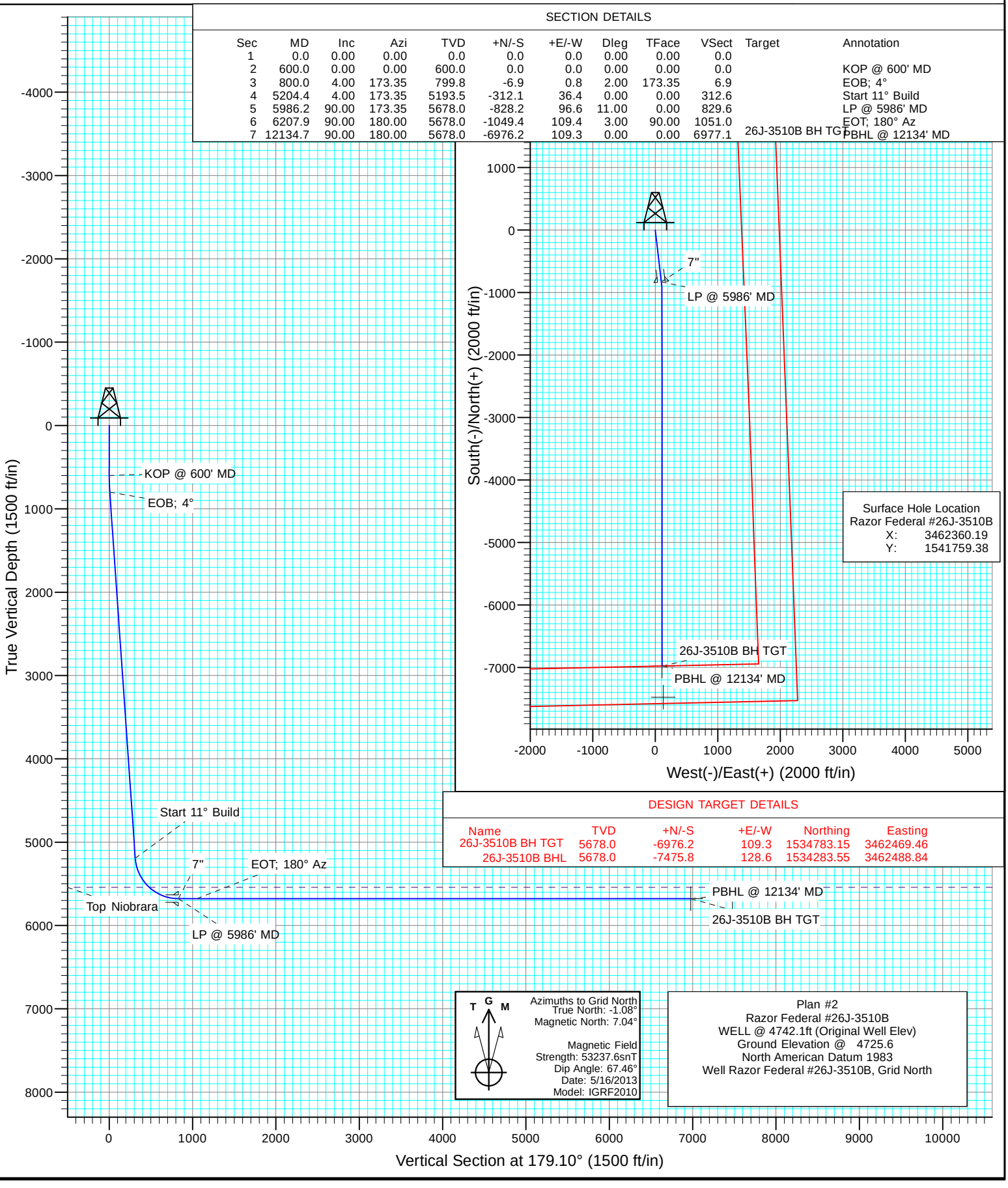
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor Federal #26J-3510B
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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0		KOP @ 600' MD
3	800.0	4.00	173.35	799.8	-6.9	0.8	2.00	173.35	6.9		EOB; 4°
4	5204.4	4.00	173.35	5193.5	-312.1	36.4	0.00	0.00	312.6		Start 11° Build
5	5986.2	90.00	173.35	5678.0	-828.2	96.6	11.00	0.00	829.6		LP @ 5986' MD
6	6207.9	90.00	180.00	5678.0	-1049.4	109.4	3.00	90.00	1051.0		EOT; 180° Az
7	12134.7	90.00	180.00	5678.0	-6976.2	109.3	0.00	0.00	6977.1	26J-3510B BH TGT	PBHL @ 12134' MD



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
26J-3510B BH TGT	5678.0	-6976.2	109.3	1534783.15	3462469.46
26J-3510B BHL	5678.0	-7475.8	128.6	1534283.55	3462488.84

T G M

Azimuths to Grid North
True North: -1.08°
Magnetic North: 7.04°

Magnetic Field
Strength: 53237.6snT
Dip Angle: 67.46°
Date: 5/16/2013
Model: IGRF2010

Plan #2
Razor Federal #26J-3510B
WELL @ 4742.1ft (Original Well Elev)
Ground Elevation @ 4725.6
North American Datum 1983
Well Razor Federal #26J-3510B, Grid North

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor Federal #26J-3510B	**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:**	40.808739
From:	Lat/Long	**Easting:**	3,459,649.47 ft	**Longitude:**	-103.839531
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.07 °

Well Razor Federal #26J-3510B

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,541,759.38 ft	**Latitude:**	40.808550
	+E/-W	0.0 ft	**Easting:**	3,462,360.19 ft	**Longitude:**	-103.829742
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,725.6 ft

Wellbore HZ

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/16/2013	8.12	67.46	53,238

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	179.10

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	4.00	173.35	799.8	-6.9	0.8	2.00	2.00	0.00	173.35	
5,204.4	4.00	173.35	5,193.5	-312.1	36.4	0.00	0.00	0.00	0.00	
5,986.2	90.00	173.35	5,678.0	-828.2	96.6	11.00	11.00	0.00	0.00	
6,207.9	90.00	180.00	5,678.0	-1,049.4	109.4	3.00	0.00	3.00	90.00	
12,134.7	90.00	180.00	5,678.0	-6,976.2	109.3	0.00	0.00	0.00	0.00	26J-3510B BH TGT

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor Federal #26J-3510B	**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	KOP @ 600' MD
700.0	2.00	173.35	700.0	-1.7	0.2	1.7	2.00	2.00	
800.0	4.00	173.35	799.8	-6.9	0.8	6.9	2.00	2.00	EOB; 4°
900.0	4.00	173.35	899.6	-13.9	1.6	13.9	0.00	0.00	
1,000.0	4.00	173.35	999.4	-20.8	2.4	20.8	0.00	0.00	
1,100.0	4.00	173.35	1,099.1	-27.7	3.2	27.8	0.00	0.00	
1,200.0	4.00	173.35	1,198.9	-34.6	4.0	34.7	0.00	0.00	
1,300.0	4.00	173.35	1,298.6	-41.6	4.8	41.6	0.00	0.00	
1,400.0	4.00	173.35	1,398.4	-48.5	5.7	48.6	0.00	0.00	
1,500.0	4.00	173.35	1,498.1	-55.4	6.5	55.5	0.00	0.00	
1,600.0	4.00	173.35	1,597.9	-62.4	7.3	62.5	0.00	0.00	
1,700.0	4.00	173.35	1,697.6	-69.3	8.1	69.4	0.00	0.00	
1,800.0	4.00	173.35	1,797.4	-76.2	8.9	76.3	0.00	0.00	
1,900.0	4.00	173.35	1,897.2	-83.1	9.7	83.3	0.00	0.00	
2,000.0	4.00	173.35	1,996.9	-90.1	10.5	90.2	0.00	0.00	
2,100.0	4.00	173.35	2,096.7	-97.0	11.3	97.2	0.00	0.00	
2,200.0	4.00	173.35	2,196.4	-103.9	12.1	104.1	0.00	0.00	
2,300.0	4.00	173.35	2,296.2	-110.9	12.9	111.1	0.00	0.00	
2,400.0	4.00	173.35	2,395.9	-117.8	13.7	118.0	0.00	0.00	
2,500.0	4.00	173.35	2,495.7	-124.7	14.5	124.9	0.00	0.00	
2,600.0	4.00	173.35	2,595.5	-131.6	15.3	131.9	0.00	0.00	
2,700.0	4.00	173.35	2,695.2	-138.6	16.2	138.8	0.00	0.00	
2,800.0	4.00	173.35	2,795.0	-145.5	17.0	145.8	0.00	0.00	
2,900.0	4.00	173.35	2,894.7	-152.4	17.8	152.7	0.00	0.00	
3,000.0	4.00	173.35	2,994.5	-159.4	18.6	159.6	0.00	0.00	
3,100.0	4.00	173.35	3,094.2	-166.3	19.4	166.6	0.00	0.00	
3,200.0	4.00	173.35	3,194.0	-173.2	20.2	173.5	0.00	0.00	
3,300.0	4.00	173.35	3,293.7	-180.1	21.0	180.5	0.00	0.00	
3,400.0	4.00	173.35	3,393.5	-187.1	21.8	187.4	0.00	0.00	
3,500.0	4.00	173.35	3,493.3	-194.0	22.6	194.3	0.00	0.00	
3,600.0	4.00	173.35	3,593.0	-200.9	23.4	201.3	0.00	0.00	
3,700.0	4.00	173.35	3,692.8	-207.9	24.2	208.2	0.00	0.00	
3,800.0	4.00	173.35	3,792.5	-214.8	25.0	215.2	0.00	0.00	
3,900.0	4.00	173.35	3,892.3	-221.7	25.9	222.1	0.00	0.00	
4,000.0	4.00	173.35	3,992.0	-228.7	26.7	229.0	0.00	0.00	
4,100.0	4.00	173.35	4,091.8	-235.6	27.5	236.0	0.00	0.00	
4,200.0	4.00	173.35	4,191.6	-242.5	28.3	242.9	0.00	0.00	
4,300.0	4.00	173.35	4,291.3	-249.4	29.1	249.9	0.00	0.00	
4,400.0	4.00	173.35	4,391.1	-256.4	29.9	256.8	0.00	0.00	
4,500.0	4.00	173.35	4,490.8	-263.3	30.7	263.7	0.00	0.00	
4,600.0	4.00	173.35	4,590.6	-270.2	31.5	270.7	0.00	0.00	
4,700.0	4.00	173.35	4,690.3	-277.2	32.3	277.6	0.00	0.00	
4,800.0	4.00	173.35	4,790.1	-284.1	33.1	284.6	0.00	0.00	
4,900.0	4.00	173.35	4,889.9	-291.0	33.9	291.5	0.00	0.00	
5,000.0	4.00	173.35	4,989.6	-297.9	34.7	298.4	0.00	0.00	
5,100.0	4.00	173.35	5,089.4	-304.9	35.5	305.4	0.00	0.00	

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Project:	Weld County, CO	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor Federal #26J-3510B	**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
5,200.0	4.00	173.35	5,189.1	-311.8	36.4	312.3	0.00	0.00	
5,204.4	4.00	173.35	5,193.5	-312.1	36.4	312.6	0.00	0.00	Start 11° Build
5,300.0	14.52	173.35	5,287.7	-327.4	38.2	327.9	11.00	11.00	
5,400.0	25.52	173.35	5,381.5	-361.3	42.1	361.9	11.00	11.00	
5,500.0	36.52	173.35	5,467.1	-412.4	48.1	413.1	11.00	11.00	
5,600.0	47.52	173.35	5,541.3	-478.8	55.8	479.6	11.00	11.00	
5,601.1	47.63	173.35	5,542.0	-479.6	55.9	480.4	11.00	11.00	Top Niobrara
5,700.0	58.52	173.35	5,601.4	-558.0	65.1	559.0	11.00	11.00	
5,800.0	69.52	173.35	5,645.1	-647.2	75.5	648.3	11.00	11.00	
5,900.0	80.52	173.35	5,670.9	-743.0	86.6	744.2	11.00	11.00	
5,986.2	90.00	173.35	5,678.0	-828.2	96.6	829.6	11.00	11.00	LP @ 5986' MD - 7"
6,000.0	90.00	173.76	5,678.0	-841.9	98.1	843.3	3.00	0.01	
6,100.0	90.00	176.76	5,678.0	-941.5	106.4	943.1	3.00	0.00	
6,200.0	90.00	179.76	5,678.0	-1,041.5	109.4	1,043.1	3.00	0.00	
6,207.9	90.00	180.00	5,678.0	-1,049.4	109.4	1,051.0	3.00	0.00	EOT; 180° Az
6,300.0	90.00	180.00	5,678.0	-1,141.5	109.4	1,143.1	0.00	0.00	
6,400.0	90.00	180.00	5,678.0	-1,241.5	109.4	1,243.1	0.00	0.00	
6,500.0	90.00	180.00	5,678.0	-1,341.5	109.4	1,343.0	0.00	0.00	
6,600.0	90.00	180.00	5,678.0	-1,441.5	109.4	1,443.0	0.00	0.00	
6,700.0	90.00	180.00	5,678.0	-1,541.5	109.4	1,543.0	0.00	0.00	
6,800.0	90.00	180.00	5,678.0	-1,641.5	109.4	1,643.0	0.00	0.00	
6,900.0	90.00	180.00	5,678.0	-1,741.5	109.4	1,743.0	0.00	0.00	
7,000.0	90.00	180.00	5,678.0	-1,841.5	109.4	1,843.0	0.00	0.00	
7,100.0	90.00	180.00	5,678.0	-1,941.5	109.4	1,943.0	0.00	0.00	
7,200.0	90.00	180.00	5,678.0	-2,041.5	109.4	2,043.0	0.00	0.00	
7,300.0	90.00	180.00	5,678.0	-2,141.5	109.4	2,142.9	0.00	0.00	
7,400.0	90.00	180.00	5,678.0	-2,241.5	109.4	2,242.9	0.00	0.00	
7,500.0	90.00	180.00	5,678.0	-2,341.5	109.4	2,342.9	0.00	0.00	
7,600.0	90.00	180.00	5,678.0	-2,441.5	109.4	2,442.9	0.00	0.00	
7,700.0	90.00	180.00	5,678.0	-2,541.5	109.4	2,542.9	0.00	0.00	
7,800.0	90.00	180.00	5,678.0	-2,641.5	109.4	2,642.9	0.00	0.00	
7,900.0	90.00	180.00	5,678.0	-2,741.5	109.4	2,742.9	0.00	0.00	
8,000.0	90.00	180.00	5,678.0	-2,841.5	109.4	2,842.9	0.00	0.00	
8,100.0	90.00	180.00	5,678.0	-2,941.5	109.4	2,942.8	0.00	0.00	
8,200.0	90.00	180.00	5,678.0	-3,041.5	109.4	3,042.8	0.00	0.00	
8,300.0	90.00	180.00	5,678.0	-3,141.5	109.4	3,142.8	0.00	0.00	
8,400.0	90.00	180.00	5,678.0	-3,241.5	109.4	3,242.8	0.00	0.00	
8,500.0	90.00	180.00	5,678.0	-3,341.5	109.4	3,342.8	0.00	0.00	
8,600.0	90.00	180.00	5,678.0	-3,441.5	109.3	3,442.8	0.00	0.00	
8,700.0	90.00	180.00	5,678.0	-3,541.5	109.3	3,542.8	0.00	0.00	
8,800.0	90.00	180.00	5,678.0	-3,641.5	109.3	3,642.8	0.00	0.00	
8,900.0	90.00	180.00	5,678.0	-3,741.5	109.3	3,742.7	0.00	0.00	
9,000.0	90.00	180.00	5,678.0	-3,841.5	109.3	3,842.7	0.00	0.00	
9,100.0	90.00	180.00	5,678.0	-3,941.5	109.3	3,942.7	0.00	0.00	
9,200.0	90.00	180.00	5,678.0	-4,041.5	109.3	4,042.7	0.00	0.00	
9,300.0	90.00	180.00	5,678.0	-4,141.5	109.3	4,142.7	0.00	0.00	
9,400.0	90.00	180.00	5,678.0	-4,241.5	109.3	4,242.7	0.00	0.00	
9,500.0	90.00	180.00	5,678.0	-4,341.5	109.3	4,342.7	0.00	0.00	
9,600.0	90.00	180.00	5,678.0	-4,441.5	109.3	4,442.7	0.00	0.00	
9,700.0	90.00	180.00	5,678.0	-4,541.5	109.3	4,542.6	0.00	0.00	
9,800.0	90.00	180.00	5,678.0	-4,641.5	109.3	4,642.6	0.00	0.00	
9,900.0	90.00	180.00	5,678.0	-4,741.5	109.3	4,742.6	0.00	0.00	

