

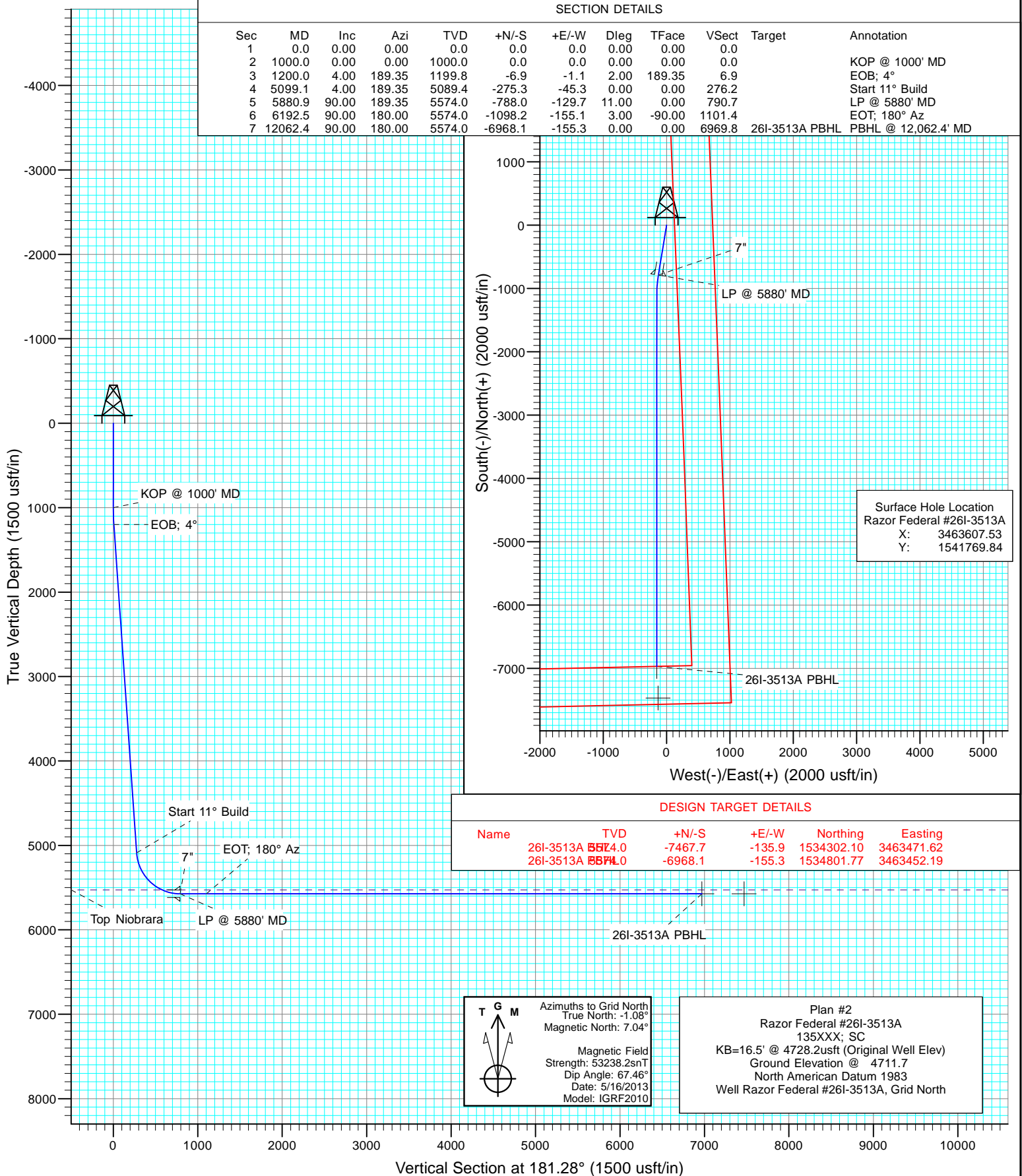


Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor Federal #26I-3513A
Wellbore: HZ
Design: Plan #2



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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0		KOP @ 1000' MD
3	1200.0	4.00	189.35	1199.8	-6.9	-1.1	2.00	189.35	6.9		EOB; 4°
4	5099.1	4.00	189.35	5089.4	-275.3	-45.3	0.00	0.00	276.2		Start 11° Build
5	5880.9	90.00	189.35	5574.0	-788.0	-129.7	11.00	0.00	790.7		LP @ 5880' MD
6	6192.5	90.00	180.00	5574.0	-1098.2	-155.1	3.00	-90.00	1101.4		EOT; 180° Az
7	12062.4	90.00	180.00	5574.0	-6968.1	-155.3	0.00	0.00	6969.8	26I-3513A PBHL	PBHL @ 12,062.4' MD



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor Federal #26I-3513A	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:	1,541,774.28 usft	Latitude:	40° 48' 31.460 N
From:	Lat/Long	Easting:	3,459,642.55 usft	Longitude:	103° 50' 22.312 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.07 °

Well	Razor Federal #26I-3513A					
Well Position	+N/-S	0.0 usft	Northing:	1,541,769.84 usft	Latitude:	40° 48' 30.680 N
	+E/-W	0.0 usft	Easting:	3,463,607.53 usft	Longitude:	103° 49' 30.760 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,711.7 usft

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)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	181.28

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	4.00	189.35	1,199.8	-6.9	-1.1	2.00	2.00	0.00	189.35	
5,099.1	4.00	189.35	5,089.4	-275.3	-45.3	0.00	0.00	0.00	0.00	
5,880.9	90.00	189.35	5,574.0	-788.0	-129.7	11.00	11.00	0.00	0.00	
6,192.5	90.00	180.00	5,574.0	-1,098.2	-155.1	3.00	0.00	-3.00	-90.00	
12,062.4	90.00	180.00	5,574.0	-6,968.1	-155.3	0.00	0.00	0.00	0.00	26I-3513A PBHL

Cathedral Energy Services

Planning Report

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Company:	Whiting Petroleum Corporation	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	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	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000' MD
1,100.0	2.00	189.35	1,100.0	-1.7	-0.3	1.7	2.00	2.00	
1,200.0	4.00	189.35	1,199.8	-6.9	-1.1	6.9	2.00	2.00	EOB; 4°
1,300.0	4.00	189.35	1,299.6	-13.8	-2.3	13.8	0.00	0.00	
1,400.0	4.00	189.35	1,399.4	-20.7	-3.4	20.7	0.00	0.00	
1,500.0	4.00	189.35	1,499.1	-27.5	-4.5	27.6	0.00	0.00	
1,600.0	4.00	189.35	1,598.9	-34.4	-5.7	34.5	0.00	0.00	
1,700.0	4.00	189.35	1,698.6	-41.3	-6.8	41.4	0.00	0.00	
1,800.0	4.00	189.35	1,798.4	-48.2	-7.9	48.3	0.00	0.00	
1,900.0	4.00	189.35	1,898.1	-55.1	-9.1	55.3	0.00	0.00	
2,000.0	4.00	189.35	1,997.9	-61.9	-10.2	62.2	0.00	0.00	
2,100.0	4.00	189.35	2,097.6	-68.8	-11.3	69.1	0.00	0.00	
2,200.0	4.00	189.35	2,197.4	-75.7	-12.5	76.0	0.00	0.00	
2,300.0	4.00	189.35	2,297.2	-82.6	-13.6	82.9	0.00	0.00	
2,400.0	4.00	189.35	2,396.9	-89.5	-14.7	89.8	0.00	0.00	
2,500.0	4.00	189.35	2,496.7	-96.4	-15.9	96.7	0.00	0.00	
2,600.0	4.00	189.35	2,596.4	-103.2	-17.0	103.6	0.00	0.00	
2,700.0	4.00	189.35	2,696.2	-110.1	-18.1	110.5	0.00	0.00	
2,800.0	4.00	189.35	2,795.9	-117.0	-19.3	117.4	0.00	0.00	
2,900.0	4.00	189.35	2,895.7	-123.9	-20.4	124.3	0.00	0.00	
3,000.0	4.00	189.35	2,995.5	-130.8	-21.5	131.2	0.00	0.00	
3,100.0	4.00	189.35	3,095.2	-137.7	-22.7	138.1	0.00	0.00	
3,200.0	4.00	189.35	3,195.0	-144.5	-23.8	145.0	0.00	0.00	
3,300.0	4.00	189.35	3,294.7	-151.4	-24.9	151.9	0.00	0.00	
3,400.0	4.00	189.35	3,394.5	-158.3	-26.1	158.9	0.00	0.00	
3,500.0	4.00	189.35	3,494.2	-165.2	-27.2	165.8	0.00	0.00	
3,600.0	4.00	189.35	3,594.0	-172.1	-28.3	172.7	0.00	0.00	
3,700.0	4.00	189.35	3,693.7	-179.0	-29.5	179.6	0.00	0.00	
3,800.0	4.00	189.35	3,793.5	-185.8	-30.6	186.5	0.00	0.00	
3,900.0	4.00	189.35	3,893.3	-192.7	-31.7	193.4	0.00	0.00	
4,000.0	4.00	189.35	3,993.0	-199.6	-32.9	200.3	0.00	0.00	
4,100.0	4.00	189.35	4,092.8	-206.5	-34.0	207.2	0.00	0.00	
4,200.0	4.00	189.35	4,192.5	-213.4	-35.1	214.1	0.00	0.00	
4,300.0	4.00	189.35	4,292.3	-220.3	-36.3	221.0	0.00	0.00	
4,400.0	4.00	189.35	4,392.0	-227.1	-37.4	227.9	0.00	0.00	
4,500.0	4.00	189.35	4,491.8	-234.0	-38.5	234.8	0.00	0.00	
4,600.0	4.00	189.35	4,591.6	-240.9	-39.7	241.7	0.00	0.00	
4,700.0	4.00	189.35	4,691.3	-247.8	-40.8	248.6	0.00	0.00	
4,800.0	4.00	189.35	4,791.1	-254.7	-41.9	255.5	0.00	0.00	
4,900.0	4.00	189.35	4,890.8	-261.6	-43.1	262.5	0.00	0.00	
5,000.0	4.00	189.35	4,990.6	-268.4	-44.2	269.4	0.00	0.00	
5,099.1	4.00	189.35	5,089.4	-275.3	-45.3	276.2	0.00	0.00	Start 11° Build

Cathedral Energy Services

Planning Report

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Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
5,150.0	9.60	189.35	5,140.0	-281.2	-46.3	282.2	11.00	11.00	
5,200.0	15.10	189.35	5,188.8	-291.8	-48.0	292.8	11.00	11.00	
5,250.0	20.60	189.35	5,236.4	-306.9	-50.5	307.9	11.00	11.00	
5,300.0	26.10	189.35	5,282.2	-326.4	-53.7	327.5	11.00	11.00	
5,350.0	31.60	189.35	5,326.0	-350.2	-57.7	351.4	11.00	11.00	
5,400.0	37.10	189.35	5,367.3	-378.0	-62.2	379.3	11.00	11.00	
5,450.0	42.60	189.35	5,405.7	-409.6	-67.4	411.0	11.00	11.00	
5,500.0	48.10	189.35	5,440.8	-444.7	-73.2	446.2	11.00	11.00	
5,550.0	53.60	189.35	5,472.3	-483.0	-79.5	484.6	11.00	11.00	
5,600.0	59.10	189.35	5,500.0	-524.0	-86.3	525.8	11.00	11.00	
5,650.0	64.60	189.35	5,523.6	-567.5	-93.4	569.4	11.00	11.00	
5,658.0	65.48	189.35	5,527.0	-574.7	-94.6	576.6	11.00	11.00	Top Niobrara
5,700.0	70.10	189.35	5,542.9	-613.0	-100.9	615.1	11.00	11.00	
5,750.0	75.60	189.35	5,557.6	-660.1	-108.7	662.4	11.00	11.00	
5,800.0	81.10	189.35	5,567.7	-708.4	-116.6	710.9	11.00	11.00	
5,850.0	86.60	189.35	5,573.0	-757.5	-124.7	760.1	11.00	11.00	
5,880.9	90.00	189.35	5,574.0	-787.9	-129.7	790.6	11.00	11.00	LP @ 5880' MD - 7"
5,900.0	90.00	188.78	5,574.0	-806.8	-132.7	809.6	3.00	0.01	
6,000.0	90.00	185.78	5,574.0	-906.0	-145.4	909.0	3.00	0.00	
6,100.0	90.00	182.78	5,574.0	-1,005.7	-152.9	1,008.9	3.00	0.00	
6,192.5	90.00	180.00	5,574.0	-1,098.2	-155.1	1,101.4	3.00	0.00	EOT; 180° Az
6,200.0	90.00	180.00	5,574.0	-1,105.7	-155.1	1,108.9	0.00	0.00	
6,300.0	90.00	180.00	5,574.0	-1,205.7	-155.1	1,208.8	0.00	0.00	
6,400.0	90.00	180.00	5,574.0	-1,305.7	-155.1	1,308.8	0.00	0.00	
6,500.0	90.00	180.00	5,574.0	-1,405.7	-155.1	1,408.8	0.00	0.00	
6,600.0	90.00	180.00	5,574.0	-1,505.7	-155.1	1,508.8	0.00	0.00	
6,700.0	90.00	180.00	5,574.0	-1,605.7	-155.1	1,608.7	0.00	0.00	
6,800.0	90.00	180.00	5,574.0	-1,705.7	-155.1	1,708.7	0.00	0.00	
6,900.0	90.00	180.00	5,574.0	-1,805.7	-155.1	1,808.7	0.00	0.00	
7,000.0	90.00	180.00	5,574.0	-1,905.7	-155.1	1,908.7	0.00	0.00	
7,100.0	90.00	180.00	5,574.0	-2,005.7	-155.1	2,008.6	0.00	0.00	
7,200.0	90.00	180.00	5,574.0	-2,105.7	-155.2	2,108.6	0.00	0.00	
7,300.0	90.00	180.00	5,574.0	-2,205.7	-155.2	2,208.6	0.00	0.00	
7,400.0	90.00	180.00	5,574.0	-2,305.7	-155.2	2,308.6	0.00	0.00	
7,500.0	90.00	180.00	5,574.0	-2,405.7	-155.2	2,408.5	0.00	0.00	
7,600.0	90.00	180.00	5,574.0	-2,505.7	-155.2	2,508.5	0.00	0.00	
7,700.0	90.00	180.00	5,574.0	-2,605.7	-155.2	2,608.5	0.00	0.00	
7,800.0	90.00	180.00	5,574.0	-2,705.7	-155.2	2,708.5	0.00	0.00	
7,900.0	90.00	180.00	5,574.0	-2,805.7	-155.2	2,808.4	0.00	0.00	
8,000.0	90.00	180.00	5,574.0	-2,905.7	-155.2	2,908.4	0.00	0.00	
8,100.0	90.00	180.00	5,574.0	-3,005.7	-155.2	3,008.4	0.00	0.00	
8,200.0	90.00	180.00	5,574.0	-3,105.7	-155.2	3,108.4	0.00	0.00	
8,300.0	90.00	180.00	5,574.0	-3,205.7	-155.2	3,208.3	0.00	0.00	
8,400.0	90.00	180.00	5,574.0	-3,305.7	-155.2	3,308.3	0.00	0.00	
8,500.0	90.00	180.00	5,574.0	-3,405.7	-155.2	3,408.3	0.00	0.00	
8,600.0	90.00	180.00	5,574.0	-3,505.7	-155.2	3,508.3	0.00	0.00	
8,700.0	90.00	180.00	5,574.0	-3,605.7	-155.2	3,608.2	0.00	0.00	
8,800.0	90.00	180.00	5,574.0	-3,705.7	-155.2	3,708.2	0.00	0.00	
8,900.0	90.00	180.00	5,574.0	-3,805.7	-155.2	3,808.2	0.00	0.00	
9,000.0	90.00	180.00	5,574.0	-3,905.7	-155.2	3,908.2	0.00	0.00	
9,100.0	90.00	180.00	5,574.0	-4,005.7	-155.2	4,008.1	0.00	0.00	
9,200.0	90.00	180.00	5,574.0	-4,105.7	-155.2	4,108.1	0.00	0.00	

Cathedral Energy Services

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Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,300.0	90.00	180.00	5,574.0	-4,205.7	-155.2	4,208.1	0.00	0.00	
9,400.0	90.00	180.00	5,574.0	-4,305.7	-155.2	4,308.1	0.00	0.00	
9,500.0	90.00	180.00	5,574.0	-4,405.7	-155.2	4,408.0	0.00	0.00	
9,600.0	90.00	180.00	5,574.0	-4,505.7	-155.2	4,508.0	0.00	0.00	
9,700.0	90.00	180.00	5,574.0	-4,605.7	-155.2	4,608.0	0.00	0.00	
9,800.0	90.00	180.00	5,574.0	-4,705.7	-155.3	4,708.0	0.00	0.00	
9,900.0	90.00	180.00	5,574.0	-4,805.7	-155.3	4,807.9	0.00	0.00	
10,000.0	90.00	180.00	5,574.0	-4,905.7	-155.3	4,907.9	0.00	0.00	
10,100.0	90.00	180.00	5,574.0	-5,005.7	-155.3	5,007.9	0.00	0.00	
10,200.0	90.00	180.00	5,574.0	-5,105.7	-155.3	5,107.9	0.00	0.00	
10,300.0	90.00	180.00	5,574.0	-5,205.7	-155.3	5,207.8	0.00	0.00	
10,400.0	90.00	180.00	5,574.0	-5,305.7	-155.3	5,307.8	0.00	0.00	
10,500.0	90.00	180.00	5,574.0	-5,405.7	-155.3	5,407.8	0.00	0.00	
10,600.0	90.00	180.00	5,574.0	-5,505.7	-155.3	5,507.8	0.00	0.00	
10,700.0	90.00	180.00	5,574.0	-5,605.7	-155.3	5,607.7	0.00	0.00	
10,800.0	90.00	180.00	5,574.0	-5,705.7	-155.3	5,707.7	0.00	0.00	
10,900.0	90.00	180.00	5,574.0	-5,805.7	-155.3	5,807.7	0.00	0.00	
11,000.0	90.00	180.00	5,574.0	-5,905.7	-155.3	5,907.7	0.00	0.00	
11,100.0	90.00	180.00	5,574.0	-6,005.7	-155.3	6,007.6	0.00	0.00	
11,200.0	90.00	180.00	5,574.0	-6,105.7	-155.3	6,107.6	0.00	0.00	
11,300.0	90.00	180.00	5,574.0	-6,205.7	-155.3	6,207.6	0.00	0.00	
11,400.0	90.00	180.00	5,574.0	-6,305.7	-155.3	6,307.6	0.00	0.00	
11,500.0	90.00	180.00	5,574.0	-6,405.7	-155.3	6,407.5	0.00	0.00	
11,600.0	90.00	180.00	5,574.0	-6,505.7	-155.3	6,507.5	0.00	0.00	
11,700.0	90.00	180.00	5,574.0	-6,605.7	-155.3	6,607.5	0.00	0.00	
11,800.0	90.00	180.00	5,574.0	-6,705.7	-155.3	6,707.5	0.00	0.00	
11,900.0	90.00	180.00	5,574.0	-6,805.7	-155.3	6,807.4	0.00	0.00	
12,000.0	90.00	180.00	5,574.0	-6,905.7	-155.3	6,907.4	0.00	0.00	
12,062.4	90.00	180.00	5,574.0	-6,968.1	-155.3	6,969.8	0.00	0.00	PBHL @ 12,062.4' MD

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
26I-3513A BHL - hit/miss target - Shape - Point	0.00	0.00	5,574.0	-7,467.7	-135.9	1,534,302.10	3,463,471.62	40° 47' 16.930 N	103° 49' 34.360 W
- plan misses target center by 500.1usft at 12062.4usft MD (5574.0 TVD, -6968.1 N, -155.3 E)									
26I-3513A PBHL - plan hits target center - Point	0.00	0.00	5,574.0	-6,968.1	-155.3	1,534,801.77	3,463,452.19	40° 47' 21.870 N	103° 49' 34.490 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
5,880.9	5,574.0	7"	0	0

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,658.0	5,527.0	Top Niobrara			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,000.0	1,000.0	0.0	0.0	KOP @ 1000' MD	
1,200.0	1,199.8	-6.9	-1.1	EOB; 4°	
5,099.1	5,089.4	-275.3	-45.3	Start 11° Build	
5,880.9	5,574.0	-788.0	-129.7	LP @ 5880' MD	
6,192.5	5,574.0	-1,098.2	-155.1	EOT; 180° Az	
12,062.4	5,574.0	-6,968.1	-155.3	PBHL @ 12,062.4' MD	

Whiting Petroleum Corporation

Weld County, CO

S26-T10N-R58W

Razor Federal #26I-3513A

HZ

Plan #2

Anticollision Report

18 June, 2013

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 10,000.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	6/18/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,062.3	Plan #2 (HZ)	ISCWSA MWD	MWD - ISCWSA

