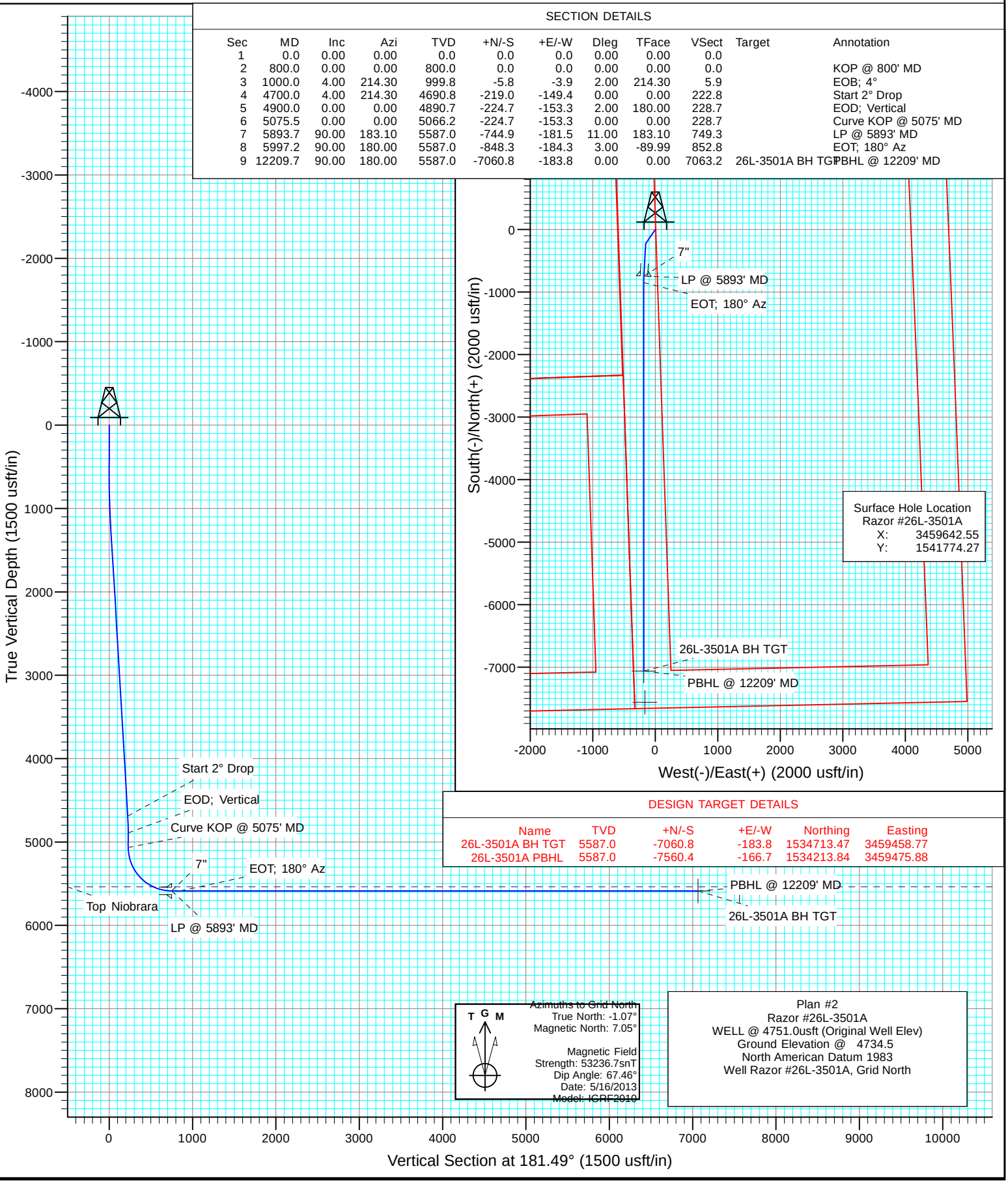
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26L-3501A
Wellbore: HZ
Design: Plan #2

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
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		KOP @ 800' MD
3	1000.0	4.00	214.30	999.8	-5.8	-3.9	2.00	214.30	5.9		EOB; 4°
4	4700.0	4.00	214.30	4690.8	-219.0	-149.4	0.00	0.00	222.8		Start 2° Drop
5	4900.0	0.00	0.00	4890.7	-224.7	-153.3	2.00	180.00	228.7		EOD; Vertical
6	5075.5	0.00	0.00	5066.2	-224.7	-153.3	0.00	0.00	228.7		Curve KOP @ 5075' MD
7	5893.7	90.00	183.10	5587.0	-744.9	-181.5	11.00	183.10	749.3		LP @ 5893' MD
8	5997.2	90.00	180.00	5587.0	-848.3	-184.3	3.00	-89.99	852.8		EOT; 180° Az
9	12209.7	90.00	180.00	5587.0	-7060.8	-183.8	0.00	0.00	7063.2	26L-3501A BH TGT	PBHL @ 12209' MD



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
26L-3501A BH TGT	5587.0	-7060.8	-183.8	1534713.47	3459458.77
26L-3501A PBHL	5587.0	-7560.4	-166.7	1534213.84	3459475.88

T G M

Azimuths to Grid North
True North: -1.07°
Magnetic North: 7.05°

Magnetic Field
Strength: 53236.7snT
Dip Angle: 67.46°
Date: 5/16/2013
Model: IGRF2010

Plan #2
Razor #26L-3501A
WELL @ 4751.0usft (Original Well Elev)
Ground Elevation @ 4734.5
North American Datum 1983
Well Razor #26L-3501A, Grid North

WHITING PETROLEUM CORPORATION

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-3501A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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° 48' 31.46 N
From:	Lat/Long	**Easting:**	3,459,649.47 ft	**Longitude:**	103° 50' 22.31 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.07 °

Well Razor #26L-3501A

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,541,777.35 ft	**Latitude:**	40° 48' 31.46 N
	+E/-W	0.0 ft	**Easting:**	3,459,649.47 ft	**Longitude:**	103° 50' 22.31 W
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,734.5 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 #2

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	181.49

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	214.30	999.8	-5.8	-3.9	2.00	2.00	0.00	214.30	
4,700.0	4.00	214.30	4,690.8	-219.0	-149.4	0.00	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,890.7	-224.7	-153.3	2.00	-2.00	0.00	180.00	
5,075.5	0.00	0.00	5,066.2	-224.7	-153.3	0.00	0.00	0.00	0.00	
5,893.7	90.00	183.10	5,587.0	-744.9	-181.5	11.00	11.00	0.00	183.10	
5,997.2	90.00	180.00	5,587.0	-848.3	-184.3	3.00	0.00	-3.00	-89.99	
12,209.7	90.00	180.00	5,587.0	-7,060.8	-183.8	0.00	0.00	0.00	0.00	26L-3501A BH TGT

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-3501A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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	214.30	900.0	-1.4	-1.0	1.5	2.00	2.00	
1,000.0	4.00	214.30	999.8	-5.8	-3.9	5.9	2.00	2.00	EOB; 4°
1,100.0	4.00	214.30	1,099.6	-11.5	-7.9	11.7	0.00	0.00	
1,200.0	4.00	214.30	1,199.4	-17.3	-11.8	17.6	0.00	0.00	
1,300.0	4.00	214.30	1,299.1	-23.1	-15.7	23.5	0.00	0.00	
1,400.0	4.00	214.30	1,398.9	-28.8	-19.7	29.3	0.00	0.00	
1,500.0	4.00	214.30	1,498.6	-34.6	-23.6	35.2	0.00	0.00	
1,600.0	4.00	214.30	1,598.4	-40.3	-27.5	41.0	0.00	0.00	
1,700.0	4.00	214.30	1,698.1	-46.1	-31.4	46.9	0.00	0.00	
1,800.0	4.00	214.30	1,797.9	-51.9	-35.4	52.8	0.00	0.00	
1,900.0	4.00	214.30	1,897.6	-57.6	-39.3	58.6	0.00	0.00	
2,000.0	4.00	214.30	1,997.4	-63.4	-43.2	64.5	0.00	0.00	
2,100.0	4.00	214.30	2,097.2	-69.2	-47.2	70.4	0.00	0.00	
2,200.0	4.00	214.30	2,196.9	-74.9	-51.1	76.2	0.00	0.00	
2,300.0	4.00	214.30	2,296.7	-80.7	-55.0	82.1	0.00	0.00	
2,400.0	4.00	214.30	2,396.4	-86.4	-59.0	87.9	0.00	0.00	
2,500.0	4.00	214.30	2,496.2	-92.2	-62.9	93.8	0.00	0.00	
2,600.0	4.00	214.30	2,595.9	-98.0	-66.8	99.7	0.00	0.00	
2,700.0	4.00	214.30	2,695.7	-103.7	-70.8	105.5	0.00	0.00	
2,800.0	4.00	214.30	2,795.5	-109.5	-74.7	111.4	0.00	0.00	
2,900.0	4.00	214.30	2,895.2	-115.3	-78.6	117.3	0.00	0.00	
3,000.0	4.00	214.30	2,995.0	-121.0	-82.6	123.1	0.00	0.00	
3,100.0	4.00	214.30	3,094.7	-126.8	-86.5	129.0	0.00	0.00	
3,200.0	4.00	214.30	3,194.5	-132.5	-90.4	134.8	0.00	0.00	
3,300.0	4.00	214.30	3,294.2	-138.3	-94.3	140.7	0.00	0.00	
3,400.0	4.00	214.30	3,394.0	-144.1	-98.3	146.6	0.00	0.00	
3,500.0	4.00	214.30	3,493.7	-149.8	-102.2	152.4	0.00	0.00	
3,600.0	4.00	214.30	3,593.5	-155.6	-106.1	158.3	0.00	0.00	
3,700.0	4.00	214.30	3,693.3	-161.4	-110.1	164.2	0.00	0.00	
3,800.0	4.00	214.30	3,793.0	-167.1	-114.0	170.0	0.00	0.00	
3,900.0	4.00	214.30	3,892.8	-172.9	-117.9	175.9	0.00	0.00	
4,000.0	4.00	214.30	3,992.5	-178.6	-121.9	181.8	0.00	0.00	
4,100.0	4.00	214.30	4,092.3	-184.4	-125.8	187.6	0.00	0.00	
4,200.0	4.00	214.30	4,192.0	-190.2	-129.7	193.5	0.00	0.00	
4,300.0	4.00	214.30	4,291.8	-195.9	-133.7	199.3	0.00	0.00	
4,400.0	4.00	214.30	4,391.6	-201.7	-137.6	205.2	0.00	0.00	
4,500.0	4.00	214.30	4,491.3	-207.5	-141.5	211.1	0.00	0.00	
4,600.0	4.00	214.30	4,591.1	-213.2	-145.4	216.9	0.00	0.00	
4,700.0	4.00	214.30	4,690.8	-219.0	-149.4	222.8	0.00	0.00	Start 2° Drop
4,800.0	2.00	214.30	4,790.7	-223.3	-152.3	227.2	2.00	-2.00	
4,900.0	0.00	0.00	4,890.7	-224.7	-153.3	228.7	2.00	-2.00	EOD; Vertical
5,000.0	0.00	0.00	4,990.7	-224.7	-153.3	228.7	0.00	0.00	
5,075.5	0.00	0.00	5,066.2	-224.7	-153.3	228.7	0.00	0.00	Curve KOP @ 5075' MD

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-3501A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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
5,100.0	2.69	183.10	5,090.7	-225.3	-153.3	229.2	11.00	11.00	
5,200.0	13.69	183.10	5,189.5	-239.5	-154.1	243.5	11.00	11.00	
5,300.0	24.69	183.10	5,283.8	-272.3	-155.9	276.3	11.00	11.00	
5,400.0	35.69	183.10	5,370.1	-322.5	-158.6	326.5	11.00	11.00	
5,500.0	46.69	183.10	5,445.2	-388.1	-162.2	392.2	11.00	11.00	
5,600.0	57.69	183.10	5,506.4	-466.9	-166.4	471.1	11.00	11.00	
5,670.6	65.46	183.10	5,540.0	-528.9	-169.8	533.1	11.00	11.00	Top Niobrara
5,700.0	68.69	183.10	5,551.4	-555.9	-171.2	560.1	11.00	11.00	
5,800.0	79.69	183.10	5,578.6	-651.8	-176.4	656.2	11.00	11.00	
5,893.7	90.00	183.10	5,587.0	-744.9	-181.5	749.3	11.00	11.00	LP @ 5893' MD - 7"
5,900.0	90.00	182.91	5,587.0	-751.2	-181.8	755.6	3.01	0.00	
5,997.2	90.00	180.00	5,587.0	-848.3	-184.3	852.8	3.00	0.00	EOT; 180° Az
6,000.0	90.00	180.00	5,587.0	-851.1	-184.3	855.6	0.00	0.00	
6,100.0	90.00	180.00	5,587.0	-951.1	-184.3	955.6	0.00	0.00	
6,200.0	90.00	180.00	5,587.0	-1,051.1	-184.3	1,055.6	0.00	0.00	
6,300.0	90.00	180.00	5,587.0	-1,151.1	-184.2	1,155.5	0.00	0.00	
6,400.0	90.00	180.00	5,587.0	-1,251.1	-184.2	1,255.5	0.00	0.00	
6,500.0	90.00	180.00	5,587.0	-1,351.1	-184.2	1,355.4	0.00	0.00	
6,600.0	90.00	180.00	5,587.0	-1,451.1	-184.2	1,455.4	0.00	0.00	
6,700.0	90.00	180.00	5,587.0	-1,551.1	-184.2	1,555.4	0.00	0.00	
6,800.0	90.00	180.00	5,587.0	-1,651.1	-184.2	1,655.3	0.00	0.00	
6,900.0	90.00	180.00	5,587.0	-1,751.1	-184.2	1,755.3	0.00	0.00	
7,000.0	90.00	180.00	5,587.0	-1,851.1	-184.2	1,855.3	0.00	0.00	
7,100.0	90.00	180.00	5,587.0	-1,951.1	-184.2	1,955.2	0.00	0.00	
7,200.0	90.00	180.00	5,587.0	-2,051.1	-184.2	2,055.2	0.00	0.00	
7,300.0	90.00	180.00	5,587.0	-2,151.1	-184.2	2,155.2	0.00	0.00	
7,400.0	90.00	180.00	5,587.0	-2,251.1	-184.2	2,255.1	0.00	0.00	
7,500.0	90.00	180.00	5,587.0	-2,351.1	-184.2	2,355.1	0.00	0.00	
7,600.0	90.00	180.00	5,587.0	-2,451.1	-184.1	2,455.1	0.00	0.00	
7,700.0	90.00	180.00	5,587.0	-2,551.1	-184.1	2,555.0	0.00	0.00	
7,800.0	90.00	180.00	5,587.0	-2,651.1	-184.1	2,655.0	0.00	0.00	
7,900.0	90.00	180.00	5,587.0	-2,751.1	-184.1	2,755.0	0.00	0.00	
8,000.0	90.00	180.00	5,587.0	-2,851.1	-184.1	2,854.9	0.00	0.00	
8,100.0	90.00	180.00	5,587.0	-2,951.1	-184.1	2,954.9	0.00	0.00	
8,200.0	90.00	180.00	5,587.0	-3,051.1	-184.1	3,054.9	0.00	0.00	
8,300.0	90.00	180.00	5,587.0	-3,151.1	-184.1	3,154.8	0.00	0.00	
8,400.0	90.00	180.00	5,587.0	-3,251.1	-184.1	3,254.8	0.00	0.00	
8,500.0	90.00	180.00	5,587.0	-3,351.1	-184.1	3,354.8	0.00	0.00	
8,600.0	90.00	180.00	5,587.0	-3,451.1	-184.1	3,454.7	0.00	0.00	
8,700.0	90.00	180.00	5,587.0	-3,551.1	-184.1	3,554.7	0.00	0.00	
8,800.0	90.00	180.00	5,587.0	-3,651.1	-184.1	3,654.7	0.00	0.00	
8,900.0	90.00	180.00	5,587.0	-3,751.1	-184.0	3,754.6	0.00	0.00	
9,000.0	90.00	180.00	5,587.0	-3,851.1	-184.0	3,854.6	0.00	0.00	
9,100.0	90.00	180.00	5,587.0	-3,951.1	-184.0	3,954.6	0.00	0.00	
9,200.0	90.00	180.00	5,587.0	-4,051.1	-184.0	4,054.5	0.00	0.00	
9,300.0	90.00	180.00	5,587.0	-4,151.1	-184.0	4,154.5	0.00	0.00	
9,400.0	90.00	180.00	5,587.0	-4,251.1	-184.0	4,254.5	0.00	0.00	
9,500.0	90.00	180.00	5,587.0	-4,351.1	-184.0	4,354.4	0.00	0.00	
9,600.0	90.00	180.00	5,587.0	-4,451.1	-184.0	4,454.4	0.00	0.00	
9,700.0	90.00	180.00	5,587.0	-4,551.1	-184.0	4,554.4	0.00	0.00	
9,800.0	90.00	180.00	5,587.0	-4,651.1	-184.0	4,654.3	0.00	0.00	
9,900.0	90.00	180.00	5,587.0	-4,751.1	-184.0	4,754.3	0.00	0.00	

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Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-3501A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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	180.00	5,587.0	-4,851.1	-184.0	4,854.3	0.00	0.00	
10,100.0	90.00	180.00	5,587.0	-4,951.1	-183.9	4,954.2	0.00	0.00	
10,200.0	90.00	180.00	5,587.0	-5,051.1	-183.9	5,054.2	0.00	0.00	
10,300.0	90.00	180.00	5,587.0	-5,151.1	-183.9	5,154.2	0.00	0.00	
10,400.0	90.00	180.00	5,587.0	-5,251.1	-183.9	5,254.1	0.00	0.00	
10,500.0	90.00	180.00	5,587.0	-5,351.1	-183.9	5,354.1	0.00	0.00	
10,600.0	90.00	180.00	5,587.0	-5,451.1	-183.9	5,454.1	0.00	0.00	
10,700.0	90.00	180.00	5,587.0	-5,551.1	-183.9	5,554.0	0.00	0.00	
10,800.0	90.00	180.00	5,587.0	-5,651.1	-183.9	5,654.0	0.00	0.00	
10,900.0	90.00	180.00	5,587.0	-5,751.1	-183.9	5,753.9	0.00	0.00	
11,000.0	90.00	180.00	5,587.0	-5,851.1	-183.9	5,853.9	0.00	0.00	
11,100.0	90.00	180.00	5,587.0	-5,951.1	-183.9	5,953.9	0.00	0.00	
11,200.0	90.00	180.00	5,587.0	-6,051.1	-183.9	6,053.8	0.00	0.00	
11,300.0	90.00	180.00	5,587.0	-6,151.1	-183.9	6,153.8	0.00	0.00	
11,400.0	90.00	180.00	5,587.0	-6,251.1	-183.8	6,253.8	0.00	0.00	
11,500.0	90.00	180.00	5,587.0	-6,351.1	-183.8	6,353.7	0.00	0.00	
11,600.0	90.00	180.00	5,587.0	-6,451.1	-183.8	6,453.7	0.00	0.00	
11,700.0	90.00	180.00	5,587.0	-6,551.1	-183.8	6,553.7	0.00	0.00	
11,800.0	90.00	180.00	5,587.0	-6,651.1	-183.8	6,653.6	0.00	0.00	
11,900.0	90.00	180.00	5,587.0	-6,751.1	-183.8	6,753.6	0.00	0.00	
12,000.0	90.00	180.00	5,587.0	-6,851.1	-183.8	6,853.6	0.00	0.00	
12,100.0	90.00	180.00	5,587.0	-6,951.1	-183.8	6,953.5	0.00	0.00	
12,200.0	90.00	180.00	5,587.0	-7,051.1	-183.8	7,053.5	0.00	0.00	
12,209.7	90.00	180.00	5,587.0	-7,060.8	-183.8	7,063.2	0.00	0.00	PBHL @ 12209' 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
26L-3501A BH TGT - plan hits target center - Point	0.00	0.00	5,587.0	-7,060.8	-183.8	1,534,716.54	3,459,465.69	40° 47' 21.74 N	103° 50' 26.42 W
26L-3501A PBHL - plan misses target center by 499.9ft at 12209.7ft MD (5587.0 TVD, -7060.8 N, -183.8 E) - Point	0.00	0.00	5,587.0	-7,560.4	-166.7	1,534,216.91	3,459,482.80	40° 47' 16.80 N	103° 50' 26.32 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
5,893.7	5,587.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,670.6	5,540.0	Top Niobrara		0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-3501A	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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	-5.8	-3.9	EOB; 4°
4,700.0	4,690.8	-219.0	-149.4	Start 2° Drop
4,900.0	4,890.7	-224.7	-153.3	EOD; Vertical
5,075.5	5,066.2	-224.7	-153.3	Curve KOP @ 5075' MD
5,893.7	5,587.0	-744.9	-181.5	LP @ 5893' MD
5,997.2	5,587.0	-848.3	-184.3	EOT; 180° Az
12,209.7	5,587.0	-7,060.8	-183.8	PBHL @ 12209' MD

