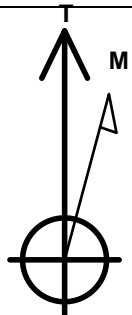


Whiting Oil & Gas

Well Name: Wildhorse #04-0414H
 Surface Location: Wildhorse Pad Sec.4-T9N-R59W
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 5106.5
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1532733.20 3418078.95 40.785967 -103.990206
 RKB Ensign 14 - 15' WELL @ 5121.5ft (RKB Ensign 14 - 15')

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HARDLINE BHL 660'FSL	1.0	-4274.0	-559.0	1528450.31	3417592.80	40.774236	-103.992224	Polygon
HARDLINE SHL 660'FNL	1.0	-340.0	-500.0	1532384.74	3417584.81	40.785034	-103.992012	Polygon
TARGET BHL 660'FSL & 660'FWL	6337.0	-4274.0	-59.0	1528458.80	3418092.73	40.774236	-103.990419	Point



Azimuths to True North
 Magnetic North: 8.44°

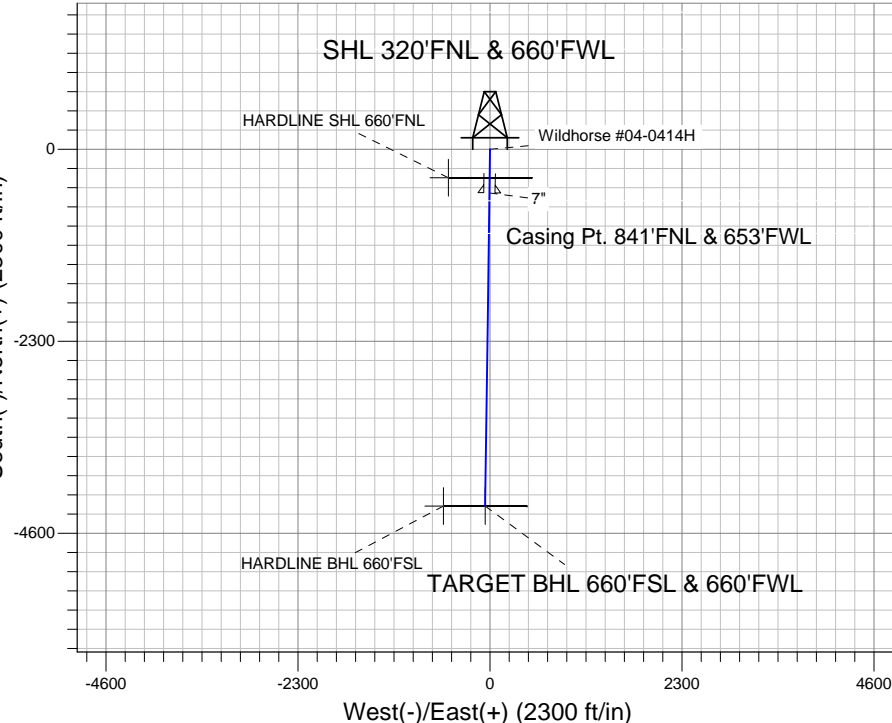
Magnetic Field
 Strength: 53388.6snT
 Dip Angle: 67.48°
 Date: 9/1/2011
 Model: IGRF2010

ANNOTATIONS

TVD MD Annotation
 5816.1 5816.1 KOP
 6337.0 6634.3 End of Build

Wildhorse Pad Sec.4-T9N-R59W
 Wildhorse #04-0414H
 Plan #1 (9-1-11)
 15:57, September 01 2011