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
S26-T10N-R58W						
Razor #26K-3508B - HZ - Plan #1	6,694.2	7,058.6	1,669.8	1,602.9	24.965	CC
Razor #26K-3508B - HZ - Plan #1	12,062.4	12,426.8	1,670.1	1,402.8	6.247	ES, SF
Razor #26K-3508B - HZ - Plan #2	12,062.4	12,419.7	1,687.2	1,419.9	6.312	CC, ES, SF
Razor Federal #26I-2313A - HZ - Plan #1	835.5	836.0	27.8	24.3	7.916	CC, ES
Razor Federal #26I-2313A - HZ - Plan #1	1,000.0	1,000.1	30.1	25.8	7.034	SF
Razor Federal #26I-2314B - HZ - Plan #1	1,501.8	1,502.4	9.7	3.3	1.515	CC, ES, SF
Razor Federal #26I-2315A - HZ - Plan #1	1,051.3	1,051.8	98.1	93.7	22.054	CC
Razor Federal #26I-2315A - HZ - Plan #1	1,100.0	1,100.4	98.3	93.6	21.119	ES
Razor Federal #26I-2315A - HZ - Plan #1	1,500.0	1,496.8	117.0	110.7	18.447	SF
Razor Federal #26I-2316B - HZ - Plan #1	1,575.2	1,574.8	79.6	72.9	11.919	CC
Razor Federal #26I-2316B - HZ - Plan #1	1,600.0	1,599.3	79.7	72.9	11.734	ES
Razor Federal #26I-2316B - HZ - Plan #1	1,800.0	1,797.4	85.5	77.8	11.108	SF
Razor Federal #26I-3514B - HZ - Plan #1	566.7	566.7	81.6	79.3	35.686	CC
Razor Federal #26I-3514B - HZ - Plan #1	600.0	600.0	81.6	79.1	33.490	ES
Razor Federal #26I-3514B - HZ - Plan #1	12,062.4	12,042.7	360.0	100.6	1.388	Level 3, SF
Razor Federal #26I-3515A - HZ - Plan #1	766.7	766.7	65.4	62.2	20.525	CC
Razor Federal #26I-3515A - HZ - Plan #1	800.0	800.0	65.4	62.0	19.603	ES
Razor Federal #26I-3515A - HZ - Plan #1	12,062.4	12,120.0	679.3	411.4	2.536	SF
Razor Federal #26I-3515A - HZ - Plan #2	600.0	600.0	65.4	62.9	26.839	CC, ES
Razor Federal #26I-3515A - HZ - Plan #2	12,062.4	12,055.8	668.5	400.1	2.490	SF
Razor Federal #26I-3516B - HZ - Plan #1	1,188.0	1,184.5	122.2	117.2	24.561	CC
Razor Federal #26I-3516B - HZ - Plan #1	1,200.0	1,196.1	122.2	117.2	24.350	ES
Razor Federal #26I-3516B - HZ - Plan #1	12,062.4	12,258.7	1,012.9	746.8	3.807	SF
Razor Federal #26I-3516B - HZ - Plan #2	1,196.6	1,193.0	122.2	117.1	24.396	CC
Razor Federal #26I-3516B - HZ - Plan #2	1,200.0	1,196.3	122.2	117.1	24.336	ES
Razor Federal #26I-3516B - HZ - Plan #2	12,062.4	12,156.5	997.4	730.9	3.743	SF
Razor Federal #26J-3509A - HZ - Plan #1	5,791.5	5,656.4	1,287.8	1,253.4	37.409	CC
Razor Federal #26J-3509A - HZ - Plan #1	12,062.4	12,139.2	1,300.3	1,032.7	4.859	ES, SF
Razor Federal #26J-3509A - HZ - Plan #2	961.3	975.2	1,289.2	1,285.1	315.161	CC
Razor Federal #26J-3509A - HZ - Plan #2	12,062.4	12,142.4	1,319.7	1,052.1	4.932	ES, SF
Razor Federal #26J-3510B - HZ - Plan #1	6,192.5	6,245.3	974.4	926.9	20.537	CC
Razor Federal #26J-3510B - HZ - Plan #1	12,062.4	12,115.2	974.4	708.6	3.666	ES, SF
Razor Federal #26J-3510B - HZ - Plan #2	12,062.4	12,113.0	993.8	727.9	3.737	CC, ES, SF
Razor Federal #26J-3511A - HZ - Plan #1	12,062.4	12,185.0	640.3	372.9	2.394	CC, ES, SF
Razor Federal #26J-3511A - HZ - Plan #2	12,062.4	12,179.4	659.9	392.7	2.469	CC, ES, SF
Razor Federal #26J-3512B - HZ - Plan #1	6,829.6	7,081.6	323.2	255.5	4.770	CC
Razor Federal #26J-3512B - HZ - Plan #1	12,062.4	12,314.4	323.3	66.4	1.258	Level 3, ES, SF
Razor Federal #26J-3512B - HZ - Plan #2	12,062.4	12,306.0	342.0	84.1	1.326	Level 3, CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: O-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	25.8	25.8	0.0	0.0	-88.06	85.2	-2,514.3	2,515.7					
100.0	100.0	125.8	125.8	0.1	0.2	-88.06	85.2	-2,514.3	2,515.7	2,515.5	0.25	N/A		
200.0	200.0	225.8	225.8	0.3	0.4	-88.06	85.2	-2,514.3	2,515.7	2,515.0	0.70	3,618.673		
300.0	300.0	325.8	325.8	0.5	0.6	-88.06	85.2	-2,514.3	2,515.7	2,514.6	1.14	2,197.635		
400.0	400.0	425.8	425.8	0.8	0.8	-88.06	85.2	-2,514.3	2,515.7	2,514.1	1.59	1,577.972		
500.0	500.0	525.8	525.8	1.0	1.1	-88.06	85.2	-2,514.3	2,515.7	2,513.7	2.04	1,230.898		
600.0	600.0	625.8	625.8	1.2	1.3	-88.06	85.2	-2,514.3	2,515.7	2,513.2	2.49	1,008.975		
700.0	700.0	725.8	725.8	1.4	1.5	-88.06	85.2	-2,514.3	2,515.7	2,512.8	2.94	854.851		
800.0	800.0	825.8	825.8	1.7	1.7	-88.06	85.2	-2,514.3	2,515.7	2,512.3	3.39	741.573		
900.0	900.0	925.8	925.8	1.9	1.9	-88.06	85.2	-2,514.3	2,515.7	2,511.9	3.84	654.804		
1,000.0	1,000.0	1,025.8	1,025.8	2.1	2.2	-88.06	85.2	-2,514.3	2,515.7	2,511.4	4.29	586.214		
1,100.0	1,100.0	1,149.7	1,149.7	2.3	2.4	82.65	84.8	-2,514.0	2,515.4	2,510.6	4.75	529.283		
1,200.0	1,199.8	1,321.9	1,321.7	2.5	2.8	82.76	77.9	-2,509.8	2,512.0	2,506.7	5.25	478.574		
1,300.0	1,299.6	1,421.8	1,421.4	2.7	3.0	82.78	72.0	-2,506.2	2,507.3	2,501.6	5.63	445.386		
1,400.0	1,399.4	1,521.7	1,521.0	2.9	3.2	82.81	66.0	-2,502.6	2,502.6	2,496.5	6.03	414.984		
1,500.0	1,499.1	1,621.6	1,620.6	3.1	3.4	82.83	60.1	-2,499.0	2,497.8	2,491.4	6.45	387.336		
1,600.0	1,598.9	1,721.5	1,720.3	3.3	3.6	82.86	54.1	-2,495.4	2,493.1	2,486.3	6.88	362.313		
1,700.0	1,698.6	1,821.3	1,819.9	3.5	3.8	82.88	48.2	-2,491.8	2,488.4	2,481.1	7.33	339.710		
1,800.0	1,798.4	1,921.2	1,919.6	3.8	4.0	82.91	42.2	-2,488.2	2,483.7	2,475.9	7.78	319.294		
1,900.0	1,898.1	2,021.1	2,019.2	4.0	4.3	82.93	36.2	-2,484.5	2,479.0	2,470.8	8.24	300.835		
2,000.0	1,997.9	2,121.0	2,118.8	4.2	4.5	82.96	30.3	-2,480.9	2,474.3	2,465.6	8.71	284.113		
2,100.0	2,097.6	2,220.9	2,218.5	4.5	4.8	82.98	24.3	-2,477.3	2,469.6	2,460.4	9.18	268.930		
2,200.0	2,197.4	2,320.8	2,318.1	4.7	5.0	83.01	18.4	-2,473.7	2,464.9	2,455.2	9.66	255.108		
2,300.0	2,297.2	2,420.6	2,417.7	5.0	5.2	83.04	12.4	-2,470.1	2,460.2	2,450.0	10.15	242.491		
2,400.0	2,396.9	2,520.5	2,517.4	5.2	5.5	83.06	6.5	-2,466.5	2,455.4	2,444.8	10.63	230.942		
2,500.0	2,496.7	2,620.4	2,617.0	5.5	5.7	83.09	0.5	-2,462.9	2,450.7	2,439.6	11.12	220.340		
2,600.0	2,596.4	2,720.3	2,716.7	5.7	6.0	83.11	-5.5	-2,459.2	2,446.0	2,434.4	11.62	210.583		
2,700.0	2,696.2	2,820.2	2,816.3	6.0	6.2	83.14	-11.4	-2,455.6	2,441.3	2,429.2	12.11	201.579		
2,800.0	2,795.9	2,920.1	2,915.9	6.2	6.5	83.17	-17.4	-2,452.0	2,436.6	2,424.0	12.61	193.250		
2,900.0	2,895.7	3,019.9	3,015.6	6.5	6.7	83.19	-23.3	-2,448.4	2,431.9	2,418.8	13.11	185.525		
3,000.0	2,895.5	3,119.8	3,115.2	6.7	7.0	83.22	-29.3	-2,444.8	2,427.2	2,413.6	13.61	178.344		
3,100.0	3,095.2	3,219.7	3,214.9	7.0	7.3	83.25	-35.2	-2,441.2	2,422.5	2,408.4	14.11	171.655		
3,200.0	3,195.0	3,319.6	3,314.5	7.2	7.5	83.27	-41.2	-2,437.6	2,417.8	2,403.2	14.62	165.410		
3,300.0	3,294.7	3,419.5	3,414.1	7.5	7.8	83.30	-47.2	-2,433.9	2,413.1	2,398.0	15.12	159.568		
3,400.0	3,394.5	3,519.4	3,513.8	7.8	8.0	83.33	-53.1	-2,430.3	2,408.4	2,392.8	15.63	154.092		
3,500.0	3,494.2	3,619.2	3,613.4	8.0	8.3	83.35	-59.1	-2,426.7	2,403.7	2,387.5	16.14	148.950		
3,600.0	3,594.0	3,719.1	3,713.1	8.3	8.5	83.38	-65.0	-2,423.1	2,399.0	2,382.3	16.65	144.114		
3,700.0	3,693.7	3,819.0	3,812.7	8.5	8.8	83.41	-71.0	-2,419.5	2,394.3	2,377.1	17.16	139.557		
3,800.0	3,793.5	3,918.9	3,912.3	8.8	9.1	83.44	-76.9	-2,415.9	2,389.6	2,371.9	17.67	135.257		
3,900.0	3,893.3	4,018.8	4,012.0	9.0	9.3	83.46	-82.9	-2,412.3	2,384.9	2,366.7	18.18	131.193		
4,000.0	3,993.0	4,118.7	4,111.6	9.3	9.6	83.49	-88.8	-2,408.6	2,380.2	2,361.5	18.69	127.346		
4,100.0	4,092.8	4,218.5	4,211.3	9.6	9.8	83.52	-94.8	-2,405.0	2,375.5	2,356.3	19.20	123.700		
4,200.0	4,192.5	4,318.4	4,310.9	9.8	10.1	83.55	-100.8	-2,401.4	2,370.8	2,351.0	19.72	120.241		
4,300.0	4,292.3	4,418.3	4,410.5	10.1	10.3	83.57	-106.7	-2,397.8	2,366.1	2,345.8	20.23	116.953		
4,400.0	4,392.0	4,518.2	4,510.2	10.3	10.6	83.60	-112.7	-2,394.2	2,361.4	2,340.6	20.75	113.825		
4,500.0	4,491.8	4,600.0	4,570.0	10.6	26.5	61.96	-953.6	-1,931.1	2,344.7	2,308.1	36.56	64.130		
4,600.0	4,591.6	4,600.0	4,570.0	10.9	26.5	61.96	-953.6	-1,931.1	2,292.9	2,256.1	36.82	62.281		
4,700.0	4,691.3	4,600.0	4,570.0	11.1	26.5	61.96	-953.6	-1,931.1	2,244.4	2,207.3	37.07	60.545		
4,800.0	4,791.1	4,600.0	4,570.0	11.4	26.5	61.96	-953.6	-1,931.1	2,199.4	2,162.0	37.32	58.926		
4,900.0	4,890.8	4,600.0	4,570.0	11.7	26.5	61.96	-953.6	-1,931.1	2,158.0	2,120.4	37.58	57.427		
5,000.0	4,990.6	4,600.0	4,570.0	11.9	26.5	61.96	-953.6	-1,931.1	2,120.6	2,082.8	37.83	56.051		
5,099.1	5,089.4	4,600.0	4,570.0	12.2	26.5	61.96	-953.6	-1,931.1	2,087.6	2,049.5	38.09	54.813		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,150.0	5,140.0	6,400.0	5,700.0	12.3	26.5	63.65	-953.6	-1,931.1	2,071.2	2,033.1	38.04	54.451		
5,200.0	5,188.8	6,400.0	5,700.0	12.5	26.5	65.46	-953.6	-1,931.1	2,054.1	2,016.2	37.94	54.140		
5,250.0	5,236.4	6,400.0	5,700.0	12.8	26.5	67.38	-953.6	-1,931.1	2,036.2	1,998.4	37.82	53.841		
5,300.0	5,282.2	6,400.0	5,700.0	13.0	26.5	69.42	-953.6	-1,931.1	2,017.7	1,980.0	37.70	53.520		
5,350.0	5,326.0	6,427.2	5,700.0	13.4	27.0	70.82	-979.3	-1,922.2	1,998.3	1,960.3	38.08	52.475		
5,400.0	5,367.3	6,439.5	5,700.0	13.7	27.2	72.75	-991.0	-1,918.3	1,978.6	1,940.3	38.24	51.741		
5,450.0	5,405.7	6,453.6	5,700.0	14.1	27.4	74.73	-1,004.3	-1,913.9	1,958.4	1,919.9	38.49	50.882		
5,500.0	5,440.8	6,469.4	5,700.0	14.6	27.7	76.76	-1,019.4	-1,909.1	1,937.8	1,899.0	38.84	49.894		
5,550.0	5,472.3	6,500.0	5,700.0	15.1	28.2	78.58	-1,048.7	-1,900.2	1,917.2	1,877.7	39.50	48.532		
5,600.0	5,500.0	6,500.0	5,700.0	15.7	28.2	81.07	-1,048.7	-1,900.2	1,896.3	1,856.5	39.79	47.655		
5,650.0	5,523.6	6,525.5	5,700.0	16.3	28.6	83.15	-1,073.2	-1,893.2	1,875.5	1,834.9	40.57	46.224		
5,700.0	5,542.9	6,546.8	5,700.0	16.9	29.0	85.36	-1,093.7	-1,887.5	1,854.8	1,813.4	41.38	44.826		
5,750.0	5,557.6	6,569.0	5,700.0	17.6	29.3	87.60	-1,115.1	-1,881.9	1,834.3	1,792.1	42.28	43.387		
5,800.0	5,567.7	6,600.0	5,700.0	18.3	29.8	89.81	-1,145.3	-1,874.4	1,814.4	1,771.0	43.38	41.820		
5,850.0	5,573.0	6,600.0	5,700.0	19.1	29.8	92.12	-1,145.3	-1,874.4	1,795.0	1,750.9	44.10	40.700		
5,880.9	5,574.0	6,630.3	5,700.0	19.5	30.3	93.47	-1,174.8	-1,867.6	1,783.2	1,738.2	45.03	39.596		
5,900.0	5,574.0	6,639.5	5,700.0	19.8	30.5	93.47	-1,183.8	-1,865.6	1,776.2	1,730.6	45.58	38.971		
6,000.0	5,574.0	6,700.0	5,700.0	21.1	31.5	93.44	-1,243.1	-1,853.7	1,744.1	1,695.6	48.53	35.942		
6,100.0	5,574.0	6,739.7	5,700.0	22.5	32.1	93.42	-1,282.2	-1,846.9	1,719.4	1,668.2	51.18	33.592		
6,192.5	5,574.0	6,800.0	5,700.0	23.9	33.1	93.41	-1,341.9	-1,838.1	1,703.5	1,649.5	54.02	31.537		
6,200.0	5,574.0	6,800.0	5,700.0	24.0	33.1	93.41	-1,341.9	-1,838.1	1,702.4	1,648.3	54.13	31.449		
6,300.0	5,574.0	6,844.3	5,700.0	25.7	33.8	93.42	-1,385.9	-1,832.9	1,690.4	1,633.9	56.52	29.907		
6,400.0	5,574.0	6,900.0	5,700.0	27.3	34.7	93.43	-1,441.3	-1,827.7	1,681.1	1,622.0	59.13	28.429		
6,500.0	5,574.0	6,950.4	5,700.0	29.0	35.5	93.44	-1,491.6	-1,824.5	1,674.6	1,612.9	61.69	27.145		
6,600.0	5,574.0	7,000.0	5,700.0	30.8	36.3	93.44	-1,541.2	-1,822.6	1,670.8	1,606.6	64.25	26.004		
6,694.2	5,574.0	7,058.6	5,700.0	32.4	37.2	93.44	-1,599.7	-1,821.9	1,669.8	1,602.9	66.89	24.965 CC		
6,700.0	5,574.0	7,064.4	5,700.0	32.5	37.3	93.44	-1,605.5	-1,821.9	1,669.8	1,602.7	67.09	24.891		
6,800.0	5,574.0	7,164.4	5,700.0	34.3	38.9	93.44	-1,705.5	-1,822.0	1,669.8	1,599.3	70.56	23.667		
6,900.0	5,574.0	7,264.4	5,700.0	36.1	40.5	93.44	-1,805.5	-1,822.0	1,669.8	1,595.8	74.06	22.546		
7,000.0	5,574.0	7,364.4	5,700.0	37.9	42.1	93.44	-1,905.5	-1,822.0	1,669.8	1,592.2	77.60	21.518		
7,100.0	5,574.0	7,464.4	5,700.0	39.7	43.8	93.44	-2,005.5	-1,822.0	1,669.8	1,588.7	81.16	20.574		
7,200.0	5,574.0	7,564.4	5,700.0	41.5	45.5	93.44	-2,105.5	-1,822.0	1,669.8	1,585.1	84.75	19.703		
7,300.0	5,574.0	7,664.4	5,700.0	43.4	47.2	93.44	-2,205.5	-1,822.0	1,669.9	1,581.5	88.36	18.899		
7,400.0	5,574.0	7,764.4	5,700.0	45.2	48.9	93.44	-2,305.5	-1,822.0	1,669.9	1,577.9	91.98	18.155		
7,500.0	5,574.0	7,864.4	5,700.0	47.0	50.6	93.44	-2,405.5	-1,822.0	1,669.9	1,574.2	95.62	17.464		
7,600.0	5,574.0	7,964.4	5,700.0	48.9	52.4	93.44	-2,505.5	-1,822.0	1,669.9	1,570.6	99.27	16.821		
7,700.0	5,574.0	8,064.4	5,700.0	50.7	54.1	93.44	-2,605.5	-1,822.0	1,669.9	1,566.9	102.94	16.222		
7,800.0	5,574.0	8,164.4	5,700.0	52.6	55.9	93.44	-2,705.5	-1,822.0	1,669.9	1,563.3	106.62	15.662		
7,900.0	5,574.0	8,264.4	5,700.0	54.5	57.7	93.44	-2,805.5	-1,822.0	1,669.9	1,559.6	110.31	15.139		
8,000.0	5,574.0	8,364.4	5,700.0	56.3	59.4	93.44	-2,905.5	-1,822.1	1,669.9	1,555.9	114.00	14.648		
8,100.0	5,574.0	8,464.4	5,700.0	58.2	61.2	93.44	-3,005.5	-1,822.1	1,669.9	1,552.2	117.71	14.187		
8,200.0	5,574.0	8,564.4	5,700.0	60.1	63.0	93.44	-3,105.5	-1,822.1	1,669.9	1,548.5	121.42	13.753		
8,300.0	5,574.0	8,664.4	5,700.0	61.9	64.8	93.44	-3,205.5	-1,822.1	1,669.9	1,544.8	125.14	13.344		
8,400.0	5,574.0	8,764.4	5,700.0	63.8	66.7	93.44	-3,305.5	-1,822.1	1,669.9	1,541.0	128.87	12.958		
8,500.0	5,574.0	8,864.4	5,700.0	65.7	68.5	93.44	-3,405.5	-1,822.1	1,669.9	1,537.3	132.60	12.594		
8,600.0	5,574.0	8,964.4	5,700.0	67.6	70.3	93.44	-3,505.5	-1,822.1	1,669.9	1,533.6	136.34	12.248		
8,700.0	5,574.0	9,064.4	5,700.0	69.5	72.1	93.44	-3,605.5	-1,822.1	1,669.9	1,529.8	140.08	11.921		
8,800.0	5,574.0	9,164.4	5,700.0	71.3	74.0	93.44	-3,705.5	-1,822.1	1,669.9	1,526.1	143.83	11.611		
8,900.0	5,574.0	9,264.4	5,700.0	73.2	75.8	93.44	-3,805.5	-1,822.1	1,669.9	1,522.3	147.58	11.316		
9,000.0	5,574.0	9,364.4	5,700.0	75.1	77.6	93.44	-3,905.5	-1,822.1	1,669.9	1,518.6	151.33	11.035		
9,100.0	5,574.0	9,464.4	5,700.0	77.0	79.5	93.44	-4,005.5	-1,822.2	1,669.9	1,514.8	155.09	10.767		
9,200.0	5,574.0	9,564.4	5,700.0	78.9	81.3	93.44	-4,105.5	-1,822.2	1,669.9	1,511.1	158.85	10.513		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,300.0	5,574.0	9,664.4	5,700.0	80.8	83.2	93.44	-4,205.5	-1,822.2	1,669.9	1,507.3	162.62	10.269		
9,400.0	5,574.0	9,764.4	5,700.0	82.7	85.0	93.44	-4,305.5	-1,822.2	1,670.0	1,503.6	166.38	10.037		
9,500.0	5,574.0	9,864.4	5,700.0	84.6	86.9	93.44	-4,405.5	-1,822.2	1,670.0	1,499.8	170.15	9.814		
9,600.0	5,574.0	9,964.4	5,700.0	86.5	88.7	93.44	-4,505.5	-1,822.2	1,670.0	1,496.0	173.93	9.601		
9,700.0	5,574.0	10,064.4	5,700.0	88.4	90.6	93.44	-4,605.5	-1,822.2	1,670.0	1,492.3	177.70	9.398		
9,800.0	5,574.0	10,164.4	5,700.0	90.3	92.5	93.44	-4,705.5	-1,822.2	1,670.0	1,488.5	181.48	9.202		
9,900.0	5,574.0	10,264.4	5,700.0	92.2	94.3	93.44	-4,805.5	-1,822.2	1,670.0	1,484.7	185.26	9.014		
10,000.0	5,574.0	10,364.4	5,700.0	94.1	96.2	93.44	-4,905.5	-1,822.2	1,670.0	1,480.9	189.04	8.834		
10,100.0	5,574.0	10,464.4	5,700.0	96.0	98.1	93.44	-5,005.5	-1,822.2	1,670.0	1,477.2	192.82	8.661		
10,200.0	5,574.0	10,564.4	5,700.0	97.9	99.9	93.44	-5,105.5	-1,822.2	1,670.0	1,473.4	196.61	8.494		
10,300.0	5,574.0	10,664.4	5,700.0	99.8	101.8	93.44	-5,205.5	-1,822.3	1,670.0	1,469.6	200.40	8.333		
10,400.0	5,574.0	10,764.4	5,700.0	101.7	103.7	93.44	-5,305.5	-1,822.3	1,670.0	1,465.8	204.18	8.179		
10,500.0	5,574.0	10,864.4	5,700.0	103.6	105.6	93.44	-5,405.5	-1,822.3	1,670.0	1,462.0	207.97	8.030		
10,600.0	5,574.0	10,964.4	5,700.0	105.5	107.4	93.44	-5,505.5	-1,822.3	1,670.0	1,458.2	211.76	7.886		
10,700.0	5,574.0	11,064.4	5,700.0	107.4	109.3	93.44	-5,605.5	-1,822.3	1,670.0	1,454.5	215.56	7.747		
10,800.0	5,574.0	11,164.4	5,700.0	109.3	111.2	93.44	-5,705.5	-1,822.3	1,670.0	1,450.7	219.35	7.613		
10,900.0	5,574.0	11,264.4	5,700.0	111.2	113.1	93.44	-5,805.5	-1,822.3	1,670.0	1,446.9	223.14	7.484		
11,000.0	5,574.0	11,364.4	5,700.0	113.1	115.0	93.44	-5,905.5	-1,822.3	1,670.0	1,443.1	226.94	7.359		
11,100.0	5,574.0	11,464.4	5,700.0	115.0	116.9	93.44	-6,005.5	-1,822.3	1,670.0	1,439.3	230.74	7.238		
11,200.0	5,574.0	11,564.4	5,700.0	116.9	118.7	93.44	-6,105.5	-1,822.3	1,670.0	1,435.5	234.53	7.121		
11,300.0	5,574.0	11,664.4	5,700.0	118.8	120.6	93.44	-6,205.5	-1,822.3	1,670.0	1,431.7	238.33	7.007		
11,400.0	5,574.0	11,764.4	5,700.0	120.7	122.5	93.44	-6,305.5	-1,822.4	1,670.0	1,427.9	242.13	6.897		
11,500.0	5,574.0	11,864.4	5,700.0	122.6	124.4	93.44	-6,405.5	-1,822.4	1,670.0	1,424.1	245.93	6.791		
11,600.0	5,574.0	11,964.4	5,700.0	124.5	126.3	93.44	-6,505.5	-1,822.4	1,670.1	1,420.3	249.74	6.687		
11,700.0	5,574.0	12,064.4	5,700.0	126.4	128.2	93.44	-6,605.5	-1,822.4	1,670.1	1,416.5	253.54	6.587		
11,800.0	5,574.0	12,164.4	5,700.0	128.3	130.1	93.44	-6,705.5	-1,822.4	1,670.1	1,412.7	257.34	6.490		
11,900.0	5,574.0	12,264.4	5,700.0	130.2	132.0	93.44	-6,805.5	-1,822.4	1,670.1	1,408.9	261.14	6.395		
12,000.0	5,574.0	12,364.4	5,700.0	132.1	133.9	93.44	-6,905.5	-1,822.4	1,670.1	1,405.1	264.95	6.303		
12,062.4	5,574.0	12,426.8	5,700.0	133.3	135.0	93.44	-6,967.9	-1,822.4	1,670.1	1,402.8	267.32	6.247 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	25.8	25.8	0.0	0.0	-88.06	85.2	-2,514.3	2,515.7					
100.0	100.0	125.8	125.8	0.1	0.2	-88.06	85.2	-2,514.3	2,515.7	2,515.5	0.25	N/A		
200.0	200.0	225.8	225.8	0.3	0.4	-88.06	85.2	-2,514.3	2,515.7	2,515.0	0.70	3,618.673		
300.0	300.0	325.8	325.8	0.5	0.6	-88.06	85.2	-2,514.3	2,515.7	2,514.6	1.14	2,197.635		
400.0	400.0	425.8	425.8	0.8	0.8	-88.06	85.2	-2,514.3	2,515.7	2,514.1	1.59	1,577.972		
500.0	500.0	525.8	525.8	1.0	1.1	-88.06	85.2	-2,514.3	2,515.7	2,513.7	2.04	1,230.898		
600.0	600.0	625.8	625.8	1.2	1.3	-88.06	85.2	-2,514.3	2,515.7	2,513.2	2.49	1,008.975		
700.0	700.0	725.8	725.8	1.4	1.5	-88.06	85.2	-2,514.3	2,515.7	2,512.8	2.94	854.851		
800.0	800.0	825.8	825.8	1.7	1.7	-88.06	85.2	-2,514.3	2,515.7	2,512.3	3.39	741.573		
900.0	900.0	925.8	925.8	1.9	1.9	-88.06	85.2	-2,514.3	2,515.7	2,511.9	3.84	654.804		
1,000.0	1,000.0	1,025.8	1,025.8	2.1	2.2	-88.06	85.2	-2,514.3	2,515.7	2,511.4	4.29	586.214		
1,100.0	1,100.0	1,149.0	1,149.0	2.3	2.4	82.65	84.9	-2,514.1	2,515.4	2,510.6	4.75	529.450		
1,200.0	1,199.8	1,320.4	1,320.2	2.5	2.8	82.75	78.0	-2,510.0	2,512.1	2,506.8	5.25	478.883		
1,300.0	1,299.6	1,420.3	1,419.8	2.7	3.0	82.78	72.0	-2,506.4	2,507.4	2,501.8	5.63	445.684		
1,400.0	1,399.4	1,520.2	1,519.5	2.9	3.2	82.80	66.0	-2,502.9	2,502.8	2,496.7	6.03	415.263		
1,500.0	1,499.1	1,620.0	1,619.1	3.1	3.4	82.83	60.0	-2,499.3	2,498.1	2,491.7	6.45	387.594		
1,600.0	1,598.9	1,719.9	1,718.8	3.3	3.6	82.85	54.0	-2,495.8	2,493.5	2,486.6	6.88	362.551		
1,700.0	1,698.6	1,819.8	1,818.4	3.5	3.8	82.88	48.0	-2,492.2	2,488.8	2,481.5	7.32	339.928		
1,800.0	1,798.4	1,919.7	1,918.0	3.8	4.0	82.90	42.0	-2,488.7	2,484.1	2,476.4	7.78	319.495		
1,900.0	1,898.1	2,019.6	2,017.7	4.0	4.3	82.92	36.0	-2,485.1	2,479.5	2,471.3	8.24	301.020		
2,000.0	1,997.9	2,119.5	2,117.3	4.2	4.5	82.95	30.0	-2,481.6	2,474.8	2,466.1	8.71	284.285		
2,100.0	2,097.6	2,219.4	2,217.0	4.5	4.8	82.97	24.0	-2,478.0	2,470.2	2,461.0	9.18	269.090		
2,200.0	2,197.4	2,319.3	2,316.6	4.7	5.0	83.00	18.0	-2,474.5	2,465.5	2,455.9	9.66	255.257		
2,300.0	2,297.2	2,419.1	2,416.3	5.0	5.2	83.02	12.0	-2,470.9	2,460.9	2,450.8	10.14	242.631		
2,400.0	2,396.9	2,519.0	2,515.9	5.2	5.5	83.05	6.1	-2,467.4	2,456.3	2,445.6	10.63	231.073		
2,500.0	2,496.7	2,618.9	2,615.5	5.5	5.7	83.07	0.1	-2,463.8	2,451.6	2,440.5	11.12	220.465		
2,600.0	2,596.4	2,718.8	2,715.2	5.7	6.0	83.10	-5.9	-2,460.3	2,447.0	2,435.3	11.61	210.702		
2,700.0	2,696.2	2,818.7	2,814.8	6.0	6.2	83.12	-11.9	-2,456.7	2,442.3	2,430.2	12.11	201.693		
2,800.0	2,795.9	2,918.6	2,914.5	6.2	6.5	83.15	-17.9	-2,453.1	2,437.7	2,425.1	12.61	193.359		
2,900.0	2,895.7	3,018.5	3,014.1	6.5	6.7	83.17	-23.9	-2,449.6	2,433.0	2,419.9	13.11	185.630		
3,000.0	2,895.5	3,118.3	3,113.7	6.7	7.0	83.20	-29.9	-2,446.0	2,428.4	2,414.8	13.61	178.447		
3,100.0	3,095.2	3,218.2	3,213.4	7.0	7.3	83.23	-35.9	-2,442.5	2,423.7	2,409.6	14.11	171.754		
3,200.0	3,195.0	3,318.1	3,313.0	7.2	7.5	83.25	-41.9	-2,438.9	2,419.1	2,404.5	14.62	165.506		
3,300.0	3,294.7	3,418.0	3,412.7	7.5	7.8	83.28	-47.9	-2,435.4	2,414.4	2,399.3	15.12	159.662		
3,400.0	3,394.5	3,517.9	3,512.3	7.8	8.0	83.30	-53.9	-2,431.8	2,409.8	2,394.2	15.63	154.185		
3,500.0	3,494.2	3,617.8	3,612.0	8.0	8.3	83.33	-59.9	-2,428.3	2,405.1	2,389.0	16.14	149.041		
3,600.0	3,594.0	3,717.7	3,711.6	8.3	8.5	83.36	-65.9	-2,424.7	2,400.5	2,383.9	16.65	144.204		
3,700.0	3,693.7	3,817.5	3,811.2	8.5	8.8	83.38	-71.9	-2,421.2	2,395.9	2,378.7	17.16	139.646		
3,800.0	3,793.5	3,917.4	3,910.9	8.8	9.0	83.41	-77.9	-2,417.6	2,391.2	2,373.6	17.67	135.344		
3,900.0	3,893.3	4,017.3	4,010.5	9.0	9.3	83.43	-83.9	-2,414.1	2,386.6	2,368.4	18.18	131.279		
4,000.0	3,993.0	4,117.2	4,110.2	9.3	9.6	83.46	-89.9	-2,410.5	2,381.9	2,363.2	18.69	127.432		
4,100.0	4,092.8	4,217.1	4,209.8	9.6	9.8	83.49	-95.9	-2,407.0	2,377.3	2,358.1	19.20	123.786		
4,200.0	4,192.5	4,317.0	4,309.5	9.8	10.1	83.51	-101.8	-2,403.4	2,372.7	2,352.9	19.72	120.326		
4,300.0	4,292.3	4,416.9	4,409.1	10.1	10.3	83.54	-107.8	-2,399.9	2,368.0	2,347.8	20.23	117.038		
4,400.0	4,392.0	4,516.7	4,508.7	10.3	10.6	83.57	-113.8	-2,396.3	2,363.4	2,342.6	20.75	113.910		
4,500.0	4,491.8	4,616.5	4,608.0	10.6	10.9	83.60	-119.8	-2,392.7	2,358.8	2,338.9	21.26	110.782		
4,600.0	4,591.6	4,716.4	4,707.0	10.9	11.2	83.63	-125.8	-2,389.1	2,354.8	2,334.9	21.77	107.654		
4,700.0	4,691.3	4,816.3	4,806.0	11.2	11.5	83.66	-131.8	-2,385.5	2,350.8	2,330.9	22.28	104.526		
4,800.0	4,791.1	4,916.2	4,905.0	11.5	11.8	83.69	-137.8	-2,381.9	2,346.8	2,326.9	22.79	101.398		
4,900.0	4,890.8	5,016.1	5,004.0	11.8	12.1	83.72	-143.8	-2,378.3	2,342.8	2,322.9	23.30	98.270		
5,000.0	4,990.6	5,116.0	5,103.0	12.1	12.4	83.75	-149.8	-2,374.7	2,338.8	2,318.9	23.81	95.142		
5,099.1	5,089.4	6,400.0	5,700.0	12.2	26.5	61.89	-959.6	-1,942.0	2,099.4	2,061.3	38.09	55.118		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,150.0	5,140.0	6,400.0	5,700.0	12.3	26.5	63.58	-959.6	-1,942.0	2,083.1	2,045.0	38.05	54.746		
5,200.0	5,188.8	6,400.0	5,700.0	12.5	26.5	65.38	-959.6	-1,942.0	2,066.1	2,028.1	37.96	54.424		
5,250.0	5,236.4	6,400.0	5,700.0	12.8	26.5	67.30	-959.6	-1,942.0	2,048.2	2,010.4	37.85	54.113		
5,300.0	5,282.2	6,400.0	5,700.0	13.0	26.5	69.33	-959.6	-1,942.0	2,029.8	1,992.0	37.74	53.780		
5,350.0	5,326.0	6,400.0	5,700.0	13.4	26.5	71.46	-959.6	-1,942.0	2,010.8	1,973.1	37.66	53.390		
5,400.0	5,367.3	6,428.2	5,700.0	13.7	27.0	72.94	-986.4	-1,933.0	1,991.0	1,952.9	38.11	52.247		
5,450.0	5,405.7	6,442.3	5,700.0	14.1	27.2	74.91	-999.8	-1,928.7	1,971.0	1,932.6	38.37	51.368		
5,500.0	5,440.8	6,458.0	5,700.0	14.6	27.5	76.92	-1,014.8	-1,924.0	1,950.6	1,911.9	38.73	50.360		
5,550.0	5,472.3	6,500.0	5,700.0	15.1	28.1	78.49	-1,055.0	-1,912.1	1,930.4	1,890.8	39.58	48.768		
5,600.0	5,500.0	6,500.0	5,700.0	15.7	28.1	80.99	-1,055.0	-1,912.1	1,909.5	1,869.6	39.88	47.881		
5,650.0	5,523.6	6,500.0	5,700.0	16.3	28.1	83.45	-1,055.0	-1,912.1	1,888.9	1,848.6	40.28	46.896		
5,700.0	5,542.9	6,535.3	5,700.0	16.9	28.7	85.43	-1,089.1	-1,902.8	1,868.3	1,827.0	41.30	45.233		
5,750.0	5,557.6	6,557.5	5,700.0	17.6	29.1	87.64	-1,110.6	-1,897.2	1,848.1	1,805.9	42.21	43.783		
5,800.0	5,567.7	6,600.0	5,700.0	18.3	29.8	89.76	-1,151.9	-1,887.3	1,828.5	1,785.0	43.49	42.044		
5,850.0	5,573.0	6,600.0	5,700.0	19.1	29.8	92.08	-1,151.9	-1,887.3	1,809.0	1,764.8	44.21	40.922		
5,880.9	5,574.0	6,600.0	5,700.0	19.5	29.8	93.42	-1,151.9	-1,887.3	1,797.7	1,753.0	44.68	40.234		
5,900.0	5,574.0	6,627.9	5,700.0	19.8	30.2	93.43	-1,179.2	-1,881.3	1,790.6	1,745.1	45.50	39.349		
6,000.0	5,574.0	6,700.0	5,700.0	21.1	31.4	93.42	-1,249.9	-1,867.6	1,759.1	1,710.5	48.62	36.182		
6,100.0	5,574.0	6,727.8	5,700.0	22.5	31.9	93.38	-1,277.4	-1,863.1	1,734.5	1,683.5	51.07	33.963		
6,192.5	5,574.0	6,775.7	5,700.0	23.9	32.6	93.37	-1,324.8	-1,856.1	1,719.0	1,665.3	53.68	32.020		
6,200.0	5,574.0	6,800.0	5,700.0	24.0	33.0	93.38	-1,348.9	-1,853.1	1,718.2	1,664.0	54.20	31.702		
6,300.0	5,574.0	6,832.1	5,700.0	25.7	33.5	93.39	-1,380.7	-1,849.5	1,706.4	1,650.0	56.39	30.263		
6,400.0	5,574.0	6,900.0	5,700.0	27.3	34.6	93.40	-1,448.4	-1,843.8	1,697.6	1,638.4	59.20	28.676		
6,500.0	5,574.0	6,937.7	5,700.0	29.0	35.2	93.40	-1,486.1	-1,841.6	1,691.3	1,629.8	61.54	27.483		
6,600.0	5,574.0	7,000.0	5,700.0	30.8	36.2	93.41	-1,548.3	-1,839.6	1,688.0	1,623.7	64.32	26.245		
6,683.0	5,574.0	7,040.3	5,700.0	32.2	36.8	93.41	-1,588.6	-1,839.4	1,687.3	1,620.8	66.45	25.392		
6,700.0	5,574.0	7,057.3	5,700.0	32.5	37.1	93.41	-1,605.6	-1,839.4	1,687.3	1,620.2	67.03	25.170		
6,800.0	5,574.0	7,157.3	5,700.0	34.3	38.7	93.41	-1,705.6	-1,839.4	1,687.3	1,616.8	70.51	23.931		
6,900.0	5,574.0	7,257.3	5,700.0	36.1	40.3	93.41	-1,805.6	-1,839.4	1,687.3	1,613.3	74.02	22.796		
7,000.0	5,574.0	7,357.3	5,700.0	37.9	42.0	93.41	-1,905.6	-1,839.4	1,687.3	1,609.7	77.56	21.756		
7,100.0	5,574.0	7,457.3	5,700.0	39.7	43.6	93.41	-2,005.6	-1,839.4	1,687.3	1,606.1	81.12	20.799		
7,200.0	5,574.0	7,557.3	5,700.0	41.5	45.3	93.41	-2,105.6	-1,839.4	1,687.3	1,602.6	84.71	19.918		
7,300.0	5,574.0	7,657.3	5,700.0	43.4	47.0	93.41	-2,205.6	-1,839.4	1,687.3	1,598.9	88.32	19.104		
7,400.0	5,574.0	7,757.3	5,700.0	45.2	48.8	93.41	-2,305.6	-1,839.4	1,687.3	1,595.3	91.94	18.351		
7,500.0	5,574.0	7,857.3	5,700.0	47.0	50.5	93.41	-2,405.6	-1,839.4	1,687.3	1,591.7	95.59	17.652		
7,600.0	5,574.0	7,957.3	5,700.0	48.9	52.2	93.41	-2,505.6	-1,839.5	1,687.3	1,588.0	99.24	17.002		
7,700.0	5,574.0	8,057.3	5,700.0	50.7	54.0	93.41	-2,605.6	-1,839.5	1,687.3	1,584.4	102.91	16.396		
7,800.0	5,574.0	8,157.3	5,700.0	52.6	55.8	93.41	-2,705.6	-1,839.5	1,687.3	1,580.7	106.59	15.830		
7,900.0	5,574.0	8,257.3	5,700.0	54.5	57.5	93.41	-2,805.6	-1,839.5	1,687.3	1,577.0	110.28	15.300		
8,000.0	5,574.0	8,357.3	5,700.0	56.3	59.3	93.41	-2,905.6	-1,839.5	1,687.3	1,573.3	113.98	14.803		
8,100.0	5,574.0	8,457.3	5,700.0	58.2	61.1	93.41	-3,005.6	-1,839.5	1,687.3	1,569.6	117.68	14.337		
8,200.0	5,574.0	8,557.3	5,700.0	60.1	62.9	93.41	-3,105.6	-1,839.5	1,687.3	1,565.9	121.40	13.899		
8,300.0	5,574.0	8,657.3	5,700.0	61.9	64.7	93.41	-3,205.6	-1,839.5	1,687.3	1,562.1	125.12	13.485		
8,400.0	5,574.0	8,757.3	5,700.0	63.8	66.6	93.41	-3,305.6	-1,839.5	1,687.3	1,558.4	128.85	13.095		
8,500.0	5,574.0	8,857.3	5,700.0	65.7	68.4	93.41	-3,405.6	-1,839.5	1,687.3	1,554.7	132.58	12.726		
8,600.0	5,574.0	8,957.3	5,700.0	67.6	70.2	93.41	-3,505.6	-1,839.5	1,687.3	1,550.9	136.32	12.377		
8,700.0	5,574.0	9,057.3	5,700.0	69.5	72.0	93.41	-3,605.6	-1,839.5	1,687.3	1,547.2	140.06	12.047		
8,800.0	5,574.0	9,157.3	5,700.0	71.3	73.9	93.41	-3,705.6	-1,839.5	1,687.3	1,543.4	143.81	11.733		
8,900.0	5,574.0	9,257.3	5,700.0	73.2	75.7	93.41	-3,805.6	-1,839.5	1,687.3	1,539.7	147.56	11.434		
9,000.0	5,574.0	9,357.3	5,700.0	75.1	77.6	93.41	-3,905.6	-1,839.5	1,687.3	1,535.9	151.32	11.150		
9,100.0	5,574.0	9,457.3	5,700.0	77.0	79.4	93.41	-4,005.6	-1,839.5	1,687.3	1,532.2	155.08	10.880		
9,200.0	5,574.0	9,557.3	5,700.0	78.9	81.2	93.41	-4,105.6	-1,839.5	1,687.3	1,528.4	158.84	10.622		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26K-3508B - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,300.0	5,574.0	9,657.3	5,700.0	80.8	83.1	93.41	-4,205.6	-1,839.5	1,687.3	1,524.7	162.60	10.376		
9,400.0	5,574.0	9,757.3	5,700.0	82.7	85.0	93.41	-4,305.6	-1,839.5	1,687.3	1,520.9	166.37	10.141		
9,500.0	5,574.0	9,857.3	5,700.0	84.6	86.8	93.41	-4,405.6	-1,839.5	1,687.3	1,517.1	170.14	9.917		
9,600.0	5,574.0	9,957.3	5,700.0	86.5	88.7	93.41	-4,505.6	-1,839.5	1,687.3	1,513.3	173.92	9.702		
9,700.0	5,574.0	10,057.3	5,700.0	88.4	90.5	93.41	-4,605.6	-1,839.5	1,687.3	1,509.6	177.69	9.495		
9,800.0	5,574.0	10,157.3	5,700.0	90.3	92.4	93.40	-4,705.6	-1,839.5	1,687.3	1,505.8	181.47	9.298		
9,900.0	5,574.0	10,257.3	5,700.0	92.2	94.3	93.40	-4,805.6	-1,839.5	1,687.3	1,502.0	185.25	9.108		
10,000.0	5,574.0	10,357.3	5,700.0	94.1	96.1	93.40	-4,905.6	-1,839.5	1,687.3	1,498.2	189.03	8.926		
10,100.0	5,574.0	10,457.3	5,700.0	96.0	98.0	93.40	-5,005.6	-1,839.5	1,687.3	1,494.4	192.82	8.751		
10,200.0	5,574.0	10,557.3	5,700.0	97.9	99.9	93.40	-5,105.6	-1,839.5	1,687.3	1,490.6	196.60	8.582		
10,300.0	5,574.0	10,657.3	5,700.0	99.8	101.8	93.40	-5,205.6	-1,839.5	1,687.2	1,486.9	200.39	8.420		
10,400.0	5,574.0	10,757.3	5,700.0	101.7	103.6	93.40	-5,305.6	-1,839.5	1,687.2	1,483.1	204.18	8.264		
10,500.0	5,574.0	10,857.3	5,700.0	103.6	105.5	93.40	-5,405.6	-1,839.6	1,687.2	1,479.3	207.97	8.113		
10,600.0	5,574.0	10,957.3	5,700.0	105.5	107.4	93.40	-5,505.6	-1,839.6	1,687.2	1,475.5	211.76	7.968		
10,700.0	5,574.0	11,057.3	5,700.0	107.4	109.3	93.40	-5,605.6	-1,839.6	1,687.2	1,471.7	215.55	7.828		
10,800.0	5,574.0	11,157.3	5,700.0	109.3	111.2	93.40	-5,705.6	-1,839.6	1,687.2	1,467.9	219.35	7.692		
10,900.0	5,574.0	11,257.3	5,700.0	111.2	113.0	93.40	-5,805.6	-1,839.6	1,687.2	1,464.1	223.14	7.561		
11,000.0	5,574.0	11,357.3	5,700.0	113.1	114.9	93.40	-5,905.6	-1,839.6	1,687.2	1,460.3	226.94	7.435		
11,100.0	5,574.0	11,457.3	5,700.0	115.0	116.8	93.40	-6,005.6	-1,839.6	1,687.2	1,456.5	230.73	7.313		
11,200.0	5,574.0	11,557.3	5,700.0	116.9	118.7	93.40	-6,105.6	-1,839.6	1,687.2	1,452.7	234.53	7.194		
11,300.0	5,574.0	11,657.3	5,700.0	118.8	120.6	93.40	-6,205.6	-1,839.6	1,687.2	1,448.9	238.33	7.079		
11,400.0	5,574.0	11,757.3	5,700.0	120.7	122.5	93.40	-6,305.6	-1,839.6	1,687.2	1,445.1	242.13	6.968		
11,500.0	5,574.0	11,857.3	5,700.0	122.6	124.4	93.40	-6,405.6	-1,839.6	1,687.2	1,441.3	245.93	6.861		
11,600.0	5,574.0	11,957.3	5,700.0	124.5	126.3	93.40	-6,505.6	-1,839.6	1,687.2	1,437.5	249.73	6.756		
11,700.0	5,574.0	12,057.3	5,700.0	126.4	128.1	93.40	-6,605.6	-1,839.6	1,687.2	1,433.7	253.54	6.655		
11,800.0	5,574.0	12,157.3	5,700.0	128.3	130.0	93.40	-6,705.6	-1,839.6	1,687.2	1,429.9	257.34	6.556		
11,900.0	5,574.0	12,257.3	5,700.0	130.2	131.9	93.40	-6,805.6	-1,839.6	1,687.2	1,426.1	261.14	6.461		
12,000.0	5,574.0	12,357.3	5,700.0	132.1	133.8	93.40	-6,905.6	-1,839.6	1,687.2	1,422.3	264.95	6.368		
12,062.4	5,574.0	12,419.7	5,700.0	133.3	135.0	93.40	-6,968.0	-1,839.6	1,687.2	1,419.9	267.32	6.312	CC, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2313A - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	88.90	0.6	32.3	32.3					
100.0	100.0	100.0	100.0	0.1	0.1	88.90	0.6	32.3	32.3	32.1	0.19	172.086		
200.0	200.0	200.0	200.0	0.3	0.3	88.90	0.6	32.3	32.3	31.7	0.64	50.685		
300.0	300.0	300.0	300.0	0.5	0.5	88.90	0.6	32.3	32.3	31.2	1.09	29.719		
400.0	400.0	400.0	400.0	0.8	0.8	88.90	0.6	32.3	32.3	30.8	1.54	21.023		
500.0	500.0	500.0	500.0	1.0	1.0	88.90	0.6	32.3	32.3	30.3	1.99	16.264		
600.0	600.0	600.5	600.5	1.2	1.2	86.14	2.1	31.4	31.4	29.0	2.43	12.915		
700.0	700.0	700.8	700.7	1.4	1.4	77.00	6.6	28.6	29.3	26.5	2.88	10.174		
800.0	800.0	800.6	800.2	1.7	1.7	63.33	12.5	24.9	27.9	24.5	3.34	8.340		
835.5	835.5	836.0	835.5	1.7	1.8	58.25	14.6	23.6	27.8	24.3	3.51	7.916 CC, ES		
900.0	900.0	900.3	899.7	1.9	1.9	49.08	18.4	21.3	28.1	24.3	3.81	7.387		
1,000.0	1,000.0	1,000.1	999.2	2.1	2.2	35.86	24.4	17.6	30.1	25.8	4.27	7.034 SF		
1,100.0	1,100.0	1,099.7	1,098.6	2.3	2.4	-165.34	30.3	13.9	35.0	30.3	4.71	7.434		
1,200.0	1,199.8	1,199.1	1,197.7	2.5	2.7	-174.44	36.2	10.3	44.6	39.5	5.11	8.720		
1,300.0	1,299.6	1,298.2	1,296.6	2.7	2.9	179.74	42.0	6.7	56.6	51.1	5.52	10.247		
1,400.0	1,399.4	1,397.4	1,395.5	2.9	3.2	175.97	47.9	3.0	69.0	63.0	5.94	11.612		
1,500.0	1,499.1	1,496.5	1,494.4	3.1	3.4	173.36	53.8	-0.6	81.6	75.2	6.36	12.817		
1,600.0	1,598.9	1,595.7	1,593.3	3.3	3.7	171.45	59.7	-4.3	94.3	87.5	6.79	13.878		
1,700.0	1,698.6	1,694.8	1,692.2	3.5	3.9	170.00	65.6	-7.9	107.1	99.8	7.23	14.816		
1,800.0	1,798.4	1,794.0	1,791.1	3.8	4.2	168.85	71.4	-11.5	119.9	112.2	7.66	15.646		
1,900.0	1,898.1	1,893.1	1,890.0	4.0	4.4	167.93	77.3	-15.2	132.8	124.7	8.10	16.385		
2,000.0	1,997.9	1,992.3	1,988.9	4.2	4.7	167.17	83.2	-18.8	145.7	137.1	8.55	17.046		
2,100.0	2,097.6	2,091.4	2,087.8	4.5	4.9	166.53	89.1	-22.5	158.6	149.6	8.99	17.640		
2,200.0	2,197.4	2,190.5	2,186.8	4.7	5.2	165.99	95.0	-26.1	171.6	162.1	9.44	18.175		
2,300.0	2,297.2	2,289.7	2,285.7	5.0	5.4	165.53	100.8	-29.7	184.5	174.6	9.89	18.660		
2,400.0	2,396.9	2,388.8	2,384.6	5.2	5.7	165.12	106.7	-33.4	197.5	187.1	10.34	19.101		
2,500.0	2,496.7	2,488.0	2,483.5	5.5	5.9	164.77	112.6	-37.0	210.5	199.7	10.79	19.504		
2,600.0	2,596.4	2,587.1	2,582.4	5.7	6.2	164.46	118.5	-40.7	223.4	212.2	11.24	19.873		