WHITING PETROLEUM CORPORATION

Whiting Petroleum Corporation

Weld County, CO
S26-T10N-R58W
Razor #26L-3501A
HZ
Plan #2

Anticollision Report

18 June, 2013

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference Plan #2

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 1,000.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 6/18/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,209.7	Plan #2 (HZ)	ISCWSA MWD	MWD - ISCWSA

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 #26K-3505A - HZ - Plan #1						Out of range
Razor #26L-2301A - HZ - Plan #2	800.1	800.5	30.1	26.8	8.999	CC, ES
Razor #26L-2301A - HZ - Plan #2	900.0	900.1	32.6	28.8	8.602	SF
Razor #26L-2302B - HZ - Plan #2	1,583.1	1,583.2	19.5	12.7	2.878	CC, ES
Razor #26L-2302B - HZ - Plan #2	1,600.0	1,600.0	19.6	12.8	2.866	SF
Razor #26L-2303A - HZ - Plan #2	800.0	800.0	99.4	96.0	29.805	CC, ES
Razor #26L-2303A - HZ - Plan #2	1,600.0	1,594.8	146.2	139.5	21.615	SF
Razor #26L-2304B - HZ - Plan #1	990.6	991.3	96.0	91.8	23.147	CC
Razor #26L-2304B - HZ - Plan #1	1,000.0	1,000.6	96.0	91.8	22.930	ES
Razor #26L-2304B - HZ - Plan #1	1,500.0	1,495.8	119.3	112.9	18.603	SF
Razor #26L-3502B - HZ - Plan #1	1,166.1	1,163.8	75.0	70.2	15.436	CC, ES
Razor #26L-3502B - HZ - Plan #1	12,209.7	12,223.2	357.9	95.0	1.361	Level 3, SF
Razor #26L-3503A - HZ - Plan #1	500.0	500.0	66.2	64.2	33.318	CC, ES
Razor #26L-3503A - HZ - Plan #1	12,209.7	12,281.8	676.8	405.7	2.496	SF
Razor #26L-3504B - HZ - Plan #1	945.5	945.4	124.5	120.6	31.562	CC
Razor #26L-3504B - HZ - Plan #1	1,000.0	999.8	124.5	120.4	29.887	ES
Razor #26L-3504B - HZ - Plan #1	6,500.0	6,557.2	994.2	940.2	18.407	SF
Razor 26-3524H (Existing) - Existing - SURVEYs						Out of range
S27-T10N-R58W						
Razor #27I-2216B - HZ - Plan #1						Out of range
Razor #27I-2216B - HZ - Plan #2						Out of range
Razor #27I-3413A - HZ - Plan #1						Out of range
Razor #27I-3413A - HZ - Plan #2						Out of range
Razor #27I-3414B - HZ - Plan #1	12,209.7	12,556.8	990.4	721.5	3.683	CC, ES, SF
Razor #27I-3415A - HZ - Plan #1	12,209.7	12,595.6	653.6	382.6	2.412	CC, ES, SF
Razor #27I-3416B - HZ - Plan #1	12,209.7	12,451.8	350.7	95.6	1.375	Level 3, CC, ES, SF
Razor #27I-3416B - HZ - Plan #2	12,209.7	12,450.3	350.5	95.6	1.375	Level 3, CC, ES, SF
Razor #27J-3412B - HZ - Plan #1						Out of range
Razor #27J-3412B - HZ - Plan #2						Out of range
Razor #27J-3412B - HZ - Plan #3						Out of range

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2

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	88.93	0.6	33.2	33.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.93	0.6	33.2	33.2	33.0	0.19	177.002	
200.0	200.0	200.0	200.0	0.3	0.3	88.93	0.6	33.2	33.2	32.6	0.64	52.133	
300.0	300.0	300.0	300.0	0.5	0.5	88.93	0.6	33.2	33.2	32.1	1.09	30.568	
400.0	400.0	400.0	400.0	0.8	0.8	88.93	0.6	33.2	33.2	31.7	1.54	21.624	
500.0	500.0	500.0	500.0	1.0	1.0	88.93	0.6	33.2	33.2	31.2	1.99	16.729	
600.0	600.0	600.5	600.4	1.2	1.2	86.11	2.2	32.4	32.5	30.1	2.43	13.355	
700.0	700.0	700.7	700.5	1.4	1.4	77.04	6.9	30.1	30.9	28.0	2.89	10.709	
800.0	800.0	800.4	800.0	1.7	1.7	64.03	13.2	27.1	30.1	26.8	3.35	9.000	
800.1	800.1	800.5	800.1	1.7	1.7	64.02	13.2	27.1	30.1	26.8	3.35	8.999	CC, ES
900.0	900.0	900.1	899.4	1.9	1.9	-164.13	19.4	24.0	32.6	28.8	3.79	8.602	SF
1,000.0	999.8	999.5	998.6	2.1	2.2	-175.87	25.7	21.0	40.1	35.9	4.21	9.536	
1,100.0	1,099.6	1,098.8	1,097.7	2.3	2.4	176.42	31.9	18.0	50.6	45.9	4.63	10.908	
1,200.0	1,199.4	1,198.1	1,196.7	2.5	2.7	171.40	38.1	14.9	61.6	56.5	5.07	12.151	
1,300.0	1,299.1	1,297.3	1,295.7	2.7	2.9	167.91	44.3	11.9	72.9	67.4	5.51	13.244	
1,400.0	1,398.9	1,396.6	1,394.8	2.9	3.2	165.37	50.6	8.9	84.4	78.5	5.95	14.197	
1,500.0	1,498.6	1,495.9	1,493.8	3.1	3.4	163.44	56.8	5.8	96.1	89.7	6.40	15.028	
1,600.0	1,598.4	1,595.2	1,592.8	3.4	3.7	161.93	63.0	2.8	107.9	101.0	6.85	15.755	
1,700.0	1,698.1	1,694.4	1,691.8	3.6	3.9	160.72	69.2	-0.3	119.7	112.4	7.30	16.394	
1,800.0	1,797.9	1,793.7	1,790.9	3.9	4.2	159.73	75.5	-3.3	131.5	123.7	7.75	16.958	
1,900.0	1,897.6	1,893.0	1,889.9	4.1	4.4	158.90	81.7	-6.3	143.4	135.2	8.21	17.459	
2,000.0	1,997.4	1,992.2	1,988.9	4.4	4.7	158.19	87.9	-9.4	155.3	146.6	8.67	17.907	
2,100.0	2,097.2	2,091.5	2,088.0	4.6	4.9	157.59	94.1	-12.4	167.2	158.1	9.13	18.310	
2,200.0	2,196.9	2,190.8	2,187.0	4.9	5.2	157.07	100.4	-15.4	179.1	169.6	9.59	18.672	
2,300.0	2,296.7	2,290.1	2,286.0	5.1	5.4	156.61	106.6	-18.5	191.1	181.0	10.06	19.001	
2,400.0	2,396.4	2,389.3	2,385.1	5.4	5.7	156.21	112.8	-21.5	203.1	192.5	10.52	19.300	
2,500.0	2,496.2	2,488.6	2,484.1	5.6	5.9	155.85	119.0	-24.5	215.0	204.0	10.99	19.573	
2,600.0	2,595.9	2,587.9	2,583.1	5.9	6.2	155.53	125.3	-27.6	227.0	215.6	11.45	19.823	
2,700.0	2,695.7	2,687.2	2,682.1	6.2	6.4	155.24	131.5	-30.6	239.0	227.1	11.92	20.053	
2,800.0	2,795.5	2,786.4	2,781.2	6.4	6.7	154.98	137.7	-33.6	251.0	238.6	12.39	20.265	
2,900.0	2,895.2	2,885.7	2,880.2	6.7	6.9	154.74	143.9	-36.7	263.0	250.1	12.85	20.462	
3,000.0	2,995.0	2,985.0	2,979.2	6.9	7.2	154.52	150.2	-39.7	275.0	261.7	13.32	20.644	
3,100.0	3,094.7	3,084.2	3,078.3	7.2	7.5	154.33	156.4	-42.8	287.0	273.2	13.79	20.814	
3,200.0	3,194.5	3,183.5	3,177.3	7.5	7.7	154.14	162.6	-45.8	299.0	284.7	14.26	20.972	
3,300.0	3,294.2	3,282.8	3,276.3	7.7	8.0	153.97	168.8	-48.8	311.0	296.3	14.73	21.120	
3,400.0	3,394.0	3,382.1	3,375.4	8.0	8.2	153.82	175.1	-51.9	323.0	307.8	15.19	21.258	
3,500.0	3,493.8	3,481.3	3,474.4	8.2	8.5	153.67	181.3	-54.9	335.0	319.4	15.66	21.388	
3,600.0	3,593.5	3,580.6	3,573.4	8.5	8.7	153.54	187.5	-57.9	347.0	330.9	16.13	21.510	
3,700.0	3,693.3	3,679.9	3,672.5	8.8	9.0	153.41	193.7	-61.0	359.1	342.5	16.60	21.625	
3,800.0	3,793.0	3,779.2	3,771.5	9.0	9.2	153.30	199.9	-64.0	371.1	354.0	17.07	21.734	
3,900.0	3,892.8	3,878.4	3,870.5	9.3	9.5	153.19	206.2	-67.0	383.1	365.6	17.54	21.836	
4,000.0	3,992.5	3,977.7	3,969.5	9.5	9.8	153.08	212.4	-70.1	395.1	377.1	18.01	21.933	
4,100.0	4,092.3	4,077.0	4,068.6	9.8	10.0	152.98	218.6	-73.1	407.1	388.7	18.49	22.025	
4,200.0	4,192.1	4,176.2	4,167.6	10.1	10.3	152.89	224.8	-76.1	419.2	400.2	18.96	22.112	
4,300.0	4,291.8	4,275.5	4,266.6	10.3	10.5	152.81	231.1	-79.2	431.2	411.8	19.43	22.195	
4,400.0	4,391.6	4,374.8	4,365.7	10.6	10.8	152.72	237.3	-82.2	443.2	423.3	19.90	22.274	
4,500.0	4,491.3	4,474.1	4,464.7	10.9	11.0	152.65	243.5	-85.3	455.2	434.9	20.37	22.350	
4,600.0	4,591.1	4,573.3	4,563.7	11.1	11.3	152.57	249.7	-88.3	467.3	446.4	20.84	22.421	
4,700.0	4,690.8	4,672.6	4,662.8	11.4	11.5	152.50	256.0	-91.3	479.3	458.0	21.31	22.490	
4,800.0	4,790.7	4,772.0	4,762.0	11.6	11.8	152.44	262.2	-94.4	489.8	468.0	21.79	22.481	
4,900.0	4,890.7	4,871.7	4,861.4	11.8	12.0	6.47	268.4	-97.4	497.2	474.6	22.59	22.009	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2

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
5,000.0	4,990.7	4,971.5	4,960.9	12.0	12.3	6.04	274.7	-100.5	503.1	480.1	23.03	21.846	
5,075.5	5,066.2	5,046.8	5,036.0	12.1	12.5	5.72	279.4	-102.8	507.6	484.2	23.35	21.737	
5,100.0	5,090.7	5,071.2	5,060.4	12.1	12.6	-177.47	281.0	-103.5	509.6	486.6	23.06	22.099	
5,150.0	5,140.4	5,113.4	5,102.5	12.3	12.7	-177.62	283.6	-104.8	517.4	494.3	23.07	22.427	
5,200.0	5,189.5	5,150.0	5,138.9	12.4	12.8	-177.82	287.0	-106.5	531.1	508.3	22.87	23.220	
5,250.0	5,237.4	5,167.1	5,155.8	12.6	12.8	-177.91	289.4	-107.7	551.2	528.8	22.44	24.561	
5,300.0	5,283.8	5,200.0	5,188.0	12.9	13.0	-178.26	295.4	-110.6	577.6	555.7	21.86	26.417	
5,350.0	5,328.1	5,200.0	5,188.0	13.2	13.0	-178.11	295.4	-110.6	608.9	587.9	21.02	28.973	
5,400.0	5,370.1	5,225.0	5,212.2	13.5	13.1	-178.43	301.2	-113.4	645.0	624.9	20.06	32.147	
5,450.0	5,409.2	5,250.0	5,236.0	13.8	13.2	-178.85	308.0	-116.7	685.2	666.3	18.94	36.175	
5,500.0	5,445.2	5,250.0	5,236.0	14.3	13.2	-178.64	308.0	-116.7	728.3	710.7	17.63	41.313	
5,550.0	5,477.7	5,250.0	5,236.0	14.7	13.2	-178.30	308.0	-116.7	774.3	758.1	16.21	47.768	
5,600.0	5,506.4	5,264.9	5,250.0	15.2	13.2	-178.50	312.6	-118.9	822.0	807.2	14.72	55.851	
5,650.0	5,531.1	5,268.8	5,253.6	15.8	13.3	-177.89	313.8	-119.6	871.0	857.8	13.19	66.038	
5,700.0	5,551.4	5,270.6	5,255.3	16.4	13.3	-174.04	314.4	-119.8	920.7	908.7	12.06	76.331	
5,750.0	5,567.4	5,270.6	5,255.3	17.0	13.3	-4.90	314.4	-119.8	970.7	960.4	10.28	94.434	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - HZ - Plan #2

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	178.93	-75.0	1.4	75.0				
100.0	100.0	100.0	100.0	0.1	0.1	178.93	-75.0	1.4	75.0	74.9	0.19	399.882	
200.0	200.0	200.0	200.0	0.3	0.3	178.93	-75.0	1.4	75.0	74.4	0.64	117.778	
300.0	300.0	300.0	300.0	0.5	0.5	178.93	-75.0	1.4	75.0	74.0	1.09	69.059	
400.0	400.0	400.0	400.0	0.8	0.8	178.93	-75.0	1.4	75.0	73.5	1.54	48.852	
500.0	500.0	500.0	500.0	1.0	1.0	178.93	-75.0	1.4	75.0	73.1	1.99	37.793	
600.0	600.0	600.0	600.0	1.2	1.2	178.93	-75.0	1.4	75.0	72.6	2.44	30.817	
700.0	700.0	700.0	700.0	1.4	1.4	178.93	-75.0	1.4	75.0	72.2	2.88	26.015	
800.0	800.0	800.0	800.0	1.7	1.7	178.93	-75.0	1.4	75.0	71.7	3.33	22.508	
900.0	900.0	900.0	900.0	1.9	1.9	-36.18	-75.0	1.4	73.6	69.9	3.76	19.587	
1,000.0	999.8	999.8	999.8	2.1	2.1	-38.77	-75.0	1.4	69.5	65.3	4.17	16.668	
1,100.0	1,099.6	1,101.8	1,101.8	2.3	2.3	-42.56	-73.3	0.9	62.4	57.8	4.60	13.578	
1,200.0	1,199.4	1,203.2	1,203.0	2.5	2.6	-47.09	-68.1	-0.5	52.2	47.1	5.04	10.349	
1,300.0	1,299.1	1,302.4	1,301.9	2.7	2.8	-53.78	-61.4	-2.4	40.7	35.2	5.49	7.423	
1,400.0	1,398.9	1,401.6	1,400.9	2.9	3.0	-65.35	-54.8	-4.2	30.3	24.3	5.94	5.091	
1,500.0	1,498.6	1,500.8	1,499.9	3.1	3.3	-86.88	-48.1	-6.1	22.2	15.8	6.41	3.456	
1,583.1	1,581.5	1,583.2	1,582.1	3.3	3.5	-114.95	-42.6	-7.6	19.5	12.7	6.78	2.878	CC, ES
1,600.0	1,598.4	1,600.0	1,598.8	3.4	3.5	-121.14	-41.4	-7.9	19.6	12.8	6.85	2.866	SF
1,700.0	1,698.1	1,699.2	1,697.8	3.6	3.7	-151.83	-34.8	-9.8	24.5	17.2	7.25	3.376	
1,800.0	1,797.9	1,798.4	1,796.7	3.9	4.0	-169.26	-28.1	-11.6	33.6	26.0	7.67	4.385	
1,900.0	1,897.6	1,897.6	1,895.7	4.1	4.2	-178.77	-21.4	-13.5	44.5	36.4	8.11	5.490	
2,000.0	1,997.4	1,996.8	1,994.7	4.4	4.5	175.54	-14.8	-15.3	56.2	47.6	8.56	6.560	
2,100.0	2,097.2	2,096.0	2,093.6	4.6	4.7	171.82	-8.1	-17.2	68.1	59.1	9.01	7.561	
2,200.0	2,196.9	2,195.2	2,192.6	4.9	5.0	169.22	-1.4	-19.0	80.3	70.8	9.47	8.484	
2,300.0	2,296.7	2,294.4	2,291.5	5.1	5.2	167.31	5.2	-20.9	92.6	82.7	9.92	9.333	
2,400.0	2,396.4	2,393.6	2,390.5	5.4	5.5	165.85	11.9	-22.7	105.0	94.6	10.38	10.114	
2,500.0	2,496.2	2,492.8	2,489.4	5.6	5.7	164.69	18.6	-24.6	117.4	106.6	10.84	10.833	
2,600.0	2,595.9	2,592.0	2,588.4	5.9	6.0	163.76	25.3	-26.4	129.9	118.6	11.30	11.496	
2,700.0	2,695.7	2,691.2	2,687.4	6.2	6.2	162.99	31.9	-28.3	142.4	130.6	11.76	12.109	
2,800.0	2,795.5	2,790.3	2,786.3	6.4	6.5	162.34	38.6	-30.1	154.9	142.7	12.22	12.677	
2,900.0	2,895.2	2,889.5	2,885.3	6.7	6.7	161.79	45.3	-32.0	167.5	154.8	12.68	13.204	
3,000.0	2,995.0	2,988.7	2,984.2	6.9	7.0	161.32	51.9	-33.8	180.0	166.9	13.14	13.695	
3,100.0	3,094.7	3,087.9	3,083.2	7.2	7.2	160.91	58.6	-35.7	192.6	179.0	13.61	14.152	
3,200.0	3,194.5	3,187.1	3,182.1	7.5	7.5	160.55	65.3	-37.5	205.1	191.1	14.07	14.580	
3,300.0	3,294.2	3,286.3	3,281.1	7.7	7.7	160.23	71.9	-39.4	217.7	203.2	14.53	14.981	
3,400.0	3,394.0	3,385.5	3,380.1	8.0	8.0	159.95	78.6	-41.2	230.3	215.3	15.00	15.357	
3,500.0	3,493.8	3,484.7	3,479.0	8.2	8.2	159.69	85.3	-43.1	242.9	227.4	15.46	15.710	
3,600.0	3,593.5	3,583.9	3,578.0	8.5	8.5	159.46	91.9	-44.9	255.5	239.5	15.92	16.043	
3,700.0	3,693.3	3,683.1	3,676.9	8.8	8.7	159.26	98.6	-46.7	268.1	251.7	16.39	16.357	
3,800.0	3,793.0	3,782.3	3,775.9	9.0	9.0	159.07	105.3	-48.6	280.7	263.8	16.85	16.654	
3,900.0	3,892.8	3,881.5	3,874.8	9.3	9.2	158.89	111.9	-50.4	293.3	275.9	17.32	16.935	
4,000.0	3,992.5	3,980.7	3,973.8	9.5	9.5	158.74	118.6	-52.3	305.9	288.1	17.78	17.201	
4,100.0	4,092.3	4,079.9	4,072.8	9.8	9.7	158.59	125.3	-54.1	318.5	300.2	18.25	17.453	
4,200.0	4,192.1	4,179.1	4,171.7	10.1	10.0	158.45	131.9	-56.0	331.1	312.4	18.71	17.693	
4,300.0	4,291.8	4,278.3	4,270.7	10.3	10.2	158.33	138.6	-57.8	343.7	324.5	19.18	17.921	
4,400.0	4,391.6	4,377.5	4,369.6	10.6	10.5	158.21	145.3	-59.7	356.3	336.6	19.64	18.139	
4,500.0	4,491.3	4,476.7	4,468.6	10.9	10.7	158.10	151.9	-61.5	368.9	348.8	20.11	18.346	
4,600.0	4,591.1	4,575.9	4,567.6	11.1	11.0	158.00	158.6	-63.4	381.5	360.9	20.57	18.544	
4,700.0	4,690.8	4,675.1	4,666.5	11.4	11.2	157.91	165.3	-65.2	394.1	373.1	21.04	18.733	
4,800.0	4,790.7	4,774.5	4,765.7	11.6	11.5	157.81	172.0	-67.1	405.1	383.6	21.51	18.835	
4,900.0	4,890.7	4,874.2	4,865.1	11.8	11.8	11.81	178.7	-69.0	412.9	390.6	22.34	18.481	
5,000.0	4,990.7	4,973.9	4,964.6	12.0	12.0	11.37	185.4	-70.8	419.1	396.4	22.78	18.397	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - HZ - Plan #2