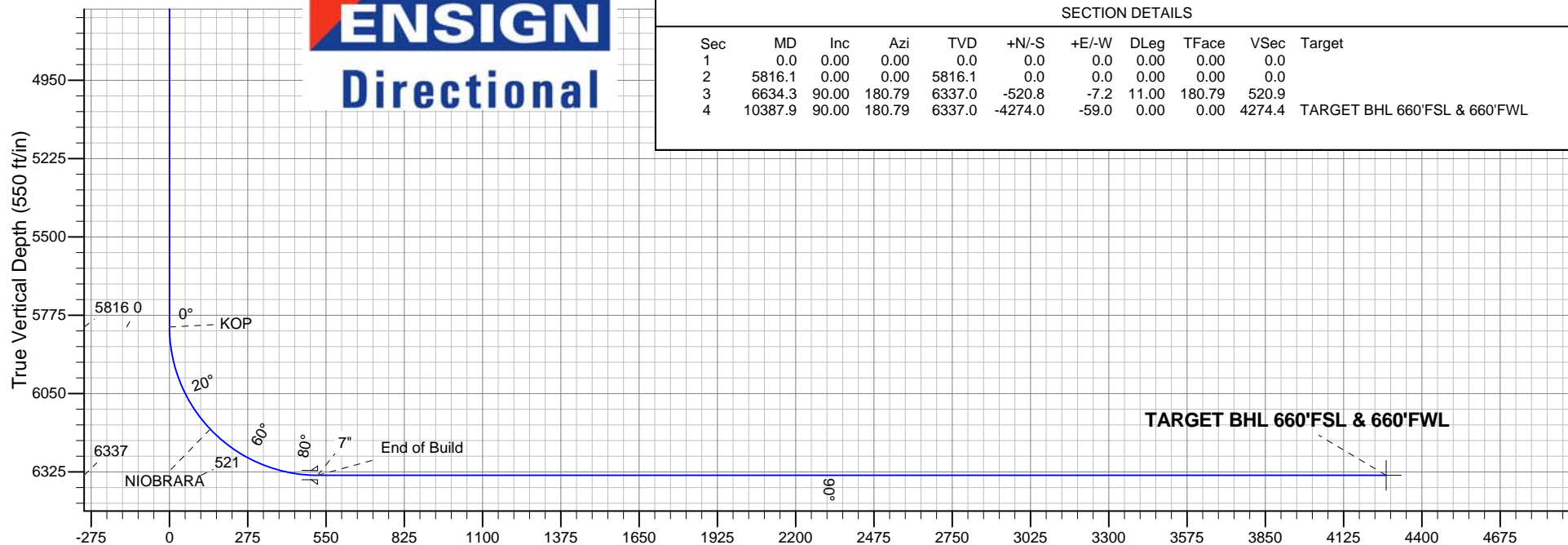
South(-)/North(+) (2300 ft/in)



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	5816.1	0.00	0.00	5816.1	0.0	0.0	0.00	0.00	0.0	
3	6634.3	90.00	180.79	6337.0	-520.8	-7.2	11.00	180.79	520.9	
4	10387.9	90.00	180.79	6337.0	-4274.0	-59.0	0.00	0.00	4274.4	TARGET BHL 660'FSL & 660'FWL



Vertical Section at 180.79° (550 ft/in)



Whiting Oil & Gas

SEC.4-T9N-R59W

Wildhorse Pad Sec.4-T9N-R59W

Wildhorse #04-0414H

Wellbore #1

Plan: Plan #1 (9-1-11)

Standard Planning Report

01 September, 2011

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

Project	SEC.4-T9N-R59W, Weld County, CO		
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

Wildhorse Pad Sec.4-T9N-R59W					
Site Position:		Northing:	1,532,733.20ft	Latitude:	40.785967
From:	Lat/Long	Easting:	3,418,078.95ft	Longitude:	-103.990206
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.98 °

Well	Wildhorse #04-0414H					
Well Position	+N-S	0.0 ft	Northing:	1,532,733.20 ft	Latitude:	40.785967
	+E-W	0.0 ft	Easting:	3,418,078.95 ft	Longitude:	-103.990206
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,106.5 ft

Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/1/2011	8.44	67.48	53,389

Design	Plan #1 (9-1-11)			
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	180.79

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	
5,816.1	0.00	0.00	5,816.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,634.3	90.00	180.79	6,337.0	-520.8	-7.2	11.00	11.00	0.00	180.79	
10,387.9	90.00	180.79	6,337.0	-4,274.0	-59.0	0.00	0.00	0.00	0.00	TARGET BHL 660'

