

# Whiting Oil & Gas

Well Name: **Horsetail #16B-1609A**

Surface Location: Horsetail 16B PAD Sec.16-T10N-R57W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

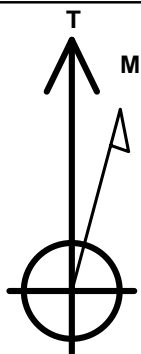
Ground Elevation: 4776.6

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1555608.52	3482878.56	40.845478	-103.754628	

RKB - 17.3' WELL @ 4793.9ft (RKB - 17.3')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 320'FNL & 2191'FEL	1.0	0.0	0.0	Point
BHL 600'FSL & 2475'FEL	5457.0	-4395.4	-238.3	Point



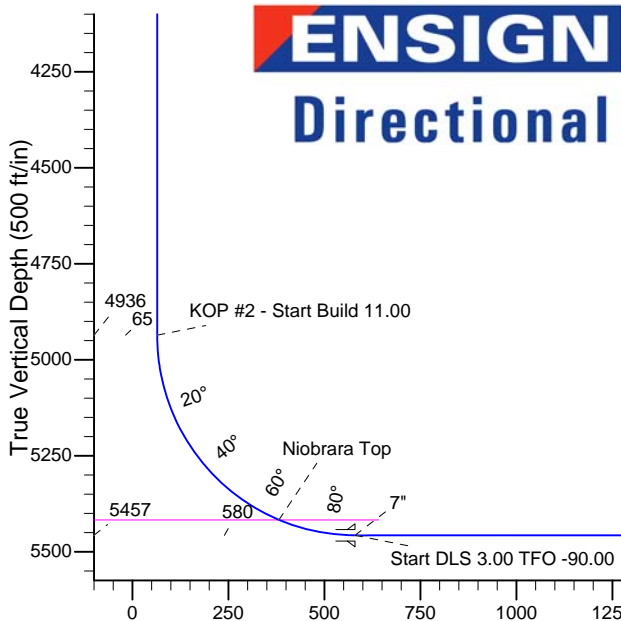
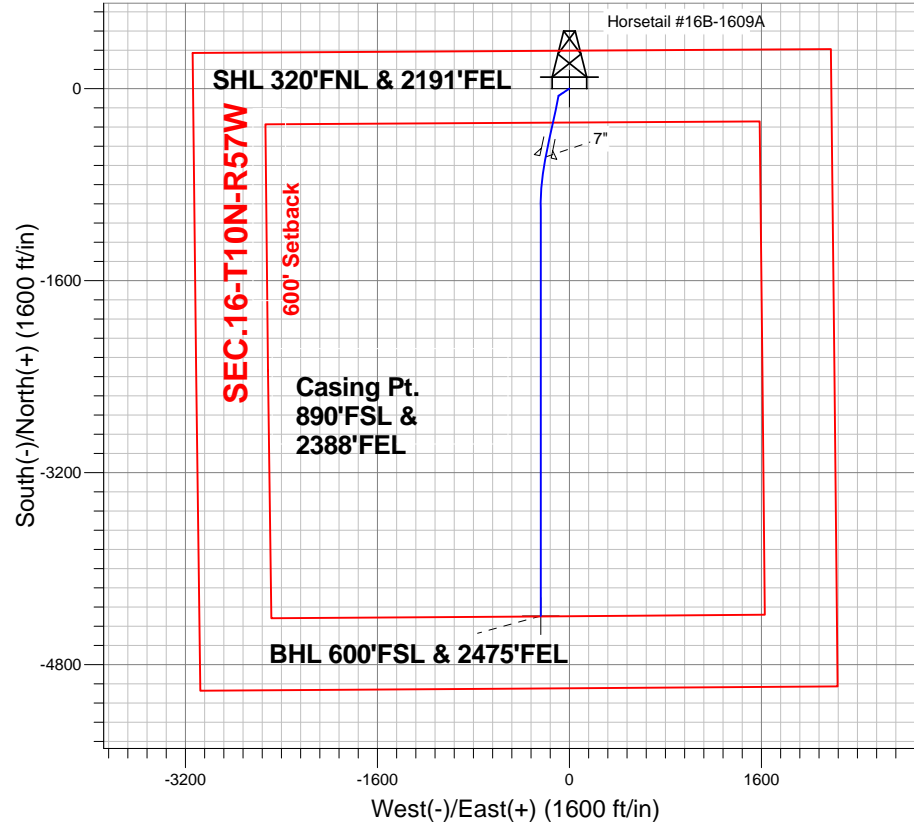
Azimuths to True North  
 Magnetic North: 8.09°

Magnetic Field  
 Strength: 53271.8snT  
 Dip Angle: 67.51°  
 Date: 4/18/2013  
 Model: IGRF2010

Horsetail 16B PAD Sec.16-T10N-R57W  
 Horsetail #16B-1609A  
 Plan #1 (10-24-13)  
 11:28, October 25 2013

## ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP - Start Build 2.00
3869.3	3871.7	Start Drop -2.00
4936.2	4938.6	KOP #2 - Start Build 11.00
5457.0	5757.0	Start DLS 3.00 TFO -90.00
5457.0	9585.1	TD at 9585.1



## 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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1630.7	2.61	236.31	1630.7	-1.7	-2.5	2.00	236.31	1.8	
4	3871.7	2.61	236.31	3869.3	-58.3	-87.5	0.00	0.00	63.0	
5	4002.4	0.00	0.00	4000.0	-60.0	-90.0	2.00	180.00	64.8	
6	4938.6	0.00	0.00	4936.1	-60.0	-90.0	0.00	0.00	64.8	
7	5756.7	90.00	191.85	5457.0	-569.8	-197.0	11.00	191.85	579.6	
8	5757.0	90.00	191.85	5457.0	-570.0	-197.0	0.00	0.00	579.8	
9	6151.6	90.00	180.01	5457.0	-961.8	-237.7	3.00	-90.00	973.3	
10	9585.1	90.00	180.01	5457.0	-4395.4	-238.3	0.00	0.00	4401.8	BHL 600'FSL & 2475'FEL

**BHL 600'FSL & 2475'FEL**

TD at 9585.1

Vertical Section at 183.10° (500 ft/in)



## **Whiting Oil & Gas**

**SEC.16-T10N-R57W**

**Horsetail 16B PAD Sec.16-T10N-R57W**

**Horsetail #16B-1609A**

**Wellbore #1**

**Plan: Plan #1 (10-24-13)**

## **Standard Planning Report**

**25 October, 2013**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Project:</b>	SEC.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>North Reference:</b>	True
<b>Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-24-13)		

<b>Project</b>	SEC.16-T10N-R57W		
<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

<b>Site</b>	Horsetail 16B PAD Sec.16-T10N-R57W				
<b>Site Position:</b>		<b>Northing:</b>	1,555,534.17 ft	<b>Latitude:</b>	40.845272
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,482,913.23 ft	<b>Longitude:</b>	-103.754508
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"	<b>Grid Convergence:</b>	1.13 °

<b>Well</b>	Horsetail #16B-1609A					
<b>Well Position</b>	<b>+N-S</b>	75.0 ft	<b>Northing:</b>	1,555,608.52 ft	<b>Latitude:</b>	40.845478
	<b>+E-W</b>	-33.2 ft	<b>Easting:</b>	3,482,878.56 ft	<b>Longitude:</b>	-103.754628
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,776.6 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	4/18/2013	8.09	67.51	53,272

<b>Design</b>	Plan #1 (10-24-13)			
<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	183.10

<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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,630.7	2.61	236.31	1,630.7	-1.7	-2.5	2.00	2.00	0.00	236.31	
3,871.7	2.61	236.31	3,869.3	-58.3	-87.5	0.00	0.00	0.00	0.00	
4,002.4	0.00	0.00	4,000.0	-60.0	-90.0	2.00	-2.00	0.00	180.00	
4,938.6	0.00	0.00	4,936.1	-60.0	-90.0	0.00	0.00	0.00	0.00	
5,756.7	90.00	191.85	5,457.0	-569.8	-197.0	11.00	11.00	0.00	191.85	
5,757.0	90.00	191.85	5,457.0	-570.0	-197.0	0.00	0.00	0.00	0.00	
6,151.6	90.00	180.01	5,457.0	-961.8	-237.7	3.00	0.00	-3.00	-90.00	
9,585.1	90.00	180.01	5,457.0	-4,395.4	-238.3	0.00	0.00	0.00	0.00	BHL 600'FSL & 247

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Project:</b>	SEC.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>North Reference:</b>	True
<b>Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-24-13)		

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 320'FNL &amp; 2191'FEL</b>										
100.0	0.00	0.00	100.0	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	
300.0	0.00	0.00	300.0	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	
500.0	0.00	0.00	500.0	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	
700.0	0.00	0.00	700.0	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	
900.0	0.00	0.00	900.0	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	
1,100.0	0.00	0.00	1,100.0	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	
1,300.0	0.00	0.00	1,300.0	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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>KOP - Start Build 2.00</b>										
1,600.0	2.00	236.31	1,600.0	-1.0	-1.5	1.0	2.00	2.00	0.00	
1,630.7	2.61	236.31	1,630.7	-1.7	-2.5	1.8	2.00	2.00	0.00	
1,700.0	2.61	236.31	1,699.9	-3.4	-5.1	3.7	0.00	0.00	0.00	
1,800.0	2.61	236.31	1,799.8	-5.9	-8.9	6.4	0.00	0.00	0.00	
1,900.0	2.61	236.31	1,899.7	-8.5	-12.7	9.1	0.00	0.00	0.00	
2,000.0	2.61	236.31	1,999.6	-11.0	-16.5	11.9	0.00	0.00	0.00	
2,100.0	2.61	236.31	2,099.5	-13.5	-20.3	14.6	0.00	0.00	0.00	
2,200.0	2.61	236.31	2,199.4	-16.1	-24.1	17.3	0.00	0.00	0.00	
2,300.0	2.61	236.31	2,299.3	-18.6	-27.9	20.1	0.00	0.00	0.00	
2,400.0	2.61	236.31	2,399.2	-21.1	-31.7	22.8	0.00	0.00	0.00	
2,500.0	2.61	236.31	2,499.1	-23.6	-35.5	25.5	0.00	0.00	0.00	
2,600.0	2.61	236.31	2,598.9	-26.2	-39.3	28.3	0.00	0.00	0.00	
2,700.0	2.61	236.31	2,698.8	-28.7	-43.1	31.0	0.00	0.00	0.00	
2,800.0	2.61	236.31	2,798.7	-31.2	-46.9	33.7	0.00	0.00	0.00	
2,900.0	2.61	236.31	2,898.6	-33.8	-50.6	36.5	0.00	0.00	0.00	
3,000.0	2.61	236.31	2,998.5	-36.3	-54.4	39.2	0.00	0.00	0.00	
3,100.0	2.61	236.31	3,098.4	-38.8	-58.2	41.9	0.00	0.00	0.00	
3,200.0	2.61	236.31	3,198.3	-41.4	-62.0	44.7	0.00	0.00	0.00	
3,300.0	2.61	236.31	3,298.2	-43.9	-65.8	47.4	0.00	0.00	0.00	
3,400.0	2.61	236.31	3,398.1	-46.4	-69.6	50.1	0.00	0.00	0.00	
3,500.0	2.61	236.31	3,498.0	-48.9	-73.4	52.8	0.00	0.00	0.00	
3,600.0	2.61	236.31	3,597.9	-51.5	-77.2	55.6	0.00	0.00	0.00	
3,700.0	2.61	236.31	3,697.8	-54.0	-81.0	58.3	0.00	0.00	0.00	
3,800.0	2.61	236.31	3,797.7	-56.5	-84.8	61.0	0.00	0.00	0.00	
3,871.7	2.61	236.31	3,869.3	-58.3	-87.5	63.0	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
3,900.0	2.05	236.31	3,897.6	-59.0	-88.5	63.7	2.00	-2.00	0.00	
4,000.0	0.05	236.31	3,997.6	-60.0	-90.0	64.8	2.00	-2.00	0.00	
4,002.4	0.00	0.00	4,000.0	-60.0	-90.0	64.8	2.00	-2.00	0.00	
4,100.0	0.00	0.00	4,097.6	-60.0	-90.0	64.8	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,197.6	-60.0	-90.0	64.8	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,297.6	-60.0	-90.0	64.8	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,397.6	-60.0	-90.0	64.8	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,497.6	-60.0	-90.0	64.8	0.00	0.00	0.00	