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Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor Federal #26J-3510B	**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	5,678.0	-4,841.5	109.3	4,842.6	0.00	0.00	
10,100.0	90.00	180.00	5,678.0	-4,941.5	109.3	4,942.6	0.00	0.00	
10,200.0	90.00	180.00	5,678.0	-5,041.5	109.3	5,042.6	0.00	0.00	
10,300.0	90.00	180.00	5,678.0	-5,141.5	109.3	5,142.6	0.00	0.00	
10,400.0	90.00	180.00	5,678.0	-5,241.5	109.3	5,242.6	0.00	0.00	
10,500.0	90.00	180.00	5,678.0	-5,341.5	109.3	5,342.5	0.00	0.00	
10,600.0	90.00	180.00	5,678.0	-5,441.5	109.3	5,442.5	0.00	0.00	
10,700.0	90.00	180.00	5,678.0	-5,541.5	109.3	5,542.5	0.00	0.00	
10,800.0	90.00	180.00	5,678.0	-5,641.5	109.3	5,642.5	0.00	0.00	
10,900.0	90.00	180.00	5,678.0	-5,741.5	109.3	5,742.5	0.00	0.00	
11,000.0	90.00	180.00	5,678.0	-5,841.5	109.3	5,842.5	0.00	0.00	
11,100.0	90.00	180.00	5,678.0	-5,941.5	109.3	5,942.5	0.00	0.00	
11,200.0	90.00	180.00	5,678.0	-6,041.5	109.3	6,042.5	0.00	0.00	
11,300.0	90.00	180.00	5,678.0	-6,141.5	109.3	6,142.4	0.00	0.00	
11,400.0	90.00	180.00	5,678.0	-6,241.5	109.3	6,242.4	0.00	0.00	
11,500.0	90.00	180.00	5,678.0	-6,341.5	109.3	6,342.4	0.00	0.00	
11,600.0	90.00	180.00	5,678.0	-6,441.5	109.3	6,442.4	0.00	0.00	
11,700.0	90.00	180.00	5,678.0	-6,541.5	109.3	6,542.4	0.00	0.00	
11,800.0	90.00	180.00	5,678.0	-6,641.5	109.3	6,642.4	0.00	0.00	
11,900.0	90.00	180.00	5,678.0	-6,741.5	109.3	6,742.4	0.00	0.00	
12,000.0	90.00	180.00	5,678.0	-6,841.5	109.3	6,842.4	0.00	0.00	
12,100.0	90.00	180.00	5,678.0	-6,941.5	109.3	6,942.4	0.00	0.00	
12,134.7	90.00	180.00	5,678.0	-6,976.2	109.3	6,977.0	0.00	0.00	PBHL @ 12134' 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
26J-3510B BH TGT - plan hits target center - Point	0.00	0.00	5,678.0	-6,976.2	109.3	1,534,783.15	3,462,469.46	40.789400	-103.829822
26J-3510B BHL - plan misses target center by 500.0ft at 12134.7ft MD (5678.0 TVD, -6976.2 N, 109.3 E) - Point	0.00	0.00	5,678.0	-7,475.8	128.6	1,534,283.55	3,462,488.84	40.788028	-103.829786

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
5,986.2	5,678.0	7"	0.000	0.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,601.1	5,542.0	Top Niobrara		0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor Federal #26J-3510B	**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
600.0	600.0	0.0	0.0	KOP @ 600' MD
800.0	799.8	-6.9	0.8	EOB; 4°
5,204.4	5,193.5	-312.1	36.4	Start 11° Build
5,986.2	5,678.0	-828.2	96.6	LP @ 5986' MD
6,207.9	5,678.0	-1,049.4	109.4	EOT; 180° Az
12,134.7	5,678.0	-6,976.2	109.3	PBHL @ 12134' MD