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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
HARDLINE SHL 660'FNL - HARDLINE BHL 660'FSL									
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

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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
5,640.0	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
5,760.0	0.00	0.00	5,760.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,816.1	0.00	0.00	5,816.1	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
5,840.0	2.63	180.79	5,840.0	-0.6	0.0	0.5	10.99	10.99	0.00
5,880.0	7.03	180.79	5,879.8	-3.9	-0.1	3.9	11.00	11.00	0.00
5,920.0	11.43	180.79	5,919.3	-10.3	-0.1	10.3	11.00	11.00	0.00
5,960.0	15.83	180.79	5,958.2	-19.7	-0.3	19.7	11.00	11.00	0.00
6,000.0	20.23	180.79	5,996.2	-32.1	-0.4	32.1	11.00	11.00	0.00
6,040.0	24.63	180.79	6,033.2	-47.4	-0.7	47.4	11.00	11.00	0.00
6,080.0	29.03	180.79	6,068.9	-65.4	-0.9	65.4	11.00	11.00	0.00
6,120.0	33.43	180.79	6,103.1	-86.1	-1.2	86.2	11.00	11.00	0.00
6,160.0	37.83	180.79	6,135.6	-109.4	-1.5	109.4	11.00	11.00	0.00
6,200.0	42.23	180.79	6,166.2	-135.2	-1.9	135.2	11.00	11.00	0.00
6,212.0	43.55	180.79	6,175.0	-143.3	-2.0	143.3	11.00	11.00	0.00
NIOBARRA									