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<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Project:</b>	SEC.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>North Reference:</b>	True
<b>Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-24-13)		

#### 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)
4,600.0	0.00	0.00	4,597.6	-60.0	-90.0	64.8	0.00	0.00	0.00
4,700.0	0.00	0.00	4,697.6	-60.0	-90.0	64.8	0.00	0.00	0.00
4,800.0	0.00	0.00	4,797.6	-60.0	-90.0	64.8	0.00	0.00	0.00
4,900.0	0.00	0.00	4,897.6	-60.0	-90.0	64.8	0.00	0.00	0.00
4,938.6	0.00	0.00	4,936.2	-60.0	-90.0	64.8	0.00	0.00	0.00
<b>KOP #2 - Start Build 11.00</b>									
5,000.0	6.76	191.85	4,997.4	-63.5	-90.7	68.4	11.01	11.01	0.00
5,100.0	17.76	191.85	5,095.0	-84.3	-95.1	89.3	11.00	11.00	0.00
5,200.0	28.76	191.85	5,186.7	-122.9	-103.2	128.3	11.00	11.00	0.00
5,300.0	39.76	191.85	5,269.3	-177.9	-114.7	183.8	11.00	11.00	0.00
5,400.0	50.76	191.85	5,339.5	-247.3	-129.3	253.9	11.00	11.00	0.00
5,500.0	61.76	191.85	5,395.0	-328.6	-146.3	336.0	11.00	11.00	0.00
5,551.3	67.40	191.85	5,417.0	-373.9	-155.8	381.8	11.00	11.00	0.00
<b>Niobrara Top</b>									
5,600.0	72.76	191.85	5,433.6	-418.7	-165.3	427.0	11.00	11.00	0.00
5,700.0	83.76	191.85	5,453.9	-514.4	-185.3	523.6	11.00	11.00	0.00
5,756.7	90.00	191.85	5,457.0	-569.8	-197.0	579.6	11.00	11.00	0.00
5,757.0	90.00	191.85	5,457.0	-570.0	-197.0	579.9	0.00	0.00	0.00
<b>Start DLS 3.00 TFO -90.00 - 7"</b>									
5,800.0	90.00	190.56	5,457.0	-612.2	-205.4	622.4	3.00	0.00	-3.00
5,900.0	90.00	187.56	5,457.0	-711.0	-221.1	721.9	3.00	0.00	-3.00
6,000.0	90.00	184.56	5,457.0	-810.4	-231.7	821.7	3.00	0.00	-3.00
6,100.0	90.00	181.56	5,457.0	-910.2	-237.0	921.7	3.00	0.00	-3.00
6,151.6	90.00	180.01	5,457.0	-961.8	-237.7	973.3	3.00	0.00	-3.00
6,200.0	90.00	180.01	5,457.0	-1,010.2	-237.7	1,021.6	0.00	0.00	0.00
6,300.0	90.00	180.01	5,457.0	-1,110.2	-237.7	1,121.5	0.00	0.00	0.00
6,400.0	90.00	180.01	5,457.0	-1,210.2	-237.7	1,221.3	0.00	0.00	0.00
6,500.0	90.00	180.01	5,457.0	-1,310.2	-237.8	1,321.2	0.00	0.00	0.00
6,600.0	90.00	180.01	5,457.0	-1,410.2	-237.8	1,421.0	0.00	0.00	0.00
6,700.0	90.00	180.01	5,457.0	-1,510.2	-237.8	1,520.9	0.00	0.00	0.00
6,800.0	90.00	180.01	5,457.0	-1,610.2	-237.8	1,620.7	0.00	0.00	0.00
6,900.0	90.00	180.01	5,457.0	-1,710.2	-237.8	1,720.6	0.00	0.00	0.00
7,000.0	90.00	180.01	5,457.0	-1,810.2	-237.8	1,820.4	0.00	0.00	0.00
7,100.0	90.00	180.01	5,457.0	-1,910.2	-237.9	1,920.3	0.00	0.00	0.00
7,200.0	90.00	180.01	5,457.0	-2,010.2	-237.9	2,020.2	0.00	0.00	0.00
7,300.0	90.00	180.01	5,457.0	-2,110.2	-237.9	2,120.0	0.00	0.00	0.00
7,400.0	90.00	180.01	5,457.0	-2,210.2	-237.9	2,219.9	0.00	0.00	0.00
7,500.0	90.00	180.01	5,457.0	-2,310.2	-237.9	2,319.7	0.00	0.00	0.00
7,600.0	90.00	180.01	5,457.0	-2,410.2	-237.9	2,419.6	0.00	0.00	0.00
7,700.0	90.00	180.01	5,457.0	-2,510.2	-238.0	2,519.4	0.00	0.00	0.00
7,800.0	90.00	180.01	5,457.0	-2,610.2	-238.0	2,619.3	0.00	0.00	0.00
7,900.0	90.00	180.01	5,457.0	-2,710.2	-238.0	2,719.1	0.00	0.00	0.00
8,000.0	90.00	180.01	5,457.0	-2,810.2	-238.0	2,819.0	0.00	0.00	0.00
8,100.0	90.00	180.01	5,457.0	-2,910.2	-238.0	2,918.8	0.00	0.00	0.00
8,200.0	90.00	180.01	5,457.0	-3,010.2	-238.0	3,018.7	0.00	0.00	0.00
8,300.0	90.00	180.01	5,457.0	-3,110.2	-238.1	3,118.6	0.00	0.00	0.00
8,400.0	90.00	180.01	5,457.0	-3,210.2	-238.1	3,218.4	0.00	0.00	0.00
8,500.0	90.00	180.01	5,457.0	-3,310.2	-238.1	3,318.3	0.00	0.00	0.00
8,600.0	90.00	180.01	5,457.0	-3,410.2	-238.1	3,418.1	0.00	0.00	0.00
8,700.0	90.00	180.01	5,457.0	-3,510.2	-238.1	3,518.0	0.00	0.00	0.00
8,800.0	90.00	180.01	5,457.0	-3,610.2	-238.1	3,617.8	0.00	0.00	0.00
8,900.0	90.00	180.01	5,457.0	-3,710.2	-238.1	3,717.7	0.00	0.00	0.00
9,000.0	90.00	180.01	5,457.0	-3,810.2	-238.2	3,817.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Company:</b>	Whiting Oil & Gas	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Project:</b>	SEC.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>North Reference:</b>	True
<b>Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-24-13)		

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)	
9,100.0	90.00	180.01	5,457.0	-3,910.2	-238.2	3,917.4	0.00	0.00	0.00	
9,200.0	90.00	180.01	5,457.0	-4,010.2	-238.2	4,017.2	0.00	0.00	0.00	
9,300.0	90.00	180.01	5,457.0	-4,110.2	-238.2	4,117.1	0.00	0.00	0.00	
9,400.0	90.00	180.01	5,457.0	-4,210.2	-238.2	4,216.9	0.00	0.00	0.00	
9,500.0	90.00	180.01	5,457.0	-4,310.2	-238.2	4,316.8	0.00	0.00	0.00	
9,585.1	90.00	180.01	5,457.0	-4,395.3	-238.3	4,401.8	0.00	0.00	0.00	
TD at 9585.1 - BHL 600'FSL & 2475'FEL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
5,757.0	5,457.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,551.3	5,417.0	Niobrara Top		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 2.00	
3,871.7	3,869.3	-58.3	-87.5	Start Drop -2.00	
4,938.6	4,936.2	-60.0	-90.0	KOP #2 - Start Build 11.00	
5,757.0	5,457.0	-570.0	-197.0	Start DLS 3.00 TFO -90.00	
9,585.1	5,457.0	-4,395.3	-238.3	TD at 9585.1	



## **Directional**

### **Whiting Oil & Gas**

**SEC.16-T10N-R57W**

**Horsetail 16B PAD Sec.16-T10N-R57W**

**Horsetail #16B-1609A**

**Wellbore #1**

**Plan #1 (10-24-13)**

### **Anticollision Report**

**25 October, 2013**

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (10-24-13)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	Date	10/25/2013		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	9,585.1	Plan #1 (10-24-13) (Wellbore #1)	MWD	MWD - Standard

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Summary</b>						
<b>Offset Well - Wellbore - Design</b>						
Horsetail 16B PAD Sec.16-T10N-R57W						
Horsetail 16B-1610B - Wellbore #1 - Wellbore #1	1,339.5	1,339.9	55.1	49.6	9.935	CC
Horsetail 16B-1610B - Wellbore #1 - Wellbore #1	1,400.0	1,400.1	55.3	49.5	9.532	ES
Horsetail 16B-1610B - Wellbore #1 - Wellbore #1	2,900.0	2,898.6	77.6	65.5	6.427	SF
Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	1,339.5	1,339.9	55.1	49.6	9.935	CC
Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	1,400.0	1,400.1	55.3	49.5	9.532	ES
Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	9,507.0	9,528.1	342.5	186.8	2.200	SF
Horsetail #16B-1611A - Wellbore #1 - Plan #1 (10-24-13)	1,500.0	1,500.0	82.7	76.2	12.692	CC, ES
Horsetail #16B-1611A - Wellbore #1 - Plan #1 (10-24-13)	9,585.1	9,587.7	660.3	491.8	3.918	SF
Horsetail #16B-1612B - Wellbore #1 - Plan #1 (10-24-13)	1,000.0	1,000.0	124.5	120.2	29.150	CC, ES
Horsetail #16B-1612B - Wellbore #1 - Plan #1 (10-24-13)	9,585.1	9,646.2	992.3	825.3	5.941	SF