WHITING PETROLEUM CORPORATION

Whiting Petroleum Corporation

Weld County, CO
S26-T10N-R58W
Razor Federal #26J-3510B
HZ
Plan #2

Anticollision Report

18 June, 2013

CATHEDRAL

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 500.0ft	**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	12,134.7	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 #26J-2633L - HZ - Plan #1	3,074.2	3,074.1	48.1	33.7	3.352	CC
Razor #26J-2633L - HZ - Plan #1	3,800.0	3,799.8	49.7	32.2	2.833	ES
Razor #26J-2633L - HZ - Plan #1	5,204.4	5,204.0	61.1	37.6	2.601	SF
Razor #26K-3505A - HZ - Plan #2						Out of range
Razor #26K-3507A - HZ - Plan #2						Out of range
Razor #26K-3508B - HZ - Plan #2						Out of range
Razor 26-3524H (Existing) - Existing - SURVEYs						Out of range
Razor Federal #26I-3513A - HZ - Plan #1						Out of range
Razor Federal #26I-3514B - HZ - Plan #1						Out of range
Razor Federal #26I-3515A - HZ - Plan #2						Out of range
Razor Federal #26J-2309A - HZ - Plan #1	500.0	500.0	75.1	73.1	37.797	CC, ES
Razor Federal #26J-2309A - HZ - Plan #1	800.0	794.4	94.0	90.8	28.730	SF
Razor Federal #26J-2310B - HZ - Plan #1	600.0	600.0	32.9	30.5	13.527	CC
Razor Federal #26J-2310B - HZ - Plan #1	700.0	700.0	33.2	30.3	11.607	ES
Razor Federal #26J-2310B - HZ - Plan #1	800.0	799.2	35.2	32.0	10.804	SF
Razor Federal #26J-2311A - HZ - Plan #1	600.0	600.0	100.0	97.6	41.077	CC, ES
Razor Federal #26J-2311A - HZ - Plan #1	1,400.0	1,389.4	161.3	155.5	27.496	SF
Razor Federal #26J-2312B - HZ - Plan #1	736.2	736.1	33.1	30.1	11.005	CC
Razor Federal #26J-2312B - HZ - Plan #1	800.0	799.8	33.3	30.0	10.193	ES
Razor Federal #26J-2312B - HZ - Plan #1	1,100.0	1,099.1	41.3	36.7	9.032	SF
Razor Federal #26J-3509A - HZ - Plan #2	600.0	600.0	81.6	79.2	33.527	CC, ES
Razor Federal #26J-3509A - HZ - Plan #2	12,135.4	12,164.8	341.8	80.6	1.309	Level 3, SF
Razor Federal #26J-3511A - HZ - Plan #1	600.0	600.0	82.1	79.6	33.700	CC, ES
Razor Federal #26J-3511A - HZ - Plan #1	12,135.4	12,207.4	360.5	98.1	1.374	Level 3, SF
Razor Federal #26J-3512B - HZ - Plan #1	792.2	792.0	65.8	62.6	20.371	CC
Razor Federal #26J-3512B - HZ - Plan #1	900.0	899.6	66.3	62.6	17.954	ES
Razor Federal #26J-3512B - HZ - Plan #1	5,204.4	5,200.8	195.6	170.3	7.749	SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 #26J-2633L - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-91.11	-1.3	-65.3	65.3				
100.0	100.0	100.0	100.0	0.1	0.1	-91.11	-1.3	-65.3	65.3	65.1	0.19	348.106	
200.0	200.0	200.0	200.0	0.3	0.3	-91.11	-1.3	-65.3	65.3	64.7	0.64	102.529	
300.0	300.0	300.5	300.5	0.5	0.5	-92.62	-3.0	-64.9	64.9	63.9	1.06	60.983	
400.0	400.0	400.6	400.5	0.8	0.7	-96.92	-7.7	-63.6	64.1	62.6	1.50	42.760	
500.0	500.0	500.5	500.2	1.0	1.0	-101.78	-13.0	-62.2	63.5	61.6	1.95	32.558	
564.2	564.2	564.6	564.2	1.1	1.1	-104.93	-16.3	-61.3	63.4	61.2	2.25	28.210	
600.0	600.0	600.3	599.9	1.2	1.2	-106.69	-18.2	-60.8	63.5	61.1	2.41	26.287	
700.0	700.0	700.3	699.7	1.4	1.4	76.60	-23.5	-59.4	63.4	60.6	2.85	22.253	
800.0	799.8	800.3	799.5	1.6	1.7	76.31	-28.7	-58.0	62.7	59.4	3.28	19.131	
900.0	899.6	900.2	899.4	1.8	1.9	77.57	-34.0	-56.6	61.6	57.9	3.73	16.526	
1,000.0	999.4	1,000.2	999.2	2.0	2.2	78.88	-39.3	-55.2	60.5	56.3	4.19	14.435	
1,100.0	1,099.1	1,100.2	1,099.0	2.2	2.4	80.23	-44.5	-53.8	59.4	54.8	4.67	12.738	
1,200.0	1,198.9	1,200.2	1,198.9	2.5	2.7	81.64	-49.8	-52.4	58.4	53.3	5.15	11.343	
1,300.0	1,298.6	1,300.2	1,298.7	2.7	2.9	83.09	-55.1	-51.0	57.4	51.8	5.64	10.183	
1,400.0	1,398.4	1,400.2	1,398.5	3.0	3.2	84.60	-60.3	-49.6	56.5	50.3	6.13	9.208	
1,500.0	1,498.1	1,500.1	1,498.4	3.2	3.4	86.15	-65.6	-48.2	55.6	48.9	6.63	8.381	
1,600.0	1,597.9	1,600.1	1,598.2	3.5	3.7	87.76	-70.8	-46.8	54.7	47.6	7.13	7.672	
1,700.0	1,697.6	1,700.1	1,698.0	3.7	3.9	89.41	-76.1	-45.4	53.9	46.2	7.63	7.060	
1,800.0	1,797.4	1,800.1	1,797.9	4.0	4.2	91.12	-81.4	-44.0	53.1	45.0	8.13	6.529	
1,900.0	1,897.2	1,900.1	1,897.7	4.2	4.4	92.88	-86.6	-42.6	52.4	43.7	8.63	6.065	
2,000.0	1,996.9	2,000.1	1,997.5	4.5	4.7	94.68	-91.9	-41.2	51.7	42.6	9.13	5.658	
2,100.0	2,096.7	2,100.0	2,097.4	4.7	4.9	96.53	-97.2	-39.7	51.1	41.4	9.63	5.300	
2,200.0	2,196.4	2,200.0	2,197.2	5.0	5.2	98.42	-102.4	-38.3	50.5	40.4	10.13	4.983	
2,300.0	2,296.2	2,300.0	2,297.1	5.3	5.4	100.35	-107.7	-36.9	50.0	39.3	10.63	4.702	
2,400.0	2,395.9	2,400.0	2,396.9	5.5	5.7	102.32	-112.9	-35.5	49.5	38.4	11.12	4.453	
2,500.0	2,495.7	2,500.0	2,496.7	5.8	5.9	104.33	-118.2	-34.1	49.1	37.5	11.61	4.231	
2,600.0	2,595.5	2,600.0	2,596.6	6.0	6.2	106.37	-123.5	-32.7	48.8	36.7	12.10	4.033	
2,700.0	2,695.2	2,700.0	2,696.4	6.3	6.4	108.43	-128.7	-31.3	48.5	35.9	12.58	3.857	
2,800.0	2,795.0	2,799.9	2,796.2	6.6	6.7	110.51	-134.0	-29.9	48.3	35.2	13.05	3.700	
2,900.0	2,894.7	2,899.9	2,896.1	6.8	6.9	112.61	-139.2	-28.5	48.2	34.6	13.53	3.560	
3,000.0	2,994.5	2,999.9	2,995.9	7.1	7.2	114.72	-144.5	-27.1	48.1	34.1	13.99	3.436	
3,074.2	3,068.5	3,074.1	3,070.0	7.3	7.4	116.28	-148.4	-26.1	48.1	33.7	14.34	3.352	CC
3,100.0	3,094.2	3,099.9	3,095.7	7.3	7.4	116.83	-149.8	-25.7	48.1	33.6	14.46	3.325	
3,200.0	3,194.0	3,199.9	3,195.6	7.6	7.7	118.94	-155.0	-24.3	48.1	33.2	14.91	3.226	
3,300.0	3,293.7	3,299.9	3,295.4	7.9	7.9	121.04	-160.3	-22.9	48.2	32.9	15.36	3.139	
3,400.0	3,393.5	3,399.8	3,395.2	8.1	8.2	123.13	-165.6	-21.5	48.4	32.6	15.81	3.061	
3,500.0	3,493.3	3,499.8	3,495.1	8.4	8.4	125.20	-170.8	-20.1	48.6	32.4	16.26	2.993	
3,600.0	3,593.0	3,599.8	3,594.9	8.7	8.7	127.25	-176.1	-18.7	49.0	32.3	16.69	2.932	
3,700.0	3,692.8	3,699.8	3,694.8	8.9	8.9	129.27	-181.3	-17.3	49.3	32.2	17.13	2.879	
3,800.0	3,792.5	3,799.8	3,794.6	9.2	9.2	131.26	-186.6	-15.9	49.7	32.2	17.56	2.833	ES
3,900.0	3,892.3	3,899.8	3,894.4	9.4	9.4	133.21	-191.9	-14.5	50.2	32.2	17.99	2.792	
4,000.0	3,992.0	3,999.7	3,994.3	9.7	9.7	135.13	-197.1	-13.1	50.8	32.4	18.42	2.757	
4,100.0	4,091.8	4,099.7	4,094.1	10.0	9.9	137.00	-202.4	-11.7	51.4	32.5	18.84	2.727	
4,200.0	4,191.6	4,199.7	4,193.9	10.2	10.2	138.82	-207.6	-10.3	52.0	32.8	19.26	2.701	
4,300.0	4,291.3	4,299.7	4,293.8	10.5	10.4	140.60	-212.9	-8.9	52.7	33.1	19.68	2.679	
4,400.0	4,391.1	4,399.7	4,393.6	10.8	10.7	142.33	-218.2	-7.5	53.5	33.4	20.10	2.661	
4,500.0	4,490.8	4,499.7	4,493.4	11.0	10.9	144.01	-223.4	-6.1	54.3	33.8	20.52	2.645	
4,600.0	4,590.6	4,599.7	4,593.3	11.3	11.2	145.64	-228.7	-4.7	55.1	34.2	20.94	2.633	
4,700.0	4,690.3	4,699.6	4,693.1	11.6	11.4	147.22	-234.0	-3.3	56.0	34.7	21.36	2.623	
4,800.0	4,790.1	4,799.6	4,792.9	11.8	11.7	148.75	-239.2	-1.9	57.0	35.2	21.78	2.615	
4,900.0	4,889.9	4,899.6	4,892.8	12.1	11.9	150.23	-244.5	-0.5	57.9	35.7	22.20	2.609	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 #26J-2633L - 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
5,000.0	4,989.6	4,999.6	4,992.6	12.3	12.2	151.66	-249.7	0.9	58.9	36.3	22.63	2.605	
5,100.0	5,089.4	5,099.6	5,092.5	12.6	12.4	153.04	-255.0	2.3	60.0	36.9	23.05	2.602	
5,204.4	5,193.5	5,204.0	5,196.7	12.9	12.7	154.43	-260.5	3.8	61.1	37.6	23.49	2.601 SF	
5,250.0	5,238.8	5,249.5	5,242.1	13.0	12.8	155.67	-262.9	4.5	63.4	39.8	23.59	2.689	
5,300.0	5,287.7	5,298.9	5,291.5	13.2	12.9	158.21	-265.5	5.1	70.2	46.7	23.50	2.988	
5,350.0	5,335.5	5,347.3	5,339.8	13.5	13.0	161.23	-268.0	5.8	81.6	58.4	23.21	3.518	
5,400.0	5,381.5	5,393.0	5,385.4	13.7	13.1	164.03	-270.2	6.4	98.0	75.3	22.70	4.316	
5,450.0	5,425.6	5,436.1	5,428.5	14.1	13.2	166.34	-271.5	6.8	119.6	97.6	22.01	5.433	
5,500.0	5,467.1	5,476.3	5,468.7	14.4	13.3	168.08	-272.2	6.9	146.1	125.0	21.14	6.911	
5,550.0	5,505.8	5,513.4	5,505.8	14.9	13.4	169.31	-272.4	7.0	177.2	157.1	20.12	8.809	
5,600.0	5,541.3	5,548.9	5,541.3	15.3	13.4	170.19	-272.4	7.0	212.1	193.2	18.94	11.197	
5,650.0	5,573.2	5,580.8	5,573.2	15.9	13.5	170.68	-272.4	7.0	250.3	232.7	17.66	14.178	
5,700.0	5,601.4	5,608.9	5,601.4	16.4	13.5	170.79	-272.4	7.0	291.5	275.2	16.30	17.888	
5,750.0	5,625.4	5,633.0	5,625.4	17.1	13.6	170.46	-272.4	7.0	335.2	320.2	14.93	22.449	
5,800.0	5,645.1	5,652.7	5,645.1	17.7	13.6	169.52	-272.4	7.0	381.0	367.3	13.70	27.807	
5,850.0	5,660.3	5,667.9	5,660.3	18.4	13.6	167.46	-272.4	7.0	428.5	415.6	12.92	33.171	
5,900.0	5,670.9	5,678.5	5,670.9	19.2	13.6	162.60	-272.4	7.0	477.3	463.7	13.54	35.251	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-2309A - 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	-1.08	75.0	-1.4	75.1				
100.0	100.0	100.0	100.0	0.1	0.1	-1.08	75.0	-1.4	75.1	74.9	0.19	399.925	
200.0	200.0	200.0	200.0	0.3	0.3	-1.08	75.0	-1.4	75.1	74.4	0.64	117.791	
300.0	300.0	300.0	300.0	0.5	0.5	-1.08	75.0	-1.4	75.1	74.0	1.09	69.067	
400.0	400.0	400.0	400.0	0.8	0.8	-1.08	75.0	-1.4	75.1	73.5	1.54	48.857	
500.0	500.0	500.0	500.0	1.0	1.0	-1.08	75.0	-1.4	75.1	73.1	1.99	37.797	CC, ES
600.0	600.0	597.8	597.8	1.2	1.2	-1.74	76.4	-2.3	76.5	74.1	2.43	31.493	
700.0	700.0	695.2	695.1	1.4	1.4	-176.96	80.6	-5.0	82.7	79.8	2.86	28.942	
800.0	799.8	794.4	794.0	1.6	1.7	-179.19	86.4	-8.8	94.0	90.8	3.27	28.730	SF
900.0	899.6	893.5	892.8	1.8	1.9	179.07	92.3	-12.5	107.3	103.6	3.69	29.089	
1,000.0	999.4	992.5	991.7	2.0	2.1	177.71	98.1	-16.2	120.6	116.4	4.11	29.328	
1,100.0	1,099.1	1,091.6	1,090.5	2.2	2.4	176.62	103.9	-20.0	133.9	129.4	4.54	29.488	
1,200.0	1,198.9	1,190.7	1,189.3	2.5	2.6	175.73	109.7	-23.7	147.3	142.3	4.98	29.597	
1,300.0	1,298.6	1,289.8	1,288.2	2.7	2.9	174.99	115.5	-27.5	160.7	155.3	5.42	29.672	
1,400.0	1,398.4	1,388.8	1,387.0	3.0	3.1	174.36	121.3	-31.2	174.1	168.3	5.86	29.723	
1,500.0	1,498.1	1,487.9	1,485.8	3.2	3.4	173.83	127.1	-34.9	187.6	181.3	6.30	29.757	
1,600.0	1,597.9	1,587.0	1,584.7	3.5	3.6	173.36	132.9	-38.7	201.1	194.3	6.75	29.781	
1,700.0	1,697.6	1,686.1	1,683.5	3.7	3.9	172.95	138.7	-42.4	214.5	207.3	7.20	29.797	
1,800.0	1,797.4	1,785.1	1,782.3	4.0	4.1	172.59	144.6	-46.2	228.0	220.4	7.65	29.806	
1,900.0	1,897.2	1,884.2	1,881.2	4.2	4.4	172.28	150.4	-49.9	241.5	233.4	8.10	29.811	
2,000.0	1,996.9	1,983.3	1,980.0	4.5	4.6	171.99	156.2	-53.7	255.0	246.5	8.55	29.814	
2,100.0	2,096.7	2,082.4	2,078.8	4.7	4.9	171.73	162.0	-57.4	268.5	259.5	9.01	29.813	
2,200.0	2,196.4	2,181.4	2,177.7	5.0	5.1	171.50	167.8	-61.1	282.1	272.6	9.46	29.811	
2,300.0	2,296.2	2,280.5	2,276.5	5.3	5.4	171.29	173.6	-64.9	295.6	285.7	9.92	29.808	
2,400.0	2,395.9	2,379.6	2,375.3	5.5	5.7	171.10	179.4	-68.6	309.1	298.7	10.37	29.804	
2,500.0	2,495.7	2,478.7	2,474.2	5.8	5.9	170.92	185.2	-72.4	322.6	311.8	10.83	29.800	
2,600.0	2,595.5	2,577.8	2,573.0	6.0	6.2	170.76	191.0	-76.1	336.1	324.9	11.28	29.795	
2,700.0	2,695.2	2,676.8	2,671.9	6.3	6.4	170.61	196.8	-79.9	349.7	337.9	11.74	29.789	
2,800.0	2,795.0	2,775.9	2,770.7	6.6	6.7	170.47	202.7	-83.6	363.2	351.0	12.19	29.783	
