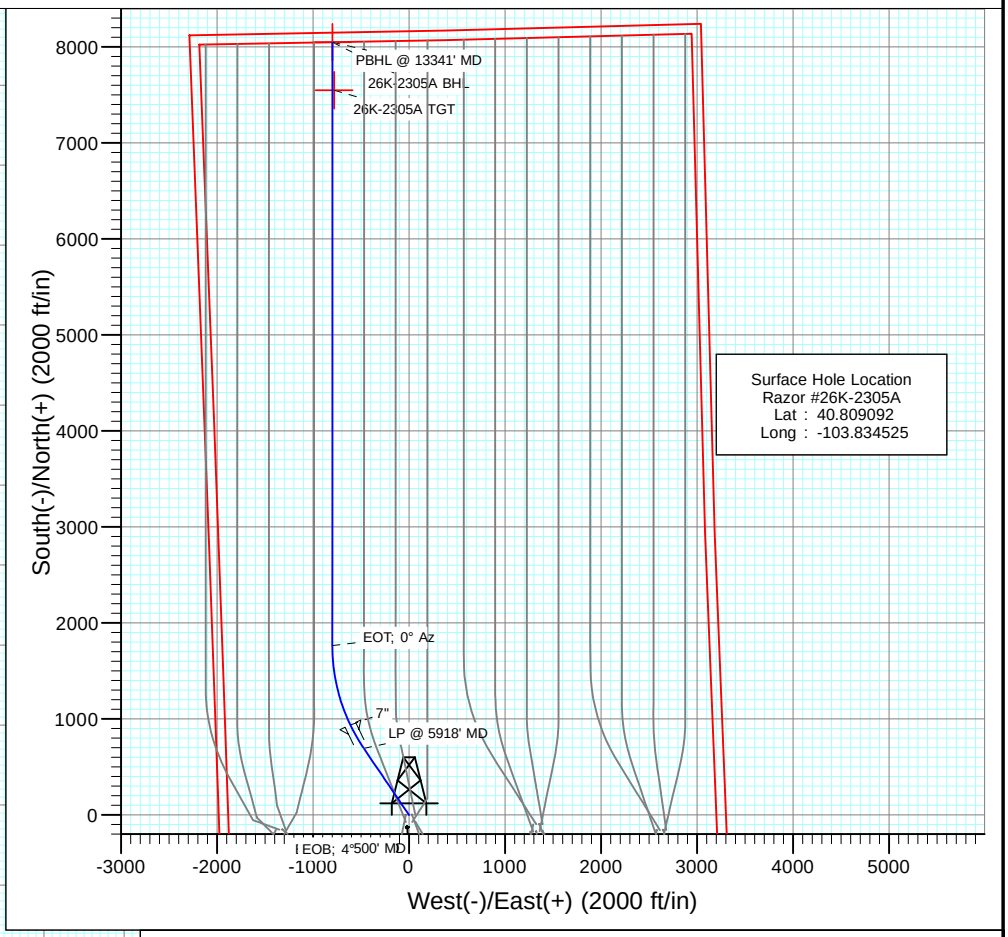
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26K-2305A
Wellbore: HZ
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	700.0	4.00	325.87	699.8	5.8	-3.9	2.00	325.87	6.1	
4	5136.4	4.00	325.87	5125.4	261.9	-177.5	0.00	0.00	278.2	
5	5918.2	90.00	325.87	5610.0	692.1	-469.1	11.00	0.00	734.9	
6	7056.0	90.00	0.00	5610.0	1763.7	-798.0	3.00	90.00	1833.8	
7	13341.6	90.00	0.00	5610.0	8049.3	-797.8	0.00	0.00	8088.8	26K-2305A BHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
26K-2305A BHL	8049.3	-797.8	1549981.25	3460234.85	40.831222	-103.836861
26K-2305A TGT	7549.7	-778.4	1549481.65	3460254.19	40.829850	-103.836825

T G M
Azimuths to Grid North
True North: -1.08°
Magnetic North: 7.05°

Magnetic Field
Strength: 53237.4snT
Dip Angle: 67.46°
Date: 5/16/2013
Model: IGRF2010

Plan #1
Razor #26K-2305A
WELL @ 4754.0ft (Original Well Elev)
Ground Elevation @ 4737.5
North American Datum 1983
Well Razor #26K-2305A, Grid North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Project Weld County, CO

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site S26-T10N-R58W

Site Position:		**Northing:**	1,541,777.36 ft	**Latitude:**	40.808739
From:	Lat/Long	**Easting:**	3,459,649.47 ft	**Longitude:**	-103.839531
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.07 °

Well Razor #26K-2305A

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,541,931.93 ft	**Latitude:**	40.809092
	+E/-W	0.0 ft	**Easting:**	3,461,032.63 ft	**Longitude:**	-103.834525
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,737.5 ft

Wellbore HZ

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/16/2013	8.13	67.46	53,237

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	354.34

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	4.00	325.87	699.8	5.8	-3.9	2.00	2.00	0.00	325.87	
5,136.4	4.00	325.87	5,125.4	261.9	-177.5	0.00	0.00	0.00	0.00	
5,918.2	90.00	325.87	5,610.0	692.1	-469.1	11.00	11.00	0.00	0.00	
7,056.0	90.00	0.00	5,610.0	1,763.7	-798.0	3.00	0.00	3.00	90.00	
13,341.6	90.00	0.00	5,610.0	8,049.3	-797.8	0.00	0.00	0.00	0.00	26K-2305A BHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500' MD
600.0	2.00	325.87	600.0	1.4	-1.0	1.5	2.00	2.00	
700.0	4.00	325.87	699.8	5.8	-3.9	6.1	2.00	2.00	EOB; 4°
800.0	4.00	325.87	799.6	11.6	-7.8	12.3	0.00	0.00	
900.0	4.00	325.87	899.4	17.3	-11.7	18.4	0.00	0.00	
1,000.0	4.00	325.87	999.1	23.1	-15.7	24.5	0.00	0.00	
1,100.0	4.00	325.87	1,098.9	28.9	-19.6	30.7	0.00	0.00	
1,200.0	4.00	325.87	1,198.6	34.6	-23.5	36.8	0.00	0.00	
1,300.0	4.00	325.87	1,298.4	40.4	-27.4	42.9	0.00	0.00	
1,400.0	4.00	325.87	1,398.1	46.2	-31.3	49.1	0.00	0.00	
1,500.0	4.00	325.87	1,497.9	52.0	-35.2	55.2	0.00	0.00	
1,600.0	4.00	325.87	1,597.6	57.7	-39.1	61.3	0.00	0.00	
1,700.0	4.00	325.87	1,697.4	63.5	-43.1	67.5	0.00	0.00	
1,800.0	4.00	325.87	1,797.2	69.3	-47.0	73.6	0.00	0.00	
1,900.0	4.00	325.87	1,896.9	75.1	-50.9	79.7	0.00	0.00	
2,000.0	4.00	325.87	1,996.7	80.8	-54.8	85.9	0.00	0.00	
2,100.0	4.00	325.87	2,096.4	86.6	-58.7	92.0	0.00	0.00	
2,200.0	4.00	325.87	2,196.2	92.4	-62.6	98.1	0.00	0.00	
2,300.0	4.00	325.87	2,295.9	98.2	-66.5	104.2	0.00	0.00	
2,400.0	4.00	325.87	2,395.7	103.9	-70.5	110.4	0.00	0.00	
2,500.0	4.00	325.87	2,495.5	109.7	-74.4	116.5	0.00	0.00	
2,600.0	4.00	325.87	2,595.2	115.5	-78.3	122.6	0.00	0.00	
2,700.0	4.00	325.87	2,695.0	121.3	-82.2	128.8	0.00	0.00	
2,800.0	4.00	325.87	2,794.7	127.0	-86.1	134.9	0.00	0.00	
2,900.0	4.00	325.87	2,894.5	132.8	-90.0	141.0	0.00	0.00	
3,000.0	4.00	325.87	2,994.2	138.6	-93.9	147.2	0.00	0.00	
3,100.0	4.00	325.87	3,094.0	144.4	-97.8	153.3	0.00	0.00	
3,200.0	4.00	325.87	3,193.7	150.1	-101.8	159.4	0.00	0.00	
3,300.0	4.00	325.87	3,293.5	155.9	-105.7	165.6	0.00	0.00	
3,400.0	4.00	325.87	3,393.3	161.7	-109.6	171.7	0.00	0.00	
3,500.0	4.00	325.87	3,493.0	167.5	-113.5	177.8	0.00	0.00	
3,600.0	4.00	325.87	3,592.8	173.2	-117.4	184.0	0.00	0.00	
3,700.0	4.00	325.87	3,692.5	179.0	-121.3	190.1	0.00	0.00	
3,800.0	4.00	325.87	3,792.3	184.8	-125.2	196.2	0.00	0.00	
3,900.0	4.00	325.87	3,892.0	190.6	-129.2	202.4	0.00	0.00	
4,000.0	4.00	325.87	3,991.8	196.3	-133.1	208.5	0.00	0.00	
4,100.0	4.00	325.87	4,091.6	202.1	-137.0	214.6	0.00	0.00	
4,200.0	4.00	325.87	4,191.3	207.9	-140.9	220.8	0.00	0.00	
4,300.0	4.00	325.87	4,291.1	213.6	-144.8	226.9	0.00	0.00	
4,400.0	4.00	325.87	4,390.8	219.4	-148.7	233.0	0.00	0.00	
4,500.0	4.00	325.87	4,490.6	225.2	-152.6	239.2	0.00	0.00	
4,600.0	4.00	325.87	4,590.3	231.0	-156.6	245.3	0.00	0.00	
4,700.0	4.00	325.87	4,690.1	236.7	-160.5	251.4	0.00	0.00	
4,800.0	4.00	325.87	4,789.9	242.5	-164.4	257.5	0.00	0.00	
4,900.0	4.00	325.87	4,889.6	248.3	-168.3	263.7	0.00	0.00	
5,000.0	4.00	325.87	4,989.4	254.1	-172.2	269.8	0.00	0.00	
5,100.0	4.00	325.87	5,089.1	259.8	-176.1	275.9	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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)	Comments / Formations
5,136.4	4.00	325.87	5,125.4	261.9	-177.5	278.2	0.00	0.00	Start 11° Build
5,200.0	10.99	325.87	5,188.4	268.8	-182.2	285.5	11.00	11.00	
5,300.0	21.99	325.87	5,284.2	292.3	-198.1	310.4	11.00	11.00	
5,400.0	32.99	325.87	5,372.8	330.4	-224.0	350.9	11.00	11.00	
5,500.0	43.99	325.87	5,450.9	381.9	-258.8	405.5	11.00	11.00	
5,600.0	54.99	325.87	5,515.8	444.7	-301.4	472.3	11.00	11.00	
5,697.8	65.75	325.87	5,564.0	515.0	-349.0	546.9	11.00	11.00	Top Niobrara
5,700.0	65.99	325.87	5,564.9	516.6	-350.2	548.7	11.00	11.00	
5,800.0	76.99	325.87	5,596.6	595.0	-403.3	631.9	11.00	11.00	
5,900.0	87.99	325.87	5,609.7	677.0	-458.9	718.9	11.00	11.00	
5,918.2	90.00	325.87	5,610.0	692.1	-469.1	734.9	11.00	11.00	LP @ 5918' MD
6,000.0	90.00	328.32	5,610.0	760.7	-513.5	807.6	3.00	0.00	
6,100.0	90.00	331.32	5,610.0	847.1	-563.8	898.6	3.00	0.00	
6,200.0	90.00	334.32	5,610.0	936.1	-609.4	991.6	3.00	0.00	7"
6,300.0	90.00	337.32	5,610.0	1,027.3	-650.4	1,086.4	3.00	0.00	
6,400.0	90.00	340.32	5,610.0	1,120.5	-686.5	1,182.8	3.00	0.00	
6,500.0	90.00	343.32	5,610.0	1,215.5	-717.7	1,280.4	3.00	0.00	
6,600.0	90.00	346.32	5,610.0	1,312.0	-743.9	1,379.0	3.00	0.00	
6,700.0	90.00	349.32	5,610.0	1,409.8	-765.0	1,478.4	3.00	0.00	
6,800.0	90.00	352.32	5,610.0	1,508.5	-780.9	1,578.2	3.00	0.00	
6,900.0	90.00	355.32	5,610.0	1,607.9	-791.7	1,678.1	3.00	0.00	
7,000.0	90.00	358.32	5,610.0	1,707.7	-797.2	1,778.0	3.00	0.00	
7,056.0	90.00	0.00	5,610.0	1,763.7	-798.0	1,833.8	3.00	0.00	EOT; 0° Az
7,100.0	90.00	0.00	5,610.0	1,807.7	-798.0	1,877.6	0.00	0.00	
7,200.0	90.00	0.00	5,610.0	1,907.7	-798.0	1,977.1	0.00	0.00	
7,300.0	90.00	0.00	5,610.0	2,007.7	-798.0	2,076.6	0.00	0.00	
7,400.0	90.00	0.00	5,610.0	2,107.7	-798.0	2,176.2	0.00	0.00	
7,500.0	90.00	0.00	5,610.0	2,207.7	-798.0	2,275.7	0.00	0.00	
7,600.0	90.00	0.00	5,610.0	2,307.7	-798.0	2,375.2	0.00	0.00	
7,700.0	90.00	0.00	5,610.0	2,407.7	-798.0	2,474.7	0.00	0.00	
7,800.0	90.00	0.00	5,610.0	2,507.7	-798.0	2,574.2	0.00	0.00	
7,900.0	90.00	0.00	5,610.0	2,607.7	-798.0	2,673.7	0.00	0.00	
8,000.0	90.00	0.00	5,610.0	2,707.7	-798.0	2,773.2	0.00	0.00	
8,100.0	90.00	0.00	5,610.0	2,807.7	-798.0	2,872.7	0.00	0.00	
8,200.0	90.00	0.00	5,610.0	2,907.7	-798.0	2,972.3	0.00	0.00	
8,300.0	90.00	0.00	5,610.0	3,007.7	-798.0	3,071.8	0.00	0.00	
8,400.0	90.00	0.00	5,610.0	3,107.7	-798.0	3,171.3	0.00	0.00	
8,500.0	90.00	0.00	5,610.0	3,207.7	-798.0	3,270.8	0.00	0.00	
8,600.0	90.00	0.00	5,610.0	3,307.7	-798.0	3,370.3	0.00	0.00	
8,700.0	90.00	0.00	5,610.0	3,407.7	-798.0	3,469.8	0.00	0.00	
8,800.0	90.00	0.00	5,610.0	3,507.7	-798.0	3,569.3	0.00	0.00	
8,900.0	90.00	0.00	5,610.0	3,607.7	-798.0	3,668.8	0.00	0.00	
9,000.0	90.00	0.00	5,610.0	3,707.7	-797.9	3,768.3	0.00	0.00	
9,100.0	90.00	0.00	5,610.0	3,807.7	-797.9	3,867.9	0.00	0.00	
9,200.0	90.00	0.00	5,610.0	3,907.7	-797.9	3,967.4	0.00	0.00	
9,300.0	90.00	0.00	5,610.0	4,007.7	-797.9	4,066.9	0.00	0.00	
9,400.0	90.00	0.00	5,610.0	4,107.7	-797.9	4,166.4	0.00	0.00	
9,500.0	90.00	0.00	5,610.0	4,207.7	-797.9	4,265.9	0.00	0.00	
9,600.0	90.00	0.00	5,610.0	4,307.7	-797.9	4,365.4	0.00	0.00	
9,700.0	90.00	0.00	5,610.0	4,407.7	-797.9	4,464.9	0.00	0.00	
9,800.0	90.00	0.00	5,610.0	4,507.7	-797.9	4,564.4	0.00	0.00	
9,900.0	90.00	0.00	5,610.0	4,607.7	-797.9	4,664.0	0.00	0.00	