2,700.0	2,696.2	2,686.3	2,681.3	6.0	6.4	164.18	124.4	-44.3	236.4	224.7	11.70	20.212		
2,800.0	2,795.9	2,785.4	2,780.2	6.2	6.7	163.93	130.3	-47.9	249.4	237.3	12.15	20.524		
2,900.0	2,895.7	2,884.6	2,879.1	6.5	7.0	163.71	136.1	-51.6	262.4	249.8	12.61	20.813		
3,000.0	2,995.5	2,983.7	2,978.0	6.7	7.2	163.50	142.0	-55.2	275.4	262.4	13.06	21.082		
3,100.0	3,095.2	3,082.9	3,076.9	7.0	7.5	163.32	147.9	-58.8	288.4	274.9	13.52	21.331		
3,200.0	3,195.0	3,182.0	3,175.8	7.2	7.7	163.15	153.8	-62.5	301.4	287.5	13.98	21.563		
3,300.0	3,294.7	3,281.2	3,274.7	7.5	8.0	162.99	159.7	-66.1	314.4	300.0	14.44	21.780		
3,400.0	3,394.5	3,380.3	3,373.6	7.8	8.2	162.85	165.5	-69.8	327.5	312.6	14.90	21.983		
3,500.0	3,494.2	3,479.5	3,472.5	8.0	8.5	162.72	171.4	-73.4	340.5	325.1	15.36	22.173		
3,600.0	3,594.0	3,578.6	3,571.4	8.3	8.7	162.60	177.3	-77.0	353.5	337.7	15.81	22.352		
3,700.0	3,693.7	3,677.7	3,670.3	8.5	9.0	162.48	183.2	-80.7	366.5	350.2	16.27	22.520		
3,800.0	3,793.5	3,776.9	3,769.2	8.8	9.2	162.38	189.1	-84.3	379.5	362.8	16.73	22.679		
3,900.0	3,893.3	3,876.0	3,868.1	9.0	9.5	162.28	194.9	-88.0	392.5	375.3	17.19	22.829		
4,000.0	3,993.0	3,975.2	3,967.0	9.3	9.8	162.19	200.8	-91.6	405.6	387.9	17.66	22.970		
4,100.0	4,092.8	4,074.3	4,065.9	9.6	10.0	162.10	206.7	-95.2	418.6	400.5	18.12	23.105		
4,200.0	4,192.5	4,173.5	4,164.9	9.8	10.3	162.02	212.6	-98.9	431.6	413.0	18.58	23.232		
4,300.0	4,292.3	4,272.6	4,263.8	10.1	10.5	161.94	218.5	-102.5	444.6	425.6	19.04	23.353		
4,400.0	4,392.0	4,371.8	4,362.7	10.3	10.8	161.87	224.4	-106.2	457.6	438.1	19.50	23.468		
4,500.0	4,491.8	4,470.9	4,461.6	10.6	11.0	161.80	230.2	-109.8	470.7	450.7	19.96	23.578		
4,600.0	4,591.6	4,570.1	4,560.5	10.9	11.3	161.74	236.1	-113.4	483.7	463.3	20.42	23.682		
4,700.0	4,691.3	4,669.2	4,659.4	11.1	11.5	161.68	242.0	-117.1	496.7	475.8	20.89	23.782		
4,800.0	4,791.1	4,768.4	4,758.3	11.4	11.8	161.62	247.9	-120.7	509.7	488.4	21.35	23.877		
4,900.0	4,890.8	4,867.5	4,857.2	11.7	12.0	161.56	253.8	-124.4	522.8	501.0	21.81	23.968		
5,000.0	4,990.6	4,966.7	4,956.1	11.9	12.3	161.51	259.6	-128.0	535.8	513.5	22.27	24.055		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2313A - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,064.9	5,054.1	12.2	12.6	161.46	265.5	-131.6	548.7	526.0	22.73	24.138	
5,150.0	5,140.0	5,100.3	5,089.4	12.3	12.6	161.16	267.6	-132.9	557.9	535.1	22.71	24.562	
5,200.0	5,188.8	5,131.5	5,120.5	12.5	12.7	160.68	270.2	-134.5	572.7	550.1	22.53	25.423	
5,250.0	5,236.4	5,150.0	5,138.7	12.8	12.8	159.91	272.5	-136.0	593.7	571.6	22.16	26.796	
5,300.0	5,282.2	5,174.2	5,162.5	13.0	12.9	158.86	276.4	-138.4	620.4	598.7	21.68	28.614	
5,350.0	5,326.0	5,200.0	5,187.6	13.4	13.0	157.46	281.5	-141.5	652.1	631.0	21.12	30.884	
5,400.0	5,367.3	5,200.0	5,187.6	13.7	13.0	155.16	281.5	-141.5	688.2	667.7	20.49	33.578	
5,450.0	5,405.7	5,221.5	5,208.2	14.1	13.1	152.44	286.6	-144.7	727.8	707.8	20.01	36.376	
5,500.0	5,440.8	5,232.4	5,218.6	14.6	13.1	148.33	289.5	-146.4	770.5	750.7	19.85	38.812	
5,550.0	5,472.3	5,250.0	5,235.2	15.1	13.2	142.82	294.4	-149.5	815.8	795.5	20.33	40.129	
5,600.0	5,500.0	5,250.0	5,235.2	15.7	13.2	133.00	294.4	-149.5	862.6	840.3	22.27	38.733	
5,650.0	5,523.6	5,250.0	5,235.2	16.3	13.2	117.19	294.4	-149.5	910.7	884.7	25.94	35.110	
5,700.0	5,542.9	5,250.0	5,235.2	16.9	13.2	93.75	294.4	-149.5	959.4	930.0	29.42	32.614	
5,750.0	5,557.6	5,250.0	5,235.2	17.6	13.2	67.81	294.4	-149.5	1,008.4	979.9	28.49	35.400	
5,800.0	5,567.7	5,250.0	5,235.2	18.3	13.2	47.95	294.4	-149.5	1,057.1	1,033.0	24.08	43.907	
5,850.0	5,573.0	5,250.0	5,235.2	19.1	13.2	35.30	294.4	-149.5	1,105.1	1,085.4	19.77	55.889	
5,880.9	5,574.0	5,250.0	5,235.2	19.5	13.2	29.98	294.4	-149.5	1,134.3	1,116.6	17.72	64.019	
5,900.0	5,574.0	5,250.0	5,235.2	19.8	13.2	28.59	294.4	-149.5	1,152.3	1,135.0	17.30	66.610	
6,000.0	5,574.0	5,250.0	5,235.2	21.1	13.2	20.24	294.4	-149.5	1,247.3	1,232.9	14.46	86.289	
6,100.0	5,574.0	5,228.6	5,215.1	22.5	13.1	8.82	288.5	-145.8	1,343.0	1,332.3	10.68	125.751	
6,192.5	5,574.0	5,221.5	5,208.2	23.9	13.1	-1.63	286.6	-144.7	1,432.3	1,422.7	9.63	148.679	
6,200.0	5,574.0	5,220.9	5,207.7	24.0	13.1	-1.64	286.5	-144.6	1,439.5	1,429.9	9.68	148.680	
6,300.0	5,574.0	5,200.0	5,187.6	25.7	13.0	-2.01	281.5	-141.5	1,536.6	1,526.3	10.35	148.413	
6,400.0	5,574.0	5,200.0	5,187.6	27.3	13.0	-2.01	281.5	-141.5	1,633.6	1,622.6	11.02	148.202	
6,500.0	5,574.0	5,200.0	5,187.6	29.0	13.0	-2.01	281.5	-141.5	1,730.9	1,719.2	11.70	147.900	
6,600.0	5,574.0	5,200.0	5,187.6	30.8	13.0	-2.01	281.5	-141.5	1,828.5	1,816.1	12.39	147.551	
6,700.0	5,574.0	5,200.0	5,187.6	32.5	13.0	-2.01	281.5	-141.5	1,926.4	1,913.3	13.09	147.179	
6,800.0	5,574.0	5,200.0	5,187.6	34.3	13.0	-2.01	281.5	-141.5	2,024.4	2,010.7	13.79	146.801	
6,900.0	5,574.0	5,200.0	5,187.6	36.1	13.0	-2.01	281.5	-141.5	2,122.7	2,108.2	14.50	146.427	
7,000.0	5,574.0	5,177.3	5,165.5	37.9	12.9	-2.29	276.9	-138.7	2,220.6	2,205.3	15.23	145.845	
7,100.0	5,574.0	5,173.4	5,161.8	39.7	12.9	-2.33	276.2	-138.3	2,318.9	2,303.0	15.94	145.459	
7,200.0	5,574.0	5,150.0	5,138.7	41.5	12.8	-2.51	272.5	-136.0	2,417.8	2,401.1	16.67	145.011	
7,300.0	5,574.0	5,150.0	5,138.7	43.4	12.8	-2.51	272.5	-136.0	2,516.2	2,498.8	17.39	144.676	
7,400.0	5,574.0	5,150.0	5,138.7	45.2	12.8	-2.51	272.5	-136.0	2,614.7	2,596.6	18.11	144.359	
7,500.0	5,574.0	5,150.0	5,138.7	47.0	12.8	-2.51	272.5	-136.0	2,713.4	2,694.6	18.84	144.060	
7,600.0	5,574.0	5,150.0	5,138.7	48.9	12.8	-2.51	272.5	-136.0	2,812.1	2,792.6	19.56	143.778	
7,700.0	5,574.0	5,150.0	5,138.7	50.7	12.8	-2.51	272.5	-136.0	2,911.0	2,890.7	20.28	143.511	
7,800.0	5,574.0	5,150.0	5,138.7	52.6	12.8	-2.51	272.5	-136.0	3,009.9	2,988.9	21.01	143.260	
7,900.0	5,574.0	5,150.0	5,138.7	54.5	12.8	-2.51	272.5	-136.0	3,108.9	3,087.1	21.74	143.022	
8,000.0	5,574.0	5,150.0	5,138.7	56.3	12.8	-2.51	272.5	-136.0	3,207.9	3,185.4	22.46	142.798	
8,100.0	5,574.0	5,150.0	5,138.7	58.2	12.8	-2.51	272.5	-136.0	3,307.0	3,283.8	23.19	142.585	
8,200.0	5,574.0	5,150.0	5,138.7	60.1	12.8	-2.51	272.5	-136.0	3,406.2	3,382.2	23.92	142.384	
8,300.0	5,574.0	5,150.0	5,138.7	61.9	12.8	-2.51	272.5	-136.0	3,505.4	3,480.7	24.65	142.193	
8,400.0	5,574.0	5,150.0	5,138.7	63.8	12.8	-2.51	272.5	-136.0	3,604.6	3,579.2	25.38	142.012	
8,500.0	5,574.0	5,150.0	5,138.7	65.7	12.8	-2.51	272.5	-136.0	3,703.9	3,677.8	26.11	141.840	
8,600.0	5,574.0	5,150.0	5,138.7	67.6	12.8	-2.51	272.5	-136.0	3,803.2	3,776.4	26.84	141.677	
8,700.0	5,574.0	5,150.0	5,138.7	69.5	12.8	-2.51	272.5	-136.0	3,902.6	3,875.0	27.58	141.521	
8,800.0	5,574.0	5,150.0	5,138.7	71.3	12.8	-2.51	272.5	-136.0	4,002.0	3,973.7	28.31	141.373	
8,900.0	5,574.0	5,150.0	5,138.7	73.2	12.8	-2.51	272.5	-136.0	4,101.4	4,072.4	29.04	141.232	
9,000.0	5,574.0	5,150.0	5,138.7	75.1	12.8	-2.51	272.5	-136.0	4,200.8	4,171.1	29.77	141.097	
9,100.0	5,574.0	5,150.0	5,138.7	77.0	12.8	-2.51	272.5	-136.0	4,300.3	4,269.8	30.51	140.968	
9,200.0	5,574.0	5,127.8	5,116.8	78.9	12.7	-2.60	269.8	-134.3	4,399.4	4,368.1	31.25	140.794	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-2313A - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,574.0	5,126.6	5,115.5	80.8	12.7	-2.60	269.7	-134.2	4,498.8	4,466.8	31.98	140.673	
9,400.0	5,574.0	5,125.4	5,114.4	82.7	12.7	-2.61	269.6	-134.1	4,598.3	4,565.6	32.71	140.558	
9,500.0	5,574.0	5,124.2	5,113.2	84.6	12.7	-2.61	269.4	-134.1	4,697.8	4,664.4	33.45	140.448	
9,600.0	5,574.0	5,123.1	5,112.1	86.5	12.7	-2.61	269.3	-134.0	4,797.3	4,763.2	34.18	140.343	
9,700.0	5,574.0	5,100.3	5,089.4	88.4	12.6	-2.62	267.6	-132.9	4,897.3	4,862.4	34.91	140.272	
9,800.0	5,574.0	5,100.3	5,089.4	90.3	12.6	-2.62	267.6	-132.9	4,996.8	4,961.2	35.65	140.173	
9,900.0	5,574.0	5,100.3	5,089.4	92.2	12.6	-2.62	267.6	-132.9	5,096.4	5,060.0	36.38	140.078	
10,000.0	5,574.0	5,100.3	5,089.4	94.1	12.6	-2.62	267.6	-132.9	5,195.9	5,158.8	37.12	139.987	
10,100.0	5,574.0	5,100.3	5,089.4	96.0	12.6	-2.62	267.6	-132.9	5,295.5	5,257.6	37.85	139.899	
10,200.0	5,574.0	5,100.3	5,089.4	97.9	12.6	-2.62	267.6	-132.9	5,395.1	5,356.5	38.59	139.814	
10,300.0	5,574.0	5,100.3	5,089.4	99.8	12.6	-2.62	267.6	-132.9	5,494.7	5,455.4	39.32	139.733	
10,400.0	5,574.0	5,100.3	5,089.4	101.7	12.6	-2.62	267.6	-132.9	5,594.3	5,554.2	40.06	139.654	
10,500.0	5,574.0	5,100.3	5,089.4	103.6	12.6	-2.62	267.6	-132.9	5,693.9	5,653.1	40.79	139.579	
10,600.0	5,574.0	5,100.3	5,089.4	105.5	12.6	-2.62	267.6	-132.9	5,793.6	5,752.1	41.53	139.506	
10,700.0	5,574.0	5,100.3	5,089.4	107.4	12.6	-2.62	267.6	-132.9	5,893.2	5,851.0	42.26	139.435	
10,800.0	5,574.0	5,100.3	5,089.4	109.3	12.6	-2.62	267.6	-132.9	5,992.9	5,949.9	43.00	139.367	
10,900.0	5,574.0	5,100.3	5,089.4	111.2	12.6	-2.62	267.6	-132.9	6,092.6	6,048.8	43.74	139.302	
11,000.0	5,574.0	5,100.3	5,089.4	113.1	12.6	-2.62	267.6	-132.9	6,192.3	6,147.8	44.47	139.238	
11,100.0	5,574.0	5,100.3	5,089.4	115.0	12.6	-2.62	267.6	-132.9	6,292.0	6,246.8	45.21	139.177	
11,200.0	5,574.0	5,100.3	5,089.4	116.9	12.6	-2.62	267.6	-132.9	6,391.7	6,345.7	45.94	139.117	
11,300.0	5,574.0	5,100.3	5,089.4	118.8	12.6	-2.62	267.6	-132.9	6,491.4	6,444.7	46.68	139.059	
11,400.0	5,574.0	5,100.3	5,089.4	120.7	12.6	-2.62	267.6	-132.9	6,591.1	6,543.7	47.42	139.003	
11,500.0	5,574.0	5,100.3	5,089.4	122.6	12.6	-2.62	267.6	-132.9	6,690.8	6,642.7	48.15	138.949	
11,600.0	5,574.0	5,100.3	5,089.4	124.5	12.6	-2.62	267.6	-132.9	6,790.6	6,741.7	48.89	138.897	
11,700.0	5,574.0	5,100.3	5,089.4	126.4	12.6	-2.62	267.6	-132.9	6,890.3	6,840.7	49.63	138.846	
11,800.0	5,574.0	5,100.3	5,089.4	128.3	12.6	-2.62	267.6	-132.9	6,990.1	6,939.7	50.36	138.796	
11,900.0	5,574.0	5,100.3	5,089.4	130.2	12.6	-2.62	267.6	-132.9	7,089.9	7,038.8	51.10	138.748	
12,000.0	5,574.0	5,100.3	5,089.4	132.1	12.6	-2.62	267.6	-132.9	7,189.6	7,137.8	51.84	138.701	
12,062.4	5,574.0	5,100.3	5,089.4	133.3	12.6	-2.62	267.6	-132.9	7,251.9	7,199.6	52.29	138.673	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2314B - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.92	-74.9	1.4	74.9					
100.0	100.0	100.0	100.0	0.1	0.1	178.92	-74.9	1.4	74.9	74.7	0.19	399.040		
200.0	200.0	200.0	200.0	0.3	0.3	178.92	-74.9	1.4	74.9	74.3	0.64	117.530		
300.0	300.0	300.0	300.0	0.5	0.5	178.92	-74.9	1.4	74.9	73.8	1.09	68.914		
400.0	400.0	400.0	400.0	0.8	0.8	178.92	-74.9	1.4	74.9	73.4	1.54	48.749		
500.0	500.0	500.0	500.0	1.0	1.0	178.92	-74.9	1.4	74.9	72.9	1.99	37.714		
600.0	600.0	600.0	600.0	1.2	1.2	178.92	-74.9	1.4	74.9	72.5	2.44	30.752		
700.0	700.0	700.0	700.0	1.4	1.4	178.92	-74.9	1.4	74.9	72.0	2.88	25.960		
800.0	800.0	802.5	802.5	1.7	1.7	179.35	-73.1	0.8	73.2	69.8	3.34	21.910		
900.0	900.0	904.7	904.5	1.9	1.9	-179.22	-68.0	-0.9	68.1	64.3	3.80	17.930		
1,000.0	1,000.0	1,004.4	1,004.0	2.1	2.1	-177.06	-61.4	-3.1	61.6	57.3	4.25	14.486		
1,100.0	1,100.0	1,104.0	1,103.4	2.3	2.4	-3.89	-54.8	-5.4	53.4	48.7	4.68	11.407		
1,200.0	1,199.8	1,203.3	1,202.4	2.5	2.6	-0.48	-48.2	-7.6	41.9	36.8	5.09	8.239		
1,300.0	1,299.6	1,302.4	1,301.3	2.7	2.9	5.79	-41.7	-9.8	28.9	23.4	5.50	5.259		
1,400.0	1,399.4	1,401.5	1,400.1	2.9	3.1	21.50	-35.1	-12.0	16.9	10.9	5.94	2.835		
1,500.0	1,499.1	1,500.6	1,499.0	3.1	3.3	74.51	-28.6	-14.2	9.7	3.3	6.42	1.518		
1,501.8	1,500.9	1,502.4	1,500.8	3.1	3.3	75.97	-28.5	-14.3	9.7	3.3	6.42	1.515 CC, ES, SF		
1,600.0	1,598.9	1,599.7	1,597.8	3.3	3.6	129.43	-22.0	-16.4	16.4	9.7	6.77	2.428		
1,700.0	1,698.6	1,698.8	1,696.6	3.5	3.8	145.81	-15.5	-18.6	28.5	21.3	7.18	3.964		
1,800.0	1,798.4	1,797.8	1,795.5	3.8	4.1	152.26	-8.9	-20.8	41.4	33.8	7.61	5.442		
1,900.0	1,898.1	1,896.9	1,894.3	4.0	4.3	155.61	-2.4	-23.1	54.6	46.6	8.05	6.790		
2,000.0	1,997.9	1,996.0	1,993.2	4.2	4.6	157.66	4.2	-25.3	68.0	59.5	8.49	8.010		
2,100.0	2,097.6	2,095.1	2,092.0	4.5	4.8	159.03	10.7	-27.5	81.4	72.4	8.93	9.113		
2,200.0	2,197.4	2,194.2	2,190.9	4.7	5.1	160.02	17.3	-29.7	94.8	85.4	9.37	10.114		
2,300.0	2,297.2	2,293.3	2,289.7	5.0	5.3	160.76	23.8	-31.9	108.2	98.4	9.82	11.024		
2,400.0	2,396.9	2,392.3	2,388.5	5.2	5.6	161.34	30.4	-34.1	121.7	111.4	10.26	11.855		
2,500.0	2,496.7	2,491.4	2,487.4	5.5	5.8	161.80	36.9	-36.3	135.2	124.4	10.71	12.617		
2,600.0	2,596.4	2,590.5	2,586.2	5.7	6.1	162.18	43.5	-38.5	148.6	137.5	11.16	13.316		
2,700.0	2,696.2	2,689.6	2,685.1	6.0	6.3	162.49	50.0	-40.7	162.1	150.5	11.61	13.961		
2,800.0	2,795.9	2,788.7	2,783.9	6.2	6.6	162.76	56.6	-42.9	175.6	163.5	12.06	14.557		
2,900.0	2,895.7	2,887.8	2,882.8	6.5	6.8	162.99	63.1	-45.2	189.1	176.6	12.51	15.110		
3,000.0	2,995.5	2,986.8	2,981.6	6.7	7.1	163.19	69.7	-47.4	202.6	189.6	12.97	15.623		
3,100.0	3,095.2	3,085.9	3,080.4	7.0	7.3	163.36	76.2	-49.6	216.1	202.6	13.42	16.102		
3,200.0	3,195.0	3,185.0	3,179.3	7.2	7.6	163.51	82.8	-51.8	229.6	215.7	13.87	16.548		
3,300.0	3,294.7	3,284.1	3,278.1	7.5	7.9	163.65	89.3	-54.0	243.1	228.7	14.33	16.966		
3,400.0	3,394.5	3,383.2	3,377.0	7.8	8.1	163.77	95.9	-56.2	256.5	241.8	14.78	17.358		
3,500.0	3,494.2	3,482.3	3,475.8	8.0	8.4	163.88	102.4	-58.4	270.0	254.8	15.23	17.726		
3,600.0	3,594.0	3,581.3	3,574.6	8.3	8.6	163.98	109.0	-60.6	283.5	267.9	15.69	18.072		
3,700.0	3,693.7	3,680.4	3,673.5	8.5	8.9	164.07	115.5	-62.8	297.0	280.9	16.14	18.399		
3,800.0	3,793.5	3,779.5	3,772.3	8.8	9.1	164.15	122.1	-65.1	310.5	293.9	16.60	18.707		
3,900.0	3,893.3	3,878.6	3,871.2	9.0	9.4	164.23	128.6	-67.3	324.0	307.0	17.06	18.999		
4,000.0	3,993.0	3,977.7	3,970.0	9.3	9.6	164.30	135.1	-69.5	337.5	320.0	17.51	19.275		
4,100.0	4,092.8	4,076.8	4,068.9	9.6	9.9	164.36	141.7	-71.7	351.0	333.1	17.97	19.537		
4,200.0	4,192.5	4,175.8	4,167.7	9.8	10.1	164.42	148.2	-73.9	364.5	346.1	18.42	19.785		
4,300.0	4,292.3	4,274.9	4,266.5	10.1	10.4	164.48	154.8	-76.1	378.0	359.2	18.88	20.022		
4,400.0	4,392.0	4,374.0	4,365.4	10.3	10.6	164.53	161.3	-78.3	391.5	372.2	19.34	20.247		
4,500.0	4,491.8	4,473.1	4,464.2	10.6	10.9	164.58	167.9	-80.5	405.0	385.2	19.80	20.462		
4,600.0	4,591.6	4,572.2	4,563.1	10.9	11.2	164.62	174.4	-82.7	418.5	398.3	20.25	20.666		
4,700.0	4,691.3	4,671.3	4,661.9	11.1	11.4	164.66	181.0	-84.9	432.0	411.3	20.71	20.862		
4,800.0	4,791.1	4,770.3	4,760.8	11.4	11.7	164.70	187.5	-87.2	445.5	424.4	21.17	21.049		
4,900.0	4,890.8	4,869.4	4,859.6	11.7	11.9	164.74	194.1	-89.4	459.1	437.4	21.63	21.228		
5,000.0	4,990.6	4,968.5	4,958.4	11.9	12.2	164.78	200.6	-91.6	472.6	450.5	22.08	21.399		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2314B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ICWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,066.7	5,056.4	12.2	12.4	164.81	207.1	-93.8	485.9	463.4	22.54	21.562	
5,150.0	5,140.0	5,116.7	5,106.3	12.3	12.5	164.63	210.4	-94.9	495.2	472.6	22.54	21.965	
5,200.0	5,188.8	5,164.8	5,154.2	12.5	12.7	164.45	213.6	-96.0	508.8	486.4	22.37	22.742	
5,250.0	5,236.4	5,200.0	5,189.3	12.8	12.8	164.13	216.1	-96.8	527.1	505.1	22.01	23.950	
5,300.0	5,282.2	5,221.0	5,210.2	13.0	12.8	163.50	218.4	-97.6	551.3	529.8	21.47	25.679	
5,350.0	5,326.0	5,250.0	5,238.8	13.4	12.9	162.70	222.8	-99.1	581.1	560.3	20.82	27.916	
5,400.0	5,367.3	5,250.0	5,238.8	13.7	12.9	161.07	222.8	-99.1	615.5	595.5	20.05	30.704	
5,450.0	5,405.7	5,271.9	5,260.2	14.1	13.0	159.30	227.2	-100.5	654.0	634.7	19.31	33.870	
5,500.0	5,440.8	5,283.7	5,271.7	14.6	13.1	156.47	229.9	-101.4	696.0	677.3	18.73	37.165	
5,550.0	5,472.3	5,300.0	5,287.4	15.1	13.1	152.56	234.0	-102.8	740.8	722.3	18.55	39.936	
5,600.0	5,500.0	5,300.0	5,287.4	15.7	13.1	145.14	234.0	-102.8	787.5	767.9	19.58	40.209	
5,650.0	5,523.6	5,300.0	5,287.4	16.3	13.1	131.90	234.0	-102.8	835.7	812.8	22.87	36.532	
5,700.0	5,542.9	5,300.0	5,287.4	16.9	13.1	107.56	234.0	-102.8	884.7	856.3	28.41	31.139	
5,750.0	5,557.6	5,300.0	5,287.4	17.6	13.1	73.21	234.0	-102.8	934.1	904.7	29.44	31.728	
5,800.0	5,567.7	5,300.0	5,287.4	18.3	13.1	46.42	234.0	-102.8	983.4	959.7	23.64	41.593	
5,850.0	5,573.0	5,300.0	5,287.4	19.1	13.1	31.58	234.0	-102.8	1,032.1	1,013.8	18.30	56.405	
5,880.9	5,574.0	5,300.0	5,287.4	19.5	13.1	25.95	234.0	-102.8	1,061.7	1,045.7	16.03	66.221	
5,900.0	5,574.0	5,300.0	5,287.4	19.8	13.1	24.28	234.0	-102.8	1,080.0	1,064.5	15.46	69.840	
6,000.0	5,574.0	5,300.0	5,287.4	21.1	13.1	14.18	234.0	-102.8	1,176.2	1,164.3	11.92	98.699	
6,100.0	5,574.0	5,300.0	5,287.4	22.5	13.1	2.02	234.0	-102.8	1,273.4	1,264.2	9.21	138.241	
6,192.5	5,574.0	5,277.6	5,265.8	23.9	13.0	-9.96	228.5	-101.0	1,363.0	1,351.8	11.21	121.571	
6,200.0	5,574.0	5,277.1	5,265.3	24.0	13.0	-9.95	228.3	-100.9	1,370.3	1,359.1	11.26	121.700	
6,300.0	5,574.0	5,270.9	5,259.2	25.7	13.0	-9.84	227.0	-100.5	1,467.8	1,455.9	11.92	123.141	
6,400.0	5,574.0	5,250.0	5,238.8	27.3	12.9	-9.49	222.8	-99.1	1,565.8	1,553.3	12.51	125.152	
6,500.0	5,574.0	5,250.0	5,238.8	29.0	12.9	-9.49	222.8	-99.1	1,663.6	1,650.3	13.23	125.717	
6,600.0	5,574.0	5,250.0	5,238.8	30.8	12.9	-9.49	222.8	-99.1	1,761.6	1,747.6	13.96	126.149	
6,700.0	5,574.0	5,250.0	5,238.8	32.5	12.9	-9.49	222.8	-99.1	1,859.8	1,845.1	14.70	126.481	
6,800.0	5,574.0	5,250.0	5,238.8	34.3	12.9	-9.49	222.8	-99.1	1,958.2	1,942.7	15.45	126.739	
6,900.0	5,574.0	5,250.0	5,238.8	36.1	12.9	-9.49	222.8	-99.1	2,056.8	2,040.5	16.20	126.940	
7,000.0	5,574.0	5,250.0	5,238.8	37.9	12.9	-9.49	222.8	-99.1	2,155.4	2,138.5	16.96	127.098	
7,100.0	5,574.0	5,250.0	5,238.8	39.7	12.9	-9.49	222.8	-99.1	2,254.2	2,236.5	17.72	127.222	
7,200.0	5,574.0	5,250.0	5,238.8	41.5	12.9	-9.49	222.8	-99.1	2,353.1	2,334.7	18.48	127.319	
7,300.0	5,574.0	5,250.0	5,238.8	43.4	12.9	-9.49	222.8	-99.1	2,452.1	2,432.9	19.25	127.396	
7,400.0	5,574.0	5,228.4	5,217.5	45.2	12.9	-9.11	219.4	-97.9	2,550.7	2,530.8	19.86	128.458	
7,500.0	5,574.0	5,225.9	5,215.1	47.0	12.8	-9.07	219.0	-97.8	2,649.7	2,629.1	20.60	128.598	
7,600.0	5,574.0	5,223.6	5,212.8	48.9	12.8	-9.03	218.7	-97.7	2,748.8	2,727.5	21.35	128.720	
7,700.0	5,574.0	5,221.5	5,210.7	50.7	12.8	-8.99	218.4	-97.6	2,847.9	2,825.8	22.11	128.826	
7,800.0	5,574.0	5,200.0	5,189.3	52.6	12.8	-8.62	216.1	-96.8	2,947.5	2,924.8	22.71	129.798	
7,900.0	5,574.0	5,200.0	5,189.3	54.5	12.8	-8.62	216.1	-96.8	3,046.7	3,023.2	23.48	129.780	
8,000.0	5,574.0	5,200.0	5,189.3	56.3	12.8	-8.62	216.1	-96.8	3,145.9	3,121.7	24.24	129.761	
8,100.0	5,574.0	5,200.0	5,189.3	58.2	12.8	-8.62	216.1	-96.8	3,245.2	3,220.1	25.01	129.740	
8,200.0	5,574.0	5,200.0	5,189.3	60.1	12.8	-8.62	216.1	-96.8	3,344.5	3,318.7	25.78	129.718	
8,300.0	5,574.0	5,200.0	5,189.3	61.9	12.8	-8.62	216.1	-96.8	3,443.8	3,417.2	26.55	129.695	
8,400.0	5,574.0	5,200.0	5,189.3	63.8	12.8	-8.62	216.1	-96.8	3,543.2	3,515.9	27.32	129.672	
8,500.0	5,574.0	5,200.0	5,189.3	65.7	12.8	-8.62	216.1	-96.8	3,642.6	3,614.5	28.10	129.648	
8,600.0	5,574.0	5,200.0	5,189.3	67.6	12.8	-8.62	216.1	-96.8	3,742.0	3,713.2	28.87	129.625	
8,700.0	5,574.0	5,200.0	5,189.3	69.5	12.8	-8.62	216.1	-96.8	3,841.5	3,811.9	29.64	129.601	
8,800.0	5,574.0	5,200.0	5,189.3	71.3	12.8	-8.62	216.1	-96.8	3,941.0	3,910.6	30.41	129.578	
8,900.0	5,574.0	5,200.0	5,189.3	73.2	12.8	-8.62	216.1	-96.8	4,040.5	4,009.3	31.19	129.555	
9,000.0	5,574.0	5,200.0	5,189.3	75.1	12.8	-8.62	216.1	-96.8	4,140.1	4,108.1	31.96	129.533	
9,100.0	5,574.0	5,200.0	5,189.3	77.0	12.8	-8.62	216.1	-96.8	4,239.6	4,206.9	32.74	129.510	
9,200.0	5,574.0	5,200.0	5,189.3	78.9	12.8	-8.62	216.1	-96.8	4,339.2	4,305.7	33.51	129.488	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-2314B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,300.0	5,574.0	5,200.0	5,189.3	80.8	12.8	-8.62	216.1	-96.8	4,438.8	4,404.6	34.29	129.467		
9,400.0	5,574.0	5,200.0	5,189.3	82.7	12.8	-8.62	216.1	-96.8	4,538.5	4,503.4	35.06	129.446		
9,500.0	5,574.0	5,200.0	5,189.3	84.6	12.8	-8.62	216.1	-96.8	4,638.1	4,602.3	35.84	129.426		
9,600.0	5,574.0	5,200.0	5,189.3	86.5	12.8	-8.62	216.1	-96.8	4,737.8	4,701.1	36.61	129.406		
9,700.0	5,574.0	5,200.0	5,189.3	88.4	12.8	-8.62	216.1	-96.8	4,837.4	4,800.0	37.39	129.386		
9,800.0	5,574.0	5,200.0	5,189.3	90.3	12.8	-8.62	216.1	-96.8	4,937.1	4,898.9	38.16	129.367		
9,900.0	5,574.0	5,193.6	5,183.0	92.2	12.7	-8.50	215.6	-96.6	5,036.8	4,997.9	38.87	129.589		
10,000.0	5,574.0	5,187.1	5,176.5	94.1	12.7	-8.39	215.1	-96.5	5,136.5	5,096.9	39.57	129.815		
10,100.0	5,574.0	5,187.1	5,176.5	96.0	12.7	-8.39	215.1	-96.5	5,236.2	5,195.9	40.34	129.794		
10,200.0	5,574.0	5,187.1	5,176.5	97.9	12.7	-8.39	215.1	-96.5	5,335.9	5,294.8	41.12	129.775		
10,300.0	5,574.0	5,187.1	5,176.5	99.8	12.7	-8.39	215.1	-96.5	5,435.6	5,393.7	41.89	129.756		
10,400.0	5,574.0	5,187.1	5,176.5	101.7	12.7	-8.39	215.1	-96.5	5,535.4	5,492.7	42.67	129.737		
10,500.0	5,574.0	5,187.1	5,176.5	103.6	12.7	-8.39	215.1	-96.5	5,635.1	5,591.7	43.44	129.719		
10,600.0	5,574.0	5,187.1	5,176.5	105.5	12.7	-8.39	215.1	-96.5	5,734.8	5,690.6	44.22	129.701		
10,700.0	5,574.0	5,187.1	5,176.5	107.4	12.7	-8.39	215.1	-96.5	5,834.6	5,789.6	44.99	129.684		
10,800.0	5,574.0	5,187.1	5,176.5	109.3	12.7	-8.39	215.1	-96.5	5,934.4	5,888.6	45.77	129.668		
10,900.0	5,574.0	5,187.0	5,176.4	111.2	12.7	-8.39	215.1	-96.4	6,034.1	5,987.6	46.54	129.654		
11,000.0	5,574.0	5,180.4	5,169.8	113.1	12.7	-8.27	214.6	-96.3	6,133.9	6,086.7	47.23	129.872		
11,100.0	5,574.0	5,173.8	5,163.2	115.0	12.7	-8.16	214.2	-96.2	6,233.7	6,185.8	47.92	130.080		
11,200.0	5,574.0	5,167.2	5,156.6	116.9	12.7	-8.05	213.8	-96.0	6,333.5	6,284.9	48.61	130.279		
11,300.0	5,574.0	5,160.6	5,150.0	118.8	12.7	-7.95	213.3	-95.9	6,433.3	6,384.0	49.31	130.468		
11,400.0	5,574.0	5,154.0	5,143.4	120.7	12.6	-7.85	212.9	-95.7	6,533.0	6,483.0	50.00	130.649		
11,500.0	5,574.0	5,147.4	5,136.8	122.6	12.6	-7.75	212.5	-95.6	6,632.8	6,582.1	50.70	130.822		
11,600.0	5,574.0	5,140.7	5,130.3	124.5	12.6	-7.66	212.0	-95.4	6,732.6	6,681.2	51.40	130.987		
11,700.0	5,574.0	5,134.1	5,123.7	126.4	12.6	-7.56	211.6	-95.3	6,832.4	6,780.3	52.10	131.146		
11,800.0	5,574.0	5,127.5	5,117.1	128.3	12.6	-7.47	211.1	-95.1	6,932.2	6,879.4	52.80	131.298		
11,900.0	5,574.0	5,120.9	5,110.5	130.2	12.6	-7.39	210.7	-95.0	7,031.9	6,978.4	53.50	131.443		
12,000.0	5,574.0	5,114.3	5,103.9	132.1	12.5	-7.30	210.3	-94.8	7,131.7	7,077.5	54.20	131.582		
12,062.4	5,574.0	5,110.2	5,099.8	133.3	12.5	-7.25	210.0	-94.7	7,194.0	7,139.3	54.64	131.666		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2315A - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	88.92	1.9	98.4	98.4					
100.0	100.0	100.0	100.0	0.1	0.1	88.92	1.9	98.4	98.4	98.2	0.19	524.452		
200.0	200.0	200.0	200.0	0.3	0.3	88.92	1.9	98.4	98.4	97.8	0.64	154.468		
300.0	300.0	300.0	300.0	0.5	0.5	88.92	1.9	98.4	98.4	97.3	1.09	90.572		
400.0	400.0	400.0	400.0	0.8	0.8	88.92	1.9	98.4	98.4	96.9	1.54	64.070		
500.0	500.0	500.0	500.0	1.0	1.0	88.92	1.9	98.4	98.4	96.4	1.99	49.566		
600.0	600.0	600.0	600.0	1.2	1.2	88.92	1.9	98.4	98.4	96.0	2.44	40.417		
700.0	700.0	700.0	700.0	1.4	1.4	88.92	1.9	98.4	98.4	95.5	2.88	34.119		
800.0	800.0	800.0	800.0	1.7	1.7	88.92	1.9	98.4	98.4	95.1	3.33	29.519		
900.0	900.0	900.0	900.0	1.9	1.9	88.92	1.9	98.4	98.4	94.6	3.78	26.012		
1,000.0	1,000.0	1,000.4	1,000.4	2.1	2.1	87.90	3.6	98.2	98.2	94.0	4.23	23.205		
1,051.3	1,051.3	1,051.8	1,051.7	2.2	2.2	-103.03	5.8	97.8	98.1	93.7	4.45	22.054 CC		
1,100.0	1,100.0	1,100.4	1,100.2	2.3	2.3	-105.49	8.8	97.4	98.3	93.6	4.65	21.119 ES		
1,200.0	1,199.8	1,199.6	1,199.2	2.5	2.6	-112.28	15.7	96.5	100.2	95.1	5.06	19.810		
1,300.0	1,299.6	1,298.7	1,298.0	2.7	2.8	-119.59	22.5	95.5	104.3	98.8	5.48	19.044		
1,400.0	1,399.4	1,397.7	1,396.8	2.9	3.0	-126.25	29.3	94.5	110.0	104.1	5.91	18.619		
1,500.0	1,499.1	1,496.8	1,495.7	3.1	3.3	-132.20	36.2	93.6	117.0	110.7	6.34	18.447 SF		
1,600.0	1,598.9	1,595.8	1,594.5	3.3	3.5	-137.43	43.0	92.6	125.2	118.4	6.78	18.455		
1,700.0	1,698.6	1,694.9	1,693.3	3.5	3.8	-141.99	49.9	91.6	134.3	127.0	7.22	18.586		
1,800.0	1,798.4	1,793.9	1,792.1	3.8	4.0	-145.96	56.7	90.7	144.1	136.4	7.66	18.798		
1,900.0	1,898.1	1,893.0	1,890.9	4.0	4.2	-149.41	63.5	89.7	154.5	146.4	8.11	19.060		
2,000.0	1,997.9	1,992.0	1,989.7	4.2	4.5	-152.42	70.4	88.7	165.4	156.9	8.55	19.352		
2,100.0	2,097.6	2,091.1	2,088.5	4.5	4.7	-155.06	77.2	87.8	176.7	167.7	8.99	19.659		
2,200.0	2,197.4	2,190.1	2,187.3	4.7	5.0	-157.37	84.1	86.8	188.4	178.9	9.43	19.970		
2,300.0	2,297.2	2,289.2	2,286.1	5.0	5.2	-159.41	90.9	85.8	200.3	190.4	9.88	20.280		
2,400.0	2,396.9	2,388.2	2,384.9	5.2	5.5	-161.23	97.7	84.9	212.4	202.1	10.32	20.584		
2,500.0	2,496.7	2,487.3	2,483.7	5.5	5.7	-162.84	104.6	83.9	224.7	214.0	10.76	20.878		
2,600.0	2,596.4	2,586.3	2,582.5	5.7	6.0	-164.29	111.4	82.9	237.2	226.0	11.21	21.163		
2,700.0	2,696.2	2,685.4	2,681.3	6.0	6.2	-165.60	118.3	81.9	249.8	238.2	11.65	21.436		
2,800.0	2,795.9	2,784.4	2,780.2	6.2	6.5	-166.77	125.1	81.0	262.5	250.4	12.10	21.697		
2,900.0	2,895.7	2,883.5	2,879.0	6.5	6.7	-167.84	132.0	80.0	275.4	262.8	12.55	21.947		
3,000.0	2,995.5	2,982.5	2,977.8	6.7	7.0	-168.82	138.8	79.0	288.3	275.3	12.99	22.185		
3,100.0	3,095.2	3,081.6	3,076.6	7.0	7.2	-169.71	145.6	78.1	301.3	287.8	13.44	22.412		
3,200.0	3,195.0	3,180.6	3,175.4	7.2	7.5	-170.52	152.5	77.1	314.3	300.4	13.89	22.628		
3,300.0	3,294.7	3,279.7	3,274.2	7.5	7.7	-171.27	159.3	76.1	327.4	313.1	14.34	22.834		
3,400.0	3,394.5	3,378.7	3,373.0	7.8	8.0	-171.97	166.2	75.2	340.6	325.8	14.79	23.030		
3,500.0	3,494.2	3,477.8	3,471.8	8.0	8.2	-172.61	173.0	74.2	353.8	338.5	15.24	23.217		
3,600.0	3,594.0	3,576.8	3,570.6	8.3	8.5	-173.20	179.8	73.2	367.0	351.3	15.69	23.396		
3,700.0	3,693.7	3,675.9	3,669.4	8.5	8.7	-173.76	186.7	72.3	380.3	364.2	16.14	23.566		
3,800.0	3,793.5	3,774.9	3,768.2	8.8	9.0	-174.27	193.5	71.3	393.6	377.0	16.59	23.728		
3,900.0	3,893.3	3,874.0	3,867.0	9.0	9.2	-174.76	200.4	70.3	407.0	389.9	17.04	23.883		
4,000.0	3,993.0	3,973.0	3,965.9	9.3	9.5	-175.21	207.2	69.4	420.3	402.9	17.49	24.031		
4,100.0	4,092.8	4,072.1	4,064.7	9.6	9.8	-175.63	214.1	68.4	433.7	415.8	17.94	24.172		
4,200.0	4,192.5	4,171.1	4,163.5	9.8	10.0	-176.03	220.9	67.4	447.2	428.8	18.40	24.308		
4,300.0	4,292.3	4,270.2	4,262.3	10.1	10.3	-176.41	227.7	66.5	460.6	441.8	18.85	24.437		
4,400.0	4,392.0	4,369.2	4,361.1	10.3	10.5	-176.76	234.6	65.5	474.1	454.8	19.30	24.562		
4,500.0	4,491.8	4,468.3	4,459.9	10.6	10.8	-177.10	241.4	64.5	487.5	467.8	19.75	24.681		
4,600.0	4,591.6	4,567.3	4,558.7	10.9	11.0	-177.42	248.3	63.6	501.0	480.8	20.21	24.795		
4,700.0	4,691.3	4,666.4	4,657.5	11.1	11.3	-177.72	255.1	62.6	514.5	493.9	20.66	24.905		
4,800.0	4,791.1	4,765.4	4,756.3	11.4	11.5	-178.00	261.9	61.6	528.0	506.9	21.11	25.010		
4,900.0	4,890.8	4,864.5	4,855.1	11.7	11.8	-178.27	268.8	60.7	541.6	520.0	21.57	25.111		
5,000.0	4,990.6	4,963.5	4,953.9	11.9	12.0	-178.53	275.6	59.7	555.1	533.1	22.02	25.209		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2315A - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,099.1	5,089.4	5,061.7	5,051.8	12.2	12.3	-178.77	282.4	58.7	568.5	546.1	22.47	25.302		
5,150.0	5,140.0	5,099.4	5,089.5	12.3	12.4	-178.84	285.0	58.4	578.0	555.6	22.44	25.762		
5,200.0	5,188.8	5,128.4	5,118.3	12.5	12.5	-178.91	287.8	58.0	593.4	571.2	22.20	26.727		
5,250.0	5,236.4	5,150.0	5,139.7	12.8	12.5	-178.98	290.9	57.5	615.1	593.4	21.76	28.267		
5,300.0	5,282.2	5,169.1	5,158.5	13.0	12.6	-179.05	294.4	57.0	642.7	621.5	21.14	30.401		
5,350.0	5,326.0	5,200.0	5,188.5	13.4	12.7	-179.26	301.5	56.0	675.7	655.3	20.37	33.173		
5,400.0	5,367.3	5,200.0	5,188.5	13.7	12.7	-179.18	301.5	56.0	712.5	693.2	19.36	36.798		
5,450.0	5,405.7	5,200.0	5,188.5	14.1	12.7	-179.06	301.5	56.0	753.7	735.5	18.21	41.383		
5,500.0	5,440.8	5,222.8	5,210.4	14.6	12.8	-179.26	307.8	55.1	797.4	780.4	16.97	46.993		
5,550.0	5,472.3	5,230.2	5,217.5	15.1	12.8	-179.22	310.1	54.8	843.8	828.2	15.59	54.122		
5,600.0	5,500.0	5,250.0	5,236.1	15.7	12.9	-179.53	316.6	53.9	892.2	878.0	14.14	63.096		
5,650.0	5,523.6	5,250.0	5,236.1	16.3	12.9	-179.20	316.6	53.9	941.3	928.7	12.64	74.452		
5,700.0	5,542.9	5,250.0	5,236.1	16.9	12.9	-176.92	316.6	53.9	991.1	979.7	11.36	87.263		
5,750.0	5,557.6	5,250.0	5,236.1	17.6	12.9	-1.53	316.6	53.9	1,041.1	1,031.3	9.78	106.423		
5,800.0	5,567.7	5,250.0	5,236.1	18.3	12.9	-0.60	316.6	53.9	1,090.8	1,082.1	8.65	126.060		
5,850.0	5,573.0	5,250.0	5,236.1	19.1	12.9	-0.37	316.6	53.9	1,139.8	1,131.8	7.94	143.564		
5,880.9	5,574.0	5,231.3	5,218.5	19.5	12.8	-0.58	310.4	54.8	1,169.1	1,161.4	7.77	150.512		
5,900.0	5,574.0	5,229.5	5,216.8	19.8	12.8	-2.41	309.9	54.9	1,187.3	1,179.4	7.95	149.255		
6,000.0	5,574.0	5,220.5	5,208.2	21.1	12.8	-11.97	307.1	55.2	1,282.9	1,272.1	10.71	119.825		
6,100.0	5,574.0	5,200.0	5,188.5	22.5	12.7	-20.66	301.5	56.0	1,378.7	1,363.9	14.81	93.102		
6,192.5	5,574.0	5,200.0	5,188.5	23.9	12.7	-28.71	301.5	56.0	1,467.0	1,447.8	19.18	76.500		
6,200.0	5,574.0	5,200.0	5,188.5	24.0	12.7	-28.71	301.5	56.0	1,474.2	1,454.9	19.25	76.597		
6,300.0	5,574.0	5,200.0	5,188.5	25.7	12.7	-28.71	301.5	56.0	1,569.9	1,549.7	20.21	77.677		
6,400.0	5,574.0	5,200.0	5,188.5	27.3	12.7	-28.71	301.5	56.0	1,666.2	1,645.0	21.20	78.596		
6,500.0	5,574.0	5,200.0	5,188.5	29.0	12.7	-28.71	301.5	56.0	1,762.8	1,740.6	22.21	79.387		
6,600.0	5,574.0	5,200.0	5,188.5	30.8	12.7	-28.71	301.5	56.0	1,859.8	1,836.6	23.23	80.071		
6,700.0	5,574.0	5,176.1	5,165.3	32.5	12.6	-27.41	295.9	56.8	1,956.5	1,933.0	23.50	83.260		
6,800.0	5,574.0	5,171.7	5,161.0	34.3	12.6	-27.18	294.9	57.0	2,053.8	2,029.4	24.38	84.243		
6,900.0	5,574.0	5,150.0	5,139.7	36.1	12.5	-26.08	290.9	57.5	2,151.6	2,126.9	24.73	87.022		
7,000.0	5,574.0	5,150.0	5,139.7	37.9	12.5	-26.08	290.9	57.5	2,249.2	2,223.4	25.74	87.394		
7,100.0	5,574.0	5,150.0	5,139.7	39.7	12.5	-26.08	290.9	57.5	2,346.9	2,320.2	26.75	87.725		
7,200.0	5,574.0	5,150.0	5,139.7	41.5	12.5	-26.08	290.9	57.5	2,444.9	2,417.1	27.78	88.023		
7,300.0	5,574.0	5,150.0	5,139.7	43.4	12.5	-26.08	290.9	57.5	2,543.0	2,514.2	28.80	88.291		
7,400.0	5,574.0	5,150.0	5,139.7	45.2	12.5	-26.08	290.9	57.5	2,641.2	2,611.4	29.83	88.534		
7,500.0	5,574.0	5,150.0	5,139.7	47.0	12.5	-26.08	290.9	57.5	2,739.6	2,708.7	30.87	88.755		
7,600.0	5,574.0	5,150.0	5,139.7	48.9	12.5	-26.08	290.9	57.5	2,838.1	2,806.2	31.90	88.956		
7,700.0	5,574.0	5,150.0	5,139.7	50.7	12.5	-26.08	290.9	57.5	2,936.7	2,903.7	32.94	89.142		
7,800.0	5,574.0	5,150.0	5,139.7	52.6	12.5	-26.08	290.9	57.5	3,035.4	3,001.4	33.99	89.312		
7,900.0	5,574.0	5,150.0	5,139.7	54.5	12.5	-26.08	290.9	57.5	3,134.1	3,099.1	35.03	89.469		
8,000.0	5,574.0	5,150.0	5,139.7	56.3	12.5	-26.08	290.9	57.5	3,233.0	3,196.9	36.08	89.615		
8,100.0	5,574.0	5,150.0	5,139.7	58.2	12.5	-26.08	290.9	57.5	3,331.9	3,294.7	37.12	89.751		
8,200.0	5,574.0	5,150.0	5,139.7	60.1	12.5	-26.08	290.9	57.5	3,430.8	3,392.7	38.17	89.877		
8,300.0	5,574.0	5,150.0	5,139.7	61.9	12.5	-26.08	290.9	57.5	3,529.9	3,490.6	39.22	89.994		
8,400.0	5,574.0	5,150.0	5,139.7	63.8	12.5	-26.08	290.9	57.5	3,629.0	3,588.7	40.28	90.104		
8,500.0	5,574.0	5,150.0	5,139.7	65.7	12.5	-26.08	290.9	57.5	3,728.1	3,686.8	41.33	90.207		
8,600.0	5,574.0	5,126.6	5,116.6	67.6	12.5	-24.98	287.6	58.0	3,826.7	3,785.3	41.34	92.562		
8,700.0	5,574.0	5,125.2	5,115.2	69.5	12.5	-24.91	287.4	58.0	3,925.8	3,883.5	42.31	92.783		
8,800.0	5,574.0	5,123.8	5,113.8	71.3	12.4	-24.85	287.3	58.0	4,025.0	3,981.7	43.28	92.991		
8,900.0	5,574.0	5,122.5	5,112.5	73.2	12.4	-24.79	287.1	58.1	4,124.2	4,080.0	44.26	93.189		
9,000.0	5,574.0	5,099.4	5,089.5	75.1	12.4	-23.77	285.0	58.4	4,224.0	4,179.7	44.26	95.429		
9,100.0	5,574.0	5,099.4	5,089.5	77.0	12.4	-23.77	285.0	58.4	4,323.2	4,277.9	45.28	95.486		
9,200.0	5,574.0	5,099.4	5,089.5	78.9	12.4	-23.77	285.0	58.4	4,422.5	4,376.2	46.29	95.540		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-2315A - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,300.0	5,574.0	5,099.4	5,089.5	80.8	12.4	-23.77	285.0	58.4	4,521.8	4,474.5	47.30	95.592	