2,900.0	2,894.7	2,875.0	2,869.5	6.8	6.9	170.34	208.5	-87.3	376.7	364.1	12.65	29.778	
3,000.0	2,994.5	2,974.1	2,968.4	7.1	7.2	170.23	214.3	-91.1	390.3	377.2	13.11	29.772	
3,100.0	3,094.2	3,073.1	3,067.2	7.3	7.4	170.11	220.1	-94.8	403.8	390.2	13.57	29.766	
3,200.0	3,194.0	3,172.2	3,166.0	7.6	7.7	170.01	225.9	-98.6	417.4	403.3	14.02	29.760	
3,300.0	3,293.7	3,271.3	3,264.9	7.9	7.9	169.91	231.7	-102.3	430.9	416.4	14.48	29.755	
3,400.0	3,393.5	3,370.4	3,363.7	8.1	8.2	169.82	237.5	-106.0	444.4	429.5	14.94	29.749	
3,500.0	3,493.3	3,469.4	3,462.5	8.4	8.5	169.73	243.3	-109.8	458.0	442.6	15.40	29.744	
3,600.0	3,593.0	3,568.5	3,561.4	8.7	8.7	169.65	249.1	-113.5	471.5	455.7	15.86	29.738	
3,700.0	3,692.8	3,667.6	3,660.2	8.9	9.0	169.58	255.0	-117.3	485.1	468.7	16.31	29.733	
3,800.0	3,792.5	3,766.7	3,759.0	9.2	9.2	169.50	260.8	-121.0	498.6	481.8	16.77	29.728	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-2310B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-91.07	-0.6	-32.9	32.9				
100.0	100.0	100.0	100.0	0.1	0.1	-91.07	-0.6	-32.9	32.9	32.8	0.19	175.528	
200.0	200.0	200.0	200.0	0.3	0.3	-91.07	-0.6	-32.9	32.9	32.3	0.64	51.699	
300.0	300.0	300.0	300.0	0.5	0.5	-91.07	-0.6	-32.9	32.9	31.9	1.09	30.314	
400.0	400.0	400.0	400.0	0.8	0.8	-91.07	-0.6	-32.9	32.9	31.4	1.54	21.443	
500.0	500.0	500.0	500.0	1.0	1.0	-91.07	-0.6	-32.9	32.9	31.0	1.99	16.589	
600.0	600.0	600.0	600.0	1.2	1.2	-91.07	-0.6	-32.9	32.9	30.5	2.44	13.527	CC
700.0	700.0	700.0	700.0	1.4	1.4	98.58	-0.6	-32.9	33.2	30.3	2.86	11.607	ES
800.0	799.8	799.2	799.2	1.6	1.7	109.55	1.0	-33.5	35.2	32.0	3.26	10.804	SF
900.0	899.6	897.6	897.5	1.8	1.9	124.48	5.8	-35.3	41.8	38.1	3.69	11.350	
1,000.0	999.4	996.6	996.2	2.0	2.1	135.99	12.3	-37.6	52.0	47.9	4.12	12.627	
1,100.0	1,099.1	1,095.7	1,095.0	2.2	2.4	143.55	18.8	-39.9	63.6	59.0	4.55	13.970	
1,200.0	1,198.9	1,194.7	1,193.8	2.5	2.6	148.74	25.3	-42.3	75.9	70.9	4.99	15.224	
1,300.0	1,298.6	1,293.7	1,292.6	2.7	2.8	152.46	31.8	-44.6	88.7	83.3	5.42	16.351	
1,400.0	1,398.4	1,392.8	1,391.4	3.0	3.1	155.24	38.3	-47.0	101.7	95.9	5.86	17.350	
1,500.0	1,498.1	1,491.8	1,490.2	3.2	3.3	157.38	44.8	-49.3	115.0	108.7	6.31	18.232	
1,600.0	1,597.9	1,590.9	1,589.0	3.5	3.6	159.08	51.3	-51.7	128.3	121.6	6.75	19.011	
1,700.0	1,697.6	1,689.9	1,687.8	3.7	3.8	160.46	57.8	-54.0	141.8	134.6	7.20	19.704	
1,800.0	1,797.4	1,788.9	1,786.6	4.0	4.1	161.60	64.3	-56.4	155.3	147.6	7.64	20.320	
1,900.0	1,897.2	1,888.0	1,885.4	4.2	4.3	162.56	70.8	-58.7	168.8	160.8	8.09	20.872	
2,000.0	1,996.9	1,987.0	1,984.2	4.5	4.6	163.37	77.3	-61.1	182.4	173.9	8.54	21.368	
2,100.0	2,096.7	2,086.1	2,083.0	4.7	4.8	164.07	83.8	-63.4	196.1	187.1	8.99	21.817	
2,200.0	2,196.4	2,185.1	2,181.8	5.0	5.1	164.68	90.3	-65.8	209.7	200.3	9.44	22.223	
2,300.0	2,296.2	2,284.1	2,280.6	5.3	5.3	165.22	96.8	-68.1	223.4	213.5	9.89	22.593	
2,400.0	2,395.9	2,383.2	2,379.4	5.5	5.6	165.69	103.3	-70.5	237.1	226.8	10.34	22.931	
2,500.0	2,495.7	2,482.2	2,478.2	5.8	5.8	166.11	109.7	-72.8	250.8	240.0	10.79	23.241	
2,600.0	2,595.5	2,581.3	2,577.0	6.0	6.1	166.49	116.2	-75.2	264.5	253.3	11.24	23.526	
2,700.0	2,695.2	2,680.3	2,675.8	6.3	6.3	166.83	122.7	-77.5	278.3	266.6	11.70	23.790	
2,800.0	2,795.0	2,779.3	2,774.6	6.6	6.6	167.14	129.2	-79.9	292.0	279.9	12.15	24.034	
2,900.0	2,894.7	2,878.4	2,873.4	6.8	6.8	167.42	135.7	-82.2	305.8	293.2	12.60	24.260	
3,000.0	2,994.5	2,977.4	2,972.2	7.1	7.1	167.68	142.2	-84.6	319.5	306.5	13.06	24.470	
3,100.0	3,094.2	3,076.5	3,071.0	7.3	7.3	167.92	148.7	-86.9	333.3	319.8	13.51	24.667	
3,200.0	3,194.0	3,175.5	3,169.8	7.6	7.6	168.13	155.2	-89.3	347.1	333.1	13.97	24.851	
3,300.0	3,293.7	3,274.5	3,268.6	7.9	7.8	168.33	161.7	-91.6	360.8	346.4	14.42	25.023	
3,400.0	3,393.5	3,373.6	3,367.4	8.1	8.1	168.52	168.2	-94.0	374.6	359.7	14.87	25.184	
3,500.0	3,493.3	3,472.6	3,466.2	8.4	8.3	168.69	174.7	-96.3	388.4	373.0	15.33	25.336	
3,600.0	3,593.0	3,571.7	3,565.0	8.7	8.6	168.85	181.2	-98.7	402.2	386.4	15.78	25.479	
3,700.0	3,692.8	3,670.7	3,663.8	8.9	8.8	169.00	187.7	-101.0	415.9	399.7	16.24	25.614	
3,800.0	3,792.5	3,769.7	3,762.6	9.2	9.1	169.14	194.2	-103.3	429.7	413.0	16.69	25.742	
3,900.0	3,892.3	3,868.8	3,861.4	9.4	9.4	169.28	200.7	-105.7	443.5	426.4	17.15	25.862	
4,000.0	3,992.0	3,967.8	3,960.2	9.7	9.6	169.40	207.2	-108.0	457.3	439.7	17.60	25.977	
4,100.0	4,091.8	4,066.9	4,059.0	10.0	9.9	169.52	213.7	-110.4	471.1	453.0	18.06	26.085	
4,200.0	4,191.6	4,165.9	4,157.8	10.2	10.1	169.63	220.2	-112.7	484.9	466.4	18.52	26.189	
4,300.0	4,291.3	4,264.9	4,256.6	10.5	10.4	169.73	226.7	-115.1	498.7	479.7	18.97	26.287	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-2311A - 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	40.33	76.3	64.7	100.0				
100.0	100.0	100.0	100.0	0.1	0.1	40.33	76.3	64.7	100.0	99.8	0.19	533.010	
200.0	200.0	200.0	200.0	0.3	0.3	40.33	76.3	64.7	100.0	99.4	0.64	156.989	
300.0	300.0	300.0	300.0	0.5	0.5	40.33	76.3	64.7	100.0	98.9	1.09	92.050	
400.0	400.0	400.0	400.0	0.8	0.8	40.33	76.3	64.7	100.0	98.5	1.54	65.115	
500.0	500.0	500.0	500.0	1.0	1.0	40.33	76.3	64.7	100.0	98.0	1.99	50.375	
600.0	600.0	600.0	600.0	1.2	1.2	40.33	76.3	64.7	100.0	97.6	2.44	41.077	CC, ES
700.0	700.0	700.0	700.0	1.4	1.4	-133.73	76.3	64.7	101.2	98.4	2.86	35.421	
800.0	799.8	799.8	799.8	1.6	1.7	-135.74	76.3	64.7	104.9	101.7	3.27	32.128	
900.0	899.6	899.6	899.6	1.8	1.9	-138.27	76.3	64.7	110.0	106.3	3.69	29.849	
1,000.0	999.4	996.4	996.4	2.0	2.1	-141.05	77.9	64.5	116.6	112.5	4.11	28.357	
1,100.0	1,099.1	1,092.6	1,092.5	2.2	2.3	-144.46	82.6	63.6	126.0	121.4	4.54	27.731	
1,200.0	1,198.9	1,191.4	1,191.0	2.5	2.6	-147.94	89.4	62.5	137.4	132.4	4.98	27.564	
1,300.0	1,298.6	1,290.4	1,289.8	2.7	2.8	-150.89	96.2	61.3	149.2	143.8	5.43	27.501	
1,400.0	1,398.4	1,389.4	1,388.6	3.0	3.0	-153.40	103.0	60.2	161.3	155.5	5.87	27.496	SF
1,500.0	1,498.1	1,488.5	1,487.4	3.2	3.3	-155.56	109.9	59.0	173.8	167.5	6.31	27.527	
1,600.0	1,597.9	1,587.5	1,586.1	3.5	3.5	-157.43	116.7	57.8	186.4	179.6	6.76	27.581	
1,700.0	1,697.6	1,686.5	1,684.9	3.7	3.7	-159.06	123.5	56.7	199.2	192.0	7.20	27.649	
1,800.0	1,797.4	1,785.5	1,783.7	4.0	4.0	-160.50	130.3	55.5	212.1	204.5	7.65	27.724	
1,900.0	1,897.2	1,884.6	1,882.5	4.2	4.2	-161.77	137.1	54.3	225.2	217.1	8.10	27.803	
2,000.0	1,996.9	1,983.6	1,981.3	4.5	4.5	-162.90	143.9	53.2	238.3	229.8	8.55	27.884	
2,100.0	2,096.7	2,082.6	2,080.1	4.7	4.7	-163.91	150.7	52.0	251.6	242.6	9.00	27.963	
2,200.0	2,196.4	2,181.7	2,178.9	5.0	5.0	-164.82	157.5	50.8	264.9	255.4	9.45	28.041	
2,300.0	2,296.2	2,280.7	2,277.6	5.3	5.2	-165.64	164.3	49.7	278.2	268.4	9.90	28.117	
2,400.0	2,395.9	2,379.7	2,376.4	5.5	5.5	-166.39	171.1	48.5	291.7	281.3	10.35	28.190	
2,500.0	2,495.7	2,478.7	2,475.2	5.8	5.7	-167.07	177.9	47.4	305.1	294.3	10.80	28.261	
2,600.0	2,595.5	2,577.8	2,574.0	6.0	6.0	-167.70	184.8	46.2	318.6	307.4	11.25	28.328	
2,700.0	2,695.2	2,676.8	2,672.8	6.3	6.2	-168.27	191.6	45.0	332.2	320.5	11.70	28.392	
2,800.0	2,795.0	2,775.8	2,771.6	6.6	6.5	-168.80	198.4	43.9	345.7	333.6	12.15	28.453	
2,900.0	2,894.7	2,874.9	2,870.4	6.8	6.7	-169.29	205.2	42.7	359.3	346.7	12.60	28.512	
3,000.0	2,994.5	2,973.9	2,969.2	7.1	7.0	-169.74	212.0	41.5	372.9	359.9	13.05	28.568	
3,100.0	3,094.2	3,072.9	3,067.9	7.3	7.2	-170.16	218.8	40.4	386.6	373.0	13.51	28.621	
3,200.0	3,194.0	3,171.9	3,166.7	7.6	7.5	-170.55	225.6	39.2	400.2	386.3	13.96	28.671	
3,300.0	3,293.7	3,271.0	3,265.5	7.9	7.7	-170.92	232.4	38.0	413.9	399.5	14.41	28.719	
3,400.0	3,393.5	3,370.0	3,364.3	8.1	8.0	-171.26	239.2	36.9	427.6	412.7	14.86	28.765	
3,500.0	3,493.3	3,469.0	3,463.1	8.4	8.2	-171.58	246.0	35.7	441.3	426.0	15.32	28.809	
3,600.0	3,593.0	3,568.0	3,561.9	8.7	8.5	-171.89	252.8	34.6	455.0	439.2	15.77	28.851	
3,700.0	3,692.8	3,667.1	3,660.7	8.9	8.7	-172.17	259.7	33.4	468.7	452.5	16.22	28.891	
3,800.0	3,792.5	3,766.1	3,759.4	9.2	9.0	-172.44	266.5	32.2	482.4	465.8	16.68	28.929	
3,900.0	3,892.3	3,865.1	3,858.2	9.4	9.2	-172.69	273.3	31.1	496.2	479.1	17.13	28.966	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-2312B - 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	0.6	33.2	33.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.94	0.6	33.2	33.2	33.0	0.19	177.003	
200.0	200.0	200.0	200.0	0.3	0.3	88.94	0.6	33.2	33.2	32.6	0.64	52.133	
300.0	300.0	300.0	300.0	0.5	0.5	88.94	0.6	33.2	33.2	32.1	1.09	30.568	
400.0	400.0	400.0	400.0	0.8	0.8	88.94	0.6	33.2	33.2	31.7	1.54	21.624	
500.0	500.0	500.0	500.0	1.0	1.0	88.94	0.6	33.2	33.2	31.2	1.99	16.729	
600.0	600.0	600.0	600.0	1.2	1.2	88.94	0.6	33.2	33.2	30.8	2.44	13.641	
700.0	700.0	700.0	700.0	1.4	1.4	-87.42	0.6	33.2	33.1	30.2	2.86	11.585	
736.2	736.1	736.1	736.1	1.5	1.5	-90.00	0.6	33.2	33.1	30.1	3.00	11.005	CC
800.0	799.8	799.8	799.8	1.6	1.7	-96.44	0.6	33.2	33.3	30.0	3.26	10.193	ES
900.0	899.6	899.6	899.6	1.8	1.9	-107.92	0.6	33.2	34.8	31.1	3.69	9.417	
1,000.0	999.4	999.4	999.4	2.0	2.1	-118.10	0.6	33.2	37.5	33.4	4.13	9.086	
1,100.0	1,099.1	1,099.1	1,099.1	2.2	2.3	-126.66	0.6	33.2	41.3	36.7	4.57	9.032	SF
1,200.0	1,198.9	1,197.5	1,197.4	2.5	2.6	-134.54	2.2	33.5	47.3	42.3	5.00	9.443	
1,300.0	1,298.6	1,295.1	1,295.0	2.7	2.8	-141.75	7.1	34.5	57.2	51.7	5.44	10.502	
1,400.0	1,398.4	1,394.1	1,393.7	3.0	3.0	-147.26	13.9	35.9	69.5	63.6	5.88	11.816	
1,500.0	1,498.1	1,493.1	1,492.5	3.2	3.2	-151.10	20.7	37.3	82.3	76.0	6.32	13.020	
1,600.0	1,597.9	1,592.2	1,591.3	3.5	3.5	-153.89	27.4	38.7	95.3	88.6	6.76	14.103	
1,700.0	1,697.6	1,691.2	1,690.1	3.7	3.7	-156.01	34.2	40.1	108.6	101.4	7.20	15.073	
1,800.0	1,797.4	1,790.3	1,788.9	4.0	3.9	-157.67	41.0	41.4	121.9	114.3	7.65	15.941	
1,900.0	1,897.2	1,889.3	1,887.7	4.2	4.2	-159.00	47.7	42.8	135.3	127.2	8.09	16.721	
2,000.0	1,996.9	1,988.4	1,986.5	4.5	4.4	-160.09	54.5	44.2	148.8	140.3	8.54	17.425	
2,100.0	2,096.7	2,087.4	2,085.3	4.7	4.7	-161.00	61.3	45.6	162.3	153.4	8.99	18.061	
2,200.0	2,196.4	2,186.5	2,184.2	5.0	4.9	-161.77	68.0	47.0	175.9	166.5	9.44	18.639	
2,300.0	2,296.2	2,285.5	2,283.0	5.3	5.2	-162.43	74.8	48.3	189.5	179.6	9.89	19.165	
2,400.0	2,395.9	2,384.6	2,381.8	5.5	5.4	-163.00	81.6	49.7	203.1	192.8	10.34	19.646	
2,500.0	2,495.7	2,483.6	2,480.6	5.8	5.6	-163.50	88.4	51.1	216.7	205.9	10.79	20.088	
2,600.0	2,595.5	2,582.7	2,579.4	6.0	5.9	-163.94	95.1	52.5	230.4	219.1	11.24	20.494	
2,700.0	2,695.2	2,681.7	2,678.2	6.3	6.1	-164.33	101.9	53.9	244.0	232.3	11.69	20.870	
2,800.0	2,795.0	2,780.8	2,777.0	6.6	6.4	-164.68	108.7	55.2	257.7	245.5	12.14	21.217	
2,900.0	2,894.7	2,879.8	2,875.8	6.8	6.6	-164.99	115.4	56.6	271.3	258.7	12.60	21.539	
3,000.0	2,994.5	2,978.9	2,974.6	7.1	6.9	-165.28	122.2	58.0	285.0	272.0	13.05	21.839	