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Project:	Weld County, CO	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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)	Comments / Formations
10,000.0	90.00	0.00	5,610.0	4,707.7	-797.9	4,763.5	0.00	0.00	
10,100.0	90.00	0.00	5,610.0	4,807.7	-797.9	4,863.0	0.00	0.00	
10,200.0	90.00	0.00	5,610.0	4,907.7	-797.9	4,962.5	0.00	0.00	
10,300.0	90.00	0.00	5,610.0	5,007.7	-797.9	5,062.0	0.00	0.00	
10,400.0	90.00	0.00	5,610.0	5,107.7	-797.9	5,161.5	0.00	0.00	
10,500.0	90.00	0.00	5,610.0	5,207.7	-797.9	5,261.0	0.00	0.00	
10,600.0	90.00	0.00	5,610.0	5,307.7	-797.9	5,360.5	0.00	0.00	
10,700.0	90.00	0.00	5,610.0	5,407.7	-797.9	5,460.1	0.00	0.00	
10,800.0	90.00	0.00	5,610.0	5,507.7	-797.9	5,559.6	0.00	0.00	
10,900.0	90.00	0.00	5,610.0	5,607.7	-797.9	5,659.1	0.00	0.00	
11,000.0	90.00	0.00	5,610.0	5,707.7	-797.9	5,758.6	0.00	0.00	
11,100.0	90.00	0.00	5,610.0	5,807.7	-797.9	5,858.1	0.00	0.00	
11,200.0	90.00	0.00	5,610.0	5,907.7	-797.9	5,957.6	0.00	0.00	
11,300.0	90.00	0.00	5,610.0	6,007.7	-797.9	6,057.1	0.00	0.00	
11,400.0	90.00	0.00	5,610.0	6,107.7	-797.9	6,156.6	0.00	0.00	
11,500.0	90.00	0.00	5,610.0	6,207.7	-797.8	6,256.2	0.00	0.00	
11,600.0	90.00	0.00	5,610.0	6,307.7	-797.8	6,355.7	0.00	0.00	
11,700.0	90.00	0.00	5,610.0	6,407.7	-797.8	6,455.2	0.00	0.00	
11,800.0	90.00	0.00	5,610.0	6,507.7	-797.8	6,554.7	0.00	0.00	
11,900.0	90.00	0.00	5,610.0	6,607.7	-797.8	6,654.2	0.00	0.00	
12,000.0	90.00	0.00	5,610.0	6,707.7	-797.8	6,753.7	0.00	0.00	
12,100.0	90.00	0.00	5,610.0	6,807.7	-797.8	6,853.2	0.00	0.00	
12,200.0	90.00	0.00	5,610.0	6,907.7	-797.8	6,952.7	0.00	0.00	
12,300.0	90.00	0.00	5,610.0	7,007.7	-797.8	7,052.2	0.00	0.00	
12,400.0	90.00	0.00	5,610.0	7,107.7	-797.8	7,151.8	0.00	0.00	
12,500.0	90.00	0.00	5,610.0	7,207.7	-797.8	7,251.3	0.00	0.00	
12,600.0	90.00	0.00	5,610.0	7,307.7	-797.8	7,350.8	0.00	0.00	
12,700.0	90.00	0.00	5,610.0	7,407.7	-797.8	7,450.3	0.00	0.00	
12,800.0	90.00	0.00	5,610.0	7,507.7	-797.8	7,549.8	0.00	0.00	
12,900.0	90.00	0.00	5,610.0	7,607.7	-797.8	7,649.3	0.00	0.00	
13,000.0	90.00	0.00	5,610.0	7,707.7	-797.8	7,748.8	0.00	0.00	
13,100.0	90.00	0.00	5,610.0	7,807.7	-797.8	7,848.3	0.00	0.00	
13,200.0	90.00	0.00	5,610.0	7,907.7	-797.8	7,947.9	0.00	0.00	
13,300.0	90.00	0.00	5,610.0	8,007.7	-797.8	8,047.4	0.00	0.00	
13,341.6	90.00	0.00	5,610.0	8,049.3	-797.8	8,088.8	0.00	0.00	PBHL @ 13341' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
26K-2305A TGT - plan misses target center by 19.4ft at 12842.0ft MD (5610.0 TVD, 7549.7 N, -797.8 E) - Point	0.00	0.00	5,610.0	7,549.7	-778.4	1,549,481.65	3,460,254.19	40.829850	-103.836825
26K-2305A BHL - plan hits target center - Point	0.00	0.00	5,610.0	8,049.3	-797.8	1,549,981.25	3,460,234.85	40.831222	-103.836861

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
6,200.0	5,610.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,697.8	5,564.0	Top Niobrara		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
500.0	500.0	0.0	0.0	KOP @ 500' MD
700.0	699.8	5.8	-3.9	EOB; 4°
5,136.4	5,125.4	261.9	-177.5	Start 11° Build
5,918.2	5,610.0	692.1	-469.1	LP @ 5918' MD
7,056.0	5,610.0	1,763.7	-798.0	EOT; 0° Az
13,341.6	5,610.0	8,049.3	-797.8	PBHL @ 13341' MD

Whiting Petroleum Corporation

Weld County, CO
S26-T10N-R58W
Razor #26K-2305A
HZ
Plan #1

Anticollision Report

22 May, 2013

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 5/22/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,341.6	Plan #1 (HZ)	ISCWSA MWD	MWD - ISCWSA

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S26-T10N-R58W						
Razor #26J-2633L - HZ - Plan #1						Out of range
Razor #26K-2306B - HZ - Plan #1	4,815.6	4,819.7	65.9	44.2	3.028	CC
Razor #26K-2306B - HZ - Plan #1	5,136.4	5,140.5	66.1	42.9	2.845	ES
Razor #26K-2306B - HZ - Plan #1	13,341.6	13,379.0	341.9	43.5	1.146	Level 2, SF
Razor #26K-2307A - HZ - Plan #1	500.0	500.0	66.2	64.2	33.318	CC, ES
Razor #26K-2307A - HZ - Plan #1	5,150.0	5,150.2	186.4	161.3	7.434	SF
Razor #26K-2308B - HZ - Plan #1	500.0	500.0	82.0	80.0	41.276	CC, ES
Razor #26K-2308B - HZ - Plan #1	5,136.4	5,135.5	380.0	355.6	15.619	SF
Razor #26K-3505A - HZ - Plan #1	857.4	856.8	27.6	24.0	7.645	CC
Razor #26K-3505A - HZ - Plan #1	900.0	899.4	27.8	24.0	7.287	ES
Razor #26K-3505A - HZ - Plan #1	1,000.0	999.1	29.4	25.1	6.860	SF
Razor #26K-3507A - HZ - Plan #1	500.0	500.0	32.9	31.0	16.589	CC, ES
Razor #26K-3507A - HZ - Plan #1	700.0	699.8	37.2	34.3	12.915	SF
Razor #26K-3508B - HZ - Plan #1	500.0	500.0	100.1	98.1	50.384	CC, ES
Razor #26K-3508B - HZ - Plan #1	1,200.0	1,194.0	143.2	138.1	28.104	SF
Razor #26L-2301A - HZ - Plan #1						Out of range
Razor #26L-2302B - HZ - Plan #1						Out of range
Razor #26L-2303A - HZ - Plan #1						Out of range
Razor #26L-2304B - HZ - Plan #1	13,331.7	13,495.1	203.2	-95.0	0.681	Level 1, CC
Razor #26L-2304B - HZ - Plan #1	13,341.6	13,502.0	203.2	-95.2	0.681	Level 1, ES, SF
Razor #26L-3501A - HZ - Plan #1						Out of range
Razor #26L-3502B - HZ - Plan #1						Out of range
Razor #26L-3503A - HZ - Plan #1						Out of range
Razor #26L-3504B - HZ - Plan #1						Out of range
Razor 26-3524H (Existing) - Existing - SURVEYs	0.0	0.0	125.7			
Razor 26-3524H (Existing) - Existing - SURVEYs	5,000.0	4,982.5	402.0	380.4	18.563	SF
Razor Federal #26I-2313A - HZ - Plan #1						Out of range
Razor Federal #26I-2314B - HZ - Plan #1						Out of range
Razor Federal #26I-2315A - HZ - Plan #1						Out of range
Razor Federal #26I-2316B - HZ - Plan #1						Out of range
Razor Federal #26I-3513A - HZ - Plan #1						Out of range
Razor Federal #26I-3514B - HZ - Plan #1						Out of range
Razor Federal #26I-3515A - HZ - Plan #1						Out of range
Razor Federal #26I-3516B - HZ - Plan #1						Out of range
Razor Federal #26J-2309A - HZ - Plan #1						Out of range
Razor Federal #26J-2310B - HZ - Plan #1						Out of range
Razor Federal #26J-2311A - HZ - Plan #1						Out of range
Razor Federal #26J-2312B - HZ - Plan #1						Out of range
Razor Federal #26J-3509A - HZ - Plan #1						Out of range
Razor Federal #26J-3510B - HZ - Plan #1						Out of range
Razor Federal #26J-3511A - HZ - Plan #1						Out of range
Razor Federal #26J-3512B - HZ - Plan #1						Out of range

