

Whiting Oil & Gas

Well Name: **Church #36-2523H**

Surface Location: Church #36-2523H Pad Sec.36-T10N-R60W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

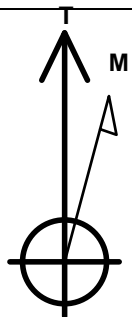
Ground Elevation: 5194.5

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1532946.93	3403698.89	40.787214	-104.042114	

RKB Ensign 14 - 15' WELL @ 5209.5ft (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 660'FSL	1.0	359.0	-500.0	1533297.67	3403193.06	40.788199	-104.043920	Polygon
BHL 1967'FSL & 1936'FWL SEC.25	6484.0	6571.2	-32.9	1539516.70	3403557.92	40.805250	-104.042233	Point



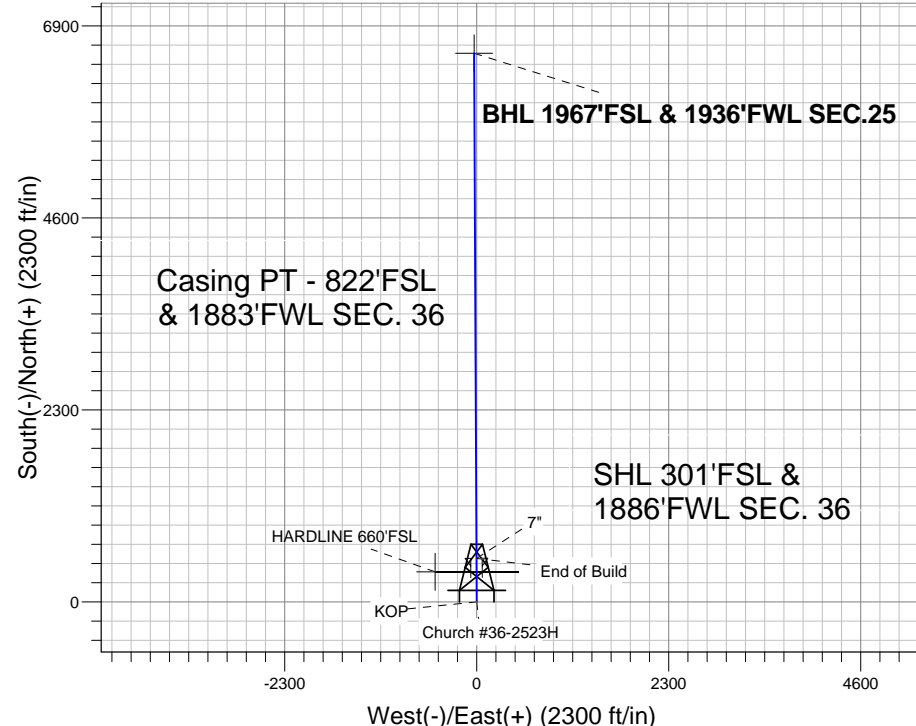
Azimuths to True North
Magnetic North: 8.45°

Magnetic Field
Strength: 53362.8nT
Dip Angle: 67.47°
Date: 11/10/2011
Model: IGRF2010