9,400.0	5,574.0	5,099.4	5,089.5	82.7	12.4	-23.77	285.0	58.4	4,621.1	4,572.8	48.32	95.641	
9,500.0	5,574.0	5,099.4	5,089.5	84.6	12.4	-23.77	285.0	58.4	4,720.5	4,671.1	49.33	95.688	
9,600.0	5,574.0	5,099.4	5,089.5	86.5	12.4	-23.77	285.0	58.4	4,819.8	4,769.5	50.35	95.732	
9,700.0	5,574.0	5,099.4	5,089.5	88.4	12.4	-23.77	285.0	58.4	4,919.3	4,867.9	51.36	95.775	
9,800.0	5,574.0	5,099.4	5,089.5	90.3	12.4	-23.77	285.0	58.4	5,018.7	4,966.3	52.38	95.816	
9,900.0	5,574.0	5,099.4	5,089.5	92.2	12.4	-23.77	285.0	58.4	5,118.1	5,064.7	53.39	95.854	
10,000.0	5,574.0	5,099.4	5,089.5	94.1	12.4	-23.77	285.0	58.4	5,217.6	5,163.2	54.41	95.892	
10,100.0	5,574.0	5,099.4	5,089.5	96.0	12.4	-23.77	285.0	58.4	5,317.1	5,261.7	55.43	95.927	
10,200.0	5,574.0	5,099.4	5,089.5	97.9	12.4	-23.77	285.0	58.4	5,416.6	5,360.2	56.45	95.961	
10,300.0	5,574.0	5,099.4	5,089.5	99.8	12.4	-23.77	285.0	58.4	5,516.1	5,458.7	57.46	95.994	
10,400.0	5,574.0	5,099.4	5,089.5	101.7	12.4	-23.77	285.0	58.4	5,615.7	5,557.2	58.48	96.026	
10,500.0	5,574.0	5,099.4	5,089.5	103.6	12.4	-23.77	285.0	58.4	5,715.3	5,655.8	59.50	96.056	
10,600.0	5,574.0	5,099.4	5,089.5	105.5	12.4	-23.77	285.0	58.4	5,814.8	5,754.3	60.52	96.085	
10,700.0	5,574.0	5,099.4	5,089.5	107.4	12.4	-23.77	285.0	58.4	5,914.4	5,852.9	61.54	96.113	
10,800.0	5,574.0	5,099.4	5,089.5	109.3	12.4	-23.77	285.0	58.4	6,014.0	5,951.5	62.55	96.140	
10,900.0	5,574.0	5,099.4	5,089.5	111.2	12.4	-23.77	285.0	58.4	6,113.7	6,050.1	63.57	96.167	
11,000.0	5,574.0	5,099.4	5,089.5	113.1	12.4	-23.77	285.0	58.4	6,213.3	6,148.7	64.59	96.192	
11,100.0	5,574.0	5,099.4	5,089.5	115.0	12.4	-23.77	285.0	58.4	6,312.9	6,247.3	65.61	96.216	
11,200.0	5,574.0	5,099.4	5,089.5	116.9	12.4	-23.77	285.0	58.4	6,412.6	6,345.9	66.63	96.240	
11,300.0	5,574.0	5,099.4	5,089.5	118.8	12.4	-23.77	285.0	58.4	6,512.2	6,444.6	67.65	96.262	
11,400.0	5,574.0	5,099.4	5,089.5	120.7	12.4	-23.77	285.0	58.4	6,611.9	6,543.2	68.67	96.284	
11,500.0	5,574.0	5,099.4	5,089.5	122.6	12.4	-23.77	285.0	58.4	6,711.6	6,641.9	69.69	96.306	
11,600.0	5,574.0	5,099.4	5,089.5	124.5	12.4	-23.77	285.0	58.4	6,811.3	6,740.6	70.71	96.326	
11,700.0	5,574.0	5,099.4	5,089.5	126.4	12.4	-23.77	285.0	58.4	6,911.0	6,839.3	71.73	96.346	
11,800.0	5,574.0	5,099.4	5,089.5	128.3	12.4	-23.77	285.0	58.4	7,010.7	6,938.0	72.75	96.366	
11,900.0	5,574.0	5,095.1	5,085.2	130.2	12.4	-23.59	284.7	58.4	7,110.4	7,036.9	73.49	96.760	
12,000.0	5,574.0	5,088.2	5,078.3	132.1	12.3	-23.31	284.2	58.5	7,210.1	7,136.1	74.05	97.369	
12,062.4	5,574.0	5,083.8	5,074.0	133.3	12.3	-23.13	283.9	58.5	7,272.4	7,198.0	74.40	97.744	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2316B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	137.81	-73.7	66.8	99.4					
100.0	100.0	100.0	100.0	0.1	0.1	137.81	-73.7	66.8	99.4	99.2	0.19	529.693		
200.0	200.0	200.0	200.0	0.3	0.3	137.81	-73.7	66.8	99.4	98.8	0.64	156.012		
300.0	300.0	300.0	300.0	0.5	0.5	137.81	-73.7	66.8	99.4	98.3	1.09	91.478		
400.0	400.0	400.0	400.0	0.8	0.8	137.81	-73.7	66.8	99.4	97.9	1.54	64.710		
500.0	500.0	500.0	500.0	1.0	1.0	137.81	-73.7	66.8	99.4	97.4	1.99	50.062		
600.0	600.0	600.0	600.0	1.2	1.2	137.81	-73.7	66.8	99.4	97.0	2.44	40.821		
700.0	700.0	700.0	700.0	1.4	1.4	137.81	-73.7	66.8	99.4	96.5	2.88	34.460		
800.0	800.0	800.0	800.0	1.7	1.7	137.81	-73.7	66.8	99.4	96.1	3.33	29.814		
900.0	900.0	900.0	900.0	1.9	1.9	137.81	-73.7	66.8	99.4	95.6	3.78	26.272		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	137.81	-73.7	66.8	99.4	95.2	4.23	23.483		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-52.35	-73.7	66.8	98.3	93.7	4.65	21.128		
1,200.0	1,199.8	1,201.6	1,201.5	2.5	2.6	-55.89	-71.9	67.2	94.3	89.3	5.06	18.646		
1,300.0	1,299.6	1,302.3	1,302.1	2.7	2.8	-62.66	-66.7	68.4	88.3	82.8	5.47	16.132		
1,400.0	1,399.4	1,401.3	1,400.9	2.9	3.0	-71.26	-60.0	69.9	83.2	77.3	5.90	14.107		
1,500.0	1,499.1	1,500.3	1,499.7	3.1	3.2	-80.72	-53.2	71.5	80.3	73.9	6.34	12.662		
1,575.2	1,574.2	1,574.8	1,574.0	3.3	3.4	-88.14	-48.2	72.7	79.6	72.9	6.68	11.919 CC		
1,600.0	1,598.9	1,599.3	1,598.4	3.3	3.5	-90.59	-46.5	73.1	79.7	72.9	6.79	11.734 ES		
1,700.0	1,698.6	1,698.4	1,697.2	3.5	3.7	-100.32	-39.8	74.6	81.5	74.2	7.24	11.244		
1,800.0	1,798.4	1,797.4	1,796.0	3.8	4.0	-109.39	-33.1	76.2	85.5	77.8	7.70	11.108 SF		
1,900.0	1,898.1	1,896.4	1,894.8	4.0	4.2	-117.48	-26.3	77.8	91.5	83.4	8.15	11.234		
2,000.0	1,997.9	1,995.4	1,993.6	4.2	4.4	-124.46	-19.6	79.3	99.1	90.5	8.59	11.540		
2,100.0	2,097.6	2,094.5	2,092.4	4.5	4.7	-130.38	-12.9	80.9	108.0	99.0	9.03	11.961		
2,200.0	2,197.4	2,193.5	2,191.2	4.7	4.9	-135.37	-6.1	82.4	117.8	108.4	9.47	12.448		
2,300.0	2,297.2	2,292.5	2,289.9	5.0	5.2	-139.58	0.6	84.0	128.4	118.5	9.90	12.970		
2,400.0	2,396.9	2,391.6	2,388.7	5.2	5.4	-143.12	7.3	85.6	139.6	129.3	10.34	13.503		
2,500.0	2,496.7	2,490.6	2,487.5	5.5	5.7	-146.14	14.0	87.1	151.3	140.5	10.78	14.035		
2,600.0	2,596.4	2,589.6	2,586.3	5.7	5.9	-148.72	20.8	88.7	163.3	152.0	11.22	14.555		
2,700.0	2,696.2	2,688.6	2,685.1	6.0	6.2	-150.95	27.5	90.2	175.5	163.9	11.66	15.060		
2,800.0	2,795.9	2,787.7	2,783.9	6.2	6.4	-152.88	34.2	91.8	188.0	175.9	12.10	15.545		
2,900.0	2,895.7	2,886.7	2,882.7	6.5	6.6	-154.57	41.0	93.4	200.7	188.2	12.54	16.009		
3,000.0	2,995.5	2,985.7	2,981.5	6.7	6.9	-156.06	47.7	94.9	213.6	200.6	12.98	16.453		
3,100.0	3,095.2	3,084.8	3,080.2	7.0	7.1	-157.38	54.4	96.5	226.5	213.1	13.42	16.875		
3,200.0	3,195.0	3,183.8	3,179.0	7.2	7.4	-158.56	61.1	98.1	239.6	225.7	13.87	17.277		
3,300.0	3,294.7	3,282.8	3,277.8	7.5	7.6	-159.62	67.9	99.6	252.8	238.5	14.31	17.659		
3,400.0	3,394.5	3,381.8	3,376.6	7.8	7.9	-160.57	74.6	101.2	266.0	251.2	14.76	18.023		
3,500.0	3,494.2	3,480.9	3,475.4	8.0	8.1	-161.43	81.3	102.7	279.3	264.1	15.21	18.369		
3,600.0	3,594.0	3,579.9	3,574.2	8.3	8.4	-162.21	88.1	104.3	292.7	277.0	15.65	18.698		
3,700.0	3,693.7	3,678.9	3,673.0	8.5	8.6	-162.92	94.8	105.9	306.1	290.0	16.10	19.011		
3,800.0	3,793.5	3,777.9	3,771.7	8.8	8.9	-163.58	101.5	107.4	319.5	303.0	16.55	19.309		
3,900.0	3,893.3	3,877.0	3,870.5	9.0	9.2	-164.18	108.2	109.0	333.0	316.0	17.00	19.593		
4,000.0	3,993.0	3,976.0	3,969.3	9.3	9.4	-164.73	115.0	110.6	346.5	329.1	17.45	19.864		
4,100.0	4,092.8	4,075.0	4,068.1	9.6	9.7	-165.25	121.7	112.1	360.1	342.2	17.90	20.122		
4,200.0	4,192.5	4,174.1	4,166.9	9.8	9.9	-165.72	128.4	113.7	373.7	355.3	18.35	20.369		
4,300.0	4,292.3	4,273.1	4,265.7	10.1	10.2	-166.16	135.2	115.2	387.3	368.5	18.80	20.605		
4,400.0	4,392.0	4,372.1	4,364.5	10.3	10.4	-166.58	141.9	116.8	400.9	381.7	19.25	20.830		
4,500.0	4,491.8	4,471.1	4,463.3	10.6	10.7	-166.96	148.6	118.4	414.5	394.8	19.70	21.046		
4,600.0	4,591.6	4,570.2	4,562.0	10.9	10.9	-167.32	155.3	119.9	428.2	408.1	20.15	21.253		
4,700.0	4,691.3	4,669.2	4,660.8	11.1	11.2	-167.66	162.1	121.5	441.9	421.3	20.60	21.452		
4,800.0	4,791.1	4,768.2	4,759.6	11.4	11.4	-167.98	168.8	123.1	455.6	434.5	21.05	21.642		
4,900.0	4,890.8	4,867.3	4,858.4	11.7	11.7	-168.28	175.5	124.6	469.3	447.8	21.50	21.825		
5,000.0	4,990.6	4,966.3	4,957.2	11.9	11.9	-168.56	182.3	126.2	483.0	461.0	21.95	22.000		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-2316B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,099.1	5,089.4	5,064.4	5,055.1	12.2	12.2	-168.82	188.9	127.7	496.6	474.2	22.40	22.167	
5,150.0	5,140.0	5,114.4	5,104.9	12.3	12.3	-168.81	192.3	128.5	506.0	483.6	22.41	22.581	
5,200.0	5,188.8	5,162.4	5,152.8	12.5	12.4	-168.78	195.6	129.3	519.8	497.6	22.23	23.385	
5,250.0	5,236.4	5,200.0	5,190.3	12.8	12.5	-168.64	198.3	129.9	538.4	516.6	21.86	24.636	
5,300.0	5,282.2	5,218.4	5,208.6	13.0	12.6	-168.23	200.4	130.4	562.9	541.6	21.28	26.448	
5,350.0	5,326.0	5,250.0	5,239.8	13.4	12.7	-167.85	205.3	131.5	593.2	572.6	20.58	28.817	
5,400.0	5,367.3	5,250.0	5,239.8	13.7	12.7	-166.68	205.3	131.5	627.8	608.1	19.73	31.823	
5,450.0	5,405.7	5,267.4	5,256.8	14.1	12.7	-165.45	208.9	132.4	666.8	648.0	18.83	35.407	
5,500.0	5,440.8	5,278.5	5,267.6	14.6	12.8	-163.45	211.4	132.9	709.2	691.2	17.97	39.461	
5,550.0	5,472.3	5,300.0	5,288.3	15.1	12.9	-161.00	216.9	134.2	754.6	737.3	17.28	43.680	
5,600.0	5,500.0	5,300.0	5,288.3	15.7	12.9	-155.39	216.9	134.2	801.5	784.1	17.44	45.965	
5,650.0	5,523.6	5,300.0	5,288.3	16.3	12.9	-144.31	216.9	134.2	850.0	830.2	19.80	42.934	
5,700.0	5,542.9	5,300.0	5,288.3	16.9	12.9	-118.33	216.9	134.2	899.4	872.7	26.74	33.637	
5,750.0	5,557.6	5,300.0	5,288.3	17.6	12.9	-69.78	216.9	134.2	949.1	920.3	28.83	32.916	
5,800.0	5,567.7	5,300.0	5,288.3	18.3	12.9	-37.12	216.9	134.2	998.7	978.6	20.09	49.704	
5,850.0	5,573.0	5,300.0	5,288.3	19.1	12.9	-23.39	216.9	134.2	1,047.7	1,033.0	14.67	71.427	
5,880.9	5,574.0	5,300.0	5,288.3	19.5	12.9	-18.79	216.9	134.2	1,077.5	1,064.7	12.81	84.092	
5,900.0	5,574.0	5,300.0	5,288.3	19.8	12.9	-20.65	216.9	134.2	1,095.9	1,082.2	13.71	79.943	
6,000.0	5,574.0	5,300.0	5,288.3	21.1	12.9	-30.04	216.9	134.2	1,192.0	1,173.5	18.49	64.454	
6,100.0	5,574.0	5,275.9	5,265.1	22.5	12.8	-36.24	210.8	132.8	1,287.2	1,265.2	22.00	58.510	
6,192.5	5,574.0	5,270.0	5,259.3	23.9	12.7	-42.42	209.4	132.5	1,375.3	1,349.8	25.49	53.955	
6,200.0	5,574.0	5,269.5	5,258.9	24.0	12.7	-42.38	209.3	132.5	1,382.5	1,356.9	25.56	54.093	
6,300.0	5,574.0	5,250.0	5,239.8	25.7	12.7	-40.62	205.3	131.5	1,478.1	1,452.2	25.94	56.987	
6,400.0	5,574.0	5,250.0	5,239.8	27.3	12.7	-40.62	205.3	131.5	1,573.8	1,546.7	27.14	57.991	
6,500.0	5,574.0	5,250.0	5,239.8	29.0	12.7	-40.62	205.3	131.5	1,670.1	1,641.7	28.36	58.883	
6,600.0	5,574.0	5,250.0	5,239.8	30.8	12.7	-40.62	205.3	131.5	1,766.7	1,737.1	29.60	59.679	
6,700.0	5,574.0	5,250.0	5,239.8	32.5	12.7	-40.62	205.3	131.5	1,863.8	1,832.9	30.86	60.393	
6,800.0	5,574.0	5,250.0	5,239.8	34.3	12.7	-40.62	205.3	131.5	1,961.1	1,928.9	32.13	61.037	
6,900.0	5,574.0	5,250.0	5,239.8	36.1	12.7	-40.62	205.3	131.5	2,058.6	2,025.2	33.41	61.621	
7,000.0	5,574.0	5,250.0	5,239.8	37.9	12.7	-40.62	205.3	131.5	2,156.4	2,121.7	34.70	62.152	
7,100.0	5,574.0	5,250.0	5,239.8	39.7	12.7	-40.62	205.3	131.5	2,254.4	2,218.4	35.99	62.637	
7,200.0	5,574.0	5,229.0	5,219.1	41.5	12.6	-38.85	201.8	130.7	2,352.1	2,315.9	36.17	65.034	
7,300.0	5,574.0	5,226.4	5,216.6	43.4	12.6	-38.64	201.5	130.6	2,450.2	2,412.9	37.30	65.688	
7,400.0	5,574.0	5,224.0	5,214.1	45.2	12.6	-38.44	201.1	130.6	2,548.5	2,510.1	38.44	66.294	
7,500.0	5,574.0	5,221.7	5,211.9	47.0	12.6	-38.26	200.8	130.5	2,647.0	2,607.4	39.59	66.857	
7,600.0	5,574.0	5,200.0	5,190.3	48.9	12.5	-36.60	198.3	129.9	2,745.9	2,706.3	39.66	69.234	
7,700.0	5,574.0	5,200.0	5,190.3	50.7	12.5	-36.60	198.3	129.9	2,844.4	2,803.5	40.91	69.531	
7,800.0	5,574.0	5,200.0	5,190.3	52.6	12.5	-36.60	198.3	129.9	2,943.1	2,900.9	42.16	69.809	
7,900.0	5,574.0	5,200.0	5,190.3	54.5	12.5	-36.60	198.3	129.9	3,041.8	2,998.4	43.41	70.068	
8,000.0	5,574.0	5,200.0	5,190.3	56.3	12.5	-36.60	198.3	129.9	3,140.6	3,095.9	44.67	70.311	
8,100.0	5,574.0	5,200.0	5,190.3	58.2	12.5	-36.60	198.3	129.9	3,239.5	3,193.5	45.92	70.539	
8,200.0	5,574.0	5,200.0	5,190.3	60.1	12.5	-36.60	198.3	129.9	3,338.4	3,291.2	47.18	70.753	
8,300.0	5,574.0	5,200.0	5,190.3	61.9	12.5	-36.60	198.3	129.9	3,437.4	3,388.9	48.44	70.955	
8,400.0	5,574.0	5,200.0	5,190.3	63.8	12.5	-36.60	198.3	129.9	3,536.4	3,486.7	49.71	71.146	
8,500.0	5,574.0	5,200.0	5,190.3	65.7	12.5	-36.60	198.3	129.9	3,635.6	3,584.6	50.97	71.326	
8,600.0	5,574.0	5,200.0	5,190.3	67.6	12.5	-36.60	198.3	129.9	3,734.7	3,682.5	52.24	71.497	
8,700.0	5,574.0	5,200.0	5,190.3	69.5	12.5	-36.60	198.3	129.9	3,833.9	3,780.4	53.50	71.659	
8,800.0	5,574.0	5,200.0	5,190.3	71.3	12.5	-36.60	198.3	129.9	3,933.1	3,878.4	54.77	71.812	
8,900.0	5,574.0	5,200.0	5,190.3	73.2	12.5	-36.60	198.3	129.9	4,032.4	3,976.4	56.04	71.959	
9,000.0	5,574.0	5,200.0	5,190.3	75.1	12.5	-36.60	198.3	129.9	4,131.7	4,074.4	57.31	72.098	
9,100.0	5,574.0	5,200.0	5,190.3	77.0	12.5	-36.60	198.3	129.9	4,231.1	4,172.5	58.58	72.230	
9,200.0	5,574.0	5,200.0	5,190.3	78.9	12.5	-36.60	198.3	129.9	4,330.5	4,270.6	59.85	72.357	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-2316B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,300.0	5,574.0	5,200.0	5,190.3	80.8	12.5	-36.60	198.3	129.9	4,429.9	4,368.7	61.12	72.477		
9,400.0	5,574.0	5,200.0	5,190.3	82.7	12.5	-36.60	198.3	129.9	4,529.3	4,466.9	62.39	72.593		
9,500.0	5,574.0	5,200.0	5,190.3	84.6	12.5	-36.60	198.3	129.9	4,628.7	4,565.1	63.67	72.703		
9,600.0	5,574.0	5,193.4	5,183.7	86.5	12.5	-36.13	197.7	129.8	4,728.2	4,663.8	64.40	73.420		
9,700.0	5,574.0	5,192.6	5,182.9	88.4	12.5	-36.07	197.7	129.8	4,827.7	4,762.1	65.60	73.595		
9,800.0	5,574.0	5,186.1	5,176.5	90.3	12.5	-35.61	197.2	129.6	4,927.2	4,860.9	66.33	74.288		
9,900.0	5,574.0	5,186.1	5,176.5	92.2	12.5	-35.61	197.2	129.6	5,026.7	4,959.1	67.58	74.381		
10,000.0	5,574.0	5,186.1	5,176.5	94.1	12.5	-35.61	197.2	129.6	5,126.3	5,057.4	68.84	74.470		
10,100.0	5,574.0	5,186.1	5,176.5	96.0	12.5	-35.61	197.2	129.6	5,225.8	5,155.7	70.09	74.555		
10,200.0	5,574.0	5,186.1	5,176.5	97.9	12.5	-35.61	197.2	129.6	5,325.4	5,254.0	71.35	74.638		
10,300.0	5,574.0	5,186.1	5,176.5	99.8	12.5	-35.61	197.2	129.6	5,425.0	5,352.4	72.61	74.717		
10,400.0	5,574.0	5,186.1	5,176.5	101.7	12.5	-35.61	197.2	129.6	5,524.6	5,450.7	73.86	74.794		
10,500.0	5,574.0	5,186.1	5,176.5	103.6	12.5	-35.61	197.2	129.6	5,624.2	5,549.1	75.12	74.868		
10,600.0	5,574.0	5,186.1	5,176.5	105.5	12.5	-35.61	197.2	129.6	5,723.8	5,647.4	76.38	74.939		
10,700.0	5,574.0	5,183.9	5,174.2	107.4	12.5	-35.46	197.0	129.6	5,823.4	5,746.0	77.43	75.212		
10,800.0	5,574.0	5,177.1	5,167.5	109.3	12.5	-34.99	196.6	129.5	5,923.1	5,845.0	78.04	75.897		
10,900.0	5,574.0	5,170.3	5,160.7	111.2	12.4	-34.54	196.1	129.4	6,022.7	5,944.1	78.65	76.577		
11,000.0	5,574.0	5,163.5	5,153.9	113.1	12.4	-34.10	195.7	129.3	6,122.4	6,043.1	79.25	77.252		
11,100.0	5,574.0	5,156.7	5,147.1	115.0	12.4	-33.66	195.2	129.2	6,222.1	6,142.2	79.85	77.921		
11,200.0	5,574.0	5,149.9	5,140.3	116.9	12.4	-33.24	194.7	129.1	6,321.7	6,241.3	80.44	78.585		
11,300.0	5,574.0	5,143.1	5,133.6	118.8	12.4	-32.82	194.3	129.0	6,421.4	6,340.3	81.03	79.244		
11,400.0	5,574.0	5,136.3	5,126.8	120.7	12.4	-32.41	193.8	128.9	6,521.0	6,439.4	81.62	79.897		
11,500.0	5,574.0	5,129.5	5,120.0	122.6	12.3	-32.01	193.4	128.8	6,620.7	6,538.5	82.20	80.545		
11,600.0	5,574.0	5,122.7	5,113.2	124.5	12.3	-31.62	192.9	128.6	6,720.4	6,637.6	82.78	81.186		
11,700.0	5,574.0	5,115.9	5,106.5	126.4	12.3	-31.24	192.4	128.5	6,820.1	6,736.7	83.35	81.822		
11,800.0	5,574.0	5,109.1	5,099.7	128.3	12.3	-30.87	192.0	128.4	6,919.7	6,835.8	83.92	82.453		
11,900.0	5,574.0	5,102.3	5,092.9	130.2	12.3	-30.50	191.5	128.3	7,019.4	6,934.9	84.49	83.077		
12,000.0	5,574.0	5,095.5	5,086.1	132.1	12.2	-30.14	191.0	128.2	7,119.1	7,034.1	85.06	83.695		
12,062.4	5,574.0	5,091.3	5,081.9	133.3	12.2	-29.92	190.8	128.2	7,181.3	7,095.9	85.41	84.078		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3514B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	155.59	-74.3	33.7	81.6					
100.0	100.0	100.0	100.0	0.1	0.1	155.59	-74.3	33.7	81.6	81.4	0.19	434.565		
200.0	200.0	200.0	200.0	0.3	0.3	155.59	-74.3	33.7	81.6	80.9	0.64	127.994		
300.0	300.0	300.0	300.0	0.5	0.5	155.59	-74.3	33.7	81.6	80.5	1.09	75.049		
400.0	400.0	400.0	400.0	0.8	0.8	155.59	-74.3	33.7	81.6	80.0	1.54	53.089		
500.0	500.0	500.0	500.0	1.0	1.0	155.59	-74.3	33.7	81.6	79.6	1.99	41.071		
566.7	566.7	566.7	566.7	1.1	1.1	155.59	-74.3	33.7	81.6	79.3	2.29	35.686 CC		
600.0	600.0	600.0	600.0	1.2	1.2	155.59	-74.3	33.7	81.6	79.1	2.44	33.490 ES		
700.0	700.0	697.3	697.3	1.4	1.4	155.89	-75.9	34.0	83.2	80.3	2.85	29.163		
800.0	800.0	794.4	794.2	1.7	1.6	156.71	-80.8	34.8	88.1	84.9	3.26	27.043		
900.0	900.0	893.9	893.5	1.9	1.8	157.72	-87.6	35.9	94.9	91.2	3.68	25.798		
1,000.0	1,000.0	993.7	993.1	2.1	2.0	158.60	-94.5	37.0	101.7	97.6	4.11	24.779		
1,100.0	1,100.0	1,093.5	1,092.7	2.3	2.2	-30.40	-101.4	38.2	107.0	102.6	4.50	23.800		
1,200.0	1,199.8	1,193.5	1,192.4	2.5	2.5	-31.02	-108.2	39.3	109.4	104.5	4.88	22.413		
1,300.0	1,299.6	1,293.5	1,292.1	2.7	2.7	-32.11	-115.1	40.4	110.2	105.0	5.28	20.873		
1,400.0	1,399.4	1,393.5	1,391.8	2.9	3.0	-33.19	-122.0	41.6	111.1	105.4	5.69	19.517		
1,500.0	1,499.1	1,493.4	1,491.6	3.1	3.2	-34.25	-128.9	42.7	112.1	105.9	6.12	18.321		
1,600.0	1,598.9	1,593.4	1,591.3	3.3	3.4	-35.29	-135.8	43.8	113.0	106.5	6.55	17.263		
1,700.0	1,698.6	1,693.4	1,691.0	3.5	3.7	-36.32	-142.6	45.0	114.1	107.1	6.99	16.323		
1,800.0	1,798.4	1,793.4	1,790.8	3.8	4.0	-37.32	-149.5	46.1	115.1	107.7	7.43	15.486		
1,900.0	1,898.1	1,893.3	1,890.5	4.0	4.2	-38.31	-156.4	47.2	116.2	108.3	7.88	14.737		
2,000.0	1,997.9	1,993.3	1,990.2	4.2	4.5	-39.28	-163.3	48.4	117.3	109.0	8.34	14.064		
2,100.0	2,097.6	2,093.3	2,090.0	4.5	4.7	-40.23	-170.2	49.5	118.4	109.6	8.80	13.458		
2,200.0	2,197.4	2,193.2	2,189.7	4.7	5.0	-41.16	-177.1	50.6	119.6	110.4	9.27	12.909		
2,300.0	2,297.2	2,293.2	2,289.4	5.0	5.2	-42.07	-183.9	51.8	120.8	111.1	9.74	12.411		
2,400.0	2,396.9	2,393.2	2,389.2	5.2	5.5	-42.96	-190.8	52.9	122.1	111.9	10.21	11.958		
2,500.0	2,496.7	2,493.2	2,488.9	5.5	5.8	-43.84	-197.7	54.0	123.3	112.7	10.69	11.543		
2,600.0	2,596.4	2,593.1	2,588.6	5.7	6.0	-44.70	-204.6	55.2	124.6	113.5	11.17	11.164		
2,700.0	2,696.2	2,693.1	2,688.3	6.0	6.3	-45.54	-211.5	56.3	126.0	114.3	11.65	10.815		
2,800.0	2,795.9	2,793.1	2,788.1	6.2	6.5	-46.36	-218.3	57.4	127.3	115.2	12.13	10.494		
2,900.0	2,895.7	2,893.1	2,887.8	6.5	6.8	-47.17	-225.2	58.6	128.7	116.1	12.62	10.197		
3,000.0	2,995.5	2,993.0	2,987.5	6.7	7.1	-47.96	-232.1	59.7	130.1	117.0	13.11	9.922		
3,100.0	3,095.2	3,093.0	3,087.3	7.0	7.3	-48.73	-239.0	60.8	131.5	117.9	13.60	9.668		
3,200.0	3,195.0	3,193.0	3,187.0	7.2	7.6	-49.48	-245.9	62.0	133.0	118.9	14.10	9.431		
3,300.0	3,294.7	3,293.0	3,286.7	7.5	7.8	-50.22	-252.7	63.1	134.5	119.9	14.60	9.211		
3,400.0	3,394.5	3,392.9	3,386.5	7.8	8.1	-50.94	-259.6	64.2	135.9	120.9	15.10	9.005		
3,500.0	3,494.2	3,492.9	3,486.2	8.0	8.4	-51.65	-266.5	65.4	137.5	121.9	15.60	8.813		
3,600.0	3,594.0	3,592.9	3,585.9	8.3	8.6	-52.34	-273.4	66.5	139.0	122.9	16.10	8.634		
3,700.0	3,693.7	3,692.9	3,685.7	8.5	8.9	-53.01	-280.3	67.6	140.6	124.0	16.60	8.465		
3,800.0	3,793.5	3,792.8	3,785.4	8.8	9.2	-53.68	-287.2	68.8	142.1	125.0	17.11	8.307		
3,900.0	3,893.3	3,892.8	3,885.1	9.0	9.4	-54.32	-294.0	69.9	143.7	126.1	17.62	8.158		
4,000.0	3,993.0	3,992.8	3,984.8	9.3	9.7	-54.95	-300.9	71.0	145.3	127.2	18.13	8.018		
4,100.0	4,092.8	4,092.8	4,084.6	9.6	10.0	-55.57	-307.8	72.2	147.0	128.3	18.64	7.886		
4,200.0	4,192.5	4,192.7	4,184.3	9.8	10.2	-56.18	-314.7	73.3	148.6	129.5	19.15	7.761		
4,300.0	4,292.3	4,292.7	4,284.0	10.1	10.5	-56.77	-321.6	74.4	150.3	130.6	19.66	7.643		
4,400.0	4,392.0	4,392.7	4,383.8	10.3	10.7	-57.34	-328.4	75.6	151.9	131.8	20.17	7.532		
4,500.0	4,491.8	4,492.7	4,483.5	10.6	11.0	-57.91	-335.3	76.7	153.6	133.0	20.69	7.426		
4,600.0	4,591.6	4,592.6	4,583.2	10.9	11.3	-58.46	-342.2	77.8	155.3	134.1	21.20	7.326		
4,700.0	4,691.3	4,692.6	4,683.0	11.1	11.5	-59.00	-349.1	79.0	157.1	135.3	21.72	7.231		
4,800.0	4,791.1	4,792.6	4,782.7	11.4	11.8	-59.53	-356.0	80.1	158.8	136.6	22.24	7.141		
4,900.0	4,890.8	4,892.6	4,882.4	11.7	12.1	-60.05	-362.8	81.2	160.6	137.8	22.76	7.055		
5,000.0	4,990.6	4,992.5	4,982.2	11.9	12.3	-60.56	-369.7	82.4	162.3	139.0	23.28	6.973		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3514B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,091.6	5,081.0	12.2	12.6	-61.05	-376.5	83.5	164.1	140.3	23.79	6.896	
5,150.0	5,140.0	5,142.4	5,131.7	12.3	12.7	-62.08	-380.0	84.1	163.8	139.7	24.09	6.799	
5,200.0	5,188.8	5,191.0	5,180.2	12.5	12.8	-64.75	-383.4	84.6	161.5	137.0	24.47	6.599	
5,250.0	5,236.4	5,231.6	5,220.4	12.8	13.0	-67.87	-388.0	85.4	159.1	134.2	24.89	6.392	
5,300.0	5,282.2	5,272.5	5,260.6	13.0	13.1	-71.35	-395.8	86.6	158.1	132.7	25.41	6.222	
5,305.7	5,287.3	5,277.1	5,265.1	13.1	13.2	-71.77	-396.9	86.8	158.1	132.6	25.48	6.205	
5,350.0	5,326.0	5,313.8	5,300.3	13.4	13.3	-75.10	-406.8	88.5	158.8	132.8	26.04	6.099	
5,400.0	5,367.3	5,355.5	5,339.4	13.7	13.5	-78.97	-421.0	90.8	161.4	134.6	26.76	6.030	
5,450.0	5,405.7	5,400.0	5,379.8	14.1	13.8	-83.07	-439.5	93.8	166.1	138.5	27.60	6.018	
5,500.0	5,440.8	5,440.3	5,414.8	14.6	14.1	-86.51	-459.1	97.1	172.9	144.4	28.44	6.079	
5,550.0	5,472.3	5,483.4	5,450.5	15.1	14.4	-89.92	-483.1	101.0	181.9	152.5	29.34	6.198	
5,600.0	5,500.0	5,527.2	5,484.5	15.7	14.8	-92.96	-510.3	105.5	192.9	162.6	30.27	6.372	
5,650.0	5,523.6	5,571.8	5,516.6	16.3	15.2	-95.58	-540.7	110.5	205.8	174.6	31.22	6.592	
5,700.0	5,542.9	5,617.1	5,546.5	16.9	15.7	-97.78	-574.3	116.0	220.4	188.2	32.21	6.844	
5,750.0	5,557.6	5,663.4	5,573.8	17.6	16.2	-99.56	-611.2	122.1	236.5	203.3	33.24	7.115	
5,800.0	5,567.7	5,710.8	5,598.2	18.3	16.8	-100.96	-651.3	128.7	253.8	219.4	34.33	7.391	
5,850.0	5,573.0	5,759.6	5,619.4	19.1	17.4	-101.99	-694.6	135.8	272.0	236.5	35.50	7.662	
5,880.9	5,574.0	5,790.4	5,630.6	19.5	17.8	-102.48	-722.9	140.5	283.7	247.4	36.27	7.822	
5,900.0	5,574.0	5,810.0	5,636.8	19.8	18.1	-103.45	-741.2	143.5	290.8	254.1	36.68	7.928	
6,000.0	5,574.0	5,920.0	5,658.7	21.1	19.7	-105.82	-847.4	161.0	323.3	284.0	39.31	8.224	
6,100.0	5,574.0	6,037.2	5,661.0	22.5	21.4	-104.80	-963.2	178.8	345.6	302.9	42.68	8.096	
6,192.5	5,574.0	6,148.9	5,661.0	23.9	22.9	-104.16	-1,074.3	189.8	356.5	310.8	45.73	7.796	
6,200.0	5,574.0	6,158.0	5,661.0	24.0	23.1	-104.13	-1,083.4	190.4	357.0	311.0	45.98	7.764	
6,300.0	5,574.0	6,280.2	5,661.0	25.7	24.8	-103.98	-1,205.6	194.4	360.1	310.8	49.38	7.293	
6,400.0	5,574.0	6,380.3	5,661.0	27.3	26.5	-103.98	-1,305.7	194.3	360.1	307.5	52.65	6.840	
6,500.0	5,574.0	6,480.3	5,661.0	29.0	28.2	-103.98	-1,405.7	194.3	360.1	304.2	55.98	6.433	
6,600.0	5,574.0	6,580.3	5,661.0	30.8	29.9	-103.98	-1,505.7	194.3	360.1	300.8	59.37	6.066	
6,700.0	5,574.0	6,680.3	5,661.0	32.5	31.6	-103.98	-1,605.7	194.3	360.1	297.3	62.79	5.735	
6,800.0	5,574.0	6,780.3	5,661.0	34.3	33.4	-103.98	-1,705.7	194.3	360.1	293.9	66.25	5.436	
6,900.0	5,574.0	6,880.3	5,661.0	36.1	35.2	-103.98	-1,805.7	194.3	360.1	290.4	69.74	5.164	
7,000.0	5,574.0	6,980.3	5,661.0	37.9	37.0	-103.98	-1,905.7	194.3	360.1	286.9	73.25	4.916	
7,100.0	5,574.0	7,080.3	5,661.0	39.7	38.8	-103.98	-2,005.7	194.3	360.1	283.3	76.79	4.690	
7,200.0	5,574.0	7,180.3	5,661.0	41.5	40.6	-103.98	-2,105.7	194.3	360.1	279.8	80.34	4.483	
7,300.0	5,574.0	7,280.3	5,661.0	43.4	42.4	-103.98	-2,205.7	194.3	360.1	276.2	83.91	4.292	
7,400.0	5,574.0	7,380.3	5,661.0	45.2	44.2	-103.98	-2,305.7	194.3	360.1	272.6	87.49	4.116	
7,500.0	5,574.0	7,480.3	5,661.0	47.0	46.1	-103.98	-2,405.7	194.3	360.1	269.0	91.09	3.954	
7,600.0	5,574.0	7,580.3	5,661.0	48.9	47.9	-103.98	-2,505.7	194.3	360.1	265.4	94.69	3.803	
7,700.0	5,574.0	7,680.3	5,661.0	50.7	49.8	-103.98	-2,605.7	194.3	360.1	261.8	98.31	3.663	
7,800.0	5,574.0	7,780.3	5,661.0	52.6	51.6	-103.98	-2,705.7	194.3	360.1	258.2	101.93	3.533	
7,900.0	5,574.0	7,880.3	5,661.0	54.5	53.5	-103.98	-2,805.7	194.3	360.1	254.5	105.56	3.411	
8,000.0	5,574.0	7,980.3	5,661.0	56.3	55.4	-103.98	-2,905.7	194.3	360.1	250.9	109.20	3.298	
8,100.0	5,574.0	8,080.3	5,661.0	58.2	57.2	-103.98	-3,005.7	194.3	360.1	247.3	112.85	3.191	
8,200.0	5,574.0	8,180.3	5,661.0	60.1	59.1	-103.98	-3,105.7	194.2	360.1	243.6	116.50	3.091	
8,300.0	5,574.0	8,280.3	5,661.0	61.9	61.0	-103.98	-3,205.7	194.2	360.1	239.9	120.16	2.997	
8,400.0	5,574.0	8,380.3	5,661.0	63.8	62.8	-103.98	-3,305.7	194.2	360.1	236.3	123.82	2.908	
8,500.0	5,574.0	8,480.3	5,661.0	65.7	64.7	-103.98	-3,405.7	194.2	360.1	232.6	127.49	2.825	
8,600.0	5,574.0	8,580.3	5,661.0	67.6	66.6	-103.98	-3,505.7	194.2	360.1	228.9	131.16	2.746	
8,700.0	5,574.0	8,680.3	5,661.0	69.5	68.5	-103.98	-3,605.7	194.2	360.1	225.3	134.83	2.671	
8,800.0	5,574.0	8,780.3	5,661.0	71.3	70.4	-103.98	-3,705.7	194.2	360.1	221.6	138.51	2.600	
8,900.0	5,574.0	8,880.3	5,661.0	73.2	72.2	-103.98	-3,805.7	194.2	360.1	217.9	142.19	2.533	
9,000.0	5,574.0	8,980.3	5,661.0	75.1	74.1	-103.98	-3,905.7	194.2	360.1	214.2	145.87	2.469	
9,100.0	5,574.0	9,080.3	5,661.0	77.0	76.0	-103.98	-4,005.7	194.2	360.1	210.5	149.56	2.408	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-3514B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Separation Factor		
9,200.0	5,574.0	9,180.3	5,661.0	78.9	77.9	-103.98	-4,105.7	194.2	360.1	206.8	153.25	2.350		
9,300.0	5,574.0	9,280.3	5,661.0	80.8	79.8	-103.98	-4,205.7	194.2	360.1	203.2	156.94	2.294		
9,400.0	5,574.0	9,380.3	5,661.0	82.7	81.7	-103.98	-4,305.7	194.2	360.1	199.5	160.63	2.242		
9,500.0	5,574.0	9,480.3	5,661.0	84.6	83.6	-103.98	-4,405.7	194.2	360.1	195.8	164.32	2.191		
9,600.0	5,574.0	9,580.3	5,661.0	86.5	85.5	-103.98	-4,505.7	194.2	360.1	192.1	168.02	2.143		
9,700.0	5,574.0	9,680.3	5,661.0	88.4	87.4	-103.98	-4,605.7	194.2	360.1	188.4	171.72	2.097		
9,800.0	5,574.0	9,780.3	5,661.0	90.3	89.3	-103.98	-4,705.7	194.2	360.1	184.7	175.42	2.053		
9,900.0	5,574.0	9,880.3	5,661.0	92.2	91.2	-103.98	-4,805.7	194.2	360.1	181.0	179.12	2.010		
10,000.0	5,574.0	9,980.3	5,661.0	94.1	93.1	-103.98	-4,905.7	194.1	360.1	177.3	182.82	1.970		
10,100.0	5,574.0	10,080.3	5,661.0	96.0	95.0	-103.98	-5,005.7	194.1	360.1	173.5	186.53	1.930		
10,200.0	5,574.0	10,180.3	5,661.0	97.9	96.9	-103.98	-5,105.7	194.1	360.1	169.8	190.23	1.893		
10,300.0	5,574.0	10,280.3	5,661.0	99.8	98.8	-103.98	-5,205.7	194.1	360.1	166.1	193.94	1.857		
10,400.0	5,574.0	10,380.3	5,661.0	101.7	100.7	-103.98	-5,305.7	194.1	360.1	162.4	197.65	1.822		
10,500.0	5,574.0	10,480.3	5,661.0	103.6	102.6	-103.98	-5,405.7	194.1	360.1	158.7	201.36	1.788		
10,600.0	5,574.0	10,580.3	5,661.0	105.5	104.5	-103.98	-5,505.7	194.1	360.1	155.0	205.07	1.756		
10,700.0	5,574.0	10,680.3	5,661.0	107.4	106.4	-103.98	-5,605.7	194.1	360.1	151.3	208.78	1.725		
10,800.0	5,574.0	10,780.3	5,661.0	109.3	108.3	-103.98	-5,705.7	194.1	360.1	147.6	212.49	1.695		
10,900.0	5,574.0	10,880.3	5,661.0	111.2	110.2	-103.98	-5,805.7	194.1	360.1	143.9	216.20	1.665		
11,000.0	5,574.0	10,980.3	5,661.0	113.1	112.1	-103.98	-5,905.7	194.1	360.1	140.1	219.91	1.637		
11,100.0	5,574.0	11,080.3	5,661.0	115.0	114.0	-103.98	-6,005.7	194.1	360.1	136.4	223.63	1.610		
11,200.0	5,574.0	11,180.3	5,661.0	116.9	115.9	-103.98	-6,105.7	194.1	360.1	132.7	227.34	1.584		
11,300.0	5,574.0	11,280.3	5,661.0	118.8	117.8	-103.98	-6,205.7	194.1	360.1	129.0	231.06	1.558		
11,400.0	5,574.0	11,380.3	5,661.0	120.7	119.7	-103.98	-6,305.7	194.1	360.1	125.3	234.77	1.534		
11,500.0	5,574.0	11,480.3	5,661.0	122.6	121.6	-103.98	-6,405.7	194.1	360.1	121.6	238.49	1.510		
11,600.0	5,574.0	11,580.3	5,661.0	124.5	123.5	-103.98	-6,505.7	194.1	360.0	117.8	242.21	1.487 Level 3		
11,700.0	5,574.0	11,680.3	5,661.0	126.4	125.4	-103.98	-6,605.7	194.1	360.0	114.1	245.93	1.464 Level 3		
11,800.0	5,574.0	11,780.3	5,661.0	128.3	127.3	-103.98	-6,705.7	194.0	360.0	110.4	249.65	1.442 Level 3		
11,900.0	5,574.0	11,880.3	5,661.0	130.2	129.2	-103.98	-6,805.7	194.0	360.0	106.7	253.36	1.421 Level 3		
12,000.0	5,574.0	11,980.3	5,661.0	132.1	131.2	-103.98	-6,905.7	194.0	360.0	103.0	257.08	1.400 Level 3		
12,062.4	5,574.0	12,042.7	5,661.0	133.3	132.3	-103.98	-6,968.1	194.0	360.0	100.6	259.41	1.388 Level 3, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3515A - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	88.94	1.2	65.4	65.4					
100.0	100.0	100.0	100.0	0.1	0.1	88.94	1.2	65.4	65.4	65.2	0.19	348.269		
200.0	200.0	200.0	200.0	0.3	0.3	88.94	1.2	65.4	65.4	64.7	0.64	102.577		
300.0	300.0	300.0	300.0	0.5	0.5	88.94	1.2	65.4	65.4	64.3	1.09	60.146		
400.0	400.0	400.0	400.0	0.8	0.8	88.94	1.2	65.4	65.4	63.8	1.54	42.546		
500.0	500.0	500.0	500.0	1.0	1.0	88.94	1.2	65.4	65.4	63.4	1.99	32.915		
600.0	600.0	600.0	600.0	1.2	1.2	88.94	1.2	65.4	65.4	62.9	2.44	26.839		
700.0	700.0	700.0	700.0	1.4	1.4	88.94	1.2	65.4	65.4	62.5	2.88	22.657		
766.7	766.7	766.7	766.7	1.6	1.6	88.94	1.2	65.4	65.4	62.2	3.18	20.525 CC		
800.0	800.0	800.0	800.0	1.7	1.7	88.94	1.2	65.4	65.4	62.0	3.33	19.603 ES		
900.0	900.0	899.1	899.1	1.9	1.9	90.32	-0.4	66.0	66.0	62.3	3.75	17.583		
1,000.0	1,000.0	998.0	997.9	2.1	2.0	94.29	-5.1	68.0	68.2	64.0	4.16	16.402		
1,100.0	1,100.0	1,097.8	1,097.4	2.3	2.2	-91.41	-11.5	70.7	71.7	67.1	4.55	15.755		
1,200.0	1,199.8	1,197.8	1,197.1	2.5	2.4	-90.74	-18.0	73.3	75.3	70.4	4.93	15.284		
1,300.0	1,299.6	1,297.7	1,296.8	2.7	2.7	-91.47	-24.4	76.0	79.0	73.7	5.33	14.823		
1,400.0	1,399.4	1,397.6	1,396.5	2.9	2.9	-92.14	-30.8	78.7	82.8	77.0	5.76	14.380		
1,500.0	1,499.1	1,497.5	1,496.2	3.1	3.1	-92.74	-37.3	81.4	86.5	80.3	6.19	13.964		
1,600.0	1,598.9	1,597.5	1,595.9	3.3	3.4	-93.30	-43.7	84.1	90.2	83.6	6.65	13.580		
1,700.0	1,698.6	1,697.4	1,695.5	3.5	3.6	-93.81	-50.1	86.7	94.0	86.9	7.11	13.227		
1,800.0	1,798.4	1,797.3	1,795.2	3.8	3.9	-94.28	-56.6	89.4	97.8	90.2	7.58	12.903		
1,900.0	1,898.1	1,897.2	1,894.9	4.0	4.1	-94.72	-63.0	92.1	101.5	93.5	8.05	12.606		
2,000.0	1,997.9	1,997.2	1,994.6	4.2	4.3	-95.13	-69.4	94.8	105.3	96.7	8.53	12.336		
2,100.0	2,097.6	2,097.1	2,094.3	4.5	4.6	-95.51	-75.9	97.4	109.1	100.0	9.02	12.088		
2,200.0	2,197.4	2,197.0	2,193.9	4.7	4.9	-95.86	-82.3	100.1	112.8	103.3	9.51	11.861		
2,300.0	2,297.2	2,297.0	2,293.6	5.0	5.1	-96.19	-88.8	102.8	116.6	106.6	10.01	11.653		
2,400.0	2,396.9	2,396.9	2,393.3	5.2	5.4	-96.50	-95.2	105.5	120.4	109.9	10.51	11.461		
2,500.0	2,496.7	2,496.8	2,493.0	5.5	5.6	-96.79	-101.6	108.2	124.2	113.2	11.01	11.284		
2,600.0	2,596.4	2,596.7	2,592.7	5.7	5.9	-97.06	-108.1	110.8	128.0	116.5	11.51	11.121		
2,700.0	2,696.2	2,696.7	2,692.4	6.0	6.1	-97.32	-114.5	113.5	131.8	119.8	12.01	10.970		
2,800.0	2,795.9	2,796.6	2,792.0	6.2	6.4	-97.56	-120.9	116.2	135.6	123.1	12.52	10.830		
2,900.0	2,895.7	2,896.5	2,891.7	6.5	6.6	-97.79	-127.4	118.9	139.4	126.3	13.03	10.699		
3,000.0	2,995.5	2,996.4	2,991.4	6.7	6.9	-98.01	-133.8	121.6	143.2	129.6	13.54	10.578		
3,100.0	3,095.2	3,096.4	3,091.1	7.0	7.2	-98.22	-140.2	124.2	147.0	132.9	14.05	10.464		
3,200.0	3,195.0	3,196.3	3,190.8	7.2	7.4	-98.41	-146.7	126.9	150.8	136.2	14.56	10.358		
3,300.0	3,294.7	3,296.2	3,290.5	7.5	7.7	-98.60	-153.1	129.6	154.6	139.5	15.07	10.258		
3,400.0	3,394.5	3,396.1	3,390.1	7.8	7.9	-98.78	-159.5	132.3	158.4	142.8	15.58	10.165		
3,500.0	3,494.2	3,496.1	3,489.8	8.0	8.2	-98.95	-166.0	134.9	162.2	146.1	16.10	10.077		
3,600.0	3,594.0	3,596.0	3,589.5	8.3	8.5	-99.11	-172.4	137.6	166.0	149.4	16.61	9.994		
3,700.0	3,693.7	3,695.9	3,689.2	8.5	8.7	-99.26	-178.8	140.3	169.8	152.7	17.13	9.916		
3,800.0	3,793.5	3,795.8	3,788.9	8.8	9.0	-99.41	-185.3	143.0	173.6	156.0	17.64	9.842		
3,900.0	3,893.3	3,895.8	3,888.6	9.0	9.2	-99.55	-191.7	145.7	177.5	159.3	18.16	9.772		
4,000.0	3,993.0	3,995.7	3,988.2	9.3	9.5	-99.68	-198.2	148.3	181.3	162.6	18.68	9.706		
4,100.0	4,092.8	4,095.6	4,087.9	9.6	9.8	-99.81	-204.6	151.0	185.1	165.9	19.19	9.643		
4,200.0	4,192.5	4,195.6	4,187.6	9.8	10.0	-99.94	-211.0	153.7	188.9	169.2	19.71	9.584		
4,300.0	4,292.3	4,295.5	4,287.3	10.1	10.3	-100.06	-217.5	156.4	192.7	172.5	20.23	9.527		
4,400.0	4,392.0	4,395.4	4,387.0	10.3	10.6	-100.17	-223.9	159.1	196.5	175.8	20.75	9.473		
4,500.0	4,491.8	4,495.3	4,486.7	10.6	10.8	-100.28	-230.3	161.7	200.4	179.1	21.27	9.421		
4,600.0	4,591.6	4,595.3	4,586.3	10.9	11.1	-100.39	-236.8	164.4	204.2	182.4	21.79	9.372		
4,700.0	4,691.3	4,695.2	4,686.0	11.1	11.3	-100.49	-243.2	167.1	208.0	185.7	22.31	9.325		
4,800.0	4,791.1	4,795.1	4,785.7	11.4	11.6	-100.59	-249.6	169.8	211.8	189.0	22.83	9.280		
4,900.0	4,890.8	4,895.0	4,885.4	11.7	11.9	-100.68	-256.1	172.4	215.7	192.3	23.35	9.237		
5,000.0	4,990.6	4,995.0	4,985.1	11.9	12.1	-100.78	-262.5	175.1	219.5	195.6	23.87	9.196		