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-157.38	-75.7	-31.5	82.0				
100.0	100.0	100.0	100.0	0.1	0.1	-157.38	-75.7	-31.5	82.0	81.8	0.19	436.729	
200.0	200.0	200.0	200.0	0.3	0.3	-157.38	-75.7	-31.5	82.0	81.3	0.64	128.631	
300.0	300.0	300.0	300.0	0.5	0.5	-157.38	-75.7	-31.5	82.0	80.9	1.09	75.423	
400.0	400.0	400.0	400.0	0.8	0.8	-157.38	-75.7	-31.5	82.0	80.4	1.54	53.353	
500.0	500.0	500.0	500.0	1.0	1.0	-157.38	-75.7	-31.5	82.0	80.0	1.99	41.276	
600.0	600.0	600.0	600.0	1.2	1.2	-124.24	-75.7	-31.5	82.9	80.5	2.43	34.068	
700.0	699.8	699.8	699.8	1.4	1.4	-127.07	-75.7	-31.5	86.0	83.1	2.89	29.794	
800.0	799.6	802.1	802.1	1.7	1.7	-129.98	-74.0	-32.2	89.0	85.6	3.35	26.584	
900.0	899.4	904.6	904.4	1.9	1.9	-131.37	-68.9	-34.2	89.2	85.4	3.81	23.400	
1,000.0	999.1	1,004.5	1,004.1	2.2	2.1	-132.10	-62.4	-36.8	88.2	83.9	4.28	20.605	
1,100.0	1,098.9	1,104.5	1,103.9	2.4	2.4	-132.86	-55.9	-39.3	87.2	82.4	4.75	18.351	
1,200.0	1,198.6	1,204.5	1,203.6	2.7	2.6	-133.63	-49.4	-41.9	86.2	81.0	5.22	16.499	
1,300.0	1,298.4	1,304.5	1,303.4	2.9	2.9	-134.42	-42.9	-44.4	85.2	79.5	5.70	14.955	
1,400.0	1,398.1	1,404.5	1,403.1	3.2	3.1	-135.23	-36.4	-47.0	84.2	78.1	6.17	13.649	
1,500.0	1,497.9	1,504.5	1,502.9	3.4	3.3	-136.05	-29.9	-49.5	83.3	76.6	6.65	12.533	
1,600.0	1,597.6	1,604.5	1,602.6	3.7	3.6	-136.90	-23.4	-52.1	82.4	75.2	7.12	11.568	
1,700.0	1,697.4	1,704.5	1,702.3	3.9	3.8	-137.76	-17.0	-54.7	81.5	73.9	7.59	10.727	
1,800.0	1,797.2	1,804.5	1,802.1	4.2	4.1	-138.65	-10.5	-57.2	80.6	72.5	8.07	9.988	
1,900.0	1,896.9	1,904.4	1,901.8	4.4	4.3	-139.55	-4.0	-59.8	79.7	71.2	8.54	9.334	
2,000.0	1,996.7	2,004.4	2,001.6	4.7	4.6	-140.47	2.5	-62.3	78.8	69.8	9.01	8.752	
2,100.0	2,096.4	2,104.4	2,101.3	4.9	4.9	-141.41	9.0	-64.9	78.0	68.5	9.48	8.231	
2,200.0	2,196.2	2,204.4	2,201.1	5.2	5.1	-142.38	15.5	-67.4	77.2	67.3	9.95	7.763	
2,300.0	2,295.9	2,304.4	2,300.8	5.5	5.4	-143.36	22.0	-70.0	76.4	66.0	10.41	7.339	
2,400.0	2,395.7	2,404.4	2,400.6	5.7	5.6	-144.36	28.5	-72.5	75.7	64.8	10.88	6.956	
2,500.0	2,495.5	2,504.4	2,500.3	6.0	5.9	-145.39	35.0	-75.1	74.9	63.6	11.34	6.606	
2,600.0	2,595.2	2,604.4	2,600.0	6.2	6.1	-146.43	41.5	-77.7	74.2	62.4	11.80	6.287	
2,700.0	2,695.0	2,704.3	2,699.8	6.5	6.4	-147.49	47.9	-80.2	73.5	61.2	12.26	5.995	
2,800.0	2,794.7	2,804.3	2,799.5	6.7	6.6	-148.58	54.4	-82.8	72.8	60.1	12.72	5.727	
2,900.0	2,894.5	2,904.3	2,899.3	7.0	6.9	-149.68	60.9	-85.3	72.2	59.0	13.18	5.480	
3,000.0	2,994.2	3,004.3	2,999.0	7.2	7.1	-150.80	67.4	-87.9	71.6	58.0	13.63	5.252	
3,100.0	3,094.0	3,104.3	3,098.8	7.5	7.4	-151.94	73.9	-90.4	71.0	56.9	14.09	5.041	
3,200.0	3,193.8	3,204.3	3,198.5	7.8	7.7	-153.10	80.4	-93.0	70.5	55.9	14.54	4.846	
3,300.0	3,293.5	3,304.3	3,298.3	8.0	7.9	-154.28	86.9	-95.6	69.9	54.9	14.99	4.665	
3,400.0	3,393.3	3,404.3	3,398.0	8.3	8.2	-155.47	93.4	-98.1	69.4	54.0	15.44	4.497	
3,500.0	3,493.0	3,504.3	3,497.8	8.5	8.4	-156.68	99.9	-100.7	69.0	53.1	15.89	4.341	
3,600.0	3,592.8	3,604.2	3,597.5	8.8	8.7	-157.91	106.3	-103.2	68.5	52.2	16.34	4.195	
3,700.0	3,692.5	3,704.2	3,697.2	9.0	8.9	-159.15	112.8	-105.8	68.1	51.4	16.78	4.060	
3,800.0	3,792.3	3,804.2	3,797.0	9.3	9.2	-160.41	119.3	-108.3	67.8	50.5	17.23	3.933	
3,900.0	3,892.1	3,904.2	3,896.7	9.6	9.4	-161.67	125.8	-110.9	67.4	49.8	17.68	3.815	
4,000.0	3,991.8	4,004.2	3,996.5	9.8	9.7	-162.96	132.3	-113.4	67.1	49.0	18.12	3.704	
4,100.0	4,091.6	4,104.2	4,096.2	10.1	10.0	-164.25	138.8	-116.0	66.9	48.3	18.57	3.601	
4,200.0	4,191.3	4,204.2	4,196.0	10.3	10.2	-165.55	145.3	-118.6	66.6	47.6	19.01	3.504	
4,300.0	4,291.1	4,304.2	4,295.7	10.6	10.5	-166.86	151.8	-121.1	66.4	47.0	19.46	3.413	
4,400.0	4,390.8	4,404.2	4,395.5	10.9	10.7	-168.18	158.3	-123.7	66.3	46.3	19.91	3.328	
4,500.0	4,490.6	4,504.1	4,495.2	11.1	11.0	-169.50	164.8	-126.2	66.1	45.8	20.36	3.248	
4,600.0	4,590.3	4,604.1	4,594.9	11.4	11.2	-170.83	171.2	-128.8	66.0	45.2	20.81	3.174	
4,700.0	4,690.1	4,704.1	4,694.7	11.6	11.5	-172.16	177.7	-131.3	66.0	44.7	21.26	3.104	
4,800.0	4,789.9	4,804.1	4,794.4	11.9	11.8	-173.49	184.2	-133.9	65.9	44.2	21.71	3.038	
4,815.6	4,805.4	4,819.7	4,810.0	11.9	11.8	-173.70	185.2	-134.3	65.9	44.2	21.78	3.028	CC
4,900.0	4,889.6	4,904.1	4,894.2	12.1	12.0	-174.83	190.7	-136.5	66.0	43.8	22.16	2.976	
5,000.0	4,989.4	5,004.1	4,993.9	12.4	12.3	-176.16	197.2	-139.0	66.0	43.4	22.62	2.918	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,089.1	5,104.1	5,093.7	12.7	12.5	-177.49	203.7	-141.6	66.1	43.0	23.08	2.864	
5,136.4	5,125.4	5,140.5	5,130.0	12.7	12.6	-177.97	206.1	-142.5	66.1	42.9	23.24	2.845	ES
5,150.0	5,139.0	5,154.1	5,143.5	12.8	12.6	-178.15	206.9	-142.8	66.3	43.0	23.29	2.847	
5,200.0	5,188.5	5,203.9	5,193.2	12.9	12.8	-178.87	210.2	-144.1	70.1	46.7	23.35	3.002	
5,250.0	5,237.0	5,257.8	5,246.9	13.1	12.9	-179.74	214.5	-145.8	77.8	54.6	23.22	3.351	
5,300.0	5,284.2	5,316.0	5,304.1	13.4	13.1	178.64	224.6	-149.8	85.5	62.6	22.91	3.732	
5,350.0	5,329.6	5,375.3	5,360.7	13.7	13.4	176.36	240.8	-156.2	92.6	70.2	22.44	4.127	
5,400.0	5,372.8	5,435.3	5,415.6	14.0	13.7	173.52	263.2	-165.0	99.1	77.3	21.83	4.540	
5,450.0	5,413.3	5,495.9	5,467.9	14.4	14.1	170.19	291.7	-176.2	105.1	83.9	21.17	4.966	
5,500.0	5,450.9	5,557.1	5,516.7	14.8	14.6	166.41	326.0	-189.7	110.6	90.1	20.55	5.381	
5,550.0	5,485.2	5,618.5	5,561.1	15.3	15.1	162.24	365.5	-205.3	115.7	95.6	20.16	5.742	
5,600.0	5,515.8	5,680.0	5,600.1	15.9	15.7	157.73	409.7	-222.7	120.6	100.5	20.17	5.979	
5,650.0	5,542.4	5,741.5	5,633.3	16.5	16.4	152.93	457.7	-241.6	125.4	104.6	20.79	6.031	
5,700.0	5,564.9	5,802.7	5,660.1	17.1	17.2	147.90	508.9	-261.8	130.1	108.0	22.11	5.885	
5,750.0	5,583.1	5,863.5	5,680.1	17.9	18.1	142.70	562.3	-282.8	135.0	110.8	24.13	5.594	
5,800.0	5,596.6	5,923.8	5,693.3	18.6	18.9	137.41	617.1	-304.4	140.0	113.3	26.73	5.239	
5,850.0	5,605.5	5,983.5	5,699.5	19.4	19.9	132.10	672.3	-326.1	145.4	115.7	29.73	4.891	
5,900.0	5,609.7	6,034.8	5,700.0	20.2	20.6	127.59	720.1	-344.8	151.8	119.3	32.52	4.668	
5,918.2	5,610.0	6,051.5	5,700.0	20.6	20.9	126.31	735.6	-350.6	155.1	121.7	33.39	4.645	
6,000.0	5,610.0	6,125.6	5,700.0	21.9	22.0	122.45	805.7	-374.8	171.4	134.3	37.11	4.618	
6,100.0	5,610.0	6,215.4	5,700.0	23.5	23.4	118.68	891.7	-400.5	191.7	150.5	41.25	4.648	
6,200.0	5,610.0	6,300.0	5,700.0	25.2	24.7	115.82	973.8	-421.0	212.2	167.2	45.02	4.715	
6,300.0	5,610.0	6,392.4	5,700.0	26.9	26.1	113.30	1,064.4	-439.2	232.6	183.8	48.78	4.768	
6,400.0	5,610.0	6,479.8	5,700.0	28.6	27.5	111.33	1,150.8	-452.3	252.7	200.5	52.23	4.838	
6,500.0	5,610.0	6,566.3	5,700.0	30.3	28.9	109.70	1,236.9	-461.5	272.4	216.9	55.50	4.909	
6,600.0	5,610.0	6,652.2	5,700.0	32.0	30.2	108.33	1,322.6	-466.6	291.7	233.1	58.58	4.979	
6,700.0	5,610.0	6,739.5	5,700.0	33.7	31.6	107.15	1,409.8	-468.0	310.3	248.8	61.52	5.044	
6,800.0	5,610.0	6,838.2	5,700.0	35.4	33.2	106.20	1,508.5	-468.0	325.6	261.1	64.47	5.050	
6,900.0	5,610.0	6,937.6	5,700.0	37.0	34.9	105.60	1,607.9	-468.0	336.0	268.7	67.22	4.998	
7,000.0	5,610.0	7,037.4	5,700.0	38.6	36.5	105.31	1,707.7	-468.0	341.3	271.5	69.75	4.893	
7,056.0	5,610.0	7,093.4	5,700.0	39.4	37.5	105.26	1,763.7	-468.0	342.1	271.0	71.07	4.813	
7,100.0	5,610.0	7,137.4	5,700.0	40.1	38.2	105.26	1,807.7	-468.0	342.1	269.5	72.54	4.716	
7,200.0	5,610.0	7,237.4	5,700.0	41.7	40.0	105.26	1,907.7	-468.0	342.1	266.2	75.86	4.509	
7,300.0	5,610.0	7,337.4	5,700.0	43.2	41.7	105.26	2,007.7	-468.0	342.1	262.9	79.22	4.318	
7,400.0	5,610.0	7,437.4	5,700.0	44.8	43.5	105.26	2,107.7	-468.0	342.1	259.5	82.61	4.141	
7,500.0	5,610.0	7,537.4	5,700.0	46.5	45.2	105.26	2,207.7	-468.0	342.1	256.0	86.03	3.976	
7,600.0	5,610.0	7,637.4	5,700.0	48.1	47.0	105.26	2,307.7	-468.0	342.1	252.6	89.47	3.823	
7,700.0	5,610.0	7,737.4	5,700.0	49.8	48.8	105.26	2,407.7	-468.0	342.1	249.1	92.94	3.681	
7,800.0	5,610.0	7,837.4	5,700.0	51.5	50.6	105.26	2,507.7	-468.0	342.1	245.6	96.42	3.548	
7,900.0	5,610.0	7,937.4	5,700.0	53.2	52.4	105.26	2,607.7	-468.0	342.1	242.1	99.92	3.423	
8,000.0	5,610.0	8,037.4	5,700.0	54.9	54.2	105.26	2,707.7	-468.0	342.1	238.6	103.43	3.307	
8,100.0	5,610.0	8,137.4	5,700.0	56.6	56.0	105.26	2,807.7	-468.0	342.0	235.1	106.96	3.198	
8,200.0	5,610.0	8,237.4	5,700.0	58.4	57.8	105.26	2,907.7	-468.0	342.0	231.5	110.50	3.095	
8,300.0	5,610.0	8,337.4	5,700.0	60.1	59.7	105.26	3,007.7	-468.0	342.0	228.0	114.05	2.999	
8,400.0	5,610.0	8,437.4	5,700.0	61.9	61.5	105.26	3,107.7	-468.0	342.0	224.4	117.62	2.908	
8,500.0	5,610.0	8,537.4	5,700.0	63.6	63.4	105.26	3,207.7	-468.0	342.0	220.8	121.19	2.822	
8,600.0	5,610.0	8,637.4	5,700.0	65.4	65.2	105.26	3,307.7	-468.0	342.0	217.3	124.77	2.741	
8,700.0	5,610.0	8,737.4	5,700.0	67.2	67.1	105.26	3,407.7	-468.0	342.0	213.7	128.35	2.665	
8,800.0	5,610.0	8,837.4	5,700.0	69.0	68.9	105.26	3,507.7	-468.0	342.0	210.1	131.95	2.592	
8,900.0	5,610.0	8,937.4	5,700.0	70.8	70.8	105.26	3,607.7	-468.0	342.0	206.5	135.55	2.523	
9,000.0	5,610.0	9,037.4	5,700.0	72.6	72.6	105.26	3,707.7	-468.0	342.0	202.9	139.16	2.458	
9,100.0	5,610.0	9,137.4	5,700.0	74.4	74.5	105.26	3,807.7	-468.0	342.0	199.2	142.77	2.396	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,200.0	5,610.0	9,237.4	5,700.0	76.2	76.4	105.26	3,907.7	-468.0	342.0	195.6	146.39	2.336	
9,300.0	5,610.0	9,337.4	5,700.0	78.0	78.2	105.26	4,007.7	-468.0	342.0	192.0	150.02	2.280	
9,400.0	5,610.0	9,437.4	5,700.0	79.8	80.1	105.26	4,107.7	-468.0	342.0	188.4	153.64	2.226	
9,500.0	5,610.0	9,537.4	5,700.0	81.7	82.0	105.26	4,207.7	-468.0	342.0	184.7	157.28	2.175	
9,600.0	5,610.0	9,637.4	5,700.0	83.5	83.8	105.26	4,307.7	-468.0	342.0	181.1	160.91	2.125	
9,700.0	5,610.0	9,737.4	5,700.0	85.3	85.7	105.26	4,407.7	-468.0	342.0	177.4	164.55	2.078	
9,800.0	5,610.0	9,837.4	5,700.0	87.2	87.6	105.26	4,507.7	-468.0	342.0	173.8	168.20	2.033	
9,900.0	5,610.0	9,937.4	5,700.0	89.0	89.5	105.26	4,607.7	-468.0	342.0	170.1	171.84	1.990	
