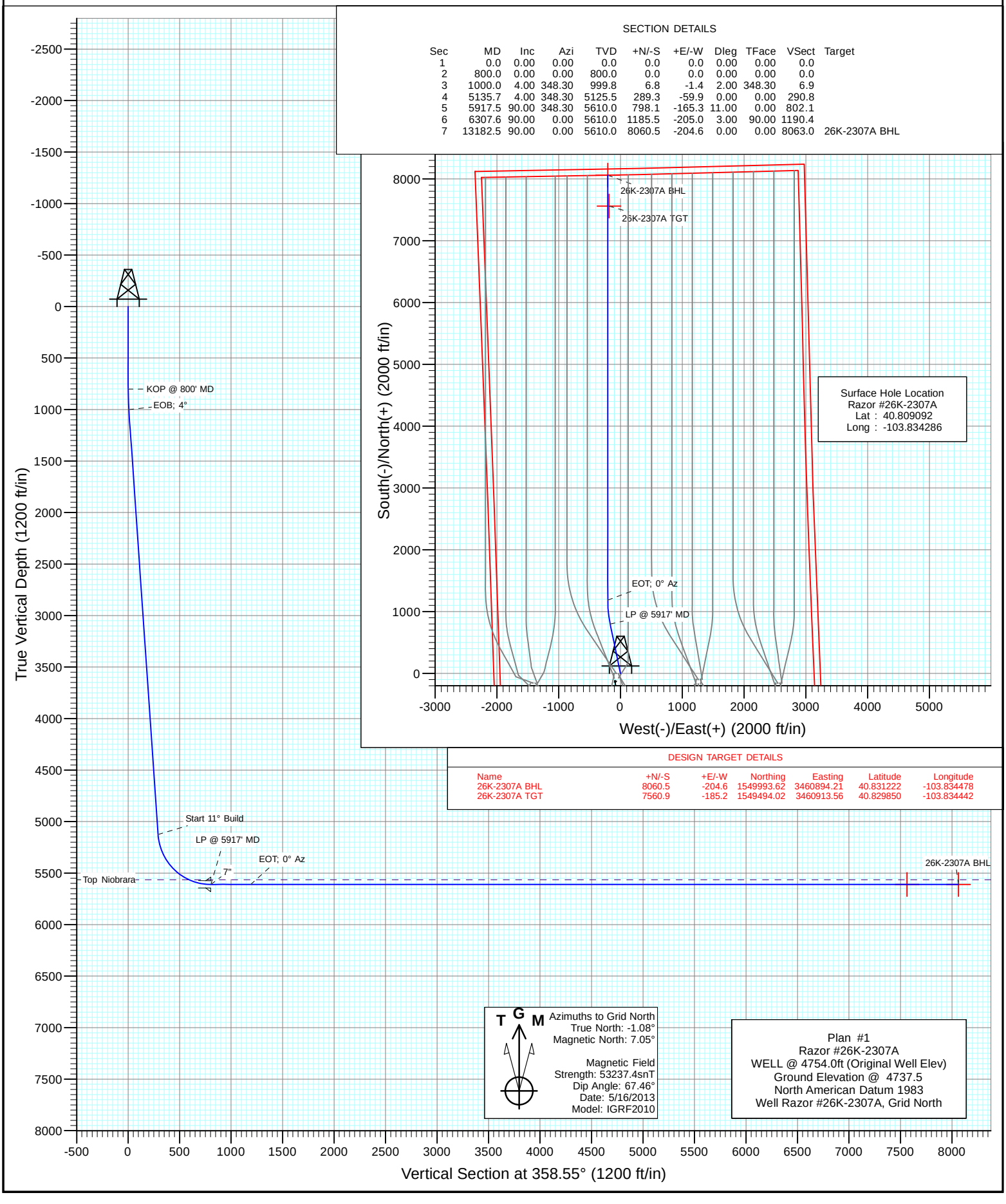
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26K-2307A
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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1000.0	4.00	348.30	999.8	6.8	-1.4	2.00	348.30	6.9	
4	5135.7	4.00	348.30	5125.5	289.3	-59.9	0.00	0.00	290.8	
5	5917.5	90.00	348.30	5610.0	798.1	-165.3	11.00	0.00	802.1	
6	6307.6	90.00	0.00	5610.0	1185.5	-205.0	3.00	90.00	1190.4	
7	13182.5	90.00	0.00	5610.0	8060.5	-204.6	0.00	0.00	8063.0	26K-2307A BHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
26K-2307A BHL	8060.5	-204.6	1549993.62	3460894.21	40.831222	-103.834478
26K-2307A TGT	7560.9	-185.2	1549494.02	3460913.56	40.829850	-103.834442

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-2307A
WELL @ 4754.0ft (Original Well Elev)
Ground Elevation @ 4737.5
North American Datum 1983
Well Razor #26K-2307A, Grid North

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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-2307A

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,541,933.17 ft	**Latitude:**	40.809092
	+E/-W	0.0 ft	**Easting:**	3,461,098.78 ft	**Longitude:**	-103.834286
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	358.55

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	4.00	348.30	999.8	6.8	-1.4	2.00	2.00	0.00	348.30	
5,135.7	4.00	348.30	5,125.5	289.3	-59.9	0.00	0.00	0.00	0.00	
5,917.5	90.00	348.30	5,610.0	798.1	-165.3	11.00	11.00	0.00	0.00	
6,307.6	90.00	0.00	5,610.0	1,185.5	-205.0	3.00	0.00	3.00	90.00	
13,182.5	90.00	0.00	5,610.0	8,060.5	-204.6	0.00	0.00	0.00	0.00	26K-2307A BHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	KOP @ 800' MD
900.0	2.00	348.30	900.0	1.7	-0.4	1.7	2.00	2.00	
1,000.0	4.00	348.30	999.8	6.8	-1.4	6.9	2.00	2.00	EOB; 4°
1,100.0	4.00	348.30	1,099.6	13.7	-2.8	13.7	0.00	0.00	
1,200.0	4.00	348.30	1,199.4	20.5	-4.2	20.6	0.00	0.00	
1,300.0	4.00	348.30	1,299.1	27.3	-5.7	27.5	0.00	0.00	
1,400.0	4.00	348.30	1,398.9	34.2	-7.1	34.3	0.00	0.00	
1,500.0	4.00	348.30	1,498.6	41.0	-8.5	41.2	0.00	0.00	
1,600.0	4.00	348.30	1,598.4	47.8	-9.9	48.1	0.00	0.00	
1,700.0	4.00	348.30	1,698.1	54.6	-11.3	54.9	0.00	0.00	
1,800.0	4.00	348.30	1,797.9	61.5	-12.7	61.8	0.00	0.00	
1,900.0	4.00	348.30	1,897.6	68.3	-14.1	68.6	0.00	0.00	
2,000.0	4.00	348.30	1,997.4	75.1	-15.6	75.5	0.00	0.00	
2,100.0	4.00	348.30	2,097.2	82.0	-17.0	82.4	0.00	0.00	
2,200.0	4.00	348.30	2,196.9	88.8	-18.4	89.2	0.00	0.00	
2,300.0	4.00	348.30	2,296.7	95.6	-19.8	96.1	0.00	0.00	
2,400.0	4.00	348.30	2,396.4	102.5	-21.2	103.0	0.00	0.00	
2,500.0	4.00	348.30	2,496.2	109.3	-22.6	109.8	0.00	0.00	
2,600.0	4.00	348.30	2,595.9	116.1	-24.0	116.7	0.00	0.00	
2,700.0	4.00	348.30	2,695.7	123.0	-25.5	123.6	0.00	0.00	
2,800.0	4.00	348.30	2,795.5	129.8	-26.9	130.4	0.00	0.00	
2,900.0	4.00	348.30	2,895.2	136.6	-28.3	137.3	0.00	0.00	
3,000.0	4.00	348.30	2,995.0	143.4	-29.7	144.2	0.00	0.00	
3,100.0	4.00	348.30	3,094.7	150.3	-31.1	151.0	0.00	0.00	
3,200.0	4.00	348.30	3,194.5	157.1	-32.5	157.9	0.00	0.00	
3,300.0	4.00	348.30	3,294.2	163.9	-34.0	164.7	0.00	0.00	
3,400.0	4.00	348.30	3,394.0	170.8	-35.4	171.6	0.00	0.00	
3,500.0	4.00	348.30	3,493.7	177.6	-36.8	178.5	0.00	0.00	
3,600.0	4.00	348.30	3,593.5	184.4	-38.2	185.3	0.00	0.00	
3,700.0	4.00	348.30	3,693.3	191.3	-39.6	192.2	0.00	0.00	
3,800.0	4.00	348.30	3,793.0	198.1	-41.0	199.1	0.00	0.00	
3,900.0	4.00	348.30	3,892.8	204.9	-42.4	205.9	0.00	0.00	
4,000.0	4.00	348.30	3,992.5	211.8	-43.9	212.8	0.00	0.00	
4,100.0	4.00	348.30	4,092.3	218.6	-45.3	219.7	0.00	0.00	
4,200.0	4.00	348.30	4,192.0	225.4	-46.7	226.5	0.00	0.00	
4,300.0	4.00	348.30	4,291.8	232.2	-48.1	233.4	0.00	0.00	
4,400.0	4.00	348.30	4,391.6	239.1	-49.5	240.3	0.00	0.00	
4,500.0	4.00	348.30	4,491.3	245.9	-50.9	247.1	0.00	0.00	
4,600.0	4.00	348.30	4,591.1	252.7	-52.3	254.0	0.00	0.00	
4,700.0	4.00	348.30	4,690.8	259.6	-53.8	260.9	0.00	0.00	
4,800.0	4.00	348.30	4,790.6	266.4	-55.2	267.7	0.00	0.00	
4,900.0	4.00	348.30	4,890.3	273.2	-56.6	274.6	0.00	0.00	
5,000.0	4.00	348.30	4,990.1	280.1	-58.0	281.4	0.00	0.00	
5,100.0	4.00	348.30	5,089.9	286.9	-59.4	288.3	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-2307A	**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
5,135.7	4.00	348.30	5,125.5	289.3	-59.9	290.8	0.00	0.00	Start 11° Build
5,200.0	11.07	348.30	5,189.2	297.6	-61.6	299.1	11.00	11.00	
5,300.0	22.07	348.30	5,284.9	325.5	-67.4	327.1	11.00	11.00	
5,400.0	33.07	348.30	5,373.4	370.7	-76.8	372.6	11.00	11.00	
5,500.0	44.07	348.30	5,451.4	431.7	-89.4	433.8	11.00	11.00	
5,600.0	55.07	348.30	5,516.2	506.1	-104.8	508.6	11.00	11.00	
5,697.0	65.74	348.30	5,564.0	588.6	-121.9	591.5	11.00	11.00	Top Niobrara
5,700.0	66.07	348.30	5,565.2	591.3	-122.4	594.2	11.00	11.00	
5,800.0	77.07	348.30	5,596.8	684.0	-141.7	687.4	11.00	11.00	
5,900.0	88.07	348.30	5,609.7	781.0	-161.7	784.8	11.00	11.00	
5,917.5	90.00	348.30	5,610.0	798.1	-165.3	802.1	11.00	11.00	LP @ 5917' MD - 7"
6,000.0	90.00	350.77	5,610.0	879.2	-180.3	883.5	3.00	0.00	
6,100.0	90.00	353.77	5,610.0	978.3	-193.7	982.9	3.00	0.00	
6,200.0	90.00	356.77	5,610.0	1,078.0	-201.9	1,082.7	3.00	0.00	
6,300.0	90.00	359.77	5,610.0	1,177.9	-205.0	1,182.7	3.00	0.00	
6,307.6	90.00	0.00	5,610.0	1,185.5	-205.0	1,190.3	3.00	0.00	EOT; 0° Az
6,400.0	90.00	0.00	5,610.0	1,277.9	-205.0	1,282.7	0.00	0.00	
6,500.0	90.00	0.00	5,610.0	1,377.9	-205.0	1,382.7	0.00	0.00	
6,600.0	90.00	0.00	5,610.0	1,477.9	-205.0	1,482.6	0.00	0.00	
6,700.0	90.00	0.00	5,610.0	1,577.9	-204.9	1,582.6	0.00	0.00	
6,800.0	90.00	0.00	5,610.0	1,677.9	-204.9	1,682.6	0.00	0.00	
6,900.0	90.00	0.00	5,610.0	1,777.9	-204.9	1,782.5	0.00	0.00	
7,000.0	90.00	0.00	5,610.0	1,877.9	-204.9	1,882.5	0.00	0.00	
7,100.0	90.00	0.00	5,610.0	1,977.9	-204.9	1,982.5	0.00	0.00	
7,200.0	90.00	0.00	5,610.0	2,077.9	-204.9	2,082.4	0.00	0.00	
7,300.0	90.00	0.00	5,610.0	2,177.9	-204.9	2,182.4	0.00	0.00	
7,400.0	90.00	0.00	5,610.0	2,277.9	-204.9	2,282.4	0.00	0.00	
7,500.0	90.00	0.00	5,610.0	2,377.9	-204.9	2,382.3	0.00	0.00	
7,600.0	90.00	0.00	5,610.0	2,477.9	-204.9	2,482.3	0.00	0.00	
7,700.0	90.00	0.00	5,610.0	2,577.9	-204.9	2,582.3	0.00	0.00	
7,800.0	90.00	0.00	5,610.0	2,677.9	-204.9	2,682.2	0.00	0.00	
7,900.0	90.00	0.00	5,610.0	2,777.9	-204.9	2,782.2	0.00	0.00	
8,000.0	90.00	0.00	5,610.0	2,877.9	-204.9	2,882.2	0.00	0.00	
8,100.0	90.00	0.00	5,610.0	2,977.9	-204.9	2,982.1	0.00	0.00	
8,200.0	90.00	0.00	5,610.0	3,077.9	-204.9	3,082.1	0.00	0.00	
8,300.0	90.00	0.00	5,610.0	3,177.9	-204.9	3,182.1	0.00	0.00	
8,400.0	90.00	0.00	5,610.0	3,277.9	-204.8	3,282.0	0.00	0.00	
8,500.0	90.00	0.00	5,610.0	3,377.9	-204.8	3,382.0	0.00	0.00	
8,600.0	90.00	0.00	5,610.0	3,477.9	-204.8	3,482.0	0.00	0.00	
8,700.0	90.00	0.00	5,610.0	3,577.9	-204.8	3,581.9	0.00	0.00	
8,800.0	90.00	0.00	5,610.0	3,677.9	-204.8	3,681.9	0.00	0.00	
8,900.0	90.00	0.00	5,610.0	3,777.9	-204.8	3,781.9	0.00	0.00	
9,000.0	90.00	0.00	5,610.0	3,877.9	-204.8	3,881.9	0.00	0.00	
9,100.0	90.00	0.00	5,610.0	3,977.9	-204.8	3,981.8	0.00	0.00	
9,200.0	90.00	0.00	5,610.0	4,077.9	-204.8	4,081.8	0.00	0.00	
9,300.0	90.00	0.00	5,610.0	4,177.9	-204.8	4,181.8	0.00	0.00	
9,400.0	90.00	0.00	5,610.0	4,277.9	-204.8	4,281.7	0.00	0.00	
9,500.0	90.00	0.00	5,610.0	4,377.9	-204.8	4,381.7	0.00	0.00	
9,600.0	90.00	0.00	5,610.0	4,477.9	-204.8	4,481.7	0.00	0.00	
9,700.0	90.00	0.00	5,610.0	4,577.9	-204.8	4,581.6	0.00	0.00	
9,800.0	90.00	0.00	5,610.0	4,677.9	-204.8	4,681.6	0.00	0.00	
9,900.0	90.00	0.00	5,610.0	4,777.9	-204.8	4,781.6	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-2307A	**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	4,877.9	-204.8	4,881.5	0.00	0.00	
10,100.0	90.00	0.00	5,610.0	4,977.9	-204.8	4,981.5	0.00	0.00	
10,200.0	90.00	0.00	5,610.0	5,077.9	-204.7	5,081.5	0.00	0.00	
10,300.0	90.00	0.00	5,610.0	5,177.9	-204.7	5,181.4	0.00	0.00	
10,400.0	90.00	0.00	5,610.0	5,277.9	-204.7	5,281.4	0.00	0.00	
10,500.0	90.00	0.00	5,610.0	5,377.9	-204.7	5,381.4	0.00	0.00	
10,600.0	90.00	0.00	5,610.0	5,477.9	-204.7	5,481.3	0.00	0.00	
10,700.0	90.00	0.00	5,610.0	5,577.9	-204.7	5,581.3	0.00	0.00	
10,800.0	90.00	0.00	5,610.0	5,677.9	-204.7	5,681.3	0.00	0.00	
10,900.0	90.00	0.00	5,610.0	5,777.9	-204.7	5,781.2	0.00	0.00	
11,000.0	90.00	0.00	5,610.0	5,877.9	-204.7	5,881.2	0.00	0.00	
11,100.0	90.00	0.00	5,610.0	5,977.9	-204.7	5,981.2	0.00	0.00	
11,200.0	90.00	0.00	5,610.0	6,077.9	-204.7	6,081.1	0.00	0.00	
11,300.0	90.00	0.00	5,610.0	6,177.9	-204.7	6,181.1	0.00	0.00	
11,400.0	90.00	0.00	5,610.0	6,277.9	-204.7	6,281.1	0.00	0.00	
11,500.0	90.00	0.00	5,610.0	6,377.9	-204.7	6,381.0	0.00	0.00	
11,600.0	90.00	0.00	5,610.0	6,477.9	-204.7	6,481.0	0.00	0.00	
11,700.0	90.00	0.00	5,610.0	6,577.9	-204.7	6,581.0	0.00	0.00	
11,800.0	90.00	0.00	5,610.0	6,677.9	-204.7	6,680.9	0.00	0.00	
11,900.0	90.00	0.00	5,610.0	6,777.9	-204.6	6,780.9	0.00	0.00	
12,000.0	90.00	0.00	5,610.0	6,877.9	-204.6	6,880.9	0.00	0.00	
12,100.0	90.00	0.00	5,610.0	6,977.9	-204.6	6,980.8	0.00	0.00	
12,200.0	90.00	0.00	5,610.0	7,077.9	-204.6	7,080.8	0.00	0.00	
12,300.0	90.00	0.00	5,610.0	7,177.9	-204.6	7,180.8	0.00	0.00	
12,400.0	90.00	0.00	5,610.0	7,277.9	-204.6	7,280.8	0.00	0.00	
12,500.0	90.00	0.00	5,610.0	7,377.9	-204.6	7,380.7	0.00	0.00	
12,600.0	90.00	0.00	5,610.0	7,477.9	-204.6	7,480.7	0.00	0.00	
12,700.0	90.00	0.00	5,610.0	7,577.9	-204.6	7,580.7	0.00	0.00	
12,800.0	90.00	0.00	5,610.0	7,677.9	-204.6	7,680.6	0.00	0.00	
12,900.0	90.00	0.00	5,610.0	7,777.9	-204.6	7,780.6	0.00	0.00	
13,000.0	90.00	0.00	5,610.0	7,877.9	-204.6	7,880.6	0.00	0.00	
13,100.0	90.00	0.00	5,610.0	7,977.9	-204.6	7,980.5	0.00	0.00	
13,182.5	90.00	0.00	5,610.0	8,060.4	-204.6	8,063.0	0.00	0.00	PBHL @ 13182' 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-2307A BHL - plan hits target center - Point	0.00	0.00	5,610.0	8,060.5	-204.6	1,549,993.62	3,460,894.21	40.831222	-103.834478
26K-2307A TGT - plan misses target center by 19.4ft at 12682.9ft MD (5610.0 TVD, 7560.9 N, -204.6 E) - Point	0.00	0.00	5,610.0	7,560.9	-185.2	1,549,494.02	3,460,913.56	40.829850	-103.834442

