

Whiting Oil & Gas

Well Name: **Razor 25-2411H**

Surface Location: Razor 25-2514H Pad Sec.25-T10N-R58W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

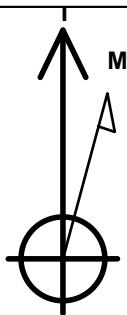
Ground Elevation: 4761.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1544615.10	3464882.70	40.816264	-103.820411	

Original Well Elev WELL @ 4777.7ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
WP1	5650.0	2899.9	20.0	Point
BHL 660'FNL, 660'FWL, SEC.24	5662.0	4911.3	-45.4	Point



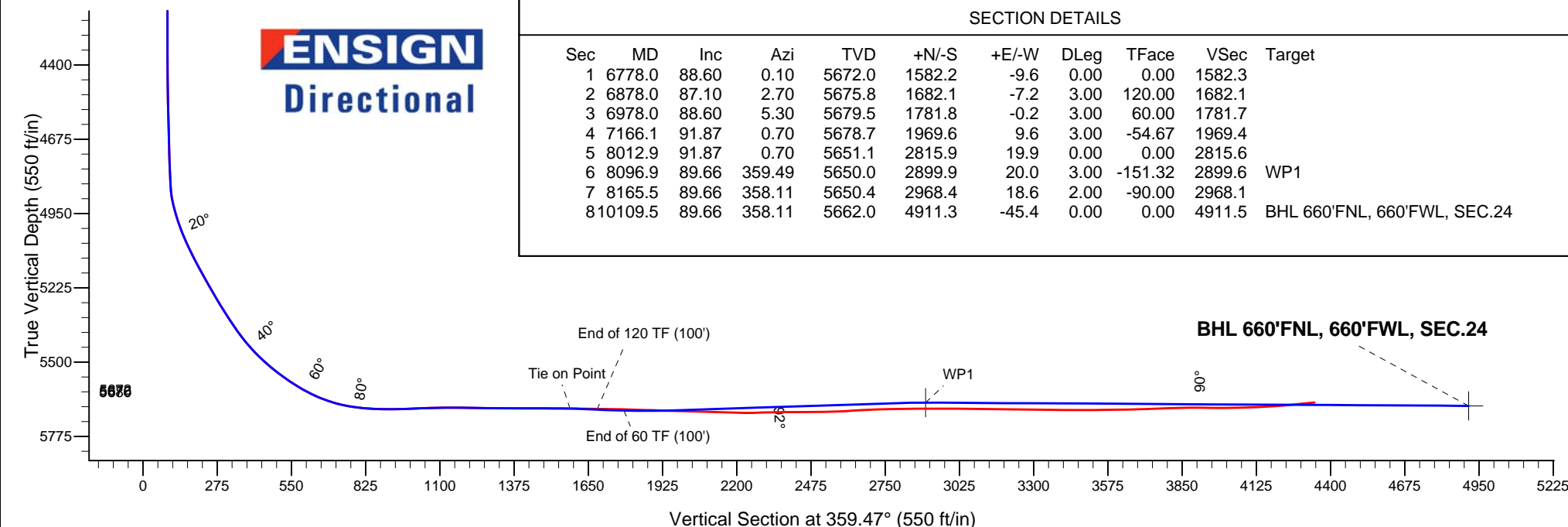
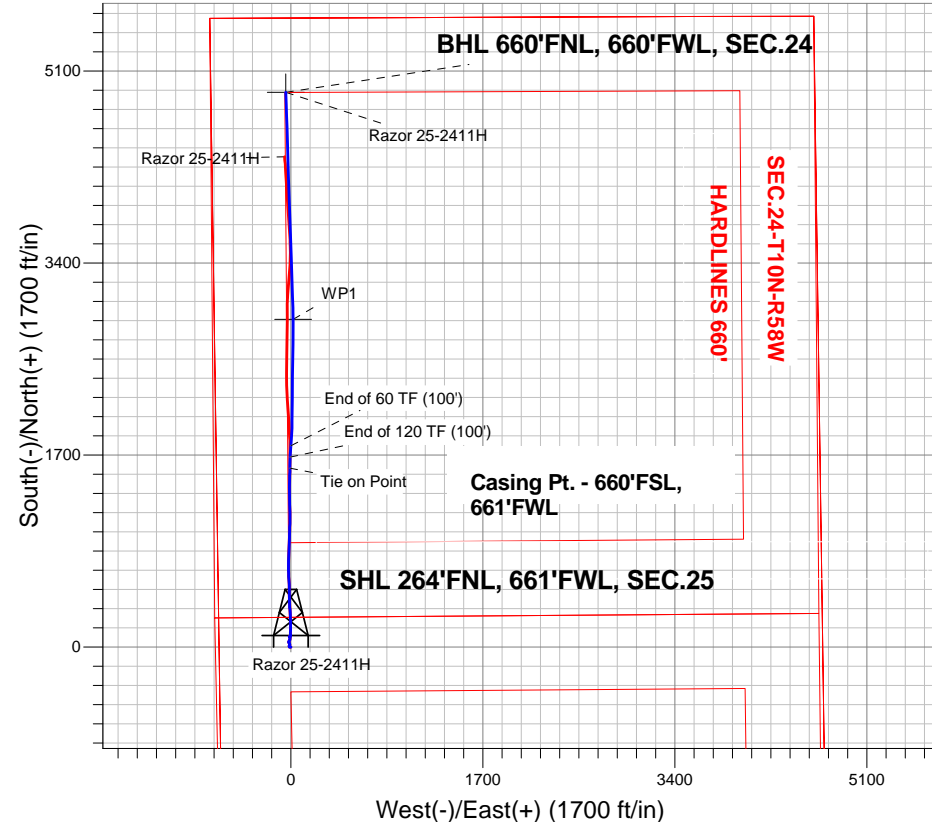
Azimuths to True North
Magnetic North: 8.13°