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

Cathedral Energy Services

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Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3515A - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,094.0	5,083.8	12.2	12.4	-100.86	-268.9	177.8	223.3	198.9	24.38	9.157	
5,150.0	5,140.0	5,138.8	5,128.4	12.3	12.5	-100.76	-273.1	179.5	226.3	201.6	24.65	9.179	
5,200.0	5,188.8	5,181.8	5,170.7	12.5	12.7	-100.59	-280.5	182.6	231.6	206.7	24.98	9.274	
5,250.0	5,236.4	5,224.5	5,211.9	12.8	12.9	-100.32	-290.9	187.0	239.3	213.9	25.36	9.435	
5,300.0	5,282.2	5,266.9	5,251.6	13.0	13.1	-99.95	-304.4	192.6	249.2	223.4	25.81	9.655	
5,350.0	5,326.0	5,308.8	5,289.7	13.4	13.3	-99.46	-320.5	199.3	261.2	234.9	26.32	9.923	
5,400.0	5,367.3	5,350.0	5,325.6	13.7	13.6	-98.85	-339.1	207.0	275.2	248.3	26.90	10.231	
5,450.0	5,405.7	5,391.0	5,359.7	14.1	13.9	-98.11	-360.2	215.8	291.2	263.6	27.57	10.563	
5,500.0	5,440.8	5,431.3	5,391.3	14.6	14.3	-97.23	-383.2	225.4	308.9	280.6	28.31	10.910	
5,550.0	5,472.3	5,471.1	5,420.5	15.1	14.6	-96.21	-408.1	235.7	328.1	299.0	29.16	11.255	
5,600.0	5,500.0	5,510.4	5,447.3	15.7	15.0	-95.07	-434.7	246.8	348.9	318.8	30.08	11.598	
5,650.0	5,523.6	5,550.0	5,472.0	16.3	15.5	-93.83	-463.2	258.7	370.8	339.8	31.08	11.930	
5,700.0	5,542.9	5,587.9	5,493.5	16.9	15.9	-92.43	-492.1	270.7	393.9	361.8	32.15	12.251	
5,750.0	5,557.6	5,626.4	5,512.8	17.6	16.4	-90.96	-522.8	283.5	417.9	384.7	33.29	12.555	
5,800.0	5,567.7	5,664.7	5,529.6	18.3	16.9	-89.43	-554.6	296.7	442.7	408.2	34.47	12.843	
5,850.0	5,573.0	5,703.2	5,543.8	19.1	17.4	-87.85	-587.6	310.5	468.1	432.4	35.70	13.113	
5,880.9	5,574.0	5,727.1	5,551.3	19.5	17.8	-86.86	-608.6	319.2	484.0	447.5	36.48	13.267	
5,900.0	5,574.0	5,742.1	5,555.5	19.8	18.0	-87.50	-621.9	324.7	493.8	456.8	37.01	13.343	
6,000.0	5,574.0	5,825.6	5,571.0	21.1	19.3	-89.64	-697.5	356.2	543.2	503.4	39.79	13.653	
6,100.0	5,574.0	5,929.4	5,574.0	22.5	20.9	-90.00	-793.4	395.5	588.0	545.0	42.96	13.687	
6,192.5	5,574.0	6,056.0	5,574.0	23.9	22.7	-90.00	-913.0	437.2	620.6	574.3	46.38	13.380	
6,200.0	5,574.0	6,066.6	5,574.0	24.0	22.9	-90.00	-923.1	440.4	622.9	576.2	46.67	13.347	
6,300.0	5,574.0	6,211.5	5,574.0	25.7	25.1	-90.00	-1,063.1	477.6	648.5	597.9	50.63	12.810	
6,400.0	5,574.0	6,361.5	5,574.0	27.3	27.5	-90.00	-1,210.6	504.8	666.7	611.9	54.80	12.166	
6,500.0	5,574.0	6,515.0	5,574.0	29.0	29.9	-90.00	-1,363.3	520.5	677.0	617.9	59.09	11.457	
6,600.0	5,574.0	6,657.6	5,574.0	30.8	32.2	-90.00	-1,505.7	524.3	679.4	616.2	63.21	10.748	
6,700.0	5,574.0	6,757.6	5,574.0	32.5	33.8	-90.00	-1,605.7	524.3	679.4	612.7	66.68	10.189	
6,800.0	5,574.0	6,857.6	5,574.0	34.3	35.5	-90.00	-1,705.7	524.3	679.4	609.2	70.19	9.679	
6,900.0	5,574.0	6,957.6	5,574.0	36.1	37.2	-90.00	-1,805.7	524.3	679.4	605.6	73.74	9.213	
7,000.0	5,574.0	7,057.6	5,574.0	37.9	38.9	-90.00	-1,905.7	524.2	679.4	602.1	77.32	8.787	
7,100.0	5,574.0	7,157.6	5,574.0	39.7	40.7	-90.00	-2,005.7	524.2	679.4	598.5	80.92	8.396	
7,200.0	5,574.0	7,257.6	5,574.0	41.5	42.4	-90.00	-2,105.7	524.2	679.4	594.8	84.54	8.036	
7,300.0	5,574.0	7,357.6	5,574.0	43.4	44.2	-90.00	-2,205.7	524.2	679.4	591.2	88.18	7.705	
7,400.0	5,574.0	7,457.6	5,574.0	45.2	46.0	-90.00	-2,305.7	524.2	679.4	587.5	91.83	7.398	
7,500.0	5,574.0	7,557.6	5,574.0	47.0	47.8	-90.00	-2,405.7	524.2	679.4	583.9	95.50	7.114	
7,600.0	5,574.0	7,657.6	5,574.0	48.9	49.6	-90.00	-2,505.7	524.2	679.4	580.2	99.19	6.850	
7,700.0	5,574.0	7,757.6	5,574.0	50.7	51.4	-90.00	-2,605.7	524.2	679.4	576.5	102.88	6.604	
7,800.0	5,574.0	7,857.6	5,574.0	52.6	53.2	-90.00	-2,705.7	524.2	679.4	572.8	106.58	6.374	
7,900.0	5,574.0	7,957.6	5,574.0	54.5	55.0	-90.00	-2,805.7	524.2	679.4	569.1	110.30	6.160	
8,000.0	5,574.0	8,057.6	5,574.0	56.3	56.8	-90.00	-2,905.7	524.2	679.4	565.4	114.02	5.959	
8,100.0	5,574.0	8,157.6	5,574.0	58.2	58.7	-90.00	-3,005.7	524.2	679.4	561.6	117.74	5.770	
8,200.0	5,574.0	8,257.6	5,574.0	60.1	60.5	-90.00	-3,105.7	524.2	679.4	557.9	121.48	5.592	
8,300.0	5,574.0	8,357.6	5,574.0	61.9	62.4	-90.00	-3,205.7	524.2	679.4	554.1	125.22	5.425	
8,400.0	5,574.0	8,457.6	5,574.0	63.8	64.2	-90.00	-3,305.7	524.2	679.4	550.4	128.97	5.268	
8,500.0	5,574.0	8,557.6	5,574.0	65.7	66.1	-90.00	-3,405.7	524.2	679.4	546.6	132.72	5.119	
8,600.0	5,574.0	8,657.6	5,574.0	67.6	67.9	-90.00	-3,505.7	524.2	679.4	542.9	136.47	4.978	
8,700.0	5,574.0	8,757.6	5,574.0	69.5	69.8	-90.00	-3,605.7	524.1	679.4	539.1	140.23	4.844	
8,800.0	5,574.0	8,857.6	5,574.0	71.3	71.6	-90.00	-3,705.7	524.1	679.4	535.4	144.00	4.718	
8,900.0	5,574.0	8,957.6	5,574.0	73.2	73.5	-90.00	-3,805.7	524.1	679.4	531.6	147.77	4.597	
9,000.0	5,574.0	9,057.6	5,574.0	75.1	75.4	-90.00	-3,905.7	524.1	679.3	527.8	151.54	4.483	
9,100.0	5,574.0	9,157.6	5,574.0	77.0	77.2	-90.00	-4,005.7	524.1	679.3	524.0	155.31	4.374	
9,200.0	5,574.0	9,257.6	5,574.0	78.9	79.1	-90.00	-4,105.7	524.1	679.3	520.3	159.09	4.270	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-3515A - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,574.0	9,357.6	5,574.0	80.8	81.0	-90.00	-4,205.7	524.1	679.3	516.5	162.87	4.171	
9,400.0	5,574.0	9,457.6	5,574.0	82.7	82.9	-90.00	-4,305.7	524.1	679.3	512.7	166.65	4.076	
9,500.0	5,574.0	9,557.6	5,574.0	84.6	84.7	-90.00	-4,405.7	524.1	679.3	508.9	170.43	3.986	
9,600.0	5,574.0	9,657.6	5,574.0	86.5	86.6	-90.00	-4,505.7	524.1	679.3	505.1	174.22	3.899	
9,700.0	5,574.0	9,757.6	5,574.0	88.4	88.5	-90.00	-4,605.7	524.1	679.3	501.3	178.01	3.816	
9,800.0	5,574.0	9,857.6	5,574.0	90.3	90.4	-90.00	-4,705.7	524.1	679.3	497.5	181.80	3.737	
9,900.0	5,574.0	9,957.6	5,574.0	92.2	92.3	-90.00	-4,805.7	524.1	679.3	493.7	185.59	3.660	
10,000.0	5,574.0	10,057.6	5,574.0	94.1	94.2	-90.00	-4,905.7	524.1	679.3	489.9	189.39	3.587	
10,100.0	5,574.0	10,157.6	5,574.0	96.0	96.0	-90.00	-5,005.7	524.1	679.3	486.1	193.18	3.516	
10,200.0	5,574.0	10,257.6	5,574.0	97.9	97.9	-90.00	-5,105.7	524.1	679.3	482.3	196.98	3.449	
10,300.0	5,574.0	10,357.6	5,574.0	99.8	99.8	-90.00	-5,205.7	524.1	679.3	478.5	200.78	3.383	
10,400.0	5,574.0	10,457.6	5,574.0	101.7	101.7	-90.00	-5,305.7	524.0	679.3	474.7	204.58	3.321	
10,500.0	5,574.0	10,557.6	5,574.0	103.6	103.6	-90.00	-5,405.7	524.0	679.3	470.9	208.38	3.260	
10,600.0	5,574.0	10,657.6	5,574.0	105.5	105.5	-90.00	-5,505.7	524.0	679.3	467.1	212.18	3.202	
10,700.0	5,574.0	10,757.6	5,574.0	107.4	107.4	-90.00	-5,605.7	524.0	679.3	463.3	215.99	3.145	
10,800.0	5,574.0	10,857.6	5,574.0	109.3	109.3	-90.00	-5,705.7	524.0	679.3	459.5	219.79	3.091	
10,900.0	5,574.0	10,957.6	5,574.0	111.2	111.2	-90.00	-5,805.7	524.0	679.3	455.7	223.60	3.038	
11,000.0	5,574.0	11,057.6	5,574.0	113.1	113.1	-90.00	-5,905.7	524.0	679.3	451.9	227.40	2.987	
11,100.0	5,574.0	11,157.6	5,574.0	115.0	115.0	-90.00	-6,005.7	524.0	679.3	448.1	231.21	2.938	
11,200.0	5,574.0	11,257.6	5,574.0	116.9	116.9	-90.00	-6,105.7	524.0	679.3	444.3	235.02	2.890	
11,300.0	5,574.0	11,357.6	5,574.0	118.8	118.8	-90.00	-6,205.7	524.0	679.3	440.5	238.83	2.844	
11,400.0	5,574.0	11,457.6	5,574.0	120.7	120.7	-90.00	-6,305.7	524.0	679.3	436.7	242.64	2.800	
11,500.0	5,574.0	11,557.6	5,574.0	122.6	122.6	-90.00	-6,405.7	524.0	679.3	432.9	246.45	2.756	
11,600.0	5,574.0	11,657.6	5,574.0	124.5	124.5	-90.00	-6,505.7	524.0	679.3	429.0	250.26	2.714	
11,700.0	5,574.0	11,757.6	5,574.0	126.4	126.4	-90.00	-6,605.7	524.0	679.3	425.2	254.07	2.674	
11,800.0	5,574.0	11,857.6	5,574.0	128.3	128.3	-90.00	-6,705.7	524.0	679.3	421.4	257.88	2.634	
11,900.0	5,574.0	11,957.6	5,574.0	130.2	130.2	-90.00	-6,805.7	524.0	679.3	417.6	261.70	2.596	
12,000.0	5,574.0	12,057.6	5,574.0	132.1	132.1	-90.00	-6,905.7	524.0	679.3	413.8	265.51	2.558	
12,062.4	5,574.0	12,120.0	5,574.0	133.3	133.2	-90.00	-6,968.1	523.9	679.3	411.4	267.89	2.536 SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3515A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	88.94	1.2	65.4	65.4					
100.0	100.0	100.0	100.0	0.1	0.1	88.94	1.2	65.4	65.4	65.2	0.19	348.269		
200.0	200.0	200.0	200.0	0.3	0.3	88.94	1.2	65.4	65.4	64.7	0.64	102.577		
300.0	300.0	300.0	300.0	0.5	0.5	88.94	1.2	65.4	65.4	64.3	1.09	60.146		
400.0	400.0	400.0	400.0	0.8	0.8	88.94	1.2	65.4	65.4	63.8	1.54	42.546		
500.0	500.0	500.0	500.0	1.0	1.0	88.94	1.2	65.4	65.4	63.4	1.99	32.915		
600.0	600.0	600.0	600.0	1.2	1.2	88.94	1.2	65.4	65.4	62.9	2.44	26.839 CC, ES		
700.0	700.0	699.3	699.3	1.4	1.4	90.38	-0.4	65.9	65.9	63.0	2.86	23.060		
800.0	800.0	798.4	798.3	1.7	1.6	94.55	-5.4	67.4	67.6	64.3	3.26	20.712		
900.0	900.0	898.2	897.8	1.9	1.8	99.82	-12.0	69.4	70.5	66.8	3.69	19.093		
1,000.0	1,000.0	997.9	997.3	2.1	2.0	104.64	-18.7	71.4	73.9	69.7	4.13	17.891		
1,100.0	1,100.0	1,097.8	1,096.9	2.3	2.2	-81.53	-25.3	73.5	77.5	73.0	4.54	17.069		
1,200.0	1,199.8	1,197.7	1,196.6	2.5	2.5	-81.07	-32.0	75.5	80.7	75.8	4.94	16.331		
1,300.0	1,299.6	1,297.7	1,296.3	2.7	2.7	-81.89	-38.7	77.5	83.7	78.3	5.36	15.595		
1,400.0	1,399.4	1,397.6	1,396.0	2.9	3.0	-82.65	-45.3	79.6	86.6	80.8	5.80	14.928		
1,500.0	1,499.1	1,497.6	1,495.7	3.1	3.2	-83.37	-52.0	81.6	89.6	83.4	6.26	14.326		
1,600.0	1,598.9	1,597.5	1,595.4	3.3	3.5	-84.03	-58.7	83.7	92.6	85.9	6.72	13.786		
1,700.0	1,698.6	1,697.5	1,695.1	3.5	3.7	-84.66	-65.3	85.7	95.6	88.4	7.19	13.301		
1,800.0	1,798.4	1,797.4	1,794.8	3.8	4.0	-85.24	-72.0	87.7	98.7	91.0	7.67	12.865		
1,900.0	1,898.1	1,897.4	1,894.5	4.0	4.2	-85.79	-78.7	89.8	101.7	93.5	8.15	12.472		
2,000.0	1,997.9	1,997.3	1,994.2	4.2	4.5	-86.31	-85.3	91.8	104.7	96.1	8.64	12.118		
2,100.0	2,097.6	2,097.3	2,093.9	4.5	4.7	-86.80	-92.0	93.8	107.8	98.6	9.14	11.797		
2,200.0	2,197.4	2,197.2	2,193.7	4.7	5.0	-87.26	-98.7	95.9	110.8	101.2	9.63	11.505		
2,300.0	2,297.2	2,297.2	2,293.4	5.0	5.3	-87.70	-105.3	97.9	113.9	103.8	10.13	11.239		
2,400.0	2,396.9	2,397.1	2,393.1	5.2	5.5	-88.12	-112.0	100.0	117.0	106.3	10.64	10.996		
2,500.0	2,496.7	2,497.1	2,492.8	5.5	5.8	-88.51	-118.7	102.0	120.0	108.9	11.14	10.773		
2,600.0	2,596.4	2,597.0	2,592.5	5.7	6.0	-88.88	-125.3	104.0	123.1	111.5	11.65	10.569		
2,700.0	2,696.2	2,697.0	2,692.2	6.0	6.3	-89.24	-132.0	106.1	126.2	114.0	12.16	10.380		
2,800.0	2,795.9	2,796.9	2,791.9	6.2	6.6	-89.58	-138.7	108.1	129.3	116.6	12.67	10.206		
2,900.0	2,895.7	2,896.9	2,891.6	6.5	6.8	-89.90	-145.3	110.2	132.4	119.2	13.18	10.044		
3,000.0	2,995.5	2,996.8	2,991.3	6.7	7.1	-90.21	-152.0	112.2	135.5	121.8	13.69	9.894		
3,100.0	3,095.2	3,096.8	3,091.0	7.0	7.3	-90.50	-158.7	114.2	138.6	124.4	14.21	9.754		
3,200.0	3,195.0	3,196.7	3,190.7	7.2	7.6	-90.78	-165.3	116.3	141.7	127.0	14.72	9.624		
3,300.0	3,294.7	3,296.7	3,290.4	7.5	7.9	-91.05	-172.0	118.3	144.8	129.5	15.24	9.502		
3,400.0	3,394.5	3,396.6	3,390.1	7.8	8.1	-91.31	-178.7	120.3	147.9	132.1	15.75	9.388		
3,500.0	3,494.2	3,496.6	3,489.8	8.0	8.4	-91.56	-185.3	122.4	151.0	134.7	16.27	9.280		
3,600.0	3,594.0	3,596.5	3,589.5	8.3	8.7	-91.80	-192.0	124.4	154.1	137.3	16.79	9.180		
3,700.0	3,693.7	3,696.5	3,689.2	8.5	8.9	-92.02	-198.7	126.5	157.2	139.9	17.31	9.085		
3,800.0	3,793.5	3,796.4	3,788.9	8.8	9.2	-92.24	-205.3	128.5	160.4	142.5	17.83	8.995		
3,900.0	3,893.3	3,896.4	3,888.7	9.0	9.4	-92.45	-212.0	130.5	163.5	145.1	18.35	8.911		
4,000.0	3,993.0	3,996.3	3,988.4	9.3	9.7	-92.66	-218.7	132.6	166.6	147.7	18.87	8.831		
4,100.0	4,092.8	4,096.3	4,088.1	9.6	10.0	-92.85	-225.3	134.6	169.7	150.3	19.39	8.755		
4,200.0	4,192.5	4,196.2	4,187.8	9.8	10.2	-93.04	-232.0	136.7	172.9	153.0	19.91	8.683		
4,300.0	4,292.3	4,296.2	4,287.5	10.1	10.5	-93.22	-238.7	138.7	176.0	155.6	20.43	8.615		
4,400.0	4,392.0	4,396.1	4,387.2	10.3	10.8	-93.40	-245.3	140.7	179.1	158.2	20.95	8.550		
4,500.0	4,491.8	4,496.1	4,486.9	10.6	11.0	-93.57	-252.0	142.8	182.3	160.8	21.47	8.488		
4,600.0	4,591.6	4,596.0	4,586.6	10.9	11.3	-93.73	-258.7	144.8	185.4	163.4	21.99	8.430		
4,700.0	4,691.3	4,696.0	4,686.3	11.1	11.5	-93.89	-265.4	146.8	188.5	166.0	22.52	8.373		
4,800.0	4,791.1	4,795.9	4,786.0	11.4	11.8	-94.04	-272.0	148.9	191.7	168.6	23.04	8.320		
4,900.0	4,890.8	4,895.9	4,885.7	11.7	12.1	-94.19	-278.7	150.9	194.8	171.3	23.56	8.269		
5,000.0	4,990.6	4,995.8	4,985.4	11.9	12.3	-94.33	-285.4	153.0	198.0	173.9	24.08	8.219		
5,099.1	5,089.4	5,094.8	5,084.2	12.2	12.6	-94.47	-292.0	155.0	201.1	176.5	24.60	8.173		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3515A - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,150.0	5,140.0	5,140.0	5,129.1	12.3	12.7	-94.47	-296.4	156.3	203.5	178.6	24.89	8.178	
5,200.0	5,188.8	5,183.5	5,171.8	12.5	12.9	-94.48	-304.2	158.7	207.8	182.6	25.23	8.238	
5,250.0	5,236.4	5,226.9	5,213.6	12.8	13.1	-94.47	-315.3	162.1	214.0	188.4	25.64	8.347	
5,300.0	5,282.2	5,270.0	5,254.0	13.0	13.3	-94.43	-329.6	166.5	222.1	196.0	26.12	8.501	
5,350.0	5,326.0	5,312.8	5,292.8	13.4	13.6	-94.32	-347.0	171.8	231.9	205.2	26.67	8.693	
5,400.0	5,367.3	5,355.4	5,329.8	13.7	13.9	-94.15	-367.2	178.0	243.4	216.1	27.30	8.916	
5,450.0	5,405.7	5,400.0	5,366.5	14.1	14.2	-93.95	-391.3	185.4	256.5	228.5	28.01	9.156	
5,500.0	5,440.8	5,439.6	5,397.2	14.6	14.6	-93.52	-415.2	192.7	271.1	242.3	28.79	9.414	
5,550.0	5,472.3	5,481.3	5,427.3	15.1	15.0	-93.05	-442.7	201.1	287.0	257.3	29.68	9.670	
5,600.0	5,500.0	5,522.7	5,455.0	15.7	15.4	-92.47	-472.3	210.1	304.2	273.6	30.65	9.925	
5,650.0	5,523.6	5,564.0	5,479.9	16.3	15.8	-91.80	-503.7	219.7	322.6	290.9	31.70	10.175	
5,700.0	5,542.9	5,605.2	5,502.2	16.9	16.3	-91.03	-536.9	229.9	341.9	309.0	32.83	10.415	
5,750.0	5,557.6	5,646.5	5,521.7	17.6	16.9	-90.18	-571.6	240.5	362.0	328.0	34.02	10.641	
5,800.0	5,567.7	5,687.9	5,538.3	18.3	17.4	-89.26	-607.9	251.6	382.8	347.6	35.28	10.851	
5,850.0	5,573.0	5,729.6	5,551.9	19.1	18.0	-88.29	-645.6	263.1	404.2	367.6	36.60	11.044	
5,880.9	5,574.0	5,755.6	5,558.7	19.5	18.4	-87.68	-669.6	270.4	417.6	380.2	37.43	11.156	
5,900.0	5,574.0	5,771.8	5,562.4	19.8	18.6	-88.28	-684.7	275.1	425.9	387.9	37.99	11.210	
6,000.0	5,574.0	5,861.3	5,573.6	21.1	20.0	-89.95	-769.5	301.0	466.8	425.9	40.90	11.414	
6,100.0	5,574.0	5,980.4	5,574.0	22.5	21.7	-90.00	-884.1	333.4	501.2	457.0	44.22	11.334	
6,192.5	5,574.0	6,103.2	5,574.0	23.9	23.5	-90.00	-1,004.1	359.3	523.0	475.4	47.56	10.996	
6,200.0	5,574.0	6,113.4	5,574.0	24.0	23.7	-90.00	-1,014.1	361.1	524.3	476.5	47.84	10.960	
6,300.0	5,574.0	6,250.6	5,574.0	25.7	25.7	-90.00	-1,150.0	380.2	538.2	486.6	51.65	10.420	
6,400.0	5,574.0	6,389.9	5,574.0	27.3	27.9	-90.00	-1,288.9	389.6	544.9	489.4	55.58	9.805	
6,500.0	5,574.0	6,494.8	5,574.0	29.0	29.6	-90.00	-1,393.8	391.9	547.2	488.1	59.03	9.269	
6,600.0	5,574.0	6,594.7	5,574.0	30.8	31.3	-90.00	-1,493.7	394.1	549.4	486.8	62.51	8.788	
6,700.0	5,574.0	6,694.7	5,574.0	32.5	33.0	-90.00	-1,593.7	396.3	551.5	485.5	66.04	8.352	
6,800.0	5,574.0	6,794.7	5,574.0	34.3	34.8	-90.00	-1,693.6	398.5	553.7	484.1	69.60	7.956	
6,900.0	5,574.0	6,894.7	5,574.0	36.1	36.5	-90.00	-1,793.6	400.6	555.9	482.7	73.19	7.596	
7,000.0	5,574.0	6,994.6	5,574.0	37.9	38.3	-90.00	-1,893.5	402.8	558.1	481.3	76.80	7.267	
7,100.0	5,574.0	7,094.6	5,574.0	39.7	40.1	-90.00	-1,993.5	405.0	560.3	479.8	80.44	6.965	
7,200.0	5,574.0	7,194.6	5,574.0	41.5	41.9	-90.00	-2,093.4	407.2	562.4	478.4	84.09	6.688	
7,300.0	5,574.0	7,294.6	5,574.0	43.4	43.7	-90.00	-2,193.4	409.3	564.6	476.9	87.77	6.433	
7,400.0	5,574.0	7,394.5	5,574.0	45.2	45.5	-90.00	-2,293.3	411.5	566.8	475.4	91.45	6.198	
7,500.0	5,574.0	7,494.5	5,574.0	47.0	47.4	-90.00	-2,393.3	413.7	569.0	473.8	95.15	5.980	
7,600.0	5,574.0	7,594.5	5,574.0	48.9	49.2	-90.00	-2,493.2	415.9	571.2	472.3	98.87	5.777	
7,700.0	5,574.0	7,694.5	5,574.0	50.7	51.0	-90.00	-2,593.2	418.0	573.4	470.8	102.59	5.589	
7,800.0	5,574.0	7,794.4	5,574.0	52.6	52.9	-90.00	-2,693.1	420.2	575.5	469.2	106.32	5.413	
7,900.0	5,574.0	7,894.4	5,574.0	54.5	54.7	-90.00	-2,793.1	422.4	577.7	467.7	110.06	5.249	
8,000.0	5,574.0	7,994.4	5,574.0	56.3	56.6	-90.00	-2,893.0	424.6	579.9	466.1	113.80	5.096	
8,100.0	5,574.0	8,094.4	5,574.0	58.2	58.5	-90.00	-2,993.0	426.8	582.1	464.5	117.56	4.951	
8,200.0	5,574.0	8,194.4	5,574.0	60.1	60.3	-90.00	-3,092.9	428.9	584.3	462.9	121.32	4.816	
8,300.0	5,574.0	8,294.3	5,574.0	61.9	62.2	-90.00	-3,192.9	431.1	586.4	461.4	125.08	4.689	
8,400.0	5,574.0	8,394.3	5,574.0	63.8	64.1	-90.00	-3,292.8	433.3	588.6	459.8	128.85	4.568	
8,500.0	5,574.0	8,494.3	5,574.0	65.7	65.9	-90.00	-3,392.8	435.5	590.8	458.2	132.63	4.455	
8,600.0	5,574.0	8,594.3	5,574.0	67.6	67.8	-90.00	-3,492.8	437.6	593.0	456.6	136.40	4.347	
8,700.0	5,574.0	8,694.2	5,574.0	69.5	69.7	-90.00	-3,592.7	439.8	595.2	455.0	140.19	4.246	
8,800.0	5,574.0	8,794.2	5,574.0	71.3	71.6	-90.00	-3,692.7	442.0	597.4	453.4	143.97	4.149	
8,900.0	5,574.0	8,894.2	5,574.0	73.2	73.5	-90.00	-3,792.6	444.2	599.5	451.8	147.76	4.057	
9,000.0	5,574.0	8,994.2	5,574.0	75.1	75.4	-90.00	-3,892.6	446.4	601.7	450.2	151.55	3.970	
9,100.0	5,574.0	9,094.1	5,574.0	77.0	77.2	-90.00	-3,992.5	448.5	603.9	448.6	155.35	3.887	
9,200.0	5,574.0	9,194.1	5,574.0	78.9	79.1	-90.00	-4,092.5	450.7	606.1	446.9	159.14	3.808	
9,300.0	5,574.0	9,294.1	5,574.0	80.8	81.0	-90.00	-4,192.4	452.9	608.3	445.3	162.94	3.733	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-3515A - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,574.0	9,394.1	5,574.0	82.7	82.9	-90.00	-4,292.4	455.1	610.4	443.7	166.75	3.661	
9,500.0	5,574.0	9,494.0	5,574.0	84.6	84.8	-90.00	-4,392.3	457.2	612.6	442.1	170.55	3.592	
9,600.0	5,574.0	9,594.0	5,574.0	86.5	86.7	-90.00	-4,492.3	459.4	614.8	440.5	174.36	3.526	
9,700.0	5,574.0	9,694.0	5,574.0	88.4	88.6	-90.00	-4,592.2	461.6	617.0	438.8	178.16	3.463	
9,800.0	5,574.0	9,794.0	5,574.0	90.3	90.5	-90.00	-4,692.2	463.8	619.2	437.2	181.97	3.403	
9,900.0	5,574.0	9,893.9	5,574.0	92.2	92.4	-90.00	-4,792.1	466.0	621.4	435.6	185.79	3.344	
10,000.0	5,574.0	9,993.9	5,574.0	94.1	94.3	-90.00	-4,892.1	468.1	623.5	433.9	189.60	3.289	
10,100.0	5,574.0	10,093.9	5,574.0	96.0	96.2	-90.00	-4,992.0	470.3	625.7	432.3	193.41	3.235	
10,200.0	5,574.0	10,193.9	5,574.0	97.9	98.1	-90.00	-5,092.0	472.5	627.9	430.7	197.23	3.184	
10,300.0	5,574.0	10,293.9	5,574.0	99.8	100.0	-90.00	-5,191.9	474.7	630.1	429.0	201.04	3.134	
10,400.0	5,574.0	10,393.8	5,574.0	101.7	101.9	-90.00	-5,291.9	476.8	632.3	427.4	204.86	3.086	
10,500.0	5,574.0	10,493.8	5,574.0	103.6	103.8	-90.00	-5,391.9	479.0	634.4	425.8	208.68	3.040	
10,600.0	5,574.0	10,593.8	5,574.0	105.5	105.7	-90.00	-5,491.8	481.2	636.6	424.1	212.50	2.996	
10,700.0	5,574.0	10,693.8	5,574.0	107.4	107.6	-90.00	-5,591.8	483.4	638.8	422.5	216.32	2.953	
10,800.0	5,574.0	10,793.7	5,574.0	109.3	109.5	-90.00	-5,691.7	485.5	641.0	420.8	220.15	2.912	
10,900.0	5,574.0	10,893.7	5,574.0	111.2	111.4	-90.00	-5,791.7	487.7	643.2	419.2	223.97	2.872	
11,000.0	5,574.0	10,993.7	5,574.0	113.1	113.3	-90.00	-5,891.6	489.9	645.4	417.6	227.79	2.833	
11,100.0	5,574.0	11,093.7	5,574.0	115.0	115.2	-90.00	-5,991.6	492.1	647.5	415.9	231.62	2.796	
11,200.0	5,574.0	11,193.6	5,574.0	116.9	117.1	-90.00	-6,091.5	494.3	649.7	414.3	235.44	2.760	
11,300.0	5,574.0	11,293.6	5,574.0	118.8	119.1	-90.00	-6,191.5	496.4	651.9	412.6	239.27	2.725	
11,400.0	5,574.0	11,393.6	5,574.0	120.7	121.0	-90.00	-6,291.4	498.6	654.1	411.0	243.10	2.691	
11,500.0	5,574.0	11,493.6	5,574.0	122.6	122.9	-90.00	-6,391.4	500.8	656.3	409.3	246.92	2.658	
11,600.0	5,574.0	11,593.5	5,574.0	124.5	124.8	-90.00	-6,491.3	503.0	658.4	407.7	250.75	2.626	
11,700.0	5,574.0	11,693.5	5,574.0	126.4	126.7	-90.00	-6,591.3	505.1	660.6	406.0	254.58	2.595	
11,800.0	5,574.0	11,793.5	5,574.0	128.3	128.6	-90.00	-6,691.2	507.3	662.8	404.4	258.41	2.565	
11,900.0	5,574.0	11,893.5	5,574.0	130.2	130.5	-90.00	-6,791.2	509.5	665.0	402.8	262.24	2.536	
12,000.0	5,574.0	11,993.4	5,574.0	132.1	132.4	-90.00	-6,891.1	511.7	667.2	401.1	266.07	2.508	
12,062.4	5,574.0	12,055.8	5,574.0	133.3	133.6	-90.00	-6,953.5	513.0	668.5	400.1	268.46	2.490 SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3516B - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	126.18	-73.0	99.8	123.7					
100.0	100.0	100.0	100.0	0.1	0.1	126.18	-73.0	99.8	123.7	123.5	0.19	659.002		
200.0	200.0	200.0	200.0	0.3	0.3	126.18	-73.0	99.8	123.7	123.0	0.64	194.098		
300.0	300.0	300.0	300.0	0.5	0.5	126.18	-73.0	99.8	123.7	122.6	1.09	113.809		
400.0	400.0	400.0	400.0	0.8	0.8	126.18	-73.0	99.8	123.7	122.1	1.54	80.507		
500.0	500.0	500.0	500.0	1.0	1.0	126.18	-73.0	99.8	123.7	121.7	1.99	62.283		
600.0	600.0	600.0	600.0	1.2	1.2	126.18	-73.0	99.8	123.7	121.2	2.44	50.786		
700.0	700.0	700.0	700.0	1.4	1.4	126.18	-73.0	99.8	123.7	120.8	2.88	42.872		
800.0	800.0	800.0	800.0	1.7	1.7	126.18	-73.0	99.8	123.7	120.3	3.33	37.093		
900.0	900.0	900.0	900.0	1.9	1.9	126.18	-73.0	99.8	123.7	119.9	3.78	32.686		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	126.18	-73.0	99.8	123.7	119.4	4.23	29.215		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-63.91	-73.0	99.8	122.9	118.2	4.65	26.407		
1,188.0	1,187.8	1,184.5	1,184.5	2.5	2.5	-65.50	-74.1	100.5	122.2	117.2	4.98	24.561 CC		
1,200.0	1,199.8	1,196.1	1,196.1	2.5	2.5	-65.76	-74.4	100.7	122.2	117.2	5.02	24.350 ES		
1,300.0	1,299.6	1,292.2	1,292.1	2.7	2.7	-67.71	-78.4	103.4	124.1	118.7	5.38	23.056		
1,400.0	1,399.4	1,391.8	1,391.4	2.9	2.9	-69.28	-84.2	107.2	127.8	122.0	5.77	22.159		
1,500.0	1,499.1	1,491.6	1,491.0	3.1	3.1	-70.76	-90.0	111.0	131.6	125.4	6.17	21.334		
1,600.0	1,598.9	1,591.5	1,590.6	3.3	3.3	-72.16	-95.8	114.9	135.5	128.9	6.59	20.577		
1,700.0	1,698.6	1,691.4	1,690.3	3.5	3.5	-73.48	-101.6	118.7	139.5	132.5	7.01	19.886		
1,800.0	1,798.4	1,791.3	1,789.9	3.8	3.8	-74.72	-107.5	122.5	143.5	136.1	7.45	19.256		
1,900.0	1,898.1	1,891.1	1,889.5	4.0	4.0	-75.89	-113.3	126.4	147.7	139.8	7.90	18.684		
2,000.0	1,997.9	1,991.0	1,989.2	4.2	4.2	-77.01	-119.1	130.2	151.8	143.5	8.36	18.163		
2,100.0	2,097.6	2,090.9	2,088.8	4.5	4.5	-78.06	-124.9	134.0	156.0	147.2	8.82	17.689		
2,200.0	2,197.4	2,190.7	2,188.4	4.7	4.7	-79.05	-130.7	137.9	160.3	151.0	9.29	17.256		
2,300.0	2,297.2	2,290.6	2,288.0	5.0	4.9	-80.00	-136.5	141.7	164.6	154.9	9.76	16.861		
2,400.0	2,396.9	2,390.5	2,387.7	5.2	5.2	-80.89	-142.4	145.5	169.0	158.8	10.24	16.499		
2,500.0	2,496.7	2,490.4	2,487.3	5.5	5.4	-81.74	-148.2	149.4	173.4	162.7	10.73	16.167		
2,600.0	2,596.4	2,590.2	2,586.9	5.7	5.7	-82.55	-154.0	153.2	177.8	166.6	11.21	15.862		
2,700.0	2,696.2	2,690.1	2,686.5	6.0	5.9	-83.32	-159.8	157.0	182.3	170.6	11.70	15.581		
2,800.0	2,795.9	2,790.0	2,786.2	6.2	6.2	-84.05	-165.6	160.8	186.8	174.6	12.19	15.322		
2,900.0	2,895.7	2,889.8	2,885.8	6.5	6.4	-84.75	-171.5	164.7	191.4	178.7	12.69	15.082		
3,000.0	2,995.5	2,989.7	2,985.4	6.7	6.7	-85.41	-177.3	168.5	195.9	182.7	13.18	14.860		
3,100.0	3,095.2	3,089.6	3,085.1	7.0	6.9	-86.04	-183.1	172.3	200.5	186.8	13.68	14.654		
3,200.0	3,195.0	3,189.4	3,184.7	7.2	7.2	-86.65	-188.9	176.2	205.1	190.9	14.18	14.462		
3,300.0	3,294.7	3,289.3	3,284.3	7.5	7.4	-87.23	-194.7	180.0	209.7	195.0	14.68	14.283		
3,400.0	3,394.5	3,389.2	3,383.9	7.8	7.7	-87.78	-200.5	183.8	214.4	199.2	15.19	14.115		
3,500.0	3,494.2	3,489.1	3,483.6	8.0	8.0	-88.31	-206.4	187.7	219.0	203.4	15.69	13.959		
3,600.0	3,594.0	3,588.9	3,583.2	8.3	8.2	-88.82	-212.2	191.5	223.7	207.5	16.20	13.812		
3,700.0	3,693.7	3,688.8	3,682.8	8.5	8.5	-89.31	-218.0	195.3	228.4	211.7	16.70	13.675		
3,800.0	3,793.5	3,788.7	3,782.4	8.8	8.7	-89.78	-223.8	199.2	233.2	215.9	17.21	13.545		
3,900.0	3,893.3	3,888.5	3,882.1	9.0	9.0	-90.23	-229.6	203.0	237.9	220.2	17.72	13.424		
4,000.0	3,993.0	3,988.4	3,981.7	9.3	9.2	-90.66	-235.4	206.8	242.6	224.4	18.23	13.309		
4,100.0	4,092.8	4,088.3	4,081.3	9.6	9.5	-91.07	-241.3	210.7	247.4	228.7	18.74	13.200		
4,200.0	4,192.5	4,188.2	4,181.0	9.8	9.8	-91.47	-247.1	214.5	252.2	232.9	19.25	13.098		
4,300.0	4,292.3	4,288.0	4,280.6	10.1	10.0	-91.86	-252.9	218.3	257.0	237.2	19.76	13.001		
4,400.0	4,392.0	4,387.9	4,380.2	10.3	10.3	-92.23	-258.7	222.2	261.8	241.5	20.28	12.909		
4,500.0	4,491.8	4,487.8	4,479.8	10.6	10.5	-92.59	-264.5	226.0	266.6	245.8	20.79	12.822		
4,600.0	4,591.6	4,587.6	4,579.5	10.9	10.8	-92.93	-270.3	229.8	271.4	250.1	21.30	12.739		
4,700.0	4,691.3	4,687.5	4,679.1	11.1	11.1	-93.26	-276.2	233.7	276.2	254.4	21.82	12.660		
4,800.0	4,791.1	4,787.4	4,778.7	11.4	11.3	-93.58	-282.0	237.5	281.0	258.7	22.33	12.585		
4,900.0	4,890.8	4,887.3	4,878.3	11.7	11.6	-93.89	-287.8	241.3	285.9	263.0	22.85	12.514		
5,000.0	4,990.6	4,987.1	4,978.0	11.9	11.8	-94.19	-293.6	245.2	290.7	267.4	23.36	12.446		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3516B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,086.1	5,076.7	12.2	12.1	-94.48	-299.4	249.0	295.6	271.7	23.87	12.381	
5,150.0	5,140.0	5,136.8	5,127.3	12.3	12.2	-94.80	-302.3	250.9	298.2	274.1	24.15	12.348	
5,200.0	5,188.8	5,186.1	5,176.4	12.5	12.4	-95.95	-305.2	252.8	301.4	276.9	24.47	12.316	
5,250.0	5,236.4	5,222.4	5,212.6	12.8	12.5	-96.94	-308.4	254.9	306.4	281.5	24.80	12.351	
5,300.0	5,282.2	5,258.5	5,248.1	13.0	12.6	-97.80	-313.6	258.3	314.2	289.0	25.18	12.481	
5,350.0	5,326.0	5,300.0	5,288.3	13.4	12.8	-98.79	-322.1	264.0	325.0	299.4	25.61	12.690	
5,400.0	5,367.3	5,329.4	5,316.3	13.7	12.9	-98.93	-329.8	269.0	338.6	312.5	26.06	12.991	
5,450.0	5,405.7	5,364.0	5,348.4	14.1	13.1	-99.12	-340.4	276.0	355.0	328.4	26.59	13.353	
5,500.0	5,440.8	5,400.0	5,380.9	14.6	13.3	-99.14	-353.4	284.6	374.1	346.9	27.17	13.766	
5,550.0	5,472.3	5,431.1	5,408.0	15.1	13.5	-98.58	-366.1	292.9	395.6	367.8	27.82	14.218	
5,600.0	5,500.0	5,463.5	5,435.2	15.7	13.7	-97.82	-380.7	302.5	419.4	390.9	28.55	14.692	
5,650.0	5,523.6	5,495.1	5,460.7	16.3	14.0	-96.72	-396.3	312.8	445.3	416.0	29.34	15.177	
5,700.0	5,542.9	5,525.9	5,484.4	16.9	14.3	-95.29	-412.7	323.6	473.1	442.9	30.21	15.662	
5,750.0	5,557.6	5,555.9	5,506.4	17.6	14.5	-93.55	-429.8	334.9	502.5	471.3	31.14	16.134	
5,800.0	5,567.7	5,585.3	5,526.7	18.3	14.8	-91.51	-447.6	346.6	533.2	501.1	32.13	16.597	
5,850.0	5,573.0	5,614.0	5,545.3	19.1	15.1	-89.21	-465.8	358.6	565.2	532.1	33.13	17.061	
5,880.9	5,574.0	5,631.5	5,556.1	19.5	15.3	-87.67	-477.3	366.2	585.5	551.7	33.75	17.350	
5,900.0	5,574.0	5,642.5	5,562.6	19.8	15.4	-88.55	-484.7	371.1	598.1	564.0	34.15	17.516	
6,000.0	5,574.0	5,707.5	5,597.2	21.1	16.2	-92.63	-530.6	401.3	663.6	627.4	36.19	18.336	
6,100.0	5,574.0	5,786.1	5,629.6	22.5	17.3	-95.55	-590.4	440.7	726.6	688.1	38.47	18.885	