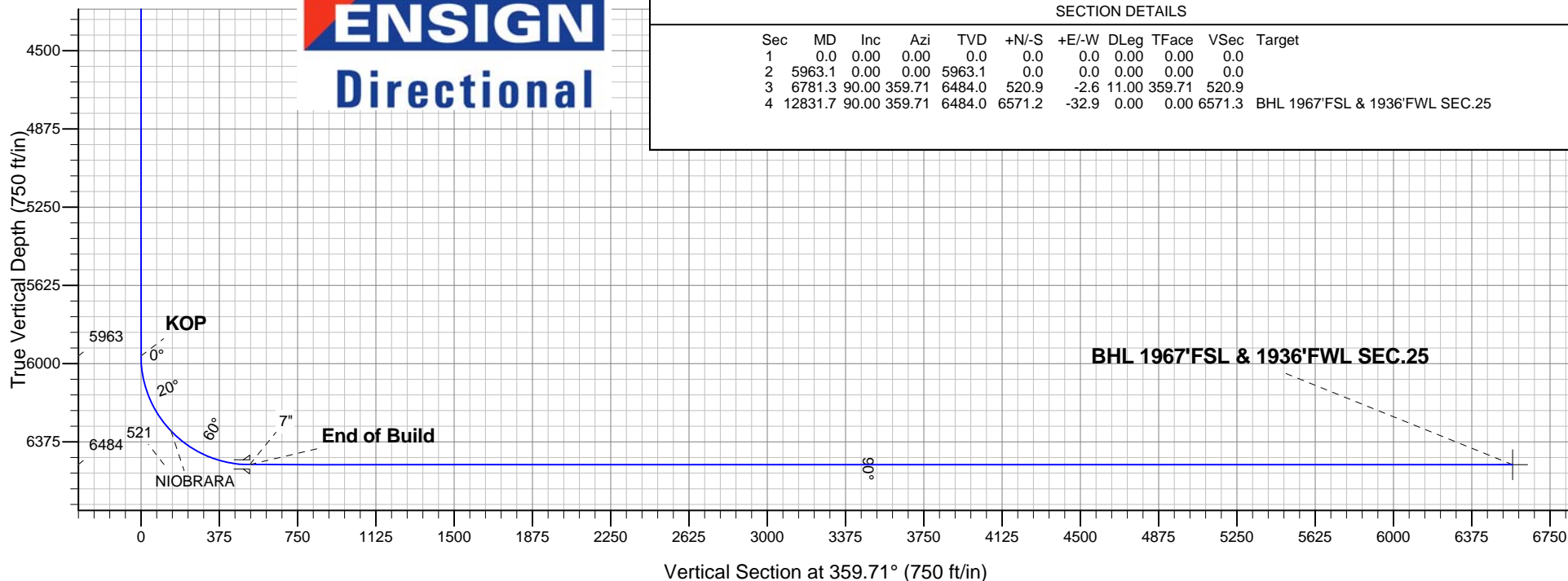
ANNOTATIONS

TVD	MD	Annotation
5963.1	5963.1	KOP
6484.0	6781.3	End of Build

Church #36-2523H Pad Sec.36-T10N-R60W
Church #36-2523H
Plan #1 (11-10-11)
16:44, November 11 2011



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	5963.1	0.00	0.00	5963.1	0.0	0.0	0.00	0.00	0.0	
3	6781.3	90.00	359.71	6484.0	520.9	-2.6	11.00	359.71	520.9	
4	12831.7	90.00	359.71	6484.0	6571.2	-32.9	0.00	0.00	6571.3	BHL 1967'FSL & 1936'FWL SEC.25



Whiting Oil & Gas

SEC.36-T10N-R60W

Church #36-2523H Pad Sec.36-T10N-R60W

Church #36-2523H

Wellbore #1

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

Standard Planning Report

11 November, 2011

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	
5,963.1	0.00	0.00	5,963.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,781.3	90.00	359.71	6,484.0	520.9	-2.6	11.00	11.00	0.00	359.71	
12,831.7	90.00	359.71	6,484.0	6,571.2	-32.9	0.00	0.00	0.00	0.00	BHL 1967'FSL & 19

Database:	Landmark	Local Co-ordinate Reference:	Well Church #36-2523H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Project:	SEC.36-T10N-R60W	MD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Site:	Church #36-2523H Pad Sec.36-T10N-R60W	North Reference:	True
Well:	Church #36-2523H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
HARDLINE 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

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Well:	Church #36-2523H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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