Magnetic Field
Strength: 53253.1nT
Dip Angle: 67.47°
Date: 4/9/2013
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
5672.0	6778.0	Tie on Point
5675.8	6878.0	End of 120 TF (100')
5679.5	6978.0	End of 60 TF (100')

Razor 25-2514H Pad Sec.25-T10N-R58W
Razor 25-2411H
Plan 7 , Sidetrack 1 lateral 4-9-13





Directional

Whiting Oil & Gas

SEC.25-T10N-R58W

Razor 25-2514H Pad Sec.25-T10N-R58W

Razor 25-2411H

Wellbore #2

Plan: Plan 7 , Sidetrack 1 lateral 4-9-13

Standard Planning Report

09 April, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 25-2411H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4777.7ft (Original Well Elev)
Project:	SEC.25-T10N-R58W	MD Reference:	WELL @ 4777.7ft (Original Well Elev)
Site:	Razor 25-2514H Pad Sec.25-T10N-R58W	North Reference:	True
Well:	Razor 25-2411H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #2		
Design:	Plan 7 , Sidetrack 1 lateral 4-9-13		

Project	SEC.25-T10N-R58W, Weld County, Colorado		
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

Site						Razor 25-2514H Pad Sec.25-T10N-R58W											
Site Position:						Northing:			1,544,564.48 ft			Latitude:			40.816125		
From:			Lat/Long			Easting:			3,464,883.65 ft			Longitude:			-103.820411		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			1.09 °		

Well	Razor 25-2411H					
Well Position	+N/-S	50.6 ft	Northing:	1,544,615.10 ft	Latitude:	40.816264
	+E/-W	0.0 ft	Easting:	3,464,882.70 ft	Longitude:	-103.820411
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,761.2 ft

Wellbore	Wellbore #2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/9/2013	8.13	67.47	53,253

Design	Plan 7 , Sidetrack 1 lateral 4-9-13			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	6,778.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	359.47