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 185-MWD													Offset Well Error:	0.0 ft
Reference	Vertical Depth (ft)	Offset	Vertical Depth (ft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	156.13	-75.0	33.2	82.0					
100.0	100.0	100.2	100.2	0.1	0.1	156.07	-74.9	33.2	81.9	81.7	0.22	364.118		
200.0	200.0	200.4	200.4	0.3	0.2	155.91	-74.5	33.3	81.6	81.0	0.58	140.943		
300.0	300.0	300.9	300.9	0.6	0.5	155.80	-73.7	33.1	80.8	79.8	1.02	78.901		
400.0	400.0	401.6	401.6	0.8	0.7	155.56	-72.1	32.8	79.2	77.8	1.47	53.775		
500.0	500.0	501.8	501.8	1.0	0.9	155.05	-69.8	32.5	77.0	75.1	1.92	40.123		
600.0	600.0	602.2	602.1	1.2	1.1	154.37	-67.3	32.3	74.6	72.3	2.36	31.639		
700.0	700.0	703.0	702.9	1.5	1.3	153.82	-63.8	31.4	71.2	68.4	2.81	25.361		
800.0	800.0	802.7	802.5	1.7	1.6	153.30	-59.8	30.1	67.0	63.7	3.25	20.623		
900.0	900.0	902.1	901.8	1.9	1.8	153.09	-56.9	28.9	63.8	60.1	3.67	17.379		
1,000.0	1,000.0	1,002.0	1,001.7	2.1	2.0	153.10	-54.5	27.6	61.1	57.0	4.10	14.912		
1,100.0	1,100.0	1,101.8	1,101.5	2.4	2.2	153.32	-52.2	26.2	58.4	53.9	4.53	12.894		
1,200.0	1,200.0	1,201.3	1,200.9	2.6	2.4	154.42	-50.8	24.3	56.3	51.3	4.96	11.353		
1,300.0	1,300.0	1,300.7	1,300.2	2.8	2.6	157.07	-50.8	21.5	55.2	49.8	5.38	10.258		
1,339.5	1,339.5	1,339.9	1,339.5	2.9	2.7	158.39	-51.3	20.3	55.1	49.6	5.55	9.935	CC	
1,400.0	1,400.0	1,400.1	1,399.6	3.0	2.8	161.02	-52.3	18.0	55.3	49.5	5.81	9.532	ES	
1,500.0	1,500.0	1,500.0	1,499.4	3.3	3.0	165.54	-54.5	14.1	56.3	50.1	6.23	9.038		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail 16B-1610B - Wellbore #1 - Wellbore #1	Offset Site Error:	0.0 ft
Survey Program: 185-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
1,600.0	1,600.0	1,600.0	1,599.3	3.5	3.2	-68.88	-56.4	10.9	56.8	50.1	6.64	8.548			
1,617.2	1,617.2	1,617.1	1,616.4	3.5	3.2	-68.87	-56.7	10.4	56.8	50.1	6.71	8.460			
1,700.0	1,699.9	1,699.3	1,698.6	3.6	3.4	-69.29	-58.9	7.7	57.0	50.0	7.04	8.096			
1,800.0	1,799.8	1,799.1	1,798.2	3.8	3.6	-69.52	-62.2	4.4	57.9	50.4	7.45	7.770			
1,900.0	1,899.7	1,897.4	1,896.4	4.0	3.8	-71.29	-66.9	3.1	60.6	52.7	7.85	7.716			
2,000.0	1,999.6	1,999.1	1,998.0	4.2	4.0	-74.91	-70.6	3.6	63.0	54.7	8.26	7.620			
2,100.0	2,099.5	2,099.4	2,098.4	4.4	4.2	-78.97	-72.6	4.4	64.0	55.4	8.68	7.380			
2,200.0	2,199.4	2,199.8	2,198.7	4.7	4.4	-83.04	-73.8	5.1	64.7	55.6	9.10	7.114			
2,300.0	2,299.3	2,299.7	2,298.6	4.9	4.7	-87.74	-74.3	6.2	65.3	55.8	9.52	6.864			
2,400.0	2,399.2	2,399.2	2,398.1	5.1	4.9	-92.12	-75.0	7.3	66.5	56.6	9.94	6.693			
2,500.0	2,499.1	2,498.9	2,497.8	5.3	5.1	-95.89	-76.6	8.4	68.7	58.4	10.36	6.633			
2,600.0	2,598.9	2,599.2	2,598.0	5.5	5.3	-99.53	-77.8	9.3	70.9	60.1	10.79	6.572			
2,700.0	2,698.8	2,699.3	2,698.1	5.7	5.5	-103.17	-78.5	10.1	72.9	61.7	11.22	6.497			
2,800.0	2,798.7	2,799.1	2,798.0	6.0	5.7	-106.34	-79.4	10.7	75.0	63.4	11.64	6.442			
2,900.0	2,898.6	2,898.6	2,897.5	6.2	5.9	-109.46	-80.2	11.5	77.6	65.5	12.07	6.427 SF			
3,000.0	2,998.5	2,998.2	2,997.0	6.4	6.1	-112.71	-81.0	13.0	81.0	68.5	12.50	6.478			
3,100.0	3,098.4	3,097.9	3,096.7	6.7	6.3	-116.09	-81.4	15.1	84.9	71.9	12.93	6.564			
3,200.0	3,198.3	3,198.1	3,196.9	6.9	6.5	-119.45	-81.4	17.3	88.9	75.5	13.36	6.654			
3,300.0	3,298.2	3,297.9	3,296.7	7.1	6.7	-122.83	-80.8	19.3	92.8	79.0	13.79	6.733			
3,400.0	3,398.1	3,398.0	3,396.8	7.3	6.9	-126.11	-79.8	21.4	96.9	82.7	14.22	6.819			
3,500.0	3,498.0	3,498.2	3,496.9	7.6	7.2	-129.40	-78.2	23.2	101.0	86.3	14.64	6.894			
3,600.0	3,597.9	3,598.6	3,597.3	7.8	7.4	-132.70	-76.1	24.7	104.8	89.7	15.07	6.952			
3,700.0	3,697.8	3,697.9	3,696.5	8.0	7.6	-135.53	-74.3	25.9	108.8	93.3	15.49	7.023			
3,800.0	3,797.7	3,795.5	3,794.1	8.3	7.8	-137.75	-73.4	28.2	114.3	98.4	15.91	7.185			
3,900.0	3,897.6	3,893.9	3,892.5	8.5	8.0	-139.61	-73.0	32.0	121.4	105.1	16.33	7.435			
4,000.0	3,997.6	3,994.0	3,992.5	8.7	8.2	-140.57	-72.7	36.2	126.9	110.2	16.74	7.583			
4,100.0	4,097.6	4,093.6	4,091.9	8.9	8.4	95.36	-72.2	40.4	131.1	114.0	17.10	7.666			
4,200.0	4,197.6	4,193.2	4,191.5	9.1	8.6	94.96	-71.7	44.8	135.5	118.0	17.51	7.735			
4,300.0	4,297.6	4,292.7	4,290.9	9.3	8.8	94.55	-71.1	49.5	140.1	122.2	17.93	7.812			
4,400.0	4,397.6	4,395.5	4,393.6	9.5	9.0	94.13	-70.4	54.2	144.6	126.3	18.35	7.881			
4,500.0	4,497.6	4,500.3	4,498.3	9.7	9.3	93.81	-69.6	54.8	145.1	126.4	18.78	7.729			
4,600.0	4,597.6	4,601.4	4,599.5	9.9	9.5	93.45	-68.7	53.9	144.2	125.0	19.20	7.512			
4,700.0	4,697.6	4,701.5	4,699.5	10.1	9.7	93.00	-67.5	52.5	142.8	123.1	19.61	7.278			
4,778.0	4,775.6	4,777.6	4,775.6	10.3	9.8	92.75	-66.8	51.9	142.1	122.1	19.94	7.126			
4,800.0	4,797.6	4,798.8	4,796.8	10.3	9.9	92.78	-66.9	52.0	142.1	122.1	20.03	7.097			
4,900.0	4,897.6	4,898.1	4,896.0	10.5	10.1	93.26	-68.1	53.0	143.3	122.8	20.45	7.006			
5,000.0	4,997.4	4,996.6	4,994.6	10.8	10.3	-99.37	-69.3	54.2	145.1	124.2	20.90	6.942			
5,100.0	5,095.0	5,083.7	5,080.9	11.0	10.5	-101.60	-79.0	58.3	154.1	132.8	21.30	7.236			
5,200.0	5,186.7	5,158.3	5,152.9	11.4	10.7	-103.65	-93.9	70.6	179.4	157.7	21.71	8.262			
5,300.0	5,269.3	5,238.1	5,226.7	11.8	10.9	-105.43	-115.7	91.1	219.2	197.0	22.19	9.879			
5,400.0	5,339.5	5,352.3	5,323.3	12.4	11.3	-106.80	-167.8	121.6	263.7	240.8	22.88	11.523			
5,500.0	5,395.0	5,532.5	5,448.9	13.2	12.2	-108.51	-294.0	139.3	292.7	268.5	24.18	12.106			
5,600.0	5,433.6	5,646.6	5,512.0	14.3	13.0	-109.35	-389.0	137.4	314.1	288.4	25.67	12.234			
5,700.0	5,453.9	5,724.0	5,550.3	15.5	13.7	-110.15	-455.9	130.8	335.7	308.5	27.20	12.341			
5,800.0	5,457.0	5,724.0	5,550.3	16.7	13.7	-107.18	-455.9	130.8	382.3	353.5	28.81	13.272			
5,900.0	5,457.0	5,724.0	5,550.3	18.0	13.7	-106.49	-455.9	130.8	444.6	414.5	30.09	14.772			
6,000.0	5,457.0	5,724.0	5,550.3	19.3	13.7	-105.65	-455.9	130.8	515.5	484.1	31.47	16.385			
6,100.0	5,457.0	5,724.0	5,550.3	20.7	13.7	-104.72	-455.9	130.8	592.0	559.1	32.89	18.000			
6,200.0	5,457.0	5,724.0	5,550.3	22.1	13.7	-104.22	-455.9	130.8	672.2	637.8	34.36	19.564			
6,300.0	5,457.0	5,724.0	5,550.3	23.7	13.7	-104.22	-455.9	130.8	756.8	720.9	35.93	21.065			
6,400.0	5,457.0	5,724.0	5,550.3	25.3	13.7	-104.22	-455.9	130.8	844.8	807.2	37.54	22.505			
6,500.0	5,457.0	5,724.0	5,550.3	27.0	13.7	-104.22	-455.9	130.8	935.1	896.0	39.18	23.865			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	Offset Site Error:	0.0 ft
Survey Program: 185-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	156.13	-75.0	33.2	82.0						
100.0	100.0	100.2	100.2	0.1	0.1	156.07	-74.9	33.2	81.9	81.7	0.22	364.118			
200.0	200.0	200.4	200.4	0.3	0.2	155.91	-74.5	33.3	81.6	81.0	0.58	140.943			
300.0	300.0	300.9	300.9	0.6	0.5	155.80	-73.7	33.1	80.8	79.8	1.02	78.901			
400.0	400.0	401.6	401.6	0.8	0.7	155.56	-72.1	32.8	79.2	77.8	1.47	53.775			
500.0	500.0	501.8	501.8	1.0	0.9	155.05	-69.8	32.5	77.0	75.1	1.92	40.123			
600.0	600.0	602.2	602.1	1.2	1.1	154.37	-67.3	32.3	74.6	72.3	2.36	31.639			
700.0	700.0	703.0	702.9	1.5	1.3	153.82	-63.8	31.4	71.2	68.4	2.81	25.361			
800.0	800.0	802.7	802.5	1.7	1.6	153.30	-59.8	30.1	67.0	63.7	3.25	20.623			
900.0	900.0	902.1	901.8	1.9	1.8	153.09	-56.9	28.9	63.8	60.1	3.67	17.379			
1,000.0	1,000.0	1,002.0	1,001.7	2.1	2.0	153.10	-54.5	27.6	61.1	57.0	4.10	14.912			
1,100.0	1,100.0	1,101.8	1,101.5	2.4	2.2	153.32	-52.2	26.2	58.4	53.9	4.53	12.894			
1,200.0	1,200.0	1,201.3	1,200.9	2.6	2.4	154.42	-50.8	24.3	56.3	51.3	4.96	11.353			
1,300.0	1,300.0	1,300.7	1,300.2	2.8	2.6	157.07	-50.8	21.5	55.2	49.8	5.38	10.258			
1,339.5	1,339.5	1,339.9	1,339.5	2.9	2.7	158.39	-51.3	20.3	55.1	49.6	5.55	9.935 CC			
1,400.0	1,400.0	1,400.1	1,399.6	3.0	2.8	161.02	-52.3	18.0	55.3	49.5	5.81	9.532 ES			
1,500.0	1,500.0	1,500.0	1,499.4	3.3	3.0	165.54	-54.5	14.1	56.3	50.1	6.23	9.038			
1,600.0	1,600.0	1,600.0	1,599.3	3.5	3.2	-68.88	-56.4	10.9	56.8	50.1	6.64	8.548			
1,617.2	1,617.2	1,617.1	1,616.4	3.5	3.2	-68.87	-56.7	10.4	56.8	50.1	6.71	8.460			
1,700.0	1,699.9	1,699.3	1,698.6	3.6	3.4	-69.29	-58.9	7.7	57.0	50.0	7.04	8.096			
1,800.0	1,799.8	1,799.1	1,798.2	3.8	3.6	-69.52	-62.2	4.4	57.9	50.4	7.45	7.770			