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
5,075.5	5,066.2	5,049.2	5,039.7	12.1	12.2	11.05	190.4	-72.2	423.9	400.7	23.11	18.344	
5,100.0	5,090.7	5,073.6	5,064.0	12.1	12.3	-172.13	192.1	-72.7	425.9	403.2	22.78	18.696	
5,150.0	5,140.4	5,123.0	5,113.2	12.3	12.4	-172.30	195.4	-73.6	433.8	410.9	22.82	19.009	
5,200.0	5,189.5	5,171.3	5,161.5	12.4	12.5	-172.48	198.6	-74.5	446.2	423.6	22.66	19.694	
5,250.0	5,237.4	5,200.0	5,190.1	12.6	12.6	-172.46	200.6	-75.0	463.6	441.4	22.26	20.825	
5,300.0	5,283.8	5,234.2	5,224.1	12.9	12.7	-172.51	203.9	-76.0	486.6	464.9	21.70	22.424	
5,350.0	5,328.1	5,250.0	5,239.7	13.2	12.7	-172.26	206.2	-76.6	515.6	494.7	20.92	24.643	
5,400.0	5,370.1	5,274.5	5,263.8	13.5	12.8	-172.11	210.7	-77.8	549.6	529.6	20.01	27.466	
5,450.0	5,409.2	5,300.0	5,288.6	13.8	12.9	-171.93	216.4	-79.4	588.1	569.2	18.95	31.035	
5,500.0	5,445.2	5,300.0	5,288.6	14.3	12.9	-170.65	216.4	-79.4	630.0	612.2	17.78	35.440	
5,550.0	5,477.7	5,300.0	5,288.6	14.7	12.9	-168.56	216.4	-79.4	675.1	658.5	16.64	40.579	
5,600.0	5,506.4	5,320.1	5,307.9	15.2	13.0	-166.61	221.8	-80.9	721.8	706.2	15.60	46.275	
5,650.0	5,531.1	5,324.9	5,312.5	15.8	13.0	-160.85	223.2	-81.3	770.4	754.9	15.50	49.711	
5,700.0	5,551.4	5,327.4	5,314.9	16.4	13.0	-143.57	224.0	-81.5	819.9	800.2	19.68	41.659	
5,750.0	5,567.4	5,327.9	5,315.3	17.0	13.0	-71.17	224.1	-81.6	869.7	841.5	28.25	30.788	
5,800.0	5,578.6	5,326.6	5,314.0	17.7	13.0	-24.76	223.7	-81.4	919.5	904.7	14.83	62.012	
5,850.0	5,585.2	5,323.6	5,311.2	18.4	13.0	-13.75	222.8	-81.2	968.8	958.4	10.48	92.431	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2

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	88.94	1.8	99.4	99.4				
100.0	100.0	100.0	100.0	0.1	0.1	88.94	1.8	99.4	99.4	99.2	0.19	529.531	
200.0	200.0	200.0	200.0	0.3	0.3	88.94	1.8	99.4	99.4	98.7	0.64	155.964	
300.0	300.0	300.0	300.0	0.5	0.5	88.94	1.8	99.4	99.4	98.3	1.09	91.450	
400.0	400.0	400.0	400.0	0.8	0.8	88.94	1.8	99.4	99.4	97.8	1.54	64.690	
500.0	500.0	500.0	500.0	1.0	1.0	88.94	1.8	99.4	99.4	97.4	1.99	50.046	
600.0	600.0	600.0	600.0	1.2	1.2	88.94	1.8	99.4	99.4	96.9	2.44	40.808	
700.0	700.0	700.0	700.0	1.4	1.4	88.94	1.8	99.4	99.4	96.5	2.88	34.449	
800.0	800.0	800.0	800.0	1.7	1.7	88.94	1.8	99.4	99.4	96.0	3.33	29.805	CC, ES
900.0	900.0	900.0	900.0	1.9	1.9	-126.15	1.8	99.4	100.4	96.6	3.76	26.718	
1,000.0	999.8	999.8	999.8	2.1	2.1	-128.44	1.8	99.4	103.6	99.4	4.16	24.877	
1,100.0	1,099.6	1,099.4	1,099.3	2.3	2.3	-132.24	3.6	99.2	108.2	103.6	4.58	23.617	
1,200.0	1,199.4	1,198.3	1,198.1	2.5	2.6	-137.40	8.7	98.9	113.7	108.7	5.00	22.721	
1,300.0	1,299.1	1,297.4	1,297.0	2.7	2.8	-142.89	15.6	98.4	120.5	115.1	5.44	22.164	
1,400.0	1,398.9	1,396.5	1,395.9	2.9	3.0	-147.75	22.5	97.9	128.3	122.4	5.88	21.835	
1,500.0	1,498.6	1,495.6	1,494.8	3.1	3.3	-152.04	29.4	97.4	136.9	130.6	6.32	21.668	
1,600.0	1,598.4	1,594.8	1,593.6	3.4	3.5	-155.81	36.3	97.0	146.2	139.5	6.77	21.615	SF
1,700.0	1,698.1	1,693.9	1,692.5	3.6	3.7	-159.11	43.2	96.5	156.1	148.9	7.21	21.640	
1,800.0	1,797.9	1,793.0	1,791.4	3.9	4.0	-162.02	50.1	96.0	166.4	158.7	7.66	21.718	
1,900.0	1,897.6	1,892.2	1,890.3	4.1	4.2	-164.58	57.0	95.5	177.1	169.0	8.11	21.831	
2,000.0	1,997.4	1,991.3	1,989.2	4.4	4.5	-166.85	63.9	95.0	188.1	179.5	8.56	21.967	
2,100.0	2,097.2	2,090.4	2,088.1	4.6	4.7	-168.87	70.8	94.5	199.4	190.3	9.01	22.116	
2,200.0	2,196.9	2,189.6	2,187.0	4.9	4.9	-170.67	77.7	94.1	210.8	201.4	9.47	22.272	
2,300.0	2,296.7	2,288.7	2,285.9	5.1	5.2	-172.29	84.6	93.6	222.5	212.6	9.92	22.432	
2,400.0	2,396.4	2,387.8	2,384.8	5.4	5.4	-173.74	91.5	93.1	234.3	224.0	10.37	22.591	
2,500.0	2,496.2	2,487.0	2,483.7	5.6	5.7	-175.05	98.4	92.6	246.3	235.5	10.83	22.748	
2,600.0	2,595.9	2,586.1	2,582.5	5.9	5.9	-176.24	105.3	92.1	258.4	247.1	11.28	22.902	
2,700.0	2,695.7	2,685.2	2,681.4	6.2	6.2	-177.33	112.1	91.7	270.5	258.8	11.74	23.052	
2,800.0	2,795.5	2,784.3	2,780.3	6.4	6.4	-178.32	119.0	91.2	282.8	270.6	12.19	23.196	
2,900.0	2,895.2	2,883.5	2,879.2	6.7	6.7	-179.23	125.9	90.7	295.1	282.5	12.65	23.336	
3,000.0	2,995.0	2,982.6	2,978.1	6.9	6.9	179.94	132.8	90.2	307.5	294.4	13.10	23.470	
3,100.0	3,094.7	3,081.7	3,077.0	7.2	7.2	179.16	139.7	89.7	320.0	306.4	13.56	23.599	
3,200.0	3,194.5	3,180.9	3,175.9	7.5	7.4	178.45	146.6	89.2	332.5	318.5	14.02	23.723	
3,300.0	3,294.2	3,280.0	3,274.8	7.7	7.7	177.79	153.5	88.8	345.1	330.6	14.47	23.841	
3,400.0	3,394.0	3,379.1	3,373.7	8.0	7.9	177.18	160.4	88.3	357.7	342.8	14.93	23.955	
3,500.0	3,493.8	3,478.3	3,472.6	8.2	8.2	176.60	167.3	87.8	370.3	354.9	15.39	24.064	
3,600.0	3,593.5	3,577.4	3,571.4	8.5	8.4	176.07	174.2	87.3	383.0	367.2	15.85	24.169	
3,700.0	3,693.3	3,676.5	3,670.3	8.8	8.7	175.57	181.1	86.8	395.7	379.4	16.31	24.269	
3,800.0	3,793.0	3,775.7	3,769.2	9.0	8.9	175.10	188.0	86.3	408.5	391.7	16.76	24.365	
3,900.0	3,892.8	3,874.8	3,868.1	9.3	9.2	174.66	194.9	85.9	421.2	404.0	17.22	24.457	
4,000.0	3,992.5	3,973.9	3,967.0	9.5	9.5	174.24	201.8	85.4	434.0	416.3	17.68	24.545	
4,100.0	4,092.3	4,073.1	4,065.9	9.8	9.7	173.85	208.7	84.9	446.8	428.7	18.14	24.630	
4,200.0	4,192.1	4,172.2	4,164.8	10.1	10.0	173.48	215.6	84.4	459.6	441.0	18.60	24.711	
4,300.0	4,291.8	4,271.3	4,263.7	10.3	10.2	173.13	222.5	83.9	472.5	453.4	19.06	24.790	
4,400.0	4,391.6	4,370.5	4,362.6	10.6	10.5	172.80	229.4	83.5	485.3	465.8	19.52	24.865	
4,500.0	4,491.3	4,469.6	4,461.5	10.9	10.7	172.48	236.3	83.0	498.2	478.2	19.98	24.937	
4,600.0	4,591.1	4,568.7	4,560.3	11.1	11.0	172.19	243.2	82.5	511.1	490.7	20.44	25.007	
4,700.0	4,690.8	4,667.8	4,659.2	11.4	11.2	171.90	250.1	82.0	524.0	503.1	20.90	25.074	
4,800.0	4,790.7	4,767.2	4,758.3	11.6	11.5	171.64	257.0	81.5	535.2	513.8	21.37	25.047	
4,900.0	4,890.7	4,866.8	4,857.7	11.8	11.7	25.62	264.0	81.0	543.0	520.8	22.18	24.477	
5,000.0	4,990.7	4,966.6	4,957.2	12.0	12.0	25.26	270.9	80.6	549.1	526.4	22.62	24.270	
5,075.5	5,066.2	5,041.9	5,032.4	12.1	12.2	24.99	276.1	80.2	553.7	530.7	22.95	24.129	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2