6,192.5	5,574.0	5,870.7	5,652.0	23.9	18.6	-96.94	-658.4	485.5	781.0	740.0	40.96	19.068	
6,200.0	5,574.0	5,878.0	5,653.3	24.0	18.8	-97.01	-664.4	489.5	785.2	744.0	41.17	19.072	
6,300.0	5,574.0	5,981.9	5,661.0	25.7	20.5	-97.07	-750.8	546.4	840.5	796.2	44.30	18.973	
6,400.0	5,574.0	6,138.8	5,661.0	27.3	22.9	-96.36	-885.8	626.2	891.3	842.9	48.33	18.441	
6,500.0	5,574.0	6,310.7	5,661.0	29.0	25.7	-95.81	-1,040.7	700.7	934.4	881.6	52.83	17.687	
6,600.0	5,574.0	6,497.0	5,661.0	30.8	28.8	-95.40	-1,215.3	765.3	969.0	911.2	57.79	16.768	
6,700.0	5,574.0	6,695.4	5,661.0	32.5	32.1	-95.13	-1,407.3	815.0	994.1	931.0	63.08	15.758	
6,800.0	5,574.0	6,902.6	5,661.0	34.3	35.5	-94.97	-1,612.1	845.5	1,008.7	940.2	68.54	14.718	
6,900.0	5,574.0	7,096.3	5,661.0	36.1	38.6	-94.93	-1,805.7	853.7	1,012.6	939.0	73.67	13.745	
7,000.0	5,574.0	7,196.3	5,661.0	37.9	40.1	-94.93	-1,905.7	853.7	1,012.6	935.5	77.16	13.123	
7,100.0	5,574.0	7,296.3	5,661.0	39.7	41.7	-94.93	-2,005.7	853.7	1,012.6	932.0	80.68	12.551	
7,200.0	5,574.0	7,396.3	5,661.0	41.5	43.4	-94.93	-2,105.7	853.7	1,012.6	928.4	84.23	12.023	
7,300.0	5,574.0	7,496.3	5,661.0	43.4	45.0	-94.93	-2,205.7	853.7	1,012.6	924.9	87.80	11.534	
7,400.0	5,574.0	7,596.3	5,661.0	45.2	46.7	-94.93	-2,305.7	853.7	1,012.7	921.3	91.39	11.081	
7,500.0	5,574.0	7,696.3	5,661.0	47.0	48.4	-94.93	-2,405.7	853.8	1,012.7	917.7	94.99	10.660	
7,600.0	5,574.0	7,796.3	5,661.0	48.9	50.1	-94.93	-2,505.7	853.8	1,012.7	914.0	98.62	10.268	
7,700.0	5,574.0	7,896.3	5,661.0	50.7	51.8	-94.93	-2,605.7	853.8	1,012.7	910.4	102.26	9.903	
7,800.0	5,574.0	7,996.3	5,661.0	52.6	53.5	-94.93	-2,705.7	853.8	1,012.7	906.8	105.91	9.561	
7,900.0	5,574.0	8,096.3	5,661.0	54.5	55.2	-94.93	-2,805.7	853.8	1,012.7	903.1	109.58	9.242	
8,000.0	5,574.0	8,196.3	5,661.0	56.3	57.0	-94.93	-2,905.7	853.8	1,012.7	899.4	113.25	8.942	
8,100.0	5,574.0	8,296.3	5,661.0	58.2	58.8	-94.93	-3,005.7	853.8	1,012.7	895.8	116.94	8.660	
8,200.0	5,574.0	8,396.3	5,661.0	60.1	60.5	-94.93	-3,105.7	853.8	1,012.7	892.1	120.63	8.395	
8,300.0	5,574.0	8,496.3	5,661.0	61.9	62.3	-94.93	-3,205.7	853.8	1,012.7	888.4	124.33	8.145	
8,400.0	5,574.0	8,596.3	5,661.0	63.8	64.1	-94.93	-3,305.7	853.8	1,012.7	884.7	128.04	7.909	
8,500.0	5,574.0	8,696.3	5,661.0	65.7	65.9	-94.93	-3,405.7	853.8	1,012.7	881.0	131.76	7.686	
8,600.0	5,574.0	8,796.3	5,661.0	67.6	67.7	-94.93	-3,505.7	853.8	1,012.7	877.2	135.48	7.475	
8,700.0	5,574.0	8,896.3	5,661.0	69.5	69.5	-94.93	-3,605.7	853.8	1,012.7	873.5	139.20	7.275	
8,800.0	5,574.0	8,996.3	5,661.0	71.3	71.3	-94.93	-3,705.7	853.8	1,012.7	869.8	142.94	7.085	
8,900.0	5,574.0	9,096.3	5,661.0	73.2	73.1	-94.93	-3,805.7	853.8	1,012.7	866.1	146.67	6.905	
9,000.0	5,574.0	9,196.3	5,661.0	75.1	75.0	-94.93	-3,905.7	853.8	1,012.7	862.3	150.41	6.733	
9,100.0	5,574.0	9,296.3	5,661.0	77.0	76.8	-94.93	-4,005.7	853.8	1,012.7	858.6	154.16	6.570	
9,200.0	5,574.0	9,396.3	5,661.0	78.9	78.6	-94.93	-4,105.7	853.8	1,012.8	854.8	157.91	6.414	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-3516B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,574.0	9,496.3	5,661.0	80.8	80.5	-94.93	-4,205.7	853.8	1,012.8	851.1	161.66	6.265	
9,400.0	5,574.0	9,596.3	5,661.0	82.7	82.3	-94.93	-4,305.7	853.8	1,012.8	847.3	165.41	6.123	
9,500.0	5,574.0	9,696.3	5,661.0	84.6	84.2	-94.93	-4,405.7	853.8	1,012.8	843.6	169.17	5.987	
9,600.0	5,574.0	9,796.3	5,661.0	86.5	86.0	-94.93	-4,505.7	853.8	1,012.8	839.8	172.93	5.856	
9,700.0	5,574.0	9,896.3	5,661.0	88.4	87.8	-94.93	-4,605.7	853.8	1,012.8	836.1	176.70	5.732	
9,800.0	5,574.0	9,996.3	5,661.0	90.3	89.7	-94.93	-4,705.7	853.8	1,012.8	832.3	180.46	5.612	
9,900.0	5,574.0	10,096.3	5,661.0	92.2	91.6	-94.93	-4,805.7	853.8	1,012.8	828.6	184.23	5.497	
10,000.0	5,574.0	10,196.3	5,661.0	94.1	93.4	-94.93	-4,905.7	853.8	1,012.8	824.8	188.00	5.387	
10,100.0	5,574.0	10,296.3	5,661.0	96.0	95.3	-94.93	-5,005.7	853.8	1,012.8	821.0	191.78	5.281	
10,200.0	5,574.0	10,396.3	5,661.0	97.9	97.1	-94.93	-5,105.7	853.8	1,012.8	817.3	195.55	5.179	
10,300.0	5,574.0	10,496.3	5,661.0	99.8	99.0	-94.93	-5,205.7	853.8	1,012.8	813.5	199.33	5.081	
10,400.0	5,574.0	10,596.3	5,661.0	101.7	100.9	-94.93	-5,305.7	853.8	1,012.8	809.7	203.10	4.987	
10,500.0	5,574.0	10,696.3	5,661.0	103.6	102.7	-94.93	-5,405.7	853.8	1,012.8	805.9	206.88	4.896	
10,600.0	5,574.0	10,796.3	5,661.0	105.5	104.6	-94.93	-5,505.7	853.8	1,012.8	802.2	210.67	4.808	
10,700.0	5,574.0	10,896.3	5,661.0	107.4	106.5	-94.93	-5,605.7	853.8	1,012.8	798.4	214.45	4.723	
10,800.0	5,574.0	10,996.3	5,661.0	109.3	108.4	-94.93	-5,705.7	853.8	1,012.8	794.6	218.23	4.641	
10,900.0	5,574.0	11,096.3	5,661.0	111.2	110.2	-94.93	-5,805.7	853.8	1,012.8	790.8	222.02	4.562	
11,000.0	5,574.0	11,196.3	5,661.0	113.1	112.1	-94.93	-5,905.7	853.8	1,012.9	787.0	225.81	4.486	
11,100.0	5,574.0	11,296.3	5,661.0	115.0	114.0	-94.93	-6,005.7	853.8	1,012.9	783.3	229.59	4.412	
11,200.0	5,574.0	11,396.3	5,661.0	116.9	115.9	-94.93	-6,105.7	853.8	1,012.9	779.5	233.38	4.340	
11,300.0	5,574.0	11,496.3	5,661.0	118.8	117.7	-94.93	-6,205.7	853.8	1,012.9	775.7	237.17	4.271	
11,400.0	5,574.0	11,596.3	5,661.0	120.7	119.6	-94.93	-6,305.7	853.8	1,012.9	771.9	240.96	4.203	
11,500.0	5,574.0	11,696.3	5,661.0	122.6	121.5	-94.93	-6,405.7	853.8	1,012.9	768.1	244.75	4.138	
11,600.0	5,574.0	11,796.3	5,661.0	124.5	123.4	-94.93	-6,505.7	853.8	1,012.9	764.3	248.55	4.075	
11,700.0	5,574.0	11,896.3	5,661.0	126.4	125.3	-94.93	-6,605.7	853.8	1,012.9	760.5	252.34	4.014	
11,800.0	5,574.0	11,996.3	5,661.0	128.3	127.2	-94.93	-6,705.7	853.8	1,012.9	756.8	256.14	3.955	
11,900.0	5,574.0	12,096.3	5,661.0	130.2	129.1	-94.93	-6,805.7	853.8	1,012.9	753.0	259.93	3.897	
12,000.0	5,574.0	12,196.3	5,661.0	132.1	130.9	-94.93	-6,905.7	853.8	1,012.9	749.2	263.73	3.841	
12,062.4	5,574.0	12,258.7	5,661.0	133.3	132.1	-94.93	-6,968.0	853.8	1,012.9	746.8	266.10	3.807 SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3516B - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	126.18	-73.0	99.8	123.7					
100.0	100.0	100.0	100.0	0.1	0.1	126.18	-73.0	99.8	123.7	123.5	0.19	659.002		
200.0	200.0	200.0	200.0	0.3	0.3	126.18	-73.0	99.8	123.7	123.0	0.64	194.098		
300.0	300.0	300.0	300.0	0.5	0.5	126.18	-73.0	99.8	123.7	122.6	1.09	113.809		
400.0	400.0	400.0	400.0	0.8	0.8	126.18	-73.0	99.8	123.7	122.1	1.54	80.507		
500.0	500.0	500.0	500.0	1.0	1.0	126.18	-73.0	99.8	123.7	121.7	1.99	62.283		
600.0	600.0	600.0	600.0	1.2	1.2	126.18	-73.0	99.8	123.7	121.2	2.44	50.786		
700.0	700.0	700.0	700.0	1.4	1.4	126.18	-73.0	99.8	123.7	120.8	2.88	42.872		
800.0	800.0	800.0	800.0	1.7	1.7	126.18	-73.0	99.8	123.7	120.3	3.33	37.093		
900.0	900.0	900.0	900.0	1.9	1.9	126.18	-73.0	99.8	123.7	119.9	3.78	32.686		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	126.18	-73.0	99.8	123.7	119.4	4.23	29.215		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-63.91	-73.0	99.8	122.9	118.2	4.65	26.407		
1,196.6	1,196.5	1,193.0	1,193.0	2.5	2.5	-65.62	-74.4	100.5	122.2	117.1	5.01	24.396 CC		
1,200.0	1,199.8	1,196.3	1,196.3	2.5	2.5	-65.69	-74.5	100.6	122.2	117.1	5.02	24.336 ES		
1,300.0	1,299.6	1,292.6	1,292.5	2.7	2.7	-67.43	-78.8	102.8	123.7	118.4	5.38	23.000		
1,400.0	1,399.4	1,392.3	1,391.9	2.9	2.9	-68.71	-85.0	105.9	127.1	121.3	5.76	22.041		
1,500.0	1,499.1	1,492.2	1,491.5	3.1	3.1	-69.92	-91.2	109.1	130.4	124.3	6.17	21.156		
1,600.0	1,598.9	1,592.1	1,591.2	3.3	3.3	-71.07	-97.4	112.2	133.9	127.3	6.58	20.341		
1,700.0	1,698.6	1,692.0	1,690.9	3.5	3.5	-72.16	-103.6	115.4	137.4	130.4	7.01	19.594		
1,800.0	1,798.4	1,791.9	1,790.5	3.8	3.7	-73.20	-109.8	118.6	140.9	133.5	7.45	18.913		
1,900.0	1,898.1	1,891.8	1,890.2	4.0	4.0	-74.19	-116.0	121.7	144.5	136.6	7.90	18.293		
2,000.0	1,997.9	1,991.7	1,989.8	4.2	4.2	-75.13	-122.2	124.9	148.2	139.8	8.36	17.727		
2,100.0	2,097.6	2,091.6	2,089.5	4.5	4.4	-76.02	-128.4	128.1	151.8	143.0	8.82	17.211		
2,200.0	2,197.4	2,191.5	2,189.2	4.7	4.7	-76.87	-134.6	131.2	155.5	146.2	9.29	16.740		
2,300.0	2,297.2	2,291.4	2,288.8	5.0	4.9	-77.69	-140.9	134.4	159.3	149.5	9.77	16.308		
2,400.0	2,396.9	2,391.3	2,388.5	5.2	5.2	-78.46	-147.1	137.6	163.0	152.8	10.25	15.913		
2,500.0	2,496.7	2,491.2	2,488.2	5.5	5.4	-79.20	-153.3	140.7	166.8	156.1	10.73	15.549		
2,600.0	2,596.4	2,591.1	2,587.8	5.7	5.7	-79.91	-159.5	143.9	170.6	159.4	11.22	15.215		
2,700.0	2,696.2	2,691.0	2,687.5	6.0	5.9	-80.58	-165.7	147.0	174.5	162.8	11.71	14.907		
2,800.0	2,795.9	2,790.9	2,787.1	6.2	6.2	-81.23	-171.9	150.2	178.4	166.2	12.20	14.621		
2,900.0	2,895.7	2,890.8	2,886.8	6.5	6.4	-81.85	-178.1	153.4	182.3	169.6	12.69	14.357		
3,000.0	2,995.5	2,990.7	2,986.5	6.7	6.7	-82.44	-184.3	156.5	186.2	173.0	13.19	14.112		
3,100.0	3,095.2	3,090.7	3,086.1	7.0	6.9	-83.01	-190.5	159.7	190.1	176.4	13.69	13.884		
3,200.0	3,195.0	3,190.6	3,185.8	7.2	7.2	-83.55	-196.7	162.9	194.0	179.9	14.19	13.672		
3,300.0	3,294.7	3,290.5	3,285.4	7.5	7.4	-84.08	-203.0	166.0	198.0	183.3	14.70	13.473		
3,400.0	3,394.5	3,390.4	3,385.1	7.8	7.7	-84.58	-209.2	169.2	202.0	186.8	15.20	13.288		
3,500.0	3,494.2	3,490.3	3,484.8	8.0	7.9	-85.06	-215.4	172.4	206.0	190.3	15.71	13.114		
3,600.0	3,594.0	3,590.2	3,584.4	8.3	8.2	-85.53	-221.6	175.5	210.0	193.8	16.21	12.951		
3,700.0	3,693.7	3,690.1	3,684.1	8.5	8.5	-85.98	-227.8	178.7	214.0	197.3	16.72	12.798		
3,800.0	3,793.5	3,790.0	3,783.8	8.8	8.7	-86.41	-234.0	181.8	218.1	200.8	17.23	12.654		
3,900.0	3,893.3	3,889.9	3,883.4	9.0	9.0	-86.82	-240.2	185.0	222.1	204.4	17.74	12.518		
4,000.0	3,993.0	3,989.8	3,983.1	9.3	9.2	-87.22	-246.4	188.2	226.2	207.9	18.25	12.390		
4,100.0	4,092.8	4,089.7	4,082.7	9.6	9.5	-87.61	-252.6	191.3	230.2	211.5	18.77	12.268		
4,200.0	4,192.5	4,189.6	4,182.4	9.8	9.7	-87.98	-258.8	194.5	234.3	215.0	19.28	12.154		
4,300.0	4,292.3	4,289.5	4,282.1	10.1	10.0	-88.34	-265.0	197.7	238.4	218.6	19.79	12.045		
4,400.0	4,392.0	4,389.4	4,381.7	10.3	10.3	-88.69	-271.3	200.8	242.5	222.2	20.31	11.942		
4,500.0	4,491.8	4,489.3	4,481.4	10.6	10.5	-89.03	-277.5	204.0	246.6	225.8	20.82	11.844		
4,600.0	4,591.6	4,589.2	4,581.1	10.9	10.8	-89.35	-283.7	207.2	250.7	229.4	21.34	11.751		
4,700.0	4,691.3	4,689.1	4,680.7	11.1	11.0	-89.67	-289.9	210.3	254.8	233.0	21.85	11.662		
4,800.0	4,791.1	4,789.0	4,780.4	11.4	11.3	-89.97	-296.1	213.5	259.0	236.6	22.37	11.578		
4,900.0	4,890.8	4,888.9	4,880.0	11.7	11.6	-90.27	-302.3	216.7	263.1	240.2	22.88	11.497		
5,000.0	4,990.6	4,988.9	4,979.7	11.9	11.8	-90.55	-308.5	219.8	267.3	243.9	23.40	11.420		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #261-3516B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,087.8	5,078.5	12.2	12.1	-90.83	-314.7	223.0	271.4	247.5	23.91	11.348	
5,150.0	5,140.0	5,138.6	5,129.1	12.3	12.2	-91.25	-317.8	224.6	273.5	249.3	24.20	11.302	
5,200.0	5,188.8	5,186.1	5,176.5	12.5	12.3	-92.53	-320.8	226.1	275.9	251.4	24.53	11.247	
5,250.0	5,236.4	5,225.4	5,215.6	12.8	12.5	-93.86	-324.5	228.0	279.8	255.0	24.89	11.243	
5,300.0	5,282.2	5,263.3	5,252.8	13.0	12.6	-95.04	-330.6	231.1	286.4	261.1	25.29	11.324	
5,350.0	5,326.0	5,300.0	5,288.3	13.4	12.7	-96.03	-338.8	235.3	295.6	269.8	25.73	11.486	
5,400.0	5,367.3	5,338.4	5,324.7	13.7	12.9	-96.94	-349.8	240.8	307.4	281.1	26.24	11.713	
5,450.0	5,405.7	5,375.5	5,358.9	14.1	13.1	-97.56	-362.6	247.4	321.7	294.9	26.80	12.005	
5,500.0	5,440.8	5,412.3	5,391.7	14.6	13.4	-97.91	-377.4	254.9	338.5	311.1	27.42	12.349	
5,550.0	5,472.3	5,450.0	5,424.0	15.1	13.6	-98.06	-394.6	263.7	357.7	329.6	28.10	12.729	
5,600.0	5,500.0	5,484.7	5,452.5	15.7	13.9	-97.75	-412.3	272.7	379.0	350.1	28.85	13.136	
5,650.0	5,523.6	5,520.3	5,480.2	16.3	14.2	-97.23	-432.2	282.9	402.2	372.5	29.68	13.551	
5,700.0	5,542.9	5,555.7	5,506.2	16.9	14.5	-96.42	-453.6	293.7	427.2	396.6	30.61	13.957	
5,750.0	5,557.6	5,590.7	5,530.3	17.6	14.9	-95.34	-476.3	305.3	453.8	422.2	31.62	14.352	
5,800.0	5,567.7	5,625.7	5,552.6	18.3	15.2	-94.02	-500.3	317.5	481.7	449.0	32.69	14.735	
5,850.0	5,573.0	5,660.7	5,573.0	19.1	15.6	-92.49	-525.6	330.4	510.8	477.0	33.81	15.106	
5,880.9	5,574.0	5,682.4	5,584.7	19.5	15.9	-91.46	-541.9	338.7	529.3	494.7	34.53	15.327	
5,900.0	5,574.0	5,696.1	5,591.7	19.8	16.1	-92.35	-552.4	344.1	540.7	505.8	34.95	15.473	
6,000.0	5,574.0	5,776.7	5,626.3	21.1	17.1	-96.09	-617.2	377.1	599.3	562.1	37.18	16.117	
6,100.0	5,574.0	5,871.4	5,652.1	22.5	18.5	-98.00	-698.2	418.4	653.4	613.6	39.85	16.397	
6,192.5	5,574.0	5,967.9	5,661.0	23.9	20.1	-98.03	-783.8	462.0	698.0	655.2	42.80	16.308	
6,200.0	5,574.0	5,978.4	5,661.0	24.0	20.2	-97.97	-793.1	466.7	701.4	658.3	43.08	16.281	
6,300.0	5,574.0	6,124.1	5,661.0	25.7	22.4	-97.27	-925.7	527.1	742.6	695.6	46.94	15.820	
6,400.0	5,574.0	6,279.5	5,661.0	27.3	24.8	-96.75	-1,071.7	580.2	776.5	725.4	51.13	15.189	
6,500.0	5,574.0	6,443.4	5,661.0	29.0	27.5	-96.38	-1,229.8	623.1	802.6	747.0	55.60	14.434	
6,600.0	5,574.0	6,613.9	5,661.0	30.8	30.2	-96.14	-1,397.5	653.2	820.2	759.9	60.27	13.609	
6,700.0	5,574.0	6,788.5	5,661.0	32.5	33.0	-96.03	-1,571.4	668.5	828.9	763.9	65.02	12.749	
6,800.0	5,574.0	6,896.7	5,661.0	34.3	34.8	-96.01	-1,679.6	672.0	832.1	763.5	68.63	12.125	
6,900.0	5,574.0	6,996.7	5,661.0	36.1	36.4	-95.98	-1,779.5	675.1	835.2	763.1	72.15	11.577	
7,000.0	5,574.0	7,096.6	5,661.0	37.9	38.1	-95.96	-1,879.4	678.3	838.4	762.7	75.70	11.075	
7,100.0	5,574.0	7,196.6	5,661.0	39.7	39.8	-95.94	-1,979.3	681.4	841.5	762.2	79.28	10.614	
7,200.0	5,574.0	7,296.5	5,661.0	41.5	41.5	-95.92	-2,079.2	684.6	844.6	761.8	82.89	10.190	
7,300.0	5,574.0	7,396.5	5,661.0	43.4	43.3	-95.89	-2,179.1	687.7	847.8	761.3	86.52	9.799	
7,400.0	5,574.0	7,496.4	5,661.0	45.2	45.0	-95.87	-2,279.0	690.9	850.9	760.8	90.16	9.438	
7,500.0	5,574.0	7,596.4	5,661.0	47.0	46.8	-95.85	-2,378.9	694.0	854.1	760.2	93.82	9.103	
7,600.0	5,574.0	7,696.3	5,661.0	48.9	48.6	-95.83	-2,478.8	697.2	857.2	759.7	97.50	8.792	
7,700.0	5,574.0	7,796.3	5,661.0	50.7	50.4	-95.81	-2,578.7	700.3	860.3	759.2	101.18	8.503	
7,800.0	5,574.0	7,896.2	5,661.0	52.6	52.2	-95.79	-2,678.6	703.5	863.5	758.6	104.88	8.233	
7,900.0	5,574.0	7,996.2	5,661.0	54.5	54.0	-95.77	-2,778.5	706.6	866.6	758.0	108.59	7.980	
8,000.0	5,574.0	8,096.1	5,661.0	56.3	55.8	-95.74	-2,878.4	709.8	869.8	757.4	112.31	7.744	
8,100.0	5,574.0	8,196.1	5,661.0	58.2	57.6	-95.72	-2,978.3	712.9	872.9	756.9	116.04	7.522	
8,200.0	5,574.0	8,296.0	5,661.0	60.1	59.5	-95.70	-3,078.2	716.1	876.0	756.3	119.77	7.314	
8,300.0	5,574.0	8,396.0	5,661.0	61.9	61.3	-95.68	-3,178.1	719.2	879.2	755.7	123.52	7.118	
8,400.0	5,574.0	8,495.9	5,661.0	63.8	63.1	-95.66	-3,278.0	722.4	882.3	755.1	127.26	6.933	
8,500.0	5,574.0	8,595.9	5,661.0	65.7	65.0	-95.64	-3,377.9	725.5	885.5	754.4	131.02	6.758	
8,600.0	5,574.0	8,695.8	5,661.0	67.6	66.8	-95.62	-3,477.8	728.7	888.6	753.8	134.78	6.593	
8,700.0	5,574.0	8,795.8	5,661.0	69.5	68.7	-95.60	-3,577.7	731.8	891.7	753.2	138.54	6.437	
8,800.0	5,574.0	8,895.7	5,661.0	71.3	70.6	-95.58	-3,677.6	735.0	894.9	752.6	142.31	6.288	
8,900.0	5,574.0	8,995.7	5,661.0	73.2	72.4	-95.56	-3,777.5	738.1	898.0	751.9	146.08	6.148	
9,000.0	5,574.0	9,095.6	5,661.0	75.1	74.3	-95.54	-3,877.4	741.3	901.2	751.3	149.85	6.014	
9,100.0	5,574.0	9,195.6	5,661.0	77.0	76.1	-95.52	-3,977.3	744.4	904.3	750.7	153.63	5.886	
9,200.0	5,574.0	9,295.5	5,661.0	78.9	78.0	-95.50	-4,077.2	747.6	907.4	750.0	157.42	5.765	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #26I-3516B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,574.0	9,395.5	5,661.0	80.8	79.9	-95.49	-4,177.1	750.7	910.6	749.4	161.20	5.649	
9,400.0	5,574.0	9,495.4	5,661.0	82.7	81.8	-95.47	-4,277.0	753.9	913.7	748.7	164.99	5.538	
9,500.0	5,574.0	9,595.4	5,661.0	84.6	83.6	-95.45	-4,376.9	757.0	916.9	748.1	168.78	5.432	
9,600.0	5,574.0	9,695.3	5,661.0	86.5	85.5	-95.43	-4,476.8	760.2	920.0	747.4	172.58	5.331	
9,700.0	5,574.0	9,795.3	5,661.0	88.4	87.4	-95.41	-4,576.7	763.3	923.2	746.8	176.37	5.234	
9,800.0	5,574.0	9,895.2	5,661.0	90.3	89.3	-95.39	-4,676.6	766.5	926.3	746.1	180.17	5.141	
9,900.0	5,574.0	9,995.2	5,661.0	92.2	91.2	-95.37	-4,776.5	769.6	929.4	745.5	183.97	5.052	
10,000.0	5,574.0	10,095.1	5,661.0	94.1	93.1	-95.36	-4,876.4	772.8	932.6	744.8	187.78	4.966	
10,100.0	5,574.0	10,195.1	5,661.0	96.0	94.9	-95.34	-4,976.3	775.9	935.7	744.1	191.58	4.884	
10,200.0	5,574.0	10,295.0	5,661.0	97.9	96.8	-95.32	-5,076.2	779.1	938.9	743.5	195.39	4.805	
10,300.0	5,574.0	10,395.0	5,661.0	99.8	98.7	-95.30	-5,176.1	782.2	942.0	742.8	199.19	4.729	
10,400.0	5,574.0	10,494.9	5,661.0	101.7	100.6	-95.28	-5,276.0	785.4	945.2	742.2	203.00	4.656	
10,500.0	5,574.0	10,594.9	5,661.0	103.6	102.5	-95.27	-5,375.9	788.5	948.3	741.5	206.81	4.585	
10,600.0	5,574.0	10,694.8	5,661.0	105.5	104.4	-95.25	-5,475.8	791.7	951.4	740.8	210.63	4.517	
10,700.0	5,574.0	10,794.8	5,661.0	107.4	106.3	-95.23	-5,575.7	794.8	954.6	740.1	214.44	4.452	
10,800.0	5,574.0	10,894.7	5,661.0	109.3	108.2	-95.21	-5,675.6	798.0	957.7	739.5	218.26	4.388	
10,900.0	5,574.0	10,994.7	5,661.0	111.2	110.1	-95.20	-5,775.5	801.2	960.9	738.8	222.07	4.327	
11,000.0	5,574.0	11,094.6	5,661.0	113.1	112.0	-95.18	-5,875.4	804.3	964.0	738.1	225.89	4.268	
11,100.0	5,574.0	11,194.6	5,661.0	115.0	113.9	-95.16	-5,975.3	807.5	967.2	737.4	229.71	4.210	
11,200.0	5,574.0	11,294.5	5,661.0	116.9	115.8	-95.15	-6,075.2	810.6	970.3	736.8	233.53	4.155	
11,300.0	5,574.0	11,394.5	5,661.0	118.8	117.7	-95.13	-6,175.1	813.8	973.4	736.1	237.35	4.101	
11,400.0	5,574.0	11,494.4	5,661.0	120.7	119.6	-95.11	-6,275.0	816.9	976.6	735.4	241.17	4.049	
11,500.0	5,574.0	11,594.4	5,661.0	122.6	121.5	-95.10	-6,374.9	820.1	979.7	734.7	244.99	3.999	
11,600.0	5,574.0	11,694.3	5,661.0	124.5	123.4	-95.08	-6,474.8	823.2	982.9	734.1	248.81	3.950	
11,700.0	5,574.0	11,794.3	5,661.0	126.4	125.3	-95.06	-6,574.7	826.4	986.0	733.4	252.64	3.903	
11,800.0	5,574.0	11,894.2	5,661.0	128.3	127.2	-95.05	-6,674.6	829.5	989.2	732.7	256.46	3.857	
11,900.0	5,574.0	11,994.2	5,661.0	130.2	129.1	-95.03	-6,774.5	832.7	992.3	732.0	260.29	3.812	
12,000.0	5,574.0	12,094.1	5,661.0	132.1	131.0	-95.02	-6,874.4	835.8	995.4	731.3	264.12	3.769	
12,062.4	5,574.0	12,156.5	5,661.0	133.3	132.2	-95.01	-6,936.7	837.8	997.4	730.9	266.50	3.743 SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	13.9	13.9	0.0	0.0	-87.29	60.9	-1,287.8	1,289.2					
100.0	100.0	113.9	113.9	0.1	0.1	-87.29	60.9	-1,287.8	1,289.2	1,289.0	0.22	5,888.945		
200.0	200.0	213.9	213.9	0.3	0.3	-87.29	60.9	-1,287.8	1,289.2	1,288.6	0.67	1,928.662		
300.0	300.0	313.9	313.9	0.5	0.6	-87.29	60.9	-1,287.8	1,289.2	1,288.1	1.12	1,153.165		
400.0	400.0	413.9	413.9	0.8	0.8	-87.29	60.9	-1,287.8	1,289.2	1,287.7	1.57	822.461		
500.0	500.0	513.9	513.9	1.0	1.0	-87.29	60.9	-1,287.8	1,289.2	1,287.2	2.02	639.162		
600.0	600.0	613.9	613.9	1.2	1.2	-87.29	60.9	-1,287.8	1,289.2	1,286.8	2.47	522.676		
700.0	700.0	713.9	713.9	1.4	1.5	-87.29	60.9	-1,287.8	1,289.2	1,286.3	2.92	442.103		
800.0	800.0	813.9	813.9	1.7	1.7	-87.29	60.9	-1,287.8	1,289.2	1,285.9	3.37	383.054		
900.0	900.0	913.9	913.9	1.9	1.9	-87.29	60.9	-1,287.8	1,289.2	1,285.4	3.82	337.919		
961.3	961.3	975.2	975.2	2.0	2.1	-87.29	60.9	-1,287.8	1,289.2	1,285.1	4.09	315.161		
1,000.0	1,000.0	1,013.1	1,013.1	2.1	2.1	-87.29	60.9	-1,287.8	1,289.2	1,285.0	4.26	302.691		
1,100.0	1,100.0	1,107.7	1,107.7	2.3	2.3	83.34	58.9	-1,288.1	1,289.3	1,284.7	4.64	277.962		
1,200.0	1,199.8	1,202.4	1,202.3	2.5	2.5	83.33	53.9	-1,289.0	1,289.4	1,284.4	4.98	258.890		
1,300.0	1,299.6	1,302.5	1,302.0	2.7	2.7	83.33	47.0	-1,290.2	1,289.5	1,284.1	5.36	240.606		
1,400.0	1,399.4	1,402.5	1,401.8	2.9	2.9	83.33	40.1	-1,291.4	1,289.5	1,283.8	5.76	223.812		
1,500.0	1,499.1	1,502.5	1,501.6	3.1	3.1	83.33	33.3	-1,292.7	1,289.6	1,283.4	6.18	208.567		
1,600.0	1,598.9	1,602.5	1,601.3	3.3	3.3	83.33	26.4	-1,293.9	1,289.7	1,283.1	6.62	194.813		
1,700.0	1,698.6	1,702.5	1,701.1	3.5	3.5	83.33	19.5	-1,295.1	1,289.8	1,282.7	7.07	182.437		
1,800.0	1,798.4	1,802.5	1,800.8	3.8	3.8	83.33	12.7	-1,296.3	1,289.8	1,282.3	7.53	171.306		
1,900.0	1,898.1	1,902.5	1,900.6	4.0	4.0	83.33	5.8	-1,297.5	1,289.9	1,281.9	8.00	161.285		
2,000.0	1,997.9	2,002.5	2,000.3	4.2	4.2	83.34	-1.1	-1,298.7	1,290.0	1,281.5	8.47	152.244		
2,100.0	2,097.6	2,102.5	2,100.1	4.5	4.5	83.34	-8.0	-1,299.9	1,290.1	1,281.1	8.95	144.067		
2,200.0	2,197.4	2,202.5	2,199.8	4.7	4.7	83.34	-14.8	-1,301.1	1,290.2	1,280.7	9.44	136.651		
2,300.0	2,297.2	2,302.5	2,299.6	5.0	5.0	83.34	-21.7	-1,302.3	1,290.2	1,280.3	9.93	129.906		
2,400.0	2,396.9	2,402.5	2,399.4	5.2	5.2	83.34	-28.6	-1,303.6	1,290.3	1,279.9	10.43	123.752		
2,500.0	2,496.7	2,502.5	2,499.1	5.5	5.5	83.34	-35.4	-1,304.8	1,290.4	1,279.5	10.92	118.121		
2,600.0	2,596.4	2,602.5	2,598.9	5.7	5.7	83.34	-42.3	-1,306.0	1,290.5	1,279.0	11.42	112.952		
2,700.0	2,696.2	2,702.5	2,698.6	6.0	6.0	83.34	-49.2	-1,307.2	1,290.6	1,278.6	11.93	108.196		
2,800.0	2,795.9	2,802.5	2,798.4	6.2	6.2	83.34	-56.0	-1,308.4	1,290.6	1,278.2	12.43	103.806		
2,900.0	2,895.7	2,902.5	2,898.1	6.5	6.5	83.34	-62.9	-1,309.6	1,290.7	1,277.8	12.94	99.745		
3,000.0	2,995.5	3,002.5	2,997.9	6.7	6.7	83.34	-69.8	-1,310.8	1,290.8	1,277.3	13.45	95.978		
3,100.0	3,095.2	3,102.5	3,097.7	7.0	7.0	83.34	-76.7	-1,312.0	1,290.9	1,276.9	13.96	92.476		
3,200.0	3,195.0	3,202.5	3,197.4	7.2	7.2	83.34	-83.5	-1,313.3	1,290.9	1,276.5	14.47	89.212		
3,300.0	3,294.7	3,302.5	3,297.2	7.5	7.5	83.34	-90.4	-1,314.5	1,291.0	1,276.0	14.98	86.165		
3,400.0	3,394.5	3,402.5	3,396.9	7.8	7.8	83.34	-97.3	-1,315.7	1,291.1	1,275.6	15.50	83.313		
3,500.0	3,494.2	3,502.5	3,496.7	8.0	8.0	83.34	-104.1	-1,316.9	1,291.2	1,275.2	16.01	80.639		
3,600.0	3,594.0	3,602.5	3,596.4	8.3	8.3	83.34	-111.0	-1,318.1	1,291.3	1,274.7	16.53	78.128		
3,700.0	3,693.7	3,702.5	3,696.2	8.5	8.5	83.34	-117.9	-1,319.3	1,291.3	1,274.3	17.04	75.765		
3,800.0	3,793.5	3,802.5	3,795.9	8.8	8.8	83.34	-124.7	-1,320.5	1,291.4	1,273.9	17.56	73.538		
3,900.0	3,893.3	3,902.5	3,895.7	9.0	9.1	83.34	-131.6	-1,321.7	1,291.5	1,273.4	18.08	71.436		
4,000.0	3,993.0	4,002.5	3,995.5	9.3	9.3	83.34	-138.5	-1,322.9	1,291.6	1,273.0	18.60	69.449		
4,100.0	4,092.8	4,102.5	4,095.2	9.6	9.6	83.34	-145.3	-1,324.2	1,291.7	1,272.5	19.12	67.567		
4,200.0	4,192.5	4,202.5	4,195.0	9.8	9.8	83.34	-152.2	-1,325.4	1,291.7	1,272.1	19.64	65.783		
4,300.0	4,292.3	4,302.5	4,294.7	10.1	10.1	83.35	-159.1	-1,326.6	1,291.8	1,271.7	20.16	64.090		
4,400.0	4,392.0	4,402.5	4,394.5	10.3	10.4	83.35	-166.0	-1,327.8	1,291.9	1,271.2	20.68	62.480		
4,500.0	4,491.8	4,502.5	4,494.2	10.6	10.6	83.35	-172.8	-1,329.0	1,292.0	1,270.8	21.20	60.949		
4,600.0	4,591.6	4,602.5	4,594.0	10.9	10.9	83.35	-179.7	-1,330.2	1,292.0	1,270.3	21.72	59.489		
4,700.0	4,691.3	4,702.5	4,693.8	11.1	11.1	83.35	-186.6	-1,331.4	1,292.1	1,269.9	22.24	58.098		
4,800.0	4,791.1	4,802.5	4,793.5	11.4	11.4	83.35	-193.4	-1,332.6	1,292.2	1,269.4	22.76	56.769		
4,900.0	4,890.8	4,902.5	4,893.3	11.7	11.7	83.35	-200.3	-1,333.8	1,292.3	1,269.0	23.28	55.499		
5,000.0	4,990.6	5,002.5	4,993.0	11.9	11.9	83.35	-207.2	-1,335.1	1,292.4	1,268.6	23.81	54.284		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,099.1	5,089.4	5,101.5	5,091.9	12.2	12.2	83.35	-214.0	-1,336.3	1,292.4	1,268.1	24.33	53.131		
5,150.0	5,140.0	5,143.3	5,133.5	12.3	12.3	83.41	-217.6	-1,336.9	1,292.3	1,267.7	24.60	52.541		
5,200.0	5,188.8	5,181.4	5,171.1	12.5	12.4	83.52	-223.7	-1,338.0	1,292.1	1,267.2	24.92	51.854		
5,250.0	5,236.4	5,219.6	5,208.2	12.8	12.6	83.68	-232.5	-1,339.5	1,291.8	1,266.5	25.30	51.057		
5,300.0	5,282.2	5,258.0	5,244.8	13.0	12.8	83.89	-244.0	-1,341.5	1,291.5	1,265.7	25.75	50.155		
5,350.0	5,326.0	5,300.0	5,283.6	13.4	13.0	84.16	-259.6	-1,344.3	1,291.0	1,264.8	26.29	49.113		
5,400.0	5,367.3	5,335.6	5,315.5	13.7	13.2	84.44	-275.1	-1,347.0	1,290.6	1,263.7	26.87	48.030		
5,450.0	5,405.7	5,374.8	5,349.3	14.1	13.5	84.77	-294.7	-1,350.5	1,290.1	1,262.5	27.55	46.830		
5,500.0	5,440.8	5,414.4	5,381.8	14.6	13.8	85.15	-317.0	-1,354.4	1,289.6	1,261.3	28.31	45.555		
5,550.0	5,472.3	5,454.4	5,412.8	15.1	14.1	85.56	-341.9	-1,358.8	1,289.1	1,260.0	29.15	44.220		
5,600.0	5,500.0	5,495.0	5,442.1	15.7	14.5	86.00	-369.5	-1,363.7	1,288.7	1,258.6	30.09	42.833		
5,650.0	5,523.6	5,536.1	5,469.6	16.3	14.9	86.47	-399.7	-1,369.0	1,288.3	1,257.2	31.11	41.415		
5,700.0	5,542.9	5,577.9	5,494.9	16.9	15.3	86.98	-432.4	-1,374.8	1,288.1	1,255.8	32.21	39.987		
5,750.0	5,557.6	5,620.5	5,517.8	17.6	15.8	87.50	-467.7	-1,381.0	1,287.9	1,254.5	33.39	38.569		
5,791.5	5,566.3	5,656.4	5,534.9	18.2	16.2	87.95	-498.8	-1,386.5	1,287.8	1,253.4	34.43	37.409 CC		
5,800.0	5,567.7	5,663.8	5,538.1	18.3	16.3	88.05	-505.4	-1,387.6	1,287.8	1,253.2	34.64	37.173		
5,850.0	5,573.0	5,708.2	5,555.5	19.1	16.9	88.61	-545.6	-1,394.7	1,287.9	1,252.0	35.96	35.814		
5,880.9	5,574.0	5,736.1	5,564.7	19.5	17.3	88.97	-571.6	-1,399.3	1,288.1	1,251.3	36.81	34.995		
5,900.0	5,574.0	5,753.7	5,569.7	19.8	17.5	89.19	-588.1	-1,402.2	1,288.3	1,251.0	37.31	34.527		
6,000.0	5,574.0	5,850.3	5,587.0	21.1	18.9	89.96	-681.6	-1,418.7	1,292.9	1,252.9	39.99	32.335		
6,100.0	5,574.0	6,064.6	5,589.0	22.5	21.9	90.05	-893.7	-1,448.5	1,300.5	1,256.3	44.24	29.397		
6,192.5	5,574.0	6,269.3	5,589.0	23.9	24.9	90.05	-1,098.2	-1,455.7	1,300.5	1,252.2	48.37	26.887		
6,200.0	5,574.0	6,276.8	5,589.0	24.0	25.0	90.05	-1,105.7	-1,455.7	1,300.5	1,251.9	48.61	26.756		
6,300.0	5,574.0	6,376.8	5,589.0	25.7	26.6	90.05	-1,205.7	-1,455.7	1,300.5	1,248.6	51.92	25.048		
6,400.0	5,574.0	6,476.8	5,589.0	27.3	28.3	90.05	-1,305.7	-1,455.6	1,300.5	1,245.2	55.31	23.512		
6,500.0	5,574.0	6,576.8	5,589.0	29.0	30.0	90.05	-1,405.7	-1,455.6	1,300.5	1,241.8	58.76	22.133		
6,600.0	5,574.0	6,676.8	5,589.0	30.8	31.8	90.05	-1,505.7	-1,455.6	1,300.5	1,238.3	62.25	20.891		
6,700.0	5,574.0	6,776.8	5,589.0	32.5	33.5	90.05	-1,605.7	-1,455.6	1,300.5	1,234.7	65.78	19.770		
6,800.0	5,574.0	6,876.8	5,589.0	34.3	35.3	90.05	-1,705.7	-1,455.6	1,300.5	1,231.2	69.34	18.754		
6,900.0	5,574.0	6,976.8	5,589.0	36.1	37.1	90.05	-1,805.7	-1,455.6	1,300.5	1,227.6	72.93	17.831		
7,000.0	5,574.0	7,076.8	5,589.0	37.9	38.9	90.05	-1,905.7	-1,455.6	1,300.5	1,224.0	76.55	16.989		
7,100.0	5,574.0	7,176.8	5,589.0	39.7	40.7	90.05	-2,005.7	-1,455.6	1,300.5	1,220.3	80.18	16.219		
7,200.0	5,574.0	7,276.8	5,589.0	41.5	42.5	90.05	-2,105.7	-1,455.6	1,300.5	1,216.7	83.83	15.513		
7,300.0	5,574.0	7,376.8	5,589.0	43.4	44.4	90.05	-2,205.7	-1,455.6	1,300.5	1,213.0	87.50	14.863		