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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	46.63	180.79	6,194.7	-163.1	-2.3	163.2	11.00	11.00	0.00
6,280.0	51.03	180.79	6,221.1	-193.2	-2.7	193.3	11.00	11.00	0.00
6,320.0	55.43	180.79	6,245.0	-225.3	-3.1	225.3	11.00	11.00	0.00
6,360.0	59.83	180.79	6,266.4	-259.0	-3.6	259.1	11.00	11.00	0.00
6,400.0	64.23	180.79	6,285.2	-294.4	-4.1	294.4	11.00	11.00	0.00
6,440.0	68.63	180.79	6,301.2	-331.0	-4.6	331.0	11.00	11.00	0.00
6,480.0	73.03	180.79	6,314.3	-368.8	-5.1	368.8	11.00	11.00	0.00
6,520.0	77.43	180.79	6,324.5	-407.4	-5.6	407.5	11.00	11.00	0.00
6,560.0	81.83	180.79	6,331.7	-446.8	-6.2	446.8	11.00	11.00	0.00
6,600.0	86.23	180.79	6,335.9	-486.5	-6.7	486.6	11.00	11.00	0.00
6,634.3	90.00	180.79	6,337.0	-520.8	-7.2	520.9	11.00	11.00	0.00
End of Build - 7"									
6,640.0	90.00	180.79	6,337.0	-526.5	-7.3	526.6	0.02	0.02	0.00
6,680.0	90.00	180.79	6,337.0	-566.5	-7.8	566.6	0.00	0.00	0.00
6,720.0	90.00	180.79	6,337.0	-606.5	-8.4	606.6	0.00	0.00	0.00
6,760.0	90.00	180.79	6,337.0	-646.5	-8.9	646.6	0.00	0.00	0.00
6,800.0	90.00	180.79	6,337.0	-686.5	-9.5	686.6	0.00	0.00	0.00
6,840.0	90.00	180.79	6,337.0	-726.5	-10.0	726.6	0.00	0.00	0.00
6,880.0	90.00	180.79	6,337.0	-766.5	-10.6	766.6	0.00	0.00	0.00
6,920.0	90.00	180.79	6,337.0	-806.5	-11.1	806.6	0.00	0.00	0.00
6,960.0	90.00	180.79	6,337.0	-846.5	-11.7	846.6	0.00	0.00	0.00
7,000.0	90.00	180.79	6,337.0	-886.5	-12.2	886.6	0.00	0.00	0.00
7,040.0	90.00	180.79	6,337.0	-926.5	-12.8	926.6	0.00	0.00	0.00
7,080.0	90.00	180.79	6,337.0	-966.5	-13.3	966.6	0.00	0.00	0.00
7,120.0	90.00	180.79	6,337.0	-1,006.5	-13.9	1,006.6	0.00	0.00	0.00
7,160.0	90.00	180.79	6,337.0	-1,046.5	-14.4	1,046.6	0.00	0.00	0.00
7,200.0	90.00	180.79	6,337.0	-1,086.5	-15.0	1,086.6	0.00	0.00	0.00
7,240.0	90.00	180.79	6,337.0	-1,126.5	-15.5	1,126.6	0.00	0.00	0.00
7,280.0	90.00	180.79	6,337.0	-1,166.5	-16.1	1,166.6	0.00	0.00	0.00
7,320.0	90.00	180.79	6,337.0	-1,206.4	-16.7	1,206.6	0.00	0.00	0.00
7,360.0	90.00	180.79	6,337.0	-1,246.4	-17.2	1,246.6	0.00	0.00	0.00
7,400.0	90.00	180.79	6,337.0	-1,286.4	-17.8	1,286.6	0.00	0.00	0.00
7,440.0	90.00	180.79	6,337.0	-1,326.4	-18.3	1,326.6	0.00	0.00	0.00
7,480.0	90.00	180.79	6,337.0	-1,366.4	-18.9	1,366.6	0.00	0.00	0.00
7,520.0	90.00	180.79	6,337.0	-1,406.4	-19.4	1,406.6	0.00	0.00	0.00
7,560.0	90.00	180.79	6,337.0	-1,446.4	-20.0	1,446.6	0.00	0.00	0.00
7,600.0	90.00	180.79	6,337.0	-1,486.4	-20.5	1,486.6	0.00	0.00	0.00
7,640.0	90.00	180.79	6,337.0	-1,526.4	-21.1	1,526.6	0.00	0.00	0.00
7,680.0	90.00	180.79	6,337.0	-1,566.4	-21.6	1,566.6	0.00	0.00	0.00
7,720.0	90.00	180.79	6,337.0	-1,606.4	-22.2	1,606.6	0.00	0.00	0.00
7,760.0	90.00	180.79	6,337.0	-1,646.4	-22.7	1,646.6	0.00	0.00	0.00
7,800.0	90.00	180.79	6,337.0	-1,686.4	-23.3	1,686.6	0.00	0.00	0.00
7,840.0	90.00	180.79	6,337.0	-1,726.4	-23.8	1,726.6	0.00	0.00	0.00
7,880.0	90.00	180.79	6,337.0	-1,766.4	-24.4	1,766.6	0.00	0.00	0.00
7,920.0	90.00	180.79	6,337.0	-1,806.4	-24.9	1,806.6	0.00	0.00	0.00
7,960.0	90.00	180.79	6,337.0	-1,846.4	-25.5	1,846.6	0.00	0.00	0.00
8,000.0	90.00	180.79	6,337.0	-1,886.4	-26.0	1,886.6	0.00	0.00	0.00
8,040.0	90.00	180.79	6,337.0	-1,926.4	-26.6	1,926.6	0.00	0.00	0.00
8,080.0	90.00	180.79	6,337.0	-1,966.4	-27.1	1,966.6	0.00	0.00	0.00
8,120.0	90.00	180.79	6,337.0	-2,006.4	-27.7	2,006.6	0.00	0.00	0.00
8,160.0	90.00	180.79	6,337.0	-2,046.4	-28.2	2,046.6	0.00	0.00	0.00
8,200.0	90.00	180.79	6,337.0	-2,086.4	-28.8	2,086.6	0.00	0.00	0.00
8,240.0	90.00	180.79	6,337.0	-2,126.4	-29.4	2,126.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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	180.79	6,337.0	-2,166.4	-29.9	2,166.6	0.00	0.00	0.00
8,320.0	90.00	180.79	6,337.0	-2,206.4	-30.5	2,206.6	0.00	0.00	0.00
8,360.0	90.00	180.79	6,337.0	-2,246.4	-31.0	2,246.6	0.00	0.00	0.00