1,900.0	1,899.7	1,897.4	1,896.4	4.0	3.8	-71.29	-66.9	3.1	60.6	52.7	7.85	7.716			
2,000.0	1,999.6	1,999.1	1,998.0	4.2	4.0	-74.91	-70.6	3.6	63.0	54.7	8.26	7.620			
2,100.0	2,099.5	2,099.4	2,098.4	4.4	4.2	-78.97	-72.6	4.4	64.0	55.4	8.68	7.380			
2,200.0	2,199.4	2,199.8	2,198.7	4.7	4.4	-83.04	-73.8	5.1	64.7	55.6	9.10	7.114			
2,300.0	2,299.3	2,299.7	2,298.6	4.9	4.7	-87.74	-74.3	6.2	65.3	55.8	9.52	6.864			
2,400.0	2,399.2	2,399.2	2,398.1	5.1	4.9	-92.12	-75.0	7.3	66.5	56.6	9.94	6.693			
2,500.0	2,499.1	2,498.9	2,497.8	5.3	5.1	-95.89	-76.6	8.4	68.7	58.4	10.36	6.633			
2,600.0	2,598.9	2,599.2	2,598.0	5.5	5.3	-99.53	-77.8	9.3	70.9	60.1	10.79	6.572			
2,700.0	2,698.8	2,699.3	2,698.1	5.7	5.5	-103.17	-78.5	10.1	72.9	61.7	11.22	6.497			
2,800.0	2,798.7	2,799.1	2,798.0	6.0	5.7	-106.34	-79.4	10.7	75.0	63.4	11.64	6.442			
2,900.0	2,898.6	2,898.6	2,897.5	6.2	5.9	-109.46	-80.2	11.5	77.6	65.5	12.07	6.427			
3,000.0	2,998.5	2,998.2	2,997.0	6.4	6.1	-112.71	-81.0	13.0	81.0	68.5	12.50	6.478			
3,100.0	3,098.4	3,097.9	3,096.7	6.7	6.3	-116.09	-81.4	15.1	84.9	71.9	12.93	6.564			
3,200.0	3,198.3	3,198.1	3,196.9	6.9	6.5	-119.45	-81.4	17.3	88.9	75.5	13.36	6.654			
3,300.0	3,298.2	3,297.9	3,296.7	7.1	6.7	-122.83	-80.8	19.3	92.8	79.0	13.79	6.733			
3,400.0	3,398.1	3,398.0	3,396.8	7.3	6.9	-126.11	-79.8	21.4	96.9	82.7	14.22	6.819			
3,500.0	3,498.0	3,498.2	3,496.9	7.6	7.2	-129.40	-78.2	23.2	101.0	86.3	14.64	6.894			
3,600.0	3,597.9	3,598.6	3,597.3	7.8	7.4	-132.70	-76.1	24.7	104.8	89.7	15.07	6.952			
3,700.0	3,697.8	3,697.9	3,696.5	8.0	7.6	-135.53	-74.3	25.9	108.8	93.3	15.49	7.023			
3,800.0	3,797.7	3,795.5	3,794.1	8.3	7.8	-137.75	-73.4	28.2	114.3	98.4	15.91	7.185			
3,900.0	3,897.6	3,893.9	3,892.5	8.5	8.0	-139.61	-73.0	32.0	121.4	105.1	16.33	7.435			
4,000.0	3,997.6	3,994.0	3,992.5	8.7	8.2	-140.57	-72.7	36.2	126.9	110.2	16.74	7.583			
4,100.0	4,097.6	4,093.6	4,091.9	8.9	8.4	95.36	-72.2	40.4	131.1	114.0	17.10	7.666			
4,200.0	4,197.6	4,193.2	4,191.5	9.1	8.6	94.96	-71.7	44.8	135.5	118.0	17.51	7.735			
4,300.0	4,297.6	4,292.3	4,290.4	9.3	8.8	94.57	-71.1	49.5	140.1	122.2	17.93	7.816			
4,400.0	4,397.6	4,392.9	4,390.9	9.5	9.0	94.22	-70.7	54.8	145.4	127.0	18.35	7.925			
4,500.0	4,497.6	4,500.6	4,498.6	9.7	9.3	93.78	-69.7	56.3	146.6	127.9	18.78	7.810			
4,600.0	4,597.6	4,601.1	4,599.0	9.9	9.5	93.37	-68.6	55.5	145.7	126.5	19.19	7.594			
4,700.0	4,697.6	4,701.3	4,699.2	10.1	9.7	92.94	-67.4	54.5	144.7	125.0	19.61	7.377			
4,800.0	4,797.6	4,808.8	4,806.5	10.3	9.9	94.22	-70.4	50.9	141.6	121.6	20.04	7.065			
4,900.0	4,897.6	4,905.8	4,902.3	10.5	10.1	100.44	-84.7	44.3	136.6	116.1	20.47	6.673			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	Offset Site Error:	0.0ft
Survey Program: 185-MWD														Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
4,976.1	4,973.5	4,977.6	4,973.1	10.7	10.2	-87.83	-96.0	40.3	135.0	114.2	20.84	6.478			
5,000.0	4,997.4	4,999.1	4,994.2	10.8	10.3	-86.24	-99.6	39.6	135.3	114.4	20.94	6.461			
5,100.0	5,095.0	5,088.4	5,081.1	11.0	10.5	-85.57	-119.8	40.3	140.6	119.2	21.40	6.569			
5,200.0	5,186.7	5,184.3	5,171.2	11.4	10.7	-87.43	-152.5	42.4	149.4	127.4	21.98	6.796			
5,300.0	5,269.3	5,284.9	5,261.4	11.8	11.1	-92.02	-196.8	42.2	158.2	135.5	22.74	6.958			
5,400.0	5,339.5	5,380.5	5,342.0	12.4	11.5	-98.05	-248.1	39.7	169.0	145.4	23.64	7.152			
5,500.0	5,395.0	5,478.4	5,416.6	13.2	12.0	-104.17	-311.4	39.8	188.1	163.5	24.61	7.644			
5,600.0	5,433.6	5,582.4	5,481.7	14.3	12.8	-108.95	-392.2	36.4	209.0	183.2	25.80	8.102			
5,700.0	5,453.9	5,676.7	5,527.6	15.5	13.7	-111.65	-474.5	35.2	236.0	208.6	27.31	8.640			
5,800.0	5,457.0	5,789.3	5,562.8	16.7	15.0	-114.34	-581.0	38.5	267.6	238.5	29.16	9.178			
5,900.0	5,457.0	5,912.6	5,573.5	18.0	16.6	-114.17	-703.6	41.7	287.6	255.8	31.78	9.049			
6,000.0	5,457.0	6,017.5	5,573.4	19.3	18.1	-112.98	-808.5	43.8	299.0	264.4	34.63	8.636			
6,100.0	5,457.0	6,118.5	5,570.0	20.7	19.6	-111.80	-909.4	45.8	304.6	267.0	37.52	8.116			
6,200.0	5,457.0	6,218.2	5,567.2	22.1	21.1	-111.16	-1,009.1	47.0	305.3	264.9	40.39	7.559			
6,300.0	5,457.0	6,317.0	5,564.6	23.7	22.6	-110.58	-1,107.8	48.7	306.0	262.6	43.46	7.041			
6,400.0	5,457.0	6,413.8	5,562.0	25.3	24.0	-110.02	-1,204.6	50.6	306.9	260.3	46.55	6.592			
6,500.0	5,457.0	6,520.3	5,559.6	27.0	25.6	-109.47	-1,311.0	52.4	307.7	258.0	49.79	6.181			
6,600.0	5,457.0	6,624.0	5,557.8	28.7	27.3	-109.20	-1,414.7	51.7	306.6	253.5	53.10	5.774			
6,691.3	5,457.0	6,710.9	5,555.9	30.3	28.7	-108.87	-1,501.5	51.6	305.8	249.7	56.03	5.457			
6,700.0	5,457.0	6,718.3	5,555.8	30.4	28.8	-108.84	-1,509.0	51.6	305.8	249.5	56.30	5.431			
6,800.0	5,457.0	6,818.8	5,553.5	32.2	30.5	-108.35	-1,609.4	53.2	306.6	246.9	59.73	5.133			
6,900.0	5,457.0	6,921.0	5,552.7	34.0	32.1	-108.15	-1,711.6	54.2	307.3	244.3	63.06	4.874			
6,910.9	5,457.0	6,930.5	5,552.9	34.1	32.2	-108.18	-1,721.1	54.2	307.3	243.9	63.39	4.848			
7,000.0	5,457.0	7,017.7	5,553.0	35.7	33.7	-108.15	-1,808.3	55.0	308.1	241.8	66.36	4.643			
7,100.0	5,457.0	7,124.1	5,551.1	37.5	35.6	-107.82	-1,914.7	55.0	307.6	237.7	69.96	4.397			
7,200.0	5,457.0	7,221.5	5,552.2	39.4	37.1	-108.05	-2,012.0	54.4	307.4	234.2	73.15	4.202			
7,300.0	5,457.0	7,320.6	5,553.8	41.2	38.8	-108.38	-2,111.1	53.4	306.9	230.5	76.39	4.018			
7,316.6	5,457.0	7,337.9	5,554.1	41.5	39.1	-108.44	-2,128.5	53.2	306.8	229.9	76.95	3.988			
7,400.0	5,457.0	7,415.0	5,555.2	43.0	40.4	-108.63	-2,205.5	53.6	307.6	228.0	79.61	3.864			
7,500.0	5,457.0	7,505.3	5,556.4	44.8	42.0	-108.67	-2,295.8	56.1	310.7	227.9	82.86	3.750			
7,600.0	5,457.0	7,607.9	5,556.6	46.7	43.8	-108.45	-2,398.2	60.7	315.0	228.5	86.47	3.643			
7,700.0	5,457.0	7,705.3	5,556.1	48.5	45.6	-108.09	-2,495.5	65.4	319.5	229.4	90.06	3.547			
7,800.0	5,457.0	7,816.0	5,554.9	50.4	47.5	-107.77	-2,606.2	67.7	321.0	227.2	93.81	3.422			
7,900.0	5,457.0	7,922.7	5,553.7	52.3	49.3	-107.53	-2,712.9	68.0	320.9	223.4	97.48	3.292			
7,929.3	5,457.0	7,949.4	5,553.5	52.8	49.8	-107.51	-2,739.6	67.9	320.8	222.3	98.48	3.257			
8,000.0	5,457.0	8,013.0	5,552.8	54.1	50.9	-107.32	-2,803.2	69.0	321.7	220.7	100.93	3.187			
8,100.0	5,457.0	8,107.6	5,552.6	56.0	52.5	-107.14	-2,897.7	71.9	324.5	220.2	104.36	3.110			
8,200.0	5,457.0	8,211.7	5,553.1	57.9	54.3	-107.06	-3,001.8	75.1	327.6	219.7	107.95	3.035			
8,300.0	5,457.0	8,304.3	5,552.0	59.8	56.0	-106.74	-3,094.4	77.8	330.2	218.7	111.50	2.961			
8,400.0	5,457.0	8,409.3	5,552.9	61.7	57.8	-106.66	-3,199.2	82.3	334.5	219.4	115.11	2.906			
8,500.0	5,457.0	8,529.4	5,552.7	63.5	59.9	-106.63	-3,319.3	82.2	334.4	215.4	118.99	2.810			
8,600.0	5,457.0	8,621.4	5,552.4	65.4	61.5	-106.67	-3,411.3	80.5	332.5	210.2	122.32	2.719			
8,699.1	5,457.0	8,719.5	5,552.2	67.3	63.2	-106.67	-3,509.4	80.0	332.1	206.2	125.82	2.639			
8,700.0	5,457.0	8,720.2	5,552.2	67.3	63.3	-106.67	-3,510.1	80.0	332.1	206.2	125.85	2.639			
8,800.0	5,457.0	8,815.7	5,552.0	69.2	64.9	-106.57	-3,605.6	81.2	333.2	203.8	129.34	2.576			
8,900.0	5,457.0	8,915.5	5,550.4	71.1	66.7	-106.23	-3,705.3	82.7	334.2	201.1	133.11	2.511			
9,000.0	5,457.0	9,012.2	5,548.7	73.0	68.4	-105.83	-3,802.0	85.1	336.1	199.3	136.81	2.457			
9,100.0	5,457.0	9,113.2	5,546.6	74.9	70.2	-105.33	-3,902.9	88.7	339.0	198.3	140.68	2.410			
9,200.0	5,457.0	9,208.7	5,545.0	76.8	71.9	-104.91	-3,998.3	92.2	342.1	197.7	144.36	2.370			
9,300.0	5,457.0	9,314.9	5,543.8	78.7	73.8	-104.57	-4,104.4	95.6	344.9	196.7	148.23	2.327			
9,400.0	5,457.0	9,428.5	5,543.8	80.6	75.7	-104.62	-4,218.0	94.3	343.8	191.8	151.98	2.262			
9,500.0	5,457.0	9,521.7	5,544.2	82.5	77.4	-104.76	-4,311.2	92.9	342.5	187.1	155.39	2.204			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail 16B-1610B - Wellbore #2 - Wellbore #2	<b>Offset Site Error:</b>	0.0 ft
Survey Program: 185-MWD													<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)		Separation Factor	
9,507.0	5,457.0	9,528.1	5,544.2	82.6	77.5	-104.75	-4,317.6	92.9	342.5	186.8	155.64	2.200 SF		
9,585.1	5,457.0	9,535.0	5,544.2	84.1	77.7	-104.75	-4,324.5	92.9	349.7	192.5	157.21	2.225		