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
6,778.0	88.60	0.10	5,672.0	1,582.2	-9.6	0.00	0.00	0.00	0.00	
6,878.0	87.10	2.70	5,675.8	1,682.1	-7.2	3.00	-1.50	2.60	120.00	
6,978.0	88.60	5.30	5,679.5	1,781.8	-0.2	3.00	1.50	2.60	60.00	
7,166.1	91.87	0.70	5,678.7	1,969.6	9.6	3.00	1.74	-2.45	-54.67	
8,012.9	91.87	0.70	5,651.1	2,815.9	19.9	0.00	0.00	0.00	0.00	
8,096.9	89.66	359.49	5,650.0	2,899.9	20.0	3.00	-2.63	-1.44	-151.32	WP1
8,165.5	89.66	358.11	5,650.4	2,968.4	18.6	2.00	0.00	-2.00	-90.00	
10,109.5	89.66	358.11	5,662.0	4,911.3	-45.4	0.00	0.00	0.00	0.00	BHL 660'FNL, 660'f

Database:	Landmark	Local Co-ordinate Reference:	Well Razor 25-2411H
Company:	Whiting Oil & Gas	TVD Reference:	WELL @ 4777.7ft (Original Well Elev)
Project:	SEC.25-T10N-R58W	MD Reference:	WELL @ 4777.7ft (Original Well Elev)
Site:	Razor 25-2514H Pad Sec.25-T10N-R58W	North Reference:	True
Well:	Razor 25-2411H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #2		
Design:	Plan 7 , Sidetrack 1 lateral 4-9-13		