3,100.0	3,094.2	3,077.9	3,073.4	7.3	7.1	-165.53	129.0	59.4	298.7	285.2	13.50	22.119	
3,200.0	3,194.0	3,177.0	3,172.3	7.6	7.4	-165.77	135.7	60.8	312.4	298.4	13.96	22.381	
3,300.0	3,293.7	3,276.0	3,271.1	7.9	7.6	-165.98	142.5	62.1	326.1	311.7	14.41	22.626	
3,400.0	3,393.5	3,375.1	3,369.9	8.1	7.9	-166.18	149.3	63.5	339.8	324.9	14.87	22.856	
3,500.0	3,493.3	3,474.1	3,468.7	8.4	8.1	-166.37	156.1	64.9	353.5	338.1	15.32	23.072	
3,600.0	3,593.0	3,573.2	3,567.5	8.7	8.4	-166.54	162.8	66.3	367.2	351.4	15.77	23.276	
3,700.0	3,692.8	3,672.2	3,666.3	8.9	8.6	-166.69	169.6	67.7	380.9	364.6	16.23	23.469	
3,800.0	3,792.5	3,771.3	3,765.1	9.2	8.9	-166.84	176.4	69.0	394.6	377.9	16.68	23.650	
3,900.0	3,892.3	3,870.3	3,863.9	9.4	9.1	-166.98	183.1	70.4	408.3	391.2	17.14	23.822	
4,000.0	3,992.0	3,969.4	3,962.7	9.7	9.4	-167.10	189.9	71.8	422.0	404.4	17.59	23.986	
4,100.0	4,091.8	4,068.4	4,061.5	10.0	9.6	-167.22	196.7	73.2	435.7	417.7	18.05	24.140	
4,200.0	4,191.6	4,167.5	4,160.4	10.2	9.9	-167.33	203.4	74.6	449.4	430.9	18.50	24.288	
4,300.0	4,291.3	4,266.6	4,259.2	10.5	10.1	-167.44	210.2	75.9	463.2	444.2	18.96	24.428	
4,400.0	4,391.1	4,365.6	4,358.0	10.8	10.4	-167.54	217.0	77.3	476.9	457.5	19.42	24.561	
4,500.0	4,490.8	4,464.7	4,456.8	11.0	10.6	-167.63	223.8	78.7	490.6	470.7	19.87	24.688	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3509A - 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	-24.24	74.5	-33.5	81.6				
100.0	100.0	100.0	100.0	0.1	0.1	-24.24	74.5	-33.5	81.6	81.5	0.19	435.048	
200.0	200.0	200.0	200.0	0.3	0.3	-24.24	74.5	-33.5	81.6	81.0	0.64	128.136	
300.0	300.0	300.0	300.0	0.5	0.5	-24.24	74.5	-33.5	81.6	80.6	1.09	75.132	
400.0	400.0	400.0	400.0	0.8	0.8	-24.24	74.5	-33.5	81.6	80.1	1.54	53.148	
500.0	500.0	500.0	500.0	1.0	1.0	-24.24	74.5	-33.5	81.6	79.7	1.99	41.117	
600.0	600.0	600.0	600.0	1.2	1.2	-24.24	74.5	-33.5	81.6	79.2	2.44	33.527	CC, ES
700.0	700.0	700.0	700.0	1.4	1.4	162.76	74.5	-33.5	83.3	80.5	2.86	29.143	
800.0	799.8	799.8	799.8	1.6	1.7	163.74	74.5	-33.5	88.3	85.1	3.27	27.048	
900.0	899.6	899.6	899.6	1.8	1.9	164.92	74.5	-33.5	95.0	91.4	3.68	25.822	
1,000.0	999.4	999.4	999.4	2.0	2.1	165.94	74.5	-33.5	101.8	97.7	4.10	24.801	
1,100.0	1,099.1	1,102.4	1,102.4	2.2	2.3	166.36	72.7	-33.9	107.1	102.5	4.51	23.733	
1,200.0	1,198.9	1,205.5	1,205.3	2.5	2.5	165.74	67.2	-34.9	109.3	104.4	4.90	22.282	
1,300.0	1,298.6	1,305.5	1,305.1	2.7	2.7	164.72	60.4	-36.3	110.1	104.8	5.31	20.755	
1,400.0	1,398.4	1,405.5	1,404.8	3.0	2.9	163.71	53.5	-37.6	111.0	105.3	5.72	19.408	
1,500.0	1,498.1	1,505.4	1,504.5	3.2	3.1	162.72	46.7	-38.9	111.9	105.8	6.14	18.219	
1,600.0	1,597.9	1,605.4	1,604.3	3.5	3.3	161.74	39.8	-40.2	112.9	106.3	6.58	17.166	
1,700.0	1,697.6	1,705.4	1,704.0	3.7	3.5	160.78	33.0	-41.6	113.9	106.9	7.02	16.231	
1,800.0	1,797.4	1,805.4	1,803.7	4.0	3.8	159.84	26.1	-42.9	114.9	107.4	7.46	15.397	
1,900.0	1,897.2	1,905.4	1,903.5	4.2	4.0	158.92	19.3	-44.2	116.0	108.0	7.91	14.651	
2,000.0	1,996.9	2,005.3	2,003.2	4.5	4.3	158.01	12.5	-45.6	117.0	108.7	8.37	13.980	
2,100.0	2,096.7	2,105.3	2,102.9	4.7	4.5	157.12	5.6	-46.9	118.1	109.3	8.83	13.375	
2,200.0	2,196.4	2,205.3	2,202.7	5.0	4.7	156.24	-1.2	-48.2	119.3	110.0	9.30	12.827	
2,300.0	2,296.2	2,305.3	2,302.4	5.3	5.0	155.38	-8.1	-49.6	120.4	110.7	9.77	12.330	
2,400.0	2,395.9	2,405.2	2,402.1	5.5	5.2	154.54	-14.9	-50.9	121.6	111.4	10.24	11.876	
2,500.0	2,495.7	2,505.2	2,501.9	5.8	5.5	153.72	-21.8	-52.2	122.9	112.1	10.72	11.462	
2,600.0	2,595.5	2,605.2	2,601.6	6.0	5.7	152.91	-28.6	-53.6	124.1	112.9	11.20	11.082	
2,700.0	2,695.2	2,705.2	2,701.3	6.3	6.0	152.12	-35.5	-54.9	125.4	113.7	11.68	10.732	
2,800.0	2,795.0	2,805.1	2,801.1	6.6	6.2	151.34	-42.3	-56.2	126.7	114.5	12.17	10.410	
2,900.0	2,894.7	2,905.1	2,900.8	6.8	6.5	150.58	-49.2	-57.5	128.0	115.3	12.65	10.112	
3,000.0	2,994.5	3,005.1	3,000.5	7.1	6.7	149.84	-56.0	-58.9	129.3	116.2	13.15	9.837	
3,100.0	3,094.2	3,105.1	3,100.3	7.3	7.0	149.11	-62.8	-60.2	130.7	117.0	13.64	9.581	
3,200.0	3,194.0	3,205.1	3,200.0	7.6	7.3	148.39	-69.7	-61.5	132.0	117.9	14.13	9.343	
3,300.0	3,293.7	3,305.0	3,299.7	7.9	7.5	147.69	-76.5	-62.9	133.4	118.8	14.63	9.121	
3,400.0	3,393.5	3,405.0	3,399.5	8.1	7.8	147.01	-83.4	-64.2	134.9	119.7	15.13	8.915	
3,500.0	3,493.3	3,505.0	3,499.2	8.4	8.0	146.34	-90.2	-65.5	136.3	120.7	15.63	8.721	
3,600.0	3,593.0	3,605.0	3,598.9	8.7	8.3	145.68	-97.1	-66.9	137.7	121.6	16.13	8.540	
3,700.0	3,692.8	3,704.9	3,698.7	8.9	8.5	145.04	-103.9	-68.2	139.2	122.6	16.63	8.370	
3,800.0	3,792.5	3,804.9	3,798.4	9.2	8.8	144.41	-110.8	-69.5	140.7	123.6	17.14	8.210	
3,900.0	3,892.3	3,904.9	3,898.1	9.4	9.1	143.79	-117.6	-70.9	142.2	124.6	17.65	8.059	
4,000.0	3,992.0	4,004.9	3,997.9	9.7	9.3	143.19	-124.5	-72.2	143.7	125.6	18.15	7.918	
4,100.0	4,091.8	4,104.8	4,097.6	10.0	9.6	142.60	-131.3	-73.5	145.3	126.6	18.66	7.784	
4,200.0	4,191.6	4,204.8	4,197.3	10.2	9.8	142.02	-138.2	-74.8	146.8	127.6	19.17	7.658	
4,300.0	4,291.3	4,304.8	4,297.1	10.5	10.1	141.45	-145.0	-76.2	148.4	128.7	19.69	7.538	
4,400.0	4,391.1	4,404.8	4,396.8	10.8	10.4	140.90	-151.8	-77.5	150.0	129.8	20.20	7.425	
4,500.0	4,490.8	4,504.8	4,496.5	11.0	10.6	140.36	-158.7	-78.8	151.6	130.9	20.71	7.318	
4,600.0	4,590.6	4,604.7	4,596.3	11.3	10.9	139.83	-165.5	-80.2	153.2	131.9	21.23	7.216	
4,700.0	4,690.3	4,704.7	4,696.0	11.6	11.1	139.31	-172.4	-81.5	154.8	133.1	21.74	7.119	
4,800.0	4,790.1	4,804.7	4,795.7	11.8	11.4	138.80	-179.2	-82.8	156.4	134.2	22.26	7.028	
4,900.0	4,889.9	4,904.7	4,895.5	12.1	11.7	138.30	-186.1	-84.2	158.1	135.3	22.78	6.940	
5,000.0	4,989.6	5,004.6	4,995.2	12.3	11.9	137.81	-192.9	-85.5	159.7	136.4	23.30	6.857	
5,100.0	5,089.4	5,104.6	5,094.9	12.6	12.2	137.33	-199.8	-86.8	161.4	137.6	23.81	6.778	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3509A - 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
5,204.4	5,193.5	5,224.4	5,212.8	12.9	12.6	133.10	-219.3	-90.6	158.5	133.8	24.64	6.432	
5,250.0	5,238.8	5,275.2	5,260.8	13.0	12.9	129.33	-235.4	-93.8	155.8	130.7	25.10	6.207	
5,300.0	5,287.7	5,329.3	5,310.0	13.2	13.2	124.64	-257.6	-98.1	154.7	129.0	25.65	6.029	
5,301.7	5,289.4	5,331.1	5,311.6	13.2	13.2	124.47	-258.4	-98.2	154.7	129.0	25.67	6.024	
5,350.0	5,335.5	5,381.8	5,355.2	13.5	13.5	119.55	-283.8	-103.2	155.7	129.4	26.30	5.922	
5,400.0	5,381.5	5,432.8	5,396.3	13.7	13.9	114.25	-313.4	-108.9	159.1	132.1	27.05	5.882	
5,450.0	5,425.6	5,482.3	5,433.2	14.1	14.3	108.96	-345.8	-115.2	164.9	137.0	27.92	5.907	
5,500.0	5,467.1	5,530.5	5,465.9	14.4	14.8	103.84	-380.4	-121.9	173.0	144.1	28.88	5.991	
5,550.0	5,505.8	5,577.3	5,494.5	14.9	15.3	99.01	-416.8	-129.0	183.1	153.2	29.91	6.123	
5,600.0	5,541.3	5,622.9	5,519.1	15.3	15.8	94.54	-454.5	-136.3	195.0	164.0	30.96	6.298	
5,650.0	5,573.2	5,667.5	5,539.7	15.9	16.4	90.45	-493.3	-143.9	208.2	176.2	32.01	6.505	
5,700.0	5,601.4	5,711.2	5,556.6	16.4	16.9	86.76	-532.8	-151.6	222.6	189.6	33.05	6.736	
5,750.0	5,625.4	5,754.0	5,569.8	17.1	17.5	83.44	-572.8	-159.3	237.8	203.8	34.08	6.979	
5,800.0	5,645.1	5,796.1	5,579.5	17.7	18.1	80.48	-613.0	-167.1	253.6	218.5	35.10	7.226	
5,850.0	5,660.3	5,837.6	5,585.8	18.4	18.7	77.83	-653.2	-175.0	269.7	233.6	36.12	7.468	
5,900.0	5,670.9	5,878.6	5,588.8	19.2	19.3	75.48	-693.4	-182.8	286.0	248.8	37.15	7.699	
5,950.0	5,676.8	5,928.0	5,589.1	19.9	20.0	73.53	-741.9	-191.9	301.8	263.5	38.28	7.883	
5,986.2	5,678.0	5,969.1	5,589.1	20.5	20.5	72.82	-782.5	-198.7	311.7	272.4	39.27	7.938	
6,000.0	5,678.0	5,984.9	5,589.1	20.7	20.8	73.08	-798.1	-201.0	315.1	275.4	39.73	7.931	
6,100.0	5,678.0	6,102.1	5,589.1	22.0	22.4	74.40	-914.5	-214.4	334.0	291.0	43.01	7.766	
6,207.9	5,678.0	6,231.9	5,589.0	23.5	24.3	74.92	-1,044.1	-220.9	342.2	295.6	46.52	7.356	
6,300.0	5,678.0	6,329.3	5,589.0	24.9	25.8	74.93	-1,141.5	-221.2	342.4	293.0	49.40	6.930	
6,400.0	5,678.0	6,429.3	5,589.0	26.6	27.5	74.93	-1,241.5	-221.2	342.3	289.7	52.67	6.500	
6,500.0	5,678.0	6,529.3	5,589.0	28.3	29.2	74.93	-1,341.5	-221.2	342.3	286.4	55.99	6.115	
6,600.0	5,678.0	6,629.3	5,589.0	30.0	30.9	74.93	-1,441.5	-221.2	342.3	283.0	59.35	5.768	
6,700.0	5,678.0	6,729.3	5,589.0	31.8	32.6	74.93	-1,541.5	-221.2	342.3	279.6	62.76	5.454	
6,800.0	5,678.0	6,829.3	5,589.0	33.6	34.4	74.93	-1,641.5	-221.1	342.3	276.1	66.20	5.170	
6,900.0	5,678.0	6,929.3	5,589.0	35.3	36.2	74.93	-1,741.5	-221.1	342.3	272.6	69.68	4.913	
7,000.0	5,678.0	7,029.3	5,589.0	37.1	38.0	74.93	-1,841.5	-221.1	342.3	269.1	73.17	4.678	
7,100.0	5,678.0	7,129.3	5,589.0	38.9	39.8	74.93	-1,941.5	-221.1	342.3	265.6	76.69	4.463	
7,200.0	5,678.0	7,229.3	5,589.0	40.8	41.6	74.93	-2,041.5	-221.1	342.3	262.0	80.22	4.266	
7,300.0	5,678.0	7,329.3	5,589.0	42.6	43.4	74.93	-2,141.5	-221.1	342.3	258.5	83.78	4.085	
7,400.0	5,678.0	7,429.3	5,589.0	44.4	45.2	74.93	-2,241.5	-221.1	342.2	254.9	87.34	3.919	
7,500.0	5,678.0	7,529.3	5,589.0	46.3	47.1	74.93	-2,341.5	-221.1	342.2	251.3	90.92	3.764	
7,600.0	5,678.0	7,629.3	5,589.0	48.1	48.9	74.93	-2,441.5	-221.1	342.2	247.7	94.51	3.621	
7,700.0	5,678.0	7,729.3	5,589.0	50.0	50.8	74.93	-2,541.5	-221.1	342.2	244.1	98.11	3.488	
7,800.0	5,678.0	7,829.3	5,589.0	51.8	52.6	74.93	-2,641.5	-221.1	342.2	240.5	101.72	3.364	
7,900.0	5,678.0	7,929.3	5,589.0	53.7	54.5	74.93	-2,741.5	-221.1	342.2	236.9	105.33	3.249	
8,000.0	5,678.0	8,029.3	5,589.0	55.6	56.4	74.93	-2,841.5	-221.1	342.2	233.2	108.96	3.141	
8,100.0	5,678.0	8,129.3	5,589.0	57.4	58.2	74.92	-2,941.5	-221.0	342.2	229.6	112.59	3.039	
8,200.0	5,678.0	8,229.3	5,589.0	59.3	60.1	74.92	-3,041.5	-221.0	342.2	226.0	116.22	2.944	
8,300.0	5,678.0	8,329.3	5,589.0	61.2	62.0	74.92	-3,141.5	-221.0	342.2	222.3	119.86	2.855	
8,400.0	5,678.0	8,429.3	5,589.0	63.0	63.8	74.92	-3,241.5	-221.0	342.2	218.6	123.51	2.770	
8,500.0	5,678.0	8,529.3	5,589.0	64.9	65.7	74.92	-3,341.5	-221.0	342.1	215.0	127.16	2.691	
8,600.0	5,678.0	8,629.3	5,589.0	66.8	67.6	74.92	-3,441.5	-221.0	342.1	211.3	130.81	2.615	
8,700.0	5,678.0	8,729.3	5,589.0	68.7	69.5	74.92	-3,541.5	-221.0	342.1	207.7	134.47	2.544	
8,800.0	5,678.0	8,829.3	5,589.0	70.6	71.4	74.92	-3,641.5	-221.0	342.1	204.0	138.13	2.477	
8,900.0	5,678.0	8,929.3	5,589.0	72.5	73.2	74.92	-3,741.5	-221.0	342.1	200.3	141.79	2.413	
9,000.0	5,678.0	9,029.3	5,589.0	74.4	75.1	74.92	-3,841.5	-221.0	342.1	196.6	145.46	2.352	
9,100.0	5,678.0	9,129.3	5,589.0	76.2	77.0	74.92	-3,941.5	-221.0	342.1	193.0	149.13	2.294	
9,200.0	5,678.0	9,229.3	5,589.0	78.1	78.9	74.92	-4,041.5	-221.0	342.1	189.3	152.80	2.239	
9,300.0	5,678.0	9,329.3	5,589.0	80.0	80.8	74.92	-4,141.5	-221.0	342.1	185.6	156.47	2.186	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3509A - HZ - Plan #2