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail #16B-1611A - Wellbore #1 - Plan #1 (10-24-13)	Offset Site Error:	0.0ft
Survey Program: 0-MWD														Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	89.99	0.0	82.7	82.7						
100.0	100.0	100.0	100.0	0.1	0.1	89.99	0.0	82.7	82.7	82.5	0.22	368.057			
200.0	200.0	200.0	200.0	0.3	0.3	89.99	0.0	82.7	82.7	82.1	0.67	122.686			
300.0	300.0	300.0	300.0	0.6	0.6	89.99	0.0	82.7	82.7	81.6	1.12	73.611			
400.0	400.0	400.0	400.0	0.8	0.8	89.99	0.0	82.7	82.7	81.2	1.57	52.580			
500.0	500.0	500.0	500.0	1.0	1.0	89.99	0.0	82.7	82.7	80.7	2.02	40.895			
600.0	600.0	600.0	600.0	1.2	1.2	89.99	0.0	82.7	82.7	80.3	2.47	33.460			
700.0	700.0	700.0	700.0	1.5	1.5	89.99	0.0	82.7	82.7	79.8	2.92	28.312			
800.0	800.0	800.0	800.0	1.7	1.7	89.99	0.0	82.7	82.7	79.4	3.37	24.537			
900.0	900.0	900.0	900.0	1.9	1.9	89.99	0.0	82.7	82.7	78.9	3.82	21.650			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.99	0.0	82.7	82.7	78.5	4.27	19.371			
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.99	0.0	82.7	82.7	78.0	4.72	17.527			
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.99	0.0	82.7	82.7	77.6	5.17	16.002			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	89.99	0.0	82.7	82.7	77.1	5.62	14.722			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	89.99	0.0	82.7	82.7	76.7	6.07	13.632			
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	89.99	0.0	82.7	82.7	76.2	6.52	12.692 CC, ES			
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-146.96	0.0	82.7	84.2	77.2	6.94	12.125			
1,700.0	1,699.9	1,699.9	1,699.9	3.6	3.7	-148.51	0.0	82.7	87.9	80.6	7.35	11.961			
1,800.0	1,799.8	1,799.8	1,799.8	3.8	3.9	-150.00	0.0	82.7	91.8	84.1	7.76	11.830			
1,900.0	1,899.7	1,899.7	1,899.7	4.0	4.2	-151.36	0.0	82.7	95.8	87.6	8.18	11.712			
2,000.0	1,999.6	1,999.6	1,999.6	4.2	4.4	-152.62	0.0	82.7	99.8	91.2	8.60	11.607			
2,100.0	2,099.5	2,097.7	2,097.7	4.4	4.6	-152.96	-1.3	83.7	104.7	95.7	9.00	11.644			
2,200.0	2,199.4	2,196.4	2,196.2	4.7	4.8	-151.89	-5.1	86.6	111.3	101.9	9.37	11.869			
2,300.0	2,299.3	2,296.1	2,295.8	4.9	4.9	-150.68	-9.5	89.8	118.1	108.3	9.76	12.101			
2,400.0	2,399.2	2,395.8	2,395.4	5.1	5.1	-149.61	-13.8	93.1	125.0	114.9	10.15	12.311			
2,500.0	2,499.1	2,495.6	2,495.0	5.3	5.3	-148.66	-18.1	96.3	131.9	121.4	10.56	12.501			
2,600.0	2,598.9	2,595.3	2,594.6	5.5	5.5	-147.79	-22.4	99.5	138.9	128.0	10.96	12.673			
2,700.0	2,698.8	2,695.1	2,694.2	5.7	5.7	-147.01	-26.7	102.8	145.9	134.6	11.37	12.829			
2,800.0	2,798.7	2,794.8	2,793.8	6.0	5.9	-146.31	-31.0	106.0	153.0	141.2	11.79	12.971			
2,900.0	2,898.6	2,894.5	2,893.4	6.2	6.1	-145.66	-35.4	109.3	160.0	147.8	12.21	13.101			
3,000.0	2,998.5	2,994.3	2,993.0	6.4	6.3	-145.07	-39.7	112.5	167.1	154.4	12.64	13.219			
3,100.0	3,098.4	3,094.0	3,092.5	6.7	6.6	-144.53	-44.0	115.7	174.1	161.1	13.07	13.327			
3,200.0	3,198.3	3,193.7	3,192.1	6.9	6.8	-144.03	-48.3	119.0	181.2	167.7	13.50	13.427			
3,300.0	3,298.2	3,293.5	3,291.7	7.1	7.0	-143.56	-52.6	122.2	188.4	174.4	13.93	13.518			
3,400.0	3,398.1	3,393.2	3,391.3	7.3	7.2	-143.13	-57.0	125.5	195.5	181.1	14.37	13.602			
3,500.0	3,498.0	3,492.9	3,490.9	7.6	7.4	-142.73	-61.3	128.7	202.6	187.8	14.81	13.680			
3,600.0	3,597.9	3,592.7	3,590.5	7.8	7.7	-142.36	-65.6	131.9	209.7	194.5	15.25	13.752			
3,700.0	3,697.8	3,692.4	3,690.1	8.0	7.9	-142.01	-69.9	135.2	216.9	201.2	15.70	13.819			
3,800.0	3,797.7	3,792.1	3,789.7	8.3	8.1	-141.69	-74.2	138.4	224.1	207.9	16.14	13.881			
3,900.0	3,897.6	3,894.4	3,891.8	8.5	8.3	-141.45	-78.4	141.5	230.9	214.3	16.59	13.917			
4,000.0	3,997.6	4,000.1	3,997.4	8.7	8.6	-141.40	-80.0	142.7	233.6	216.6	17.01	13.734			
4,100.0	4,097.6	4,100.2	4,097.6	8.9	8.8	94.91	-80.0	142.7	233.6	216.2	17.41	13.418			
4,200.0	4,197.6	4,200.2	4,197.6	9.1	9.0	94.91	-80.0	142.7	233.6	215.8	17.82	13.107			
4,300.0	4,297.6	4,300.2	4,297.6	9.3	9.2	94.91	-80.0	142.7	233.6	215.3	18.24	12.809			
4,400.0	4,397.6	4,400.2	4,397.6	9.5	9.4	94.91	-80.0	142.7	233.6	214.9	18.65	12.523			
4,500.0	4,497.6	4,500.2	4,497.6	9.7	9.6	94.91	-80.0	142.7	233.6	214.5	19.07	12.249			
4,600.0	4,597.6	4,600.2	4,597.6	9.9	9.8	94.91	-80.0	142.7	233.6	214.1	19.49	11.986			
4,700.0	4,697.6	4,700.2	4,697.6	10.1	10.0	94.91	-80.0	142.7	233.6	213.7	19.91	11.732			
4,800.0	4,797.6	4,800.2	4,797.6	10.3	10.2	94.91	-80.0	142.7	233.6	213.3	20.33	11.489			
4,900.0	4,897.6	4,900.2	4,897.6	10.5	10.4	94.91	-80.0	142.7	233.6	212.8	20.75	11.255			
4,907.9	4,905.5	4,908.1	4,905.5	10.6	10.5	-96.95	-80.0	142.7	233.6	212.8	20.79	11.234			
5,000.0	4,997.4	4,990.6	4,987.9	10.8	10.6	-96.92	-82.4	143.6	235.3	214.1	21.16	11.116			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail #16B-1611A - Wellbore #1 - Plan #1 (10-24-13)	Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,100.0	5,095.0	5,074.6	5,070.4	11.0	10.9	-96.78	-96.6	148.5	245.2	223.6	21.62	11.342			
5,200.0	5,186.7	5,157.4	5,148.4	11.4	11.1	-96.41	-122.7	157.6	263.6	241.5	22.18	11.888			
5,300.0	5,269.3	5,238.6	5,219.7	11.8	11.5	-95.67	-159.2	170.4	290.0	267.1	22.92	12.656			
5,400.0	5,339.5	5,317.9	5,282.7	12.4	11.9	-94.45	-204.6	186.3	323.5	299.6	23.91	13.532			
5,500.0	5,395.0	5,395.6	5,336.6	13.2	12.5	-92.73	-257.3	204.7	362.9	337.7	25.18	14.411			
5,600.0	5,433.6	5,472.2	5,381.1	14.3	13.2	-90.53	-316.1	225.2	407.1	380.4	26.76	15.213			
5,700.0	5,453.9	5,550.0	5,416.4	15.5	14.0	-88.06	-381.4	248.1	454.9	426.3	28.60	15.904			
5,800.0	5,457.0	5,626.5	5,440.7	16.7	15.0	-87.88	-449.8	272.0	504.5	473.8	30.68	16.444			
5,900.0	5,457.0	5,711.8	5,455.0	18.0	16.2	-89.77	-529.1	299.7	551.6	518.7	32.98	16.725			
6,000.0	5,457.0	5,820.8	5,457.0	19.3	17.8	-90.00	-632.3	334.8	593.7	558.0	35.78	16.593			
6,100.0	5,457.0	5,960.2	5,457.0	20.7	19.8	-90.00	-766.7	371.7	625.4	586.2	39.15	15.972			
6,200.0	5,457.0	6,107.1	5,457.0	22.1	22.1	-90.00	-910.8	399.9	645.3	602.4	42.88	15.048			
6,300.0	5,457.0	6,257.8	5,457.0	23.7	24.4	-90.00	-1,060.5	417.2	656.8	609.9	46.87	14.014			
6,400.0	5,457.0	6,407.8	5,457.0	25.3	26.8	-90.00	-1,210.4	422.7	660.4	609.5	50.94	12.964			
6,500.0	5,457.0	6,507.8	5,457.0	27.0	28.4	-90.00	-1,310.4	422.6	660.4	606.1	54.28	12.165			
6,600.0	5,457.0	6,607.8	5,457.0	28.7	30.0	-90.00	-1,410.4	422.6	660.4	602.7	57.70	11.446			
6,700.0	5,457.0	6,707.8	5,457.0	30.4	31.7	-90.00	-1,510.4	422.6	660.4	599.2	61.16	10.798			
6,800.0	5,457.0	6,807.8	5,457.0	32.2	33.4	-90.00	-1,610.4	422.6	660.4	595.7	64.67	10.212			
6,900.0	5,457.0	6,907.8	5,457.0	34.0	35.2	-90.00	-1,710.4	422.6	660.4	592.2	68.21	9.681			
7,000.0	5,457.0	7,007.8	5,457.0	35.7	36.9	-90.00	-1,810.4	422.5	660.4	588.6	71.79	9.198			
7,100.0	5,457.0	7,107.8	5,457.0	37.5	38.7	-90.00	-1,910.4	422.5	660.4	585.0	75.40	8.758			
7,200.0	5,457.0	7,207.8	5,457.0	39.4	40.5	-90.00	-2,010.4	422.5	660.4	581.3	79.03	8.356			
7,300.0	5,457.0	7,307.8	5,457.0	41.2	42.3	-90.00	-2,110.4	422.5	660.4	577.7	82.68	7.987			
7,400.0	5,457.0	7,407.8	5,457.0	43.0	44.1	-90.00	-2,210.4	422.5	660.4	574.0	86.35	7.648			
7,500.0	5,457.0	7,507.8	5,457.0	44.8	45.9	-90.00	-2,310.4	422.4	660.4	570.3	90.03	7.335			
7,600.0	5,457.0	7,607.8	5,457.0	46.7	47.7	-90.00	-2,410.4	422.4	660.3	566.6	93.73	7.045			
7,700.0	5,457.0	7,707.8	5,457.0	48.5	49.5	-90.00	-2,510.4	422.4	660.3	562.9	97.44	6.777			
7,800.0	5,457.0	7,807.8	5,457.0	50.4	51.4	-90.00	-2,610.4	422.4	660.3	559.2	101.16	6.528			
7,900.0	5,457.0	7,907.8	5,457.0	52.3	53.2	-90.00	-2,710.4	422.3	660.3	555.4	104.89	6.295			
8,000.0	5,457.0	8,007.8	5,457.0	54.1	55.1	-90.00	-2,810.4	422.3	660.3	551.7	108.63	6.079			
8,100.0	5,457.0	8,107.8	5,457.0	56.0	56.9	-90.00	-2,910.4	422.3	660.3	547.9	112.38	5.876			
8,200.0	5,457.0	8,207.8	5,457.0	57.9	58.8	-90.00	-3,010.4	422.3	660.3	544.2	116.13	5.686			
8,300.0	5,457.0	8,307.8	5,457.0	59.8	60.6	-90.00	-3,110.4	422.3	660.3	540.4	119.89	5.508			
8,400.0	5,457.0	8,407.8	5,457.0	61.7	62.5	-90.00	-3,210.4	422.2	660.3	536.6	123.66	5.340			
8,500.0	5,457.0	8,507.8	5,457.0	63.5	64.4	-90.00	-3,310.4	422.2	660.3	532.9	127.43	5.182			
8,600.0	5,457.0	8,607.8	5,457.0	65.4	66.3	-90.00	-3,410.4	422.2	660.3	529.1	131.21	5.032			
8,700.0	5,457.0	8,707.8	5,457.0	67.3	68.1	-90.00	-3,510.4	422.2	660.3	525.3	134.99	4.891			
8,800.0	5,457.0	8,807.8	5,457.0	69.2	70.0	-90.00	-3,610.4	422.2	660.3	521.5	138.78	4.758			
8,900.0	5,457.0	8,907.8	5,457.0	71.1	71.9	-90.00	-3,710.4	422.1	660.3	517.7	142.57	4.631			
9,000.0	5,457.0	9,007.8	5,457.0	73.0	73.8	-90.00	-3,810.4	422.1	660.3	513.9	146.36	4.511			
9,100.0	5,457.0	9,107.8	5,457.0	74.9	75.7	-90.00	-3,910.4	422.1	660.3	510.1	150.16	4.397			
9,200.0	5,457.0	9,207.8	5,457.0	76.8	77.6	-90.00	-4,010.4	422.1	660.3	506.3	153.96	4.289			
9,300.0	5,457.0	9,307.8	5,457.0	78.7	79.5	-90.00	-4,110.4	422.1	660.3	502.5	157.76	4.185			
9,400.0	5,457.0	9,407.8	5,457.0	80.6	81.4	-90.00	-4,210.4	422.0	660.3	498.7	161.57	4.087			
9,500.0	5,457.0	9,507.8	5,457.0	82.5	83.2	-90.00	-4,310.4	422.0	660.3	494.9	165.37	3.993			
9,560.2	5,457.0	9,568.0	5,457.0	83.6	84.4	-90.00	-4,370.5	422.0	660.3	492.6	167.67	3.938			
9,585.1	5,457.0	9,587.7	5,457.0	84.1	84.8	-90.00	-4,390.3	422.0	660.3	491.8	168.52	3.918 SF			