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	5,090.7	5,066.3	5,056.7	12.1	12.2	-158.13	277.8	80.1	555.7	533.1	22.65	24.539	
5,150.0	5,140.4	5,112.0	5,102.3	12.3	12.4	-158.14	281.0	79.8	563.2	540.5	22.71	24.802	
5,200.0	5,189.5	5,138.3	5,128.4	12.4	12.4	-157.90	283.5	79.7	576.2	553.6	22.57	25.531	
5,250.0	5,237.4	5,150.0	5,140.1	12.6	12.5	-157.22	285.0	79.6	595.5	573.3	22.25	26.765	
5,300.0	5,283.8	5,181.7	5,171.3	12.9	12.6	-156.73	290.5	79.2	620.2	598.4	21.85	28.384	
5,350.0	5,328.1	5,200.0	5,189.2	13.2	12.6	-155.64	294.5	78.9	650.3	629.0	21.33	30.485	
5,400.0	5,370.1	5,215.5	5,204.2	13.5	12.7	-154.01	298.4	78.6	685.0	664.2	20.79	32.954	
5,450.0	5,409.2	5,228.5	5,216.7	13.8	12.7	-151.61	302.0	78.4	723.7	703.3	20.33	35.603	
5,500.0	5,445.2	5,250.0	5,237.1	14.3	12.8	-148.88	308.6	77.9	765.7	745.7	20.05	38.196	
5,550.0	5,477.7	5,250.0	5,237.1	14.7	12.8	-142.94	308.6	77.9	810.1	789.5	20.54	39.440	
5,600.0	5,506.4	5,250.0	5,237.1	15.2	12.8	-133.73	308.6	77.9	856.5	834.3	22.24	38.511	
5,650.0	5,531.1	5,250.0	5,237.1	15.8	12.8	-119.09	308.6	77.9	904.4	878.9	25.47	35.509	
5,700.0	5,551.4	5,250.0	5,237.1	16.4	12.8	-97.24	308.6	77.9	953.0	924.2	28.77	33.127	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**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
0.0	0.0	0.0	0.0	0.0	0.0	137.54	-73.8	67.6	100.1				
100.0	100.0	100.0	100.0	0.1	0.1	137.54	-73.8	67.6	100.1	99.9	0.19	533.183	
200.0	200.0	200.0	200.0	0.3	0.3	137.54	-73.8	67.6	100.1	99.4	0.64	157.040	
300.0	300.0	300.0	300.0	0.5	0.5	137.54	-73.8	67.6	100.1	99.0	1.09	92.080	
400.0	400.0	400.0	400.0	0.8	0.8	137.54	-73.8	67.6	100.1	98.5	1.54	65.137	
500.0	500.0	500.0	500.0	1.0	1.0	137.54	-73.8	67.6	100.1	98.1	1.99	50.391	
600.0	600.0	600.0	600.0	1.2	1.2	137.54	-73.8	67.6	100.1	97.6	2.44	41.090	
700.0	700.0	701.0	701.0	1.4	1.4	136.56	-72.3	68.4	99.6	96.7	2.88	34.507	
800.0	800.0	801.8	801.6	1.7	1.7	133.58	-67.7	71.1	98.2	94.8	3.34	29.428	
900.0	900.0	901.4	901.0	1.9	1.9	-85.78	-61.7	74.6	96.6	92.9	3.77	25.655	
990.6	990.4	991.3	990.7	2.0	2.1	-92.21	-56.2	77.7	96.0	91.8	4.15	23.147	CC
1,000.0	999.8	1,000.6	1,000.0	2.1	2.1	-92.97	-55.7	78.0	96.0	91.8	4.19	22.930	ES
1,100.0	1,099.6	1,099.7	1,098.8	2.3	2.4	-101.12	-49.7	81.5	97.2	92.5	4.62	21.027	
1,200.0	1,199.4	1,198.7	1,197.6	2.5	2.6	-108.93	-43.7	85.0	100.3	95.2	5.07	19.795	
1,300.0	1,299.1	1,297.7	1,296.4	2.7	2.9	-116.14	-37.7	88.4	105.2	99.7	5.52	19.069	
1,400.0	1,398.9	1,396.8	1,395.1	2.9	3.1	-122.63	-31.7	91.9	111.6	105.7	5.97	18.708	
1,500.0	1,498.6	1,495.8	1,493.9	3.1	3.4	-128.36	-25.7	95.3	119.3	112.9	6.41	18.603	SF
1,600.0	1,598.4	1,594.8	1,592.7	3.4	3.6	-133.36	-19.8	98.8	128.1	121.2	6.86	18.671	
1,700.0	1,698.1	1,693.8	1,691.5	3.6	3.9	-137.69	-13.8	102.2	137.7	130.4	7.30	18.852	
1,800.0	1,797.9	1,792.9	1,790.3	3.9	4.1	-141.45	-7.8	105.7	148.0	140.2	7.75	19.103	
1,900.0	1,897.6	1,891.9	1,889.1	4.1	4.4	-144.72	-1.8	109.1	158.8	150.6	8.19	19.396	
2,000.0	1,997.4	1,990.9	1,987.9	4.4	4.6	-147.56	4.2	112.6	170.1	161.5	8.63	19.710	
2,100.0	2,097.2	2,090.0	2,086.7	4.6	4.9	-150.04	10.1	116.0	181.8	172.7	9.07	20.034	
2,200.0	2,196.9	2,189.0	2,185.4	4.9	5.1	-152.22	16.1	119.5	193.7	184.2	9.52	20.358	
2,300.0	2,296.7	2,288.0	2,284.2	5.1	5.4	-154.15	22.1	122.9	205.9	196.0	9.96	20.676	
2,400.0	2,396.4	2,387.0	2,383.0	5.4	5.6	-155.86	28.1	126.4	218.3	207.9	10.40	20.986	
2,500.0	2,496.2	2,486.1	2,481.8	5.6	5.9	-157.39	34.1	129.9	230.9	220.0	10.85	21.285	
2,600.0	2,595.9	2,585.1	2,580.6	5.9	6.1	-158.75	40.1	133.3	243.6	232.3	11.29	21.573	
2,700.0	2,695.7	2,684.1	2,679.4	6.2	6.4	-159.99	46.0	136.8	256.4	244.7	11.74	21.847	
2,800.0	2,795.5	2,783.2	2,778.2	6.4	6.6	-161.10	52.0	140.2	269.4	257.2	12.18	22.110	
2,900.0	2,895.2	2,882.2	2,877.0	6.7	6.9	-162.11	58.0	143.7	282.4	269.8	12.63	22.360	
3,000.0	2,995.0	2,981.2	2,975.7	6.9	7.1	-163.04	64.0	147.1	295.5	282.5	13.08	22.598	
3,100.0	3,094.7	3,080.2	3,074.5	7.2	7.4	-163.88	70.0	150.6	308.7	295.2	13.53	22.824	
3,200.0	3,194.5	3,179.3	3,173.3	7.5	7.6	-164.66	76.0	154.0	322.0	308.0	13.98	23.040	
3,300.0	3,294.2	3,278.3	3,272.1	7.7	7.9	-165.37	81.9	157.5	335.3	320.9	14.42	23.245	
3,400.0	3,394.0	3,377.3	3,370.9	8.0	8.1	-166.03	87.9	160.9	348.6	333.8	14.87	23.441	
3,500.0	3,493.8	3,476.4	3,469.7	8.2	8.4	-166.64	93.9	164.4	362.0	346.7	15.32	23.627	
3,600.0	3,593.5	3,575.4	3,568.5	8.5	8.6	-167.21	99.9	167.8	375.5	359.7	15.77	23.804	
3,700.0	3,693.3	3,674.4	3,667.2	8.8	8.9	-167.74	105.9	171.3	388.9	372.7	16.22	23.973	
3,800.0	3,793.0	3,773.4	3,766.0	9.0	9.1	-168.23	111.9	174.8	402.4	385.7	16.67	24.135	
3,900.0	3,892.8	3,872.5	3,864.8	9.3	9.4	-168.69	117.8	178.2	415.9	398.8	17.12	24.289	
4,000.0	3,992.5	3,971.5	3,963.6	9.5	9.7	-169.12	123.8	181.7	429.5	411.9	17.58	24.436	
4,100.0	4,092.3	4,070.5	4,062.4	9.8	9.9	-169.53	129.8	185.1	443.0	425.0	18.03	24.577	
4,200.0	4,192.1	4,169.6	4,161.2	10.1	10.2	-169.91	135.8	188.6	456.6	438.1	18.48	24.711	
4,300.0	4,291.8	4,268.6	4,260.0	10.3	10.4	-170.27	141.8	192.0	470.2	451.3	18.93	24.840	
4,400.0	4,391.6	4,367.6	4,358.8	10.6	10.7	-170.61	147.7	195.5	483.9	464.5	19.38	24.964	
4,500.0	4,491.3	4,466.6	4,457.5	10.9	10.9	-170.93	153.7	198.9	497.5	477.7	19.83	25.083	
4,600.0	4,591.1	4,565.7	4,556.3	11.1	11.2	-171.23	159.7	202.4	511.1	490.9	20.29	25.196	
4,700.0	4,690.8	4,664.7	4,655.1	11.4	11.4	-171.52	165.7	205.8	524.8	504.1	20.74	25.306	
4,800.0	4,790.7	4,763.9	4,754.1	11.6	11.7	-171.80	171.7	209.3	536.8	515.6	21.20	25.316	
4,900.0	4,890.7	4,878.1	4,868.0	11.8	11.9	42.29	177.7	212.8	544.5	522.4	22.04	24.704	
5,000.0	4,990.7	5,000.7	4,990.7	12.0	12.2	42.23	179.9	214.0	546.5	524.1	22.46	24.338	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - 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
5,075.5	5,066.2	5,076.2	5,066.2	12.1	12.3	42.23	179.9	214.0	546.5	523.8	22.74	24.032	
5,100.0	5,090.7	5,100.7	5,090.7	12.1	12.3	-140.87	179.9	214.0	547.0	524.6	22.43	24.387	
5,150.0	5,140.4	5,150.5	5,140.4	12.3	12.4	-140.93	179.9	214.0	550.7	528.1	22.54	24.433	
5,200.0	5,189.5	5,182.3	5,172.2	12.4	12.5	-140.77	180.2	214.1	558.6	536.1	22.51	24.815	
5,250.0	5,237.4	5,200.0	5,189.9	12.6	12.6	-140.13	181.1	214.3	572.4	550.0	22.38	25.572	
5,300.0	5,283.8	5,228.3	5,218.1	12.9	12.6	-139.48	183.7	215.0	591.5	569.3	22.22	26.618	
5,350.0	5,328.1	5,250.0	5,239.6	13.2	12.7	-138.32	186.8	215.7	615.8	593.8	22.04	27.938	
5,400.0	5,370.1	5,265.4	5,254.7	13.5	12.7	-136.41	189.4	216.4	644.9	623.0	21.94	29.390	
5,450.0	5,409.2	5,280.0	5,269.0	13.8	12.8	-133.81	192.4	217.1	678.3	656.2	22.03	30.794	
5,500.0	5,445.2	5,300.0	5,288.4	14.3	12.9	-130.82	197.0	218.2	715.3	693.0	22.35	32.004	
5,550.0	5,477.7	5,300.0	5,288.4	14.7	12.9	-125.07	197.0	218.2	755.2	731.9	23.33	32.372	
5,600.0	5,506.4	5,300.0	5,288.4	15.2	12.9	-117.48	197.0	218.2	797.7	772.8	24.89	32.046	
5,650.0	5,531.1	5,300.0	5,288.4	15.8	12.9	-107.73	197.0	218.2	842.0	815.2	26.84	31.367	
5,700.0	5,551.4	5,315.7	5,303.5	16.4	12.9	-98.37	201.2	219.3	887.2	858.7	28.49	31.137	
5,750.0	5,567.4	5,316.4	5,304.2	17.0	12.9	-85.31	201.3	219.3	933.3	903.8	29.48	31.656	
5,800.0	5,578.6	5,300.0	5,288.4	17.7	12.9	-69.51	197.0	218.2	980.1	951.5	28.52	34.359	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - 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	155.05	-74.4	34.6	82.1				
100.0	100.0	100.0	100.0	0.1	0.1	155.05	-74.4	34.6	82.1	81.9	0.19	437.363	
200.0	200.0	200.0	200.0	0.3	0.3	155.05	-74.4	34.6	82.1	81.4	0.64	128.818	
300.0	300.0	300.0	300.0	0.5	0.5	155.05	-74.4	34.6	82.1	81.0	1.09	75.532	
400.0	400.0	400.0	400.0	0.8	0.8	155.05	-74.4	34.6	82.1	80.5	1.54	53.431	
500.0	500.0	500.0	500.0	1.0	1.0	155.05	-74.4	34.6	82.1	80.1	1.99	41.335	
600.0	600.0	600.0	600.0	1.2	1.2	155.05	-74.4	34.6	82.1	79.6	2.44	33.705	
700.0	700.0	700.0	700.0	1.4	1.4	155.05	-74.4	34.6	82.1	79.2	2.88	28.453	
800.0	800.0	800.0	800.0	1.7	1.7	155.05	-74.4	34.6	82.1	78.7	3.33	24.617	
900.0	900.0	900.0	900.0	1.9	1.9	-60.32	-74.4	34.6	81.2	77.4	3.76	21.603	
1,000.0	999.8	999.8	999.8	2.1	2.1	-63.67	-74.4	34.6	78.7	74.6	4.17	18.889	
1,100.0	1,099.6	1,099.6	1,099.6	2.3	2.3	-68.38	-74.4	34.6	75.9	71.3	4.59	16.522	
1,166.1	1,165.5	1,163.8	1,163.8	2.4	2.5	-71.53	-75.0	35.0	75.0	70.2	4.86	15.436	CC, ES
1,200.0	1,199.4	1,196.9	1,196.8	2.5	2.5	-73.10	-75.8	35.4	75.3	70.3	5.00	15.056	
1,300.0	1,299.1	1,294.1	1,293.9	2.7	2.7	-77.29	-80.1	37.9	78.5	73.1	5.40	14.545	
1,400.0	1,398.9	1,393.7	1,393.3	2.9	2.9	-80.86	-86.1	41.4	83.9	78.1	5.81	14.444	
1,500.0	1,498.6	1,493.4	1,492.7	3.1	3.1	-83.98	-92.2	44.9	89.6	83.4	6.23	14.378	
1,600.0	1,598.4	1,593.1	1,592.2	3.4	3.3	-86.72	-98.2	48.3	95.6	88.9	6.67	14.333	
1,700.0	1,698.1	1,692.8	1,691.7	3.6	3.5	-89.14	-104.2	51.8	101.7	94.6	7.11	14.303	
1,800.0	1,797.9	1,792.6	1,791.2	3.9	3.8	-91.28	-110.2	55.3	108.0	100.5	7.56	14.282	
1,900.0	1,897.6	1,892.3	1,890.7	4.1	4.0	-93.18	-116.3	58.8	114.5	106.5	8.02	14.268	
2,000.0	1,997.4	1,992.0	1,990.2	4.4	4.2	-94.88	-122.3	62.2	121.0	112.5	8.49	14.258	
2,100.0	2,097.2	2,091.7	2,089.6	4.6	4.4	-96.40	-128.3	65.7	127.7	118.7	8.96	14.251	
2,200.0	2,196.9	2,191.4	2,189.1	4.9	4.7	-97.77	-134.3	69.2	134.4	125.0	9.43	14.248	
2,300.0	2,296.7	2,291.2	2,288.6	5.1	4.9	-99.01	-140.3	72.7	141.2	131.3	9.91	14.247	
2,400.0	2,396.4	2,390.9	2,388.1	5.4	5.2	-100.13	-146.4	76.2	148.1	137.7	10.39	14.247	
2,500.0	2,496.2	2,490.6	2,487.6	5.6	5.4	-101.16	-152.4	79.6	155.0	144.1	10.88	14.248	
2,600.0	2,595.9	2,590.3	2,587.0	5.9	5.7	-102.10	-158.4	83.1	161.9	150.6	11.36	14.250	
2,700.0	2,695.7	2,690.1	2,686.5	6.2	5.9	-102.96	-164.4	86.6	168.9	157.1	11.85	14.252	
2,800.0	2,795.5	2,789.8	2,786.0	6.4	6.2	-103.75	-170.5	90.1	175.9	163.6	12.34	14.255	
2,900.0	2,895.2	2,889.5	2,885.5	6.7	6.4	-104.48	-176.5	93.5	183.0	170.2	12.83	14.259	
3,000.0	2,995.0	2,989.2	2,985.0	6.9	6.7	-105.16	-182.5	97.0	190.1	176.8	13.33	14.262	
3,100.0	3,094.7	3,089.0	3,084.5	7.2	6.9	-105.78	-188.5	100.5	197.2	183.4	13.82	14.266	
3,200.0	3,194.5	3,188.7	3,183.9	7.5	7.2	-106.37	-194.6	104.0	204.3	190.0	14.32	14.270	
3,300.0	3,294.2	3,288.4	3,283.4	7.7	7.4	-106.91	-200.6	107.5	211.5	196.7	14.82	14.273	
3,400.0	3,394.0	3,388.1	3,382.9	8.0	7.7	-107.42	-206.6	110.9	218.6	203.3	15.31	14.277	
3,500.0	3,493.8	3,487.9	3,482.4	8.2	7.9	-107.90	-212.6	114.4	225.8	210.0	15.81	14.281	
3,600.0	3,593.5	3,587.6	3,581.9	8.5	8.2	-108.34	-218.7	117.9	233.0	216.7	16.31	14.285	
3,700.0	3,693.3	3,687.3	3,681.3	8.8	8.5	-108.76	-224.7	121.4	240.2	223.4	16.81	14.288	
3,800.0	3,793.0	3,787.0	3,780.8	9.0	8.7	-109.16	-230.7	124.9	247.5	230.2	17.32	14.292	
3,900.0	3,892.8	3,886.8	3,880.3	9.3	9.0	-109.53	-236.7	128.3	254.7	236.9	17.82	14.296	
4,000.0	3,992.5	3,986.5	3,979.8	9.5	9.2	-109.89	-242.8	131.8	262.0	243.6	18.32	14.299	
4,100.0	4,092.3	4,086.2	4,079.3	9.8	9.5	-110.22	-248.8	135.3	269.2	250.4	18.82	14.302	
4,200.0	4,192.1	4,185.9	4,178.7	10.1	9.7	-110.54	-254.8	138.8	276.5	257.2	19.33	14.306	
4,300.0	4,291.8	4,285.7	4,278.2	10.3	10.0	-110.84	-260.8	142.2	283.8	263.9	19.83	14.309	
4,400.0	4,391.6	4,385.4	4,377.7	10.6	10.3	-111.12	-266.9	145.7	291.0	270.7	20.33	14.312	
4,500.0	4,491.3	4,485.1	4,477.2	10.9	10.5	-111.39	-272.9	149.2	298.3	277.5	20.84	14.315	
4,600.0	4,591.1	4,584.8	4,576.7	11.1	10.8	-111.65	-278.9	152.7	305.6	284.3	21.34	14.318	
4,700.0	4,690.8	4,684.6	4,676.2	11.4	11.0	-111.90	-284.9	156.2	312.9	291.1	21.85	14.321	
4,800.0	4,790.7	4,784.3	4,775.7	11.6	11.3	-111.96	-291.0	159.6	319.6	297.2	22.32	14.317	
4,900.0	4,890.7	4,891.1	4,882.3	11.8	11.5	102.74	-296.2	162.6	324.0	301.1	22.89	14.159	
5,000.0	4,990.7	4,999.5	4,990.6	12.0	11.8	103.00	-298.0	163.7	325.3	302.0	23.28	13.974	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - 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
5,075.5	5,066.2	5,075.0	5,066.2	12.1	11.9	103.00	-298.0	163.7	325.3	301.8	23.55	13.813	
5,100.0	5,090.7	5,099.5	5,090.7	12.1	11.9	-80.21	-298.0	163.7	325.2	301.7	23.51	13.835	
5,150.0	5,140.4	5,149.3	5,140.4	12.3	12.0	-81.11	-298.0	163.7	324.5	300.7	23.73	13.670	
5,200.0	5,189.5	5,194.7	5,185.9	12.4	12.1	-82.57	-298.9	163.7	323.3	299.3	24.00	13.472	
5,250.0	5,237.4	5,239.2	5,230.1	12.6	12.2	-84.10	-303.5	163.7	322.5	298.2	24.33	13.256	
5,300.0	5,283.8	5,284.3	5,274.4	12.9	12.4	-85.68	-312.0	163.7	322.2	297.4	24.72	13.030	
5,312.6	5,295.2	5,295.8	5,285.5	12.9	12.4	-86.09	-314.8	163.7	322.1	297.3	24.84	12.970	
5,350.0	5,328.1	5,330.1	5,318.4	13.2	12.6	-87.31	-324.5	163.7	322.3	297.1	25.19	12.794	
5,400.0	5,370.1	5,376.7	5,361.9	13.5	12.8	-88.97	-341.2	163.7	322.9	297.2	25.73	12.550	
5,450.0	5,409.2	5,424.2	5,404.5	13.8	13.0	-90.64	-362.1	163.7	324.1	297.7	26.35	12.300	
5,500.0	5,445.2	5,472.6	5,445.8	14.3	13.3	-92.30	-387.3	163.7	325.8	298.8	27.05	12.047	
5,550.0	5,477.7	5,521.9	5,485.3	14.7	13.7	-93.94	-416.8	163.7	328.1	300.3	27.82	11.792	
5,600.0	5,506.4	5,572.4	5,522.6	15.2	14.1	-95.54	-450.7	163.7	330.9	302.2	28.68	11.536	
5,650.0	5,531.1	5,623.9	5,557.2	15.8	14.5	-97.08	-488.9	163.7	334.1	304.5	29.62	11.281	
5,700.0	5,551.4	5,676.7	5,588.5	16.4	15.0	-98.54	-531.4	163.7	337.8	307.2	30.64	11.026	
5,750.0	5,567.4	5,730.7	5,615.9	17.0	15.6	-99.90	-577.9	163.6	341.9	310.1	31.74	10.772	
5,800.0	5,578.6	5,786.0	5,638.8	17.7	16.3	-101.16	-628.2	163.6	346.2	313.3	32.92	10.517	
5,850.0	5,585.2	5,842.6	5,656.7	18.4	17.0	-102.30	-681.8	163.6	350.7	316.5	34.17	10.263	
5,893.7	5,587.0	5,893.1	5,667.6	19.0	17.7	-103.18	-731.1	163.6	354.6	319.3	35.33	10.040	
5,900.0	5,587.0	5,900.4	5,668.8	19.1	17.8	-103.35	-738.4	163.6	355.2	319.7	35.48	10.010	
5,997.2	5,587.0	6,010.7	5,675.0	20.3	19.3	-104.19	-848.3	163.6	358.8	320.7	38.12	9.415	
6,000.0	5,587.0	6,013.5	5,675.0	20.4	19.4	-104.19	-851.2	163.6	358.8	320.6	38.20	9.395	
6,100.0	5,587.0	6,113.5	5,675.0	21.9	20.9	-104.19	-951.2	163.6	358.8	317.6	41.19	8.711	
6,200.0	5,587.0	6,213.5	5,675.0	23.5	22.5	-104.19	-1,051.2	163.6	358.8	314.5	44.30	8.099	
6,300.0	5,587.0	6,313.5	5,675.0	25.1	24.1	-104.19	-1,151.2	163.6	358.8	311.3	47.50	7.553	
6,400.0	5,587.0	6,413.5	5,675.0	26.8	25.8	-104.19	-1,251.2	163.6	358.8	308.0	50.78	7.066	
6,500.0	5,587.0	6,513.5	5,675.0	28.5	27.4	-104.19	-1,351.2	163.6	358.8	304.7	54.11	6.630	
6,600.0	5,587.0	6,613.5	5,675.0	30.3	29.2	-104.19	-1,451.2	163.6	358.8	301.3	57.49	6.240	
6,700.0	5,587.0	6,713.5	5,675.0	32.0	30.9	-104.19	-1,551.2	163.6	358.7	297.8	60.91	5.889	
6,800.0	5,587.0	6,813.5	5,675.0	33.8	32.7	-104.19	-1,651.2	163.6	358.7	294.3	64.37	5.573	
6,900.0	5,587.0	6,913.5	5,675.0	35.6	34.5	-104.20	-1,751.2	163.5	358.7	290.8	67.86	5.286	
7,000.0	5,587.0	7,013.5	5,675.0	37.4	36.3	-104.20	-1,851.2	163.5	358.7	287.3	71.37	5.026	
7,100.0	5,587.0	7,113.5	5,675.0	39.2	38.1	-104.20	-1,951.2	163.5	358.7	283.8	74.90	4.788	
7,200.0	5,587.0	7,213.5	5,675.0	41.0	39.9	-104.20	-2,051.2	163.5	358.7	280.2	78.46	4.571	
7,300.0	5,587.0	7,313.5	5,675.0	42.8	41.7	-104.20	-2,151.2	163.5	358.6	276.6	82.02	4.372	
7,400.0	5,587.0	7,413.5	5,675.0	44.7	43.5	-104.20	-2,251.2	163.5	358.6	273.0	85.61	4.189	
7,500.0	5,587.0	7,513.5	5,675.0	46.5	45.4	-104.20	-2,351.2	163.5	358.6	269.4	89.20	4.020	
7,600.0	5,587.0	7,613.5	5,675.0	48.4	47.2	-104.20	-2,451.2	163.5	358.6	265.8	92.81	3.864	
7,700.0	5,587.0	7,713.5	5,675.0	50.2	49.1	-104.20	-2,551.2	163.5	358.6	262.2	96.42	3.719	
7,800.0	5,587.0	7,813.5	5,675.0	52.1	50.9	-104.20	-2,651.2	163.5	358.6	258.5	100.05	3.584	
7,900.0	5,587.0	7,913.5	5,675.0	53.9	52.8	-104.20	-2,751.2	163.5	358.5	254.9	103.68	3.458	
8,000.0	5,587.0	8,013.5	5,675.0	55.8	54.7	-104.20	-2,851.2	163.5	358.5	251.2	107.32	3.341	
8,100.0	5,587.0	8,113.5	5,675.0	57.7	56.5	-104.20	-2,951.2	163.4	358.5	247.6	110.96	3.231	
8,200.0	5,587.0	8,213.5	5,675.0	59.5	58.4	-104.21	-3,051.2	163.4	358.5	243.9	114.61	3.128	
8,300.0	5,587.0	8,313.5	5,675.0	61.4	60.3	-104.21	-3,151.2	163.4	358.5	240.2	118.27	3.031	
8,400.0	5,587.0	8,413.5	5,675.0	63.3	62.1	-104.21	-3,251.2	163.4	358.5	236.5	121.93	2.940	
8,500.0	5,587.0	8,513.5	5,675.0	65.2	64.0	-104.21	-3,351.2	163.4	358.5	232.9	125.59	2.854	
8,600.0	5,587.0	8,613.5	5,675.0	67.1	65.9	-104.21	-3,451.2	163.4	358.4	229.2	129.26	2.773	
8,700.0	5,587.0	8,713.5	5,675.0	68.9	67.8	-104.21	-3,551.2	163.4	358.4	225.5	132.93	2.696	
8,800.0	5,587.0	8,813.5	5,675.0	70.8	69.7	-104.21	-3,651.2	163.4	358.4	221.8	136.61	2.624	
8,900.0	5,587.0	8,913.5	5,675.0	72.7	71.6	-104.21	-3,751.2	163.4	358.4	218.1	140.28	2.555	
9,000.0	5,587.0	9,013.5	5,675.0	74.6	73.5	-104.21	-3,851.2	163.4	358.4	214.4	143.97	2.489	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - 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
9,100.0	5,587.0	9,113.5	5,675.0	76.5	75.3	-104.21	-3,951.2	163.4	358.4	210.7	147.65	2.427	
9,200.0	5,587.0	9,213.5	5,675.0	78.4	77.2	-104.21	-4,051.2	163.4	358.3	207.0	151.34	2.368	
9,300.0	5,587.0	9,313.5	5,675.0	80.3	79.1	-104.21	-4,151.2	163.3	358.3	203.3	155.02	2.311	
9,400.0	5,587.0	9,413.5	5,675.0	82.2	81.0	-104.21	-4,251.2	163.3	358.3	199.6	158.71	2.258	
9,500.0	5,587.0	9,513.5	5,675.0	84.1	82.9	-104.21	-4,351.2	163.3	358.3	195.9	162.41	2.206	
9,600.0	5,587.0	9,613.5	5,675.0	86.0	84.8	-104.22	-4,451.2	163.3	358.3	192.2	166.10	2.157	
9,700.0	5,587.0	9,713.5	5,675.0	87.9	86.7	-104.22	-4,551.2	163.3	358.3	188.5	169.80	2.110	
9,800.0	5,587.0	9,813.5	5,675.0	89.7	88.6	-104.22	-4,651.2	163.3	358.2	184.8	173.49	2.065	
9,900.0	5,587.0	9,913.5	5,675.0	91.6	90.5	-104.22	-4,751.2	163.3	358.2	181.0	177.19	2.022	
10,000.0	5,587.0	10,013.5	5,675.0	93.5	92.4	-104.22	-4,851.2	163.3	358.2	177.3	180.89	1.980	
10,100.0	5,587.0	10,113.5	5,675.0	95.4	94.3	-104.22	-4,951.2	163.3	358.2	173.6	184.59	1.940	
10,200.0	5,587.0	10,213.5	5,675.0	97.3	96.2	-104.22	-5,051.2	163.3	358.2	169.9	188.30	1.902	
10,300.0	5,587.0	10,313.5	5,675.0	99.2	98.1	-104.22	-5,151.2	163.3	358.2	166.2	192.00	1.865	
10,400.0	5,587.0	10,413.5	5,675.0	101.1	100.0	-104.22	-5,251.2	163.3	358.2	162.4	195.70	1.830	
10,500.0	5,587.0	10,513.5	5,675.0	103.1	101.9	-104.22	-5,351.2	163.2	358.1	158.7	199.41	1.796	
10,600.0	5,587.0	10,613.5	5,675.0	105.0	103.8	-104.22	-5,451.2	163.2	358.1	155.0	203.12	1.763	
10,700.0	5,587.0	10,713.5	5,675.0	106.9	105.7	-104.22	-5,551.2	163.2	358.1	151.3	206.82	1.731	
10,800.0	5,587.0	10,813.5	5,675.0	108.8	107.6	-104.22	-5,651.2	163.2	358.1	147.6	210.53	1.701	
10,900.0	5,587.0	10,913.5	5,675.0	110.7	109.5	-104.23	-5,751.2	163.2	358.1	143.8	214.24	1.671	
11,000.0	5,587.0	11,013.5	5,675.0	112.6	111.4	-104.23	-5,851.2	163.2	358.1	140.1	217.95	1.643	
11,100.0	5,587.0	11,113.5	5,675.0	114.5	113.3	-104.23	-5,951.2	163.2	358.0	136.4	221.66	1.615	
11,200.0	5,587.0	11,213.5	5,675.0	116.4	115.2	-104.23	-6,051.2	163.2	358.0	132.6	225.38	1.589	
11,300.0	5,587.0	11,313.5	5,675.0	118.3	117.1	-104.23	-6,151.2	163.2	358.0	128.9	229.09	1.563	
11,400.0	5,587.0	11,413.5	5,675.0	120.2	119.0	-104.23	-6,251.2	163.2	358.0	125.2	232.80	1.538	
11,500.0	5,587.0	11,513.5	5,675.0	122.1	121.0	-104.23	-6,351.2	163.2	358.0	121.5	236.51	1.514	
11,600.0	5,587.0	11,613.5	5,675.0	124.0	122.9	-104.23	-6,451.2	163.1	358.0	117.7	240.23	1.490	Level 3
11,700.0	5,587.0	11,713.5	5,675.0	125.9	124.8	-104.23	-6,551.2	163.1	357.9	114.0	243.94	1.467	Level 3
11,800.0	5,587.0	11,813.5	5,675.0	127.8	126.7	-104.23	-6,651.2	163.1	357.9	110.3	247.66	1.445	Level 3
11,900.0	5,587.0	11,913.5	5,675.0	129.7	128.6	-104.23	-6,751.2	163.1	357.9	106.5	251.37	1.424	Level 3
12,000.0	5,587.0	12,013.5	5,675.0	131.6	130.5	-104.23	-6,851.2	163.1	357.9	102.8	255.09	1.403	Level 3
12,100.0	5,587.0	12,113.5	5,675.0	133.5	132.4	-104.23	-6,951.2	163.1	357.9	99.1	258.81	1.383	Level 3
12,209.7	5,587.0	12,223.2	5,675.0	135.6	134.5	-104.24	-7,060.8	163.1	357.9	95.0	262.88	1.361	Level 3, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - 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	88.94	1.2	66.2	66.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.94	1.2	66.2	66.2	66.0	0.19	352.529	
200.0	200.0	200.0	200.0	0.3	0.3	88.94	1.2	66.2	66.2	65.5	0.64	103.831	
300.0	300.0	300.0	300.0	0.5	0.5	88.94	1.2	66.2	66.2	65.1	1.09	60.882	
400.0	400.0	400.0	400.0	0.8	0.8	88.94	1.2	66.2	66.2	64.6	1.54	43.067	
500.0	500.0	500.0	500.0	1.0	1.0	88.94	1.2	66.2	66.2	64.2	1.99	33.318	CC, ES
600.0	600.0	598.3	598.2	1.2	1.2	89.88	0.1	67.4	67.5	65.1	2.41	27.993	
700.0	700.0	696.3	696.1	1.4	1.4	92.48	-3.1	71.3	71.5	68.6	2.83	25.276	
800.0	800.0	796.0	795.6	1.7	1.6	95.64	-7.6	76.6	77.1	73.9	3.27	23.619	
900.0	900.0	895.7	895.1	1.9	1.8	-116.90	-12.0	82.0	83.8	80.1	3.67	22.813	
1,000.0	999.8	995.4	994.5	2.1	2.1	-117.32	-16.5	87.3	92.0	87.9	4.07	22.584	
1,100.0	1,099.6	1,094.9	1,093.8	2.3	2.3	-118.67	-21.0	92.6	101.1	96.6	4.49	22.490	
1,200.0	1,199.4	1,194.5	1,193.1	2.5	2.6	-119.80	-25.4	97.9	110.2	105.3	4.93	22.352	
1,300.0	1,299.1	1,294.0	1,292.4	2.7	2.8	-120.75	-29.9	103.2	119.3	114.0	5.38	22.196	
1,400.0	1,398.9	1,393.6	1,391.7	2.9	3.1	-121.57	-34.4	108.6	128.5	122.7	5.83	22.035	
1,500.0	1,498.6	1,493.2	1,491.1	3.1	3.3	-122.28	-38.8	113.9	137.7	131.4	6.30	21.877	
1,600.0	1,598.4	1,592.7	1,590.4	3.4	3.6	-122.90	-43.3	119.2	147.0	140.2	6.76	21.726	
1,700.0	1,698.1	1,692.3	1,689.7	3.6	3.8	-123.45	-47.8	124.5	156.2	149.0	7.24	21.583	
1,800.0	1,797.9	1,791.8	1,789.0	3.9	4.1	-123.94	-52.2	129.8	165.5	157.7	7.71	21.450	
1,900.0	1,897.6	1,891.4	1,888.3	4.1	4.3	-124.37	-56.7	135.2	174.7	166.5	8.19	21.326	
2,000.0	1,997.4	1,991.0	1,987.7	4.4	4.6	-124.76	-61.1	140.5	184.0	175.3	8.67	21.211	
2,100.0	2,097.2	2,090.5	2,087.0	4.6	4.8	-125.11	-65.6	145.8	193.3	184.1	9.16	21.104	
2,200.0	2,196.9	2,190.1	2,186.3	4.9	5.1	-125.43	-70.1	151.1	202.6	192.9	9.64	21.005	
2,300.0	2,296.7	2,289.7	2,285.6	5.1	5.4	-125.73	-74.5	156.4	211.9	201.7	10.13	20.913	
2,400.0	2,396.4	2,389.2	2,384.9	5.4	5.6	-126.00	-79.0	161.8	221.2	210.5	10.62	20.827	
2,500.0	2,496.2	2,488.8	2,484.3	5.6	5.9	-126.24	-83.5	167.1	230.5	219.3	11.11	20.748	
2,600.0	2,595.9	2,588.3	2,583.6	5.9	6.1	-126.47	-87.9	172.4	239.8	228.2	11.60	20.673	
2,700.0	2,695.7	2,687.9	2,682.9	6.2	6.4	-126.68	-92.4	177.7	249.1	237.0	12.09	20.604	
2,800.0	2,795.5	2,787.5	2,782.2	6.4	6.7	-126.87	-96.9	183.0	258.4	245.8	12.58	20.539	
2,900.0	2,895.2	2,887.0	2,881.5	6.7	6.9	-127.06	-101.3	188.4	267.7	254.6	13.07	20.478	
3,000.0	2,995.0	2,986.6	2,980.9	6.9	7.2	-127.23	-105.8	193.7	277.0	263.5	13.57	20.421	
3,100.0	3,094.7	3,086.2	3,080.2	7.2	7.4	-127.38	-110.3	199.0	286.3	272.3	14.06	20.367	
3,200.0	3,194.5	3,185.7	3,179.5	7.5	7.7	-127.53	-114.7	204.3	295.7	281.1	14.55	20.317	
3,300.0	3,294.2	3,285.3	3,278.8	7.7	8.0	-127.67	-119.2	209.6	305.0	289.9	15.05	20.269	
3,400.0	3,394.0	3,384.8	3,378.1	8.0	8.2	-127.80	-123.6	215.0	314.3	298.8	15.54	20.224	
3,500.0	3,493.8	3,484.4	3,477.5	8.2	8.5	-127.93	-128.1	220.3	323.6	307.6	16.04	20.182	
3,600.0	3,593.5	3,584.0	3,576.8	8.5	8.7	-128.04	-132.6	225.6	333.0	316.4	16.53	20.142	
3,700.0	3,693.3	3,683.5	3,676.1	8.8	9.0	-128.15	-137.0	230.9	342.3	325.3	17.03	20.104	
3,800.0	3,793.0	3,783.1	3,775.4	9.0	9.3	-128.26	-141.5	236.2	351.6	334.1	17.52	20.067	
3,900.0	3,892.8	3,882.6	3,874.7	9.3	9.5	-128.36	-146.0	241.6	361.0	342.9	18.02	20.033	
4,000.0	3,992.5	3,982.2	3,974.1	9.5	9.8	-128.45	-150.4	246.9	370.3	351.8	18.51	20.000	
4,100.0	4,092.3	4,081.8	4,073.4	9.8	10.1	-128.54	-154.9	252.2	379.6	360.6	19.01	19.969	
4,200.0	4,192.1	4,181.3	4,172.7	10.1	10.3	-128.63	-159.4	257.5	389.0	369.5	19.51	19.939	
4,300.0	4,291.8	4,280.9	4,272.0	10.3	10.6	-128.71	-163.8	262.8	398.3	378.3	20.00	19.911	
4,400.0	4,391.6	4,380.5	4,371.3	10.6	10.8	-128.78	-168.3	268.2	407.6	387.1	20.50	19.884	