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)
6,778.0	88.60	0.10	5,672.0	1,582.2	-9.6	1,582.3	0.00	0.00	0.00
Tie on Point									
6,800.0	88.27	0.67	5,672.6	1,604.2	-9.5	1,604.2	3.00	-1.50	2.60
6,840.0	87.67	1.71	5,674.0	1,644.2	-8.7	1,644.2	3.00	-1.50	2.60
6,878.0	87.10	2.70	5,675.8	1,682.1	-7.2	1,682.1	3.00	-1.50	2.60
End of 120 TF (100')									
6,880.0	87.13	2.75	5,675.9	1,684.1	-7.1	1,684.1	3.00	1.50	2.60
6,920.0	87.73	3.79	5,677.7	1,724.0	-4.8	1,724.0	3.00	1.50	2.60
6,960.0	88.33	4.83	5,679.0	1,763.9	-1.8	1,763.8	3.00	1.50	2.60
6,978.0	88.60	5.30	5,679.5	1,781.8	-0.2	1,781.7	3.00	1.50	2.60
End of 60 TF (100')									
7,000.0	88.99	4.76	5,680.0	1,803.7	1.7	1,803.6	3.00	1.74	-2.45
7,040.0	89.68	3.78	5,680.5	1,843.6	4.7	1,843.5	3.00	1.74	-2.45
7,080.0	90.37	2.80	5,680.4	1,883.5	7.0	1,883.4	3.00	1.74	-2.45
7,120.0	91.07	1.82	5,679.9	1,923.5	8.6	1,923.3	3.00	1.74	-2.45
7,160.0	91.76	0.85	5,678.9	1,963.5	9.5	1,963.3	3.00	1.73	-2.45
7,166.1	91.87	0.70	5,678.7	1,969.6	9.6	1,969.4	3.00	1.73	-2.45
7,200.0	91.87	0.70	5,677.6	2,003.4	10.0	2,003.3	0.00	0.00	0.00
7,240.0	91.87	0.70	5,676.3	2,043.4	10.5	2,043.2	0.00	0.00	0.00
7,280.0	91.87	0.70	5,675.0	2,083.4	11.0	2,083.2	0.00	0.00	0.00
7,320.0	91.87	0.70	5,673.7	2,123.4	11.5	2,123.2	0.00	0.00	0.00
7,360.0	91.87	0.70	5,672.4	2,163.3	12.0	2,163.1	0.00	0.00	0.00
7,400.0	91.87	0.70	5,671.1	2,203.3	12.4	2,203.1	0.00	0.00	0.00
7,440.0	91.87	0.70	5,669.8	2,243.3	12.9	2,243.1	0.00	0.00	0.00
7,480.0	91.87	0.70	5,668.5	2,283.3	13.4	2,283.0	0.00	0.00	0.00
7,520.0	91.87	0.70	5,667.2	2,323.2	13.9	2,323.0	0.00	0.00	0.00
7,560.0	91.87	0.70	5,665.9	2,363.2	14.4	2,363.0	0.00	0.00	0.00
7,600.0	91.87	0.70	5,664.6	2,403.2	14.9	2,403.0	0.00	0.00	0.00
7,640.0	91.87	0.70	5,663.3	2,443.2	15.3	2,442.9	0.00	0.00	0.00
7,680.0	91.87	0.70	5,662.0	2,483.1	15.8	2,482.9	0.00	0.00	0.00
7,720.0	91.87	0.70	5,660.7	2,523.1	16.3	2,522.9	0.00	0.00	0.00
7,760.0	91.87	0.70	5,659.4	2,563.1	16.8	2,562.8	0.00	0.00	0.00
7,800.0	91.87	0.70	5,658.1	2,603.1	17.3	2,602.8	0.00	0.00	0.00
7,840.0	91.87	0.70	5,656.8	2,643.1	17.8	2,642.8	0.00	0.00	0.00
7,880.0	91.87	0.70	5,655.5	2,683.0	18.3	2,682.7	0.00	0.00	0.00
7,920.0	91.87	0.70	5,654.2	2,723.0	18.7	2,722.7	0.00	0.00	0.00
7,960.0	91.87	0.70	5,652.8	2,763.0	19.2	2,762.7	0.00	0.00	0.00
8,000.0	91.87	0.70	5,651.5	2,803.0	19.7	2,802.7	0.00	0.00	0.00
8,012.9	91.87	0.70	5,651.1	2,815.9	19.9	2,815.6	0.00	0.00	0.00
8,040.0	91.16	0.31	5,650.4	2,842.9	20.1	2,842.6	3.00	-2.63	-1.44
8,080.0	90.10	359.73	5,650.0	2,882.9	20.1	2,882.6	3.00	-2.63	-1.44
8,096.9	89.66	359.49	5,650.0	2,899.9	20.0	2,899.6	3.00	-2.63	-1.44
WP1									
8,120.0	89.66	359.02	5,650.1	2,922.9	19.7	2,922.6	2.00	0.00	-2.00
8,160.0	89.66	358.22	5,650.4	2,962.9	18.7	2,962.6	2.00	0.00	-2.00
8,165.5	89.66	358.11	5,650.4	2,968.4	18.6	2,968.1	2.00	0.00	-2.00
8,200.0	89.66	358.11	5,650.6	3,002.9	17.4	3,002.6	0.00	0.00	0.00
8,240.0	89.66	358.11	5,650.9	3,042.9	16.1	3,042.6	0.00	0.00	0.00
8,280.0	89.66	358.11	5,651.1	3,082.9	14.8	3,082.6	0.00	0.00	0.00
8,320.0	89.66	358.11	5,651.3	3,122.8	13.5	3,122.6	0.00	0.00	0.00
8,360.0	89.66	358.11	5,651.6	3,162.8	12.2	3,162.6	0.00	0.00	0.00
8,400.0	89.66	358.11	5,651.8	3,202.8	10.9	3,202.5	0.00	0.00	0.00
8,440.0	89.66	358.11	5,652.0	3,242.8	9.5	3,242.5	0.00	0.00	0.00
8,480.0	89.66	358.11	5,652.3	3,282.7	8.2	3,282.5	0.00	0.00	0.00

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Site:	Razor 25-2514H Pad Sec.25-T10N-R58W	North Reference:	True
Well:	Razor 25-2411H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #2		
Design:	Plan 7 , Sidetrack 1 lateral 4-9-13		