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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)
5,917.5	5,610.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,697.0	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
800.0	800.0	0.0	0.0	KOP @ 800' MD
1,000.0	999.8	6.8	-1.4	EOB; 4°
5,135.7	5,125.5	289.3	-59.9	Start 11° Build
5,917.5	5,610.0	798.1	-165.3	LP @ 5917' MD
6,307.6	5,610.0	1,185.5	-205.0	EOT; 0° Az
13,182.5	5,610.0	8,060.4	-204.6	PBHL @ 13182' MD

Whiting Petroleum Corporation

Weld County, CO
S26-T10N-R58W
Razor #26K-2307A
HZ
Plan #1

Anticollision Report

22 May, 2013

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	13,181.8	Plan #1 (HZ)	ISCWSA MWD	MWD - ISCWSA

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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-2305A - HZ - Plan #1	500.0	500.0	66.2	64.2	33.318	CC, ES
Razor #26K-2305A - HZ - Plan #1	5,150.0	5,144.0	186.3	161.2	7.433	SF
Razor #26K-2306B - HZ - Plan #1	919.9	922.1	123.1	119.3	31.754	CC
Razor #26K-2306B - HZ - Plan #1	13,182.5	13,385.2	341.7	43.2	1.145	Level 2, ES, SF
Razor #26K-2308B - HZ - Plan #1	1,133.3	1,138.1	67.1	62.2	13.818	CC
Razor #26K-2308B - HZ - Plan #1	13,182.5	13,375.5	342.7	43.1	1.144	Level 2, ES, SF
Razor #26K-3505A - HZ - Plan #1	1,048.6	1,047.8	97.9	93.4	22.044	CC, ES
Razor #26K-3505A - HZ - Plan #1	1,500.0	1,493.4	118.9	112.5	18.683	SF
Razor #26K-3507A - HZ - Plan #1	904.3	904.6	31.7	28.0	8.506	CC, ES
Razor #26K-3507A - HZ - Plan #1	1,000.0	999.5	34.0	29.8	8.206	SF
Razor #26K-3508B - HZ - Plan #1	800.0	800.0	75.1	71.7	22.509	CC, ES
Razor #26K-3508B - HZ - Plan #1	1,100.0	1,099.6	88.8	84.1	18.972	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						Out of range
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	142.1			
Razor 26-3524H (Existing) - Existing - SURVEYs	5,000.0	4,983.2	398.6	376.9	18.406	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-2307A
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-2307A	**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-2305A - 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	-91.08	-1.2	-66.2	66.2				
100.0	100.0	100.0	100.0	0.1	0.1	-91.08	-1.2	-66.2	66.2	66.0	0.19	352.527	
200.0	200.0	200.0	200.0	0.3	0.3	-91.08	-1.2	-66.2	66.2	65.5	0.64	103.831	
300.0	300.0	300.0	300.0	0.5	0.5	-91.08	-1.2	-66.2	66.2	65.1	1.09	60.881	
400.0	400.0	400.0	400.0	0.8	0.8	-91.08	-1.2	-66.2	66.2	64.6	1.54	43.067	
500.0	500.0	500.0	500.0	1.0	1.0	-91.08	-1.2	-66.2	66.2	64.2	1.99	33.318	CC, ES
600.0	600.0	598.7	598.7	1.2	1.2	-89.86	0.2	-67.1	67.1	64.7	2.43	27.618	
700.0	700.0	697.2	697.0	1.4	1.4	-86.42	4.4	-70.0	70.2	67.3	2.88	24.387	
800.0	800.0	796.9	796.5	1.7	1.7	-82.19	10.1	-73.9	74.6	71.3	3.33	22.422	
900.0	900.0	896.8	896.1	1.9	1.9	-67.84	15.9	-77.8	78.8	75.0	3.78	20.841	
1,000.0	999.8	996.7	995.8	2.1	2.2	-67.70	21.7	-81.7	81.7	77.5	4.24	19.289	
1,100.0	1,099.6	1,096.7	1,095.6	2.3	2.4	-68.72	27.4	-85.6	84.0	79.3	4.70	17.864	
1,200.0	1,199.4	1,196.6	1,195.3	2.6	2.6	-69.68	33.2	-89.5	86.3	81.1	5.17	16.678	
1,300.0	1,299.1	1,296.6	1,295.0	2.8	2.9	-70.60	39.0	-93.4	88.6	83.0	5.65	15.680	
1,400.0	1,398.9	1,396.6	1,394.7	3.1	3.2	-71.47	44.8	-97.3	91.0	84.8	6.13	14.830	
1,500.0	1,498.6	1,496.5	1,494.4	3.3	3.4	-72.30	50.5	-101.2	93.3	86.7	6.62	14.100	
1,600.0	1,598.4	1,596.5	1,594.2	3.6	3.7	-73.08	56.3	-105.2	95.7	88.6	7.11	13.466	
1,700.0	1,698.1	1,696.5	1,693.9	3.8	3.9	-73.83	62.1	-109.1	98.1	90.5	7.60	12.911	
1,800.0	1,797.9	1,796.4	1,793.6	4.0	4.2	-74.54	67.8	-113.0	100.5	92.4	8.09	12.423	
1,900.0	1,897.6	1,896.4	1,893.3	4.3	4.4	-75.22	73.6	-116.9	103.0	94.4	8.59	11.989	
2,000.0	1,997.4	1,996.4	1,993.0	4.5	4.7	-75.86	79.4	-120.8	105.4	96.3	9.09	11.603	
2,100.0	2,097.2	2,096.3	2,092.8	4.8	4.9	-76.48	85.2	-124.7	107.9	98.3	9.58	11.256	
2,200.0	2,196.9	2,196.3	2,192.5	5.1	5.2	-77.07	90.9	-128.6	110.3	100.3	10.08	10.943	
2,300.0	2,296.7	2,296.2	2,292.2	5.3	5.4	-77.63	96.7	-132.5	112.8	102.2	10.59	10.659	
2,400.0	2,396.4	2,396.2	2,391.9	5.6	5.7	-78.17	102.5	-136.5	115.3	104.2	11.09	10.402	
2,500.0	2,496.2	2,496.2	2,491.6	5.8	6.0	-78.68	108.2	-140.4	117.8	106.2	11.59	10.166	
2,600.0	2,595.9	2,596.1	2,591.3	6.1	6.2	-79.18	114.0	-144.3	120.3	108.2	12.09	9.950	
2,700.0	2,695.7	2,696.1	2,691.1	6.3	6.5	-79.65	119.8	-148.2	122.9	110.3	12.60	9.752	
2,800.0	2,795.5	2,796.1	2,790.8	6.6	6.7	-80.11	125.6	-152.1	125.4	112.3	13.10	9.569	
2,900.0	2,895.2	2,896.0	2,890.5	6.8	7.0	-80.54	131.3	-156.0	127.9	114.3	13.61	9.400	
3,000.0	2,995.0	2,996.0	2,990.2	7.1	7.2	-80.96	137.1	-159.9	130.5	116.3	14.11	9.243	
3,100.0	3,094.7	3,095.9	3,089.9	7.3	7.5	-81.37	142.9	-163.8	133.0	118.4	14.62	9.097	
3,200.0	3,194.5	3,195.9	3,189.7	7.6	7.8	-81.76	148.7	-167.8	135.6	120.4	15.13	8.961	
3,300.0	3,294.2	3,295.9	3,289.4	7.8	8.0	-82.13	154.4	-171.7	138.1	122.5	15.64	8.834	
3,400.0	3,394.0	3,395.8	3,389.1	8.1	8.3	-82.49	160.2	-175.6	140.7	124.6	16.14	8.715	
3,500.0	3,493.8	3,495.8	3,488.8	8.3	8.5	-82.84	166.0	-179.5	143.3	126.6	16.65	8.604	
3,600.0	3,593.5	3,595.8	3,588.5	8.6	8.8	-83.18	171.7	-183.4	145.8	128.7	17.16	8.499	
3,700.0	3,693.3	3,695.7	3,688.3	8.9	9.0	-83.50	177.5	-187.3	148.4	130.8	17.67	8.400	
3,800.0	3,793.0	3,795.7	3,788.0	9.1	9.3	-83.81	183.3	-191.2	151.0	132.8	18.18	8.308	
3,900.0	3,892.8	3,895.7	3,887.7	9.4	9.6	-84.11	189.1	-195.1	153.6	134.9	18.69	8.220	
4,000.0	3,992.5	3,995.6	3,987.4	9.6	9.8	-84.41	194.8	-199.1	156.2	137.0	19.20	8.137	
4,100.0	4,092.3	4,095.6	4,087.1	9.9	10.1	-84.69	200.6	-203.0	158.8	139.1	19.71	8.058	
4,200.0	4,192.1	4,195.5	4,186.9	10.1	10.3	-84.96	206.4	-206.9	161.4	141.2	20.22	7.984	
4,300.0	4,291.8	4,295.5	4,286.6	10.4	10.6	-85.23	212.1	-210.8	164.0	143.3	20.73	7.913	
4,400.0	4,391.6	4,395.5	4,386.3	10.6	10.8	-85.48	217.9	-214.7	166.6	145.4	21.24	7.846	
4,500.0	4,491.3	4,495.4	4,486.0	10.9	11.1	-85.73	223.7	-218.6	169.2	147.5	21.75	7.782	
4,600.0	4,591.1	4,595.4	4,585.7	11.2	11.4	-85.97	229.5	-222.5	171.9	149.6	22.26	7.721	
4,700.0	4,690.8	4,695.4	4,685.5	11.4	11.6	-86.21	235.2	-226.4	174.5	151.7	22.77	7.663	
4,800.0	4,790.6	4,795.3	4,785.2	11.7	11.9	-86.43	241.0	-230.4	177.1	153.8	23.28	7.608	
4,900.0	4,890.3	4,895.3	4,884.9	11.9	12.1	-86.66	246.8	-234.3	179.7	155.9	23.79	7.555	
5,000.0	4,990.1	4,995.3	4,984.6	12.2	12.4	-86.87	252.6	-238.2	182.3	158.0	24.30	7.504	
5,100.0	5,089.9	5,095.2	5,084.3	12.4	12.6	-87.08	258.3	-242.1	185.0	160.2	24.81	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-2307A
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-2307A	**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-2305A - 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
5,135.7	5,125.5	5,130.9	5,119.9	12.5	12.7	-87.15	260.4	-243.5	185.9	160.9	24.99	7.439	
5,150.0	5,139.7	5,144.0	5,133.0	12.6	12.8	-87.17	261.2	-244.0	186.3	161.2	25.07	7.433	SF
5,200.0	5,189.2	5,187.4	5,176.0	12.7	12.9	-87.32	265.7	-247.1	188.6	163.3	25.36	7.439	
5,250.0	5,237.7	5,230.6	5,218.3	12.9	13.1	-87.56	273.1	-252.1	192.5	166.8	25.71	7.487	
5,300.0	5,284.9	5,273.8	5,259.7	13.2	13.3	-87.86	283.4	-259.1	197.9	171.7	26.13	7.573	
5,350.0	5,330.2	5,316.8	5,299.7	13.4	13.5	-88.19	296.5	-267.9	204.7	178.1	26.61	7.692	
5,400.0	5,373.4	5,359.7	5,338.2	13.7	13.7	-88.52	312.1	-278.6	213.1	185.9	27.17	7.841	
5,450.0	5,413.9	5,400.0	5,372.8	14.1	14.0	-88.73	329.2	-290.1	222.8	195.0	27.78	8.020	
5,500.0	5,451.4	5,445.0	5,409.4	14.5	14.3	-89.06	350.8	-304.8	233.9	205.4	28.51	8.203	
5,550.0	5,485.6	5,487.5	5,441.8	15.0	14.7	-89.24	373.5	-320.2	246.2	216.9	29.30	8.403	
5,600.0	5,516.2	5,529.9	5,471.8	15.5	15.1	-89.33	398.3	-337.0	259.8	229.6	30.18	8.609	
5,650.0	5,542.8	5,572.2	5,499.2	16.0	15.6	-89.32	425.0	-355.1	274.5	243.3	31.13	8.816	
5,700.0	5,565.2	5,614.6	5,523.9	16.6	16.0	-89.22	453.4	-374.3	290.1	257.9	32.17	9.018	
5,750.0	5,583.3	5,657.0	5,545.9	17.3	16.6	-89.02	483.6	-394.8	306.6	273.3	33.29	9.211	
5,800.0	5,596.8	5,700.0	5,564.9	18.0	17.1	-88.75	515.4	-416.3	323.9	289.4	34.49	9.392	
5,850.0	5,605.6	5,742.7	5,580.7	18.7	17.7	-88.38	548.3	-438.6	341.8	306.0	35.75	9.559	
5,900.0	5,609.7	5,786.2	5,593.3	19.5	18.4	-87.96	582.6	-461.9	360.2	323.1	37.09	9.711	
5,917.5	5,610.0	5,801.5	5,597.0	19.7	18.6	-87.80	595.0	-470.3	366.7	329.1	37.57	9.761	
6,000.0	5,610.0	5,875.1	5,608.2	20.9	19.8	-89.71	655.2	-511.1	399.6	359.9	39.64	10.080	
6,100.0	5,610.0	5,978.6	5,610.0	22.3	21.5	-90.00	741.3	-568.3	443.3	401.1	42.21	10.502	
6,200.0	5,610.0	6,097.6	5,610.0	23.8	23.5	-90.00	843.8	-628.8	486.8	441.9	44.91	10.840	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	-128.21	-76.9	-97.7	124.3				
100.0	100.0	100.0	100.0	0.1	0.1	-128.21	-76.9	-97.7	124.3	124.1	0.19	662.392	
200.0	200.0	200.0	200.0	0.3	0.3	-128.21	-76.9	-97.7	124.3	123.7	0.64	195.096	
300.0	300.0	300.0	300.0	0.5	0.5	-128.21	-76.9	-97.7	124.3	123.2	1.09	114.395	
400.0	400.0	400.0	400.0	0.8	0.8	-128.21	-76.9	-97.7	124.3	122.8	1.54	80.921	
500.0	500.0	500.0	500.0	1.0	1.0	-128.21	-76.9	-97.7	124.3	122.3	1.99	62.603	
600.0	600.0	600.0	600.0	1.2	1.2	-128.21	-76.9	-97.7	124.3	121.9	2.44	51.047	
700.0	700.0	700.0	700.0	1.4	1.4	-128.21	-76.9	-97.7	124.3	121.4	2.88	43.093	
800.0	800.0	801.2	801.2	1.7	1.7	-127.42	-75.2	-98.3	123.8	120.5	3.34	37.120	
900.0	900.0	902.3	902.1	1.9	1.9	-114.08	-70.3	-100.3	123.2	119.4	3.79	32.521	
919.9	919.8	922.1	921.9	1.9	1.9	-113.78	-69.0	-100.8	123.1	119.3	3.88	31.754	CC
1,000.0	999.8	1,002.2	1,001.8	2.1	2.1	-113.15	-63.8	-102.8	123.6	119.4	4.24	29.125	
1,100.0	1,099.6	1,102.2	1,101.6	2.3	2.4	-112.98	-57.3	-105.4	124.7	120.0	4.71	26.476	
1,200.0	1,199.4	1,202.2	1,201.3	2.6	2.6	-112.81	-50.8	-108.0	125.9	120.7	5.19	24.268	
1,300.0	1,299.1	1,302.2	1,301.1	2.8	2.8	-112.64	-44.3	-110.5	127.0	121.3	5.67	22.407	
1,400.0	1,398.9	1,402.2	1,400.8	3.1	3.1	-112.48	-37.8	-113.1	128.1	122.0	6.15	20.822	
1,500.0	1,498.6	1,502.2	1,500.6	3.3	3.3	-112.32	-31.3	-115.6	129.3	122.6	6.64	19.459	
1,600.0	1,598.4	1,602.2	1,600.3	3.6	3.6	-112.17	-24.8	-118.2	130.4	123.3	7.14	18.275	
1,700.0	1,698.1	1,702.2	1,700.1	3.8	3.8	-112.01	-18.3	-120.7	131.6	123.9	7.63	17.239	
1,800.0	1,797.9	1,802.2	1,799.8	4.0	4.1	-111.86	-11.9	-123.3	132.7	124.6	8.13	16.325	
1,900.0	1,897.6	1,902.2	1,899.6	4.3	4.3	-111.71	-5.4	-125.9	133.8	125.2	8.63	15.513	
2,000.0	1,997.4	2,002.2	1,999.3	4.5	4.6	-111.56	1.1	-128.4	135.0	125.8	9.13	14.789	
2,100.0	2,097.2	2,102.2	2,099.1	4.8	4.8	-111.42	7.6	-131.0	136.1	126.5	9.63	14.137	
2,200.0	2,196.9	2,202.2	2,198.8	5.1	5.1	-111.28	14.1	-133.5	137.3	127.1	10.13	13.549	
2,300.0	2,296.7	2,302.2	2,298.6	5.3	5.4	-111.14	20.6	-136.1	138.4	127.8	10.63	13.016	
2,400.0	2,396.4	2,402.1	2,398.3	5.6	5.6	-111.00	27.1	-138.6	139.5	128.4	11.14	12.530	
2,500.0	2,496.2	2,502.1	2,498.1	5.8	5.9	-110.87	33.6	-141.2	140.7	129.0	11.64	12.085	
2,600.0	2,595.9	2,602.1	2,597.8	6.1	6.1	-110.74	40.1	-143.8	141.8	129.7	12.15	11.677	
2,700.0	2,695.7	2,702.1	2,697.6	6.3	6.4	-110.61	46.6	-146.3	143.0	130.3	12.65	11.300	
2,800.0	2,795.5	2,802.1	2,797.3	6.6	6.6	-110.48	53.0	-148.9	144.1	131.0	13.16	10.953	
2,900.0	2,895.2	2,902.1	2,897.1	6.8	6.9	-110.35	59.5	-151.4	145.3	131.6	13.67	10.631	
3,000.0	2,995.0	3,002.1	2,996.8	7.1	7.1	-110.23	66.0	-154.0	146.4	132.3	14.17	10.331	
3,100.0	3,094.7	3,102.1	3,096.6	7.3	7.4	-110.10	72.5	-156.5	147.6	132.9	14.68	10.053	
3,200.0	3,194.5	3,202.1	3,196.3	7.6	7.6	-109.98	79.0	-159.1	148.7	133.5	15.19	9.792	
3,300.0	3,294.2	3,302.1	3,296.1	7.8	7.9	-109.86	85.5	-161.6	149.9	134.2	15.70	9.548	
3,400.0	3,394.0	3,402.1	3,395.8	8.1	8.2	-109.75	92.0	-164.2	151.0	134.8	16.21	9.320	
3,500.0	3,493.8	3,502.1	3,495.6	8.3	8.4	-109.63	98.5	-166.8	152.2	135.5	16.71	9.105	
3,600.0	3,593.5	3,602.1	3,595.3	8.6	8.7	-109.52	105.0	-169.3	153.3	136.1	17.22	8.903	
3,700.0	3,693.3	3,702.1	3,695.1	8.9	8.9	-109.41	111.5	-171.9	154.5	136.8	17.73	8.712	
3,800.0	3,793.0	3,802.1	3,794.8	9.1	9.2	-109.30	117.9	-174.4	155.6	137.4	18.24	8.532	
3,900.0	3,892.8	3,902.0	3,894.6	9.4	9.4	-109.19	124.4	-177.0	156.8	138.0	18.75	8.362	
4,000.0	3,992.5	4,002.0	3,994.3	9.6	9.7	-109.08	130.9	-179.5	158.0	138.7	19.26	8.201	
4,100.0	4,092.3	4,102.0	4,094.1	9.9	10.0	-108.98	137.4	-182.1	159.1	139.3	19.77	8.048	
4,200.0	4,192.1	4,202.0	4,193.8	10.1	10.2	-108.87	143.9	-184.7	160.3	140.0	20.28	7.902	
4,300.0	4,291.8	4,302.0	4,293.6	10.4	10.5	-108.77	150.4	-187.2	161.4	140.6	20.79	7.764	
4,400.0	4,391.6	4,402.0	4,393.3	10.6	10.7	-108.67	156.9	-189.8	162.6	141.3	21.30	7.632	
4,500.0	4,491.3	4,502.0	4,493.1	10.9	11.0	-108.57	163.4	-192.3	163.7	141.9	21.81	7.507	
4,600.0	4,591.1	4,602.0	4,592.8	11.2	11.2	-108.47	169.9	-194.9	164.9	142.6	22.32	7.387	
4,700.0	4,690.8	4,702.0	4,692.6	11.4	11.5	-108.38	176.3	-197.4	166.1	143.2	22.83	7.272	
4,800.0	4,790.6	4,802.0	4,792.3	11.7	11.7	-108.28	182.8	-200.0	167.2	143.9	23.34	7.163	
4,900.0	4,890.3	4,902.0	4,892.1	11.9	12.0	-108.19	189.3	-202.5	168.4	144.5	23.86	7.058	
5,000.0	4,990.1	5,002.0	4,991.8	12.2	12.3	-108.10	195.8	-205.1	169.5	145.2	24.37	6.958	