10,000.0	5,610.0	10,037.4	5,700.0	90.9	91.4	105.26	4,707.7	-468.0	342.0	166.5	175.49	1.949	
10,100.0	5,610.0	10,137.4	5,700.0	92.7	93.2	105.26	4,807.7	-468.0	342.0	162.8	179.15	1.909	
10,200.0	5,610.0	10,237.4	5,700.0	94.6	95.1	105.26	4,907.7	-468.0	342.0	159.2	182.80	1.871	
10,300.0	5,610.0	10,337.4	5,700.0	96.4	97.0	105.26	5,007.7	-468.0	342.0	155.5	186.46	1.834	
10,400.0	5,610.0	10,437.4	5,700.0	98.3	98.9	105.26	5,107.7	-468.0	342.0	151.9	190.12	1.799	
10,500.0	5,610.0	10,537.4	5,700.0	100.1	100.8	105.26	5,207.7	-468.0	342.0	148.2	193.78	1.765	
10,600.0	5,610.0	10,637.4	5,700.0	102.0	102.7	105.26	5,307.7	-468.0	342.0	144.5	197.44	1.732	
10,700.0	5,610.0	10,737.4	5,700.0	103.9	104.6	105.26	5,407.7	-468.0	342.0	140.9	201.11	1.700	
10,800.0	5,610.0	10,837.4	5,700.0	105.7	106.5	105.26	5,507.7	-468.0	342.0	137.2	204.78	1.670	
10,900.0	5,610.0	10,937.4	5,700.0	107.6	108.4	105.26	5,607.7	-468.0	342.0	133.5	208.45	1.640	
11,000.0	5,610.0	11,037.4	5,700.0	109.5	110.2	105.26	5,707.7	-468.0	342.0	129.8	212.12	1.612	
11,100.0	5,610.0	11,137.4	5,700.0	111.3	112.1	105.26	5,807.7	-468.0	341.9	126.2	215.79	1.585	
11,200.0	5,610.0	11,237.4	5,700.0	113.2	114.0	105.26	5,907.7	-468.0	341.9	122.5	219.47	1.558	
11,300.0	5,610.0	11,337.4	5,700.0	115.1	115.9	105.26	6,007.7	-468.0	341.9	118.8	223.14	1.532	
11,400.0	5,610.0	11,437.4	5,700.0	117.0	117.8	105.26	6,107.7	-468.0	341.9	115.1	226.82	1.508	
11,500.0	5,610.0	11,537.4	5,700.0	118.8	119.7	105.26	6,207.7	-468.0	341.9	111.4	230.50	1.483	Level 3
11,600.0	5,610.0	11,637.4	5,700.0	120.7	121.6	105.26	6,307.7	-468.0	341.9	107.8	234.18	1.460	Level 3
11,700.0	5,610.0	11,737.4	5,700.0	122.6	123.5	105.26	6,407.7	-468.0	341.9	104.1	237.86	1.438	Level 3
11,800.0	5,610.0	11,837.4	5,700.0	124.5	125.4	105.26	6,507.7	-468.0	341.9	100.4	241.54	1.416	Level 3
11,900.0	5,610.0	11,937.4	5,700.0	126.4	127.3	105.26	6,607.7	-468.0	341.9	96.7	245.23	1.394	Level 3
12,000.0	5,610.0	12,037.4	5,700.0	128.2	129.2	105.26	6,707.7	-468.0	341.9	93.0	248.91	1.374	Level 3
12,100.0	5,610.0	12,137.4	5,700.0	130.1	131.1	105.26	6,807.7	-468.0	341.9	89.3	252.60	1.354	Level 3
12,200.0	5,610.0	12,237.4	5,700.0	132.0	133.0	105.26	6,907.7	-468.0	341.9	85.6	256.28	1.334	Level 3
12,300.0	5,610.0	12,337.4	5,700.0	133.9	134.9	105.26	7,007.7	-468.0	341.9	81.9	259.97	1.315	Level 3
12,400.0	5,610.0	12,437.4	5,700.0	135.8	136.8	105.26	7,107.7	-468.0	341.9	78.2	263.66	1.297	Level 3
12,500.0	5,610.0	12,537.4	5,700.0	137.7	138.7	105.26	7,207.7	-468.0	341.9	74.6	267.35	1.279	Level 3
12,600.0	5,610.0	12,637.4	5,700.0	139.5	140.6	105.26	7,307.7	-468.0	341.9	70.9	271.04	1.261	Level 3
12,700.0	5,610.0	12,737.4	5,700.0	141.4	142.5	105.26	7,407.7	-468.0	341.9	67.2	274.73	1.244	Level 2
12,800.0	5,610.0	12,837.4	5,700.0	143.3	144.4	105.26	7,507.8	-468.0	341.9	63.5	278.42	1.228	Level 2
12,900.0	5,610.0	12,937.4	5,700.0	145.2	146.3	105.26	7,607.8	-468.0	341.9	59.8	282.11	1.212	Level 2
13,000.0	5,610.0	13,037.4	5,700.0	147.1	148.2	105.26	7,707.8	-468.0	341.9	56.1	285.80	1.196	Level 2
13,100.0	5,610.0	13,137.4	5,700.0	149.0	150.1	105.26	7,807.8	-468.0	341.9	52.4	289.50	1.181	Level 2
13,200.0	5,610.0	13,237.4	5,700.0	150.9	152.0	105.26	7,907.8	-468.0	341.9	48.7	293.19	1.166	Level 2
13,300.0	5,610.0	13,337.4	5,700.0	152.8	153.9	105.26	8,007.8	-468.0	341.9	45.0	296.89	1.152	Level 2
13,341.6	5,610.0	13,379.0	5,700.0	153.6	154.7	105.26	8,049.3	-468.0	341.9	43.5	298.42	1.146	Level 2, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2307A - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	88.92	1.2	66.2	66.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.92	1.2	66.2	66.2	66.0	0.19	352.527	
200.0	200.0	200.0	200.0	0.3	0.3	88.92	1.2	66.2	66.2	65.5	0.64	103.831	
300.0	300.0	300.0	300.0	0.5	0.5	88.92	1.2	66.2	66.2	65.1	1.09	60.881	
400.0	400.0	400.0	400.0	0.8	0.8	88.92	1.2	66.2	66.2	64.6	1.54	43.067	
500.0	500.0	500.0	500.0	1.0	1.0	88.92	1.2	66.2	66.2	64.2	1.99	33.318	CC, ES
600.0	600.0	600.0	600.0	1.2	1.2	124.29	1.2	66.2	67.1	64.7	2.43	27.588	
700.0	699.8	699.8	699.8	1.4	1.4	127.76	1.2	66.2	70.2	67.3	2.88	24.367	
800.0	799.6	799.6	799.6	1.7	1.7	131.99	1.2	66.2	74.7	71.4	3.33	22.413	
900.0	899.4	900.4	900.4	1.9	1.9	134.59	3.0	65.8	78.9	75.1	3.79	20.824	
1,000.0	999.1	1,001.4	1,001.3	2.2	2.1	134.66	8.2	64.7	81.8	77.5	4.25	19.261	
1,100.0	1,098.9	1,101.4	1,101.0	2.4	2.4	133.64	15.0	63.3	84.1	79.3	4.71	17.842	
1,200.0	1,198.6	1,201.4	1,200.7	2.7	2.6	132.67	21.8	61.9	86.4	81.2	5.18	16.660	
1,300.0	1,298.4	1,301.3	1,300.4	2.9	2.8	131.75	28.7	60.5	88.7	83.0	5.66	15.665	
1,400.0	1,398.1	1,401.3	1,400.1	3.2	3.1	130.89	35.5	59.1	91.0	84.9	6.14	14.817	
1,500.0	1,497.9	1,501.3	1,499.9	3.4	3.3	130.06	42.3	57.6	93.4	86.8	6.63	14.088	
1,600.0	1,597.6	1,601.2	1,599.6	3.7	3.6	129.28	49.1	56.2	95.8	88.7	7.12	13.456	
1,700.0	1,697.4	1,701.2	1,699.3	3.9	3.8	128.53	56.0	54.8	98.2	90.6	7.61	12.903	
1,800.0	1,797.2	1,801.1	1,799.0	4.2	4.1	127.82	62.8	53.4	100.6	92.5	8.10	12.415	
1,900.0	1,896.9	1,901.1	1,898.7	4.4	4.3	127.15	69.6	52.0	103.0	94.4	8.60	11.983	
2,000.0	1,996.7	2,001.1	1,998.5	4.7	4.6	126.50	76.5	50.6	105.5	96.4	9.10	11.597	
2,100.0	2,096.4	2,101.0	2,098.2	4.9	4.8	125.89	83.3	49.2	107.9	98.3	9.59	11.250	
2,200.0	2,196.2	2,201.0	2,197.9	5.2	5.1	125.30	90.1	47.7	110.4	100.3	10.09	10.938	
2,300.0	2,295.9	2,301.0	2,297.6	5.5	5.3	124.73	96.9	46.3	112.9	102.3	10.60	10.655	
2,400.0	2,395.7	2,400.9	2,397.3	5.7	5.6	124.20	103.8	44.9	115.4	104.3	11.10	10.397	
2,500.0	2,495.5	2,500.9	2,497.1	6.0	5.8	123.68	110.6	43.5	117.9	106.3	11.60	10.162	
2,600.0	2,595.2	2,600.9	2,596.8	6.2	6.1	123.19	117.4	42.1	120.4	108.3	12.10	9.947	
2,700.0	2,695.0	2,700.8	2,696.5	6.5	6.3	122.71	124.3	40.7	122.9	110.3	12.61	9.749	
2,800.0	2,794.7	2,800.8	2,796.2	6.7	6.6	122.26	131.1	39.3	125.4	112.3	13.11	9.566	
2,900.0	2,894.5	2,900.7	2,895.9	7.0	6.8	121.82	137.9	37.8	128.0	114.4	13.62	9.397	
3,000.0	2,994.2	3,000.7	2,995.7	7.2	7.1	121.40	144.7	36.4	130.5	116.4	14.13	9.240	
3,100.0	3,094.0	3,100.7	3,095.4	7.5	7.3	121.00	151.6	35.0	133.1	118.4	14.63	9.095	
3,200.0	3,193.8	3,200.6	3,195.1	7.8	7.6	120.61	158.4	33.6	135.6	120.5	15.14	8.959	
3,300.0	3,293.5	3,300.6	3,294.8	8.0	7.8	120.24	165.2	32.2	138.2	122.5	15.65	8.832	
3,400.0	3,393.3	3,400.6	3,394.5	8.3	8.1	119.88	172.1	30.8	140.8	124.6	16.15	8.713	
3,500.0	3,493.0	3,500.5	3,494.3	8.5	8.4	119.53	178.9	29.4	143.3	126.7	16.66	8.602	
3,600.0	3,592.8	3,600.5	3,594.0	8.8	8.6	119.19	185.7	27.9	145.9	128.7	17.17	8.497	
3,700.0	3,692.5	3,700.4	3,693.7	9.0	8.9	118.87	192.5	26.5	148.5	130.8	17.68	8.399	
3,800.0	3,792.3	3,800.4	3,793.4	9.3	9.1	118.56	199.4	25.1	151.1	132.9	18.19	8.306	
3,900.0	3,892.1	3,900.4	3,893.1	9.6	9.4	118.25	206.2	23.7	153.7	135.0	18.70	8.218	
4,000.0	3,991.8	4,000.3	3,992.9	9.8	9.6	117.96	213.0	22.3	156.3	137.1	19.21	8.136	
4,100.0	4,091.6	4,100.3	4,092.6	10.1	9.9	117.68	219.8	20.9	158.9	139.1	19.72	8.057	
4,200.0	4,191.3	4,200.3	4,192.3	10.3	10.1	117.41	226.7	19.5	161.5	141.2	20.23	7.983	
4,300.0	4,291.1	4,300.2	4,292.0	10.6	10.4	117.14	233.5	18.1	164.1	143.3	20.74	7.912	
4,400.0	4,390.8	4,400.2	4,391.7	10.9	10.6	116.89	240.3	16.6	166.7	145.4	21.25	7.845	
4,500.0	4,490.6	4,500.2	4,491.5	11.1	10.9	116.64	247.2	15.2	169.3	147.5	21.76	7.781	
4,600.0	4,590.3	4,600.1	4,591.2	11.4	11.2	116.40	254.0	13.8	171.9	149.6	22.27	7.720	
4,700.0	4,690.1	4,700.1	4,690.9	11.6	11.4	116.16	260.8	12.4	174.5	151.8	22.78	7.662	
4,800.0	4,789.9	4,800.0	4,790.6	11.9	11.7	115.94	267.6	11.0	177.2	153.9	23.29	7.607	
4,900.0	4,889.6	4,900.0	4,890.3	12.1	11.9	115.72	274.5	9.6	179.8	156.0	23.80	7.554	
5,000.0	4,989.4	5,000.0	4,990.1	12.4	12.2	115.50	281.3	8.2	182.4	158.1	24.31	7.503	
5,100.0	5,089.1	5,099.9	5,089.8	12.7	12.4	115.30	288.1	6.7	185.0	160.2	24.82	7.455	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2307A - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,136.4	5,125.4	5,136.3	5,126.1	12.7	12.5	115.22	290.6	6.2	186.0	161.0	25.01	7.438	
5,150.0	5,139.0	5,150.2	5,139.9	12.8	12.6	115.14	291.8	6.0	186.4	161.3	25.08	7.434	SF
5,200.0	5,188.5	5,200.9	5,190.1	12.9	12.7	114.63	299.0	4.5	189.1	163.8	25.36	7.458	
5,250.0	5,237.0	5,251.5	5,239.1	13.1	12.9	113.79	310.9	2.0	193.6	167.9	25.69	7.536	
5,300.0	5,284.2	5,301.7	5,286.5	13.4	13.2	112.68	327.4	-1.4	199.8	173.8	26.09	7.660	
5,350.0	5,329.6	5,351.6	5,331.6	13.7	13.4	111.32	348.0	-5.7	207.8	181.2	26.56	7.822	
5,400.0	5,372.8	5,400.9	5,374.1	14.0	13.7	109.77	372.5	-10.7	217.4	190.2	27.14	8.010	
5,450.0	5,413.3	5,449.8	5,413.7	14.4	14.1	108.06	400.5	-16.5	228.5	200.7	27.82	8.214	
5,500.0	5,450.9	5,498.1	5,450.1	14.8	14.5	106.24	431.6	-23.0	241.1	212.4	28.62	8.424	
5,550.0	5,485.2	5,545.9	5,483.0	15.3	14.9	104.33	465.6	-30.0	255.0	225.4	29.54	8.632	
5,600.0	5,515.8	5,593.2	5,512.3	15.9	15.4	102.36	501.9	-37.5	270.1	239.5	30.57	8.833	
5,650.0	5,542.4	5,640.1	5,537.9	16.5	15.9	100.36	540.4	-45.5	286.2	254.5	31.72	9.023	
5,700.0	5,564.9	5,686.6	5,559.7	17.1	16.5	98.35	580.6	-53.8	303.2	270.3	32.96	9.201	
5,750.0	5,583.1	5,732.8	5,577.6	17.9	17.1	96.35	622.3	-62.5	321.0	286.7	34.28	9.365	
5,800.0	5,596.6	5,778.8	5,591.7	18.6	17.7	94.37	665.2	-71.3	339.3	303.7	35.66	9.517	
5,850.0	5,605.5	5,824.8	5,601.8	19.4	18.3	92.43	709.0	-80.4	358.1	321.0	37.09	9.655	
5,900.0	5,609.7	5,870.7	5,607.9	20.2	19.0	90.54	753.6	-89.7	377.1	338.5	38.55	9.782	
5,918.2	5,610.0	5,887.5	5,609.1	20.6	19.3	89.87	770.0	-93.0	384.0	344.9	39.09	9.825	
6,000.0	5,610.0	5,955.5	5,610.0	21.9	20.3	90.00	836.6	-106.5	414.1	372.6	41.48	9.983	
6,100.0	5,610.0	6,031.7	5,610.0	23.5	21.4	90.00	911.8	-118.9	449.5	405.3	44.25	10.159	
6,200.0	5,610.0	6,100.0	5,610.0	25.2	22.3	90.00	979.6	-127.6	483.8	436.9	46.92	10.311	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2308B - HZ - Plan #1 — **Offset Site Error:** 0.0 ft