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Wellbore:	Wellbore #1		
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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
5,840.0	0.00	0.00	5,840.0	0.0	0.0	0.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,880.0	0.0	0.0	0.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,920.0	0.0	0.0	0.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,960.0	0.0	0.0	0.0	0.00	0.00	0.00
5,963.1	0.00	0.00	5,963.1	0.0	0.0	0.0	0.00	0.00	0.00
KOP									
6,000.0	4.06	359.71	6,000.0	1.3	0.0	1.3	10.99	10.99	0.00
6,040.0	8.46	359.71	6,039.7	5.7	0.0	5.7	11.00	11.00	0.00
6,080.0	12.86	359.71	6,079.0	13.1	-0.1	13.1	11.00	11.00	0.00
6,120.0	17.26	359.71	6,117.6	23.4	-0.1	23.4	11.00	11.00	0.00
6,160.0	21.66	359.71	6,155.3	36.8	-0.2	36.8	11.00	11.00	0.00
6,200.0	26.06	359.71	6,191.9	52.9	-0.3	52.9	11.00	11.00	0.00
6,240.0	30.46	359.71	6,227.1	71.9	-0.4	71.9	11.00	11.00	0.00
6,280.0	34.86	359.71	6,260.8	93.4	-0.5	93.4	11.00	11.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Church #36-2523H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Project:	SEC.36-T10N-R60W	MD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Site:	Church #36-2523H Pad Sec.36-T10N-R60W	North Reference:	True
Well:	Church #36-2523H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
6,320.0	39.26	359.71	6,292.7	117.5	-0.6	117.5	11.00	11.00	0.00
6,359.0	43.55	359.71	6,322.0	143.3	-0.7	143.3	11.00	11.00	0.00
NIORARA									
6,360.0	43.66	359.71	6,322.7	144.0	-0.7	144.0	11.00	11.00	0.00
6,400.0	48.06	359.71	6,350.6	172.7	-0.9	172.7	11.00	11.00	0.00
6,440.0	52.46	359.71	6,376.1	203.5	-1.0	203.5	11.00	11.00	0.00
6,480.0	56.86	359.71	6,399.3	236.1	-1.2	236.1	11.00	11.00	0.00
6,520.0	61.26	359.71	6,419.8	270.4	-1.4	270.4	11.00	11.00	0.00
6,560.0	65.66	359.71	6,437.7	306.2	-1.5	306.2	11.00	11.00	0.00
6,600.0	70.06	359.71	6,452.8	343.2	-1.7	343.2	11.00	11.00	0.00
6,640.0	74.46	359.71	6,464.9	381.3	-1.9	381.3	11.00	11.00	0.00
6,680.0	78.86	359.71	6,474.2	420.2	-2.1	420.2	11.00	11.00	0.00
6,720.0	83.26	359.71	6,480.4	459.7	-2.3	459.7	11.00	11.00	0.00
6,760.0	87.66	359.71	6,483.6	499.6	-2.5	499.6	11.00	11.00	0.00
6,781.3	90.00	359.71	6,484.0	520.9	-2.6	520.9	11.00	11.00	0.00
End of Build - 7"									
6,800.0	90.00	359.71	6,484.0	539.6	-2.7	539.6	0.01	0.01	0.00
6,840.0	90.00	359.71	6,484.0	579.6	-2.9	579.6	0.00	0.00	0.00
6,880.0	90.00	359.71	6,484.0	619.6	-3.1	619.6	0.00	0.00	0.00
6,920.0	90.00	359.71	6,484.0	659.6	-3.3	659.6	0.00	0.00	0.00