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-2307A
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-2307A	**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	5,089.9	5,102.0	5,091.6	12.4	12.5	-108.00	202.3	-207.7	170.7	145.8	24.88	6.861	
5,135.7	5,125.5	5,137.7	5,127.2	12.5	12.6	-107.97	204.6	-208.6	171.1	146.0	25.06	6.828	
5,150.0	5,139.7	5,152.0	5,141.4	12.6	12.6	-108.00	205.6	-208.9	171.3	146.2	25.13	6.817	
5,200.0	5,189.2	5,201.8	5,191.1	12.7	12.8	-108.95	208.8	-210.2	173.1	147.7	25.38	6.821	
5,250.0	5,237.7	5,252.9	5,242.1	12.9	12.9	-111.03	212.7	-211.8	176.5	150.9	25.62	6.891	
5,300.0	5,284.9	5,306.3	5,294.6	13.2	13.1	-113.03	221.2	-215.1	181.1	155.2	25.88	6.996	
5,350.0	5,330.2	5,360.5	5,346.8	13.4	13.3	-114.67	235.0	-220.5	186.5	160.3	26.17	7.126	
5,400.0	5,373.4	5,415.7	5,398.0	13.7	13.6	-115.92	254.0	-228.0	192.6	166.1	26.49	7.270	
5,450.0	5,413.9	5,471.6	5,447.4	14.1	13.9	-116.78	278.4	-237.6	199.4	172.5	26.88	7.419	
5,500.0	5,451.4	5,528.4	5,494.4	14.5	14.3	-117.26	308.0	-249.3	206.7	179.3	27.35	7.556	
5,550.0	5,485.6	5,585.8	5,538.1	15.0	14.8	-117.37	342.6	-262.9	214.3	186.4	27.94	7.670	
5,600.0	5,516.2	5,643.9	5,577.9	15.5	15.4	-117.13	382.0	-278.4	222.2	193.5	28.68	7.746	
5,650.0	5,542.8	5,702.6	5,613.0	16.0	16.0	-116.58	425.6	-295.6	230.2	200.6	29.61	7.776	
5,700.0	5,565.2	5,761.6	5,642.8	16.6	16.7	-115.74	473.0	-314.3	238.4	207.6	30.73	7.755	
5,750.0	5,583.3	5,821.0	5,666.8	17.3	17.5	-114.63	523.5	-334.2	246.5	214.4	32.06	7.688	
5,800.0	5,596.8	5,880.6	5,684.5	18.0	18.3	-113.30	576.4	-355.0	254.6	221.0	33.58	7.582	
5,850.0	5,605.6	5,940.3	5,695.6	18.7	19.2	-111.78	631.0	-376.5	262.5	227.3	35.26	7.446	
5,900.0	5,609.7	5,999.9	5,700.0	19.5	20.1	-110.08	686.3	-398.3	270.3	233.3	37.07	7.292	
5,917.5	5,610.0	6,020.2	5,700.0	19.7	20.4	-109.50	705.2	-405.7	273.0	235.3	37.71	7.240	
6,000.0	5,610.0	6,114.7	5,700.0	20.9	21.9	-108.59	794.1	-437.6	285.6	245.4	40.23	7.098	
6,100.0	5,610.0	6,230.4	5,700.0	22.3	23.6	-107.64	905.0	-470.6	300.2	257.0	43.19	6.952	
6,200.0	5,610.0	6,347.4	5,700.0	23.8	25.4	-106.82	1,018.9	-497.0	314.1	267.9	46.16	6.804	
6,307.6	5,610.0	6,474.5	5,700.0	25.4	27.4	-106.06	1,144.3	-517.8	328.1	278.8	49.35	6.649	
6,400.0	5,610.0	6,584.9	5,700.0	26.9	29.2	-105.53	1,254.2	-529.1	337.2	284.6	52.63	6.407	
6,500.0	5,610.0	6,705.5	5,700.0	28.6	31.1	-105.30	1,374.6	-534.1	341.2	285.0	56.22	6.069	
6,600.0	5,610.0	6,808.8	5,700.0	30.3	32.7	-105.30	1,477.9	-534.2	341.3	281.8	59.54	5.732	
6,700.0	5,610.0	6,908.8	5,700.0	32.0	34.4	-105.29	1,577.9	-534.2	341.3	278.4	62.86	5.430	
6,800.0	5,610.0	7,008.8	5,700.0	33.7	36.1	-105.29	1,677.9	-534.2	341.3	275.1	66.22	5.154	
6,900.0	5,610.0	7,108.8	5,700.0	35.5	37.8	-105.29	1,777.9	-534.2	341.3	271.7	69.62	4.902	
7,000.0	5,610.0	7,208.8	5,700.0	37.2	39.5	-105.29	1,877.9	-534.2	341.3	268.3	73.05	4.672	
7,100.0	5,610.0	7,308.8	5,700.0	39.0	41.2	-105.29	1,977.9	-534.2	341.3	264.8	76.51	4.461	
7,200.0	5,610.0	7,408.8	5,700.0	40.8	43.0	-105.29	2,077.9	-534.2	341.3	261.3	79.99	4.267	
7,300.0	5,610.0	7,508.8	5,700.0	42.6	44.7	-105.29	2,177.9	-534.2	341.3	257.8	83.49	4.088	
7,400.0	5,610.0	7,608.8	5,700.0	44.5	46.5	-105.29	2,277.9	-534.2	341.3	254.3	87.01	3.923	
7,500.0	5,610.0	7,708.8	5,700.0	46.3	48.3	-105.29	2,377.9	-534.2	341.3	250.8	90.55	3.770	
7,600.0	5,610.0	7,808.8	5,700.0	48.1	50.1	-105.29	2,477.9	-534.2	341.4	247.3	94.10	3.628	
7,700.0	5,610.0	7,908.8	5,700.0	50.0	51.9	-105.29	2,577.9	-534.2	341.4	243.7	97.66	3.495	
7,800.0	5,610.0	8,008.8	5,700.0	51.8	53.7	-105.29	2,677.9	-534.2	341.4	240.1	101.23	3.372	
7,900.0	5,610.0	8,108.8	5,700.0	53.7	55.5	-105.29	2,777.9	-534.2	341.4	236.5	104.81	3.257	
8,000.0	5,610.0	8,208.8	5,700.0	55.5	57.3	-105.29	2,877.9	-534.2	341.4	233.0	108.41	3.149	
8,100.0	5,610.0	8,308.8	5,700.0	57.4	59.2	-105.29	2,977.9	-534.2	341.4	229.4	112.01	3.048	
8,200.0	5,610.0	8,408.8	5,700.0	59.2	61.0	-105.29	3,077.9	-534.2	341.4	225.8	115.62	2.953	
8,300.0	5,610.0	8,508.8	5,700.0	61.1	62.8	-105.29	3,177.9	-534.2	341.4	222.2	119.23	2.863	
8,400.0	5,610.0	8,608.8	5,700.0	63.0	64.7	-105.29	3,277.9	-534.2	341.4	218.5	122.85	2.779	
8,500.0	5,610.0	8,708.8	5,700.0	64.8	66.5	-105.29	3,377.9	-534.2	341.4	214.9	126.48	2.699	
8,600.0	5,610.0	8,808.8	5,700.0	66.7	68.4	-105.29	3,477.9	-534.1	341.4	211.3	130.11	2.624	
8,700.0	5,610.0	8,908.8	5,700.0	68.6	70.2	-105.29	3,577.9	-534.1	341.4	207.7	133.75	2.553	
8,800.0	5,610.0	9,008.8	5,700.0	70.5	72.1	-105.29	3,677.9	-534.1	341.4	204.0	137.39	2.485	
8,900.0	5,610.0	9,108.8	5,700.0	72.3	74.0	-105.29	3,777.9	-534.1	341.4	200.4	141.03	2.421	
9,000.0	5,610.0	9,208.8	5,700.0	74.2	75.8	-105.29	3,877.9	-534.1	341.4	196.7	144.68	2.360	
9,100.0	5,610.0	9,308.8	5,700.0	76.1	77.7	-105.29	3,977.9	-534.1	341.4	193.1	148.34	2.302	
9,200.0	5,610.0	9,408.8	5,700.0	78.0	79.6	-105.29	4,077.9	-534.1	341.4	189.4	151.99	2.246	

