0.00	0.00
9,320.0	90.00	179.38	6,125.0	-3,418.4	37.3	3,418.6	0.00	0.00	0.00
9,360.0	90.00	179.38	6,125.0	-3,458.4	37.7	3,458.6	0.00	0.00	0.00
9,400.0	90.00	179.38	6,125.0	-3,498.4	38.2	3,498.6	0.00	0.00	0.00
9,440.0	90.00	179.38	6,125.0	-3,538.3	38.6	3,538.6	0.00	0.00	0.00
9,480.0	90.00	179.38	6,125.0	-3,578.3	39.0	3,578.6	0.00	0.00	0.00
9,520.0	90.00	179.38	6,125.0	-3,618.3	39.5	3,618.6	0.00	0.00	0.00
9,560.0	90.00	179.38	6,125.0	-3,658.3	39.9	3,658.6	0.00	0.00	0.00
9,600.0	90.00	179.38	6,125.0	-3,698.3	40.3	3,698.6	0.00	0.00	0.00
9,640.0	90.00	179.38	6,125.0	-3,738.3	40.8	3,738.6	0.00	0.00	0.00
9,680.0	90.00	179.38	6,125.0	-3,778.3	41.2	3,778.6	0.00	0.00	0.00
9,720.0	90.00	179.38	6,125.0	-3,818.3	41.6	3,818.6	0.00	0.00	0.00
9,760.0	90.00	179.38	6,125.0	-3,858.3	42.1	3,858.6	0.00	0.00	0.00
9,800.0	90.00	179.38	6,125.0	-3,898.3	42.5	3,898.6	0.00	0.00	0.00
9,840.0	90.00	179.38	6,125.0	-3,938.3	43.0	3,938.6	0.00	0.00	0.00
9,880.0	90.00	179.38	6,125.0	-3,978.3	43.4	3,978.6	0.00	0.00	0.00
9,920.0	90.00	179.38	6,125.0	-4,018.3	43.8	4,018.6	0.00	0.00	0.00
9,960.0	90.00	179.38	6,125.0	-4,058.3	44.3	4,058.6	0.00	0.00	0.00
10,000.0	90.00	179.38	6,125.0	-4,098.3	44.7	4,098.6	0.00	0.00	0.00
10,040.0	90.00	179.38	6,125.0	-4,138.3	45.1	4,138.6	0.00	0.00	0.00
10,080.0	90.00	179.38	6,125.0	-4,178.3	45.6	4,178.6	0.00	0.00	0.00
10,120.0	90.00	179.38	6,125.0	-4,218.3	46.0	4,218.6	0.00	0.00	0.00
10,160.0	90.00	179.38	6,125.0	-4,258.3	46.4	4,258.6	0.00	0.00	0.00
10,200.0	90.00	179.38	6,125.0	-4,298.3	46.9	4,298.6	0.00	0.00	0.00
10,219.1	90.00	179.38	6,125.0	-4,317.4	47.1	4,317.6	0.00	0.00	0.00
BHL 660'FSL & 1981'FWL									



Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	5,604.1	5,604.1	0.0	0.0	KOP
	6,422.3	6,125.0	-520.8	5.7	End of Build