Survey Program: 0-ISCWSA MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	155.23	-74.4	34.3	82.0				
100.0	100.0	100.0	100.0	0.1	0.1	155.23	-74.4	34.3	82.0	81.8	0.19	436.729	
200.0	200.0	200.0	200.0	0.3	0.3	155.23	-74.4	34.3	82.0	81.3	0.64	128.631	
300.0	300.0	300.0	300.0	0.5	0.5	155.23	-74.4	34.3	82.0	80.9	1.09	75.423	
400.0	400.0	400.0	400.0	0.8	0.8	155.23	-74.4	34.3	82.0	80.4	1.54	53.353	
500.0	500.0	500.0	500.0	1.0	1.0	155.23	-74.4	34.3	82.0	80.0	1.99	41.276	CC, ES
600.0	600.0	600.0	600.0	1.2	1.2	-170.83	-74.4	34.3	83.7	81.3	2.44	34.359	
700.0	699.8	701.5	701.4	1.4	1.4	-172.36	-72.9	35.3	87.9	85.0	2.89	30.472	
800.0	799.6	802.7	802.6	1.7	1.7	-175.81	-68.4	38.2	92.3	88.9	3.33	27.682	
900.0	899.4	902.5	902.0	1.9	1.9	-179.79	-62.5	41.9	96.2	92.5	3.79	25.408	
1,000.0	999.1	1,002.2	1,001.5	2.2	2.1	176.56	-56.6	45.7	100.6	96.4	4.25	23.680	
1,100.0	1,098.9	1,101.9	1,101.0	2.4	2.4	173.23	-50.8	49.4	105.4	100.7	4.72	22.346	
1,200.0	1,198.6	1,201.6	1,200.4	2.7	2.6	170.19	-44.9	53.1	110.5	105.3	5.19	21.298	
1,300.0	1,298.4	1,301.3	1,299.9	2.9	2.9	167.43	-39.0	56.9	115.8	110.2	5.66	20.461	
1,400.0	1,398.1	1,401.0	1,399.4	3.2	3.1	164.91	-33.2	60.6	121.5	115.3	6.14	19.784	
1,500.0	1,497.9	1,500.7	1,498.8	3.4	3.4	162.62	-27.3	64.4	127.3	120.7	6.62	19.229	
1,600.0	1,597.6	1,600.4	1,598.3	3.7	3.6	160.54	-21.4	68.1	133.3	126.2	7.10	18.769	
1,700.0	1,697.4	1,700.1	1,697.8	3.9	3.9	158.63	-15.6	71.8	139.5	131.9	7.59	18.385	
1,800.0	1,797.2	1,799.8	1,797.2	4.2	4.1	156.89	-9.7	75.6	145.8	137.7	8.07	18.061	
1,900.0	1,896.9	1,899.5	1,896.7	4.4	4.4	155.30	-3.8	79.3	152.2	143.7	8.56	17.786	
2,000.0	1,996.7	1,999.2	1,996.1	4.7	4.6	153.83	2.0	83.0	158.8	149.7	9.05	17.550	
2,100.0	2,096.4	2,098.9	2,095.6	4.9	4.9	152.48	7.9	86.8	165.4	155.9	9.54	17.346	
2,200.0	2,196.2	2,198.6	2,195.1	5.2	5.1	151.24	13.7	90.5	172.2	162.1	10.03	17.169	
2,300.0	2,295.9	2,298.3	2,294.5	5.5	5.4	150.09	19.6	94.3	179.0	168.4	10.52	17.015	
2,400.0	2,395.7	2,398.1	2,394.0	5.7	5.6	149.02	25.5	98.0	185.8	174.8	11.01	16.880	
2,500.0	2,495.5	2,497.8	2,493.5	6.0	5.9	148.04	31.3	101.7	192.8	181.3	11.50	16.761	
2,600.0	2,595.2	2,597.5	2,592.9	6.2	6.1	147.12	37.2	105.5	199.7	187.7	11.99	16.655	
2,700.0	2,695.0	2,697.2	2,692.4	6.5	6.4	146.26	43.1	109.2	206.8	194.3	12.49	16.561	
2,800.0	2,794.7	2,796.9	2,791.9	6.7	6.7	145.46	48.9	112.9	213.8	200.9	12.98	16.477	
2,900.0	2,894.5	2,896.6	2,891.3	7.0	6.9	144.71	54.8	116.7	220.9	207.5	13.47	16.402	
3,000.0	2,994.2	2,996.3	2,990.8	7.2	7.2	144.00	60.7	120.4	228.1	214.1	13.96	16.334	
3,100.0	3,094.0	3,096.0	3,090.2	7.5	7.4	143.34	66.5	124.2	235.3	220.8	14.46	16.273	
3,200.0	3,193.8	3,195.7	3,189.7	7.8	7.7	142.72	72.4	127.9	242.5	227.5	14.95	16.217	
3,300.0	3,293.5	3,295.4	3,289.2	8.0	7.9	142.14	78.3	131.6	249.7	234.3	15.45	16.167	
3,400.0	3,393.3	3,395.1	3,388.6	8.3	8.2	141.58	84.1	135.4	257.0	241.0	15.94	16.121	
3,500.0	3,493.0	3,494.8	3,488.1	8.5	8.4	141.06	90.0	139.1	264.3	247.8	16.43	16.080	
3,600.0	3,592.8	3,594.5	3,587.6	8.8	8.7	140.57	95.9	142.8	271.6	254.6	16.93	16.041	
3,700.0	3,692.5	3,694.2	3,687.0	9.0	8.9	140.10	101.7	146.6	278.9	261.5	17.42	16.006	
3,800.0	3,792.3	3,793.9	3,786.5	9.3	9.2	139.65	107.6	150.3	286.2	268.3	17.92	15.974	
3,900.0	3,892.1	3,893.7	3,886.0	9.6	9.5	139.23	113.5	154.0	293.6	275.2	18.41	15.945	
4,000.0	3,991.8	3,993.4	3,985.4	9.8	9.7	138.83	119.3	157.8	300.9	282.0	18.91	15.917	
4,100.0	4,091.6	4,093.1	4,084.9	10.1	10.0	138.45	125.2	161.5	308.3	288.9	19.40	15.892	
4,200.0	4,191.3	4,192.8	4,184.3	10.3	10.2	138.08	131.1	165.3	315.7	295.8	19.90	15.868	
4,300.0	4,291.1	4,292.5	4,283.8	10.6	10.5	137.74	136.9	169.0	323.1	302.7	20.39	15.847	
4,400.0	4,390.8	4,392.2	4,383.3	10.9	10.7	137.41	142.8	172.7	330.6	309.7	20.89	15.827	
4,500.0	4,490.6	4,491.9	4,482.7	11.1	11.0	137.09	148.7	176.5	338.0	316.6	21.38	15.808	
4,600.0	4,590.3	4,591.6	4,582.2	11.4	11.2	136.78	154.5	180.2	345.4	323.5	21.88	15.790	
4,700.0	4,690.1	4,691.3	4,681.7	11.6	11.5	136.49	160.4	183.9	352.9	330.5	22.37	15.774	
4,800.0	4,789.9	4,791.0	4,781.1	11.9	11.8	136.21	166.3	187.7	360.3	337.5	22.87	15.759	
4,900.0	4,889.6	4,895.0	4,884.9	12.1	12.0	136.17	171.1	190.7	367.3	343.9	23.33	15.739	
5,000.0	4,989.4	4,999.4	4,989.3	12.4	12.2	136.66	172.7	191.8	373.0	349.2	23.75	15.702	
5,100.0	5,089.1	5,099.2	5,089.1	12.7	12.3	137.39	172.7	191.8	378.1	353.9	24.17	15.644	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2308B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,136.4	5,125.4	5,135.5	5,125.4	12.7	12.4	137.65	172.7	191.8	380.0	355.6	24.33	15.619 SF	
5,150.0	5,139.0	5,149.1	5,139.0	12.8	12.4	137.70	172.7	191.8	380.8	356.4	24.37	15.628	
5,200.0	5,188.5	5,200.6	5,190.6	12.9	12.5	138.04	172.8	191.8	386.1	361.6	24.45	15.789	
5,250.0	5,237.0	5,261.4	5,251.1	13.1	12.7	138.19	177.7	191.8	394.0	369.5	24.50	16.083	
5,300.0	5,284.2	5,322.6	5,311.1	13.4	12.9	137.72	189.7	191.8	404.0	379.5	24.52	16.479	
5,350.0	5,329.6	5,383.7	5,369.2	13.7	13.1	136.67	208.6	191.8	416.0	391.5	24.55	16.949	
5,400.0	5,372.8	5,444.4	5,424.2	14.0	13.4	135.06	233.9	191.8	429.9	405.3	24.62	17.457	
5,450.0	5,413.3	5,504.1	5,475.2	14.4	13.8	132.96	265.0	191.8	445.6	420.8	24.82	17.955	
5,500.0	5,450.9	5,562.7	5,521.4	14.8	14.2	130.43	301.0	191.8	463.2	438.0	25.19	18.391	
5,550.0	5,485.2	5,620.0	5,562.4	15.3	14.6	127.51	340.9	191.8	482.6	456.8	25.77	18.725	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-3505A - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-91.10	-0.6	-32.9	32.9				
100.0	100.0	100.0	100.0	0.1	0.1	-91.10	-0.6	-32.9	32.9	32.8	0.19	175.526	
200.0	200.0	200.0	200.0	0.3	0.3	-91.10	-0.6	-32.9	32.9	32.3	0.64	51.698	
300.0	300.0	300.0	300.0	0.5	0.5	-91.10	-0.6	-32.9	32.9	31.9	1.09	30.313	
400.0	400.0	400.0	400.0	0.8	0.8	-91.10	-0.6	-32.9	32.9	31.4	1.54	21.443	
500.0	500.0	500.0	500.0	1.0	1.0	-91.10	-0.6	-32.9	32.9	31.0	1.99	16.589	
600.0	600.0	600.0	600.0	1.2	1.2	-59.60	-0.6	-32.9	32.0	29.6	2.43	13.160	
700.0	699.8	699.8	699.8	1.4	1.4	-68.37	-0.6	-32.9	29.7	26.8	2.88	10.308	
800.0	799.6	799.6	799.6	1.7	1.7	-81.77	-0.6	-32.9	27.9	24.6	3.34	8.347	
857.4	856.8	856.8	856.8	1.8	1.8	-90.00	-0.6	-32.9	27.6	24.0	3.61	7.645	CC
900.0	899.4	899.4	899.4	1.9	1.9	-96.13	-0.6	-32.9	27.8	24.0	3.81	7.287	ES
1,000.0	999.1	999.1	999.1	2.2	2.1	-109.76	-0.6	-32.9	29.4	25.1	4.28	6.860	SF
1,100.0	1,098.9	1,097.7	1,097.7	2.4	2.3	-121.95	-2.3	-33.3	34.0	29.3	4.71	7.225	
1,200.0	1,198.6	1,195.8	1,195.7	2.7	2.5	-131.14	-7.2	-34.3	43.3	38.2	5.12	8.458	
1,300.0	1,298.4	1,294.9	1,294.5	2.9	2.7	-136.99	-14.0	-35.6	55.1	49.6	5.54	9.961	
1,400.0	1,398.1	1,394.1	1,393.5	3.2	2.9	-140.75	-20.7	-37.0	67.3	61.4	5.95	11.309	
1,500.0	1,497.9	1,493.3	1,492.4	3.4	3.1	-143.35	-27.5	-38.4	79.7	73.4	6.38	12.500	
1,600.0	1,597.6	1,592.5	1,591.3	3.7	3.3	-145.25	-34.3	-39.8	92.3	85.5	6.81	13.549	
1,700.0	1,697.4	1,691.6	1,690.3	3.9	3.5	-146.70	-41.1	-41.2	104.9	97.6	7.24	14.475	
1,800.0	1,797.2	1,790.8	1,789.2	4.2	3.7	-147.83	-47.9	-42.5	117.5	109.8	7.68	15.295	
1,900.0	1,896.9	1,890.0	1,888.1	4.4	4.0	-148.75	-54.6	-43.9	130.2	122.1	8.12	16.024	
2,000.0	1,996.7	1,989.1	1,987.1	4.7	4.2	-149.50	-61.4	-45.3	142.9	134.3	8.57	16.676	
2,100.0	2,096.4	2,088.3	2,086.0	4.9	4.5	-150.13	-68.2	-46.7	155.6	146.6	9.02	17.262	
2,200.0	2,196.2	2,187.5	2,184.9	5.2	4.7	-150.66	-75.0	-48.0	168.4	158.9	9.46	17.790	
2,300.0	2,295.9	2,286.7	2,283.9	5.5	4.9	-151.12	-81.8	-49.4	181.1	171.2	9.92	18.268	
2,400.0	2,395.7	2,385.8	2,382.8	5.7	5.2	-151.52	-88.5	-50.8	193.9	183.5	10.37	18.703	
2,500.0	2,495.5	2,485.0	2,481.7	6.0	5.4	-151.87	-95.3	-52.2	206.7	195.9	10.82	19.100	
2,600.0	2,595.2	2,584.2	2,580.6	6.2	5.7	-152.17	-102.1	-53.5	219.5	208.2	11.28	19.463	
2,700.0	2,695.0	2,683.4	2,679.6	6.5	5.9	-152.45	-108.9	-54.9	232.3	220.5	11.73	19.798	
2,800.0	2,794.7	2,782.5	2,778.5	6.7	6.2	-152.69	-115.7	-56.3	245.0	232.9	12.19	20.106	
2,900.0	2,894.5	2,881.7	2,877.4	7.0	6.4	-152.92	-122.4	-57.7	257.8	245.2	12.65	20.390	
3,000.0	2,994.2	2,980.9	2,976.4	7.2	6.7	-153.12	-129.2	-59.1	270.6	257.5	13.10	20.654	
3,100.0	3,094.0	3,080.0	3,075.3	7.5	6.9	-153.30	-136.0	-60.4	283.5	269.9	13.56	20.900	
3,200.0	3,193.8	3,179.2	3,174.2	7.8	7.2	-153.46	-142.8	-61.8	296.3	282.2	14.02	21.128	
3,300.0	3,293.5	3,278.4	3,273.2	8.0	7.4	-153.62	-149.6	-63.2	309.1	294.6	14.48	21.342	
3,400.0	3,393.3	3,377.6	3,372.1	8.3	7.7	-153.76	-156.3	-64.6	321.9	306.9	14.94	21.541	
3,500.0	3,493.0	3,476.7	3,471.0	8.5	8.0	-153.89	-163.1	-65.9	334.7	319.3	15.40	21.729	
3,600.0	3,592.8	3,575.9	3,570.0	8.8	8.2	-154.01	-169.9	-67.3	347.5	331.6	15.86	21.905	
3,700.0	3,692.5	3,675.1	3,668.9	9.0	8.5	-154.12	-176.7	-68.7	360.3	344.0	16.33	22.070	
3,800.0	3,792.3	3,774.3	3,767.8	9.3	8.7	-154.22	-183.4	-70.1	373.1	356.4	16.79	22.227	
3,900.0	3,892.1	3,873.4	3,866.8	9.6	9.0	-154.32	-190.2	-71.4	386.0	368.7	17.25	22.374	
4,000.0	3,991.8	3,972.6	3,965.7	9.8	9.2	-154.41	-197.0	-72.8	398.8	381.1	17.71	22.513	
4,100.0	4,091.6	4,071.8	4,064.6	10.1	9.5	-154.50	-203.8	-74.2	411.6	393.4	18.18	22.646	
4,200.0	4,191.3	4,171.0	4,163.6	10.3	9.8	-154.58	-210.6	-75.6	424.4	405.8	18.64	22.771	
4,300.0	4,291.1	4,270.1	4,262.5	10.6	10.0	-154.65	-217.3	-76.9	437.2	418.1	19.10	22.890	
4,400.0	4,390.8	4,369.3	4,361.4	10.9	10.3	-154.72	-224.1	-78.3	450.1	430.5	19.57	23.003	
4,500.0	4,490.6	4,468.5	4,460.3	11.1	10.5	-154.79	-230.9	-79.7	462.9	442.9	20.03	23.111	
4,600.0	4,590.3	4,567.6	4,559.3	11.4	10.8	-154.85	-237.7	-81.1	475.7	455.2	20.49	23.213	
4,700.0	4,690.1	4,666.8	4,658.2	11.6	11.0	-154.91	-244.5	-82.5	488.5	467.6	20.96	23.311	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-3507A - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	88.97	0.6	32.9	32.9				
100.0	100.0	100.0	100.0	0.1	0.1	88.97	0.6	32.9	32.9	32.8	0.19	175.526	
200.0	200.0	200.0	200.0	0.3	0.3	88.97	0.6	32.9	32.9	32.3	0.64	51.698	
300.0	300.0	300.0	300.0	0.5	0.5	88.97	0.6	32.9	32.9	31.9	1.09	30.313	
400.0	400.0	400.0	400.0	0.8	0.8	88.97	0.6	32.9	32.9	31.4	1.54	21.443	
500.0	500.0	500.0	500.0	1.0	1.0	88.97	0.6	32.9	32.9	31.0	1.99	16.589	CC, ES
600.0	600.0	600.0	600.0	1.2	1.2	125.55	0.6	32.9	33.9	31.5	2.43	13.943	
700.0	699.8	699.8	699.8	1.4	1.4	132.06	0.6	32.9	37.2	34.3	2.88	12.915	SF
800.0	799.6	798.7	798.7	1.7	1.6	140.90	-1.0	33.5	43.2	39.9	3.30	13.082	
900.0	899.4	896.9	896.8	1.9	1.8	150.13	-5.8	35.3	52.4	48.7	3.71	14.117	
1,000.0	999.1	995.9	995.5	2.2	2.0	157.56	-12.2	37.6	64.0	59.9	4.13	15.492	
1,100.0	1,098.9	1,094.9	1,094.3	2.4	2.2	162.67	-18.7	40.0	76.4	71.8	4.56	16.764	
1,200.0	1,198.6	1,194.0	1,193.1	2.7	2.4	166.33	-25.2	42.3	89.2	84.2	4.98	17.887	
1,300.0	1,298.4	1,293.0	1,291.9	2.9	2.7	169.08	-31.7	44.7	102.2	96.8	5.42	18.867	