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-2307A
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-2307A	**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
9,300.0	5,610.0	9,508.8	5,700.0	79.9	81.4	-105.29	4,177.9	-534.1	341.4	185.8	155.65	2.194	
9,400.0	5,610.0	9,608.8	5,700.0	81.8	83.3	-105.29	4,277.9	-534.1	341.4	182.1	159.31	2.143	
9,500.0	5,610.0	9,708.8	5,700.0	83.7	85.2	-105.29	4,377.9	-534.1	341.4	178.5	162.98	2.095	
9,600.0	5,610.0	9,808.8	5,700.0	85.6	87.1	-105.29	4,477.9	-534.1	341.4	174.8	166.64	2.049	
9,700.0	5,610.0	9,908.8	5,700.0	87.4	88.9	-105.29	4,577.9	-534.1	341.4	171.1	170.31	2.005	
9,800.0	5,610.0	10,008.8	5,700.0	89.3	90.8	-105.29	4,677.9	-534.1	341.5	167.5	173.98	1.963	
9,900.0	5,610.0	10,108.8	5,700.0	91.2	92.7	-105.29	4,777.9	-534.1	341.5	163.8	177.66	1.922	
10,000.0	5,610.0	10,208.8	5,700.0	93.1	94.6	-105.29	4,877.9	-534.1	341.5	160.1	181.33	1.883	
10,100.0	5,610.0	10,308.8	5,700.0	95.0	96.5	-105.28	4,977.9	-534.1	341.5	156.5	185.01	1.846	
10,200.0	5,610.0	10,408.8	5,700.0	96.9	98.4	-105.28	5,077.9	-534.1	341.5	152.8	188.69	1.810	
10,300.0	5,610.0	10,508.8	5,700.0	98.8	100.2	-105.28	5,177.9	-534.1	341.5	149.1	192.37	1.775	
10,400.0	5,610.0	10,608.8	5,700.0	100.7	102.1	-105.28	5,277.9	-534.1	341.5	145.4	196.05	1.742	
10,500.0	5,610.0	10,708.8	5,700.0	102.6	104.0	-105.28	5,377.9	-534.1	341.5	141.8	199.73	1.710	
10,600.0	5,610.0	10,808.8	5,700.0	104.5	105.9	-105.28	5,477.9	-534.1	341.5	138.1	203.41	1.679	
10,700.0	5,610.0	10,908.8	5,700.0	106.4	107.8	-105.28	5,577.9	-534.1	341.5	134.4	207.10	1.649	
10,800.0	5,610.0	11,008.8	5,700.0	108.3	109.7	-105.28	5,677.9	-534.1	341.5	130.7	210.79	1.620	
10,900.0	5,610.0	11,108.8	5,700.0	110.2	111.6	-105.28	5,777.9	-534.1	341.5	127.0	214.47	1.592	
11,000.0	5,610.0	11,208.8	5,700.0	112.1	113.5	-105.28	5,877.9	-534.1	341.5	123.3	218.16	1.565	
11,100.0	5,610.0	11,308.8	5,700.0	114.0	115.4	-105.28	5,977.9	-534.1	341.5	119.7	221.85	1.539	
11,200.0	5,610.0	11,408.8	5,700.0	115.9	117.3	-105.28	6,077.9	-534.1	341.5	116.0	225.54	1.514	
11,300.0	5,610.0	11,508.8	5,700.0	117.8	119.2	-105.28	6,177.9	-534.1	341.5	112.3	229.23	1.490	Level 3
11,400.0	5,610.0	11,608.8	5,700.0	119.7	121.1	-105.28	6,277.9	-534.1	341.5	108.6	232.93	1.466	Level 3
11,500.0	5,610.0	11,708.8	5,700.0	121.6	123.0	-105.28	6,377.9	-534.1	341.5	104.9	236.62	1.443	Level 3
11,600.0	5,610.0	11,808.8	5,700.0	123.5	124.9	-105.28	6,477.9	-534.1	341.5	101.2	240.31	1.421	Level 3
11,700.0	5,610.0	11,908.8	5,700.0	125.5	126.8	-105.28	6,577.9	-534.1	341.5	97.5	244.01	1.400	Level 3
11,800.0	5,610.0	12,008.8	5,700.0	127.4	128.7	-105.28	6,677.9	-534.1	341.5	93.8	247.71	1.379	Level 3
11,900.0	5,610.0	12,108.8	5,700.0	129.3	130.6	-105.28	6,777.9	-534.1	341.5	90.1	251.40	1.359	Level 3
12,000.0	5,610.0	12,208.8	5,700.0	131.2	132.5	-105.28	6,877.9	-534.1	341.6	86.5	255.10	1.339	Level 3
12,100.0	5,610.0	12,308.8	5,700.0	133.1	134.4	-105.28	6,977.9	-534.1	341.6	82.8	258.80	1.320	Level 3
12,200.0	5,610.0	12,408.8	5,700.0	135.0	136.3	-105.28	7,077.9	-534.1	341.6	79.1	262.50	1.301	Level 3
12,300.0	5,610.0	12,508.8	5,700.0	136.9	138.2	-105.28	7,177.9	-534.1	341.6	75.4	266.19	1.283	Level 3
12,400.0	5,610.0	12,608.8	5,700.0	138.8	140.1	-105.28	7,277.9	-534.1	341.6	71.7	269.89	1.266	Level 3
12,500.0	5,610.0	12,708.8	5,700.0	140.7	142.0	-105.28	7,377.9	-534.1	341.6	68.0	273.59	1.248	Level 2
12,600.0	5,610.0	12,808.8	5,700.0	142.6	143.9	-105.28	7,477.9	-534.1	341.6	64.3	277.29	1.232	Level 2
12,700.0	5,610.0	12,908.8	5,700.0	144.5	145.8	-105.28	7,577.9	-534.1	341.6	60.6	281.00	1.216	Level 2
12,800.0	5,610.0	13,008.8	5,700.0	146.4	147.7	-105.28	7,677.9	-534.1	341.6	56.9	284.70	1.200	Level 2
12,900.0	5,610.0	13,108.8	5,700.0	148.3	149.6	-105.28	7,777.9	-534.1	341.6	53.2	288.40	1.184	Level 2
13,000.0	5,610.0	13,208.8	5,700.0	150.2	151.5	-105.28	7,877.9	-534.1	341.6	49.5	292.10	1.169	Level 2
13,100.0	5,610.0	13,308.8	5,700.0	152.2	153.4	-105.28	7,977.9	-534.1	341.6	45.8	295.80	1.155	Level 2
13,147.1	5,610.0	13,356.0	5,700.0	152.9	154.3	-105.28	8,025.0	-534.1	341.6	44.2	297.39	1.149	Level 2
13,182.5	5,610.0	13,385.2	5,700.0	153.4	154.9	-105.28	8,054.3	-534.1	341.7	43.2	298.46	1.145	Level 2, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	-157.20	-75.7	-31.8	82.1				
100.0	100.0	100.0	100.0	0.1	0.1	-157.20	-75.7	-31.8	82.1	81.9	0.19	437.324	
200.0	200.0	200.0	200.0	0.3	0.3	-157.20	-75.7	-31.8	82.1	81.4	0.64	128.806	
300.0	300.0	300.0	300.0	0.5	0.5	-157.20	-75.7	-31.8	82.1	81.0	1.09	75.525	
400.0	400.0	400.0	400.0	0.8	0.8	-157.20	-75.7	-31.8	82.1	80.5	1.54	53.426	
500.0	500.0	500.0	500.0	1.0	1.0	-157.20	-75.7	-31.8	82.1	80.1	1.99	41.332	
600.0	600.0	600.0	600.0	1.2	1.2	-157.20	-75.7	-31.8	82.1	79.6	2.44	33.702	
700.0	700.0	702.9	702.8	1.4	1.4	-157.42	-74.1	-30.8	80.3	77.4	2.89	27.783	
800.0	800.0	805.3	805.1	1.7	1.7	-158.15	-69.5	-27.9	75.0	71.7	3.35	22.401	
900.0	900.0	905.1	904.7	1.9	1.9	-148.36	-63.6	-24.1	69.7	65.9	3.80	18.345	
1,000.0	999.8	1,005.0	1,004.4	2.1	2.1	-152.00	-57.7	-20.4	67.4	63.2	4.24	15.887	
1,100.0	1,099.6	1,104.9	1,104.0	2.3	2.4	-156.46	-51.8	-16.6	67.1	62.4	4.70	14.273	
1,133.3	1,132.8	1,138.1	1,137.1	2.4	2.5	-157.95	-49.9	-15.4	67.1	62.2	4.85	13.818	CC
1,200.0	1,199.4	1,204.7	1,203.6	2.6	2.6	-160.93	-46.0	-12.9	67.2	62.0	5.16	13.015	
1,300.0	1,299.1	1,304.6	1,303.2	2.8	2.9	-165.37	-40.1	-9.1	67.6	62.0	5.62	12.028	
1,400.0	1,398.9	1,404.5	1,402.8	3.1	3.1	-169.72	-34.2	-5.4	68.5	62.4	6.09	11.249	
1,500.0	1,498.6	1,504.3	1,502.5	3.3	3.4	-173.94	-28.3	-1.7	69.8	63.2	6.56	10.635	
1,600.0	1,598.4	1,604.2	1,602.1	3.6	3.6	-177.98	-22.5	2.1	71.4	64.4	7.04	10.149	
1,700.0	1,698.1	1,704.1	1,701.7	3.8	3.9	178.17	-16.6	5.8	73.4	65.8	7.51	9.765	
1,800.0	1,797.9	1,803.9	1,801.3	4.0	4.1	174.54	-10.7	9.6	75.6	67.6	7.99	9.462	
1,900.0	1,897.6	1,903.8	1,900.9	4.3	4.4	171.13	-4.8	13.3	78.2	69.7	8.48	9.223	
2,000.0	1,997.4	2,003.6	2,000.6	4.5	4.6	167.95	1.0	17.1	81.0	72.1	8.97	9.036	
2,100.0	2,097.2	2,103.5	2,100.2	4.8	4.9	164.99	6.9	20.8	84.1	74.6	9.46	8.891	
2,200.0	2,196.9	2,203.4	2,199.8	5.1	5.1	162.24	12.8	24.5	87.4	77.4	9.95	8.779	
2,300.0	2,296.7	2,303.2	2,299.4	5.3	5.4	159.70	18.7	28.3	90.8	80.4	10.45	8.693	
2,400.0	2,396.4	2,403.1	2,399.0	5.6	5.6	157.35	24.5	32.0	94.4	83.5	10.94	8.629	
2,500.0	2,496.2	2,503.0	2,498.6	5.8	5.9	155.17	30.4	35.8	98.2	86.7	11.44	8.582	
2,600.0	2,595.9	2,602.8	2,598.3	6.1	6.2	153.16	36.3	39.5	102.1	90.1	11.94	8.549	
2,700.0	2,695.7	2,702.7	2,697.9	6.3	6.4	151.30	42.2	43.3	106.1	93.7	12.44	8.527	
2,800.0	2,795.5	2,802.5	2,797.5	6.6	6.7	149.57	48.0	47.0	110.2	97.3	12.94	8.515	
2,900.0	2,895.2	2,902.4	2,897.1	6.8	6.9	147.97	53.9	50.7	114.4	101.0	13.45	8.510	
3,000.0	2,995.0	3,002.3	2,996.7	7.1	7.2	146.49	59.8	54.5	118.7	104.8	13.95	8.511	
3,100.0	3,094.7	3,102.1	3,096.4	7.3	7.4	145.11	65.7	58.2	123.1	108.6	14.45	8.516	
3,200.0	3,194.5	3,202.0	3,196.0	7.6	7.7	143.82	71.5	62.0	127.5	112.5	14.96	8.526	
3,300.0	3,294.2	3,301.9	3,295.6	7.8	7.9	142.62	77.4	65.7	132.0	116.5	15.46	8.538	
3,400.0	3,394.0	3,401.7	3,395.2	8.1	8.2	141.50	83.3	69.5	136.5	120.6	15.96	8.553	
3,500.0	3,493.8	3,501.6	3,494.8	8.3	8.5	140.46	89.2	73.2	141.1	124.7	16.47	8.570	
3,600.0	3,593.5	3,601.4	3,594.5	8.6	8.7	139.47	95.0	76.9	145.8	128.8	16.97	8.589	
3,700.0	3,693.3	3,701.3	3,694.1	8.9	9.0	138.55	100.9	80.7	150.5	133.0	17.48	8.608	
3,800.0	3,793.0	3,801.2	3,793.7	9.1	9.2	137.69	106.8	84.4	155.2	137.2	17.98	8.628	
3,900.0	3,892.8	3,901.0	3,893.3	9.4	9.5	136.88	112.7	88.2	159.9	141.4	18.49	8.650	
4,000.0	3,992.5	4,000.9	3,992.9	9.6	9.7	136.11	118.5	91.9	164.7	145.7	18.99	8.671	
4,100.0	4,092.3	4,100.8	4,092.6	9.9	10.0	135.39	124.4	95.7	169.5	150.0	19.50	8.693	
4,200.0	4,192.1	4,200.6	4,192.2	10.1	10.2	134.70	130.3	99.4	174.3	154.3	20.00	8.715	
4,300.0	4,291.8	4,300.5	4,291.8	10.4	10.5	134.06	136.2	103.1	179.2	158.7	20.51	8.737	
4,400.0	4,391.6	4,400.3	4,391.4	10.6	10.8	133.45	142.0	106.9	184.1	163.0	21.01	8.759	
4,500.0	4,491.3	4,500.2	4,491.0	10.9	11.0	132.87	147.9	110.6	189.0	167.4	21.52	8.781	
4,600.0	4,591.1	4,600.1	4,590.6	11.2	11.3	132.32	153.8	114.4	193.9	171.8	22.02	8.802	
4,700.0	4,690.8	4,699.9	4,690.3	11.4	11.5	131.79	159.7	118.1	198.8	176.3	22.53	8.824	
4,800.0	4,790.6	4,799.8	4,789.9	11.7	11.8	131.29	165.5	121.9	203.7	180.7	23.04	8.845	
4,900.0	4,890.3	4,900.0	4,890.0	11.9	12.0	131.30	170.0	124.7	208.6	185.1	23.50	8.878	
5,000.0	4,990.1	5,000.2	4,990.1	12.2	12.2	132.24	171.4	125.6	213.3	189.4	23.90	8.927	

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-2307A
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-2307A	**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