8,400.0	90.00	180.79	6,337.0	-2,286.3	-31.6	2,286.6	0.00	0.00	0.00
8,440.0	90.00	180.79	6,337.0	-2,326.3	-32.1	2,326.6	0.00	0.00	0.00
8,480.0	90.00	180.79	6,337.0	-2,366.3	-32.7	2,366.6	0.00	0.00	0.00
8,520.0	90.00	180.79	6,337.0	-2,406.3	-33.2	2,406.6	0.00	0.00	0.00
8,560.0	90.00	180.79	6,337.0	-2,446.3	-33.8	2,446.6	0.00	0.00	0.00
8,600.0	90.00	180.79	6,337.0	-2,486.3	-34.3	2,486.6	0.00	0.00	0.00
8,640.0	90.00	180.79	6,337.0	-2,526.3	-34.9	2,526.6	0.00	0.00	0.00
8,680.0	90.00	180.79	6,337.0	-2,566.3	-35.4	2,566.6	0.00	0.00	0.00
8,720.0	90.00	180.79	6,337.0	-2,606.3	-36.0	2,606.6	0.00	0.00	0.00
8,760.0	90.00	180.79	6,337.0	-2,646.3	-36.5	2,646.6	0.00	0.00	0.00
8,800.0	90.00	180.79	6,337.0	-2,686.3	-37.1	2,686.6	0.00	0.00	0.00
8,840.0	90.00	180.79	6,337.0	-2,726.3	-37.6	2,726.6	0.00	0.00	0.00
8,880.0	90.00	180.79	6,337.0	-2,766.3	-38.2	2,766.6	0.00	0.00	0.00
8,920.0	90.00	180.79	6,337.0	-2,806.3	-38.7	2,806.6	0.00	0.00	0.00
8,960.0	90.00	180.79	6,337.0	-2,846.3	-39.3	2,846.6	0.00	0.00	0.00
9,000.0	90.00	180.79	6,337.0	-2,886.3	-39.8	2,886.6	0.00	0.00	0.00
9,040.0	90.00	180.79	6,337.0	-2,926.3	-40.4	2,926.6	0.00	0.00	0.00
9,080.0	90.00	180.79	6,337.0	-2,966.3	-40.9	2,966.6	0.00	0.00	0.00
9,120.0	90.00	180.79	6,337.0	-3,006.3	-41.5	3,006.6	0.00	0.00	0.00
9,160.0	90.00	180.79	6,337.0	-3,046.3	-42.0	3,046.6	0.00	0.00	0.00
9,200.0	90.00	180.79	6,337.0	-3,086.3	-42.6	3,086.6	0.00	0.00	0.00
9,240.0	90.00	180.79	6,337.0	-3,126.3	-43.2	3,126.6	0.00	0.00	0.00
9,280.0	90.00	180.79	6,337.0	-3,166.3	-43.7	3,166.6	0.00	0.00	0.00
9,320.0	90.00	180.79	6,337.0	-3,206.3	-44.3	3,206.6	0.00	0.00	0.00
9,360.0	90.00	180.79	6,337.0	-3,246.3	-44.8	3,246.6	0.00	0.00	0.00
9,400.0	90.00	180.79	6,337.0	-3,286.3	-45.4	3,286.6	0.00	0.00	0.00
9,440.0	90.00	180.79	6,337.0	-3,326.2	-45.9	3,326.6	0.00	0.00	0.00
9,480.0	90.00	180.79	6,337.0	-3,366.2	-46.5	3,366.6	0.00	0.00	0.00
9,520.0	90.00	180.79	6,337.0	-3,406.2	-47.0	3,406.6	0.00	0.00	0.00
9,560.0	90.00	180.79	6,337.0	-3,446.2	-47.6	3,446.6	0.00	0.00	0.00
9,600.0	90.00	180.79	6,337.0	-3,486.2	-48.1	3,486.6	0.00	0.00	0.00
9,640.0	90.00	180.79	6,337.0	-3,526.2	-48.7	3,526.6	0.00	0.00	0.00
9,680.0	90.00	180.79	6,337.0	-3,566.2	-49.2	3,566.6	0.00	0.00	0.00
9,720.0	90.00	180.79	6,337.0	-3,606.2	-49.8	3,606.6	0.00	0.00	0.00
9,760.0	90.00	180.79	6,337.0	-3,646.2	-50.3	3,646.6	0.00	0.00	0.00
9,800.0	90.00	180.79	6,337.0	-3,686.2	-50.9	3,686.6	0.00	0.00	0.00
9,840.0	90.00	180.79	6,337.0	-3,726.2	-51.4	3,726.6	0.00	0.00	0.00
9,880.0	90.00	180.79	6,337.0	-3,766.2	-52.0	3,766.6	0.00	0.00	0.00
9,920.0	90.00	180.79	6,337.0	-3,806.2	-52.5	3,806.6	0.00	0.00	0.00
9,960.0	90.00	180.79	6,337.0	-3,846.2	-53.1	3,846.6	0.00	0.00	0.00
10,000.0	90.00	180.79	6,337.0	-3,886.2	-53.6	3,886.6	0.00	0.00	0.00
10,040.0	90.00	180.79	6,337.0	-3,926.2	-54.2	3,926.6	0.00	0.00	0.00
10,080.0	90.00	180.79	6,337.0	-3,966.2	-54.7	3,966.6	0.00	0.00	0.00
10,120.0	90.00	180.79	6,337.0	-4,006.2	-55.3	4,006.6	0.00	0.00	0.00
10,160.0	90.00	180.79	6,337.0	-4,046.2	-55.9	4,046.6	0.00	0.00	0.00
10,200.0	90.00	180.79	6,337.0	-4,086.2	-56.4	4,086.6	0.00	0.00	0.00
10,240.0	90.00	180.79	6,337.0	-4,126.2	-57.0	4,126.6	0.00	0.00	0.00
10,280.0	90.00	180.79	6,337.0	-4,166.2	-57.5	4,166.6	0.00	0.00	0.00
10,320.0	90.00	180.79	6,337.0	-4,206.2	-58.1	4,206.6	0.00	0.00	0.00
10,360.0	90.00	180.79	6,337.0	-4,246.2	-58.6	4,246.6	0.00	0.00	0.00
10,387.9	90.00	180.79	6,337.0	-4,274.0	-59.0	4,274.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Wildhorse #04-0414H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Project:	SEC.4-T9N-R59W	MD Reference:	WELL @ 5121.5ft (RKB Ensign 14 - 15')
Site:	Wildhorse Pad Sec.4-T9N-R59W	North Reference:	True
Well:	Wildhorse #04-0414H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (9-1-11)		