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail #16B-1612B - Wellbore #1 - Plan #1 (10-24-13)	Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:		0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	127.07	-75.0	99.3	124.5						
100.0	100.0	100.0	100.0	0.1	0.1	127.07	-75.0	99.3	124.5	124.3	0.22	553.856			
200.0	200.0	200.0	200.0	0.3	0.3	127.07	-75.0	99.3	124.5	123.8	0.67	184.619			
300.0	300.0	300.0	300.0	0.6	0.6	127.07	-75.0	99.3	124.5	123.4	1.12	110.771			
400.0	400.0	400.0	400.0	0.8	0.8	127.07	-75.0	99.3	124.5	122.9	1.57	79.122			
500.0	500.0	500.0	500.0	1.0	1.0	127.07	-75.0	99.3	124.5	122.5	2.02	61.540			
600.0	600.0	600.0	600.0	1.2	1.2	127.07	-75.0	99.3	124.5	122.0	2.47	50.351			
700.0	700.0	700.0	700.0	1.5	1.5	127.07	-75.0	99.3	124.5	121.6	2.92	42.604			
800.0	800.0	800.0	800.0	1.7	1.7	127.07	-75.0	99.3	124.5	121.1	3.37	36.924			
900.0	900.0	900.0	900.0	1.9	1.9	127.07	-75.0	99.3	124.5	120.7	3.82	32.580			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	127.07	-75.0	99.3	124.5	120.2	4.27	29.150	CC, ES		
1,100.0	1,100.0	1,095.8	1,095.8	2.4	2.3	126.96	-75.8	100.7	126.1	121.4	4.69	26.889			
1,200.0	1,200.0	1,192.4	1,192.2	2.6	2.5	126.63	-78.0	105.0	131.0	125.9	5.10	25.684			
1,300.0	1,300.0	1,292.2	1,291.9	2.8	2.7	126.26	-80.9	110.2	137.0	131.4	5.52	24.794			
1,400.0	1,400.0	1,392.0	1,391.5	3.0	2.9	125.92	-83.7	115.5	142.9	137.0	5.95	24.002			
1,500.0	1,500.0	1,491.8	1,491.1	3.3	3.1	125.60	-86.5	120.8	148.9	142.5	6.39	23.297			
1,600.0	1,600.0	1,591.6	1,590.7	3.5	3.4	-111.48	-89.3	126.1	155.4	148.7	6.78	22.927			
1,700.0	1,699.9	1,691.2	1,690.1	3.6	3.6	-113.12	-92.1	131.4	163.1	155.9	7.17	22.740			
1,800.0	1,799.8	1,790.8	1,789.5	3.8	3.8	-114.70	-94.9	136.6	170.9	163.3	7.57	22.572			
1,900.0	1,899.7	1,890.3	1,888.9	4.0	4.1	-116.14	-97.8	141.9	178.9	170.9	7.98	22.416			
2,000.0	1,999.6	1,989.9	1,988.4	4.2	4.3	-117.46	-100.6	147.2	186.9	178.5	8.39	22.272			
2,100.0	2,099.5	2,089.5	2,087.8	4.4	4.5	-118.67	-103.4	152.5	195.1	186.3	8.81	22.138			
2,200.0	2,199.4	2,189.1	2,187.2	4.7	4.8	-119.78	-106.2	157.7	203.3	194.1	9.24	22.014			
2,300.0	2,299.3	2,288.7	2,286.6	4.9	5.0	-120.80	-109.0	163.0	211.6	201.9	9.66	21.899			
2,400.0	2,399.2	2,388.3	2,386.0	5.1	5.2	-121.75	-111.8	168.3	220.0	209.9	10.09	21.792			
2,500.0	2,499.1	2,487.9	2,485.4	5.3	5.5	-122.63	-114.6	173.6	228.4	217.8	10.53	21.693			
2,600.0	2,598.9	2,587.5	2,584.8	5.5	5.7	-123.44	-117.4	178.8	236.8	225.9	10.96	21.602			
2,700.0	2,698.8	2,687.0	2,684.2	5.7	6.0	-124.20	-120.3	184.1	245.3	233.9	11.40	21.516			
2,800.0	2,798.7	2,786.6	2,783.6	6.0	6.2	-124.91	-123.1	189.4	253.9	242.1	11.84	21.436			
2,900.0	2,898.6	2,886.2	2,883.0	6.2	6.5	-125.57	-125.9	194.6	262.5	250.2	12.29	21.362			
3,000.0	2,998.5	2,985.8	2,982.4	6.4	6.7	-126.19	-128.7	199.9	271.1	258.4	12.73	21.293			
3,100.0	3,098.4	3,085.4	3,081.8	6.7	6.9	-126.77	-131.5	205.2	279.7	266.6	13.18	21.228			
3,200.0	3,198.3	3,185.0	3,181.2	6.9	7.2	-127.32	-134.3	210.5	288.4	274.8	13.63	21.167			
3,300.0	3,298.2	3,284.6	3,280.6	7.1	7.4	-127.84	-137.1	215.7	297.1	283.0	14.08	21.109			
3,400.0	3,398.1	3,384.1	3,380.1	7.3	7.7	-128.32	-139.9	221.0	305.8	291.3	14.53	21.056			
3,500.0	3,498.0	3,483.7	3,479.5	7.6	7.9	-128.78	-142.8	226.3	314.6	299.6	14.98	21.005			
3,600.0	3,597.9	3,583.3	3,578.9	7.8	8.2	-129.21	-145.6	231.6	323.3	307.9	15.43	20.957			
3,700.0	3,697.8	3,682.9	3,678.3	8.0	8.4	-129.62	-148.4	236.8	332.1	316.2	15.88	20.912			
3,800.0	3,797.7	3,782.5	3,777.7	8.3	8.7	-130.01	-151.2	242.1	340.9	324.6	16.34	20.869			
3,900.0	3,897.6	3,888.7	3,883.8	8.5	8.9	-130.44	-153.9	247.2	349.2	332.4	16.79	20.794			
4,000.0	3,997.6	4,002.2	3,997.2	8.7	9.1	-130.66	-155.0	249.3	352.4	335.2	17.22	20.465			
4,100.0	4,097.6	4,102.6	4,097.6	8.9	9.3	105.65	-155.0	249.3	352.4	334.7	17.65	19.966			
4,200.0	4,197.6	4,202.6	4,197.6	9.1	9.5	105.65	-155.0	249.3	352.4	334.3	18.05	19.523			
4,300.0	4,297.6	4,302.6	4,297.6	9.3	9.7	105.65	-155.0	249.3	352.4	333.9	18.45	19.096			
4,400.0	4,397.6	4,402.6	4,397.6	9.5	9.9	105.65	-155.0	249.3	352.4	333.5	18.86	18.686			
4,500.0	4,497.6	4,502.6	4,497.6	9.7	10.1	105.65	-155.0	249.3	352.4	333.1	19.27	18.291			
4,600.0	4,597.6	4,602.6	4,597.6	9.9	10.3	105.65	-155.0	249.3	352.4	332.7	19.68	17.910			
4,700.0	4,697.6	4,702.6	4,697.6	10.1	10.5	105.65	-155.0	249.3	352.4	332.3	20.09	17.544			
4,800.0	4,797.6	4,802.6	4,797.6	10.3	10.7	105.65	-155.0	249.3	352.4	331.9	20.50	17.191			
4,900.0	4,897.6	4,902.6	4,897.6	10.5	10.9	105.65	-155.0	249.3	352.4	331.5	20.91	16.850			
5,000.0	4,997.4	5,002.4	4,997.4	10.8	11.1	-86.81	-155.0	249.3	352.2	330.9	21.31	16.524			
5,014.2	5,011.5	5,013.2	5,008.2	10.8	11.1	-87.04	-155.1	249.4	352.1	330.7	21.37	16.476			