Survey Program: 0-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
5,100.0	5,089.9	5,099.9	5,089.9	12.4	12.3	133.59	171.4	125.6	218.1	193.8	24.30	8.975	
5,135.7	5,125.5	5,135.5	5,125.5	12.5	12.4	134.06	171.4	125.6	219.8	195.4	24.45	8.990	
5,150.0	5,139.7	5,149.8	5,139.7	12.6	12.4	134.22	171.4	125.6	220.7	196.2	24.50	9.008	
5,200.0	5,189.2	5,202.5	5,192.4	12.7	12.6	135.21	171.6	125.6	225.7	201.1	24.60	9.175	
5,250.0	5,237.7	5,268.2	5,257.9	12.9	12.7	136.30	177.4	125.6	231.9	207.2	24.67	9.399	
5,300.0	5,284.9	5,335.4	5,323.4	13.2	12.9	136.74	191.8	125.6	237.9	213.2	24.71	9.629	
5,350.0	5,330.2	5,403.5	5,387.4	13.4	13.2	136.53	214.9	125.6	243.7	218.9	24.75	9.846	
5,400.0	5,373.4	5,472.2	5,448.4	13.7	13.6	135.71	246.5	125.6	249.1	224.2	24.85	10.024	
5,450.0	5,413.9	5,541.1	5,504.9	14.1	14.0	134.31	285.9	125.6	254.1	229.0	25.06	10.140	
5,500.0	5,451.4	5,609.7	5,555.4	14.5	14.5	132.37	332.2	125.6	258.8	233.3	25.46	10.163	
5,550.0	5,485.6	5,677.6	5,599.1	15.0	15.1	129.98	384.1	125.6	263.2	237.1	26.11	10.078	
5,600.0	5,516.2	5,744.5	5,635.1	15.5	15.8	127.18	440.4	125.6	267.5	240.4	27.06	9.884	
5,650.0	5,542.8	5,810.0	5,663.1	16.0	16.5	124.05	499.7	125.6	271.8	243.5	28.32	9.597	
5,700.0	5,565.2	5,874.1	5,683.0	16.6	17.3	120.66	560.4	125.6	276.4	246.5	29.87	9.251	
5,750.0	5,583.3	5,936.4	5,695.2	17.3	18.1	117.09	621.6	125.6	281.2	249.6	31.66	8.883	
5,800.0	5,596.8	5,997.0	5,699.9	18.0	19.0	113.39	682.0	125.6	286.5	252.9	33.61	8.525	
5,850.0	5,605.6	6,047.3	5,700.0	18.7	19.7	110.37	732.2	125.6	292.9	257.5	35.39	8.276	
5,900.0	5,609.7	6,096.0	5,700.0	19.5	20.4	108.14	781.0	125.7	301.2	264.2	37.05	8.130	
5,917.5	5,610.0	6,113.2	5,700.0	19.7	20.7	107.53	798.1	125.7	304.5	266.9	37.62	8.095	
6,000.0	5,610.0	6,194.3	5,700.0	20.9	21.9	106.59	879.2	125.7	318.9	278.6	40.31	7.910	
6,100.0	5,610.0	6,293.4	5,700.0	22.3	23.5	105.83	978.3	125.7	331.8	288.3	43.54	7.622	
6,200.0	5,610.0	6,393.0	5,700.0	23.8	25.1	105.38	1,078.0	125.7	339.7	293.0	46.76	7.266	
6,307.6	5,610.0	6,500.6	5,700.0	25.4	26.9	105.23	1,185.5	125.7	342.7	292.5	50.18	6.828	
6,400.0	5,610.0	6,593.0	5,700.0	26.9	28.4	105.23	1,277.9	125.7	342.7	289.5	53.15	6.447	
6,500.0	5,610.0	6,693.0	5,700.0	28.6	30.2	105.23	1,377.9	125.7	342.7	286.2	56.45	6.070	
6,600.0	5,610.0	6,793.0	5,700.0	30.3	31.9	105.23	1,477.9	125.7	342.7	282.9	59.81	5.730	
6,700.0	5,610.0	6,893.0	5,700.0	32.0	33.7	105.23	1,577.9	125.7	342.7	279.5	63.20	5.422	
6,800.0	5,610.0	6,993.0	5,700.0	33.7	35.5	105.23	1,677.9	125.7	342.7	276.0	66.63	5.143	
6,900.0	5,610.0	7,093.0	5,700.0	35.5	37.2	105.23	1,777.9	125.7	342.7	272.6	70.09	4.889	
7,000.0	5,610.0	7,193.0	5,700.0	37.2	39.1	105.23	1,877.9	125.7	342.7	269.1	73.57	4.658	
7,100.0	5,610.0	7,293.0	5,700.0	39.0	40.9	105.23	1,977.9	125.7	342.7	265.6	77.08	4.446	
7,200.0	5,610.0	7,393.0	5,700.0	40.8	42.7	105.23	2,077.9	125.7	342.7	262.1	80.60	4.251	
7,300.0	5,610.0	7,493.0	5,700.0	42.6	44.5	105.23	2,177.9	125.7	342.7	258.5	84.14	4.073	
7,400.0	5,610.0	7,593.0	5,700.0	44.5	46.4	105.23	2,277.9	125.7	342.7	255.0	87.70	3.907	
7,500.0	5,610.0	7,693.0	5,700.0	46.3	48.2	105.23	2,377.9	125.7	342.7	251.4	91.27	3.755	
7,600.0	5,610.0	7,793.0	5,700.0	48.1	50.1	105.23	2,477.9	125.7	342.7	247.8	94.85	3.613	
7,700.0	5,610.0	7,893.0	5,700.0	50.0	51.9	105.23	2,577.9	125.8	342.7	244.2	98.44	3.481	
7,800.0	5,610.0	7,993.0	5,700.0	51.8	53.8	105.23	2,677.9	125.8	342.7	240.6	102.04	3.358	
7,900.0	5,610.0	8,093.0	5,700.0	53.7	55.6	105.23	2,777.9	125.8	342.7	237.0	105.65	3.244	
8,000.0	5,610.0	8,193.0	5,700.0	55.5	57.5	105.23	2,877.9	125.8	342.7	233.4	109.26	3.136	
8,100.0	5,610.0	8,293.0	5,700.0	57.4	59.4	105.23	2,977.9	125.8	342.7	229.8	112.89	3.036	
8,200.0	5,610.0	8,393.0	5,700.0	59.2	61.2	105.23	3,077.9	125.8	342.7	226.2	116.51	2.941	
8,300.0	5,610.0	8,493.0	5,700.0	61.1	63.1	105.23	3,177.9	125.8	342.7	222.5	120.15	2.852	
8,400.0	5,610.0	8,593.0	5,700.0	63.0	65.0	105.23	3,277.9	125.8	342.7	218.9	123.79	2.768	
8,500.0	5,610.0	8,693.0	5,700.0	64.8	66.9	105.23	3,377.9	125.8	342.7	215.2	127.43	2.689	
8,600.0	5,610.0	8,793.0	5,700.0	66.7	68.8	105.23	3,477.9	125.8	342.7	211.6	131.08	2.614	
8,700.0	5,610.0	8,893.0	5,700.0	68.6	70.6	105.23	3,577.9	125.8	342.7	207.9	134.73	2.543	
8,800.0	5,610.0	8,993.0	5,700.0	70.5	72.5	105.23	3,677.9	125.8	342.7	204.3	138.38	2.476	
8,900.0	5,610.0	9,093.0	5,700.0	72.3	74.4	105.23	3,777.9	125.8	342.7	200.6	142.04	2.412	
9,000.0	5,610.0	9,193.0	5,700.0	74.2	76.3	105.23	3,877.9	125.8	342.7	197.0	145.71	2.352	
9,100.0	5,610.0	9,293.0	5,700.0	76.1	78.2	105.23	3,977.9	125.8	342.7	193.3	149.37	2.294	
9,200.0	5,610.0	9,393.0	5,700.0	78.0	80.1	105.23	4,077.9	125.8	342.7	189.6	153.04	2.239	