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
9,400.0	5,678.0	9,429.3	5,589.0	81.9	82.7	74.92	-4,241.5	-220.9	342.1	181.9	160.15	2.136	
9,500.0	5,678.0	9,529.3	5,589.0	83.8	84.6	74.92	-4,341.5	-220.9	342.0	178.2	163.83	2.088	
9,600.0	5,678.0	9,629.3	5,589.0	85.7	86.5	74.92	-4,441.5	-220.9	342.0	174.5	167.51	2.042	
9,700.0	5,678.0	9,729.3	5,589.0	87.6	88.4	74.92	-4,541.5	-220.9	342.0	170.8	171.19	1.998	
9,800.0	5,678.0	9,829.3	5,589.0	89.5	90.3	74.92	-4,641.5	-220.9	342.0	167.1	174.87	1.956	
9,900.0	5,678.0	9,929.3	5,589.0	91.4	92.2	74.92	-4,741.5	-220.9	342.0	163.4	178.56	1.915	
10,000.0	5,678.0	10,029.3	5,589.0	93.3	94.1	74.92	-4,841.5	-220.9	342.0	159.8	182.24	1.877	
10,100.0	5,678.0	10,129.3	5,589.0	95.2	96.0	74.92	-4,941.5	-220.9	342.0	156.1	185.93	1.839	
10,200.0	5,678.0	10,229.3	5,589.0	97.1	97.9	74.92	-5,041.5	-220.9	342.0	152.4	189.62	1.803	
10,300.0	5,678.0	10,329.3	5,589.0	99.0	99.8	74.91	-5,141.5	-220.9	342.0	148.7	193.31	1.769	
10,400.0	5,678.0	10,429.3	5,589.0	100.9	101.7	74.91	-5,241.5	-220.9	342.0	145.0	197.00	1.736	
10,500.0	5,678.0	10,529.3	5,589.0	102.8	103.6	74.91	-5,341.5	-220.9	341.9	141.3	200.70	1.704	
10,600.0	5,678.0	10,629.3	5,589.0	104.7	105.5	74.91	-5,441.5	-220.9	341.9	137.6	204.39	1.673	
10,700.0	5,678.0	10,729.3	5,589.0	106.6	107.4	74.91	-5,541.5	-220.8	341.9	133.8	208.08	1.643	
10,800.0	5,678.0	10,829.3	5,589.0	108.5	109.3	74.91	-5,641.5	-220.8	341.9	130.1	211.78	1.615	
10,900.0	5,678.0	10,929.3	5,589.0	110.4	111.2	74.91	-5,741.5	-220.8	341.9	126.4	215.47	1.587	
11,000.0	5,678.0	11,029.3	5,589.0	112.3	113.1	74.91	-5,841.5	-220.8	341.9	122.7	219.17	1.560	
11,100.0	5,678.0	11,129.3	5,589.0	114.2	115.0	74.91	-5,941.5	-220.8	341.9	119.0	222.87	1.534	
11,200.0	5,678.0	11,229.3	5,589.0	116.1	116.9	74.91	-6,041.5	-220.8	341.9	115.3	226.57	1.509	
11,300.0	5,678.0	11,329.3	5,589.0	118.0	118.8	74.91	-6,141.5	-220.8	341.9	111.6	230.27	1.485	Level 3
11,400.0	5,678.0	11,429.3	5,589.0	120.0	120.7	74.91	-6,241.5	-220.8	341.9	107.9	233.97	1.461	Level 3
11,500.0	5,678.0	11,529.3	5,589.0	121.9	122.6	74.91	-6,341.5	-220.8	341.9	104.2	237.67	1.438	Level 3
11,600.0	5,678.0	11,629.3	5,589.0	123.8	124.5	74.91	-6,441.5	-220.8	341.8	100.5	241.37	1.416	Level 3
11,700.0	5,678.0	11,729.3	5,589.0	125.7	126.4	74.91	-6,541.5	-220.8	341.8	96.8	245.07	1.395	Level 3
11,800.0	5,678.0	11,829.3	5,589.0	127.6	128.3	74.91	-6,641.5	-220.8	341.8	93.1	248.77	1.374	Level 3
11,900.0	5,678.0	11,929.3	5,589.0	129.5	130.2	74.91	-6,741.5	-220.8	341.8	89.3	252.47	1.354	Level 3
12,000.0	5,678.0	12,029.3	5,589.0	131.4	132.1	74.91	-6,841.5	-220.7	341.8	85.6	256.18	1.334	Level 3
12,100.0	5,678.0	12,129.3	5,589.0	133.3	134.0	74.91	-6,941.5	-220.7	341.8	81.9	259.88	1.315	Level 3
12,134.7	5,678.0	12,164.1	5,589.0	134.0	134.7	74.91	-6,976.3	-220.7	341.8	80.6	261.17	1.309	Level 3
12,135.4	5,678.0	12,164.8	5,589.0	134.0	134.7	74.91	-6,977.0	-220.7	341.8	80.6	261.19	1.309	Level 3, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3511A - 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	22.80	75.7	31.8	82.1				
100.0	100.0	100.0	100.0	0.1	0.1	22.80	75.7	31.8	82.1	81.9	0.19	437.287	
200.0	200.0	200.0	200.0	0.3	0.3	22.80	75.7	31.8	82.1	81.4	0.64	128.795	
300.0	300.0	300.0	300.0	0.5	0.5	22.80	75.7	31.8	82.1	81.0	1.09	75.519	
400.0	400.0	400.0	400.0	0.8	0.8	22.80	75.7	31.8	82.1	80.5	1.54	53.421	
500.0	500.0	500.0	500.0	1.0	1.0	22.80	75.7	31.8	82.1	80.1	1.99	41.328	
600.0	600.0	600.0	600.0	1.2	1.2	22.80	75.7	31.8	82.1	79.6	2.44	33.700	CC, ES
700.0	700.0	700.0	700.0	1.4	1.4	-151.13	75.7	31.8	83.6	80.7	2.86	29.242	
800.0	799.8	799.8	799.8	1.6	1.7	-152.72	75.7	31.8	88.2	84.9	3.27	27.008	
900.0	899.6	902.1	902.1	1.8	1.9	-153.99	74.0	32.5	93.1	89.5	3.66	25.445	
1,000.0	999.4	1,004.5	1,004.4	2.0	2.1	-153.73	68.9	34.5	95.3	91.3	4.05	23.559	
1,100.0	1,099.1	1,104.5	1,104.1	2.2	2.3	-152.85	62.4	37.0	96.3	91.9	4.45	21.645	
1,200.0	1,198.9	1,204.5	1,203.9	2.5	2.5	-151.98	55.9	39.5	97.3	92.5	4.87	19.990	
1,300.0	1,298.6	1,304.5	1,303.6	2.7	2.7	-151.14	49.4	42.1	98.4	93.1	5.30	18.559	
1,400.0	1,398.4	1,404.5	1,403.3	3.0	2.9	-150.31	42.9	44.6	99.5	93.7	5.74	17.318	
1,500.0	1,498.1	1,504.5	1,503.1	3.2	3.1	-149.50	36.4	47.1	100.5	94.3	6.19	16.235	
1,600.0	1,597.9	1,604.5	1,602.8	3.5	3.4	-148.70	29.9	49.7	101.6	95.0	6.65	15.286	
1,700.0	1,697.6	1,704.4	1,702.6	3.7	3.6	-147.93	23.4	52.2	102.8	95.6	7.11	14.450	
1,800.0	1,797.4	1,804.4	1,802.3	4.0	3.9	-147.17	16.9	54.7	103.9	96.3	7.58	13.709	
1,900.0	1,897.2	1,904.4	1,902.0	4.2	4.1	-146.43	10.4	57.3	105.1	97.0	8.05	13.048	
2,000.0	1,996.9	2,004.4	2,001.8	4.5	4.4	-145.70	3.9	59.8	106.2	97.7	8.53	12.458	
2,100.0	2,096.7	2,104.4	2,101.5	4.7	4.6	-144.99	-2.6	62.3	107.4	98.4	9.01	11.927	
2,200.0	2,196.4	2,204.4	2,201.3	5.0	4.9	-144.30	-9.1	64.9	108.6	99.1	9.49	11.447	
2,300.0	2,296.2	2,304.3	2,301.0	5.3	5.1	-143.62	-15.6	67.4	109.9	99.9	9.98	11.012	
2,400.0	2,395.9	2,404.3	2,400.7	5.5	5.4	-142.95	-22.1	70.0	111.1	100.6	10.46	10.616	
2,500.0	2,495.7	2,504.3	2,500.5	5.8	5.6	-142.30	-28.6	72.5	112.3	101.4	10.96	10.255	
2,600.0	2,595.5	2,604.3	2,600.2	6.0	5.9	-141.67	-35.1	75.0	113.6	102.2	11.45	9.924	
2,700.0	2,695.2	2,704.3	2,700.0	6.3	6.1	-141.05	-41.6	77.6	114.9	102.9	11.94	9.619	
2,800.0	2,795.0	2,804.3	2,799.7	6.6	6.4	-140.44	-48.1	80.1	116.2	103.7	12.44	9.339	
2,900.0	2,894.7	2,904.2	2,899.4	6.8	6.7	-139.85	-54.6	82.6	117.5	104.5	12.94	9.079	
3,000.0	2,994.5	3,004.2	2,999.2	7.1	6.9	-139.27	-61.1	85.2	118.8	105.4	13.44	8.839	
3,100.0	3,094.2	3,104.2	3,098.9	7.3	7.2	-138.70	-67.6	87.7	120.1	106.2	13.94	8.616	
3,200.0	3,194.0	3,204.2	3,198.7	7.6	7.4	-138.14	-74.1	90.2	121.5	107.0	14.45	8.408	
3,300.0	3,293.7	3,304.2	3,298.4	7.9	7.7	-137.60	-80.6	92.8	122.8	107.9	14.95	8.214	
3,400.0	3,393.5	3,404.2	3,398.1	8.1	8.0	-137.07	-87.1	95.3	124.2	108.7	15.46	8.033	
3,500.0	3,493.3	3,504.2	3,497.9	8.4	8.2	-136.55	-93.6	97.8	125.6	109.6	15.97	7.864	
3,600.0	3,593.0	3,604.1	3,597.6	8.7	8.5	-136.04	-100.1	100.4	127.0	110.5	16.48	7.705	
3,700.0	3,692.8	3,704.1	3,697.4	8.9	8.7	-135.54	-106.6	102.9	128.4	111.4	16.99	7.555	
3,800.0	3,792.5	3,804.1	3,797.1	9.2	9.0	-135.06	-113.1	105.5	129.8	112.3	17.50	7.415	
3,900.0	3,892.3	3,904.1	3,896.9	9.4	9.3	-134.58	-119.6	108.0	131.2	113.2	18.01	7.282	
4,000.0	3,992.0	4,004.1	3,996.6	9.7	9.5	-134.11	-126.1	110.5	132.6	114.1	18.53	7.157	
4,100.0	4,091.8	4,104.1	4,096.3	10.0	9.8	-133.66	-132.6	113.1	134.0	115.0	19.04	7.039	
4,200.0	4,191.6	4,204.0	4,196.1	10.2	10.0	-133.21	-139.0	115.6	135.5	115.9	19.55	6.927	
4,300.0	4,291.3	4,304.0	4,295.8	10.5	10.3	-132.77	-145.5	118.1	136.9	116.8	20.07	6.821	
4,400.0	4,391.1	4,404.0	4,395.6	10.8	10.6	-132.35	-152.0	120.7	138.4	117.8	20.59	6.721	
4,500.0	4,490.8	4,504.0	4,495.3	11.0	10.8	-131.93	-158.5	123.2	139.8	118.7	21.10	6.625	
4,600.0	4,590.6	4,604.0	4,595.0	11.3	11.1	-131.52	-165.0	125.7	141.3	119.7	21.62	6.535	
4,700.0	4,690.3	4,704.0	4,694.8	11.6	11.4	-131.12	-171.5	128.3	142.8	120.6	22.14	6.448	
4,800.0	4,790.1	4,803.9	4,794.5	11.8	11.6	-130.72	-178.0	130.8	144.3	121.6	22.66	6.366	
4,900.0	4,889.9	4,903.9	4,894.3	12.1	11.9	-130.34	-184.5	133.3	145.7	122.6	23.18	6.288	
5,000.0	4,989.6	5,003.9	4,994.0	12.3	12.2	-129.96	-191.0	135.9	147.2	123.5	23.70	6.213	
5,100.0	5,089.4	5,103.9	5,093.7	12.6	12.4	-129.59	-197.5	138.4	148.7	124.5	24.22	6.141	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3511A - 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
5,204.4	5,193.5	5,219.6	5,207.7	12.9	12.8	-125.41	-214.8	145.2	146.6	121.6	25.04	5.857	
5,250.0	5,238.8	5,268.8	5,254.4	13.0	13.1	-121.62	-229.1	150.8	144.7	119.2	25.50	5.675	
5,284.6	5,272.8	5,305.3	5,288.0	13.2	13.3	-118.48	-242.4	155.9	144.3	118.4	25.90	5.571	
5,300.0	5,287.7	5,321.4	5,302.5	13.2	13.4	-117.03	-249.0	158.5	144.4	118.3	26.09	5.533	
5,350.0	5,335.5	5,372.7	5,347.1	13.5	13.7	-112.17	-272.5	167.7	146.0	119.2	26.77	5.452	
5,400.0	5,381.5	5,422.7	5,388.0	13.7	14.1	-107.22	-299.3	178.2	149.6	122.1	27.56	5.429	
5,450.0	5,425.6	5,471.5	5,425.0	14.1	14.5	-102.36	-328.9	189.7	155.2	126.8	28.44	5.459	
5,500.0	5,467.1	5,519.2	5,458.2	14.4	15.0	-97.73	-360.8	202.1	162.7	133.3	29.38	5.538	
5,550.0	5,505.8	5,565.7	5,487.5	14.9	15.5	-93.42	-394.5	215.3	171.8	141.5	30.36	5.659	
5,600.0	5,541.3	5,611.4	5,512.9	15.3	16.0	-89.47	-429.8	229.1	182.3	150.9	31.35	5.814	
5,650.0	5,573.2	5,656.1	5,534.5	15.9	16.6	-85.91	-466.2	243.3	193.8	161.5	32.34	5.993	
5,700.0	5,601.4	5,700.0	5,552.4	16.4	17.2	-82.73	-503.6	257.9	206.3	172.9	33.33	6.188	
5,750.0	5,625.4	5,743.2	5,566.6	17.1	17.8	-79.91	-541.6	272.7	219.3	185.0	34.32	6.390	
5,800.0	5,645.1	5,785.8	5,577.3	17.7	18.5	-77.41	-580.0	287.7	232.7	197.4	35.31	6.590	
5,850.0	5,660.3	5,827.9	5,584.5	18.4	19.1	-75.21	-618.6	302.8	246.4	210.1	36.33	6.783	
5,900.0	5,670.9	5,869.6	5,588.3	19.2	19.8	-73.29	-657.3	317.9	260.1	222.7	37.37	6.961	
5,950.0	5,676.8	5,916.0	5,589.0	19.9	20.5	-71.67	-700.6	334.6	273.5	235.0	38.51	7.104	
5,986.2	5,678.0	5,956.8	5,589.0	20.5	21.0	-71.14	-738.9	348.7	281.9	242.4	39.54	7.130	
6,000.0	5,678.0	5,972.5	5,589.0	20.7	21.3	-71.34	-753.7	353.8	284.8	244.9	39.97	7.126	
6,100.0	5,678.0	6,087.0	5,589.0	22.0	22.9	-72.67	-862.9	387.9	305.6	262.6	42.99	7.108	
6,207.9	5,678.0	6,212.4	5,589.0	23.5	24.9	-73.88	-984.8	417.7	327.3	281.1	46.28	7.073	
6,300.0	5,678.0	6,321.5	5,589.0	24.9	26.6	-74.79	-1,092.1	437.0	343.1	293.5	49.57	6.921	
6,400.0	5,678.0	6,442.1	5,589.0	26.6	28.5	-75.39	-1,211.9	451.2	354.4	301.2	53.26	6.656	
6,500.0	5,678.0	6,564.1	5,589.0	28.3	30.4	-75.66	-1,333.6	457.8	359.7	302.8	56.93	6.318	