7,400.0	5,574.0	7,476.8	5,589.0	45.2	46.2	90.05	-2,305.7	-1,455.6	1,300.5	1,209.3	91.18	14.262		
7,500.0	5,574.0	7,576.8	5,589.0	47.0	48.0	90.05	-2,405.7	-1,455.6	1,300.5	1,205.6	94.88	13.707		
7,600.0	5,574.0	7,676.8	5,589.0	48.9	49.9	90.05	-2,505.7	-1,455.6	1,300.5	1,201.9	98.58	13.192		
7,700.0	5,574.0	7,776.8	5,589.0	50.7	51.7	90.05	-2,605.7	-1,455.6	1,300.5	1,198.2	102.29	12.713		
7,800.0	5,574.0	7,876.8	5,589.0	52.6	53.6	90.05	-2,705.7	-1,455.6	1,300.5	1,194.5	106.02	12.267		
7,900.0	5,574.0	7,976.8	5,589.0	54.5	55.5	90.05	-2,805.7	-1,455.6	1,300.5	1,190.7	109.75	11.850		
8,000.0	5,574.0	8,076.8	5,589.0	56.3	57.3	90.05	-2,905.7	-1,455.6	1,300.5	1,187.0	113.48	11.460		
8,100.0	5,574.0	8,176.8	5,589.0	58.2	59.2	90.05	-3,005.7	-1,455.6	1,300.5	1,183.2	117.22	11.094		
8,200.0	5,574.0	8,276.8	5,589.0	60.1	61.1	90.05	-3,105.7	-1,455.6	1,300.5	1,179.5	120.97	10.750		
8,300.0	5,574.0	8,376.8	5,589.0	61.9	62.9	90.05	-3,205.7	-1,455.6	1,300.4	1,175.7	124.73	10.426		
8,400.0	5,574.0	8,476.8	5,589.0	63.8	64.8	90.05	-3,305.7	-1,455.6	1,300.4	1,172.0	128.49	10.121		
8,500.0	5,574.0	8,576.8	5,589.0	65.7	66.7	90.05	-3,405.7	-1,455.6	1,300.4	1,168.2	132.25	9.833		
8,600.0	5,574.0	8,676.8	5,589.0	67.6	68.6	90.05	-3,505.7	-1,455.6	1,300.4	1,164.4	136.02	9.561		
8,700.0	5,574.0	8,776.8	5,589.0	69.5	70.5	90.05	-3,605.7	-1,455.6	1,300.4	1,160.6	139.79	9.303		
8,800.0	5,574.0	8,876.8	5,589.0	71.3	72.4	90.05	-3,705.7	-1,455.6	1,300.4	1,156.9	143.56	9.058		
8,900.0	5,574.0	8,976.8	5,589.0	73.2	74.2	90.05	-3,805.7	-1,455.6	1,300.4	1,153.1	147.34	8.826		
9,000.0	5,574.0	9,076.8	5,589.0	75.1	76.1	90.05	-3,905.7	-1,455.6	1,300.4	1,149.3	151.12	8.605		
9,100.0	5,574.0	9,176.8	5,589.0	77.0	78.0	90.05	-4,005.7	-1,455.6	1,300.4	1,145.5	154.90	8.395		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,200.0	5,574.0	9,276.8	5,589.0	78.9	79.9	90.05	-4,105.7	-1,455.6	1,300.4	1,141.7	158.68	8.195		
9,300.0	5,574.0	9,376.8	5,589.0	80.8	81.8	90.05	-4,205.7	-1,455.6	1,300.4	1,137.9	162.47	8.004		
9,400.0	5,574.0	9,476.8	5,589.0	82.7	83.7	90.05	-4,305.7	-1,455.6	1,300.4	1,134.1	166.26	7.821		
9,500.0	5,574.0	9,576.8	5,589.0	84.6	85.6	90.05	-4,405.7	-1,455.6	1,300.4	1,130.3	170.05	7.647		
9,600.0	5,574.0	9,676.8	5,589.0	86.5	87.5	90.05	-4,505.7	-1,455.6	1,300.4	1,126.5	173.84	7.480		
9,700.0	5,574.0	9,776.8	5,589.0	88.4	89.4	90.05	-4,605.7	-1,455.6	1,300.4	1,122.7	177.64	7.320		
9,800.0	5,574.0	9,876.8	5,589.0	90.3	91.3	90.05	-4,705.7	-1,455.6	1,300.4	1,118.9	181.44	7.167		
9,900.0	5,574.0	9,976.8	5,589.0	92.2	93.2	90.05	-4,805.7	-1,455.6	1,300.4	1,115.1	185.23	7.020		
10,000.0	5,574.0	10,076.8	5,589.0	94.1	95.1	90.05	-4,905.7	-1,455.6	1,300.4	1,111.3	189.03	6.879		
10,100.0	5,574.0	10,176.8	5,589.0	96.0	97.0	90.05	-5,005.7	-1,455.6	1,300.4	1,107.5	192.83	6.743		
10,200.0	5,574.0	10,276.8	5,589.0	97.9	98.9	90.05	-5,105.7	-1,455.6	1,300.4	1,103.7	196.64	6.613		
10,300.0	5,574.0	10,376.8	5,589.0	99.8	100.8	90.05	-5,205.7	-1,455.6	1,300.4	1,099.9	200.44	6.488		
10,400.0	5,574.0	10,476.8	5,589.0	101.7	102.7	90.05	-5,305.7	-1,455.6	1,300.4	1,096.1	204.24	6.367		
10,500.0	5,574.0	10,576.8	5,589.0	103.6	104.6	90.05	-5,405.7	-1,455.6	1,300.4	1,092.3	208.05	6.250		
10,600.0	5,574.0	10,676.8	5,589.0	105.5	106.5	90.05	-5,505.7	-1,455.6	1,300.3	1,088.5	211.86	6.138		
10,700.0	5,574.0	10,776.8	5,589.0	107.4	108.4	90.05	-5,605.7	-1,455.6	1,300.3	1,084.7	215.66	6.030		
10,800.0	5,574.0	10,876.8	5,589.0	109.3	110.3	90.05	-5,705.7	-1,455.6	1,300.3	1,080.9	219.47	5.925		
10,900.0	5,574.0	10,976.8	5,589.0	111.2	112.2	90.05	-5,805.7	-1,455.6	1,300.3	1,077.1	223.28	5.824		
11,000.0	5,574.0	11,076.8	5,589.0	113.1	114.1	90.05	-5,905.7	-1,455.6	1,300.3	1,073.2	227.09	5.726		
11,100.0	5,574.0	11,176.8	5,589.0	115.0	116.0	90.05	-6,005.7	-1,455.6	1,300.3	1,069.4	230.90	5.632		
11,200.0	5,574.0	11,276.8	5,589.0	116.9	117.9	90.05	-6,105.7	-1,455.6	1,300.3	1,065.6	234.71	5.540		
11,300.0	5,574.0	11,376.8	5,589.0	118.8	119.8	90.05	-6,205.7	-1,455.6	1,300.3	1,061.8	238.53	5.451		
11,400.0	5,574.0	11,476.8	5,589.0	120.7	121.7	90.05	-6,305.7	-1,455.6	1,300.3	1,058.0	242.34	5.366		
11,500.0	5,574.0	11,576.8	5,589.0	122.6	123.6	90.05	-6,405.7	-1,455.6	1,300.3	1,054.2	246.15	5.283		
11,600.0	5,574.0	11,676.8	5,589.0	124.5	125.5	90.05	-6,505.7	-1,455.6	1,300.3	1,050.3	249.97	5.202		
11,700.0	5,574.0	11,776.8	5,589.0	126.4	127.4	90.05	-6,605.7	-1,455.6	1,300.3	1,046.5	253.78	5.124		
11,800.0	5,574.0	11,876.8	5,589.0	128.3	129.3	90.05	-6,705.7	-1,455.6	1,300.3	1,042.7	257.60	5.048		
11,900.0	5,574.0	11,976.8	5,589.0	130.2	131.2	90.05	-6,805.7	-1,455.6	1,300.3	1,038.9	261.41	4.974		
12,000.0	5,574.0	12,076.8	5,589.0	132.1	133.2	90.05	-6,905.7	-1,455.6	1,300.3	1,035.1	265.23	4.902		
12,062.4	5,574.0	12,139.2	5,589.0	133.3	134.3	90.05	-6,968.1	-1,455.6	1,300.3	1,032.7	267.61	4.859 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: O-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	13.9	13.9	0.0	0.0	-87.29	60.9	-1,287.8	1,289.2					
100.0	100.0	113.9	113.9	0.1	0.1	-87.29	60.9	-1,287.8	1,289.2	1,289.0	0.22	5,888.945		
200.0	200.0	213.9	213.9	0.3	0.3	-87.29	60.9	-1,287.8	1,289.2	1,288.6	0.67	1,928.662		
300.0	300.0	313.9	313.9	0.5	0.6	-87.29	60.9	-1,287.8	1,289.2	1,288.1	1.12	1,153.165		
400.0	400.0	413.9	413.9	0.8	0.8	-87.29	60.9	-1,287.8	1,289.2	1,287.7	1.57	822.461		
500.0	500.0	513.9	513.9	1.0	1.0	-87.29	60.9	-1,287.8	1,289.2	1,287.2	2.02	639.162		
600.0	600.0	613.9	613.9	1.2	1.2	-87.29	60.9	-1,287.8	1,289.2	1,286.8	2.47	522.676		
700.0	700.0	713.9	713.9	1.4	1.5	-87.29	60.9	-1,287.8	1,289.2	1,286.3	2.92	442.103		
800.0	800.0	813.9	813.9	1.7	1.7	-87.29	60.9	-1,287.8	1,289.2	1,285.9	3.37	383.054		
900.0	900.0	913.9	913.9	1.9	1.9	-87.29	60.9	-1,287.8	1,289.2	1,285.4	3.82	337.919		
961.3	961.3	975.2	975.2	2.0	2.1	-87.29	60.9	-1,287.8	1,289.2	1,285.1	4.09	315.161 CC		
1,000.0	1,000.0	1,013.1	1,013.1	2.1	2.1	-87.29	60.9	-1,287.8	1,289.2	1,285.0	4.26	302.704		
1,100.0	1,100.0	1,107.0	1,106.9	2.3	2.3	83.34	59.0	-1,288.2	1,289.3	1,284.7	4.64	278.049		
1,200.0	1,199.8	1,200.9	1,200.7	2.5	2.5	83.33	54.0	-1,289.1	1,289.5	1,284.5	4.98	259.061		
1,300.0	1,299.6	1,300.9	1,300.5	2.7	2.7	83.33	47.2	-1,290.5	1,289.7	1,284.3	5.36	240.783		
1,400.0	1,399.4	1,400.9	1,400.2	2.9	2.9	83.33	40.3	-1,291.8	1,289.9	1,284.1	5.76	223.994		
1,500.0	1,499.1	1,500.9	1,500.0	3.1	3.1	83.34	33.5	-1,293.1	1,290.1	1,283.9	6.18	208.753		
1,600.0	1,598.9	1,600.9	1,599.8	3.3	3.3	83.34	26.6	-1,294.5	1,290.3	1,283.7	6.62	195.002		
1,700.0	1,698.6	1,700.9	1,699.5	3.5	3.5	83.34	19.8	-1,295.8	1,290.5	1,283.4	7.07	182.629		
1,800.0	1,798.4	1,800.9	1,799.3	3.8	3.8	83.34	12.9	-1,297.1	1,290.7	1,283.2	7.53	171.501		
1,900.0	1,898.1	1,900.9	1,899.0	4.0	4.0	83.34	6.1	-1,298.4	1,290.9	1,282.9	7.99	161.481		
2,000.0	1,997.9	2,000.9	1,998.8	4.2	4.2	83.34	-0.8	-1,299.8	1,291.1	1,282.6	8.47	152.441		
2,100.0	2,097.6	2,100.9	2,098.5	4.5	4.5	83.34	-7.6	-1,301.1	1,291.3	1,282.3	8.95	144.266		
2,200.0	2,197.4	2,200.9	2,198.3	4.7	4.7	83.34	-14.5	-1,302.4	1,291.5	1,282.1	9.44	136.852		
2,300.0	2,297.2	2,300.9	2,298.1	5.0	5.0	83.35	-21.3	-1,303.8	1,291.7	1,281.8	9.93	130.108		
2,400.0	2,396.9	2,400.9	2,397.8	5.2	5.2	83.35	-28.2	-1,305.1	1,291.9	1,281.5	10.42	123.955		
2,500.0	2,496.7	2,500.9	2,497.6	5.5	5.5	83.35	-35.0	-1,306.4	1,292.1	1,281.2	10.92	118.324		
2,600.0	2,596.4	2,600.9	2,597.3	5.7	5.7	83.35	-41.9	-1,307.8	1,292.3	1,280.9	11.42	113.157		
2,700.0	2,696.2	2,700.9	2,697.1	6.0	6.0	83.35	-48.7	-1,309.1	1,292.5	1,280.6	11.92	108.401		
2,800.0	2,795.9	2,800.9	2,796.8	6.2	6.2	83.35	-55.6	-1,310.4	1,292.7	1,280.3	12.43	104.012		
2,900.0	2,895.7	2,900.9	2,896.6	6.5	6.5	83.35	-62.4	-1,311.8	1,292.9	1,279.9	12.94	99.952		
3,000.0	2,995.5	3,000.9	2,996.3	6.7	6.7	83.35	-69.3	-1,313.1	1,293.1	1,279.6	13.44	96.185		
3,100.0	3,095.2	3,100.9	3,096.1	7.0	7.0	83.35	-76.1	-1,314.4	1,293.3	1,279.3	13.95	92.684		
3,200.0	3,195.0	3,200.9	3,195.9	7.2	7.2	83.36	-82.9	-1,315.7	1,293.5	1,279.0	14.47	89.421		
3,300.0	3,294.7	3,300.9	3,295.6	7.5	7.5	83.36	-89.8	-1,317.1	1,293.7	1,278.7	14.98	86.374		
3,400.0	3,394.5	3,400.9	3,395.4	7.8	7.8	83.36	-96.6	-1,318.4	1,293.9	1,278.4	15.49	83.522		
3,500.0	3,494.2	3,500.9	3,495.1	8.0	8.0	83.36	-103.5	-1,319.7	1,294.1	1,278.1	16.01	80.849		
3,600.0	3,594.0	3,600.9	3,594.9	8.3	8.3	83.36	-110.3	-1,321.1	1,294.3	1,277.8	16.52	78.338		
3,700.0	3,693.7	3,700.9	3,694.6	8.5	8.5	83.36	-117.2	-1,322.4	1,294.5	1,277.4	17.04	75.976		
3,800.0	3,793.5	3,800.9	3,794.4	8.8	8.8	83.36	-124.0	-1,323.7	1,294.7	1,277.1	17.56	73.750		
3,900.0	3,893.3	3,900.9	3,894.1	9.0	9.1	83.36	-130.9	-1,325.1	1,294.9	1,276.8	18.07	71.648		
4,000.0	3,993.0	4,000.9	3,993.9	9.3	9.3	83.37	-137.7	-1,326.4	1,295.1	1,276.5	18.59	69.661		
4,100.0	4,092.8	4,100.9	4,093.7	9.6	9.6	83.37	-144.6	-1,327.7	1,295.3	1,276.2	19.11	67.780		
4,200.0	4,192.5	4,200.9	4,193.4	9.8	9.8	83.37	-151.4	-1,329.1	1,295.5	1,275.8	19.63	65.996		
4,300.0	4,292.3	4,300.9	4,293.2	10.1	10.1	83.37	-158.3	-1,330.4	1,295.7	1,275.5	20.15	64.303		
4,400.0	4,392.0	4,400.9	4,392.9	10.3	10.4	83.37	-165.1	-1,331.7	1,295.9	1,275.2	20.67	62.694		
4,500.0	4,491.8	4,500.9	4,492.7	10.6	10.6	83.37	-172.0	-1,333.0	1,296.1	1,274.9	21.19	61.162		
4,600.0	4,591.6	4,600.9	4,592.4	10.9	10.9	83.37	-178.8	-1,334.4	1,296.3	1,274.6	21.71	59.703		
4,700.0	4,691.3	4,700.9	4,692.2	11.1	11.1	83.37	-185.7	-1,335.7	1,296.5	1,274.2	22.23	58.312		
4,800.0	4,791.1	4,800.9	4,792.0	11.4	11.4	83.37	-192.5	-1,337.0	1,296.7	1,273.9	22.76	56.983		
4,900.0	4,890.8	4,900.9	4,891.7	11.7	11.7	83.38	-199.4	-1,338.4	1,296.9	1,273.6	23.28	55.714		
5,000.0	4,990.6	5,000.9	4,991.5	11.9	11.9	83.38	-206.2	-1,339.7	1,297.1	1,273.3	23.80	54.499		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,099.1	5,089.4	5,100.0	5,090.3	12.2	12.2	83.38	-213.0	-1,341.0	1,297.3	1,272.9	24.32	53.346	
5,150.0	5,140.0	5,141.2	5,131.4	12.3	12.3	83.44	-216.5	-1,341.7	1,297.2	1,272.6	24.59	52.761	
5,200.0	5,188.8	5,178.1	5,167.8	12.5	12.4	83.54	-222.2	-1,342.8	1,297.1	1,272.2	24.90	52.086	
5,250.0	5,236.4	5,215.1	5,203.9	12.8	12.6	83.70	-230.4	-1,344.4	1,297.0	1,271.7	25.28	51.308	
5,300.0	5,282.2	5,250.0	5,237.2	13.0	12.7	83.88	-240.4	-1,346.4	1,296.8	1,271.1	25.70	50.452	
5,350.0	5,326.0	5,289.7	5,274.3	13.4	12.9	84.13	-254.4	-1,349.1	1,296.6	1,270.4	26.23	49.434	
5,400.0	5,367.3	5,327.4	5,308.3	13.7	13.2	84.41	-270.3	-1,352.2	1,296.5	1,269.6	26.82	48.346	
5,450.0	5,405.7	5,365.4	5,341.3	14.1	13.4	84.73	-288.7	-1,355.7	1,296.3	1,268.8	27.48	47.176	
5,497.8	5,439.3	5,400.0	5,370.2	14.6	13.6	85.04	-307.4	-1,359.4	1,296.2	1,268.1	28.17	46.018	
5,500.0	5,440.8	5,400.0	5,370.2	14.6	13.6	85.04	-307.4	-1,359.4	1,296.2	1,268.0	28.19	45.985	
5,548.6	5,471.5	5,441.4	5,402.9	15.1	14.0	85.46	-332.3	-1,364.2	1,296.2	1,267.2	29.02	44.658	
5,550.0	5,472.3	5,442.5	5,403.8	15.1	14.0	85.47	-333.0	-1,364.3	1,296.2	1,267.1	29.05	44.622	
5,600.0	5,500.0	5,481.8	5,432.8	15.7	14.3	85.89	-358.9	-1,369.4	1,296.2	1,266.3	29.96	43.262	
5,650.0	5,523.6	5,521.6	5,460.2	16.3	14.7	86.33	-387.3	-1,374.9	1,296.4	1,265.4	30.96	41.875	
5,700.0	5,542.9	5,562.1	5,485.7	16.9	15.1	86.81	-418.3	-1,380.9	1,296.7	1,264.6	32.03	40.479	
5,750.0	5,557.6	5,603.4	5,509.0	17.6	15.6	87.30	-451.7	-1,387.4	1,297.1	1,263.9	33.18	39.088	
5,800.0	5,567.7	5,645.5	5,530.0	18.3	16.1	87.82	-487.5	-1,394.4	1,297.7	1,263.3	34.41	37.713	
5,850.0	5,573.0	5,688.6	5,548.3	19.1	16.6	88.35	-525.8	-1,401.8	1,298.5	1,262.8	35.70	36.370	
5,880.9	5,574.0	5,715.8	5,558.2	19.5	17.0	88.69	-550.6	-1,406.7	1,299.1	1,262.6	36.53	35.563	
5,900.0	5,574.0	5,733.0	5,563.7	19.8	17.2	88.94	-566.5	-1,409.7	1,299.6	1,262.6	37.03	35.099	
6,000.0	5,574.0	5,827.8	5,584.6	21.1	18.6	89.86	-657.2	-1,427.4	1,305.9	1,266.2	39.66	32.923	
6,100.0	5,574.0	5,995.4	5,589.0	22.5	20.9	90.05	-822.0	-1,456.8	1,316.8	1,273.5	43.30	30.408	
6,192.5	5,574.0	6,272.5	5,589.0	23.9	24.9	90.05	-1,098.3	-1,475.4	1,320.3	1,271.9	48.39	27.284	
6,200.0	5,574.0	6,280.0	5,589.0	24.0	25.0	90.05	-1,105.8	-1,475.4	1,320.3	1,271.7	48.63	27.151	
6,300.0	5,574.0	6,380.0	5,589.0	25.7	26.7	90.05	-1,205.8	-1,475.4	1,320.3	1,268.4	51.94	25.419	
6,400.0	5,574.0	6,480.0	5,589.0	27.3	28.3	90.05	-1,305.8	-1,475.4	1,320.3	1,265.0	55.33	23.862	
6,500.0	5,574.0	6,580.0	5,589.0	29.0	30.0	90.05	-1,405.8	-1,475.4	1,320.3	1,261.5	58.77	22.464	
6,600.0	5,574.0	6,680.0	5,589.0	30.8	31.8	90.05	-1,505.8	-1,475.4	1,320.3	1,258.0	62.26	21.205	
6,700.0	5,574.0	6,780.0	5,589.0	32.5	33.5	90.05	-1,605.8	-1,475.4	1,320.3	1,254.5	65.79	20.068	
6,800.0	5,574.0	6,880.0	5,589.0	34.3	35.3	90.05	-1,705.8	-1,475.4	1,320.3	1,250.9	69.35	19.037	
6,900.0	5,574.0	6,980.0	5,589.0	36.1	37.1	90.05	-1,805.8	-1,475.4	1,320.3	1,247.3	72.94	18.101	
7,000.0	5,574.0	7,080.0	5,589.0	37.9	38.9	90.05	-1,905.8	-1,475.4	1,320.2	1,243.7	76.55	17.247	
7,100.0	5,574.0	7,180.0	5,589.0	39.7	40.7	90.05	-2,005.8	-1,475.4	1,320.2	1,240.0	80.18	16.465	
7,200.0	5,574.0	7,280.0	5,589.0	41.5	42.5	90.05	-2,105.8	-1,475.4	1,320.2	1,236.4	83.83	15.748	
7,300.0	5,574.0	7,380.0	5,589.0	43.4	44.3	90.05	-2,205.8	-1,475.4	1,320.2	1,232.7	87.50	15.088	
7,400.0	5,574.0	7,480.0	5,589.0	45.2	46.2	90.05	-2,305.8	-1,475.4	1,320.2	1,229.0	91.18	14.479	
7,500.0	5,574.0	7,580.0	5,589.0	47.0	48.0	90.05	-2,405.8	-1,475.3	1,320.2	1,225.3	94.87	13.915	
7,600.0	5,574.0	7,680.0	5,589.0	48.9	49.9	90.05	-2,505.8	-1,475.3	1,320.2	1,221.6	98.57	13.393	
7,700.0	5,574.0	7,780.0	5,589.0	50.7	51.7	90.05	-2,605.8	-1,475.3	1,320.2	1,217.9	102.29	12.906	
7,800.0	5,574.0	7,880.0	5,589.0	52.6	53.6	90.05	-2,705.8	-1,475.3	1,320.2	1,214.1	106.01	12.453	
7,900.0	5,574.0	7,980.0	5,589.0	54.5	55.4	90.05	-2,805.8	-1,475.3	1,320.1	1,210.4	109.74	12.030	
8,000.0	5,574.0	8,080.0	5,589.0	56.3	57.3	90.05	-2,905.8	-1,475.3	1,320.1	1,206.7	113.47	11.634	
8,100.0	5,574.0	8,180.0	5,589.0	58.2	59.2	90.05	-3,005.8	-1,475.3	1,320.1	1,202.9	117.22	11.262	
8,200.0	5,574.0	8,280.0	5,589.0	60.1	61.0	90.05	-3,105.8	-1,475.3	1,320.1	1,199.1	120.96	10.913	
8,300.0	5,574.0	8,380.0	5,589.0	61.9	62.9	90.05	-3,205.8	-1,475.3	1,320.1	1,195.4	124.72	10.585	
8,400.0	5,574.0	8,480.0	5,589.0	63.8	64.8	90.05	-3,305.8	-1,475.3	1,320.1	1,191.6	128.47	10.275	
8,500.0	5,574.0	8,580.0	5,589.0	65.7	66.7	90.05	-3,405.8	-1,475.3	1,320.1	1,187.8	132.24	9.983	
8,600.0	5,574.0	8,680.0	5,589.0	67.6	68.5	90.05	-3,505.8	-1,475.3	1,320.1	1,184.1	136.00	9.706	
8,700.0	5,574.0	8,780.0	5,589.0	69.5	70.4	90.05	-3,605.8	-1,475.3	1,320.0	1,180.3	139.77	9.444	
8,800.0	5,574.0	8,880.0	5,589.0	71.3	72.3	90.05	-3,705.8	-1,475.2	1,320.0	1,176.5	143.55	9.196	
8,900.0	5,574.0	8,980.0	5,589.0	73.2	74.2	90.05	-3,805.8	-1,475.2	1,320.0	1,172.7	147.32	8.960	
9,000.0	5,574.0	9,080.0	5,589.0	75.1	76.1	90.05	-3,905.8	-1,475.2	1,320.0	1,168.9	151.10	8.736	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,100.0	5,574.0	9,180.0	5,589.0	77.0	78.0	90.05	-4,005.8	-1,475.2	1,320.0	1,165.1	154.88	8.523		
9,200.0	5,574.0	9,280.0	5,589.0	78.9	79.9	90.05	-4,105.8	-1,475.2	1,320.0	1,161.3	158.67	8.319		
9,300.0	5,574.0	9,380.0	5,589.0	80.8	81.8	90.05	-4,205.8	-1,475.2	1,320.0	1,157.5	162.46	8.125		
9,400.0	5,574.0	9,480.0	5,589.0	82.7	83.6	90.05	-4,305.8	-1,475.2	1,320.0	1,153.7	166.24	7.940		
9,500.0	5,574.0	9,580.0	5,589.0	84.6	85.5	90.05	-4,405.8	-1,475.2	1,320.0	1,149.9	170.04	7.763		
9,600.0	5,574.0	9,680.0	5,589.0	86.5	87.4	90.05	-4,505.8	-1,475.2	1,319.9	1,146.1	173.83	7.593		
9,700.0	5,574.0	9,780.0	5,589.0	88.4	89.3	90.05	-4,605.8	-1,475.2	1,319.9	1,142.3	177.62	7.431		
9,800.0	5,574.0	9,880.0	5,589.0	90.3	91.2	90.05	-4,705.8	-1,475.2	1,319.9	1,138.5	181.42	7.276		
9,900.0	5,574.0	9,980.0	5,589.0	92.2	93.1	90.05	-4,805.8	-1,475.2	1,319.9	1,134.7	185.22	7.126		
10,000.0	5,574.0	10,080.0	5,589.0	94.1	95.0	90.05	-4,905.8	-1,475.2	1,319.9	1,130.9	189.02	6.983		
10,100.0	5,574.0	10,180.0	5,589.0	96.0	96.9	90.05	-5,005.8	-1,475.2	1,319.9	1,127.1	192.82	6.845		
10,200.0	5,574.0	10,280.0	5,589.0	97.9	98.8	90.05	-5,105.8	-1,475.1	1,319.9	1,123.3	196.62	6.713		
10,300.0	5,574.0	10,380.0	5,589.0	99.8	100.7	90.05	-5,205.8	-1,475.1	1,319.9	1,119.4	200.42	6.585		
10,400.0	5,574.0	10,480.0	5,589.0	101.7	102.6	90.05	-5,305.8	-1,475.1	1,319.9	1,115.6	204.23	6.463		
10,500.0	5,574.0	10,580.0	5,589.0	103.6	104.5	90.05	-5,405.8	-1,475.1	1,319.8	1,111.8	208.03	6.344		
10,600.0	5,574.0	10,680.0	5,589.0	105.5	106.4	90.05	-5,505.8	-1,475.1	1,319.8	1,108.0	211.84	6.230		
10,700.0	5,574.0	10,780.0	5,589.0	107.4	108.3	90.05	-5,605.8	-1,475.1	1,319.8	1,104.2	215.64	6.120		
10,800.0	5,574.0	10,880.0	5,589.0	109.3	110.2	90.05	-5,705.8	-1,475.1	1,319.8	1,100.4	219.45	6.014		
10,900.0	5,574.0	10,980.0	5,589.0	111.2	112.1	90.05	-5,805.8	-1,475.1	1,319.8	1,096.5	223.26	5.911		
11,000.0	5,574.0	11,080.0	5,589.0	113.1	114.0	90.05	-5,905.8	-1,475.1	1,319.8	1,092.7	227.07	5.812		
11,100.0	5,574.0	11,180.0	5,589.0	115.0	115.9	90.05	-6,005.8	-1,475.1	1,319.8	1,088.9	230.88	5.716		
11,200.0	5,574.0	11,280.0	5,589.0	116.9	117.8	90.05	-6,105.8	-1,475.1	1,319.8	1,085.1	234.69	5.623		
11,300.0	5,574.0	11,380.0	5,589.0	118.8	119.8	90.05	-6,205.8	-1,475.1	1,319.7	1,081.2	238.51	5.533		
11,400.0	5,574.0	11,480.0	5,589.0	120.7	121.7	90.05	-6,305.8	-1,475.1	1,319.7	1,077.4	242.32	5.446		
11,500.0	5,574.0	11,580.0	5,589.0	122.6	123.6	90.05	-6,405.8	-1,475.0	1,319.7	1,073.6	246.13	5.362		
11,600.0	5,574.0	11,680.0	5,589.0	124.5	125.5	90.05	-6,505.8	-1,475.0	1,319.7	1,069.8	249.95	5.280		
11,700.0	5,574.0	11,780.0	5,589.0	126.4	127.4	90.05	-6,605.8	-1,475.0	1,319.7	1,065.9	253.76	5.201		
11,800.0	5,574.0	11,880.0	5,589.0	128.3	129.3	90.05	-6,705.8	-1,475.0	1,319.7	1,062.1	257.58	5.124		
11,900.0	5,574.0	11,980.0	5,589.0	130.2	131.2	90.05	-6,805.8	-1,475.0	1,319.7	1,058.3	261.39	5.049		
12,000.0	5,574.0	12,080.0	5,589.0	132.1	133.1	90.05	-6,905.8	-1,475.0	1,319.7	1,054.5	265.21	4.976		
12,062.4	5,574.0	12,142.4	5,589.0	133.3	134.3	90.05	-6,968.2	-1,475.0	1,319.7	1,052.1	267.59	4.932 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	13.9	13.9	0.0	0.0	-90.62	-13.5	-1,254.3	1,254.3					
100.0	100.0	113.9	113.9	0.1	0.1	-90.62	-13.5	-1,254.3	1,254.3	1,254.1	0.22	5,729.585		
200.0	200.0	213.9	213.9	0.3	0.3	-90.62	-13.5	-1,254.3	1,254.3	1,253.7	0.67	1,876.471		
300.0	300.0	313.9	313.9	0.5	0.6	-90.62	-13.5	-1,254.3	1,254.3	1,253.2	1.12	1,121.959		
400.0	400.0	413.9	413.9	0.8	0.8	-90.62	-13.5	-1,254.3	1,254.3	1,252.8	1.57	800.204		
500.0	500.0	513.9	513.9	1.0	1.0	-90.62	-13.5	-1,254.3	1,254.3	1,252.3	2.02	621.866		
600.0	600.0	614.7	614.7	1.2	1.2	-90.62	-13.6	-1,254.3	1,254.3	1,251.9	2.46	509.010		
700.0	700.0	720.3	720.3	1.4	1.5	-90.73	-16.0	-1,253.9	1,254.0	1,251.1	2.89	433.288		
800.0	800.0	824.3	824.1	1.7	1.6	-91.01	-22.1	-1,253.1	1,253.3	1,250.0	3.31	378.098		
900.0	900.0	924.1	923.6	1.9	1.9	-91.33	-29.0	-1,252.2	1,252.5	1,248.8	3.75	334.327		
1,000.0	1,000.0	1,023.8	1,023.1	2.1	2.1	-91.64	-35.9	-1,251.2	1,251.8	1,247.6	4.19	298.661		
1,100.0	1,100.0	1,123.7	1,122.7	2.3	2.3	78.79	-42.8	-1,250.3	1,250.7	1,246.1	4.61	271.139		
1,200.0	1,199.8	1,223.7	1,222.5	2.5	2.5	78.74	-49.7	-1,249.4	1,249.0	1,244.0	5.02	248.598		
1,300.0	1,299.6	1,323.6	1,322.2	2.7	2.8	78.73	-56.7	-1,248.4	1,246.9	1,241.5	5.45	228.613		
1,400.0	1,399.4	1,423.6	1,421.9	2.9	3.0	78.73	-63.6	-1,247.5	1,244.9	1,239.0	5.90	210.987		
1,500.0	1,499.1	1,523.6	1,521.7	3.1	3.3	78.72	-70.5	-1,246.6	1,242.8	1,236.4	6.36	195.453		
1,600.0	1,598.9	1,623.6	1,621.4	3.3	3.5	78.72	-77.4	-1,245.6	1,240.7	1,233.9	6.83	181.739		
1,700.0	1,698.6	1,723.6	1,721.1	3.5	3.8	78.71	-84.3	-1,244.7	1,238.7	1,231.4	7.30	169.597		
1,800.0	1,798.4	1,823.5	1,820.9	3.8	4.0	78.71	-91.2	-1,243.8	1,236.6	1,228.8	7.79	158.806		
1,900.0	1,898.1	1,923.5	1,920.6	4.0	4.3	78.71	-98.1	-1,242.8	1,234.5	1,226.3	8.28	149.177		
2,000.0	1,997.9	2,023.5	2,020.3	4.2	4.5	78.70	-105.0	-1,241.9	1,232.5	1,223.7	8.77	140.548		
2,100.0	2,097.6	2,123.5	2,120.1	4.5	4.8	78.70	-111.9	-1,241.0	1,230.4	1,221.1	9.27	132.783		
2,200.0	2,197.4	2,223.4	2,219.8	4.7	5.1	78.69	-118.9	-1,240.0	1,228.3	1,218.6	9.77	125.766		
2,300.0	2,297.2	2,323.4	2,319.5	5.0	5.3	78.69	-125.8	-1,239.1	1,226.3	1,216.0	10.27	119.401		
2,400.0	2,396.9	2,423.4	2,419.3	5.2	5.6	78.68	-132.7	-1,238.2	1,224.2	1,213.4	10.78	113.605		
2,500.0	2,496.7	2,523.4	2,519.0	5.5	5.8	78.68	-139.6	-1,237.2	1,222.1	1,210.9	11.28	108.304		
2,600.0	2,596.4	2,623.4	2,618.8	5.7	6.1	78.67	-146.5	-1,236.3	1,220.1	1,208.3	11.79	103.443		
2,700.0	2,696.2	2,723.3	2,718.5	6.0	6.4	78.67	-153.4	-1,235.4	1,218.0	1,205.7	12.31	98.973		
2,800.0	2,795.9	2,823.3	2,818.2	6.2	6.6	78.66	-160.3	-1,234.4	1,216.0	1,203.1	12.82	94.849		
2,900.0	2,895.7	2,923.3	2,918.0	6.5	6.9	78.66	-167.2	-1,233.5	1,213.9	1,200.6	13.33	91.034		
3,000.0	2,995.5	3,023.3	3,017.7	6.7	7.1	78.65	-174.1	-1,232.5	1,211.8	1,198.0	13.85	87.495		
3,100.0	3,095.2	3,123.3	3,117.4	7.0	7.4	78.65	-181.1	-1,231.6	1,209.8	1,195.4	14.37	84.204		
3,200.0	3,195.0	3,223.2	3,217.2	7.2	7.7	78.64	-188.0	-1,230.7	1,207.7	1,192.8	14.88	81.136		
3,300.0	3,294.7	3,323.2	3,316.9	7.5	7.9	78.64	-194.9	-1,229.7	1,205.6	1,190.2	15.40	78.271		
3,400.0	3,394.5	3,423.2	3,416.6	7.8	8.2	78.63	-201.8	-1,228.8	1,203.6	1,187.6	15.92	75.588		
3,500.0	3,494.2	3,523.2	3,516.4	8.0	8.5	78.63	-208.7	-1,227.9	1,201.5	1,185.0	16.44	73.072		
3,600.0	3,594.0	3,623.1	3,616.1	8.3	8.7	78.62	-215.6	-1,226.9	1,199.4	1,182.5	16.96	70.708		
3,700.0	3,693.7	3,723.1	3,715.8	8.5	9.0	78.62	-222.5	-1,226.0	1,197.4	1,179.9	17.48	68.482		
3,800.0	3,793.5	3,823.1	3,815.6	8.8	9.2	78.61	-229.4	-1,225.1	1,195.3	1,177.3	18.01	66.383		
3,900.0	3,893.3	3,923.1	3,915.3	9.0	9.5	78.61	-236.3	-1,224.1	1,193.2	1,174.7	18.53	64.400		
4,000.0	3,993.0	4,023.1	4,015.0	9.3	9.8	78.60	-243.3	-1,223.2	1,191.2	1,172.1	19.05	62.525		
4,100.0	4,092.8	4,123.0	4,114.8	9.6	10.0	78.60	-250.2	-1,222.3	1,189.1	1,169.5	19.57	60.749		
4,200.0	4,192.5	4,223.0	4,214.5	9.8	10.3	78.59	-257.1	-1,221.3	1,187.0	1,166.9	20.10	59.063		
4,300.0	4,292.3	4,323.0	4,314.3	10.1	10.6	78.59	-264.0	-1,220.4	1,185.0	1,164.3	20.62	57.463		
4,400.0	4,392.0	4,423.0	4,414.0	10.3	10.8	78.58	-270.9	-1,219.5	1,182.9	1,161.8	21.15	55.941		
4,500.0	4,491.8	4,523.0	4,513.7	10.6	11.1	78.58	-277.8	-1,218.5	1,180.8	1,159.2	21.67	54.491		
4,600.0	4,591.6	4,622.9	4,613.5	10.9	11.3	78.57	-284.7	-1,217.6	1,178.8	1,156.6	22.20	53.110		
4,700.0	4,691.3	4,722.9	4,713.2	11.1	11.6	78.57	-291.6	-1,216.7	1,176.7	1,154.0	22.72	51.791		
4,800.0	4,791.1	4,822.9	4,812.9	11.4	11.9	78.56	-298.5	-1,215.7	1,174.6	1,151.4	23.25	50.532		
4,900.0	4,890.8	4,922.9	4,912.7	11.7	12.1	78.56	-305.5	-1,214.8	1,172.6	1,148.8	23.77	49.327		
5,000.0	4,990.6	5,022.8	5,012.4	11.9	12.4	78.55	-312.4	-1,213.9	1,170.5	1,146.2	24.30	48.175		
5,099.1	5,089.4	5,121.9	5,111.2	12.2	12.7	78.55	-319.2	-1,212.9	1,168.5	1,143.6	24.82	47.080		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #1													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,150.0	5,140.0	5,172.7	5,161.9	12.3	12.8	78.83	-322.7	-1,212.5	1,166.9	1,141.8	25.10	46.491		
5,200.0	5,188.8	5,227.6	5,216.6	12.5	13.0	79.46	-327.0	-1,211.9	1,164.5	1,139.0	25.44	45.782		
5,250.0	5,236.4	5,292.6	5,280.5	12.8	13.2	80.30	-338.3	-1,210.3	1,160.6	1,134.8	25.89	44.834		
5,300.0	5,282.2	5,358.5	5,343.5	13.0	13.5	81.21	-357.8	-1,207.7	1,155.4	1,128.9	26.46	43.667		
5,350.0	5,326.0	5,425.0	5,403.9	13.4	13.9	82.18	-385.2	-1,204.0	1,148.7	1,121.5	27.15	42.306		
5,400.0	5,367.3	5,491.7	5,460.4	13.7	14.4	83.21	-420.1	-1,199.3	1,140.6	1,112.6	27.96	40.791		
5,450.0	5,405.7	5,558.1	5,511.8	14.1	14.9	84.30	-461.8	-1,193.7	1,131.2	1,102.3	28.90	39.140		
5,500.0	5,440.8	5,624.0	5,557.1	14.6	15.6	85.43	-509.1	-1,187.3	1,120.6	1,090.6	29.99	37.365		
5,550.0	5,472.3	5,689.0	5,595.5	15.1	16.3	86.59	-561.0	-1,180.2	1,108.9	1,077.7	31.19	35.551		
5,600.0	5,500.0	5,752.9	5,626.6	15.7	17.1	87.80	-616.3	-1,172.8	1,096.2	1,063.7	32.49	33.735		
5,650.0	5,523.6	5,815.5	5,650.3	16.3	17.9	89.02	-673.7	-1,165.0	1,082.7	1,048.8	33.89	31.949		
5,700.0	5,542.9	5,876.8	5,666.6	16.9	18.8	90.27	-732.2	-1,157.1	1,068.5	1,033.2	35.35	30.230		
5,750.0	5,557.6	5,936.6	5,675.7	17.6	19.7	91.53	-790.8	-1,149.2	1,053.8	1,017.0	36.85	28.598		
5,800.0	5,567.7	5,990.9	5,678.0	18.3	20.5	92.82	-844.5	-1,141.9	1,038.7	1,000.4	38.31	27.114		
5,850.0	5,573.0	6,021.9	5,678.0	19.1	21.0	94.33	-875.3	-1,138.1	1,024.2	984.8	39.40	25.995		
5,880.9	5,574.0	6,041.3	5,678.0	19.5	21.2	95.28	-894.5	-1,135.9	1,015.8	975.8	40.08	25.347		
5,900.0	5,574.0	6,053.4	5,678.0	19.8	21.4	95.28	-906.6	-1,134.7	1,010.9	970.4	40.53	24.945		
6,000.0	5,574.0	6,117.7	5,678.0	21.1	22.2	95.30	-970.6	-1,129.4	990.2	947.4	42.82	23.123		
6,100.0	5,574.0	6,200.0	5,678.0	22.5	23.4	95.31	-1,052.8	-1,125.8	978.2	932.8	45.44	21.530		
6,192.5	5,574.0	6,245.3	5,678.0	23.9	24.1	95.31	-1,098.1	-1,125.3	974.4	926.9	47.45	20.537 CC		
6,192.5	5,574.0	6,245.3	5,678.0	23.9	24.1	95.31	-1,098.1	-1,125.3	974.4	926.9	47.45	20.537		
6,200.0	5,574.0	6,252.8	5,678.0	24.0	24.2	95.31	-1,105.6	-1,125.3	974.4	926.7	47.68	20.436		
6,300.0	5,574.0	6,352.8	5,678.0	25.7	25.8	95.31	-1,205.6	-1,125.3	974.4	923.4	50.95	19.126		
6,400.0	5,574.0	6,452.8	5,678.0	27.3	27.5	95.31	-1,305.6	-1,125.3	974.4	920.1	54.32	17.938		
6,500.0	5,574.0	6,552.8	5,678.0	29.0	29.2	95.31	-1,405.6	-1,125.3	974.4	916.6	57.75	16.873		
6,600.0	5,574.0	6,652.8	5,678.0	30.8	30.9	95.31	-1,505.6	-1,125.3	974.4	913.2	61.22	15.915		
6,700.0	5,574.0	6,752.8	5,678.0	32.5	32.7	95.31	-1,605.6	-1,125.3	974.4	909.7	64.74	15.052		
6,800.0	5,574.0	6,852.8	5,678.0	34.3	34.5	95.31	-1,705.6	-1,125.4	974.4	906.1	68.28	14.270		
6,900.0	5,574.0	6,952.8	5,678.0	36.1	36.3	95.31	-1,805.6	-1,125.4	974.4	902.5	71.86	13.560		
7,000.0	5,574.0	7,052.8	5,678.0	37.9	38.1	95.31	-1,905.6	-1,125.4	974.4	898.9	75.46	12.913		
7,100.0	5,574.0	7,152.8	5,678.0	39.7	39.9	95.31	-2,005.6	-1,125.4	974.4	895.3	79.08	12.322		
7,200.0	5,574.0	7,252.8	5,678.0	41.5	41.7	95.31	-2,105.6	-1,125.4	974.4	891.7	82.71	11.780		
7,300.0	5,574.0	7,352.8	5,678.0	43.4	43.5	95.31	-2,205.6	-1,125.4	974.4	888.0	86.37	11.282		
7,400.0	5,574.0	7,452.8	5,678.0	45.2	45.4	95.31	-2,305.6	-1,125.4	974.4	884.4	90.03	10.823		