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)
8,520.0	89.66	358.11	5,652.5	3,322.7	6.9	3,322.5	0.00	0.00	0.00
8,560.0	89.66	358.11	5,652.8	3,362.7	5.6	3,362.5	0.00	0.00	0.00
8,600.0	89.66	358.11	5,653.0	3,402.7	4.3	3,402.5	0.00	0.00	0.00
8,640.0	89.66	358.11	5,653.2	3,442.6	3.0	3,442.5	0.00	0.00	0.00
8,680.0	89.66	358.11	5,653.5	3,482.6	1.6	3,482.5	0.00	0.00	0.00
8,720.0	89.66	358.11	5,653.7	3,522.6	0.3	3,522.5	0.00	0.00	0.00
8,760.0	89.66	358.11	5,654.0	3,562.6	-1.0	3,562.4	0.00	0.00	0.00
8,800.0	89.66	358.11	5,654.2	3,602.6	-2.3	3,602.4	0.00	0.00	0.00
8,840.0	89.66	358.11	5,654.4	3,642.5	-3.6	3,642.4	0.00	0.00	0.00
8,880.0	89.66	358.11	5,654.7	3,682.5	-4.9	3,682.4	0.00	0.00	0.00
8,920.0	89.66	358.11	5,654.9	3,722.5	-6.3	3,722.4	0.00	0.00	0.00
8,960.0	89.66	358.11	5,655.1	3,762.5	-7.6	3,762.4	0.00	0.00	0.00
9,000.0	89.66	358.11	5,655.4	3,802.4	-8.9	3,802.4	0.00	0.00	0.00
9,040.0	89.66	358.11	5,655.6	3,842.4	-10.2	3,842.4	0.00	0.00	0.00
9,080.0	89.66	358.11	5,655.9	3,882.4	-11.5	3,882.3	0.00	0.00	0.00
9,120.0	89.66	358.11	5,656.1	3,922.4	-12.8	3,922.3	0.00	0.00	0.00
9,160.0	89.66	358.11	5,656.3	3,962.4	-14.2	3,962.3	0.00	0.00	0.00
9,200.0	89.66	358.11	5,656.6	4,002.3	-15.5	4,002.3	0.00	0.00	0.00
9,240.0	89.66	358.11	5,656.8	4,042.3	-16.8	4,042.3	0.00	0.00	0.00
9,280.0	89.66	358.11	5,657.1	4,082.3	-18.1	4,082.3	0.00	0.00	0.00
9,320.0	89.66	358.11	5,657.3	4,122.3	-19.4	4,122.3	0.00	0.00	0.00
9,360.0	89.66	358.11	5,657.5	4,162.2	-20.7	4,162.3	0.00	0.00	0.00
9,400.0	89.66	358.11	5,657.8	4,202.2	-22.0	4,202.2	0.00	0.00	0.00
9,440.0	89.66	358.11	5,658.0	4,242.2	-23.4	4,242.2	0.00	0.00	0.00
9,480.0	89.66	358.11	5,658.2	4,282.2	-24.7	4,282.2	0.00	0.00	0.00
9,520.0	89.66	358.11	5,658.5	4,322.2	-26.0	4,322.2	0.00	0.00	0.00
9,560.0	89.66	358.11	5,658.7	4,362.1	-27.3	4,362.2	0.00	0.00	0.00
9,600.0	89.66	358.11	5,659.0	4,402.1	-28.6	4,402.2	0.00	0.00	0.00
9,640.0	89.66	358.11	5,659.2	4,442.1	-29.9	4,442.2	0.00	0.00	0.00
9,680.0	89.66	358.11	5,659.4	4,482.1	-31.3	4,482.2	0.00	0.00	0.00
9,720.0	89.66	358.11	5,659.7	4,522.0	-32.6	4,522.2	0.00	0.00	0.00
9,760.0	89.66	358.11	5,659.9	4,562.0	-33.9	4,562.1	0.00	0.00	0.00
9,800.0	89.66	358.11	5,660.2	4,602.0	-35.2	4,602.1	0.00	0.00	0.00
9,840.0	89.66	358.11	5,660.4	4,642.0	-36.5	4,642.1	0.00	0.00	0.00
9,880.0	89.66	358.11	5,660.6	4,682.0	-37.8	4,682.1	0.00	0.00	0.00
9,920.0	89.66	358.11	5,660.9	4,721.9	-39.2	4,722.1	0.00	0.00	0.00
9,960.0	89.66	358.11	5,661.1	4,761.9	-40.5	4,762.1	0.00	0.00	0.00
10,000.0	89.66	358.11	5,661.3	4,801.9	-41.8	4,802.1	0.00	0.00	0.00
10,040.0	89.66	358.11	5,661.6	4,841.9	-43.1	4,842.1	0.00	0.00	0.00
10,080.0	89.66	358.11	5,661.8	4,881.8	-44.4	4,882.0	0.00	0.00	0.00
10,109.5	89.66	358.11	5,662.0	4,911.3	-45.4	4,911.5	0.00	0.00	0.00
BHL 660'FNL, 660'FWL, SEC.24									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
6,778.0	5,672.0	1,582.2	-9.6	Tie on Point
6,878.0	5,675.8	1,682.1	-7.2	End of 120 TF (100')
6,978.0	5,679.5	1,781.8	-0.2	End of 60 TF (100')