1,400.0	1,398.1	1,392.1	1,390.7	3.2	2.9	171.19	-38.2	47.1	115.4	109.6	5.85	19.721	
1,500.0	1,497.9	1,491.1	1,489.5	3.4	3.1	172.88	-44.7	49.4	128.8	122.5	6.29	20.466	
1,600.0	1,597.6	1,590.2	1,588.3	3.7	3.4	174.24	-51.2	51.8	142.2	135.5	6.73	21.120	
1,700.0	1,697.4	1,689.2	1,687.1	3.9	3.6	175.37	-57.7	54.2	155.7	148.5	7.18	21.696	
1,800.0	1,797.2	1,788.2	1,785.9	4.2	3.9	176.32	-64.2	56.5	169.3	161.6	7.62	22.208	
1,900.0	1,896.9	1,887.3	1,884.7	4.4	4.1	177.13	-70.7	58.9	182.9	174.8	8.07	22.663	
2,000.0	1,996.7	1,986.3	1,983.5	4.7	4.4	177.82	-77.2	61.2	196.5	188.0	8.52	23.072	
2,100.0	2,096.4	2,085.4	2,082.3	4.9	4.6	178.43	-83.7	63.6	210.1	201.2	8.96	23.439	
2,200.0	2,196.2	2,184.4	2,181.1	5.2	4.9	178.96	-90.2	66.0	223.8	214.4	9.41	23.772	
2,300.0	2,295.9	2,283.5	2,279.9	5.5	5.1	179.43	-96.6	68.3	237.5	227.6	9.86	24.074	
2,400.0	2,395.7	2,382.5	2,378.7	5.7	5.4	179.85	-103.1	70.7	251.2	240.9	10.32	24.350	
2,500.0	2,495.5	2,481.5	2,477.5	6.0	5.7	-179.77	-109.6	73.1	264.9	254.1	10.77	24.602	
2,600.0	2,595.2	2,580.6	2,576.3	6.2	5.9	-179.43	-116.1	75.4	278.6	267.4	11.22	24.834	
2,700.0	2,695.0	2,679.6	2,675.1	6.5	6.2	-179.13	-122.6	77.8	292.3	280.7	11.67	25.048	
2,800.0	2,794.7	2,778.7	2,773.9	6.7	6.4	-178.85	-129.1	80.1	306.1	294.0	12.12	25.245	
2,900.0	2,894.5	2,877.7	2,872.7	7.0	6.7	-178.59	-135.6	82.5	319.8	307.2	12.58	25.428	
3,000.0	2,994.2	2,976.7	2,971.5	7.2	6.9	-178.36	-142.1	84.9	333.6	320.5	13.03	25.598	
3,100.0	3,094.0	3,075.8	3,070.3	7.5	7.2	-178.14	-148.6	87.2	347.3	333.8	13.48	25.757	
3,200.0	3,193.8	3,174.8	3,169.1	7.8	7.5	-177.94	-155.1	89.6	361.1	347.1	13.94	25.905	
3,300.0	3,293.5	3,273.9	3,267.9	8.0	7.7	-177.76	-161.6	92.0	374.8	360.4	14.39	26.043	
3,400.0	3,393.3	3,372.9	3,366.7	8.3	8.0	-177.59	-168.1	94.3	388.6	373.8	14.85	26.173	
3,500.0	3,493.0	3,472.0	3,465.5	8.5	8.2	-177.43	-174.6	96.7	402.4	387.1	15.30	26.295	
3,600.0	3,592.8	3,571.0	3,564.3	8.8	8.5	-177.28	-181.0	99.0	416.1	400.4	15.76	26.410	
3,700.0	3,692.5	3,670.0	3,663.1	9.0	8.7	-177.14	-187.5	101.4	429.9	413.7	16.21	26.519	
3,800.0	3,792.3	3,769.1	3,761.9	9.3	9.0	-177.00	-194.0	103.8	443.7	427.0	16.67	26.621	
3,900.0	3,892.1	3,868.1	3,860.7	9.6	9.3	-176.88	-200.5	106.1	457.5	440.4	17.12	26.718	
4,000.0	3,991.8	3,967.2	3,959.5	9.8	9.5	-176.77	-207.0	108.5	471.3	453.7	17.58	26.810	
4,100.0	4,091.6	4,066.2	4,058.3	10.1	9.8	-176.66	-213.5	110.9	485.0	467.0	18.03	26.897	
4,200.0	4,191.3	4,165.2	4,157.1	10.3	10.0	-176.55	-220.0	113.2	498.8	480.3	18.49	26.979	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-3508B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	137.53	-73.8	67.6	100.1				
100.0	100.0	100.0	100.0	0.1	0.1	137.53	-73.8	67.6	100.1	99.9	0.19	533.103	
200.0	200.0	200.0	200.0	0.3	0.3	137.53	-73.8	67.6	100.1	99.4	0.64	157.016	
300.0	300.0	300.0	300.0	0.5	0.5	137.53	-73.8	67.6	100.1	99.0	1.09	92.066	
400.0	400.0	400.0	400.0	0.8	0.8	137.53	-73.8	67.6	100.1	98.5	1.54	65.127	
500.0	500.0	500.0	500.0	1.0	1.0	137.53	-73.8	67.6	100.1	98.1	1.99	50.384	CC, ES
600.0	600.0	600.0	600.0	1.2	1.2	171.79	-73.8	67.6	101.8	99.3	2.44	41.792	
700.0	699.8	699.8	699.8	1.4	1.4	172.18	-73.8	67.6	107.0	104.1	2.88	37.078	
800.0	799.6	799.6	799.6	1.7	1.7	172.66	-73.8	67.6	113.9	110.5	3.33	34.193	
900.0	899.4	899.4	899.4	1.9	1.9	173.08	-73.8	67.6	120.8	117.0	3.78	31.973	
1,000.0	999.1	999.1	999.1	2.2	2.1	173.46	-73.8	67.6	127.7	123.5	4.23	30.215	
1,100.0	1,098.9	1,098.9	1,098.9	2.4	2.3	173.80	-73.8	67.6	134.7	130.0	4.68	28.791	
1,200.0	1,198.6	1,194.0	1,194.0	2.7	2.5	174.18	-75.1	68.4	143.2	138.1	5.10	28.104	SF
1,300.0	1,298.4	1,288.4	1,288.3	2.9	2.7	174.69	-79.1	70.8	155.0	149.5	5.50	28.193	
1,400.0	1,398.1	1,386.8	1,386.5	3.2	2.9	175.24	-84.9	74.3	168.8	162.9	5.91	28.562	
1,500.0	1,497.9	1,485.9	1,485.2	3.4	3.1	175.71	-90.8	77.9	182.6	176.3	6.32	28.879	
1,600.0	1,597.6	1,584.9	1,584.0	3.7	3.3	176.12	-96.8	81.5	196.5	189.7	6.74	29.136	
1,700.0	1,697.4	1,683.9	1,682.8	3.9	3.5	176.47	-102.7	85.1	210.3	203.2	7.17	29.346	
1,800.0	1,797.2	1,782.9	1,781.6	4.2	3.7	176.78	-108.6	88.7	224.2	216.6	7.60	29.519	
1,900.0	1,896.9	1,882.0	1,880.4	4.4	4.0	177.05	-114.5	92.2	238.1	230.1	8.03	29.663	
2,000.0	1,996.7	1,981.0	1,979.2	4.7	4.2	177.29	-120.4	95.8	252.0	243.5	8.46	29.782	
2,100.0	2,096.4	2,080.0	2,078.0	4.9	4.4	177.51	-126.3	99.4	265.8	256.9	8.90	29.883	
2,200.0	2,196.2	2,179.1	2,176.8	5.2	4.7	177.71	-132.2	103.0	279.7	270.4	9.33	29.969	
2,300.0	2,295.9	2,278.1	2,275.5	5.5	4.9	177.88	-138.1	106.6	293.6	283.8	9.77	30.042	
2,400.0	2,395.7	2,377.1	2,374.3	5.7	5.1	178.04	-144.0	110.2	307.5	297.3	10.21	30.104	
2,500.0	2,495.5	2,476.1	2,473.1	6.0	5.4	178.19	-149.9	113.7	321.4	310.7	10.66	30.158	
2,600.0	2,595.2	2,575.2	2,571.9	6.2	5.6	178.33	-155.8	117.3	335.3	324.2	11.10	30.204	
2,700.0	2,695.0	2,674.2	2,670.7	6.5	5.9	178.45	-161.7	120.9	349.2	337.6	11.54	30.245	
2,800.0	2,794.7	2,773.2	2,769.5	6.7	6.1	178.56	-167.6	124.5	363.1	351.1	11.99	30.280	
2,900.0	2,894.5	2,872.3	2,868.3	7.0	6.4	178.67	-173.5	128.1	377.0	364.5	12.44	30.311	
3,000.0	2,994.2	2,971.3	2,967.0	7.2	6.6	178.77	-179.4	131.7	390.9	378.0	12.88	30.338	
3,100.0	3,094.0	3,070.3	3,065.8	7.5	6.9	178.86	-185.3	135.2	404.8	391.4	13.33	30.362	
3,200.0	3,193.8	3,169.3	3,164.6	7.8	7.1	178.95	-191.2	138.8	418.7	404.9	13.78	30.384	
3,300.0	3,293.5	3,268.4	3,263.4	8.0	7.4	179.03	-197.1	142.4	432.6	418.3	14.23	30.402	
3,400.0	3,393.3	3,367.4	3,362.2	8.3	7.6	179.10	-203.1	146.0	446.5	431.8	14.68	30.419	
3,500.0	3,493.0	3,466.4	3,461.0	8.5	7.9	179.17	-209.0	149.6	460.4	445.2	15.13	30.434	
3,600.0	3,592.8	3,565.4	3,559.8	8.8	8.1	179.24	-214.9	153.2	474.3	458.7	15.58	30.447	
3,700.0	3,692.5	3,664.5	3,658.6	9.0	8.4	179.30	-220.8	156.7	488.2	472.1	16.03	30.459	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
6,000.0	5,610.0	6,262.0	5,675.0	21.9	23.3	-99.93	806.6	-998.2	491.6	448.8	42.84	11.477	
6,100.0	5,610.0	6,328.4	5,675.0	23.5	24.3	-100.57	872.8	-993.1	435.5	389.6	45.91	9.485	
6,200.0	5,610.0	6,400.0	5,675.0	25.2	25.3	-101.33	944.4	-990.2	386.9	337.8	49.08	7.883	
6,300.0	5,610.0	6,483.0	5,675.0	26.9	26.6	-102.26	1,027.3	-989.7	346.1	293.7	52.38	6.608	
6,400.0	5,610.0	6,576.2	5,675.0	28.6	28.1	-103.40	1,120.6	-989.7	310.8	255.0	55.75	5.574	
6,500.0	5,610.0	6,671.2	5,675.0	30.3	29.6	-104.63	1,215.6	-989.7	280.4	221.4	59.04	4.749	
6,600.0	5,610.0	6,767.7	5,675.0	32.0	31.3	-105.90	1,312.1	-989.7	255.1	192.8	62.23	4.099	
6,700.0	5,610.0	6,865.5	5,675.0	33.7	32.9	-107.12	1,409.8	-989.7	234.8	169.5	65.28	3.597	
6,800.0	5,610.0	6,964.2	5,675.0	35.4	34.6	-108.20	1,508.5	-989.7	219.6	151.4	68.19	3.220	
6,900.0	5,610.0	7,063.6	5,675.0	37.0	36.3	-109.02	1,607.9	-989.7	209.4	138.4	71.01	2.949	
7,000.0	5,610.0	7,163.4	5,675.0	38.6	38.1	-109.47	1,707.8	-989.7	204.1	130.4	73.77	2.767	
7,056.0	5,610.0	7,219.4	5,675.0	39.4	39.1	-109.54	1,763.7	-989.7	203.4	128.1	75.29	2.701	
7,100.0	5,610.0	7,263.4	5,675.0	40.1	39.8	-109.54	1,807.8	-989.7	203.4	126.6	76.75	2.650	
7,200.0	5,610.0	7,363.4	5,675.0	41.7	41.6	-109.54	1,907.8	-989.7	203.4	123.3	80.04	2.541	
7,300.0	5,610.0	7,463.4	5,675.0	43.2	43.4	-109.54	2,007.8	-989.7	203.4	120.0	83.37	2.439	
7,400.0	5,610.0	7,563.4	5,675.0	44.8	45.2	-109.54	2,107.8	-989.7	203.4	116.6	86.73	2.345	
7,500.0	5,610.0	7,663.4	5,675.0	46.5	47.0	-109.54	2,207.8	-989.7	203.4	113.2	90.11	2.257	
7,600.0	5,610.0	7,763.4	5,675.0	48.1	48.8	-109.54	2,307.8	-989.6	203.4	109.8	93.51	2.175	
7,700.0	5,610.0	7,863.4	5,675.0	49.8	50.7	-109.54	2,407.8	-989.6	203.4	106.4	96.93	2.098	
7,800.0	5,610.0	7,963.4	5,675.0	51.5	52.5	-109.54	2,507.8	-989.6	203.3	103.0	100.37	2.026	
7,900.0	5,610.0	8,063.4	5,675.0	53.2	54.3	-109.54	2,607.8	-989.6	203.3	99.5	103.82	1.959	
8,000.0	5,610.0	8,163.4	5,675.0	54.9	56.2	-109.54	2,707.8	-989.6	203.3	96.1	107.29	1.895	
8,100.0	5,610.0	8,263.4	5,675.0	56.6	58.0	-109.54	2,807.8	-989.6	203.3	92.6	110.77	1.836	
8,200.0	5,610.0	8,363.4	5,675.0	58.4	59.9	-109.54	2,907.8	-989.6	203.3	89.1	114.25	1.780	
8,300.0	5,610.0	8,463.4	5,675.0	60.1	61.7	-109.54	3,007.8	-989.6	203.3	85.6	117.75	1.727	
8,400.0	5,610.0	8,563.4	5,675.0	61.9	63.6	-109.54	3,107.8	-989.6	203.3	82.1	121.26	1.677	
8,500.0	5,610.0	8,663.4	5,675.0	63.6	65.5	-109.54	3,207.8	-989.6	203.3	78.5	124.78	1.630	
8,600.0	5,610.0	8,763.4	5,675.0	65.4	67.3	-109.54	3,307.8	-989.6	203.3	75.0	128.30	1.585	
8,700.0	5,610.0	8,863.4	5,675.0	67.2	69.2	-109.54	3,407.8	-989.6	203.3	71.5	131.83	1.542	
8,800.0	5,610.0	8,963.4	5,675.0	69.0	71.1	-109.54	3,507.8	-989.6	203.3	67.9	135.37	1.502	
8,900.0	5,610.0	9,063.4	5,675.0	70.8	72.9	-109.54	3,607.8	-989.6	203.3	64.4	138.91	1.464	Level 3
9,000.0	5,610.0	9,163.4	5,675.0	72.6	74.8	-109.54	3,707.8	-989.5	203.3	60.9	142.46	1.427	Level 3
9,100.0	5,610.0	9,263.4	5,675.0	74.4	76.7	-109.54	3,807.8	-989.5	203.3	57.3	146.01	1.392	Level 3
9,200.0	5,610.0	9,363.4	5,675.0	76.2	78.6	-109.54	3,907.8	-989.5	203.3	53.7	149.57	1.359	Level 3
9,300.0	5,610.0	9,463.4	5,675.0	78.0	80.5	-109.54	4,007.8	-989.5	203.3	50.2	153.13	1.328	Level 3
9,400.0	5,610.0	9,563.4	5,675.0	79.8	82.3	-109.54	4,107.8	-989.5	203.3	46.6	156.70	1.297	Level 3
9,500.0	5,610.0	9,663.4	5,675.0	81.7	84.2	-109.55	4,207.8	-989.5	203.3	43.0	160.27	1.268	Level 3
9,600.0	5,610.0	9,763.4	5,675.0	83.5	86.1	-109.55	4,307.8	-989.5	203.3	39.4	163.85	1.241	Level 2
9,700.0	5,610.0	9,863.4	5,675.0	85.3	88.0	-109.55	4,407.8	-989.5	203.3	35.9	167.42	1.214	Level 2
9,800.0	5,610.0	9,963.4	5,675.0	87.2	89.9	-109.55	4,507.8	-989.5	203.3	32.3	171.00	1.189	Level 2
9,900.0	5,610.0	10,063.4	5,675.0	89.0	91.8	-109.55	4,607.8	-989.5	203.3	28.7	174.58	1.164	Level 2
10,000.0	5,610.0	10,163.4	5,675.0	90.9	93.7	-109.55	4,707.8	-989.5	203.3	25.1	178.17	1.141	Level 2
10,100.0	5,610.0	10,263.4	5,675.0	92.7	95.6	-109.55	4,807.8	-989.5	203.3	21.5	181.76	1.118	Level 2
10,200.0	5,610.0	10,363.4	5,675.0	94.6	97.4	-109.55	4,907.8	-989.5	203.3	17.9	185.35	1.097	Level 2
10,300.0	5,610.0	10,463.4	5,675.0	96.4	99.3	-109.55	5,007.8	-989.5	203.3	14.3	188.94	1.076	Level 2
10,400.0	5,610.0	10,563.4	5,675.0	98.3	101.2	-109.55	5,107.8	-989.4	203.3	10.7	192.54	1.056	Level 2
10,500.0	5,610.0	10,663.4	5,675.0	100.1	103.1	-109.55	5,207.8	-989.4	203.3	7.1	196.13	1.036	Level 2
10,600.0	5,610.0	10,763.4	5,675.0	102.0	105.0	-109.55	5,307.8	-989.4	203.3	3.5	199.73	1.018	Level 2
10,700.0	5,610.0	10,863.4	5,675.0	103.9	106.9	-109.55	5,407.8	-989.4	203.3	-0.1	203.33	1.000	Level 1
10,800.0	5,610.0	10,963.4	5,675.0	105.7	108.8	-109.55	5,507.8	-989.4	203.3	-3.7	206.93	0.982	Level 1
10,900.0	5,610.0	11,063.4	5,675.0	107.6	110.7	-109.55	5,607.8	-989.4	203.3	-7.3	210.54	0.965	Level 1
11,000.0	5,610.0	11,163.4	5,675.0	109.5	112.6	-109.55	5,707.8	-989.4	203.3	-10.9	214.14	0.949	Level 1