6,960.0	90.00	359.71	6,484.0	699.6	-3.5	699.6	0.00	0.00	0.00
7,000.0	90.00	359.71	6,484.0	739.6	-3.7	739.6	0.00	0.00	0.00
7,040.0	90.00	359.71	6,484.0	779.6	-3.9	779.6	0.00	0.00	0.00
7,080.0	90.00	359.71	6,484.0	819.5	-4.1	819.6	0.00	0.00	0.00
7,120.0	90.00	359.71	6,484.0	859.5	-4.3	859.6	0.00	0.00	0.00
7,160.0	90.00	359.71	6,484.0	899.5	-4.5	899.6	0.00	0.00	0.00
7,200.0	90.00	359.71	6,484.0	939.5	-4.7	939.6	0.00	0.00	0.00
7,240.0	90.00	359.71	6,484.0	979.5	-4.9	979.6	0.00	0.00	0.00
7,280.0	90.00	359.71	6,484.0	1,019.5	-5.1	1,019.6	0.00	0.00	0.00
7,320.0	90.00	359.71	6,484.0	1,059.5	-5.3	1,059.6	0.00	0.00	0.00
7,360.0	90.00	359.71	6,484.0	1,099.5	-5.5	1,099.6	0.00	0.00	0.00
7,400.0	90.00	359.71	6,484.0	1,139.5	-5.7	1,139.6	0.00	0.00	0.00
7,440.0	90.00	359.71	6,484.0	1,179.5	-5.9	1,179.6	0.00	0.00	0.00
7,480.0	90.00	359.71	6,484.0	1,219.5	-6.1	1,219.6	0.00	0.00	0.00
7,520.0	90.00	359.71	6,484.0	1,259.5	-6.3	1,259.6	0.00	0.00	0.00
7,560.0	90.00	359.71	6,484.0	1,299.5	-6.5	1,299.6	0.00	0.00	0.00
7,600.0	90.00	359.71	6,484.0	1,339.5	-6.7	1,339.6	0.00	0.00	0.00
7,640.0	90.00	359.71	6,484.0	1,379.5	-6.9	1,379.6	0.00	0.00	0.00
7,680.0	90.00	359.71	6,484.0	1,419.5	-7.1	1,419.6	0.00	0.00	0.00
7,720.0	90.00	359.71	6,484.0	1,459.5	-7.3	1,459.6	0.00	0.00	0.00
7,760.0	90.00	359.71	6,484.0	1,499.5	-7.5	1,499.6	0.00	0.00	0.00
7,800.0	90.00	359.71	6,484.0	1,539.5	-7.7	1,539.6	0.00	0.00	0.00
7,840.0	90.00	359.71	6,484.0	1,579.5	-7.9	1,579.6	0.00	0.00	0.00
7,880.0	90.00	359.71	6,484.0	1,619.5	-8.1	1,619.6	0.00	0.00	0.00
7,920.0	90.00	359.71	6,484.0	1,659.5	-8.3	1,659.6	0.00	0.00	0.00
7,960.0	90.00	359.71	6,484.0	1,699.5	-8.5	1,699.6	0.00	0.00	0.00
8,000.0	90.00	359.71	6,484.0	1,739.5	-8.7	1,739.6	0.00	0.00	0.00
8,040.0	90.00	359.71	6,484.0	1,779.5	-8.9	1,779.6	0.00	0.00	0.00
8,080.0	90.00	359.71	6,484.0	1,819.5	-9.1	1,819.6	0.00	0.00	0.00
8,120.0	90.00	359.71	6,484.0	1,859.5	-9.3	1,859.6	0.00	0.00	0.00
8,160.0	90.00	359.71	6,484.0	1,899.5	-9.5	1,899.6	0.00	0.00	0.00
8,200.0	90.00	359.71	6,484.0	1,939.5	-9.7	1,939.6	0.00	0.00	0.00
8,240.0	90.00	359.71	6,484.0	1,979.5	-9.9	1,979.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Church #36-2523H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Project:	SEC.36-T10N-R60W	MD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Site:	Church #36-2523H Pad Sec.36-T10N-R60W	North Reference:	True
Well:	Church #36-2523H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	359.71	6,484.0	2,019.5	-10.1	2,019.6	0.00	0.00	0.00
8,320.0	90.00	359.71	6,484.0	2,059.5	-10.3	2,059.6	0.00	0.00	0.00