Directional

Whiting Oil & Gas

SEC.25-T10N-R58W

Razor 25-2514H Pad Sec.25-T10N-R58W

Razor 25-2411H

Wellbore #2

Plan 7 , Sidetrack 1 lateral 4-9-13

Anticollision Report

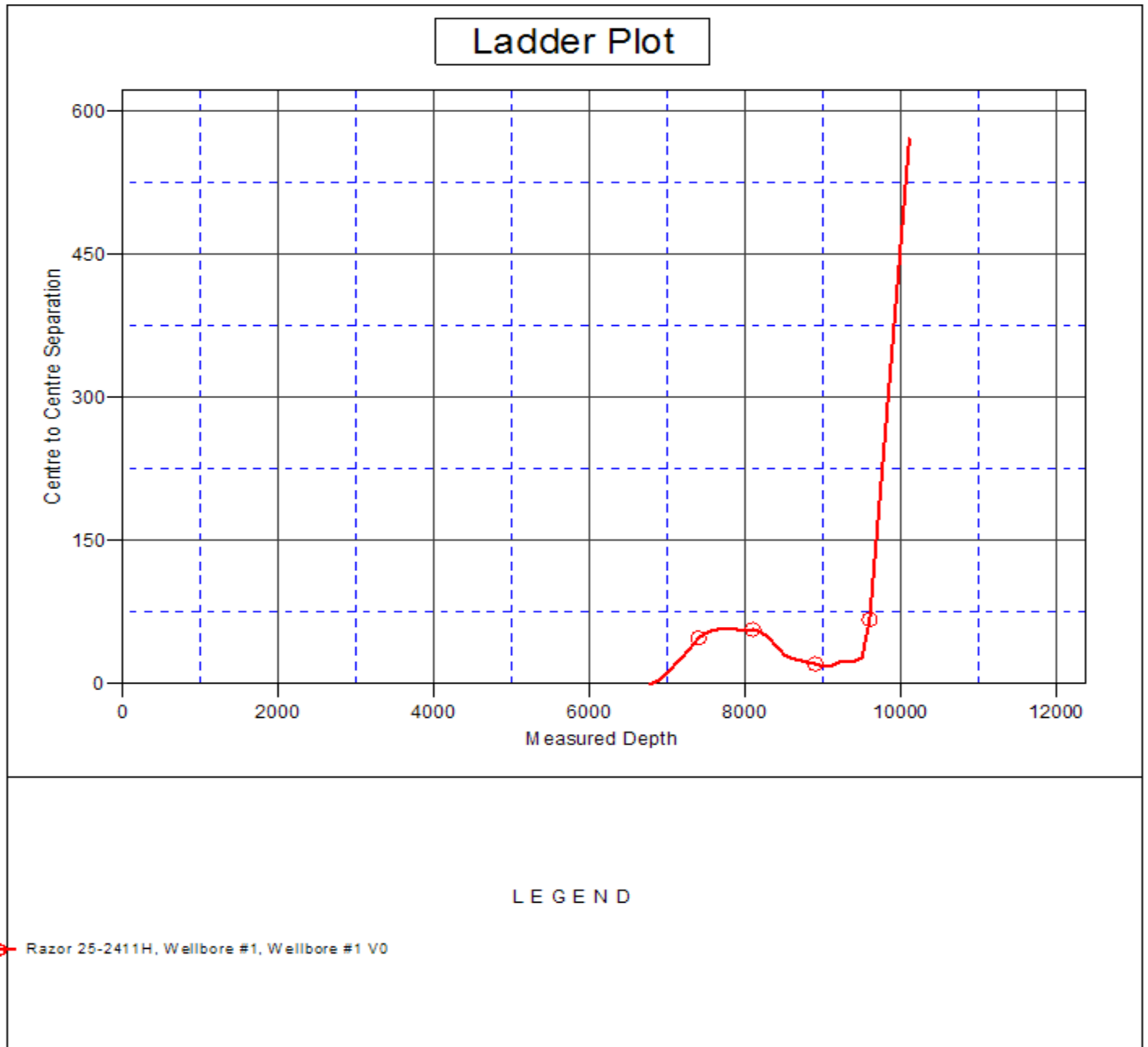
09 April, 2013

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor 25-2411H
Project:	SEC.25-T10N-R58W	TVD Reference:	WELL @ 4777.7ft (Original Well Elev)
Reference Site:	Razor 25-2514H Pad Sec.25-T10N-R58W	MD Reference:	WELL @ 4777.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Razor 25-2411H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #2	Database:	Landmark
Reference Design:	Plan 7 , Sidetrack 1 lateral 4-9-13	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Razor 25-2514H Pad Sec.25-T10N-R58W - Razor 25-2411H - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 105-MWD													
Reference		Offset		Semi Major Axis			Distance						
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	Warning
8,900.0	5,654.8	8,900.8	5,674.5	38.3	36.6	-160.70	3,702.4	-12.5	20.9	-16.4	37.27	0.560	Level 1
9,000.0	5,655.4	9,001.1	5,670.6	40.2	38.4	-143.86	3,802.3	-20.0	18.8	-33.8	52.67	0.357	Level 1
9,054.8	5,655.7	9,055.6	5,669.0	41.2	39.4	-136.23	3,856.8	-23.4	18.3	-41.9	60.27	0.304	Level 1
9,100.0	5,656.0	9,100.3	5,668.8	42.1	40.2	-132.38	3,901.3	-26.2	19.0	-45.5	64.54	0.294	Level 1
9,200.0	5,656.6	9,200.4	5,670.0	44.0	42.0	-126.52	4,001.2	-33.6	22.5	-49.4	71.94	0.313	Level 1
9,300.0	5,657.2	9,300.9	5,667.3	45.9	43.8	-115.56	4,101.4	-39.9	23.5	-58.9	82.32	0.285	Level 1