6,600.0	5,678.0	6,671.9	5,589.0	30.0	32.1	-75.68	-1,441.5	458.3	360.1	299.7	60.38	5.964	
6,700.0	5,678.0	6,771.9	5,589.0	31.8	33.8	-75.68	-1,541.5	458.3	360.1	296.4	63.76	5.648	
6,800.0	5,678.0	6,871.9	5,589.0	33.6	35.5	-75.68	-1,641.5	458.3	360.1	292.9	67.18	5.361	
6,900.0	5,678.0	6,971.9	5,589.0	35.3	37.2	-75.68	-1,741.5	458.3	360.1	289.5	70.64	5.098	
7,000.0	5,678.0	7,071.9	5,589.0	37.1	38.9	-75.68	-1,841.5	458.3	360.1	286.0	74.12	4.859	
7,100.0	5,678.0	7,171.9	5,589.0	38.9	40.7	-75.68	-1,941.5	458.3	360.1	282.5	77.63	4.639	
7,200.0	5,678.0	7,271.9	5,589.0	40.8	42.4	-75.68	-2,041.5	458.3	360.2	279.0	81.16	4.438	
7,300.0	5,678.0	7,371.9	5,589.0	42.6	44.2	-75.68	-2,141.5	458.4	360.2	275.5	84.70	4.252	
7,400.0	5,678.0	7,471.9	5,589.0	44.4	46.0	-75.68	-2,241.5	458.4	360.2	271.9	88.26	4.081	
7,500.0	5,678.0	7,571.9	5,589.0	46.3	47.8	-75.68	-2,341.5	458.4	360.2	268.3	91.84	3.922	
7,600.0	5,678.0	7,671.9	5,589.0	48.1	49.6	-75.68	-2,441.5	458.4	360.2	264.8	95.42	3.775	
7,700.0	5,678.0	7,771.9	5,589.0	50.0	51.4	-75.68	-2,541.5	458.4	360.2	261.2	99.02	3.637	
7,800.0	5,678.0	7,871.9	5,589.0	51.8	53.2	-75.68	-2,641.5	458.4	360.2	257.6	102.63	3.510	
7,900.0	5,678.0	7,971.9	5,589.0	53.7	55.1	-75.68	-2,741.5	458.4	360.2	254.0	106.25	3.390	
8,000.0	5,678.0	8,071.9	5,589.0	55.6	56.9	-75.68	-2,841.5	458.4	360.2	250.3	109.87	3.279	
8,100.0	5,678.0	8,171.9	5,589.0	57.4	58.7	-75.69	-2,941.5	458.4	360.2	246.7	113.50	3.174	
8,200.0	5,678.0	8,271.9	5,589.0	59.3	60.6	-75.69	-3,041.5	458.4	360.2	243.1	117.14	3.075	
8,300.0	5,678.0	8,371.9	5,589.0	61.2	62.4	-75.69	-3,141.5	458.4	360.2	239.4	120.78	2.982	
8,400.0	5,678.0	8,471.9	5,589.0	63.0	64.3	-75.69	-3,241.5	458.4	360.2	235.8	124.43	2.895	
8,500.0	5,678.0	8,571.9	5,589.0	64.9	66.2	-75.69	-3,341.5	458.4	360.2	232.2	128.09	2.813	
8,600.0	5,678.0	8,671.9	5,589.0	66.8	68.0	-75.69	-3,441.5	458.4	360.3	228.5	131.75	2.734	
8,700.0	5,678.0	8,771.9	5,589.0	68.7	69.9	-75.69	-3,541.5	458.4	360.3	224.9	135.41	2.661	
8,800.0	5,678.0	8,871.9	5,589.0	70.6	71.7	-75.69	-3,641.5	458.4	360.3	221.2	139.07	2.590	
8,900.0	5,678.0	8,971.9	5,589.0	72.5	73.6	-75.69	-3,741.5	458.4	360.3	217.5	142.74	2.524	
9,000.0	5,678.0	9,071.9	5,589.0	74.4	75.5	-75.69	-3,841.5	458.4	360.3	213.9	146.42	2.461	
9,100.0	5,678.0	9,171.9	5,589.0	76.2	77.4	-75.69	-3,941.5	458.5	360.3	210.2	150.09	2.400	
9,200.0	5,678.0	9,271.9	5,589.0	78.1	79.2	-75.69	-4,041.5	458.5	360.3	206.5	153.77	2.343	
9,300.0	5,678.0	9,371.9	5,589.0	80.0	81.1	-75.69	-4,141.5	458.5	360.3	202.9	157.45	2.288	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3511A - 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
9,400.0	5,678.0	9,471.9	5,589.0	81.9	83.0	-75.69	-4,241.5	458.5	360.3	199.2	161.14	2.236	
9,500.0	5,678.0	9,571.9	5,589.0	83.8	84.9	-75.69	-4,341.5	458.5	360.3	195.5	164.82	2.186	
9,600.0	5,678.0	9,671.9	5,589.0	85.7	86.7	-75.69	-4,441.5	458.5	360.3	191.8	168.51	2.138	
9,700.0	5,678.0	9,771.9	5,589.0	87.6	88.6	-75.69	-4,541.5	458.5	360.3	188.1	172.20	2.093	
9,800.0	5,678.0	9,871.9	5,589.0	89.5	90.5	-75.69	-4,641.5	458.5	360.3	184.5	175.89	2.049	
9,900.0	5,678.0	9,971.9	5,589.0	91.4	92.4	-75.69	-4,741.5	458.5	360.4	180.8	179.59	2.007	
10,000.0	5,678.0	10,071.9	5,589.0	93.3	94.3	-75.70	-4,841.5	458.5	360.4	177.1	183.28	1.966	
10,100.0	5,678.0	10,171.9	5,589.0	95.2	96.2	-75.70	-4,941.5	458.5	360.4	173.4	186.98	1.927	
10,200.0	5,678.0	10,271.9	5,589.0	97.1	98.1	-75.70	-5,041.5	458.5	360.4	169.7	190.68	1.890	
10,300.0	5,678.0	10,371.9	5,589.0	99.0	100.0	-75.70	-5,141.5	458.5	360.4	166.0	194.38	1.854	
10,400.0	5,678.0	10,471.9	5,589.0	100.9	101.9	-75.70	-5,241.5	458.5	360.4	162.3	198.08	1.819	
10,500.0	5,678.0	10,571.9	5,589.0	102.8	103.7	-75.70	-5,341.5	458.5	360.4	158.6	201.78	1.786	
10,600.0	5,678.0	10,671.9	5,589.0	104.7	105.6	-75.70	-5,441.5	458.5	360.4	154.9	205.49	1.754	
10,700.0	5,678.0	10,771.9	5,589.0	106.6	107.5	-75.70	-5,541.5	458.5	360.4	151.2	209.19	1.723	
10,800.0	5,678.0	10,871.9	5,589.0	108.5	109.4	-75.70	-5,641.5	458.5	360.4	147.5	212.90	1.693	
10,900.0	5,678.0	10,971.9	5,589.0	110.4	111.3	-75.70	-5,741.5	458.6	360.4	143.8	216.60	1.664	
11,000.0	5,678.0	11,071.9	5,589.0	112.3	113.2	-75.70	-5,841.5	458.6	360.4	140.1	220.31	1.636	
11,100.0	5,678.0	11,171.9	5,589.0	114.2	115.1	-75.70	-5,941.5	458.6	360.4	136.4	224.02	1.609	
11,200.0	5,678.0	11,271.9	5,589.0	116.1	117.0	-75.70	-6,041.5	458.6	360.4	132.7	227.73	1.583	
11,300.0	5,678.0	11,371.9	5,589.0	118.0	118.9	-75.70	-6,141.5	458.6	360.5	129.0	231.44	1.557	
11,400.0	5,678.0	11,471.9	5,589.0	120.0	120.8	-75.70	-6,241.5	458.6	360.5	125.3	235.15	1.533	
11,500.0	5,678.0	11,571.9	5,589.0	121.9	122.7	-75.70	-6,341.5	458.6	360.5	121.6	238.86	1.509	
11,600.0	5,678.0	11,671.9	5,589.0	123.8	124.6	-75.70	-6,441.5	458.6	360.5	117.9	242.57	1.486	Level 3
11,700.0	5,678.0	11,771.9	5,589.0	125.7	126.5	-75.70	-6,541.5	458.6	360.5	114.2	246.28	1.464	Level 3
11,800.0	5,678.0	11,871.9	5,589.0	127.6	128.4	-75.71	-6,641.5	458.6	360.5	110.5	250.00	1.442	Level 3
11,900.0	5,678.0	11,971.9	5,589.0	129.5	130.3	-75.71	-6,741.5	458.6	360.5	106.8	253.71	1.421	Level 3
12,000.0	5,678.0	12,071.9	5,589.0	131.4	132.2	-75.71	-6,841.5	458.6	360.5	103.1	257.43	1.400	Level 3
12,100.0	5,678.0	12,171.9	5,589.0	133.3	134.1	-75.71	-6,941.5	458.6	360.5	99.4	261.14	1.381	Level 3
12,134.7	5,678.0	12,206.7	5,589.0	134.0	134.8	-75.71	-6,976.2	458.6	360.5	98.1	262.43	1.374	Level 3
12,135.4	5,678.0	12,207.4	5,589.0	134.0	134.8	-75.71	-6,976.9	458.6	360.5	98.1	262.46	1.374	Level 3, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3512B - 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	352.531	
200.0	200.0	200.0	200.0	0.3	0.3	88.94	1.2	66.2	66.2	65.5	0.64	103.832	
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	
600.0	600.0	600.0	600.0	1.2	1.2	88.94	1.2	66.2	66.2	63.7	2.44	27.168	
700.0	700.0	700.0	700.0	1.4	1.4	-85.92	1.2	66.2	66.0	63.2	2.86	23.109	
792.2	792.0	792.0	792.0	1.6	1.6	-90.00	1.2	66.2	65.8	62.6	3.23	20.371	CC
800.0	799.8	799.8	799.8	1.6	1.7	-90.46	1.2	66.2	65.9	62.6	3.26	20.173	
900.0	899.6	899.6	899.6	1.8	1.9	-96.49	1.2	66.2	66.3	62.6	3.69	17.954	ES
1,000.0	999.4	999.4	999.4	2.0	2.1	-102.38	1.2	66.2	67.4	63.3	4.13	16.317	
1,100.0	1,099.1	1,098.8	1,098.7	2.2	2.3	-106.60	-0.2	67.1	69.5	64.9	4.55	15.261	
1,200.0	1,198.9	1,198.4	1,198.2	2.5	2.5	-107.84	-4.6	69.8	72.3	67.3	4.97	14.560	
1,300.0	1,298.6	1,298.3	1,297.9	2.7	2.7	-107.63	-10.5	73.5	75.4	70.0	5.40	13.964	
1,400.0	1,398.4	1,398.3	1,397.6	3.0	2.9	-107.44	-16.4	77.2	78.5	72.6	5.85	13.421	
1,500.0	1,498.1	1,498.2	1,497.3	3.2	3.1	-107.26	-22.3	80.9	81.5	75.2	6.30	12.931	
1,600.0	1,597.9	1,598.2	1,597.0	3.5	3.3	-107.09	-28.2	84.7	84.6	77.8	6.77	12.490	
1,700.0	1,697.6	1,698.1	1,696.7	3.7	3.6	-106.94	-34.1	88.4	87.7	80.4	7.25	12.092	
1,800.0	1,797.4	1,798.1	1,796.4	4.0	3.8	-106.80	-40.0	92.1	90.7	83.0	7.73	11.734	
1,900.0	1,897.2	1,898.0	1,896.2	4.2	4.0	-106.67	-45.9	95.8	93.8	85.6	8.22	11.411	
2,000.0	1,996.9	1,998.0	1,995.9	4.5	4.3	-106.54	-51.8	99.5	96.9	88.2	8.72	11.119	
2,100.0	2,096.7	2,097.9	2,095.6	4.7	4.5	-106.42	-57.7	103.2	100.0	90.8	9.21	10.853	
2,200.0	2,196.4	2,197.9	2,195.3	5.0	4.8	-106.31	-63.6	106.9	103.1	93.3	9.71	10.611	
2,300.0	2,296.2	2,297.8	2,295.0	5.3	5.0	-106.21	-69.5	110.7	106.1	95.9	10.21	10.391	
2,400.0	2,395.9	2,397.8	2,394.7	5.5	5.2	-106.11	-75.4	114.4	109.2	98.5	10.72	10.188	
2,500.0	2,495.7	2,497.7	2,494.4	5.8	5.5	-106.02	-81.3	118.1	112.3	101.1	11.23	10.002	
2,600.0	2,595.5	2,597.7	2,594.1	6.0	5.7	-105.93	-87.2	121.8	115.4	103.6	11.73	9.831	
2,700.0	2,695.2	2,697.6	2,693.8	6.3	6.0	-105.85	-93.1	125.5	118.4	106.2	12.24	9.673	
2,800.0	2,795.0	2,797.6	2,793.5	6.6	6.3	-105.77	-99.0	129.2	121.5	108.8	12.76	9.527	
2,900.0	2,894.7	2,897.5	2,893.2	6.8	6.5	-105.69	-104.9	132.9	124.6	111.3	13.27	9.391	
3,000.0	2,994.5	2,997.5	2,993.0	7.1	6.8	-105.62	-110.8	136.6	127.7	113.9	13.78	9.264	
3,100.0	3,094.2	3,097.4	3,092.7	7.3	7.0	-105.55	-116.7	140.4	130.7	116.5	14.30	9.146	
3,200.0	3,194.0	3,197.4	3,192.4	7.6	7.3	-105.49	-122.6	144.1	133.8	119.0	14.81	9.035	
3,300.0	3,293.7	3,297.4	3,292.1	7.9	7.5	-105.43	-128.5	147.8	136.9	121.6	15.33	8.932	
3,400.0	3,393.5	3,397.3	3,391.8	8.1	7.8	-105.37	-134.4	151.5	140.0	124.1	15.84	8.835	
3,500.0	3,493.3	3,497.3	3,491.5	8.4	8.0	-105.31	-140.3	155.2	143.1	126.7	16.36	8.744	
3,600.0	3,593.0	3,597.2	3,591.2	8.7	8.3	-105.26	-146.2	158.9	146.1	129.3	16.88	8.658	
3,700.0	3,692.8	3,697.2	3,690.9	8.9	8.6	-105.21	-152.1	162.6	149.2	131.8	17.40	8.577	
3,800.0	3,792.5	3,797.1	3,790.6	9.2	8.8	-105.16	-158.0	166.4	152.3	134.4	17.92	8.500	
3,900.0	3,892.3	3,897.1	3,890.3	9.4	9.1	-105.11	-163.9	170.1	155.4	136.9	18.44	8.428	
4,000.0	3,992.0	3,997.0	3,990.0	9.7	9.3	-105.06	-169.8	173.8	158.5	139.5	18.96	8.359	
4,100.0	4,091.8	4,097.0	4,089.8	10.0	9.6	-105.02	-175.7	177.5	161.5	142.1	19.48	8.294	
4,200.0	4,191.6	4,196.9	4,189.5	10.2	9.9	-104.97	-181.6	181.2	164.6	144.6	20.00	8.232	
4,300.0	4,291.3	4,296.9	4,289.2	10.5	10.1	-104.93	-187.5	184.9	167.7	147.2	20.52	8.173	
4,400.0	4,391.1	4,396.8	4,388.9	10.8	10.4	-104.89	-193.4	188.6	170.8	149.7	21.04	8.117	
4,500.0	4,490.8	4,496.8	4,488.6	11.0	10.6	-104.85	-199.3	192.3	173.9	152.3	21.56	8.064	
4,600.0	4,590.6	4,596.7	4,588.3	11.3	10.9	-104.82	-205.2	196.1	176.9	154.9	22.08	8.013	
4,700.0	4,690.3	4,696.7	4,688.0	11.6	11.2	-104.78	-211.1	199.8	180.0	157.4	22.60	7.964	
4,800.0	4,790.1	4,796.6	4,787.7	11.8	11.4	-104.75	-217.0	203.5	183.1	160.0	23.13	7.918	
4,900.0	4,889.9	4,896.6	4,887.4	12.1	11.7	-104.71	-222.9	207.2	186.2	162.5	23.65	7.873	
5,000.0	4,989.6	4,996.5	4,987.1	12.3	12.0	-104.68	-228.8	210.9	189.3	165.1	24.17	7.831	