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)	
TARGET BHL 660'FSL & 660'FWL										

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 660'FS	- plan hits target center	0.00	0.00	6,337.0	-4,274.0	-59.0	1,528,458.80	3,418,092.73	40.774236	-103.990419
	- Point									
HARDLINE SHL 660'f	- plan misses target center by 604.6ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)	0.00	0.00	1.0	-340.0	-500.0	1,532,384.74	3,417,584.81	40.785034	-103.992012
	- Polygon									
	Point 1			1.0	0.0	0.0	1,532,384.74	3,417,584.81		
	Point 2			1.0	0.0	1,000.0	1,532,401.76	3,418,584.67		
HARDLINE BHL 660'f	- plan misses target center by 4310.4ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)	0.00	0.00	1.0	-4,274.0	-559.0	1,528,450.31	3,417,592.80	40.774236	-103.992224
	- Polygon									
	Point 1			1.0	0.0	0.0	1,528,450.31	3,417,592.80		
	Point 2			1.0	0.0	1,000.0	1,528,467.33	3,418,592.65		

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")		
6,634.3	6,337.0	7"	7	7-1/2		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,212.0	6,175.0	NIOBRARA				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment	
5,816.1	5,816.1	0.0	0.0	KOP	
6,634.3	6,337.0	-520.8	-7.2	End of Build	