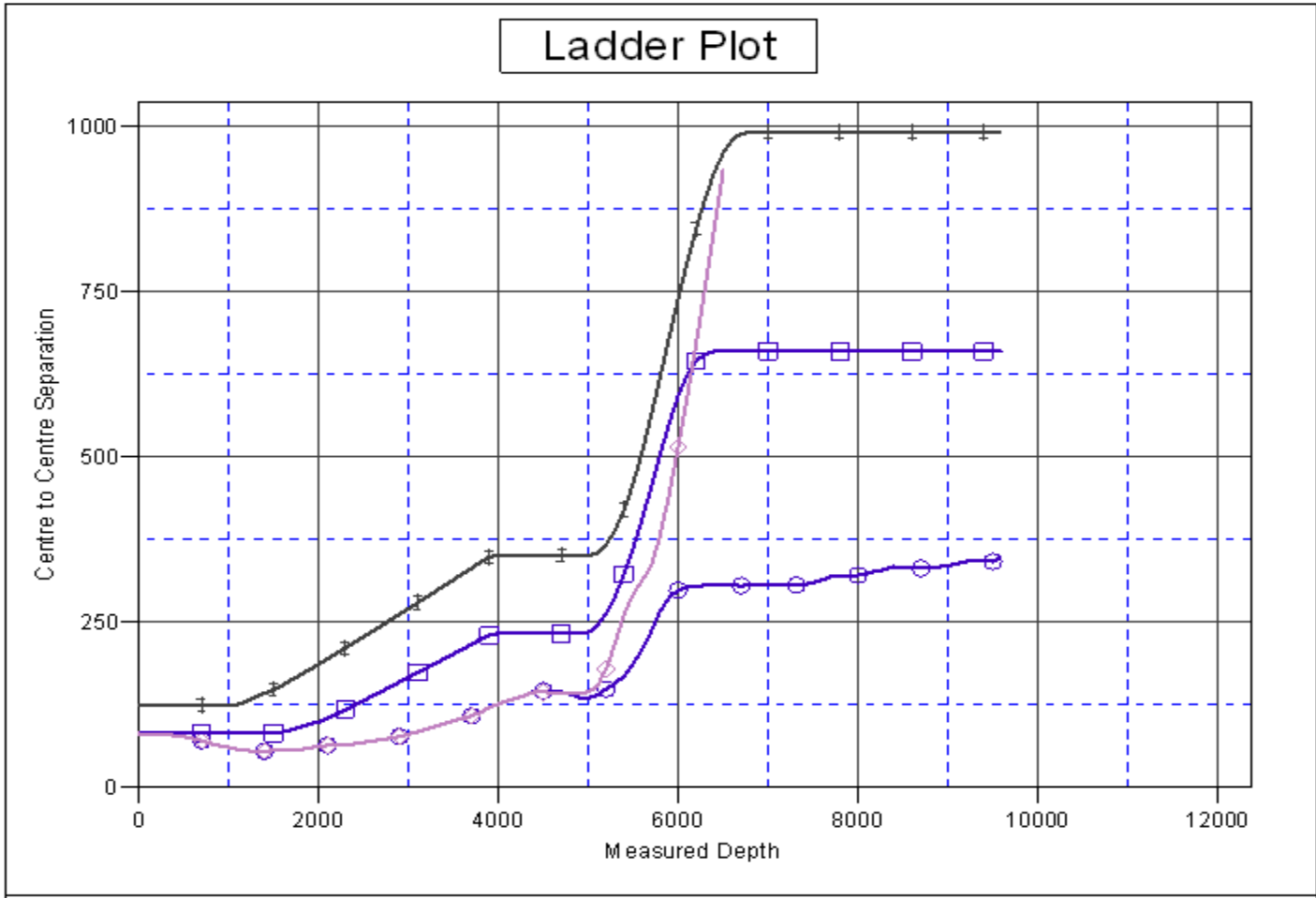
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Horsetail 16B PAD Sec.16-T10N-R57W - Horsetail #16B-1612B - Wellbore #1 - Plan #1 (10-24-13)	Offset Site Error:	0.0 ft	
Survey Program: 0-MWD															Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,100.0	5,095.0	5,070.9	5,065.7	11.0	11.3	-88.32	-158.5	251.3	355.5	333.7	21.72	16.364				
5,200.0	5,186.7	5,137.3	5,130.9	11.4	11.5	-89.71	-169.4	257.4	367.8	345.6	22.22	16.551				
5,300.0	5,269.3	5,200.0	5,190.6	11.8	11.7	-90.56	-186.1	266.8	389.6	366.8	22.85	17.051				
5,400.0	5,339.5	5,264.4	5,248.9	12.4	12.0	-90.91	-209.8	280.0	420.9	397.2	23.68	17.775				
5,500.0	5,395.0	5,324.1	5,299.7	13.2	12.3	-90.18	-237.1	295.3	461.0	436.3	24.72	18.646				
5,600.0	5,433.6	5,380.8	5,344.3	14.3	12.7	-88.38	-267.6	312.5	508.9	482.9	25.99	19.585				
5,700.0	5,453.9	5,434.7	5,383.0	15.5	13.1	-85.51	-300.3	330.8	563.2	535.9	27.40	20.560				
5,800.0	5,457.0	5,487.2	5,416.7	16.7	13.6	-85.35	-335.4	350.5	622.3	593.3	28.98	21.475				
5,900.0	5,457.0	5,549.1	5,451.0	18.0	14.2	-89.37	-380.3	375.7	682.3	651.6	30.71	22.217				
6,000.0	5,457.0	5,623.9	5,483.9	19.3	15.1	-92.53	-438.8	408.5	740.7	708.0	32.67	22.671				
6,100.0	5,457.0	5,711.7	5,509.9	20.7	16.4	-94.48	-511.9	449.5	795.4	760.5	34.97	22.747				
6,200.0	5,457.0	5,809.2	5,521.8	22.1	17.9	-95.04	-596.1	496.7	845.6	807.9	37.67	22.448				
6,300.0	5,457.0	5,957.2	5,522.0	23.7	20.3	-94.63	-727.2	565.4	892.2	851.0	41.24	21.634				
6,400.0	5,457.0	6,133.1	5,522.0	25.3	23.2	-94.27	-889.3	633.8	931.0	885.6	45.44	20.491				
6,500.0	5,457.0	6,321.8	5,522.0	27.0	26.3	-94.01	-1,069.3	690.1	960.9	910.7	50.11	19.173				
6,600.0	5,457.0	6,520.7	5,522.0	28.7	29.6	-93.84	-1,264.0	730.0	980.9	925.8	55.13	17.793				
6,700.0	5,457.0	6,726.0	5,522.0	30.4	32.9	-93.77	-1,468.3	749.7	990.5	930.2	60.31	16.423				
6,800.0	5,457.0	6,867.9	5,522.0	32.2	35.1	-93.76	-1,610.1	751.5	991.4	927.0	64.44	15.386				
6,900.0	5,457.0	6,967.9	5,522.0	34.0	36.7	-93.76	-1,710.1	751.5	991.4	923.5	67.89	14.604				
7,000.0	5,457.0	7,067.9	5,522.0	35.7	38.3	-93.76	-1,810.1	751.5	991.4	920.1	71.37	13.891				
7,100.0	5,457.0	7,167.9	5,522.0	37.5	39.9	-93.76	-1,910.1	751.5	991.5	916.6	74.90	13.238				
7,200.0	5,457.0	7,267.9	5,522.0	39.4	41.5	-93.76	-2,010.1	751.5	991.5	913.1	78.45	12.638				
7,300.0	5,457.0	7,367.9	5,522.0	41.2	43.2	-93.76	-2,110.1	751.5	991.5	909.5	82.03	12.087				
7,400.0	5,457.0	7,467.9	5,522.0	43.0	44.9	-93.76	-2,210.1	751.5	991.6	905.9	85.64	11.579				
7,500.0	5,457.0	7,567.9	5,522.0	44.8	46.6	-93.76	-2,310.1	751.6	991.6	902.3	89.26	11.109				
7,600.0	5,457.0	7,667.9	5,522.0	46.7	48.3	-93.76	-2,410.1	751.6	991.6	898.7	92.90	10.674				
7,700.0	5,457.0	7,767.9	5,522.0	48.5	50.1	-93.76	-2,510.1	751.6	991.7	895.1	96.56	10.270				
7,800.0	5,457.0	7,867.9	5,522.0	50.4	51.8	-93.76	-2,610.1	751.6	991.7	891.5	100.23	9.894				
7,900.0	5,457.0	7,967.9	5,522.0	52.3	53.6	-93.76	-2,710.1	751.6	991.7	887.8	103.92	9.543				
8,000.0	5,457.0	8,067.9	5,522.0	54.1	55.4	-93.76	-2,810.1	751.6	991.8	884.1	107.62	9.216				
8,100.0	5,457.0	8,167.9	5,522.0	56.0	57.2	-93.76	-2,910.1	751.6	991.8	880.5	111.32	8.909				
8,200.0	5,457.0	8,267.9	5,522.0	57.9	59.0	-93.76	-3,010.1	751.7	991.8	876.8	115.04	8.622				
8,300.0	5,457.0	8,367.9	5,522.0	59.8	60.8	-93.76	-3,110.1	751.7	991.8	873.1	118.76	8.351				
8,400.0	5,457.0	8,467.9	5,522.0	61.7	62.6	-93.76	-3,210.1	751.7	991.9	869.4	122.50	8.097				
8,500.0	5,457.0	8,567.9	5,522.0	63.5	64.4	-93.76	-3,310.1	751.7	991.9	865.7	126.24	7.857				
8,600.0	5,457.0	8,667.9	5,522.0	65.4	66.2	-93.76	-3,410.1	751.7	991.9	862.0	129.98	7.631				
8,700.0	5,457.0	8,767.9	5,522.0	67.3	68.1	-93.76	-3,510.1	751.7	992.0	858.2	133.74	7.417				
8,800.0	5,457.0	8,867.9	5,522.0	69.2	69.9	-93.76	-3,610.1	751.7	992.0	854.5	137.49	7.215				
8,900.0	5,457.0	8,967.9	5,522.0	71.1	71.7	-93.76	-3,710.1	751.8	992.0	850.8	141.26	7.023				
9,000.0	5,457.0	9,067.9	5,522.0	73.0	73.6	-93.76	-3,810.1	751.8	992.1	847.0	145.02	6.841				
9,100.0	5,457.0	9,167.9	5,522.0	74.9	75.4	-93.76	-3,910.1	751.8	992.1	843.3	148.80	6.668				
9,200.0	5,457.0	9,267.9	5,522.0	76.8	77.3	-93.76	-4,010.1	751.8	992.1	839.6	152.57	6.503				
9,300.0	5,457.0	9,367.9	5,522.0	78.7	79.1	-93.76	-4,110.1	751.8	992.2	835.8	156.35	6.346				
9,400.0	5,457.0	9,467.9	5,522.0	80.6	81.0	-93.76	-4,210.1	751.8	992.2	832.1	160.13	6.196				
9,500.0	5,457.0	9,567.9	5,522.0	82.5	82.9	-93.76	-4,310.1	751.8	992.2	828.3	163.92	6.053				
9,546.5	5,457.0	9,614.3	5,522.0	83.4	83.7	-93.76	-4,356.6	751.8	992.2	826.6	165.68	5.989				
9,585.1	5,457.0	9,646.2	5,522.0	84.1	84.3	-93.76	-4,388.4	751.9	992.3	825.3	167.01	5.941 SF				