4,500.0	4,491.3	4,480.0	4,470.7	10.9	11.1	-128.86	-172.7	273.5	417.0	396.0	21.00	19.858	
4,600.0	4,591.1	4,589.0	4,579.4	11.1	11.3	-129.07	-176.7	278.3	425.4	403.9	21.48	19.803	
4,700.0	4,690.8	4,700.4	4,690.8	11.4	11.6	-129.67	-178.1	279.9	431.2	409.3	21.94	19.652	
4,800.0	4,790.7	4,800.3	4,790.7	11.6	11.7	-130.25	-178.1	279.9	434.6	412.2	22.36	19.437	
4,900.0	4,890.7	4,900.3	4,890.7	11.8	11.9	83.86	-178.1	279.9	435.7	412.8	22.89	19.033	
5,000.0	4,990.7	5,000.3	4,990.7	12.0	12.1	83.86	-178.1	279.9	435.7	412.5	23.25	18.737	
5,050.3	5,041.0	5,050.6	5,041.0	12.0	12.2	83.86	-178.1	279.9	435.7	412.3	23.43	18.597	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - 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
5,075.5	5,066.2	5,075.7	5,066.1	12.1	12.2	83.86	-178.1	279.9	435.7	412.2	23.52	18.528	
5,100.0	5,090.7	5,097.2	5,087.7	12.1	12.2	-99.23	-178.6	280.0	435.9	412.4	23.44	18.592	
5,150.0	5,140.4	5,141.1	5,131.4	12.3	12.4	-99.14	-182.1	281.0	437.3	413.7	23.69	18.464	
5,200.0	5,189.5	5,184.9	5,174.6	12.4	12.5	-98.95	-189.1	283.0	440.3	416.3	23.98	18.360	
5,250.0	5,237.4	5,228.7	5,217.0	12.6	12.7	-98.68	-199.6	286.0	444.6	420.3	24.32	18.278	
5,300.0	5,283.8	5,272.5	5,258.2	12.9	12.9	-98.32	-213.5	289.9	450.3	425.6	24.73	18.212	
5,350.0	5,328.1	5,316.1	5,298.1	13.2	13.1	-97.87	-230.6	294.7	457.4	432.2	25.20	18.155	
5,400.0	5,370.1	5,359.8	5,336.3	13.5	13.3	-97.34	-250.8	300.4	465.8	440.1	25.74	18.099	
5,450.0	5,409.2	5,403.3	5,372.6	13.8	13.6	-96.73	-274.1	307.0	475.4	449.0	26.35	18.039	
5,500.0	5,445.2	5,446.9	5,406.7	14.3	13.9	-96.05	-300.1	314.3	486.1	459.0	27.05	17.967	
5,550.0	5,477.7	5,490.4	5,438.4	14.7	14.3	-95.30	-328.8	322.4	497.8	469.9	27.84	17.879	
5,600.0	5,506.4	5,534.0	5,467.5	15.2	14.7	-94.49	-360.0	331.2	510.5	481.7	28.72	17.775	
5,650.0	5,531.1	5,577.7	5,493.9	15.8	15.1	-93.63	-393.5	340.6	524.0	494.3	29.68	17.655	
5,700.0	5,551.4	5,621.5	5,517.4	16.4	15.6	-92.73	-429.1	350.7	538.2	507.5	30.72	17.520	
5,750.0	5,567.4	5,665.6	5,537.8	17.0	16.1	-91.80	-466.7	361.3	553.0	521.2	31.86	17.360	
5,800.0	5,578.6	5,710.0	5,554.9	17.7	16.7	-90.84	-506.1	372.4	568.4	535.3	33.08	17.179	
5,850.0	5,585.2	5,754.9	5,568.6	18.4	17.3	-89.88	-547.2	384.0	584.0	549.7	34.38	16.988	
5,893.7	5,587.0	5,794.5	5,577.5	19.0	17.8	-89.04	-584.3	394.5	598.0	562.4	35.56	16.815	
5,900.0	5,587.0	5,800.0	5,578.6	19.1	17.9	-89.15	-589.6	395.9	600.0	564.3	35.73	16.791	
5,997.2	5,587.0	5,892.0	5,587.0	20.3	19.3	-90.00	-677.6	420.8	628.7	590.2	38.44	16.356	
6,000.0	5,587.0	5,895.2	5,587.0	20.4	19.3	-90.00	-680.7	421.6	629.4	590.9	38.52	16.339	
6,100.0	5,587.0	6,041.6	5,587.0	21.9	21.2	-90.00	-823.0	455.8	652.8	610.7	42.11	15.503	
6,200.0	5,587.0	6,192.6	5,587.0	23.5	23.3	-90.00	-972.1	479.6	668.5	622.6	45.96	14.547	
6,300.0	5,587.0	6,346.5	5,587.0	25.1	25.6	-90.00	-1,125.5	491.6	676.4	626.4	50.00	13.527	
6,400.0	5,587.0	6,472.2	5,587.0	26.8	27.5	-90.00	-1,251.1	493.0	677.2	623.6	53.68	12.615	
6,500.0	5,587.0	6,572.2	5,587.0	28.5	29.1	-90.00	-1,351.1	493.0	677.2	620.2	57.07	11.867	
6,600.0	5,587.0	6,672.2	5,587.0	30.3	30.7	-90.00	-1,451.1	493.0	677.2	616.7	60.52	11.191	
6,700.0	5,587.0	6,772.2	5,587.0	32.0	32.4	-90.00	-1,551.1	493.0	677.2	613.2	64.01	10.580	
6,800.0	5,587.0	6,872.2	5,587.0	33.8	34.1	-90.00	-1,651.1	493.0	677.2	609.7	67.54	10.027	
6,900.0	5,587.0	6,972.2	5,587.0	35.6	35.8	-90.00	-1,751.1	493.0	677.2	606.1	71.10	9.524	
7,000.0	5,587.0	7,072.2	5,587.0	37.4	37.6	-90.00	-1,851.1	493.0	677.2	602.5	74.69	9.067	
7,100.0	5,587.0	7,172.2	5,587.0	39.2	39.3	-90.00	-1,951.1	493.0	677.2	598.9	78.30	8.648	
7,200.0	5,587.0	7,272.2	5,587.0	41.0	41.1	-90.00	-2,051.1	493.0	677.2	595.2	81.94	8.265	
7,300.0	5,587.0	7,372.2	5,587.0	42.8	42.9	-90.00	-2,151.1	493.0	677.2	591.6	85.59	7.912	
7,400.0	5,587.0	7,472.2	5,587.0	44.7	44.7	-90.00	-2,251.1	493.0	677.2	587.9	89.25	7.587	
7,500.0	5,587.0	7,572.2	5,587.0	46.5	46.5	-90.00	-2,351.1	493.0	677.2	584.2	92.93	7.287	
7,600.0	5,587.0	7,672.2	5,587.0	48.4	48.3	-90.00	-2,451.1	493.0	677.2	580.5	96.63	7.008	
7,700.0	5,587.0	7,772.2	5,587.0	50.2	50.1	-90.00	-2,551.1	493.0	677.1	576.8	100.33	6.749	
7,800.0	5,587.0	7,872.2	5,587.0	52.1	51.9	-90.00	-2,651.1	493.0	677.1	573.1	104.04	6.508	
7,900.0	5,587.0	7,972.2	5,587.0	53.9	53.8	-90.00	-2,751.1	493.0	677.1	569.4	107.76	6.284	
8,000.0	5,587.0	8,072.2	5,587.0	55.8	55.6	-90.00	-2,851.1	493.0	677.1	565.6	111.49	6.073	
8,100.0	5,587.0	8,172.2	5,587.0	57.7	57.5	-90.00	-2,951.1	493.0	677.1	561.9	115.22	5.877	
8,200.0	5,587.0	8,272.2	5,587.0	59.5	59.3	-90.00	-3,051.1	493.0	677.1	558.1	118.97	5.692	
8,300.0	5,587.0	8,372.2	5,587.0	61.4	61.2	-90.00	-3,151.1	493.0	677.1	554.4	122.71	5.518	
8,400.0	5,587.0	8,472.2	5,587.0	63.3	63.0	-90.00	-3,251.1	493.0	677.1	550.6	126.47	5.354	
8,500.0	5,587.0	8,572.2	5,587.0	65.2	64.9	-90.00	-3,351.1	493.0	677.1	546.9	130.22	5.199	
8,600.0	5,587.0	8,672.2	5,587.0	67.1	66.7	-90.00	-3,451.1	493.0	677.1	543.1	133.99	5.053	
8,700.0	5,587.0	8,772.2	5,587.0	68.9	68.6	-90.00	-3,551.1	493.0	677.1	539.3	137.75	4.915	
8,800.0	5,587.0	8,872.2	5,587.0	70.8	70.5	-90.00	-3,651.1	493.0	677.1	535.6	141.52	4.784	
8,900.0	5,587.0	8,972.2	5,587.0	72.7	72.3	-90.00	-3,751.1	493.0	677.1	531.8	145.29	4.660	
9,000.0	5,587.0	9,072.2	5,587.0	74.6	74.2	-90.00	-3,851.1	493.0	677.1	528.0	149.07	4.542	
9,100.0	5,587.0	9,172.2	5,587.0	76.5	76.1	-90.00	-3,951.1	493.0	677.1	524.2	152.85	4.430	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - 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	5,587.0	9,272.2	5,587.0	78.4	78.0	-90.00	-4,051.1	493.0	677.0	520.4	156.63	4.323	
9,300.0	5,587.0	9,372.2	5,587.0	80.3	79.9	-90.00	-4,151.1	493.0	677.0	516.6	160.41	4.221	
9,400.0	5,587.0	9,472.2	5,587.0	82.2	81.7	-90.00	-4,251.1	493.0	677.0	512.8	164.20	4.123	
9,500.0	5,587.0	9,572.2	5,587.0	84.1	83.6	-90.00	-4,351.1	493.0	677.0	509.0	167.99	4.030	
9,600.0	5,587.0	9,672.2	5,587.0	86.0	85.5	-90.00	-4,451.1	493.0	677.0	505.2	171.78	3.941	
9,700.0	5,587.0	9,772.2	5,587.0	87.9	87.4	-90.00	-4,551.1	493.0	677.0	501.4	175.57	3.856	
9,800.0	5,587.0	9,872.2	5,587.0	89.7	89.3	-90.00	-4,651.1	493.0	677.0	497.6	179.37	3.774	
9,900.0	5,587.0	9,972.2	5,587.0	91.6	91.2	-90.00	-4,751.1	493.0	677.0	493.8	183.16	3.696	
10,000.0	5,587.0	10,072.2	5,587.0	93.5	93.1	-90.00	-4,851.1	493.0	677.0	490.0	186.96	3.621	
10,100.0	5,587.0	10,172.2	5,587.0	95.4	94.9	-90.00	-4,951.1	493.0	677.0	486.2	190.76	3.549	
10,200.0	5,587.0	10,272.2	5,587.0	97.3	96.8	-90.00	-5,051.1	493.0	677.0	482.4	194.56	3.480	
10,300.0	5,587.0	10,372.2	5,587.0	99.2	98.7	-90.00	-5,151.1	493.0	677.0	478.6	198.36	3.413	
10,400.0	5,587.0	10,472.2	5,587.0	101.1	100.6	-90.00	-5,251.1	493.0	677.0	474.8	202.16	3.349	
10,500.0	5,587.0	10,572.2	5,587.0	103.1	102.5	-90.00	-5,351.1	493.0	677.0	471.0	205.97	3.287	
10,600.0	5,587.0	10,672.2	5,587.0	105.0	104.4	-90.00	-5,451.1	493.0	676.9	467.2	209.77	3.227	
10,700.0	5,587.0	10,772.2	5,587.0	106.9	106.3	-90.00	-5,551.1	493.0	676.9	463.4	213.58	3.170	
10,800.0	5,587.0	10,872.2	5,587.0	108.8	108.2	-90.00	-5,651.1	493.0	676.9	459.6	217.38	3.114	
10,900.0	5,587.0	10,972.2	5,587.0	110.7	110.1	-90.00	-5,751.1	493.0	676.9	455.7	221.19	3.060	
11,000.0	5,587.0	11,072.2	5,587.0	112.6	112.0	-90.00	-5,851.1	493.0	676.9	451.9	225.00	3.009	
11,100.0	5,587.0	11,172.2	5,587.0	114.5	113.9	-90.00	-5,951.1	493.0	676.9	448.1	228.81	2.958	
11,200.0	5,587.0	11,272.2	5,587.0	116.4	115.8	-90.00	-6,051.1	493.0	676.9	444.3	232.62	2.910	
11,300.0	5,587.0	11,372.2	5,587.0	118.3	117.7	-90.00	-6,151.1	493.0	676.9	440.5	236.43	2.863	
11,400.0	5,587.0	11,472.2	5,587.0	120.2	119.6	-90.00	-6,251.1	493.0	676.9	436.6	240.24	2.818	
11,500.0	5,587.0	11,572.2	5,587.0	122.1	121.5	-90.00	-6,351.1	493.0	676.9	432.8	244.06	2.773	
11,600.0	5,587.0	11,672.2	5,587.0	124.0	123.4	-90.00	-6,451.1	493.1	676.9	429.0	247.87	2.731	
11,700.0	5,587.0	11,772.2	5,587.0	125.9	125.3	-90.00	-6,551.1	493.1	676.9	425.2	251.68	2.689	
11,800.0	5,587.0	11,872.2	5,587.0	127.8	127.2	-90.00	-6,651.1	493.1	676.9	421.4	255.50	2.649	
11,900.0	5,587.0	11,972.2	5,587.0	129.7	129.1	-90.00	-6,751.1	493.1	676.9	417.5	259.31	2.610	
12,000.0	5,587.0	12,072.2	5,587.0	131.6	131.0	-90.00	-6,851.1	493.1	676.9	413.7	263.13	2.572	
12,100.0	5,587.0	12,172.2	5,587.0	133.5	132.9	-90.00	-6,951.1	493.1	676.8	409.9	266.94	2.536	
12,209.7	5,587.0	12,281.8	5,587.0	135.6	135.0	-90.00	-7,060.8	493.1	676.8	405.7	271.13	2.496	SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - 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	126.00	-73.2	100.8	124.6				
100.0	100.0	100.0	100.0	0.1	0.1	126.00	-73.2	100.8	124.6	124.4	0.19	663.672	
200.0	200.0	200.0	200.0	0.3	0.3	126.00	-73.2	100.8	124.6	123.9	0.64	195.473	
300.0	300.0	300.0	300.0	0.5	0.5	126.00	-73.2	100.8	124.6	123.5	1.09	114.616	
400.0	400.0	400.0	400.0	0.8	0.8	126.00	-73.2	100.8	124.6	123.0	1.54	81.078	
500.0	500.0	500.0	500.0	1.0	1.0	126.00	-73.2	100.8	124.6	122.6	1.99	62.724	
600.0	600.0	600.0	600.0	1.2	1.2	126.00	-73.2	100.8	124.6	122.1	2.44	51.146	
700.0	700.0	700.0	700.0	1.4	1.4	126.00	-73.2	100.8	124.6	121.7	2.88	43.176	
800.0	800.0	800.0	800.0	1.7	1.7	126.00	-73.2	100.8	124.6	121.2	3.33	37.355	
900.0	900.0	900.0	900.0	1.9	1.9	-89.10	-73.2	100.8	124.5	120.8	3.76	33.132	
945.5	945.4	945.4	945.4	2.0	2.0	-90.00	-73.2	100.8	124.5	120.6	3.94	31.562	CC
1,000.0	999.8	999.8	999.8	2.1	2.1	-91.51	-73.2	100.8	124.5	120.4	4.17	29.887	ES
1,100.0	1,099.6	1,095.5	1,095.4	2.3	2.3	-94.69	-73.8	102.3	126.6	122.0	4.56	27.725	
1,200.0	1,199.4	1,190.7	1,190.6	2.5	2.5	-97.91	-75.4	106.7	132.3	127.3	4.96	26.658	
1,300.0	1,299.1	1,289.7	1,289.3	2.7	2.7	-101.02	-77.7	113.2	140.4	135.0	5.38	26.101	
1,400.0	1,398.9	1,389.1	1,388.5	2.9	2.9	-103.79	-80.1	119.7	148.9	143.1	5.80	25.649	
1,500.0	1,498.6	1,488.5	1,487.6	3.1	3.1	-106.26	-82.5	126.2	157.7	151.4	6.24	25.275	
1,600.0	1,598.4	1,587.9	1,586.8	3.4	3.4	-108.47	-84.9	132.8	166.7	160.1	6.68	24.963	
1,700.0	1,698.1	1,687.3	1,685.9	3.6	3.6	-110.45	-87.2	139.3	176.0	168.9	7.13	24.702	
1,800.0	1,797.9	1,786.7	1,785.1	3.9	3.8	-112.23	-89.6	145.8	185.5	177.9	7.58	24.482	
1,900.0	1,897.6	1,886.1	1,884.2	4.1	4.1	-113.84	-92.0	152.3	195.1	187.1	8.03	24.295	
2,000.0	1,997.4	1,985.5	1,983.4	4.4	4.3	-115.29	-94.3	158.8	204.9	196.4	8.49	24.135	
2,100.0	2,097.2	2,084.9	2,082.5	4.6	4.6	-116.61	-96.7	165.3	214.8	205.8	8.95	23.997	
2,200.0	2,196.9	2,184.3	2,181.7	4.9	4.8	-117.82	-99.1	171.8	224.8	215.4	9.41	23.877	
2,300.0	2,296.7	2,283.6	2,280.8	5.1	5.1	-118.92	-101.5	178.4	234.9	225.0	9.88	23.773	
2,400.0	2,396.4	2,383.0	2,380.0	5.4	5.3	-119.93	-103.8	184.9	245.0	234.7	10.35	23.682	
2,500.0	2,496.2	2,482.4	2,479.1	5.6	5.6	-120.86	-106.2	191.4	255.2	244.4	10.81	23.601	
2,600.0	2,595.9	2,581.8	2,578.3	5.9	5.8	-121.72	-108.6	197.9	265.5	254.2	11.29	23.530	
2,700.0	2,695.7	2,681.2	2,677.4	6.2	6.1	-122.51	-110.9	204.4	275.9	264.1	11.76	23.466	
2,800.0	2,795.5	2,780.6	2,776.6	6.4	6.3	-123.25	-113.3	210.9	286.3	274.0	12.23	23.409	
2,900.0	2,895.2	2,880.0	2,875.7	6.7	6.6	-123.93	-115.7	217.5	296.7	284.0	12.70	23.358	
3,000.0	2,995.0	2,979.4	2,974.9	6.9	6.8	-124.57	-118.1	224.0	307.2	294.0	13.18	23.312	
3,100.0	3,094.7	3,078.8	3,074.1	7.2	7.1	-125.17	-120.4	230.5	317.7	304.1	13.65	23.271	
3,200.0	3,194.5	3,178.2	3,173.2	7.5	7.3	-125.73	-122.8	237.0	328.2	314.1	14.13	23.233	
3,300.0	3,294.2	3,277.6	3,272.4	7.7	7.6	-126.25	-125.2	243.5	338.8	324.2	14.61	23.199	
3,400.0	3,394.0	3,377.0	3,371.5	8.0	7.8	-126.74	-127.5	250.0	349.4	334.3	15.08	23.167	
3,500.0	3,493.8	3,476.4	3,470.7	8.2	8.1	-127.21	-129.9	256.5	360.0	344.5	15.56	23.138	
3,600.0	3,593.5	3,575.8	3,569.8	8.5	8.3	-127.64	-132.3	263.1	370.7	354.7	16.04	23.112	
3,700.0	3,693.3	3,675.2	3,669.0	8.8	8.6	-128.05	-134.7	269.6	381.4	364.8	16.52	23.088	
3,800.0	3,793.0	3,774.5	3,768.1	9.0	8.9	-128.44	-137.0	276.1	392.0	375.0	17.00	23.065	
3,900.0	3,892.8	3,873.9	3,867.3	9.3	9.1	-128.81	-139.4	282.6	402.7	385.3	17.48	23.044	
4,000.0	3,992.5	3,973.3	3,966.4	9.5	9.4	-129.16	-141.8	289.1	413.5	395.5	17.96	23.025	
4,100.0	4,092.3	4,072.7	4,065.6	9.8	9.6	-129.49	-144.1	295.6	424.2	405.8	18.44	23.007	
4,200.0	4,192.1	4,172.1	4,164.7	10.1	9.9	-129.81	-146.5	302.2	434.9	416.0	18.92	22.990	
4,300.0	4,291.8	4,271.5	4,263.9	10.3	10.1	-130.11	-148.9	308.7	445.7	426.3	19.40	22.975	
4,400.0	4,391.6	4,370.9	4,363.0	10.6	10.4	-130.40	-151.2	315.2	456.5	436.6	19.88	22.960	
4,500.0	4,491.3	4,470.3	4,462.2	10.9	10.7	-130.67	-153.6	321.7	467.2	446.9	20.36	22.947	
4,600.0	4,591.1	4,569.7	4,561.3	11.1	10.9	-130.93	-156.0	328.2	478.0	457.2	20.84	22.934	
4,700.0	4,690.8	4,669.1	4,660.5	11.4	11.2	-131.18	-158.4	334.7	488.8	467.5	21.33	22.922	
4,800.0	4,790.7	4,768.6	4,759.8	11.6	11.4	-131.41	-160.7	341.3	498.5	476.7	21.79	22.876	
4,900.0	4,890.7	4,881.1	4,872.0	11.8	11.7	82.98	-163.0	347.5	505.0	482.5	22.46	22.483	
5,000.0	4,990.7	4,999.7	4,990.6	12.0	11.9	83.10	-163.9	349.9	506.8	484.0	22.88	22.154	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - 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
5,075.5	5,066.2	5,075.3	5,066.2	12.1	12.0	83.10	-163.9	349.9	506.8	483.7	23.15	21.889	
5,100.0	5,090.7	5,099.8	5,090.7	12.1	12.1	-100.05	-163.9	349.9	506.9	483.9	23.02	22.024	
5,150.0	5,140.4	5,149.5	5,140.4	12.3	12.2	-100.48	-163.9	349.9	507.8	484.6	23.24	21.854	
5,200.0	5,189.5	5,189.8	5,180.7	12.4	12.3	-101.02	-164.5	350.2	509.9	486.5	23.46	21.732	
5,250.0	5,237.4	5,226.7	5,217.4	12.6	12.4	-101.37	-167.3	351.7	514.3	490.5	23.72	21.677	
5,300.0	5,283.8	5,263.6	5,253.9	12.9	12.5	-101.57	-172.4	354.4	520.9	496.8	24.02	21.684	
5,350.0	5,328.1	5,300.0	5,289.3	13.2	12.6	-101.61	-179.6	358.3	529.7	505.3	24.36	21.745	
5,400.0	5,370.1	5,337.4	5,325.1	13.5	12.7	-101.51	-189.3	363.5	540.7	515.9	24.76	21.839	
5,450.0	5,409.2	5,374.2	5,359.4	13.8	12.9	-101.21	-201.0	369.8	553.8	528.6	25.22	21.962	
5,500.0	5,445.2	5,410.9	5,392.6	14.3	13.1	-100.74	-214.8	377.2	568.9	543.2	25.74	22.100	
5,550.0	5,477.7	5,450.0	5,426.6	14.7	13.3	-100.18	-231.7	386.2	586.0	559.6	26.35	22.235	
5,600.0	5,506.4	5,484.0	5,455.0	15.2	13.5	-99.26	-248.2	395.1	604.8	577.7	27.04	22.367	
5,650.0	5,531.1	5,520.4	5,484.0	15.8	13.7	-98.25	-267.7	405.5	625.2	597.4	27.81	22.484	
5,700.0	5,551.4	5,556.8	5,511.3	16.4	14.0	-97.07	-288.8	416.9	647.1	618.5	28.65	22.588	
5,750.0	5,567.4	5,593.3	5,537.0	17.0	14.3	-95.74	-311.7	429.1	670.4	640.8	29.56	22.677	
5,800.0	5,578.6	5,630.0	5,560.9	17.7	14.6	-94.27	-336.2	442.3	694.8	664.2	30.54	22.754	
5,850.0	5,585.2	5,667.0	5,582.9	18.4	15.0	-92.69	-362.4	456.3	720.2	688.6	31.55	22.827	
5,893.7	5,587.0	5,699.7	5,600.7	19.0	15.3	-91.24	-386.6	469.3	743.0	710.5	32.46	22.891	
5,900.0	5,587.0	5,704.5	5,603.1	19.1	15.4	-91.45	-390.3	471.3	746.3	713.7	32.58	22.907	
5,997.2	5,587.0	5,786.4	5,638.9	20.3	16.4	-94.30	-455.0	506.0	796.1	761.6	34.49	23.085	
6,000.0	5,587.0	5,789.0	5,639.9	20.4	16.4	-94.37	-457.2	507.1	797.5	763.0	34.55	23.085	
6,100.0	5,587.0	5,886.8	5,666.4	21.9	17.8	-96.16	-540.0	551.6	846.6	809.5	37.12	22.806	
6,200.0	5,587.0	5,997.6	5,675.0	23.5	19.4	-96.37	-637.3	603.6	894.3	854.1	40.20	22.245	
6,300.0	5,587.0	6,170.8	5,675.0	25.1	21.9	-95.83	-794.0	677.1	936.6	892.3	44.31	21.137	
6,400.0	5,587.0	6,358.1	5,675.0	26.8	24.7	-95.43	-970.3	740.2	970.2	921.2	48.96	19.818	
6,500.0	5,587.0	6,557.2	5,675.0	28.5	27.8	-95.17	-1,163.4	788.1	994.2	940.2	54.01	18.407	SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3414B - 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
11,700.0	5,587.0	12,047.2	5,736.0	125.9	125.5	97.30	-6,569.7	-1,175.4	999.8	750.2	249.60	4.006	
11,800.0	5,587.0	12,147.2	5,736.0	127.8	127.4	97.31	-6,669.6	-1,173.5	998.0	744.6	253.39	3.938	
11,900.0	5,587.0	12,247.2	5,736.0	129.7	129.4	97.33	-6,769.6	-1,171.6	996.1	738.9	257.17	3.873	
12,000.0	5,587.0	12,347.2	5,736.0	131.6	131.3	97.34	-6,869.6	-1,169.7	994.3	733.3	260.96	3.810	
12,100.0	5,587.0	12,447.2	5,736.0	133.5	133.2	97.35	-6,969.5	-1,167.9	992.4	727.7	264.75	3.749	
12,209.7	5,587.0	12,556.8	5,736.0	135.6	135.3	97.37	-7,079.2	-1,165.8	990.4	721.5	268.90	3.683	CC, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3415A - 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
5,300.0	5,283.8	6,078.2	5,648.9	12.9	17.7	79.10	-567.0	-1,043.7	996.4	966.6	29.80	33.440	
5,350.0	5,328.1	6,100.0	5,648.9	13.2	18.0	80.57	-587.7	-1,036.9	974.1	943.8	30.30	32.151	
5,400.0	5,370.1	6,100.0	5,648.9	13.5	18.0	83.13	-587.7	-1,036.9	952.8	922.2	30.57	31.167	
5,450.0	5,409.2	6,129.5	5,648.9	13.8	18.4	84.03	-615.9	-1,028.2	932.5	901.2	31.30	29.793	
5,500.0	5,445.2	6,151.7	5,648.9	14.3	18.8	85.25	-637.2	-1,021.9	913.3	881.4	31.98	28.560	
5,550.0	5,477.7	6,176.2	5,648.9	14.7	19.1	86.31	-660.8	-1,015.2	895.3	862.6	32.74	27.343	
5,600.0	5,506.4	6,200.0	5,648.9	15.2	19.4	87.36	-683.8	-1,009.0	878.4	844.8	33.55	26.182	
5,650.0	5,531.1	6,231.4	5,648.9	15.8	19.9	88.14	-714.2	-1,001.3	862.5	827.9	34.54	24.973	
5,700.0	5,551.4	6,261.7	5,648.9	16.4	20.3	89.01	-743.7	-994.3	847.6	812.1	35.55	23.840	
5,750.0	5,567.4	6,300.0	5,648.9	17.0	20.9	89.78	-781.1	-986.2	833.8	797.0	36.72	22.704	
5,800.0	5,578.6	6,326.4	5,648.9	17.7	21.3	90.86	-807.0	-981.0	820.8	783.0	37.78	21.728	
5,850.0	5,585.2	6,360.2	5,648.9	18.4	21.8	91.91	-840.2	-974.9	808.9	769.9	38.97	20.759	
5,893.7	5,587.0	6,400.0	5,648.9	19.0	22.4	92.93	-879.5	-968.5	799.4	759.3	40.17	19.901	
5,900.0	5,587.0	6,400.0	5,648.9	19.1	22.4	92.93	-879.5	-968.5	798.1	757.8	40.27	19.820	
5,997.2	5,587.0	6,462.3	5,648.9	20.3	23.4	92.94	-941.3	-960.1	782.3	739.8	42.59	18.368	
6,000.0	5,587.0	6,464.3	5,648.9	20.4	23.4	92.94	-943.3	-959.8	782.0	739.3	42.66	18.329	
6,100.0	5,587.0	6,535.1	5,648.9	21.9	24.5	92.97	-1,013.7	-952.8	772.1	726.7	45.33	17.031	
6,200.0	5,587.0	6,600.0	5,648.9	23.5	25.5	92.98	-1,078.4	-948.6	765.9	717.9	47.97	15.965	
6,300.0	5,587.0	6,686.9	5,648.9	25.1	26.9	92.99	-1,165.3	-946.2	763.1	712.1	51.02	14.958	
6,400.0	5,587.0	6,786.9	5,648.9	26.8	28.5	93.00	-1,265.3	-944.3	761.3	707.0	54.31	14.017	
6,500.0	5,587.0	6,886.9	5,648.9	28.5	30.1	93.01	-1,365.3	-942.5	759.4	701.8	57.67	13.169	
6,600.0	5,587.0	6,986.9	5,648.9	30.3	31.7	93.02	-1,465.2	-940.6	757.6	696.5	61.08	12.403	
6,700.0	5,587.0	7,086.9	5,648.9	32.0	33.4	93.02	-1,565.2	-938.7	755.7	691.2	64.54	11.710	
6,800.0	5,587.0	7,186.9	5,648.9	33.8	35.1	93.03	-1,665.2	-936.9	753.9	685.8	68.04	11.080	
6,900.0	5,587.0	7,286.8	5,648.9	35.6	36.8	93.04	-1,765.1	-935.0	752.0	680.4	71.57	10.507	
7,000.0	5,587.0	7,386.8	5,648.9	37.4	38.5	93.05	-1,865.1	-933.2	750.2	675.0	75.13	9.985	
7,100.0	5,587.0	7,486.8	5,648.9	39.2	40.3	93.05	-1,965.1	-931.3	748.3	669.6	78.72	9.506	
7,200.0	5,587.0	7,586.8	5,648.9	41.0	42.0	93.06	-2,065.0	-929.4	746.4	664.1	82.33	9.067	
7,300.0	5,587.0	7,686.8	5,648.9	42.8	43.8	93.07	-2,165.0	-927.6	744.6	658.6	85.96	8.662	
7,400.0	5,587.0	7,786.8	5,648.9	44.7	45.6	93.08	-2,265.0	-925.7	742.7	653.1	89.60	8.289	
7,500.0	5,587.0	7,886.7	5,648.9	46.5	47.4	93.09	-2,364.9	-923.8	740.9	647.6	93.26	7.944	
7,600.0	5,587.0	7,986.7	5,648.9	48.4	49.2	93.09	-2,464.9	-922.0	739.0	642.1	96.94	7.624	
7,700.0	5,587.0	8,086.7	5,648.9	50.2	51.0	93.10	-2,564.9	-920.1	737.2	636.6	100.62	7.326	
7,800.0	5,587.0	8,186.7	5,648.9	52.1	52.9	93.11	-2,664.8	-918.2	735.3	631.0	104.32	7.049	
7,900.0	5,587.0	8,286.7	5,648.9	53.9	54.7	93.12	-2,764.8	-916.4	733.5	625.4	108.02	6.790	
8,000.0	5,587.0	8,386.7	5,648.9	55.8	56.5	93.13	-2,864.7	-914.5	731.6	619.9	111.74	6.548	
8,100.0	5,587.0	8,486.6	5,648.9	57.7	58.4	93.13	-2,964.7	-912.7	729.8	614.3	115.46	6.321	
8,200.0	5,587.0	8,586.6	5,648.9	59.5	60.2	93.14	-3,064.7	-910.8	727.9	608.7	119.19	6.107	
8,300.0	5,587.0	8,686.6	5,648.9	61.4	62.1	93.15	-3,164.6	-908.9	726.1	603.1	122.92	5.907	
8,400.0	5,587.0	8,786.6	5,648.9	63.3	63.9	93.16	-3,264.6	-907.1	724.2	597.5	126.66	5.718	
8,500.0	5,587.0	8,886.6	5,648.9	65.2	65.8	93.17	-3,364.6	-905.2	722.3	591.9	130.41	5.539	
8,600.0	5,587.0	8,986.6	5,648.9	67.1	67.7	93.18	-3,464.5	-903.3	720.5	586.3	134.16	5.371	
8,700.0	5,587.0	9,086.5	5,648.9	68.9	69.5	93.18	-3,564.5	-901.5	718.6	580.7	137.91	5.211	
8,800.0	5,587.0	9,186.5	5,648.9	70.8	71.4	93.19	-3,664.5	-899.6	716.8	575.1	141.67	5.060	
8,900.0	5,587.0	9,286.5	5,648.9	72.7	73.3	93.20	-3,764.4	-897.7	714.9	569.5	145.43	4.916	
9,000.0	5,587.0	9,386.5	5,648.9	74.6	75.1	93.21	-3,864.4	-895.9	713.1	563.9	149.20	4.779	
9,100.0	5,587.0	9,486.5	5,648.9	76.5	77.0	93.22	-3,964.4	-894.0	711.2	558.3	152.97	4.650	
9,200.0	5,587.0	9,586.4	5,648.9	78.4	78.9	93.23	-4,064.3	-892.1	709.4	552.6	156.74	4.526	
9,300.0	5,587.0	9,686.4	5,648.9	80.3	80.8	93.23	-4,164.3	-890.3	707.5	547.0	160.52	4.408	
9,400.0	5,587.0	9,786.4	5,648.9	82.2	82.7	93.24	-4,264.3	-888.4	705.7	541.4	164.29	4.295	
9,500.0	5,587.0	9,886.4	5,649.0	84.1	84.5	93.25	-4,364.2	-886.6	703.8	535.7	168.07	4.188	
9,600.0	5,587.0	9,986.4	5,649.0	86.0	86.4	93.26	-4,464.2	-884.7	702.0	530.1	171.86	4.085	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3415A - 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
9,700.0	5,587.0	10,086.4	5,649.0	87.9	88.3	93.27	-4,564.2	-882.8	700.1	524.5	175.64	3.986	
9,800.0	5,587.0	10,186.3	5,649.0	89.7	90.2	93.28	-4,664.1	-881.0	698.3	518.8	179.43	3.892	
9,900.0	5,587.0	10,286.3	5,649.0	91.6	92.1	93.29	-4,764.1	-879.1	696.4	513.2	183.21	3.801	
10,000.0	5,587.0	10,386.3	5,649.0	93.5	94.0	93.30	-4,864.1	-877.2	694.6	507.5	187.00	3.714	
10,100.0	5,587.0	10,486.3	5,649.0	95.4	95.9	93.31	-4,964.0	-875.4	692.7	501.9	190.79	3.631	
10,200.0	5,587.0	10,586.3	5,649.0	97.3	97.8	93.31	-5,064.0	-873.5	690.8	496.3	194.59	3.550	
10,300.0	5,587.0	10,686.3	5,649.0	99.2	99.7	93.32	-5,164.0	-871.6	689.0	490.6	198.38	3.473	
10,400.0	5,587.0	10,786.2	5,649.0	101.1	101.6	93.33	-5,263.9	-869.8	687.1	485.0	202.18	3.399	
10,500.0	5,587.0	10,886.2	5,649.0	103.1	103.5	93.34	-5,363.9	-867.9	685.3	479.3	205.97	3.327	
10,600.0	5,587.0	10,986.2	5,649.0	105.0	105.4	93.35	-5,463.9	-866.1	683.4	473.7	209.77	3.258	
10,700.0	5,587.0	11,086.2	5,649.0	106.9	107.3	93.36	-5,563.8	-864.2	681.6	468.0	213.57	3.191	
10,800.0	5,587.0	11,186.2	5,649.0	108.8	109.2	93.37	-5,663.8	-862.3	679.7	462.4	217.37	3.127	
10,900.0	5,587.0	11,286.2	5,649.0	110.7	111.1	93.38	-5,763.7	-860.5	677.9	456.7	221.17	3.065	
11,000.0	5,587.0	11,386.1	5,649.0	112.6	113.0	93.39	-5,863.7	-858.6	676.0	451.0	224.97	3.005	
11,100.0	5,587.0	11,486.1	5,649.0	114.5	114.9	93.40	-5,963.7	-856.7	674.2	445.4	228.77	2.947	
11,200.0	5,587.0	11,586.1	5,649.0	116.4	116.8	93.41	-6,063.6	-854.9	672.3	439.7	232.58	2.891	
11,300.0	5,587.0	11,686.1	5,649.0	118.3	118.7	93.42	-6,163.6	-853.0	670.5	434.1	236.38	2.836	
11,400.0	5,587.0	11,786.1	5,649.0	120.2	120.6	93.43	-6,263.6	-851.1	668.6	428.4	240.19	2.784	
11,500.0	5,587.0	11,886.1	5,649.0	122.1	122.5	93.44	-6,363.5	-849.3	666.8	422.8	243.99	2.733	
11,600.0	5,587.0	11,986.0	5,649.0	124.0	124.4	93.45	-6,463.5	-847.4	664.9	417.1	247.80	2.683	
11,700.0	5,587.0	12,086.0	5,649.0	125.9	126.3	93.46	-6,563.5	-845.5	663.0	411.4	251.60	2.635	
11,800.0	5,587.0	12,186.0	5,649.0	127.8	128.2	93.47	-6,663.4	-843.7	661.2	405.8	255.41	2.589	
11,900.0	5,587.0	12,286.0	5,649.0	129.7	130.1	93.48	-6,763.4	-841.8	659.3	400.1	259.22	2.544	
12,000.0	5,587.0	12,386.0	5,649.0	131.6	132.0	93.49	-6,863.4	-840.0	657.5	394.5	263.03	2.500	
12,100.0	5,587.0	12,486.0	5,649.0	133.5	133.9	93.50	-6,963.3	-838.1	655.6	388.8	266.84	2.457	
12,209.7	5,587.0	12,595.6	5,649.0	135.6	136.0	93.51	-7,073.0	-836.0	653.6	382.6	271.02	2.412	CC, ES, SF