8,360.0	90.00	359.71	6,484.0	2,099.5	-10.5	2,099.6	0.00	0.00	0.00
8,400.0	90.00	359.71	6,484.0	2,139.5	-10.7	2,139.6	0.00	0.00	0.00
8,440.0	90.00	359.71	6,484.0	2,179.5	-10.9	2,179.6	0.00	0.00	0.00
8,480.0	90.00	359.71	6,484.0	2,219.5	-11.1	2,219.6	0.00	0.00	0.00
8,520.0	90.00	359.71	6,484.0	2,259.5	-11.3	2,259.6	0.00	0.00	0.00
8,560.0	90.00	359.71	6,484.0	2,299.5	-11.5	2,299.6	0.00	0.00	0.00
8,600.0	90.00	359.71	6,484.0	2,339.5	-11.7	2,339.6	0.00	0.00	0.00
8,640.0	90.00	359.71	6,484.0	2,379.5	-11.9	2,379.6	0.00	0.00	0.00
8,680.0	90.00	359.71	6,484.0	2,419.5	-12.1	2,419.6	0.00	0.00	0.00
8,720.0	90.00	359.71	6,484.0	2,459.5	-12.3	2,459.6	0.00	0.00	0.00
8,760.0	90.00	359.71	6,484.0	2,499.5	-12.5	2,499.6	0.00	0.00	0.00
8,800.0	90.00	359.71	6,484.0	2,539.5	-12.7	2,539.6	0.00	0.00	0.00
8,840.0	90.00	359.71	6,484.0	2,579.5	-12.9	2,579.6	0.00	0.00	0.00
8,880.0	90.00	359.71	6,484.0	2,619.5	-13.1	2,619.6	0.00	0.00	0.00
8,920.0	90.00	359.71	6,484.0	2,659.5	-13.3	2,659.6	0.00	0.00	0.00
8,960.0	90.00	359.71	6,484.0	2,699.5	-13.5	2,699.6	0.00	0.00	0.00
9,000.0	90.00	359.71	6,484.0	2,739.5	-13.7	2,739.6	0.00	0.00	0.00
9,040.0	90.00	359.71	6,484.0	2,779.5	-13.9	2,779.6	0.00	0.00	0.00
9,080.0	90.00	359.71	6,484.0	2,819.5	-14.1	2,819.6	0.00	0.00	0.00
9,120.0	90.00	359.71	6,484.0	2,859.5	-14.3	2,859.6	0.00	0.00	0.00
9,160.0	90.00	359.71	6,484.0	2,899.5	-14.5	2,899.6	0.00	0.00	0.00
9,200.0	90.00	359.71	6,484.0	2,939.5	-14.7	2,939.6	0.00	0.00	0.00
9,240.0	90.00	359.71	6,484.0	2,979.5	-14.9	2,979.6	0.00	0.00	0.00
9,280.0	90.00	359.71	6,484.0	3,019.5	-15.1	3,019.6	0.00	0.00	0.00
9,320.0	90.00	359.71	6,484.0	3,059.5	-15.3	3,059.6	0.00	0.00	0.00
9,360.0	90.00	359.71	6,484.0	3,099.5	-15.5	3,099.6	0.00	0.00	0.00
9,400.0	90.00	359.71	6,484.0	3,139.5	-15.7	3,139.6	0.00	0.00	0.00
9,440.0	90.00	359.71	6,484.0	3,179.5	-15.9	3,179.6	0.00	0.00	0.00
9,480.0	90.00	359.71	6,484.0	3,219.5	-16.1	3,219.6	0.00	0.00	0.00
9,520.0	90.00	359.71	6,484.0	3,259.5	-16.3	3,259.6	0.00	0.00	0.00
9,560.0	90.00	359.71	6,484.0	3,299.5	-16.5	3,299.6	0.00	0.00	0.00
9,600.0	90.00	359.71	6,484.0	3,339.5	-16.7	3,339.6	0.00	0.00	0.00
9,640.0	90.00	359.71	6,484.0	3,379.5	-16.9	3,379.6	0.00	0.00	0.00
9,680.0	90.00	359.71	6,484.0	3,419.5	-17.1	3,419.6	0.00	0.00	0.00
9,720.0	90.00	359.71	6,484.0	3,459.5	-17.3	3,459.6	0.00	0.00	0.00
9,760.0	90.00	359.71	6,484.0	3,499.5	-17.5	3,499.6	0.00	0.00	0.00
9,800.0	90.00	359.71	6,484.0	3,539.5	-17.7	3,539.6	0.00	0.00	0.00
9,840.0	90.00	359.71	6,484.0	3,579.5	-17.9	3,579.6	0.00	0.00	0.00