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 Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 Federal #26J-3512B - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 ft

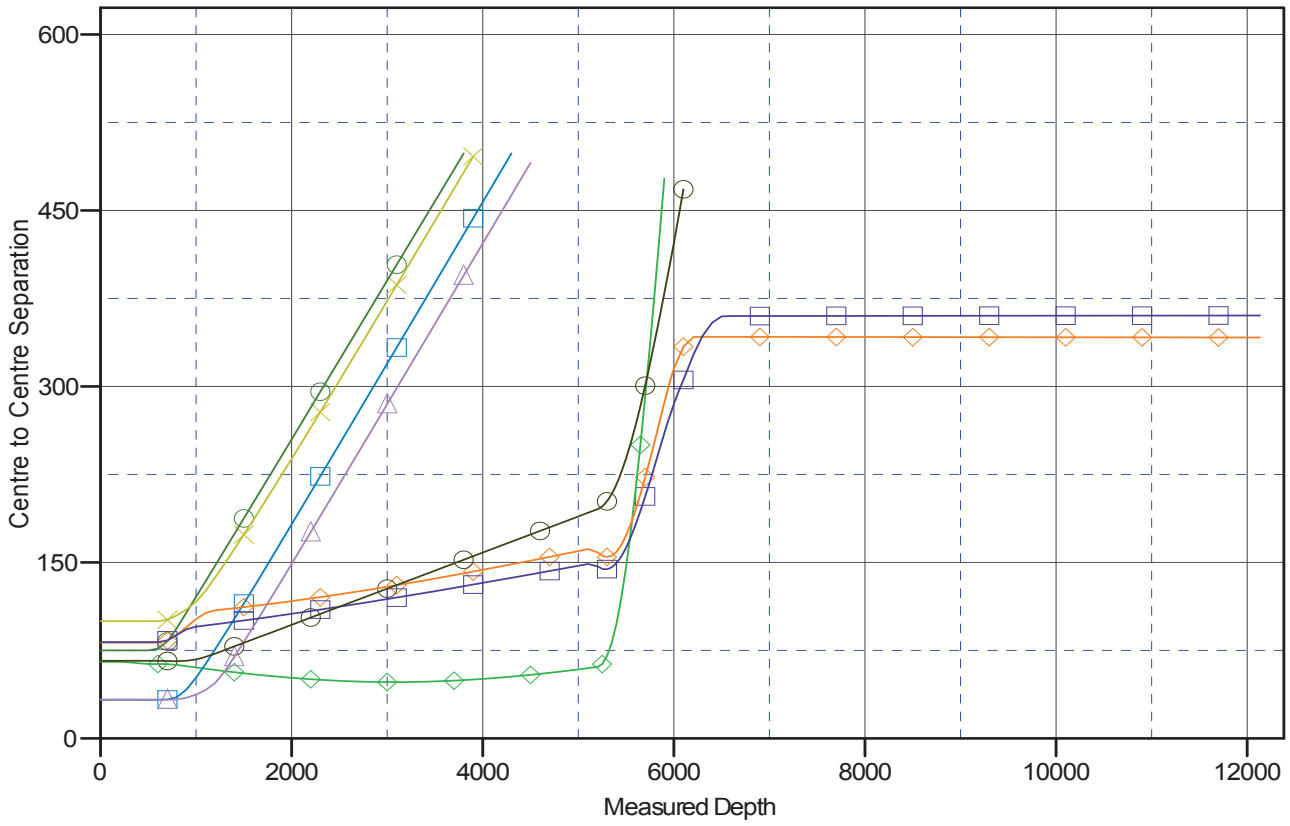
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,089.4	5,096.5	5,086.8	12.6	12.2	-104.65	-234.7	214.6	192.3	167.6	24.69	7.790	
5,204.4	5,193.5	5,200.8	5,190.9	12.9	12.5	-104.62	-240.9	218.5	195.6	170.3	25.24	7.749	SF
5,250.0	5,238.8	5,243.5	5,233.4	13.0	12.6	-104.45	-244.7	220.9	197.8	172.3	25.49	7.759	
5,300.0	5,287.7	5,290.0	5,279.0	13.2	12.8	-104.13	-252.2	225.6	202.1	176.3	25.83	7.828	
5,350.0	5,335.5	5,336.3	5,323.4	13.5	13.0	-103.66	-263.0	232.4	208.5	182.3	26.23	7.949	
5,400.0	5,381.5	5,382.3	5,366.3	13.7	13.2	-103.05	-277.1	241.3	216.8	190.1	26.71	8.117	
5,450.0	5,425.6	5,427.9	5,407.2	14.1	13.5	-102.32	-294.1	252.0	226.9	199.6	27.26	8.321	
5,500.0	5,467.1	5,473.1	5,445.9	14.4	13.8	-101.46	-313.9	264.4	238.7	210.8	27.90	8.554	
5,550.0	5,505.8	5,517.9	5,482.1	14.9	14.2	-100.48	-336.3	278.5	252.1	223.5	28.63	8.805	
5,600.0	5,541.3	5,562.3	5,515.6	15.3	14.6	-99.40	-360.9	294.0	267.0	237.6	29.46	9.065	
5,650.0	5,573.2	5,606.4	5,546.2	15.9	15.0	-98.23	-387.7	310.9	283.3	252.9	30.37	9.328	
5,700.0	5,601.4	5,650.0	5,573.8	16.4	15.5	-96.98	-416.3	328.9	300.7	269.4	31.37	9.586	
5,750.0	5,625.4	5,693.5	5,598.5	17.1	16.0	-95.65	-446.7	348.0	319.2	286.7	32.49	9.826	
5,800.0	5,645.1	5,736.8	5,619.9	17.7	16.6	-94.27	-478.5	368.0	338.6	304.9	33.68	10.053	
5,850.0	5,660.3	5,780.0	5,638.1	18.4	17.2	-92.85	-511.6	388.9	358.8	323.8	34.95	10.265	
5,900.0	5,670.9	5,823.3	5,653.1	19.2	17.8	-91.40	-546.0	410.5	379.5	343.2	36.28	10.461	
5,950.0	5,676.8	5,866.7	5,664.6	19.9	18.4	-89.95	-581.4	432.8	400.6	362.9	37.66	10.638	
5,986.2	5,678.0	5,898.4	5,670.8	20.5	18.9	-88.90	-607.7	449.3	416.1	377.4	38.68	10.756	
6,000.0	5,678.0	5,910.5	5,672.7	20.7	19.1	-89.19	-617.8	455.7	422.0	383.0	39.03	10.813	
6,100.0	5,678.0	6,003.1	5,678.0	22.0	20.7	-90.00	-696.0	504.8	468.0	426.5	41.46	11.288	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor Federal #26J-3510B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4742.1ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	Grid
Reference Well:	Razor Federal #26J-3510B	**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 @ 4742.1ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Razor Federal #26J-3510B
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.08°

Ladder Plot



LEGEND

- Razor #26J-2633L, HZ, Plan #1 V0
- Razor Federal #26J-2309A, HZ, Plan #1 V0
- Razor Federal #26J-2310B, HZ, Plan #1 V0
- Razor Federal #26J-2311A, HZ, Plan #1 V0
- Razor Federal #26J-2312B, HZ, Plan #1 V0
- Razor Federal #26J-3509A, HZ, Plan #2 V0
- Razor Federal #26J-3511A, HZ, Plan #1 V0
- Razor Federal #26J-3512B, HZ, Plan #1 V0