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4793.9ft (RKB - 17.3')      Coordinates are relative to: Horsetail #16B-1609A  
 Offset Depths are relative to Offset Datum      Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Central Meridian is -105.500000 °      Grid Convergence at Surface is: 1.13°

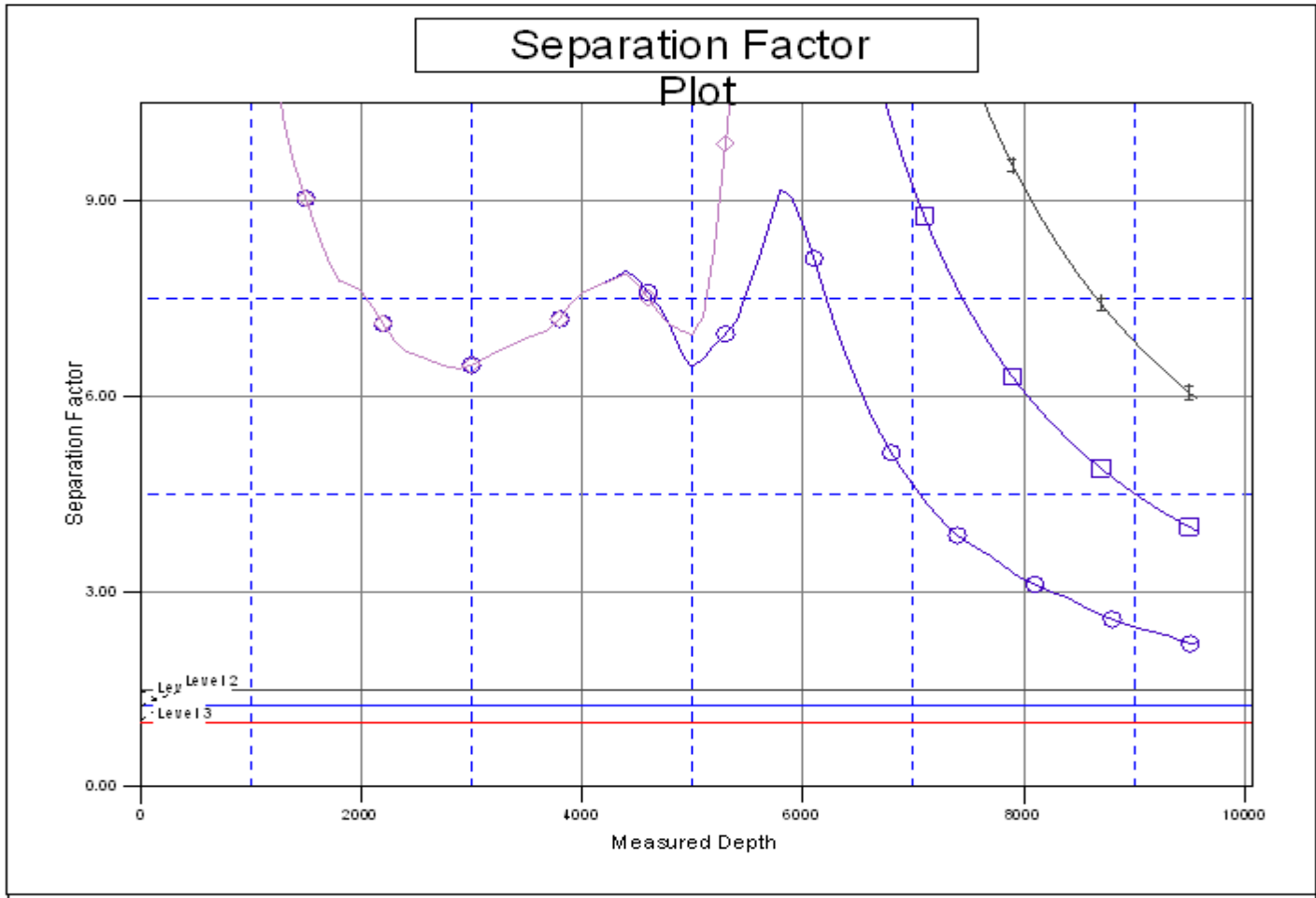


LEGEND

- B-1611A, Wellbore #1, Plan #1 (10-24-13) √0
- B-1610B, Wellbore #2, Wellbore #2 √0
- Horsetail 16B-1610B, Wellbore #1, Wellbore #1 √0
- Horsetail #16B-1612B, Wellbore #1, Plan #1 (10-24-13) √0

<b>Company:</b>	Whiting Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Horsetail #16B-1609A
<b>Project:</b>	SEC.16-T10N-R57W	<b>TVD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Reference Site:</b>	Horsetail 16B PAD Sec.16-T10N-R57W	<b>MD Reference:</b>	WELL @ 4793.9ft (RKB - 17.3')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Horsetail #16B-1609A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-24-13)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4793.9ft (RKB - 17.3')      Coordinates are relative to: Horsetail #16B-1609A  
 Offset Depths are relative to Offset Datum      Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Central Meridian is -105.500000°      Grid Convergence at Surface is: 1.13°



LEGEND

- iB-1611A, Wellbore #1, Plan #1 (10-24-13) VD ◆ Horsetail 16B-1610B, Wellbore #1, Wellbore #1 VD
- B-1610B, Wellbore #2, Wellbore #2 VD ◆ Horsetail #16B-1612B, Wellbore #1, Plan #1 (10-24-13) VD ■