9,880.0	90.00	359.71	6,484.0	3,619.5	-18.1	3,619.6	0.00	0.00	0.00
9,920.0	90.00	359.71	6,484.0	3,659.5	-18.3	3,659.6	0.00	0.00	0.00
9,960.0	90.00	359.71	6,484.0	3,699.5	-18.5	3,699.6	0.00	0.00	0.00
10,000.0	90.00	359.71	6,484.0	3,739.5	-18.7	3,739.6	0.00	0.00	0.00
10,040.0	90.00	359.71	6,484.0	3,779.5	-18.9	3,779.6	0.00	0.00	0.00
10,080.0	90.00	359.71	6,484.0	3,819.5	-19.1	3,819.6	0.00	0.00	0.00
10,120.0	90.00	359.71	6,484.0	3,859.5	-19.3	3,859.6	0.00	0.00	0.00
10,160.0	90.00	359.71	6,484.0	3,899.5	-19.6	3,899.6	0.00	0.00	0.00
10,200.0	90.00	359.71	6,484.0	3,939.5	-19.8	3,939.6	0.00	0.00	0.00
10,240.0	90.00	359.71	6,484.0	3,979.5	-20.0	3,979.6	0.00	0.00	0.00
10,280.0	90.00	359.71	6,484.0	4,019.5	-20.2	4,019.6	0.00	0.00	0.00
10,320.0	90.00	359.71	6,484.0	4,059.5	-20.4	4,059.6	0.00	0.00	0.00
10,360.0	90.00	359.71	6,484.0	4,099.5	-20.6	4,099.6	0.00	0.00	0.00
10,400.0	90.00	359.71	6,484.0	4,139.5	-20.8	4,139.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Church #36-2523H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Project:	SEC.36-T10N-R60W	MD Reference:	WELL @ 5209.5ft (RKB Ensign 14 - 15')
Site:	Church #36-2523H Pad Sec.36-T10N-R60W	North Reference:	True
Well:	Church #36-2523H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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)
10,440.0	90.00	359.71	6,484.0	4,179.5	-21.0	4,179.6	0.00	0.00	0.00
10,480.0	90.00	359.71	6,484.0	4,219.5	-21.2	4,219.6	0.00	0.00	0.00
10,520.0	90.00	359.71	6,484.0	4,259.5	-21.4	4,259.6	0.00	0.00	0.00
10,560.0	90.00	359.71	6,484.0	4,299.5	-21.6	4,299.6	0.00	0.00	0.00
10,600.0	90.00	359.71	6,484.0	4,339.5	-21.8	4,339.6	0.00	0.00	0.00
10,640.0	90.00	359.71	6,484.0	4,379.5	-22.0	4,379.6	0.00	0.00	0.00
10,680.0	90.00	359.71	6,484.0	4,419.5	-22.2	4,419.6	0.00	0.00	0.00
10,720.0	90.00	359.71	6,484.0	4,459.5	-22.4	4,459.6	0.00	0.00	0.00
10,760.0	90.00	359.71	6,484.0	4,499.5	-22.6	4,499.6	0.00	0.00	0.00
10,800.0	90.00	359.71	6,484.0	4,539.5	-22.8	4,539.6	0.00	0.00	0.00
10,840.0	90.00	359.71	6,484.0	4,579.5	-23.0	4,579.6	0.00	0.00	0.00
10,880.0	90.00	359.71	6,484.0	4,619.5	-23.2	4,619.6	0.00	0.00	0.00
10,920.0	90.00	359.71	6,484.0	4,659.5	-23.4	4,659.6	0.00	0.00	0.00
10,960.0	90.00	359.71	6,484.0	4,699.5	-23.6	4,699.6	0.00	0.00	0.00
11,000.0	90.00	359.71	6,484.0	4,739.5	-23.8	4,739.6	0.00	0.00	0.00
11,040.0	90.00	359.71	6,484.0	4,779.5	-24.0	4,779.6	0.00	0.00	0.00
11,080.0	90.00	359.71	6,484.0	4,819.5	-24.2	4,819.6	0.00	0.00	0.00
11,120.0	90.00	359.71	6,484.0	4,859.5	-24.4	4,859.6	0.00	0.00	0.00