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,100.0	5,610.0	11,263.4	5,675.0	111.3	114.5	-109.55	5,807.8	-989.4	203.3	-14.5	217.75	0.933	Level 1
11,200.0	5,610.0	11,363.4	5,675.0	113.2	116.4	-109.55	5,907.8	-989.4	203.2	-18.1	221.35	0.918	Level 1
11,300.0	5,610.0	11,463.4	5,675.0	115.1	118.3	-109.55	6,007.8	-989.4	203.2	-21.7	224.96	0.903	Level 1
11,400.0	5,610.0	11,563.4	5,675.0	117.0	120.2	-109.55	6,107.8	-989.4	203.2	-25.3	228.57	0.889	Level 1
11,500.0	5,610.0	11,663.4	5,675.0	118.8	122.1	-109.55	6,207.8	-989.4	203.2	-28.9	232.18	0.875	Level 1
11,600.0	5,610.0	11,763.4	5,675.0	120.7	124.0	-109.55	6,307.8	-989.4	203.2	-32.6	235.80	0.862	Level 1
11,700.0	5,610.0	11,863.4	5,675.0	122.6	125.9	-109.55	6,407.8	-989.4	203.2	-36.2	239.41	0.849	Level 1
11,800.0	5,610.0	11,963.4	5,675.0	124.5	127.8	-109.55	6,507.8	-989.4	203.2	-39.8	243.02	0.836	Level 1
11,900.0	5,610.0	12,063.4	5,675.0	126.4	129.7	-109.55	6,607.8	-989.3	203.2	-43.4	246.64	0.824	Level 1
12,000.0	5,610.0	12,163.4	5,675.0	128.2	131.6	-109.55	6,707.8	-989.3	203.2	-47.0	250.26	0.812	Level 1
12,100.0	5,610.0	12,263.4	5,675.0	130.1	133.5	-109.55	6,807.8	-989.3	203.2	-50.7	253.87	0.800	Level 1
12,200.0	5,610.0	12,363.4	5,675.0	132.0	135.4	-109.55	6,907.8	-989.3	203.2	-54.3	257.49	0.789	Level 1
12,300.0	5,610.0	12,463.4	5,675.0	133.9	137.4	-109.55	7,007.8	-989.3	203.2	-57.9	261.11	0.778	Level 1
12,400.0	5,610.0	12,563.4	5,675.0	135.8	139.3	-109.55	7,107.8	-989.3	203.2	-61.5	264.73	0.768	Level 1
12,500.0	5,610.0	12,663.4	5,675.0	137.7	141.2	-109.55	7,207.8	-989.3	203.2	-65.1	268.35	0.757	Level 1
12,600.0	5,610.0	12,763.4	5,675.0	139.5	143.1	-109.55	7,307.8	-989.3	203.2	-68.8	271.97	0.747	Level 1
12,700.0	5,610.0	12,863.4	5,675.0	141.4	145.0	-109.55	7,407.8	-989.3	203.2	-72.4	275.59	0.737	Level 1
12,800.0	5,610.0	12,963.4	5,675.0	143.3	146.9	-109.55	7,507.8	-989.3	203.2	-76.0	279.21	0.728	Level 1
12,900.0	5,610.0	13,063.4	5,675.0	145.2	148.8	-109.55	7,607.8	-989.3	203.2	-79.6	282.84	0.718	Level 1
13,000.0	5,610.0	13,163.4	5,675.0	147.1	150.7	-109.55	7,707.8	-989.3	203.2	-83.3	286.46	0.709	Level 1
13,100.0	5,610.0	13,263.4	5,675.0	149.0	152.6	-109.55	7,807.8	-989.3	203.2	-86.9	290.08	0.700	Level 1
13,200.0	5,610.0	13,363.4	5,675.0	150.9	154.5	-109.55	7,907.8	-989.3	203.2	-90.5	293.71	0.692	Level 1
13,300.0	5,610.0	13,463.4	5,675.0	152.8	156.2	-109.55	8,007.8	-989.2	203.2	-93.9	297.12	0.684	Level 1
13,331.7	5,610.0	13,495.1	5,675.0	153.4	156.7	-109.55	8,039.5	-989.2	203.2	-95.0	298.17	0.681	Level 1, CC
13,341.6	5,610.0	13,502.0	5,675.0	153.6	156.8	-109.55	8,046.4	-989.2	203.2	-95.2	298.44	0.681	Level 1, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor 26-3524H (Existing) - Existing - SURVEYs