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-2307A
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-2307A	**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
9,300.0	5,610.0	9,493.0	5,700.0	79.9	82.0	105.23	4,177.9	125.8	342.7	186.0	156.71	2.187	
9,400.0	5,610.0	9,593.0	5,700.0	81.8	83.9	105.23	4,277.9	125.9	342.7	182.3	160.38	2.137	
9,500.0	5,610.0	9,693.0	5,700.0	83.7	85.8	105.23	4,377.9	125.9	342.7	178.6	164.05	2.089	
9,600.0	5,610.0	9,793.0	5,700.0	85.6	87.7	105.23	4,477.9	125.9	342.7	174.9	167.73	2.043	
9,700.0	5,610.0	9,893.0	5,700.0	87.4	89.5	105.23	4,577.9	125.9	342.7	171.3	171.40	1.999	
9,800.0	5,610.0	9,993.0	5,700.0	89.3	91.4	105.23	4,677.9	125.9	342.7	167.6	175.08	1.957	
9,900.0	5,610.0	10,093.0	5,700.0	91.2	93.3	105.23	4,777.9	125.9	342.7	163.9	178.77	1.917	
10,000.0	5,610.0	10,193.0	5,700.0	93.1	95.2	105.23	4,877.9	125.9	342.7	160.2	182.45	1.878	
10,100.0	5,610.0	10,293.0	5,700.0	95.0	97.1	105.23	4,977.9	125.9	342.7	156.5	186.13	1.841	
10,200.0	5,610.0	10,393.0	5,700.0	96.9	99.0	105.23	5,077.9	125.9	342.7	152.9	189.82	1.805	
10,300.0	5,610.0	10,493.0	5,700.0	98.8	100.9	105.23	5,177.9	125.9	342.7	149.2	193.50	1.771	
10,400.0	5,610.0	10,593.0	5,700.0	100.7	102.8	105.23	5,277.9	125.9	342.7	145.5	197.19	1.738	
10,500.0	5,610.0	10,693.0	5,700.0	102.6	104.7	105.23	5,377.9	125.9	342.7	141.8	200.88	1.706	
10,600.0	5,610.0	10,793.0	5,700.0	104.5	106.7	105.23	5,477.9	125.9	342.7	138.1	204.57	1.675	
10,700.0	5,610.0	10,893.0	5,700.0	106.4	108.6	105.23	5,577.9	125.9	342.7	134.4	208.26	1.645	
10,800.0	5,610.0	10,993.0	5,700.0	108.3	110.5	105.23	5,677.9	125.9	342.7	130.7	211.95	1.617	
10,900.0	5,610.0	11,093.0	5,700.0	110.2	112.4	105.23	5,777.9	125.9	342.7	127.0	215.65	1.589	
11,000.0	5,610.0	11,193.0	5,700.0	112.1	114.3	105.23	5,877.9	125.9	342.7	123.3	219.34	1.562	
11,100.0	5,610.0	11,293.0	5,700.0	114.0	116.2	105.23	5,977.9	126.0	342.7	119.6	223.03	1.536	
11,200.0	5,610.0	11,393.0	5,700.0	115.9	118.1	105.23	6,077.9	126.0	342.7	115.9	226.73	1.511	
11,300.0	5,610.0	11,493.0	5,700.0	117.8	120.0	105.23	6,177.9	126.0	342.7	112.2	230.43	1.487	Level 3
11,400.0	5,610.0	11,593.0	5,700.0	119.7	121.9	105.23	6,277.9	126.0	342.7	108.6	234.12	1.464	Level 3
11,500.0	5,610.0	11,693.0	5,700.0	121.6	123.8	105.23	6,377.9	126.0	342.7	104.9	237.82	1.441	Level 3
11,600.0	5,610.0	11,793.0	5,700.0	123.5	125.7	105.23	6,477.9	126.0	342.7	101.2	241.52	1.419	Level 3
11,700.0	5,610.0	11,893.0	5,700.0	125.5	127.6	105.23	6,577.9	126.0	342.7	97.5	245.22	1.397	Level 3
11,800.0	5,610.0	11,993.0	5,700.0	127.4	129.5	105.23	6,677.9	126.0	342.7	93.8	248.92	1.377	Level 3
11,900.0	5,610.0	12,093.0	5,700.0	129.3	131.4	105.23	6,777.9	126.0	342.7	90.1	252.62	1.356	Level 3
12,000.0	5,610.0	12,193.0	5,700.0	131.2	133.3	105.23	6,877.9	126.0	342.7	86.4	256.32	1.337	Level 3
12,100.0	5,610.0	12,293.0	5,700.0	133.1	135.2	105.23	6,977.9	126.0	342.7	82.7	260.02	1.318	Level 3
12,200.0	5,610.0	12,393.0	5,700.0	135.0	137.1	105.23	7,077.9	126.0	342.7	79.0	263.72	1.299	Level 3
12,300.0	5,610.0	12,493.0	5,700.0	136.9	139.1	105.23	7,177.9	126.0	342.7	75.3	267.42	1.281	Level 3
12,400.0	5,610.0	12,593.0	5,700.0	138.8	141.0	105.23	7,277.9	126.0	342.7	71.6	271.12	1.264	Level 3
12,500.0	5,610.0	12,693.0	5,700.0	140.7	142.9	105.23	7,377.9	126.0	342.7	67.8	274.83	1.247	Level 2
12,600.0	5,610.0	12,793.0	5,700.0	142.6	144.8	105.23	7,477.9	126.0	342.7	64.1	278.53	1.230	Level 2
12,700.0	5,610.0	12,893.0	5,700.0	144.5	146.7	105.23	7,577.9	126.0	342.7	60.4	282.23	1.214	Level 2
12,800.0	5,610.0	12,993.0	5,700.0	146.4	148.6	105.23	7,677.9	126.0	342.7	56.7	285.94	1.198	Level 2
12,900.0	5,610.0	13,093.0	5,700.0	148.3	150.5	105.23	7,777.9	126.1	342.7	53.0	289.64	1.183	Level 2
13,000.0	5,610.0	13,193.0	5,700.0	150.2	152.4	105.23	7,877.9	126.1	342.7	49.3	293.35	1.168	Level 2
13,100.0	5,610.0	13,293.0	5,700.0	152.2	154.3	105.23	7,977.9	126.1	342.7	45.6	297.05	1.154	Level 2
13,182.5	5,610.0	13,375.5	5,700.0	153.4	155.6	105.23	8,060.4	126.1	342.7	43.1	299.57	1.144	Level 2, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	-91.08	-1.9	-99.1	99.1				
100.0	100.0	100.0	100.0	0.1	0.1	-91.08	-1.9	-99.1	99.1	98.9	0.19	528.053	
200.0	200.0	200.0	200.0	0.3	0.3	-91.08	-1.9	-99.1	99.1	98.5	0.64	155.529	
300.0	300.0	300.0	300.0	0.5	0.5	-91.08	-1.9	-99.1	99.1	98.0	1.09	91.194	
400.0	400.0	400.0	400.0	0.8	0.8	-91.08	-1.9	-99.1	99.1	97.6	1.54	64.510	
500.0	500.0	500.0	500.0	1.0	1.0	-91.08	-1.9	-99.1	99.1	97.1	1.99	49.907	
600.0	600.0	600.0	600.0	1.2	1.2	-91.08	-1.9	-99.1	99.1	96.7	2.44	40.695	
700.0	700.0	700.0	700.0	1.4	1.4	-91.08	-1.9	-99.1	99.1	96.2	2.88	34.353	
800.0	800.0	800.0	800.0	1.7	1.7	-91.08	-1.9	-99.1	99.1	95.8	3.33	29.722	
900.0	900.0	900.0	900.0	1.9	1.9	-80.38	-1.9	-99.1	98.8	95.0	3.78	26.117	
1,000.0	999.8	999.8	999.8	2.1	2.1	-83.41	-1.9	-99.1	98.1	93.8	4.23	23.169	
1,048.6	1,048.4	1,047.8	1,047.8	2.2	2.2	-85.58	-2.3	-99.2	97.9	93.4	4.44	22.044	CC, ES
1,100.0	1,099.6	1,098.4	1,098.4	2.3	2.3	-88.35	-3.5	-99.4	98.1	93.5	4.66	21.071	
1,200.0	1,199.4	1,196.2	1,196.1	2.6	2.5	-94.91	-8.5	-100.4	100.5	95.4	5.07	19.841	
1,300.0	1,299.1	1,295.3	1,294.9	2.8	2.7	-101.99	-15.2	-101.8	105.2	99.7	5.49	19.167	
1,400.0	1,398.9	1,394.3	1,393.7	3.1	2.9	-108.38	-22.0	-103.2	111.4	105.5	5.92	18.809	
1,500.0	1,498.6	1,493.4	1,492.5	3.3	3.1	-114.04	-28.8	-104.5	118.9	112.5	6.36	18.683	SF
1,600.0	1,598.4	1,592.4	1,591.3	3.6	3.3	-119.01	-35.5	-105.9	127.4	120.5	6.80	18.719	
1,700.0	1,698.1	1,691.5	1,690.2	3.8	3.5	-123.33	-42.3	-107.3	136.7	129.4	7.24	18.864	
1,800.0	1,797.9	1,790.6	1,789.0	4.0	3.7	-127.09	-49.1	-108.7	146.7	139.0	7.69	19.080	
1,900.0	1,897.6	1,889.6	1,887.8	4.3	4.0	-130.36	-55.9	-110.1	157.2	149.1	8.13	19.339	
2,000.0	1,997.4	1,988.7	1,986.6	4.5	4.2	-133.21	-62.6	-111.4	168.2	159.6	8.57	19.624	
2,100.0	2,097.2	2,087.8	2,085.5	4.8	4.4	-135.71	-69.4	-112.8	179.5	170.5	9.01	19.919	
2,200.0	2,196.9	2,186.8	2,184.3	5.1	4.7	-137.91	-76.2	-114.2	191.2	181.7	9.46	20.218	
2,300.0	2,296.7	2,285.9	2,283.1	5.3	4.9	-139.86	-82.9	-115.6	203.1	193.2	9.90	20.513	
2,400.0	2,396.4	2,385.0	2,381.9	5.6	5.2	-141.59	-89.7	-116.9	215.2	204.8	10.34	20.802	
2,500.0	2,496.2	2,484.0	2,480.8	5.8	5.4	-143.14	-96.5	-118.3	227.5	216.7	10.79	21.082	
2,600.0	2,595.9	2,583.1	2,579.6	6.1	5.7	-144.52	-103.3	-119.7	239.9	228.6	11.23	21.351	
2,700.0	2,695.7	2,682.2	2,678.4	6.3	5.9	-145.77	-110.0	-121.1	252.4	240.7	11.68	21.610	
2,800.0	2,795.5	2,781.2	2,777.2	6.6	6.2	-146.90	-116.8	-122.4	265.1	253.0	12.13	21.857	
2,900.0	2,895.2	2,880.3	2,876.1	6.8	6.4	-147.93	-123.6	-123.8	277.8	265.3	12.58	22.092	
3,000.0	2,995.0	2,979.4	2,974.9	7.1	6.7	-148.87	-130.4	-125.2	290.7	277.6	13.02	22.317	
3,100.0	3,094.7	3,078.4	3,073.7	7.3	6.9	-149.73	-137.1	-126.6	303.6	290.1	13.47	22.531	
3,200.0	3,194.5	3,177.5	3,172.5	7.6	7.2	-150.52	-143.9	-127.9	316.5	302.6	13.92	22.735	
3,300.0	3,294.2	3,276.6	3,271.4	7.8	7.4	-151.25	-150.7	-129.3	329.5	315.2	14.37	22.929	
3,400.0	3,394.0	3,375.6	3,370.2	8.1	7.7	-151.92	-157.4	-130.7	342.6	327.8	14.82	23.113	
3,500.0	3,493.8	3,474.7	3,469.0	8.3	7.9	-152.54	-164.2	-132.1	355.7	340.4	15.27	23.289	
3,600.0	3,593.5	3,573.8	3,567.8	8.6	8.2	-153.12	-171.0	-133.4	368.9	353.1	15.72	23.457	
3,700.0	3,693.3	3,672.8	3,666.7	8.9	8.5	-153.65	-177.8	-134.8	382.0	365.9	16.18	23.617	
3,800.0	3,793.0	3,771.9	3,765.5	9.1	8.7	-154.16	-184.5	-136.2	395.2	378.6	16.63	23.769	
3,900.0	3,892.8	3,871.0	3,864.3	9.4	9.0	-154.63	-191.3	-137.6	408.5	391.4	17.08	23.915	
4,000.0	3,992.5	3,970.0	3,963.1	9.6	9.2	-155.07	-198.1	-138.9	421.7	404.2	17.53	24.054	
4,100.0	4,092.3	4,069.1	4,062.0	9.9	9.5	-155.48	-204.8	-140.3	435.0	417.0	17.99	24.187	
4,200.0	4,192.1	4,168.2	4,160.8	10.1	9.7	-155.87	-211.6	-141.7	448.3	429.9	18.44	24.314	