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3416B - 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
3,300.0	3,294.2	3,383.7	3,377.0	7.7	8.2	56.47	-129.7	-1,083.0	990.5	975.3	15.23	65.019	
3,400.0	3,394.0	3,483.2	3,476.2	8.0	8.5	56.61	-133.1	-1,076.9	980.6	964.8	15.73	62.340	
3,500.0	3,493.8	3,582.6	3,575.4	8.2	8.7	56.76	-136.4	-1,070.9	970.6	954.3	16.22	59.822	
3,600.0	3,593.5	3,682.1	3,674.7	8.5	9.0	56.91	-139.8	-1,064.8	960.6	943.9	16.72	57.452	
3,700.0	3,693.3	3,781.6	3,773.9	8.8	9.3	57.07	-143.2	-1,058.7	950.6	933.4	17.22	55.217	
3,800.0	3,793.0	3,881.0	3,873.1	9.0	9.5	57.23	-146.5	-1,052.7	940.7	923.0	17.71	53.107	
3,900.0	3,892.8	3,980.5	3,972.3	9.3	9.8	57.39	-149.9	-1,046.6	930.7	912.5	18.21	51.110	
4,000.0	3,992.5	4,080.0	4,071.6	9.5	10.0	57.55	-153.3	-1,040.5	920.8	902.1	18.71	49.219	
4,100.0	4,092.3	4,179.4	4,170.8	9.8	10.3	57.72	-156.6	-1,034.5	910.8	891.6	19.21	47.425	
4,200.0	4,192.1	4,278.9	4,270.0	10.1	10.6	57.90	-160.0	-1,028.4	900.9	881.2	19.70	45.721	
4,300.0	4,291.8	4,378.4	4,369.3	10.3	10.8	58.07	-163.4	-1,022.3	891.0	870.8	20.20	44.101	
4,400.0	4,391.6	4,477.8	4,468.5	10.6	11.1	58.25	-166.7	-1,016.3	881.1	860.4	20.70	42.558	
4,500.0	4,491.3	4,577.3	4,567.7	10.9	11.3	58.44	-170.1	-1,010.2	871.2	850.0	21.20	41.088	
4,600.0	4,591.1	4,676.8	4,666.9	11.1	11.6	58.63	-173.5	-1,004.1	861.3	839.6	21.70	39.685	
4,700.0	4,690.8	4,776.3	4,766.2	11.4	11.9	58.82	-176.8	-998.0	851.4	829.2	22.20	38.346	
4,800.0	4,790.7	4,875.8	4,865.5	11.6	12.1	58.76	-180.2	-992.0	842.4	819.7	22.68	37.146	
4,900.0	4,890.7	4,975.6	4,965.0	11.8	12.4	-87.17	-183.6	-985.9	835.2	812.3	22.92	36.447	
5,000.0	4,990.7	5,075.3	5,064.5	12.0	12.7	-87.38	-187.0	-979.8	829.0	805.6	23.34	35.514	
5,075.5	5,066.2	5,150.6	5,139.6	12.1	12.9	-87.55	-189.5	-975.2	824.3	800.6	23.65	34.849	
5,100.0	5,090.7	5,175.1	5,164.0	12.1	12.9	89.51	-190.3	-973.7	822.7	798.8	23.97	34.318	
5,150.0	5,140.4	5,224.9	5,213.7	12.3	13.0	90.08	-192.0	-970.7	819.6	795.3	24.23	33.827	
5,200.0	5,189.5	5,303.5	5,291.9	12.4	13.3	91.25	-196.9	-965.1	816.1	791.5	24.59	33.182	
5,250.0	5,237.4	5,425.0	5,408.9	12.6	13.8	92.56	-225.0	-949.6	809.2	784.0	25.19	32.123	
5,300.0	5,283.8	5,543.0	5,512.4	12.9	14.5	93.34	-276.2	-926.8	798.2	772.3	25.92	30.795	
5,350.0	5,328.1	5,652.5	5,595.1	13.2	15.3	93.70	-342.4	-899.9	783.5	756.7	26.77	29.263	
5,400.0	5,370.1	5,750.9	5,655.2	13.5	16.3	93.82	-414.9	-871.8	765.8	738.1	27.74	27.602	
5,450.0	5,409.2	5,838.1	5,695.5	13.8	17.3	93.86	-487.3	-844.8	745.9	716.9	28.91	25.799	
5,500.0	5,445.2	5,915.4	5,719.9	14.3	18.3	93.93	-556.1	-819.8	724.3	694.1	30.15	24.020	
5,550.0	5,477.7	5,984.3	5,732.4	14.7	19.3	94.07	-619.8	-797.2	701.7	670.2	31.43	22.327	
5,600.0	5,506.4	6,045.1	5,736.0	15.2	20.2	94.36	-677.1	-777.2	678.5	645.8	32.69	20.753	
5,650.0	5,531.1	6,076.0	5,736.0	15.8	20.6	95.87	-706.4	-767.3	655.9	622.3	33.55	19.551	
5,700.0	5,551.4	6,100.0	5,736.0	16.4	20.9	97.58	-729.3	-760.0	634.9	600.6	34.34	18.488	
5,750.0	5,567.4	6,142.1	5,736.0	17.0	21.5	98.80	-769.5	-747.8	615.4	580.0	35.42	17.375	
5,800.0	5,578.6	6,177.3	5,736.0	17.7	21.9	100.32	-803.5	-738.4	597.5	561.1	36.42	16.408	
5,850.0	5,585.2	6,213.6	5,736.0	18.4	22.4	101.92	-838.6	-729.2	581.4	544.0	37.46	15.522	
5,893.7	5,587.0	6,245.9	5,736.0	19.0	22.8	103.40	-870.0	-721.7	568.8	530.4	38.40	14.815	
5,900.0	5,587.0	6,250.6	5,736.0	19.1	22.9	103.42	-874.6	-720.6	567.1	528.6	38.55	14.711	
5,997.2	5,587.0	6,324.3	5,736.0	20.3	23.9	103.69	-946.7	-705.5	545.5	504.5	40.93	13.327	
6,000.0	5,587.0	6,326.5	5,736.0	20.4	24.0	103.70	-948.9	-705.1	544.9	504.0	41.00	13.292	
6,100.0	5,587.0	6,400.0	5,736.0	21.9	25.0	104.01	-1,021.4	-693.0	529.0	485.5	43.49	12.163	
6,200.0	5,587.0	6,482.4	5,736.0	23.5	26.2	104.29	-1,103.1	-682.7	516.9	470.7	46.21	11.188	
6,300.0	5,587.0	6,561.5	5,736.0	25.1	27.3	104.47	-1,181.9	-676.1	508.9	459.9	48.95	10.396	
6,400.0	5,587.0	6,644.4	5,736.0	26.8	28.5	104.57	-1,264.8	-672.6	504.8	453.0	51.83	9.740	
6,500.0	5,587.0	6,744.4	5,736.0	28.5	30.0	104.65	-1,364.7	-669.9	502.1	447.0	55.08	9.117	
6,600.0	5,587.0	6,844.3	5,736.0	30.3	31.6	104.73	-1,464.6	-667.1	499.4	441.0	58.39	8.553	
6,700.0	5,587.0	6,944.3	5,736.0	32.0	33.3	104.81	-1,564.5	-664.3	496.7	435.0	61.75	8.044	
6,800.0	5,587.0	7,044.2	5,736.0	33.8	34.9	104.89	-1,664.5	-661.5	494.1	428.9	65.15	7.583	
6,900.0	5,587.0	7,144.2	5,736.0	35.6	36.6	104.98	-1,764.4	-658.7	491.4	422.8	68.58	7.165	
7,000.0	5,587.0	7,244.2	5,736.0	37.4	38.3	105.06	-1,864.3	-655.9	488.7	416.6	72.03	6.784	
7,100.0	5,587.0	7,344.1	5,736.0	39.2	40.1	105.15	-1,964.2	-653.1	486.0	410.5	75.50	6.437	
7,200.0	5,587.0	7,444.1	5,736.0	41.0	41.8	105.23	-2,064.1	-650.3	483.3	404.3	78.99	6.118	
7,300.0	5,587.0	7,544.1	5,736.0	42.8	43.6	105.32	-2,164.1	-647.5	480.6	398.1	82.50	5.826	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3416B - 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
7,400.0	5,587.0	7,644.0	5,736.0	44.7	45.4	105.41	-2,264.0	-644.8	477.9	391.9	86.02	5.556	
7,500.0	5,587.0	7,744.0	5,736.0	46.5	47.1	105.50	-2,363.9	-642.0	475.3	385.7	89.55	5.307	
7,600.0	5,587.0	7,843.9	5,736.0	48.4	48.9	105.59	-2,463.8	-639.2	472.6	379.5	93.09	5.077	
7,700.0	5,587.0	7,943.9	5,736.0	50.2	50.7	105.68	-2,563.8	-636.4	469.9	373.3	96.64	4.862	
7,800.0	5,587.0	8,043.9	5,736.0	52.1	52.6	105.77	-2,663.7	-633.6	467.2	367.0	100.19	4.663	
7,900.0	5,587.0	8,143.8	5,736.0	53.9	54.4	105.87	-2,763.6	-630.8	464.5	360.8	103.75	4.477	
8,000.0	5,587.0	8,243.8	5,736.0	55.8	56.2	105.96	-2,863.5	-628.0	461.9	354.5	107.32	4.304	
8,100.0	5,587.0	8,343.7	5,736.0	57.7	58.0	106.06	-2,963.4	-625.2	459.2	348.3	110.88	4.141	
8,200.0	5,587.0	8,443.7	5,736.0	59.5	59.9	106.15	-3,063.4	-622.4	456.5	342.1	114.45	3.989	
8,300.0	5,587.0	8,543.7	5,736.0	61.4	61.7	106.25	-3,163.3	-619.6	453.8	335.8	118.03	3.845	
8,400.0	5,587.0	8,643.6	5,736.0	63.3	63.6	106.35	-3,263.2	-616.9	451.2	329.6	121.60	3.710	
8,500.0	5,587.0	8,743.6	5,736.0	65.2	65.4	106.45	-3,363.1	-614.1	448.5	323.3	125.17	3.583	
8,600.0	5,587.0	8,843.6	5,736.0	67.1	67.3	106.55	-3,463.1	-611.3	445.8	317.1	128.75	3.463	
8,700.0	5,587.0	8,943.5	5,736.0	68.9	69.1	106.65	-3,563.0	-608.5	443.2	310.8	132.32	3.349	
8,800.0	5,587.0	9,043.5	5,736.0	70.8	71.0	106.76	-3,662.9	-605.7	440.5	304.6	135.90	3.241	
8,900.0	5,587.0	9,143.4	5,736.0	72.7	72.9	106.86	-3,762.8	-602.9	437.8	298.4	139.47	3.139	
9,000.0	5,587.0	9,243.4	5,736.0	74.6	74.7	106.97	-3,862.7	-600.1	435.2	292.1	143.04	3.042	
9,100.0	5,587.0	9,343.4	5,736.0	76.5	76.6	107.08	-3,962.7	-597.3	432.5	285.9	146.61	2.950	
9,200.0	5,587.0	9,443.3	5,736.0	78.4	78.5	107.19	-4,062.6	-594.5	429.9	279.7	150.18	2.862	
9,300.0	5,587.0	9,543.3	5,736.0	80.3	80.4	107.30	-4,162.5	-591.7	427.2	273.5	153.74	2.779	
9,400.0	5,587.0	9,643.2	5,736.0	82.2	82.2	107.41	-4,262.4	-589.0	424.5	267.2	157.31	2.699	
9,500.0	5,587.0	9,743.2	5,736.0	84.1	84.1	107.52	-4,362.4	-586.2	421.9	261.0	160.87	2.623	
9,600.0	5,587.0	9,843.2	5,736.0	86.0	86.0	107.64	-4,462.3	-583.4	419.2	254.8	164.42	2.550	
9,700.0	5,587.0	9,943.1	5,736.0	87.9	87.9	107.75	-4,562.2	-580.6	416.6	248.6	167.97	2.480	
9,800.0	5,587.0	10,043.1	5,736.0	89.7	89.8	107.87	-4,662.1	-577.8	413.9	242.4	171.52	2.413	
9,900.0	5,587.0	10,143.1	5,736.0	91.6	91.7	107.99	-4,762.0	-575.0	411.3	236.2	175.07	2.349	
10,000.0	5,587.0	10,243.0	5,736.0	93.5	93.5	108.11	-4,862.0	-572.2	408.6	230.0	178.61	2.288	
10,100.0	5,587.0	10,343.0	5,736.0	95.4	95.4	108.23	-4,961.9	-569.4	406.0	223.9	182.14	2.229	
10,200.0	5,587.0	10,442.9	5,736.0	97.3	97.3	108.36	-5,061.8	-566.6	403.4	217.7	185.67	2.172	
10,300.0	5,587.0	10,542.9	5,736.0	99.2	99.2	108.48	-5,161.7	-563.9	400.7	211.5	189.20	2.118	
10,400.0	5,587.0	10,642.9	5,736.0	101.1	101.1	108.61	-5,261.7	-561.1	398.1	205.4	192.72	2.066	
10,500.0	5,587.0	10,742.8	5,736.0	103.1	103.0	108.74	-5,361.6	-558.3	395.4	199.2	196.23	2.015	
10,600.0	5,587.0	10,842.8	5,736.0	105.0	104.9	108.87	-5,461.5	-555.5	392.8	193.1	199.74	1.967	
10,700.0	5,587.0	10,942.7	5,736.0	106.9	106.8	109.00	-5,561.4	-552.7	390.2	186.9	203.24	1.920	
10,800.0	5,587.0	11,042.7	5,736.0	108.8	108.7	109.13	-5,661.4	-549.9	387.5	180.8	206.73	1.875	
10,900.0	5,587.0	11,142.7	5,736.0	110.7	110.6	109.27	-5,761.3	-547.1	384.9	174.7	210.22	1.831	
11,000.0	5,587.0	11,242.6	5,736.0	112.6	112.5	109.41	-5,861.2	-544.3	382.3	168.6	213.70	1.789	
11,100.0	5,587.0	11,342.6	5,736.0	114.5	114.4	109.55	-5,961.1	-541.5	379.7	162.5	217.17	1.748	
11,200.0	5,587.0	11,442.6	5,736.0	116.4	116.3	109.69	-6,061.0	-538.7	377.1	156.4	220.63	1.709	
11,300.0	5,587.0	11,542.5	5,736.0	118.3	118.2	109.83	-6,161.0	-536.0	374.4	150.3	224.09	1.671	
11,400.0	5,587.0	11,642.5	5,736.0	120.2	120.1	109.98	-6,260.9	-533.2	371.8	144.3	227.54	1.634	
11,500.0	5,587.0	11,742.4	5,736.0	122.1	122.0	110.13	-6,360.8	-530.4	369.2	138.2	230.98	1.598	
11,600.0	5,587.0	11,842.4	5,736.0	124.0	123.9	110.28	-6,460.7	-527.6	366.6	132.2	234.41	1.564	
11,700.0	5,587.0	11,942.4	5,736.0	125.9	125.8	110.43	-6,560.7	-524.8	364.0	126.2	237.83	1.530	
11,800.0	5,587.0	12,042.3	5,736.0	127.8	127.7	110.58	-6,660.6	-522.0	361.4	120.1	241.24	1.498	Level 3
11,900.0	5,587.0	12,142.3	5,736.0	129.7	129.6	110.74	-6,760.5	-519.2	358.8	114.1	244.64	1.467	Level 3
12,000.0	5,587.0	12,242.2	5,736.0	131.6	131.5	110.90	-6,860.4	-516.4	356.2	108.1	248.03	1.436	Level 3
12,100.0	5,587.0	12,342.2	5,736.0	133.5	133.4	111.06	-6,960.3	-513.6	353.6	102.2	251.41	1.406	Level 3
12,209.7	5,587.0	12,451.8	5,736.0	135.6	135.5	111.24	-7,069.9	-510.6	350.7	95.6	255.11	1.375	Level 3, CC, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3416B - HZ - Plan #2