Offset Site Error: 0.0 ft

Survey Program: 113-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	178.92	-125.7	2.4	125.7				
100.0	100.0	99.0	99.0	0.1	0.1	179.23	-126.0	1.7	126.0	125.8	0.19	649.923	
200.0	200.0	198.8	198.7	0.3	0.3	-179.97	-126.9	-0.1	126.9	126.2	0.62	203.677	
300.0	300.0	298.7	298.7	0.5	0.5	-179.24	-127.8	-1.7	127.8	126.8	1.05	121.826	
400.0	400.0	398.9	398.8	0.8	0.7	-178.55	-128.7	-3.3	128.7	127.2	1.48	86.901	
500.0	500.0	498.9	498.9	1.0	0.9	-177.73	-129.4	-5.1	129.5	127.6	1.92	67.401	
600.0	600.0	599.0	598.9	1.2	1.1	-143.57	-130.2	-6.2	131.8	129.4	2.36	55.879	
700.0	699.8	699.3	699.2	1.4	1.3	-144.52	-130.6	-6.9	136.4	133.6	2.79	48.865	
800.0	799.6	799.3	799.2	1.7	1.6	-145.76	-131.0	-7.9	142.6	139.3	3.23	44.131	
900.0	899.4	899.3	899.2	1.9	1.8	-147.02	-130.9	-8.6	148.3	144.6	3.67	40.433	
1,000.0	999.1	998.9	998.8	2.2	2.0	-148.23	-131.2	-9.1	154.4	150.3	4.11	37.601	
1,100.0	1,098.9	1,098.6	1,098.5	2.4	2.2	-149.12	-131.3	-10.3	160.4	155.8	4.55	35.234	
1,200.0	1,198.6	1,197.6	1,197.4	2.7	2.4	-149.55	-131.8	-12.6	166.8	161.8	5.00	33.341	
1,300.0	1,298.4	1,297.9	1,297.7	2.9	2.6	-149.71	-132.6	-15.6	173.4	168.0	5.46	31.786	
1,400.0	1,398.1	1,397.8	1,397.5	3.2	2.8	-149.62	-133.1	-19.4	179.7	173.8	5.91	30.385	
1,500.0	1,497.9	1,499.1	1,498.7	3.4	3.1	-149.29	-133.4	-24.0	185.7	179.4	6.37	29.142	
1,600.0	1,597.6	1,596.9	1,596.5	3.7	3.3	-149.28	-133.3	-27.5	191.4	184.6	6.82	28.078	
1,700.0	1,697.4	1,694.1	1,693.7	3.9	3.5	-149.98	-134.8	-28.5	198.9	191.7	7.25	27.423	
1,800.0	1,797.2	1,792.7	1,792.2	4.2	3.7	-150.54	-136.9	-29.8	207.0	199.3	7.70	26.877	
1,900.0	1,896.9	1,894.9	1,894.3	4.4	3.9	-151.20	-139.1	-30.6	215.2	207.0	8.15	26.409	
2,000.0	1,996.7	2,001.3	2,000.8	4.7	4.1	-152.79	-138.5	-28.1	221.0	212.5	8.59	25.733	
2,100.0	2,096.4	2,099.6	2,099.0	4.9	4.3	-154.00	-136.7	-26.7	225.6	216.6	9.02	25.013	
2,200.0	2,196.2	2,199.3	2,198.7	5.2	4.5	-155.66	-134.9	-23.3	230.7	221.2	9.44	24.434	
2,300.0	2,295.9	2,292.0	2,291.3	5.5	4.7	-157.18	-134.8	-19.6	237.7	227.9	9.85	24.126	
2,400.0	2,395.7	2,395.6	2,394.8	5.7	4.9	-158.58	-135.6	-16.2	245.6	235.3	10.29	23.864	
2,500.0	2,495.5	2,503.0	2,502.1	6.0	5.1	-160.03	-133.4	-13.0	250.8	240.1	10.74	23.357	
2,600.0	2,595.2	2,608.5	2,607.5	6.2	5.4	-160.12	-130.1	-16.0	253.7	242.5	11.20	22.654	
2,700.0	2,695.0	2,708.8	2,707.5	6.5	5.6	-159.81	-125.5	-21.0	254.6	242.9	11.65	21.851	
2,800.0	2,794.7	2,801.3	2,800.0	6.7	5.8	-159.86	-123.1	-23.7	257.8	245.7	12.08	21.348	
2,900.0	2,894.5	2,898.9	2,897.5	7.0	6.0	-159.95	-122.2	-25.9	262.9	250.4	12.51	21.013	
3,000.0	2,994.2	2,996.7	2,995.4	7.2	6.2	-160.54	-121.0	-25.8	268.4	255.5	12.94	20.736	
3,100.0	3,094.0	3,094.6	3,093.2	7.5	6.4	-160.99	-121.3	-25.8	275.2	261.8	13.38	20.570	
3,200.0	3,193.8	3,191.0	3,189.6	7.8	6.6	-161.13	-122.1	-27.2	282.3	268.5	13.81	20.432	
3,300.0	3,293.5	3,286.7	3,285.3	8.0	6.8	-161.81	-123.9	-25.3	291.3	277.0	14.24	20.454	
3,400.0	3,393.3	3,393.2	3,391.8	8.3	7.0	-162.64	-125.6	-22.8	300.1	285.4	14.68	20.436	
3,500.0	3,493.0	3,496.0	3,494.5	8.5	7.2	-163.19	-124.9	-22.2	306.3	291.1	15.12	20.249	
3,600.0	3,592.8	3,594.5	3,593.1	8.8	7.4	-163.81	-124.1	-21.0	312.6	297.1	15.56	20.097	
3,700.0	3,692.5	3,698.8	3,697.3	9.0	7.6	-164.34	-123.2	-20.3	318.7	302.7	16.00	19.916	
3,800.0	3,792.3	3,800.3	3,798.8	9.3	7.8	-164.73	-121.3	-20.6	323.5	307.1	16.44	19.675	
3,900.0	3,892.1	3,902.5	3,901.0	9.6	8.1	-165.18	-118.7	-20.7	327.8	311.0	16.89	19.414	
4,000.0	3,991.8	3,999.1	3,997.5	9.8	8.3	-165.57	-116.5	-21.0	332.3	315.0	17.32	19.188	
4,100.0	4,091.6	4,090.4	4,088.8	10.1	8.4	-165.94	-115.9	-20.5	338.6	320.9	17.74	19.093	
4,200.0	4,191.3	4,192.3	4,190.7	10.3	8.7	-166.44	-115.9	-19.2	345.9	327.7	18.17	19.030	
4,300.0	4,291.1	4,294.1	4,292.5	10.6	8.9	-166.84	-115.3	-18.5	352.4	333.8	18.62	18.928	
4,400.0	4,390.8	4,391.9	4,390.3	10.9	9.1	-167.11	-115.2	-18.5	359.0	340.0	19.05	18.843	
4,500.0	4,490.6	4,491.4	4,489.8	11.1	9.3	-167.26	-115.7	-18.9	366.2	346.7	19.50	18.782	
4,600.0	4,590.3	4,593.5	4,591.9	11.4	9.5	-167.48	-115.4	-19.2	372.6	352.7	19.94	18.688	
4,700.0	4,690.1	4,690.8	4,689.2	11.6	9.7	-167.75	-115.2	-18.9	379.3	359.0	20.37	18.624	
4,800.0	4,789.9	4,788.3	4,786.7	11.9	9.9	-168.06	-115.4	-18.2	386.6	365.9	20.80	18.592	
4,900.0	4,889.6	4,888.4	4,886.8	12.1	10.1	-168.38	-115.9	-17.1	394.4	373.2	21.23	18.576	
5,000.0	4,989.4	4,982.5	4,981.0	12.4	10.3	-168.63	-116.4	-16.4	402.0	380.4	21.66	18.563	SF
5,100.0	5,089.1	5,067.0	5,065.3	12.7	10.5	-168.64	-119.9	-16.2	412.7	390.6	22.07	18.702	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor 26-3524H (Existing) - Existing - SURVEYs

Survey Program: 113-ISCWSA MWD

Offset Site Error: 0.0 ft

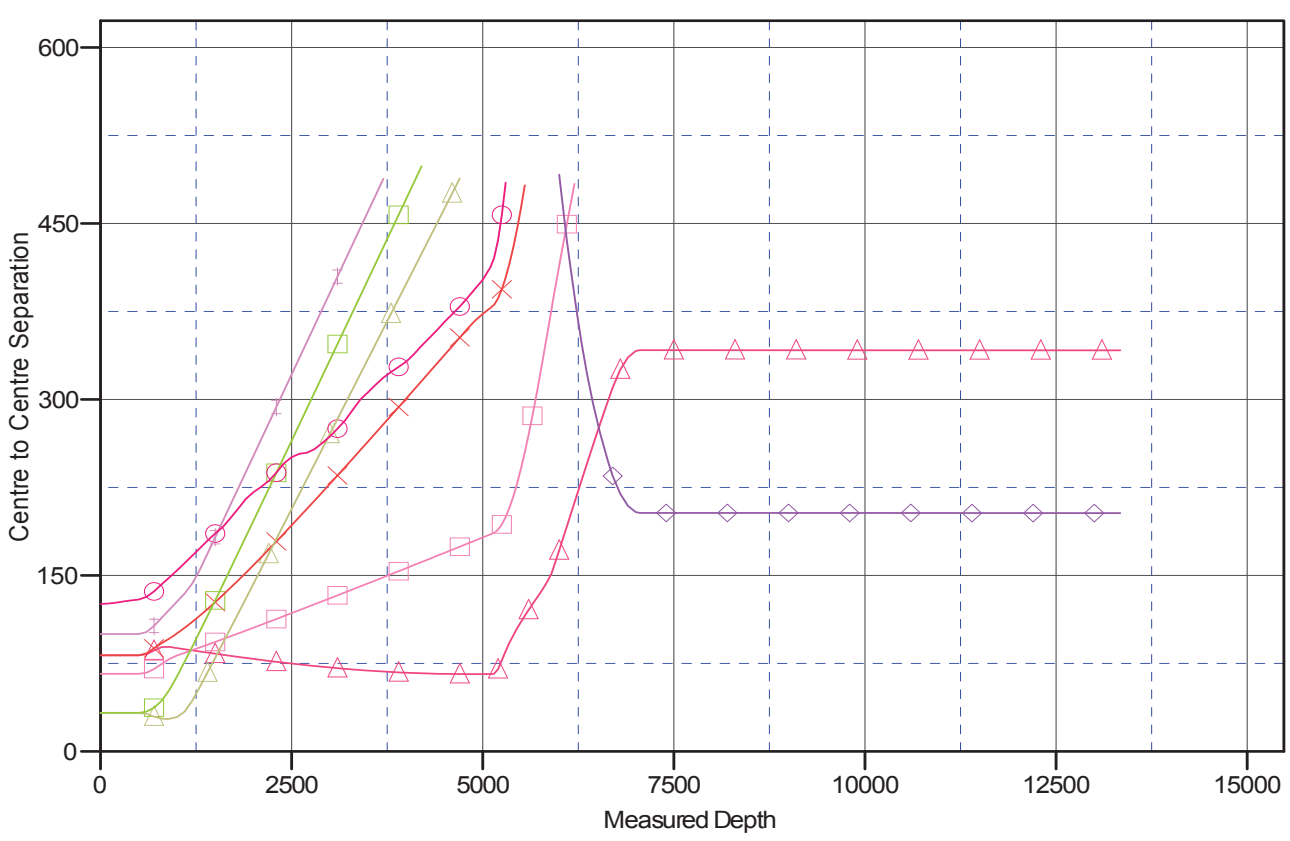
Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,136.4	5,125.4	5,079.9	5,078.2	12.7	10.5	-168.60	-121.2	-16.1	418.4	396.3	22.18	18.865	
5,150.0	5,139.0	5,086.6	5,084.8	12.8	10.5	-168.52	-122.1	-16.1	421.2	399.0	22.20	18.967	
5,200.0	5,188.5	5,110.7	5,108.5	12.9	10.6	-168.08	-126.0	-15.8	435.8	413.7	22.19	19.643	
5,250.0	5,237.0	5,130.0	5,127.4	13.1	10.6	-167.47	-130.2	-15.6	457.4	435.4	22.00	20.793	
5,300.0	5,284.2	5,162.0	5,158.3	13.4	10.7	-166.61	-138.6	-15.0	484.8	463.2	21.67	22.371	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2305A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4754.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26K-2305A	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4754.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Razor #26K-2305A
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.08°



LEGEND

- Razor #26K-2306B, HZ, Plan #1 V0
- Razor #26K-2307A, HZ, Plan #1 V0
- Razor #26K-2308B, HZ, Plan #1 V0
- Razor #26K-3505A, HZ, Plan #1 V0
- Razor #26K-3507A, HZ, Plan #1 V0
- Razor #26K-3508B, HZ, Plan #1 V0
- Razor #26L-2304B, HZ, Plan #1 V0
- Razor 26-3524H (Existing), Existing, SURVEYs