9,400.0	5,657.8	9,400.8	5,662.6	47.8	45.6	-101.53	4,201.0	-45.5	24.0	-67.8	91.77	0.261	Level 1, SF
9,500.0	5,658.4	9,500.6	5,653.4	49.7	47.4	-79.49	4,300.2	-51.9	27.1	-68.6	95.65	0.283	Level 1, ES
9,600.0	5,659.0	9,541.0	5,649.7	51.6	48.1	-72.00	4,340.4	-54.1	67.5	-28.1	95.51	0.706	Level 1
9,700.0	5,659.6	9,541.0	5,649.7	53.5	48.1	-72.00	4,340.4	-54.1	163.5	66.2	97.34	1.680	
9,800.0	5,660.2	9,541.0	5,649.7	55.4	48.1	-72.00	4,340.4	-54.1	262.5	163.4	99.17	2.647	
9,900.0	5,660.8	9,541.0	5,649.7	57.3	48.1	-72.00	4,340.4	-54.1	362.1	261.1	101.00	3.585	
10,000.0	5,661.3	9,541.0	5,649.7	59.2	48.1	-72.00	4,340.4	-54.1	461.8	359.0	102.83	4.491	
10,100.0	5,661.9	9,541.0	5,649.7	61.1	48.1	-72.00	4,340.4	-54.1	561.7	457.0	104.66	5.367	
10,109.5	5,662.0	9,541.0	5,649.7	61.3	48.1	-72.00	4,340.4	-54.1	571.2	466.3	104.84	5.448	

Company:	Whiting Oil & Gas	Local Co-ordinate Reference:	Well Razor 25-2411H
Project:	SEC.25-T10N-R58W	TVD Reference:	WELL @ 4777.7ft (Original Well Elev)
Reference Site:	Razor 25-2514H Pad Sec.25-T10N-R58W	MD Reference:	WELL @ 4777.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Razor 25-2411H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #2	Database:	Landmark
Reference Design:	Plan 7 , Sidetrack 1 lateral 4-9-13	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4777.7ft (Original Well Elev) Coordinates are relative to: Razor 25-2411H
 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: 1.09°



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