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
3,300.0	3,294.2	3,383.7	3,377.0	7.7	8.2	56.47	-129.7	-1,083.0	990.5	975.3	15.23	65.019	
3,400.0	3,394.0	3,483.2	3,476.2	8.0	8.5	56.61	-133.1	-1,076.9	980.6	964.8	15.73	62.340	
3,500.0	3,493.8	3,582.6	3,575.4	8.2	8.7	56.76	-136.4	-1,070.9	970.6	954.3	16.22	59.822	
3,600.0	3,593.5	3,682.1	3,674.7	8.5	9.0	56.91	-139.8	-1,064.8	960.6	943.9	16.72	57.452	
3,700.0	3,693.3	3,781.6	3,773.9	8.8	9.3	57.07	-143.2	-1,058.7	950.6	933.4	17.22	55.217	
3,800.0	3,793.0	3,881.0	3,873.1	9.0	9.5	57.23	-146.5	-1,052.7	940.7	923.0	17.71	53.107	
3,900.0	3,892.8	3,980.5	3,972.3	9.3	9.8	57.39	-149.9	-1,046.6	930.7	912.5	18.21	51.110	
4,000.0	3,992.5	4,080.0	4,071.6	9.5	10.0	57.55	-153.3	-1,040.5	920.8	902.1	18.71	49.219	
4,100.0	4,092.3	4,179.4	4,170.8	9.8	10.3	57.72	-156.6	-1,034.5	910.8	891.6	19.21	47.425	
4,200.0	4,192.1	4,278.9	4,270.0	10.1	10.6	57.90	-160.0	-1,028.4	900.9	881.2	19.70	45.721	
4,300.0	4,291.8	4,378.4	4,369.3	10.3	10.8	58.07	-163.4	-1,022.3	891.0	870.8	20.20	44.101	
4,400.0	4,391.6	4,477.8	4,468.5	10.6	11.1	58.25	-166.7	-1,016.3	881.1	860.4	20.70	42.558	
4,500.0	4,491.3	4,577.3	4,567.7	10.9	11.3	58.44	-170.1	-1,010.2	871.2	850.0	21.20	41.088	
4,600.0	4,591.1	4,676.8	4,666.9	11.1	11.6	58.63	-173.5	-1,004.1	861.3	839.6	21.70	39.685	
4,700.0	4,690.8	4,776.3	4,766.2	11.4	11.9	58.82	-176.8	-998.0	851.4	829.2	22.20	38.346	
4,800.0	4,790.7	4,875.8	4,865.5	11.6	12.1	58.76	-180.2	-992.0	842.4	819.7	22.68	37.146	
4,900.0	4,890.7	4,959.9	4,949.4	11.8	12.3	-87.12	-182.8	-987.4	835.9	813.1	22.86	36.572	
5,000.0	4,990.7	5,039.1	5,028.6	12.0	12.5	-87.20	-184.1	-985.0	832.8	809.6	23.20	35.899	
5,075.5	5,066.2	5,100.0	5,089.4	12.1	12.6	-87.22	-184.4	-984.4	832.1	808.6	23.44	35.498	
5,085.1	5,075.7	5,108.3	5,097.7	12.1	12.6	89.68	-184.4	-984.4	832.1	808.4	23.68	35.137	
5,100.0	5,090.7	5,123.2	5,112.7	12.1	12.6	89.72	-184.4	-984.4	832.1	808.3	23.74	35.050	
5,145.3	5,135.8	5,168.4	5,157.8	12.3	12.7	90.00	-184.4	-984.4	832.1	808.1	23.95	34.746	
5,150.0	5,140.4	5,173.0	5,162.4	12.3	12.7	90.04	-184.4	-984.4	832.1	808.1	23.97	34.715	
5,200.0	5,189.5	5,222.1	5,211.5	12.4	12.8	90.68	-184.4	-984.4	832.1	807.9	24.23	34.346	
5,250.0	5,237.4	5,324.3	5,313.2	12.6	13.1	92.23	-193.4	-981.9	831.0	806.3	24.68	33.667	
5,300.0	5,283.8	5,434.9	5,418.8	12.9	13.5	93.53	-224.4	-973.3	826.5	801.2	25.29	32.686	
5,350.0	5,328.1	5,545.4	5,515.2	13.2	14.1	94.44	-276.0	-958.8	818.7	792.7	26.03	31.451	
5,400.0	5,370.1	5,651.7	5,595.2	13.5	14.9	94.95	-343.0	-940.1	807.7	780.8	26.93	29.994	
5,450.0	5,409.2	5,750.6	5,655.6	13.8	15.8	95.17	-418.3	-919.1	793.9	766.0	27.97	28.381	
5,500.0	5,445.2	5,840.8	5,696.9	14.3	16.8	95.21	-495.5	-897.6	777.9	748.7	29.23	26.613	
5,550.0	5,477.7	5,922.4	5,721.9	14.7	17.8	95.17	-570.2	-876.7	760.1	729.5	30.60	24.840	
5,600.0	5,506.4	5,996.1	5,733.8	15.2	18.9	95.14	-640.1	-857.2	741.2	709.1	32.01	23.151	
5,650.0	5,531.1	6,056.3	5,736.0	15.8	19.7	95.39	-698.1	-841.0	721.5	688.2	33.35	21.636	
5,700.0	5,551.4	6,099.6	5,736.0	16.4	20.3	96.33	-739.7	-829.3	702.4	667.9	34.48	20.373	
5,750.0	5,567.4	6,144.4	5,736.0	17.0	21.0	97.45	-783.0	-817.3	684.0	648.3	35.69	19.163	
5,800.0	5,578.6	6,190.6	5,736.0	17.7	21.8	98.81	-827.4	-804.9	666.4	629.4	36.94	18.038	
5,850.0	5,585.2	6,237.5	5,736.0	18.4	22.5	100.45	-872.6	-792.2	649.5	611.3	38.22	16.991	
5,893.7	5,587.0	6,278.8	5,736.0	19.0	23.2	102.15	-912.4	-781.1	635.4	596.1	39.33	16.154	
5,900.0	5,587.0	6,284.8	5,736.0	19.1	23.3	102.18	-918.1	-779.5	633.4	593.9	39.52	16.029	
5,997.2	5,587.0	6,372.3	5,736.0	20.3	24.7	102.52	-1,002.5	-756.1	605.7	563.5	42.22	14.347	
6,000.0	5,587.0	6,374.6	5,736.0	20.4	24.7	102.53	-1,004.7	-755.5	605.0	562.7	42.29	14.306	
6,100.0	5,587.0	6,455.2	5,736.0	21.9	25.9	102.97	-1,082.8	-735.6	580.9	536.0	44.89	12.942	
6,200.0	5,587.0	6,537.0	5,736.0	23.5	27.1	103.39	-1,162.6	-717.8	559.6	512.1	47.56	11.768	
6,300.0	5,587.0	6,619.7	5,736.0	25.1	28.4	103.78	-1,243.8	-702.0	541.1	490.8	50.31	10.755	
6,400.0	5,587.0	6,700.0	5,736.0	26.8	29.6	104.12	-1,323.0	-689.0	525.4	472.3	53.10	9.895	
6,500.0	5,587.0	6,787.6	5,736.0	28.5	31.0	104.44	-1,409.8	-677.3	512.6	456.5	56.05	9.144	
6,600.0	5,587.0	6,872.5	5,736.0	30.3	32.3	104.69	-1,494.3	-668.5	502.5	443.5	59.02	8.515	
6,700.0	5,587.0	6,957.8	5,736.0	32.0	33.6	104.87	-1,579.4	-662.2	495.4	433.4	62.03	7.986	
6,800.0	5,587.0	7,043.5	5,736.0	33.8	35.0	104.99	-1,664.9	-658.5	491.2	426.1	65.10	7.545	
6,900.0	5,587.0	7,142.6	5,736.0	35.6	36.6	105.07	-1,764.1	-655.7	488.5	420.0	68.47	7.134	
7,000.0	5,587.0	7,242.6	5,736.0	37.4	38.3	105.15	-1,864.0	-653.0	485.9	414.0	71.91	6.756	
7,100.0	5,587.0	7,342.6	5,736.0	39.2	40.0	105.24	-1,963.9	-650.3	483.2	407.9	75.37	6.411	