11,160.0	90.00	359.71	6,484.0	4,899.5	-24.6	4,899.6	0.00	0.00	0.00
11,200.0	90.00	359.71	6,484.0	4,939.5	-24.8	4,939.6	0.00	0.00	0.00
11,240.0	90.00	359.71	6,484.0	4,979.5	-25.0	4,979.6	0.00	0.00	0.00
11,280.0	90.00	359.71	6,484.0	5,019.5	-25.2	5,019.6	0.00	0.00	0.00
11,320.0	90.00	359.71	6,484.0	5,059.5	-25.4	5,059.6	0.00	0.00	0.00
11,360.0	90.00	359.71	6,484.0	5,099.5	-25.6	5,099.6	0.00	0.00	0.00
11,400.0	90.00	359.71	6,484.0	5,139.5	-25.8	5,139.6	0.00	0.00	0.00
11,440.0	90.00	359.71	6,484.0	5,179.5	-26.0	5,179.6	0.00	0.00	0.00
11,480.0	90.00	359.71	6,484.0	5,219.5	-26.2	5,219.6	0.00	0.00	0.00
11,520.0	90.00	359.71	6,484.0	5,259.5	-26.4	5,259.6	0.00	0.00	0.00
11,560.0	90.00	359.71	6,484.0	5,299.5	-26.6	5,299.6	0.00	0.00	0.00
11,600.0	90.00	359.71	6,484.0	5,339.5	-26.8	5,339.6	0.00	0.00	0.00
11,640.0	90.00	359.71	6,484.0	5,379.5	-27.0	5,379.6	0.00	0.00	0.00
11,680.0	90.00	359.71	6,484.0	5,419.5	-27.2	5,419.6	0.00	0.00	0.00
11,720.0	90.00	359.71	6,484.0	5,459.5	-27.4	5,459.6	0.00	0.00	0.00
11,760.0	90.00	359.71	6,484.0	5,499.5	-27.6	5,499.6	0.00	0.00	0.00
11,800.0	90.00	359.71	6,484.0	5,539.5	-27.8	5,539.6	0.00	0.00	0.00
11,840.0	90.00	359.71	6,484.0	5,579.5	-28.0	5,579.6	0.00	0.00	0.00
11,880.0	90.00	359.71	6,484.0	5,619.5	-28.2	5,619.6	0.00	0.00	0.00
11,920.0	90.00	359.71	6,484.0	5,659.5	-28.4	5,659.6	0.00	0.00	0.00
11,960.0	90.00	359.71	6,484.0	5,699.5	-28.6	5,699.6	0.00	0.00	0.00
12,000.0	90.00	359.71	6,484.0	5,739.5	-28.8	5,739.6	0.00	0.00	0.00
12,040.0	90.00	359.71	6,484.0	5,779.5	-29.0	5,779.6	0.00	0.00	0.00
12,080.0	90.00	359.71	6,484.0	5,819.5	-29.2	5,819.6	0.00	0.00	0.00
12,120.0	90.00	359.71	6,484.0	5,859.5	-29.4	5,859.6	0.00	0.00	0.00
12,160.0	90.00	359.71	6,484.0	5,899.5	-29.6	5,899.6	0.00	0.00	0.00
12,200.0	90.00	359.71	6,484.0	5,939.5	-29.8	5,939.6	0.00	0.00	0.00
12,240.0	90.00	359.71	6,484.0	5,979.5	-30.0	5,979.6	0.00	0.00	0.00
12,280.0	90.00	359.71	6,484.0	6,019.5	-30.2	6,019.6	0.00	0.00	0.00
12,320.0	90.00	359.71	6,484.0	6,059.5	-30.4	6,059.6	0.00	0.00	0.00
12,360.0	90.00	359.71	6,484.0	6,099.5	-30.6	6,099.6	0.00	0.00	0.00
12,400.0	90.00	359.71	6,484.0	6,139.5	-30.8	6,139.6	0.00	0.00	0.00
12,440.0	90.00	359.71	6,484.0	6,179.5	-31.0	6,179.6	0.00	0.00	0.00
12,480.0	90.00	359.71	6,484.0	6,219.5	-31.2	6,219.6	0.00	0.00	0.00
12,520.0	90.00	359.71	6,484.0	6,259.5	-31.4	6,259.6	0.00	0.00	0.00
12,560.0	90.00	359.71	6,484.0	6,299.5	-31.6	6,299.6	0.00	0.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	5,963.1	5,963.1	0.0	0.0	KOP
	6,781.3	6,484.0	520.9	-2.6	End of Build