4,300.0	4,291.8	4,267.2	4,259.6	10.4	10.0	-156.24	-218.4	-143.1	461.7	442.8	18.89	24.436	
4,400.0	4,391.6	4,366.3	4,358.4	10.6	10.3	-156.58	-225.2	-144.4	475.0	455.7	19.35	24.553	
4,500.0	4,491.3	4,465.4	4,457.3	10.9	10.5	-156.91	-231.9	-145.8	488.4	468.6	19.80	24.664	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	-91.12	-0.6	-33.2	33.2				
100.0	100.0	100.0	100.0	0.1	0.1	-91.12	-0.6	-33.2	33.2	33.0	0.19	177.001	
200.0	200.0	200.0	200.0	0.3	0.3	-91.12	-0.6	-33.2	33.2	32.6	0.64	52.133	
300.0	300.0	300.0	300.0	0.5	0.5	-91.12	-0.6	-33.2	33.2	32.1	1.09	30.568	
400.0	400.0	400.0	400.0	0.8	0.8	-91.12	-0.6	-33.2	33.2	31.7	1.54	21.623	
500.0	500.0	500.0	500.0	1.0	1.0	-91.12	-0.6	-33.2	33.2	31.2	1.99	16.728	
600.0	600.0	600.0	600.0	1.2	1.2	-91.12	-0.6	-33.2	33.2	30.8	2.44	13.641	
700.0	700.0	700.0	700.0	1.4	1.4	-91.12	-0.6	-33.2	33.2	30.3	2.88	11.515	
800.0	800.0	800.3	800.3	1.7	1.6	-94.03	-2.3	-32.6	32.7	29.4	3.31	9.885	
900.0	900.0	900.3	900.1	1.9	1.8	-94.65	-7.2	-30.8	31.7	28.0	3.71	8.549	
904.3	904.3	904.6	904.4	1.9	1.8	-95.46	-7.5	-30.7	31.7	28.0	3.73	8.506	CC, ES
1,000.0	999.8	999.5	999.1	2.1	2.0	-115.43	-13.7	-28.5	34.0	29.8	4.14	8.206	SF
1,100.0	1,099.6	1,098.6	1,097.9	2.3	2.2	-133.65	-20.2	-26.1	41.1	36.6	4.58	8.986	
1,200.0	1,199.4	1,197.6	1,196.7	2.6	2.5	-145.69	-26.7	-23.7	51.1	46.1	5.01	10.202	
1,300.0	1,299.1	1,296.6	1,295.5	2.8	2.7	-153.60	-33.2	-21.4	62.6	57.2	5.45	11.502	
1,400.0	1,398.9	1,395.7	1,394.3	3.1	2.9	-158.99	-39.7	-19.0	74.9	69.1	5.88	12.747	
1,500.0	1,498.6	1,494.7	1,493.1	3.3	3.2	-162.84	-46.2	-16.6	87.7	81.4	6.32	13.891	
1,600.0	1,598.4	1,593.7	1,591.9	3.6	3.4	-165.71	-52.7	-14.3	100.8	94.0	6.75	14.926	
1,700.0	1,698.1	1,692.8	1,690.7	3.8	3.6	-167.92	-59.2	-11.9	114.1	106.9	7.19	15.857	
1,800.0	1,797.9	1,791.8	1,789.5	4.0	3.9	-169.66	-65.7	-9.5	127.5	119.8	7.64	16.694	
1,900.0	1,897.6	1,890.8	1,888.3	4.3	4.1	-171.07	-72.2	-7.2	140.9	132.9	8.08	17.448	
2,000.0	1,997.4	1,989.9	1,987.0	4.5	4.4	-172.24	-78.6	-4.8	154.5	146.0	8.52	18.129	
2,100.0	2,097.2	2,088.9	2,085.8	4.8	4.6	-173.22	-85.1	-2.5	168.1	159.2	8.97	18.746	
2,200.0	2,196.9	2,187.9	2,184.6	5.1	4.9	-174.05	-91.6	-0.1	181.8	172.4	9.41	19.307	
2,300.0	2,296.7	2,287.0	2,283.4	5.3	5.1	-174.76	-98.1	2.3	195.5	185.6	9.86	19.819	
2,400.0	2,396.4	2,386.0	2,382.2	5.6	5.4	-175.38	-104.6	4.6	209.2	198.9	10.31	20.287	
2,500.0	2,496.2	2,485.0	2,481.0	5.8	5.7	-175.93	-111.1	7.0	222.9	212.1	10.76	20.717	
2,600.0	2,595.9	2,584.1	2,579.8	6.1	5.9	-176.41	-117.6	9.4	236.6	225.4	11.21	21.113	
2,700.0	2,695.7	2,683.1	2,678.6	6.3	6.2	-176.84	-124.1	11.7	250.4	238.8	11.66	21.479	
2,800.0	2,795.5	2,782.1	2,777.4	6.6	6.4	-177.22	-130.6	14.1	264.2	252.1	12.11	21.817	
2,900.0	2,895.2	2,881.1	2,876.2	6.8	6.7	-177.56	-137.1	16.4	278.0	265.4	12.56	22.132	
3,000.0	2,995.0	2,980.2	2,975.0	7.1	6.9	-177.88	-143.6	18.8	291.8	278.8	13.01	22.425	
3,100.0	3,094.7	3,079.2	3,073.7	7.3	7.2	-178.16	-150.1	21.2	305.6	292.1	13.46	22.698	
3,200.0	3,194.5	3,178.2	3,172.5	7.6	7.5	-178.42	-156.5	23.5	319.4	305.5	13.91	22.953	
3,300.0	3,294.2	3,277.3	3,271.3	7.8	7.7	-178.66	-163.0	25.9	333.2	318.8	14.37	23.193	
3,400.0	3,394.0	3,376.3	3,370.1	8.1	8.0	-178.88	-169.5	28.3	347.0	332.2	14.82	23.417	
3,500.0	3,493.8	3,475.3	3,468.9	8.3	8.2	-179.08	-176.0	30.6	360.8	345.6	15.27	23.629	
3,600.0	3,593.5	3,574.4	3,567.7	8.6	8.5	-179.27	-182.5	33.0	374.7	358.9	15.72	23.828	
3,700.0	3,693.3	3,673.4	3,666.5	8.9	8.8	-179.45	-189.0	35.3	388.5	372.3	16.18	24.016	
3,800.0	3,793.0	3,772.4	3,765.3	9.1	9.0	-179.61	-195.5	37.7	402.3	385.7	16.63	24.193	
3,900.0	3,892.8	3,871.5	3,864.1	9.4	9.3	-179.76	-202.0	40.1	416.2	399.1	17.08	24.362	
4,000.0	3,992.5	3,970.5	3,962.9	9.6	9.5	-179.90	-208.5	42.4	430.0	412.5	17.54	24.521	
4,100.0	4,092.3	4,069.5	4,061.7	9.9	9.8	179.96	-215.0	44.8	443.9	425.9	17.99	24.672	
4,200.0	4,192.1	4,168.6	4,160.4	10.1	10.1	179.84	-221.5	47.2	457.7	439.3	18.44	24.816	
4,300.0	4,291.8	4,267.6	4,259.2	10.4	10.3	179.72	-228.0	49.5	471.6	452.7	18.90	24.953	
4,400.0	4,391.6	4,366.6	4,358.0	10.6	10.6	179.61	-234.4	51.9	485.4	466.1	19.35	25.083	
4,500.0	4,491.3	4,465.7	4,456.8	10.9	10.8	179.51	-240.9	54.2	499.3	479.5	19.81	25.208	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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	178.92	-75.0	1.4	75.1				
100.0	100.0	100.0	100.0	0.1	0.1	178.92	-75.0	1.4	75.1	74.9	0.19	399.903	
200.0	200.0	200.0	200.0	0.3	0.3	178.92	-75.0	1.4	75.1	74.4	0.64	117.785	
300.0	300.0	300.0	300.0	0.5	0.5	178.92	-75.0	1.4	75.1	74.0	1.09	69.063	
400.0	400.0	400.0	400.0	0.8	0.8	178.92	-75.0	1.4	75.1	73.5	1.54	48.854	
500.0	500.0	500.0	500.0	1.0	1.0	178.92	-75.0	1.4	75.1	73.1	1.99	37.795	
600.0	600.0	600.0	600.0	1.2	1.2	178.92	-75.0	1.4	75.1	72.6	2.44	30.819	
700.0	700.0	700.0	700.0	1.4	1.4	178.92	-75.0	1.4	75.1	72.2	2.88	26.016	
800.0	800.0	800.0	800.0	1.7	1.7	178.92	-75.0	1.4	75.1	71.7	3.33	22.509	CC, ES
900.0	900.0	900.0	900.0	1.9	1.9	-169.61	-75.0	1.4	76.8	73.0	3.78	20.288	
1,000.0	999.8	999.8	999.8	2.1	2.1	-170.25	-75.0	1.4	81.9	77.7	4.23	19.357	
1,100.0	1,099.6	1,099.6	1,099.6	2.3	2.3	-171.01	-75.0	1.4	88.8	84.1	4.68	18.972	SF
1,200.0	1,199.4	1,196.5	1,196.4	2.6	2.5	-172.10	-76.4	2.3	97.2	92.1	5.10	19.050	
1,300.0	1,299.1	1,292.7	1,292.5	2.8	2.7	-173.78	-80.6	4.8	108.6	103.1	5.51	19.722	
1,400.0	1,398.9	1,391.5	1,391.1	3.1	2.9	-175.55	-86.5	8.3	121.8	115.9	5.92	20.581	
1,500.0	1,498.6	1,490.5	1,489.9	3.3	3.1	-176.98	-92.4	11.9	135.2	128.9	6.34	21.335	
1,600.0	1,598.4	1,589.6	1,588.7	3.6	3.3	-178.15	-98.3	15.5	148.6	141.8	6.76	21.990	
1,700.0	1,698.1	1,688.6	1,687.5	3.8	3.5	-179.13	-104.2	19.1	162.1	154.9	7.18	22.562	
1,800.0	1,797.9	1,787.7	1,786.4	4.0	3.7	-179.96	-110.1	22.7	175.6	168.0	7.61	23.064	
1,900.0	1,897.6	1,886.8	1,885.2	4.3	4.0	179.33	-116.0	26.3	189.1	181.1	8.04	23.508	
2,000.0	1,997.4	1,985.8	1,984.0	4.5	4.2	178.71	-121.9	29.8	202.7	194.2	8.48	23.901	
2,100.0	2,097.2	2,084.9	2,082.8	4.8	4.4	178.18	-127.8	33.4	216.2	207.3	8.92	24.253	
2,200.0	2,196.9	2,183.9	2,181.6	5.1	4.7	177.70	-133.7	37.0	229.8	220.5	9.35	24.569	
2,300.0	2,296.7	2,283.0	2,280.4	5.3	4.9	177.28	-139.6	40.6	243.4	233.6	9.79	24.853	
2,400.0	2,396.4	2,382.0	2,379.2	5.6	5.2	176.90	-145.5	44.2	257.1	246.8	10.24	25.111	
2,500.0	2,496.2	2,481.1	2,478.0	5.8	5.4	176.56	-151.4	47.8	270.7	260.0	10.68	25.345	
2,600.0	2,595.9	2,580.1	2,576.9	6.1	5.6	176.26	-157.3	51.4	284.3	273.2	11.12	25.559	
2,700.0	2,695.7	2,679.2	2,675.7	6.3	5.9	175.98	-163.3	54.9	298.0	286.4	11.57	25.754	
2,800.0	2,795.5	2,778.3	2,774.5	6.6	6.1	175.73	-169.2	58.5	311.6	299.6	12.02	25.934	
2,900.0	2,895.2	2,877.3	2,873.3	6.8	6.4	175.49	-175.1	62.1	325.3	312.8	12.46	26.100	
3,000.0	2,995.0	2,976.4	2,972.1	7.1	6.6	175.28	-181.0	65.7	338.9	326.0	12.91	26.253	
3,100.0	3,094.7	3,075.4	3,070.9	7.3	6.9	175.08	-186.9	69.3	352.6	339.2	13.36	26.395	
3,200.0	3,194.5	3,174.5	3,169.7	7.6	7.1	174.90	-192.8	72.9	366.3	352.5	13.81	26.527	
3,300.0	3,294.2	3,273.5	3,268.6	7.8	7.4	174.73	-198.7	76.4	379.9	365.7	14.26	26.649	
3,400.0	3,394.0	3,372.6	3,367.4	8.1	7.6	174.57	-204.6	80.0	393.6	378.9	14.71	26.764	
3,500.0	3,493.8	3,471.6	3,466.2	8.3	7.9	174.43	-210.5	83.6	407.3	392.1	15.16	26.871	
3,600.0	3,593.5	3,570.7	3,565.0	8.6	8.2	174.29	-216.4	87.2	421.0	405.4	15.61	26.972	
3,700.0	3,693.3	3,669.7	3,663.8	8.9	8.4	174.16	-222.3	90.8	434.7	418.6	16.06	27.066	
3,800.0	3,793.0	3,768.8	3,762.6	9.1	8.7	174.04	-228.2	94.4	448.3	431.8	16.51	27.155	
3,900.0	3,892.8	3,867.9	3,861.4	9.4	8.9	173.92	-234.1	98.0	462.0	445.1	16.96	27.238	
4,000.0	3,992.5	3,966.9	3,960.3	9.6	9.2	173.82	-240.0	101.5	475.7	458.3	17.41	27.317	
4,100.0	4,092.3	4,066.0	4,059.1	9.9	9.4	173.72	-246.0	105.1	489.4	471.5	17.87	27.392	