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 #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S27-T10N-R58W - Razor #27I-3416B - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

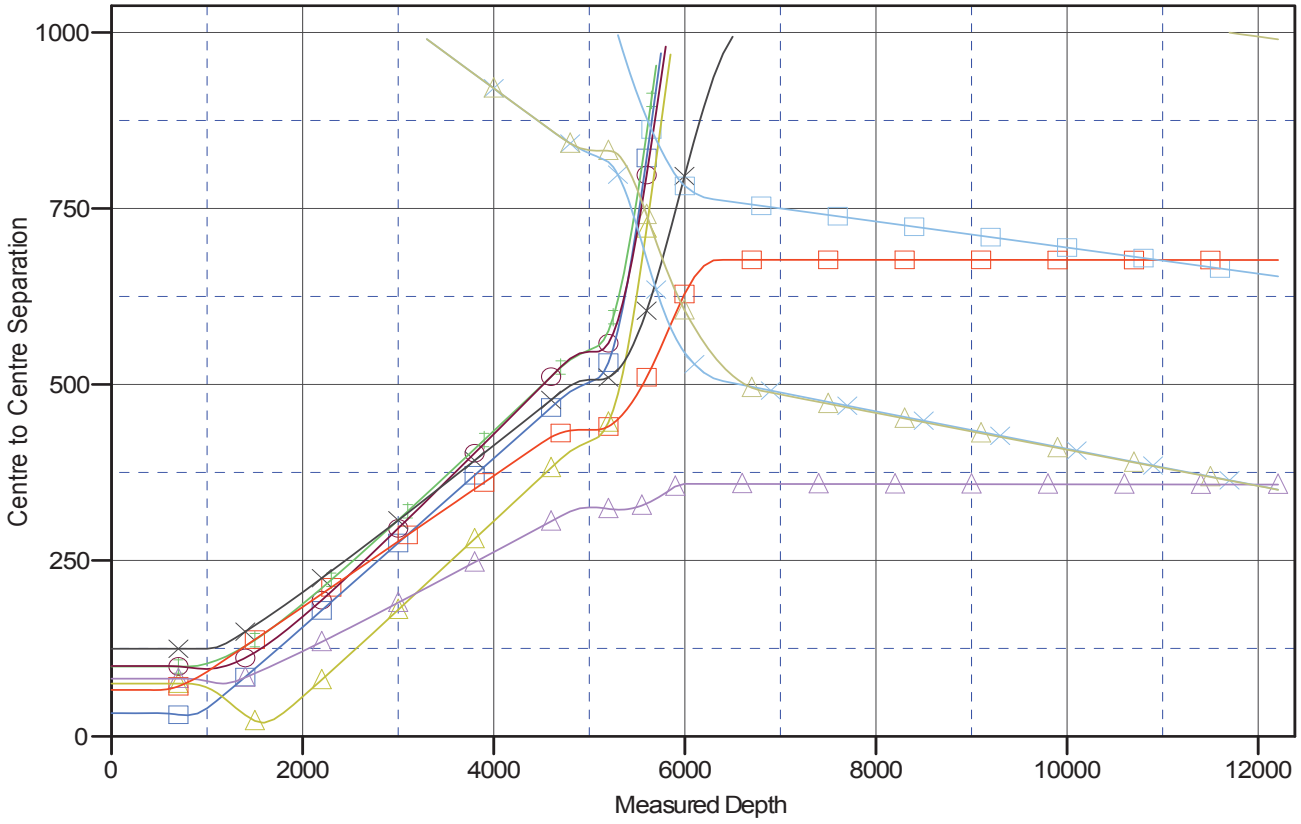
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,200.0	5,587.0	7,442.5	5,736.0	41.0	41.8	105.32	-2,063.8	-647.5	480.6	401.7	78.86	6.095	
7,300.0	5,587.0	7,542.5	5,736.0	42.8	43.5	105.41	-2,163.8	-644.8	478.0	395.6	82.35	5.804	
7,400.0	5,587.0	7,642.4	5,736.0	44.7	45.3	105.50	-2,263.7	-642.1	475.3	389.5	85.86	5.536	
7,500.0	5,587.0	7,742.4	5,736.0	46.5	47.1	105.59	-2,363.6	-639.3	472.7	383.3	89.38	5.288	
7,600.0	5,587.0	7,842.4	5,736.0	48.4	48.8	105.68	-2,463.5	-636.6	470.1	377.2	92.92	5.059	
7,700.0	5,587.0	7,942.3	5,736.0	50.2	50.6	105.77	-2,563.5	-633.8	467.4	371.0	96.46	4.846	
7,800.0	5,587.0	8,042.3	5,736.0	52.1	52.4	105.86	-2,663.4	-631.1	464.8	364.8	100.00	4.648	
7,900.0	5,587.0	8,142.3	5,736.0	53.9	54.3	105.95	-2,763.3	-628.4	462.2	358.6	103.56	4.463	
8,000.0	5,587.0	8,242.2	5,736.0	55.8	56.1	106.04	-2,863.2	-625.6	459.6	352.4	107.12	4.290	
8,100.0	5,587.0	8,342.2	5,736.0	57.7	57.9	106.14	-2,963.2	-622.9	456.9	346.3	110.68	4.129	
8,200.0	5,587.0	8,442.1	5,736.0	59.5	59.7	106.24	-3,063.1	-620.1	454.3	340.1	114.24	3.977	
8,300.0	5,587.0	8,542.1	5,736.0	61.4	61.6	106.33	-3,163.0	-617.4	451.7	333.9	117.81	3.834	
8,400.0	5,587.0	8,642.1	5,736.0	63.3	63.4	106.43	-3,262.9	-614.7	449.1	327.7	121.38	3.700	
8,500.0	5,587.0	8,742.0	5,736.0	65.2	65.3	106.53	-3,362.9	-611.9	446.5	321.5	124.95	3.573	
8,600.0	5,587.0	8,842.0	5,736.0	67.1	67.1	106.63	-3,462.8	-609.2	443.8	315.3	128.52	3.453	
8,700.0	5,587.0	8,942.0	5,736.0	68.9	69.0	106.73	-3,562.7	-606.4	441.2	309.1	132.09	3.340	
8,800.0	5,587.0	9,041.9	5,736.0	70.8	70.8	106.83	-3,662.6	-603.7	438.6	302.9	135.66	3.233	
8,900.0	5,587.0	9,141.9	5,736.0	72.7	72.7	106.94	-3,762.6	-601.0	436.0	296.8	139.23	3.131	
9,000.0	5,587.0	9,241.8	5,736.0	74.6	74.6	107.04	-3,862.5	-598.2	433.4	290.6	142.80	3.035	
9,100.0	5,587.0	9,341.8	5,736.0	76.5	76.4	107.15	-3,962.4	-595.5	430.8	284.4	146.36	2.943	
9,200.0	5,587.0	9,441.8	5,736.0	78.4	78.3	107.26	-4,062.3	-592.8	428.2	278.2	149.93	2.856	
9,300.0	5,587.0	9,541.7	5,736.0	80.3	80.2	107.37	-4,162.3	-590.0	425.5	272.1	153.49	2.772	
9,400.0	5,587.0	9,641.7	5,736.0	82.2	82.1	107.48	-4,262.2	-587.3	422.9	265.9	157.05	2.693	
9,500.0	5,587.0	9,741.7	5,736.0	84.1	83.9	107.59	-4,362.1	-584.5	420.3	259.7	160.61	2.617	
9,600.0	5,587.0	9,841.6	5,736.0	86.0	85.8	107.70	-4,462.0	-581.8	417.7	253.6	164.16	2.545	
9,700.0	5,587.0	9,941.6	5,736.0	87.9	87.7	107.82	-4,562.0	-579.1	415.1	247.4	167.71	2.475	
9,800.0	5,587.0	10,041.6	5,736.0	89.7	89.6	107.93	-4,661.9	-576.3	412.5	241.3	171.26	2.409	
9,900.0	5,587.0	10,141.5	5,736.0	91.6	91.5	108.05	-4,761.8	-573.6	409.9	235.1	174.80	2.345	
10,000.0	5,587.0	10,241.5	5,736.0	93.5	93.4	108.17	-4,861.7	-570.8	407.3	229.0	178.34	2.284	
10,100.0	5,587.0	10,341.4	5,736.0	95.4	95.2	108.29	-4,961.7	-568.1	404.7	222.9	181.87	2.225	
10,200.0	5,587.0	10,441.4	5,736.0	97.3	97.1	108.41	-5,061.6	-565.4	402.1	216.8	185.40	2.169	
10,300.0	5,587.0	10,541.4	5,736.0	99.2	99.0	108.54	-5,161.5	-562.6	399.6	210.6	188.92	2.115	
10,400.0	5,587.0	10,641.3	5,736.0	101.1	100.9	108.66	-5,261.4	-559.9	397.0	204.5	192.44	2.063	
10,500.0	5,587.0	10,741.3	5,736.0	103.1	102.8	108.79	-5,361.4	-557.2	394.4	198.4	195.95	2.013	
10,600.0	5,587.0	10,841.3	5,736.0	105.0	104.7	108.92	-5,461.3	-554.4	391.8	192.3	199.46	1.964	
10,700.0	5,587.0	10,941.2	5,736.0	106.9	106.6	109.05	-5,561.2	-551.7	389.2	186.3	202.96	1.918	
10,800.0	5,587.0	11,041.2	5,736.0	108.8	108.5	109.18	-5,661.1	-548.9	386.6	180.2	206.45	1.873	
10,900.0	5,587.0	11,141.1	5,736.0	110.7	110.4	109.32	-5,761.1	-546.2	384.1	174.1	209.94	1.829	
11,000.0	5,587.0	11,241.1	5,736.0	112.6	112.3	109.45	-5,861.0	-543.5	381.5	168.1	213.42	1.787	
11,100.0	5,587.0	11,341.1	5,736.0	114.5	114.2	109.59	-5,960.9	-540.7	378.9	162.0	216.89	1.747	
11,200.0	5,587.0	11,441.0	5,736.0	116.4	116.1	109.73	-6,060.8	-538.0	376.3	156.0	220.35	1.708	
11,300.0	5,587.0	11,541.0	5,736.0	118.3	118.0	109.87	-6,160.8	-535.2	373.8	149.9	223.81	1.670	
11,400.0	5,587.0	11,641.0	5,736.0	120.2	119.9	110.01	-6,260.7	-532.5	371.2	143.9	227.26	1.633	
11,500.0	5,587.0	11,740.9	5,736.0	122.1	121.8	110.16	-6,360.6	-529.8	368.6	137.9	230.70	1.598	
11,600.0	5,587.0	11,840.9	5,736.0	124.0	123.7	110.31	-6,460.5	-527.0	366.1	131.9	234.13	1.564	
11,700.0	5,587.0	11,940.8	5,736.0	125.9	125.6	110.46	-6,560.5	-524.3	363.5	125.9	237.55	1.530	
11,800.0	5,587.0	12,040.8	5,736.0	127.8	127.5	110.61	-6,660.4	-521.5	360.9	120.0	240.97	1.498	Level 3
11,900.0	5,587.0	12,140.8	5,736.0	129.7	129.4	110.76	-6,760.3	-518.8	358.4	114.0	244.37	1.467	Level 3
12,000.0	5,587.0	12,240.7	5,736.0	131.6	131.3	110.92	-6,860.2	-516.1	355.8	108.1	247.76	1.436	Level 3
12,100.0	5,587.0	12,340.7	5,736.0	133.5	133.2	111.08	-6,960.2	-513.3	353.3	102.1	251.14	1.407	Level 3
12,209.7	5,587.0	12,450.3	5,736.0	135.6	135.3	111.25	-7,069.8	-510.3	350.5	95.6	254.84	1.375	Level 3, CC, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-3501A
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor #26L-3501A	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4751.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.00 W °

Coordinates are relative to: Razor #26L-3501A
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.07°

Ladder Plot



LEGEND

- Razor #26L-2301A, HZ, Plan #2 V0
- Razor #26L-2302B, HZ, Plan #2 V0
- Razor #26L-2303A, HZ, Plan #2 V0
- Razor #26L-2304B, HZ, Plan #1 V0
- Razor #26L-3502B, HZ, Plan #1 V0
- Razor #26L-3503A, HZ, Plan #1 V0
- Razor #26L-3504B, HZ, Plan #1 V0
- Razor #27I-3414B, HZ, Plan #1 V0
- Razor #27I-3415A, HZ, Plan #1 V0
- Razor #27I-3416B, HZ, Plan #1 V0
- Razor #27I-3416B, HZ, Plan #2 V0