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-2307A
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-2307A	**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
0.0	0.0	0.0	0.0	0.0	0.0	-153.32	-126.9	-63.8	142.1				
100.0	100.0	98.2	98.1	0.1	0.1	-153.14	-127.3	-64.5	142.7	142.5	0.19	737.607	
200.0	200.0	197.4	197.4	0.3	0.3	-152.67	-128.1	-66.2	144.2	143.6	0.62	232.589	
300.0	300.0	297.8	297.8	0.5	0.5	-152.27	-129.0	-67.8	145.8	144.8	1.05	139.220	
400.0	400.0	397.7	397.6	0.8	0.7	-151.89	-129.9	-69.4	147.3	145.8	1.48	99.638	
500.0	500.0	497.8	497.7	1.0	0.9	-151.39	-130.6	-71.3	148.8	146.9	1.92	77.565	
600.0	600.0	598.5	598.4	1.2	1.1	-151.17	-131.4	-72.4	150.1	147.7	2.35	63.872	
700.0	700.0	698.9	698.8	1.4	1.3	-151.00	-131.8	-73.1	150.8	148.0	2.78	54.218	
800.0	800.0	799.1	799.0	1.7	1.6	-150.75	-132.2	-74.1	151.6	148.4	3.22	47.128	
900.0	900.0	899.5	899.4	1.9	1.8	-139.22	-132.2	-74.8	153.2	149.5	3.65	41.948	
1,000.0	999.8	999.1	999.0	2.1	2.0	-140.28	-132.4	-75.3	157.6	153.5	4.08	38.599	
1,100.0	1,099.6	1,098.0	1,097.8	2.3	2.2	-141.47	-132.5	-76.4	163.7	159.1	4.52	36.187	
1,200.0	1,199.4	1,196.1	1,196.0	2.6	2.4	-142.32	-133.0	-78.7	170.6	165.7	4.97	34.356	
1,300.0	1,299.1	1,295.8	1,295.6	2.8	2.6	-142.94	-133.9	-81.7	178.2	172.8	5.41	32.915	
1,400.0	1,398.9	1,394.4	1,394.2	3.1	2.8	-143.26	-134.3	-85.3	185.8	180.0	5.86	31.689	
1,500.0	1,498.6	1,496.0	1,495.6	3.3	3.1	-143.30	-134.7	-90.0	193.7	187.4	6.32	30.651	
1,600.0	1,598.4	1,595.6	1,595.2	3.6	3.3	-143.53	-134.5	-93.6	200.7	193.9	6.76	29.676	
1,700.0	1,698.1	1,694.2	1,693.7	3.8	3.5	-144.60	-136.1	-94.6	208.2	201.0	7.20	28.911	
1,800.0	1,797.9	1,791.7	1,791.3	4.0	3.7	-145.55	-138.1	-95.9	216.3	208.7	7.64	28.308	
1,900.0	1,897.6	1,898.0	1,897.5	4.3	3.9	-146.66	-140.4	-96.7	224.4	216.3	8.10	27.723	
2,000.0	1,997.4	2,003.2	2,002.6	4.5	4.1	-148.19	-139.7	-94.2	228.9	220.3	8.54	26.799	
2,100.0	2,097.2	2,102.5	2,101.9	4.8	4.3	-149.26	-137.9	-92.7	232.6	223.6	8.98	25.908	
2,200.0	2,196.9	2,204.5	2,203.9	5.1	4.5	-150.82	-136.0	-89.2	235.8	226.4	9.41	25.062	
2,300.0	2,296.7	2,295.6	2,294.8	5.3	4.7	-152.38	-136.1	-85.6	240.9	231.1	9.82	24.527	
2,400.0	2,396.4	2,400.3	2,399.5	5.6	4.9	-153.97	-136.8	-82.2	247.0	236.7	10.27	24.051	
2,500.0	2,496.2	2,505.2	2,504.4	5.8	5.1	-155.27	-134.6	-79.1	250.5	239.8	10.72	23.372	
2,600.0	2,595.9	2,602.7	2,601.7	6.1	5.3	-155.15	-131.6	-81.9	254.4	243.3	11.16	22.797	
2,700.0	2,695.7	2,704.8	2,703.6	6.3	5.6	-154.46	-126.9	-87.0	257.5	245.9	11.62	22.159	
2,800.0	2,795.5	2,799.2	2,797.9	6.6	5.8	-154.35	-124.3	-89.8	261.8	249.8	12.05	21.721	
2,900.0	2,895.2	2,898.0	2,896.7	6.8	6.0	-154.48	-123.4	-92.1	267.7	255.3	12.49	21.431	
3,000.0	2,995.0	2,998.1	2,996.7	7.1	6.2	-155.08	-122.3	-91.9	272.9	260.0	12.93	21.104	
3,100.0	3,094.7	3,093.7	3,092.4	7.3	6.4	-155.66	-122.5	-92.0	279.5	266.1	13.36	20.917	
3,200.0	3,194.5	3,191.9	3,190.5	7.6	6.6	-155.99	-123.3	-93.3	287.0	273.2	13.80	20.795	
3,300.0	3,294.2	3,291.0	3,289.6	7.8	6.8	-157.00	-125.3	-91.4	294.9	280.7	14.23	20.721	
3,400.0	3,394.0	3,395.7	3,394.3	8.1	7.0	-158.05	-126.8	-88.9	302.4	287.7	14.67	20.608	
3,500.0	3,493.8	3,498.3	3,496.8	8.3	7.2	-158.64	-126.1	-88.3	308.0	292.9	15.11	20.380	
3,600.0	3,593.5	3,597.0	3,595.6	8.6	7.4	-159.30	-125.4	-87.1	313.6	298.1	15.55	20.173	
3,700.0	3,693.3	3,699.6	3,698.2	8.9	7.6	-159.84	-124.4	-86.4	319.2	303.2	15.99	19.959	
3,800.0	3,793.0	3,800.9	3,799.4	9.1	7.8	-160.17	-122.5	-86.7	323.9	307.5	16.44	19.708	
3,900.0	3,892.8	3,903.6	3,902.1	9.4	8.1	-160.50	-119.9	-86.9	328.0	311.1	16.88	19.428	
4,000.0	3,992.5	3,999.4	3,997.9	9.6	8.3	-160.79	-117.7	-87.2	332.3	315.0	17.32	19.192	
4,100.0	4,092.3	4,093.2	4,091.7	9.9	8.5	-161.23	-117.1	-86.7	338.2	320.5	17.74	19.068	
4,200.0	4,192.1	4,195.1	4,193.5	10.1	8.7	-161.83	-117.1	-85.3	344.7	326.5	18.18	18.961	
4,300.0	4,291.8	4,295.2	4,293.6	10.4	8.9	-162.28	-116.6	-84.7	350.7	332.1	18.62	18.839	
4,400.0	4,391.6	4,392.3	4,390.8	10.6	9.1	-162.62	-116.4	-84.6	357.2	338.2	19.05	18.747	
4,500.0	4,491.3	4,491.2	4,489.6	10.9	9.3	-162.88	-116.9	-85.1	364.4	344.9	19.49	18.696	
4,600.0	4,591.1	4,594.4	4,592.8	11.2	9.5	-163.17	-116.6	-85.3	370.8	350.9	19.94	18.599	
4,700.0	4,690.8	4,692.3	4,690.8	11.4	9.7	-163.50	-116.4	-85.0	377.3	356.9	20.37	18.522	
4,800.0	4,790.6	4,790.6	4,789.0	11.7	9.9	-163.91	-116.7	-84.3	384.2	363.4	20.80	18.470	
4,900.0	4,890.3	4,890.9	4,889.3	11.9	10.1	-164.36	-117.2	-83.2	391.3	370.1	21.23	18.429	
5,000.0	4,990.1	4,983.2	4,981.6	12.2	10.3	-164.71	-117.7	-82.6	398.6	376.9	21.66	18.406	SF
5,100.0	5,089.9	5,067.0	5,065.3	12.4	10.5	-164.99	-121.1	-82.3	409.4	387.3	22.06	18.556	

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-2307A
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-2307A	**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
5,135.7	5,125.5	5,078.8	5,077.1	12.5	10.5	-165.04	-122.3	-82.3	415.1	392.9	22.17	18.722	
5,150.0	5,139.7	5,085.7	5,083.9	12.6	10.5	-164.99	-123.2	-82.2	418.0	395.8	22.19	18.834	
5,200.0	5,189.2	5,109.2	5,107.1	12.7	10.6	-164.72	-127.0	-82.0	432.9	410.7	22.17	19.526	
5,250.0	5,237.7	5,130.0	5,127.4	12.9	10.6	-164.27	-131.4	-81.7	454.6	432.6	21.98	20.680	
5,300.0	5,284.9	5,154.2	5,150.8	13.2	10.7	-163.69	-137.7	-81.3	482.3	460.7	21.65	22.282	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26K-2307A
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-2307A	**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-2307A
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.08°