7,500.0	5,574.0	7,552.8	5,678.0	47.0	47.2	95.31	-2,405.6	-1,125.4	974.4	880.7	93.71	10.398		
7,600.0	5,574.0	7,652.8	5,678.0	48.9	49.1	95.31	-2,505.6	-1,125.4	974.4	877.0	97.40	10.004		
7,700.0	5,574.0	7,752.8	5,678.0	50.7	50.9	95.31	-2,605.6	-1,125.4	974.4	873.3	101.10	9.638		
7,800.0	5,574.0	7,852.8	5,678.0	52.6	52.8	95.31	-2,705.6	-1,125.4	974.4	869.6	104.81	9.297		
7,900.0	5,574.0	7,952.8	5,678.0	54.5	54.6	95.31	-2,805.6	-1,125.4	974.4	865.9	108.53	8.978		
8,000.0	5,574.0	8,052.8	5,678.0	56.3	56.5	95.31	-2,905.6	-1,125.4	974.4	862.2	112.25	8.681		
8,100.0	5,574.0	8,152.8	5,678.0	58.2	58.4	95.31	-3,005.6	-1,125.4	974.4	858.4	115.98	8.401		
8,200.0	5,574.0	8,252.8	5,678.0	60.1	60.2	95.31	-3,105.6	-1,125.4	974.4	854.7	119.72	8.139		
8,300.0	5,574.0	8,352.8	5,678.0	61.9	62.1	95.31	-3,205.6	-1,125.4	974.4	850.9	123.46	7.893		
8,400.0	5,574.0	8,452.8	5,678.0	63.8	64.0	95.31	-3,305.6	-1,125.4	974.4	847.2	127.20	7.660		
8,500.0	5,574.0	8,552.8	5,678.0	65.7	65.9	95.31	-3,405.6	-1,125.4	974.4	843.5	130.95	7.441		
8,600.0	5,574.0	8,652.8	5,678.0	67.6	67.8	95.31	-3,505.6	-1,125.4	974.4	839.7	134.70	7.234		
8,700.0	5,574.0	8,752.8	5,678.0	69.5	69.6	95.31	-3,605.6	-1,125.4	974.4	835.9	138.46	7.037		
8,800.0	5,574.0	8,852.8	5,678.0	71.3	71.5	95.31	-3,705.6	-1,125.4	974.4	832.2	142.22	6.851		
8,900.0	5,574.0	8,952.8	5,678.0	73.2	73.4	95.31	-3,805.6	-1,125.4	974.4	828.4	145.98	6.675		
9,000.0	5,574.0	9,052.8	5,678.0	75.1	75.3	95.31	-3,905.6	-1,125.5	974.4	824.7	149.75	6.507		
9,100.0	5,574.0	9,152.8	5,678.0	77.0	77.2	95.31	-4,005.6	-1,125.5	974.4	820.9	153.52	6.347		
9,200.0	5,574.0	9,252.8	5,678.0	78.9	79.1	95.31	-4,105.6	-1,125.5	974.4	817.1	157.29	6.195		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,300.0	5,574.0	9,352.8	5,678.0	80.8	81.0	95.31	-4,205.6	-1,125.5	974.4	813.3	161.06	6.050		
9,400.0	5,574.0	9,452.8	5,678.0	82.7	82.9	95.31	-4,305.6	-1,125.5	974.4	809.6	164.84	5.911		
9,500.0	5,574.0	9,552.8	5,678.0	84.6	84.8	95.31	-4,405.6	-1,125.5	974.4	805.8	168.62	5.779		
9,600.0	5,574.0	9,652.8	5,678.0	86.5	86.7	95.31	-4,505.6	-1,125.5	974.4	802.0	172.40	5.652		
9,700.0	5,574.0	9,752.8	5,678.0	88.4	88.6	95.31	-4,605.6	-1,125.5	974.4	798.2	176.18	5.531		
9,800.0	5,574.0	9,852.8	5,678.0	90.3	90.5	95.31	-4,705.6	-1,125.5	974.4	794.5	179.96	5.415		
9,900.0	5,574.0	9,952.8	5,678.0	92.2	92.4	95.31	-4,805.6	-1,125.5	974.4	790.7	183.75	5.303		
10,000.0	5,574.0	10,052.8	5,678.0	94.1	94.3	95.31	-4,905.6	-1,125.5	974.4	786.9	187.53	5.196		
10,100.0	5,574.0	10,152.8	5,678.0	96.0	96.2	95.31	-5,005.6	-1,125.5	974.4	783.1	191.32	5.093		
10,200.0	5,574.0	10,252.8	5,678.0	97.9	98.1	95.31	-5,105.6	-1,125.5	974.4	779.3	195.11	4.994		
10,300.0	5,574.0	10,352.8	5,678.0	99.8	100.0	95.31	-5,205.6	-1,125.5	974.4	775.5	198.90	4.899		
10,400.0	5,574.0	10,452.8	5,678.0	101.7	101.9	95.31	-5,305.6	-1,125.5	974.4	771.7	202.69	4.807		
10,500.0	5,574.0	10,552.8	5,678.0	103.6	103.8	95.31	-5,405.6	-1,125.5	974.4	767.9	206.48	4.719		
10,600.0	5,574.0	10,652.8	5,678.0	105.5	105.7	95.31	-5,505.6	-1,125.5	974.4	764.1	210.27	4.634		
10,700.0	5,574.0	10,752.8	5,678.0	107.4	107.6	95.31	-5,605.6	-1,125.5	974.4	760.4	214.07	4.552		
10,800.0	5,574.0	10,852.8	5,678.0	109.3	109.5	95.31	-5,705.6	-1,125.5	974.4	756.6	217.86	4.473		
10,900.0	5,574.0	10,952.8	5,678.0	111.2	111.4	95.31	-5,805.6	-1,125.5	974.4	752.8	221.66	4.396		
11,000.0	5,574.0	11,052.8	5,678.0	113.1	113.3	95.31	-5,905.6	-1,125.5	974.4	749.0	225.46	4.322		
11,100.0	5,574.0	11,152.8	5,678.0	115.0	115.2	95.31	-6,005.6	-1,125.6	974.4	745.2	229.25	4.250		
11,200.0	5,574.0	11,252.8	5,678.0	116.9	117.1	95.31	-6,105.6	-1,125.6	974.4	741.4	233.05	4.181		
11,300.0	5,574.0	11,352.8	5,678.0	118.8	119.0	95.31	-6,205.6	-1,125.6	974.4	737.6	236.85	4.114		
11,400.0	5,574.0	11,452.8	5,678.0	120.7	120.9	95.31	-6,305.6	-1,125.6	974.4	733.8	240.65	4.049		
11,500.0	5,574.0	11,552.8	5,678.0	122.6	122.8	95.31	-6,405.6	-1,125.6	974.4	730.0	244.45	3.986		
11,600.0	5,574.0	11,652.8	5,678.0	124.5	124.7	95.31	-6,505.6	-1,125.6	974.4	726.2	248.25	3.925		
11,700.0	5,574.0	11,752.8	5,678.0	126.4	126.6	95.31	-6,605.6	-1,125.6	974.4	722.4	252.05	3.866		
11,800.0	5,574.0	11,852.8	5,678.0	128.3	128.5	95.31	-6,705.6	-1,125.6	974.4	718.6	255.85	3.809		
11,900.0	5,574.0	11,952.8	5,678.0	130.2	130.4	95.31	-6,805.6	-1,125.6	974.4	714.8	259.66	3.753		
12,000.0	5,574.0	12,052.8	5,678.0	132.1	132.3	95.30	-6,905.6	-1,125.6	974.4	711.0	263.46	3.699		
12,062.4	5,574.0	12,115.2	5,678.0	133.3	133.5	95.30	-6,968.0	-1,125.6	974.4	708.6	265.83	3.666 ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	13.9	13.9	0.0	0.0	-90.62	-13.5	-1,254.3	1,254.3					
100.0	100.0	113.9	113.9	0.1	0.1	-90.62	-13.5	-1,254.3	1,254.3	1,254.1	0.22	5,729.585		
200.0	200.0	213.9	213.9	0.3	0.3	-90.62	-13.5	-1,254.3	1,254.3	1,253.7	0.67	1,876.471		
300.0	300.0	313.9	313.9	0.5	0.6	-90.62	-13.5	-1,254.3	1,254.3	1,253.2	1.12	1,121.959		
400.0	400.0	413.9	413.9	0.8	0.8	-90.62	-13.5	-1,254.3	1,254.3	1,252.8	1.57	800.204		
500.0	500.0	513.9	513.9	1.0	1.0	-90.62	-13.5	-1,254.3	1,254.3	1,252.3	2.02	621.866		
600.0	600.0	614.6	614.6	1.2	1.2	-90.62	-13.6	-1,254.3	1,254.3	1,251.9	2.46	509.061		
700.0	700.0	719.3	719.3	1.4	1.5	-90.73	-16.0	-1,254.0	1,254.1	1,251.2	2.89	433.589		
800.0	800.0	822.7	822.5	1.7	1.6	-91.01	-22.0	-1,253.3	1,253.5	1,250.2	3.31	378.529		
900.0	900.0	922.5	922.0	1.9	1.8	-91.32	-29.0	-1,252.5	1,252.8	1,249.1	3.74	334.736		
1,000.0	1,000.0	1,022.2	1,021.5	2.1	2.1	-91.64	-35.9	-1,251.7	1,252.2	1,248.0	4.19	299.047		
1,100.0	1,100.0	1,122.1	1,121.2	2.3	2.3	78.79	-42.8	-1,250.9	1,251.3	1,246.7	4.61	271.483		
1,200.0	1,199.8	1,222.1	1,220.9	2.5	2.5	78.74	-49.7	-1,250.0	1,249.7	1,244.6	5.02	248.924		
1,300.0	1,299.6	1,322.0	1,320.6	2.7	2.8	78.73	-56.6	-1,249.2	1,247.7	1,242.3	5.45	228.922		
1,400.0	1,399.4	1,422.0	1,420.4	2.9	3.0	78.73	-63.6	-1,248.4	1,245.8	1,239.9	5.90	211.282		
1,500.0	1,499.1	1,522.0	1,520.1	3.1	3.3	78.72	-70.5	-1,247.6	1,243.9	1,237.5	6.35	195.736		
1,600.0	1,598.9	1,622.0	1,619.8	3.3	3.5	78.71	-77.4	-1,246.8	1,241.9	1,235.1	6.82	182.013		
1,700.0	1,698.6	1,722.0	1,719.6	3.5	3.8	78.71	-84.4	-1,246.0	1,240.0	1,232.7	7.30	169.863		
1,800.0	1,798.4	1,822.0	1,819.3	3.8	4.0	78.70	-91.3	-1,245.2	1,238.0	1,230.3	7.78	159.065		
1,900.0	1,898.1	1,921.9	1,919.0	4.0	4.3	78.70	-98.2	-1,244.4	1,236.1	1,227.8	8.27	149.431		
2,000.0	1,997.9	2,021.9	2,018.8	4.2	4.5	78.69	-105.1	-1,243.6	1,234.2	1,225.4	8.77	140.797		
2,100.0	2,097.6	2,121.9	2,118.5	4.5	4.8	78.69	-112.1	-1,242.8	1,232.2	1,223.0	9.26	133.028		
2,200.0	2,197.4	2,221.9	2,218.3	4.7	5.1	78.68	-119.0	-1,242.0	1,230.3	1,220.5	9.76	126.008		
2,300.0	2,297.2	2,321.9	2,318.0	5.0	5.3	78.68	-125.9	-1,241.2	1,228.3	1,218.1	10.27	119.641		
2,400.0	2,396.9	2,421.8	2,417.7	5.2	5.6	78.67	-132.8	-1,240.4	1,226.4	1,215.6	10.77	113.844		
2,500.0	2,496.7	2,521.8	2,517.5	5.5	5.8	78.67	-139.8	-1,239.5	1,224.5	1,213.2	11.28	108.541		
2,600.0	2,596.4	2,621.8	2,617.2	5.7	6.1	78.66	-146.7	-1,238.7	1,222.5	1,210.7	11.79	103.680		
2,700.0	2,696.2	2,721.8	2,716.9	6.0	6.4	78.66	-153.6	-1,237.9	1,220.6	1,208.3	12.30	99.208		
2,800.0	2,795.9	2,821.8	2,816.7	6.2	6.6	78.65	-160.6	-1,237.1	1,218.7	1,205.8	12.82	95.083		
2,900.0	2,895.7	2,921.7	2,916.4	6.5	6.9	78.65	-167.5	-1,236.3	1,216.7	1,203.4	13.33	91.268		
3,000.0	2,995.5	3,021.7	3,016.2	6.7	7.1	78.64	-174.4	-1,235.5	1,214.8	1,200.9	13.85	87.728		
3,100.0	3,095.2	3,121.7	3,115.9	7.0	7.4	78.64	-181.3	-1,234.7	1,212.8	1,198.5	14.36	84.437		
3,200.0	3,195.0	3,221.7	3,215.6	7.2	7.7	78.63	-188.3	-1,233.9	1,210.9	1,196.0	14.88	81.369		
3,300.0	3,294.7	3,321.7	3,315.4	7.5	7.9	78.62	-195.2	-1,233.1	1,209.0	1,193.6	15.40	78.503		
3,400.0	3,394.5	3,421.7	3,415.1	7.8	8.2	78.62	-202.1	-1,232.3	1,207.0	1,191.1	15.92	75.821		
3,500.0	3,494.2	3,521.6	3,514.8	8.0	8.4	78.61	-209.0	-1,231.5	1,205.1	1,188.6	16.44	73.304		
3,600.0	3,594.0	3,621.6	3,614.6	8.3	8.7	78.61	-216.0	-1,230.7	1,203.1	1,186.2	16.96	70.940		
3,700.0	3,693.7	3,721.6	3,714.3	8.5	9.0	78.60	-222.9	-1,229.9	1,201.2	1,183.7	17.48	68.714		
3,800.0	3,793.5	3,821.6	3,814.1	8.8	9.2	78.60	-229.8	-1,229.0	1,199.3	1,181.3	18.00	66.615		
3,900.0	3,893.3	3,921.6	3,913.8	9.0	9.5	78.59	-236.8	-1,228.2	1,197.3	1,178.8	18.53	64.632		
4,000.0	3,993.0	4,021.5	4,013.5	9.3	9.8	78.59	-243.7	-1,227.4	1,195.4	1,176.3	19.05	62.757		
4,100.0	4,092.8	4,121.5	4,113.3	9.6	10.0	78.58	-250.6	-1,226.6	1,193.5	1,173.9	19.57	60.981		
4,200.0	4,192.5	4,221.5	4,213.0	9.8	10.3	78.57	-257.5	-1,225.8	1,191.5	1,171.4	20.09	59.296		
4,300.0	4,292.3	4,321.5	4,312.7	10.1	10.6	78.57	-264.5	-1,225.0	1,189.6	1,169.0	20.62	57.695		
4,400.0	4,392.0	4,421.5	4,412.5	10.3	10.8	78.56	-271.4	-1,224.2	1,187.6	1,166.5	21.14	56.173		
4,500.0	4,491.8	4,521.4	4,512.2	10.6	11.1	78.56	-278.3	-1,223.4	1,185.7	1,164.0	21.67	54.724		
4,600.0	4,591.6	4,621.4	4,612.0	10.9	11.3	78.55	-285.2	-1,222.6	1,183.8	1,161.6	22.19	53.342		
4,700.0	4,691.3	4,721.4	4,711.7	11.1	11.6	78.55	-292.2	-1,221.8	1,181.8	1,159.1	22.72	52.024		
4,800.0	4,791.1	4,821.4	4,811.4	11.4	11.9	78.54	-299.1	-1,221.0	1,179.9	1,156.6	23.24	50.764		
4,900.0	4,890.8	4,921.4	4,911.2	11.7	12.1	78.54	-306.0	-1,220.2	1,178.0	1,154.2	23.77	49.560		
5,000.0	4,990.6	5,021.4	5,010.9	11.9	12.4	78.53	-313.0	-1,219.4	1,176.0	1,151.7	24.29	48.408		
5,099.1	5,089.4	5,120.4	5,109.7	12.2	12.7	78.52	-319.8	-1,218.6	1,174.1	1,149.3	24.82	47.313		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,150.0	5,140.0	5,171.2	5,160.4	12.3	12.8	78.80	-323.3	-1,218.1	1,172.6	1,147.5	25.10	46.723		
5,200.0	5,188.8	5,224.6	5,213.6	12.5	12.9	79.41	-327.4	-1,217.7	1,170.2	1,144.8	25.43	46.022		
5,250.0	5,236.4	5,286.3	5,274.4	12.8	13.2	80.23	-337.6	-1,216.5	1,166.6	1,140.7	25.87	45.103		
5,300.0	5,282.2	5,348.9	5,334.4	13.0	13.4	81.13	-355.3	-1,214.4	1,161.7	1,135.3	26.41	43.986		
5,350.0	5,326.0	5,412.2	5,392.5	13.4	13.8	82.10	-380.2	-1,211.5	1,155.4	1,128.4	27.08	42.673		
5,400.0	5,367.3	5,476.0	5,447.5	13.7	14.3	83.14	-412.2	-1,207.8	1,148.0	1,120.1	27.86	41.207		
5,450.0	5,405.7	5,539.8	5,498.2	14.1	14.8	84.24	-450.7	-1,203.3	1,139.3	1,110.5	28.76	39.619		
5,500.0	5,440.8	5,603.6	5,543.7	14.6	15.4	85.39	-494.9	-1,198.1	1,129.5	1,099.7	29.80	37.902		
5,550.0	5,472.3	5,666.9	5,583.2	15.1	16.1	86.58	-544.1	-1,192.4	1,118.8	1,087.8	30.97	36.122		
5,600.0	5,500.0	5,729.6	5,616.1	15.7	16.8	87.81	-597.1	-1,186.2	1,107.1	1,074.8	32.25	34.332		
5,650.0	5,523.6	5,791.6	5,642.1	16.3	17.6	89.06	-652.9	-1,179.7	1,094.6	1,061.0	33.61	32.566		
5,700.0	5,542.9	5,852.6	5,661.0	16.9	18.5	90.33	-710.5	-1,173.0	1,081.5	1,046.5	35.05	30.854		
5,750.0	5,557.6	5,912.7	5,672.9	17.6	19.3	91.61	-768.9	-1,166.2	1,067.9	1,031.3	36.55	29.216		
5,800.0	5,567.7	5,971.7	5,677.8	18.3	20.2	92.88	-827.3	-1,159.4	1,053.9	1,015.8	38.09	27.672		
5,850.0	5,573.0	6,000.0	5,678.0	19.1	20.7	94.30	-855.4	-1,156.2	1,040.1	1,000.9	39.18	26.547		
5,880.9	5,574.0	6,028.9	5,678.0	19.5	21.0	95.18	-884.2	-1,153.2	1,032.0	992.0	39.98	25.815		
5,900.0	5,574.0	6,040.9	5,678.0	19.8	21.2	95.18	-896.2	-1,152.1	1,027.3	986.8	40.42	25.413		
6,000.0	5,574.0	6,100.0	5,678.0	21.1	22.0	95.19	-955.1	-1,147.9	1,007.7	965.1	42.63	23.640		
6,100.0	5,574.0	6,170.2	5,678.0	22.5	23.0	95.20	-1,025.3	-1,145.2	996.6	951.6	45.06	22.118		
6,192.5	5,574.0	6,243.1	5,678.0	23.9	24.0	95.21	-1,098.1	-1,144.9	993.8	946.4	47.47	20.936		
6,200.0	5,574.0	6,250.6	5,678.0	24.0	24.2	95.21	-1,105.6	-1,144.9	993.8	946.1	47.70	20.834		
6,300.0	5,574.0	6,350.6	5,678.0	25.7	25.8	95.21	-1,205.6	-1,144.9	993.8	942.9	50.97	19.500		
6,400.0	5,574.0	6,450.6	5,678.0	27.3	27.5	95.21	-1,305.6	-1,144.9	993.8	939.5	54.34	18.289		
6,500.0	5,574.0	6,550.6	5,678.0	29.0	29.2	95.21	-1,405.6	-1,144.9	993.8	936.1	57.77	17.204		
6,600.0	5,574.0	6,650.6	5,678.0	30.8	30.9	95.21	-1,505.6	-1,144.9	993.8	932.6	61.25	16.227		
6,700.0	5,574.0	6,750.6	5,678.0	32.5	32.7	95.21	-1,605.6	-1,144.9	993.8	929.1	64.76	15.346		
6,800.0	5,574.0	6,850.6	5,678.0	34.3	34.5	95.20	-1,705.6	-1,144.9	993.8	925.5	68.31	14.549		
6,900.0	5,574.0	6,950.6	5,678.0	36.1	36.2	95.20	-1,805.6	-1,144.9	993.8	921.9	71.88	13.825		
7,000.0	5,574.0	7,050.6	5,678.0	37.9	38.1	95.20	-1,905.6	-1,144.9	993.8	918.3	75.48	13.166		
7,100.0	5,574.0	7,150.6	5,678.0	39.7	39.9	95.20	-2,005.6	-1,144.9	993.8	914.7	79.10	12.563		
7,200.0	5,574.0	7,250.6	5,678.0	41.5	41.7	95.20	-2,105.6	-1,144.9	993.8	911.1	82.74	12.011		
7,300.0	5,574.0	7,350.6	5,678.0	43.4	43.5	95.20	-2,205.6	-1,144.9	993.8	907.4	86.40	11.503		
7,400.0	5,574.0	7,450.6	5,678.0	45.2	45.4	95.20	-2,305.6	-1,144.9	993.8	903.8	90.07	11.034		
7,500.0	5,574.0	7,550.6	5,678.0	47.0	47.2	95.20	-2,405.6	-1,144.9	993.8	900.1	93.75	10.601		
7,600.0	5,574.0	7,650.6	5,678.0	48.9	49.1	95.20	-2,505.6	-1,144.9	993.8	896.4	97.44	10.200		
7,700.0	5,574.0	7,750.6	5,678.0	50.7	50.9	95.20	-2,605.6	-1,144.9	993.8	892.7	101.14	9.826		
7,800.0	5,574.0	7,850.6	5,678.0	52.6	52.8	95.20	-2,705.6	-1,144.9	993.8	889.0	104.85	9.479		
7,900.0	5,574.0	7,950.6	5,678.0	54.5	54.6	95.20	-2,805.6	-1,144.9	993.8	885.3	108.56	9.154		
8,000.0	5,574.0	8,050.6	5,678.0	56.3	56.5	95.20	-2,905.6	-1,144.9	993.8	881.5	112.29	8.851		
8,100.0	5,574.0	8,150.6	5,678.0	58.2	58.4	95.20	-3,005.6	-1,144.9	993.8	877.8	116.02	8.566		
8,200.0	5,574.0	8,250.6	5,678.0	60.1	60.2	95.20	-3,105.6	-1,144.9	993.8	874.1	119.75	8.299		
8,300.0	5,574.0	8,350.6	5,678.0	61.9	62.1	95.20	-3,205.6	-1,144.9	993.8	870.3	123.49	8.047		
8,400.0	5,574.0	8,450.6	5,678.0	63.8	64.0	95.20	-3,305.6	-1,144.9	993.8	866.6	127.24	7.810		
8,500.0	5,574.0	8,550.6	5,678.0	65.7	65.9	95.20	-3,405.6	-1,144.9	993.8	862.8	130.99	7.587		
8,600.0	5,574.0	8,650.6	5,678.0	67.6	67.8	95.20	-3,505.6	-1,144.9	993.8	859.1	134.74	7.375		
8,700.0	5,574.0	8,750.6	5,678.0	69.5	69.6	95.20	-3,605.6	-1,144.9	993.8	855.3	138.50	7.175		
8,800.0	5,574.0	8,850.6	5,678.0	71.3	71.5	95.20	-3,705.6	-1,144.9	993.8	851.5	142.26	6.986		
8,900.0	5,574.0	8,950.6	5,678.0	73.2	73.4	95.20	-3,805.6	-1,144.9	993.8	847.8	146.03	6.806		
9,000.0	5,574.0	9,050.6	5,678.0	75.1	75.3	95.20	-3,905.6	-1,144.9	993.8	844.0	149.79	6.634		
9,100.0	5,574.0	9,150.6	5,678.0	77.0	77.2	95.20	-4,005.6	-1,144.9	993.8	840.2	153.56	6.472		
9,200.0	5,574.0	9,250.6	5,678.0	78.9	79.1	95.20	-4,105.6	-1,144.9	993.8	836.5	157.34	6.316		
9,300.0	5,574.0	9,350.6	5,678.0	80.8	81.0	95.20	-4,205.6	-1,144.9	993.8	832.7	161.11	6.168		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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-3510B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,574.0	9,450.6	5,678.0	82.7	82.9	95.20	-4,305.6	-1,144.9	993.8	828.9	164.89	6.027	
9,500.0	5,574.0	9,550.6	5,678.0	84.6	84.8	95.20	-4,405.6	-1,144.9	993.8	825.1	168.66	5.892	
9,600.0	5,574.0	9,650.6	5,678.0	86.5	86.7	95.20	-4,505.6	-1,144.9	993.8	821.3	172.44	5.763	
9,700.0	5,574.0	9,750.6	5,678.0	88.4	88.6	95.20	-4,605.6	-1,144.9	993.8	817.6	176.23	5.639	
9,800.0	5,574.0	9,850.6	5,678.0	90.3	90.5	95.20	-4,705.6	-1,144.9	993.8	813.8	180.01	5.521	
9,900.0	5,574.0	9,950.6	5,678.0	92.2	92.4	95.20	-4,805.6	-1,144.9	993.8	810.0	183.80	5.407	
10,000.0	5,574.0	10,050.6	5,678.0	94.1	94.3	95.20	-4,905.6	-1,144.9	993.8	806.2	187.58	5.298	
10,100.0	5,574.0	10,150.6	5,678.0	96.0	96.2	95.20	-5,005.6	-1,145.0	993.8	802.4	191.37	5.193	
10,200.0	5,574.0	10,250.6	5,678.0	97.9	98.1	95.20	-5,105.6	-1,145.0	993.8	798.6	195.16	5.092	
10,300.0	5,574.0	10,350.6	5,678.0	99.8	100.0	95.20	-5,205.6	-1,145.0	993.8	794.8	198.95	4.995	
10,400.0	5,574.0	10,450.6	5,678.0	101.7	101.9	95.20	-5,305.6	-1,145.0	993.8	791.0	202.74	4.902	
10,500.0	5,574.0	10,550.6	5,678.0	103.6	103.8	95.20	-5,405.6	-1,145.0	993.8	787.2	206.53	4.812	
10,600.0	5,574.0	10,650.6	5,678.0	105.5	105.7	95.20	-5,505.6	-1,145.0	993.8	783.4	210.33	4.725	
10,700.0	5,574.0	10,750.6	5,678.0	107.4	107.6	95.20	-5,605.6	-1,145.0	993.8	779.7	214.12	4.641	
10,800.0	5,574.0	10,850.6	5,678.0	109.3	109.5	95.20	-5,705.6	-1,145.0	993.8	775.9	217.92	4.560	
10,900.0	5,574.0	10,950.6	5,678.0	111.2	111.4	95.20	-5,805.6	-1,145.0	993.8	772.1	221.71	4.482	
11,000.0	5,574.0	11,050.6	5,678.0	113.1	113.3	95.20	-5,905.6	-1,145.0	993.8	768.3	225.51	4.407	
11,100.0	5,574.0	11,150.6	5,678.0	115.0	115.2	95.20	-6,005.6	-1,145.0	993.8	764.5	229.31	4.334	
11,200.0	5,574.0	11,250.6	5,678.0	116.9	117.1	95.20	-6,105.6	-1,145.0	993.8	760.7	233.11	4.263	
11,300.0	5,574.0	11,350.6	5,678.0	118.8	119.0	95.20	-6,205.6	-1,145.0	993.8	756.9	236.91	4.195	
11,400.0	5,574.0	11,450.6	5,678.0	120.7	120.9	95.20	-6,305.6	-1,145.0	993.8	753.1	240.71	4.129	
11,500.0	5,574.0	11,550.6	5,678.0	122.6	122.8	95.20	-6,405.6	-1,145.0	993.8	749.3	244.51	4.064	
11,600.0	5,574.0	11,650.6	5,678.0	124.5	124.7	95.20	-6,505.6	-1,145.0	993.8	745.5	248.31	4.002	
11,700.0	5,574.0	11,750.6	5,678.0	126.4	126.6	95.20	-6,605.6	-1,145.0	993.8	741.6	252.11	3.942	
11,800.0	5,574.0	11,850.6	5,678.0	128.3	128.5	95.20	-6,705.6	-1,145.0	993.8	737.8	255.91	3.883	
11,900.0	5,574.0	11,950.6	5,678.0	130.2	130.5	95.20	-6,805.6	-1,145.0	993.8	734.0	259.72	3.826	
12,000.0	5,574.0	12,050.6	5,678.0	132.1	132.4	95.20	-6,905.6	-1,145.0	993.8	730.2	263.52	3.771	
12,062.4	5,574.0	12,113.0	5,678.0	133.3	133.6	95.20	-6,968.0	-1,145.0	993.8	727.9	265.89	3.737	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	13.9	13.9	0.0	0.0	-87.09	62.1	-1,222.5	1,224.0					
100.0	100.0	113.9	113.9	0.1	0.1	-87.09	62.1	-1,222.5	1,224.0	1,223.8	0.22	5,591.198		
200.0	200.0	213.9	213.9	0.3	0.3	-87.09	62.1	-1,222.5	1,224.0	1,223.4	0.67	1,831.148		
300.0	300.0	313.9	313.9	0.5	0.6	-87.09	62.1	-1,222.5	1,224.0	1,222.9	1.12	1,094.860		
400.0	400.0	413.9	413.9	0.8	0.8	-87.09	62.1	-1,222.5	1,224.0	1,222.5	1.57	780.877		
500.0	500.0	513.9	513.9	1.0	1.0	-87.09	62.1	-1,222.5	1,224.0	1,222.0	2.02	606.846		
600.0	600.0	613.9	613.9	1.2	1.2	-87.09	62.1	-1,222.5	1,224.0	1,221.6	2.47	496.249		
700.0	700.0	713.9	713.9	1.4	1.5	-87.09	62.1	-1,222.5	1,224.0	1,221.1	2.92	419.750		
800.0	800.0	816.9	816.9	1.7	1.7	-87.09	62.1	-1,222.4	1,224.0	1,220.7	3.37	363.466		
900.0	900.0	938.0	938.0	1.9	1.9	-87.23	59.0	-1,221.3	1,222.9	1,219.1	3.83	319.707		
1,000.0	1,000.0	1,048.6	1,048.3	2.1	2.1	-87.54	52.5	-1,218.7	1,220.3	1,216.0	4.26	286.620		
1,100.0	1,100.0	1,148.4	1,147.9	2.3	2.3	82.96	46.0	-1,216.2	1,217.3	1,212.6	4.65	261.618		
1,200.0	1,199.8	1,248.3	1,247.6	2.5	2.6	82.97	39.5	-1,213.6	1,213.9	1,208.8	5.04	240.853		
1,300.0	1,299.6	1,348.3	1,347.3	2.7	2.8	82.99	33.0	-1,211.1	1,210.2	1,204.8	5.45	222.113		
1,400.0	1,399.4	1,448.2	1,447.0	2.9	3.0	83.02	26.5	-1,208.6	1,206.5	1,200.7	5.88	205.345		
1,500.0	1,499.1	1,548.1	1,546.6	3.1	3.2	83.04	20.0	-1,206.0	1,202.9	1,196.6	6.32	190.407		
1,600.0	1,598.9	1,648.1	1,646.3	3.3	3.5	83.07	13.5	-1,203.5	1,199.2	1,192.5	6.77	177.111		
1,700.0	1,698.6	1,748.0	1,746.0	3.5	3.7	83.10	7.0	-1,201.0	1,195.6	1,188.4	7.23	165.267		
1,800.0	1,798.4	1,847.9	1,845.7	3.8	4.0	83.12	0.5	-1,198.4	1,192.0	1,184.2	7.71	154.684		
1,900.0	1,898.1	1,947.9	1,945.4	4.0	4.2	83.15	-6.0	-1,195.9	1,188.3	1,180.1	8.18	145.201		
2,000.0	1,997.9	2,047.8	2,045.1	4.2	4.5	83.17	-12.5	-1,193.4	1,184.7	1,176.0	8.67	136.678		
2,100.0	2,097.6	2,147.7	2,144.8	4.5	4.7	83.20	-19.0	-1,190.8	1,181.0	1,171.8	9.16	128.991		
2,200.0	2,197.4	2,247.7	2,244.5	4.7	5.0	83.23	-25.5	-1,188.3	1,177.4	1,167.7	9.65	122.031		
2,300.0	2,297.2	2,347.6	2,344.2	5.0	5.2	83.25	-32.0	-1,185.7	1,173.7	1,163.6	10.14	115.709		
2,400.0	2,396.9	2,447.5	2,443.8	5.2	5.5	83.28	-38.4	-1,183.2	1,170.1	1,159.4	10.64	109.946		
2,500.0	2,496.7	2,547.5	2,543.5	5.5	5.7	83.31	-44.9	-1,180.7	1,166.4	1,155.3	11.14	104.674		
2,600.0	2,596.4	2,647.4	2,643.2	5.7	6.0	83.33	-51.4	-1,178.1	1,162.8	1,151.1	11.65	99.837		
2,700.0	2,696.2	2,747.3	2,742.9	6.0	6.3	83.36	-57.9	-1,175.6	1,159.1	1,147.0	12.15	95.386		
2,800.0	2,795.9	2,847.3	2,842.6	6.2	6.5	83.39	-64.4	-1,173.1	1,155.5	1,142.8	12.66	91.277		
2,900.0	2,895.7	2,947.2	2,942.3	6.5	6.8	83.42	-70.9	-1,170.5	1,151.8	1,138.7	13.17	87.475		
3,000.0	2,895.5	3,047.1	3,042.0	6.7	7.0	83.44	-77.4	-1,168.0	1,148.2	1,134.5	13.68	83.947		
3,100.0	3,095.2	3,147.1	3,141.7	7.0	7.3	83.47	-83.9	-1,165.5	1,144.5	1,130.3	14.19	80.666		
3,200.0	3,195.0	3,247.0	3,241.4	7.2	7.5	83.50	-90.4	-1,162.9	1,140.9	1,126.2	14.70	77.607		
3,300.0	3,294.7	3,346.9	3,341.0	7.5	7.8	83.53	-96.9	-1,160.4	1,137.2	1,122.0	15.21	74.749		
3,400.0	3,394.5	3,446.9	3,440.7	7.8	8.1	83.56	-103.4	-1,157.9	1,133.6	1,117.9	15.73	72.073		
3,500.0	3,494.2	3,546.8	3,540.4	8.0	8.3	83.59	-109.9	-1,155.3	1,130.0	1,113.7	16.24	69.563		
3,600.0	3,594.0	3,646.7	3,640.1	8.3	8.6	83.62	-116.4	-1,152.8	1,126.3	1,109.5	16.76	67.205		
3,700.0	3,693.7	3,746.6	3,739.8	8.5	8.9	83.64	-122.9	-1,150.3	1,122.7	1,105.4	17.28	64.985		
3,800.0	3,793.5	3,846.6	3,839.5	8.8	9.1	83.67	-129.4	-1,147.7	1,119.0	1,101.2	17.79	62.891		
3,900.0	3,893.3	3,946.5	3,939.2	9.0	9.4	83.70	-135.9	-1,145.2	1,115.4	1,097.1	18.31	60.914		
4,000.0	3,993.0	4,046.4	4,038.9	9.3	9.6	83.73	-142.3	-1,142.7	1,111.7	1,092.9	18.83	59.043		
4,100.0	4,092.8	4,146.4	4,138.6	9.6	9.9	83.76	-148.8	-1,140.1	1,108.1	1,088.7	19.35	57.271		
4,200.0	4,192.5	4,246.3	4,238.2	9.8	10.2	83.79	-155.3	-1,137.6	1,104.4	1,084.6	19.87	55.591		
4,300.0	4,292.3	4,346.2	4,337.9	10.1	10.4	83.82	-161.8	-1,135.1	1,100.8	1,080.4	20.39	53.995		
4,400.0	4,392.0	4,446.2	4,437.6	10.3	10.7	83.85	-168.3	-1,132.5	1,097.2	1,076.3	20.91	52.477		
4,500.0	4,491.8	4,546.1	4,537.3	10.6	10.9	83.89	-174.8	-1,130.0	1,093.5	1,072.1	21.43	51.032		
4,600.0	4,591.6	4,646.0	4,637.0	10.9	11.2	83.92	-181.3	-1,127.5	1,089.9	1,067.9	21.95	49.655		
4,700.0	4,691.3	4,746.0	4,736.7	11.1	11.5	83.95	-187.8	-1,124.9	1,086.2	1,063.8	22.47	48.341		
4,800.0	4,791.1	4,845.9	4,836.4	11.4	11.7	83.98	-194.3	-1,122.4	1,082.6	1,059.6	22.99	47.086		
4,900.0	4,890.8	4,945.8	4,936.1	11.7	12.0	84.01	-200.8	-1,119.9	1,079.0	1,055.4	23.51	45.886		
5,000.0	4,990.6	5,045.8	5,035.7	11.9	12.3	84.04	-207.3	-1,117.3	1,075.3	1,051.3	24.04	44.737		
5,099.1	5,089.4	5,317.4	5,298.9	12.2	13.3	82.19	-260.8	-1,096.4	1,069.2	1,043.9	25.33	42.212		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,150.0	5,140.0	5,554.3	5,480.6	12.3	15.4	77.13	-399.5	-1,042.3	1,054.9	1,027.5	27.38	38.529	
5,200.0	5,188.8	5,687.9	5,547.8	12.5	17.0	73.72	-506.7	-1,000.4	1,035.6	1,006.4	29.15	35.530	
5,250.0	5,236.4	5,773.6	5,574.5	12.8	18.3	72.01	-582.4	-970.9	1,014.0	983.5	30.48	33.269	
5,300.0	5,282.2	5,835.6	5,585.4	13.0	19.2	71.37	-639.3	-948.7	991.2	959.7	31.52	31.443	
5,350.0	5,326.0	5,884.9	5,588.8	13.4	20.0	71.39	-685.1	-930.8	967.7	935.3	32.41	29.863	
5,400.0	5,367.3	5,900.0	5,588.9	13.7	20.2	73.34	-699.1	-925.4	944.0	911.2	32.83	28.759	
5,450.0	5,405.7	5,927.5	5,588.9	14.1	20.6	74.65	-724.8	-915.6	920.5	887.1	33.43	27.537	
5,500.0	5,440.8	5,948.6	5,588.9	14.6	20.9	76.35	-744.6	-908.4	897.5	863.4	34.02	26.380	
5,550.0	5,472.3	5,971.9	5,588.9	15.1	21.3	77.99	-766.6	-900.6	874.8	840.1	34.70	25.207	
5,600.0	5,500.0	6,000.0	5,588.9	15.7	21.7	79.49	-793.3	-891.6	852.5	817.0	35.51	24.008	
5,650.0	5,523.6	6,024.4	5,588.9	16.3	22.0	81.24	-816.5	-884.1	830.6	794.2	36.36	22.840	
5,700.0	5,542.9	6,053.3	5,588.9	16.9	22.4	82.93	-844.2	-875.7	809.1	771.8	37.34	21.670	
5,750.0	5,557.6	6,083.7	5,588.9	17.6	22.9	84.71	-873.4	-867.2	788.1	749.7	38.39	20.530	
5,800.0	5,567.7	6,115.4	5,588.9	18.3	23.4	86.63	-903.9	-858.9	767.6	728.1	39.52	19.424	
5,850.0	5,573.0	6,148.0	5,588.9	19.1	23.9	88.72	-935.5	-850.9	747.7	706.9	40.71	18.364	
5,880.9	5,574.0	6,168.5	5,588.9	19.5	24.2	90.09	-955.4	-846.1	735.7	694.2	41.47	17.739	
5,900.0	5,574.0	6,181.3	5,588.9	19.8	24.4	90.09	-967.9	-843.2	728.5	686.5	41.99	17.349	
6,000.0	5,574.0	6,250.1	5,588.9	21.1	25.4	90.09	-1,035.3	-829.2	695.9	651.2	44.70	15.567	
6,100.0	5,574.0	6,321.6	5,588.9	22.5	26.6	90.09	-1,105.8	-817.3	671.9	624.4	47.52	14.138	
6,192.5	5,574.0	6,400.0	5,588.9	23.9	27.8	90.09	-1,183.5	-807.2	657.6	607.3	50.35	13.060	
6,200.0	5,574.0	6,400.0	5,588.9	24.0	27.8	90.09	-1,183.5	-807.2	656.7	606.2	50.47	13.011	
6,300.0	5,574.0	6,469.2	5,588.9	25.7	28.9	90.10	-1,252.4	-800.9	647.5	594.3	53.23	12.163	
6,400.0	5,574.0	6,543.8	5,588.9	27.3	30.1	90.10	-1,326.9	-797.0	642.2	586.1	56.13	11.442	
6,500.0	5,574.0	6,622.6	5,588.9	29.0	31.3	90.10	-1,405.7	-796.0	640.8	581.7	59.13	10.837	
6,600.0	5,574.0	6,722.6	5,588.9	30.8	32.9	90.10	-1,505.7	-795.9	640.8	578.3	62.56	10.243	
6,700.0	5,574.0	6,822.6	5,588.9	32.5	34.6	90.10	-1,605.7	-795.9	640.8	574.8	66.06	9.701	
6,800.0	5,574.0	6,922.6	5,588.9	34.3	36.3	90.10	-1,705.7	-795.9	640.8	571.2	69.59	9.209	
6,900.0	5,574.0	7,022.6	5,588.9	36.1	38.1	90.10	-1,805.7	-795.9	640.8	567.6	73.15	8.760	
7,000.0	5,574.0	7,122.6	5,588.9	37.9	39.8	90.10	-1,905.7	-795.9	640.8	564.0	76.74	8.350	
7,100.0	5,574.0	7,222.6	5,588.9	39.7	41.6	90.10	-2,005.7	-795.9	640.8	560.4	80.35	7.975	
7,200.0	5,574.0	7,322.6	5,588.9	41.5	43.3	90.10	-2,105.7	-795.9	640.8	556.8	83.98	7.630	
7,300.0	5,574.0	7,422.6	5,588.9	43.4	45.1	90.10	-2,205.7	-795.9	640.8	553.1	87.63	7.312	
7,400.0	5,574.0	7,522.6	5,588.9	45.2	46.9	90.10	-2,305.7	-795.9	640.7	549.5	91.29	7.019	
7,500.0	5,574.0	7,622.6	5,589.0	47.0	48.7	90.10	-2,405.7	-795.9	640.7	545.8	94.97	6.747	
7,600.0	5,574.0	7,722.6	5,589.0	48.9	50.5	90.10	-2,505.7	-795.9	640.7	542.1	98.65	6.495	
7,700.0	5,574.0	7,822.6	5,589.0	50.7	52.3	90.10	-2,605.7	-795.9	640.7	538.4	102.35	6.260	
7,800.0	5,574.0	7,922.6	5,589.0	52.6	54.2	90.10	-2,705.7	-795.9	640.7	534.6	106.06	6.041	
7,900.0	5,574.0	8,022.6	5,589.0	54.5	56.0	90.10	-2,805.7	-795.9	640.7	530.9	109.78	5.836	
8,000.0	5,574.0	8,122.6	5,589.0	56.3	57.8	90.10	-2,905.7	-795.9	640.7	527.2	113.50	5.645	
8,100.0	5,574.0	8,222.6	5,589.0	58.2	59.7	90.10	-3,005.7	-795.9	640.7	523.4	117.24	5.465	
8,200.0	5,574.0	8,322.6	5,589.0	60.1	61.5	90.10	-3,105.7	-795.9	640.7	519.7	120.97	5.296	
8,300.0	5,574.0	8,422.6	5,589.0	61.9	63.4	90.10	-3,205.7	-795.9	640.7	515.9	124.72	5.137	
8,400.0	5,574.0	8,522.6	5,589.0	63.8	65.2	90.10	-3,305.7	-795.8	640.7	512.2	128.47	4.987	
8,500.0	5,574.0	8,622.6	5,589.0	65.7	67.1	90.10	-3,405.7	-795.8	640.6	508.4	132.22	4.845	
8,600.0	5,574.0	8,722.6	5,589.0	67.6	69.0	90.10	-3,505.7	-795.8	640.6	504.7	135.98	4.711	
8,700.0	5,574.0	8,822.6	5,589.0	69.5	70.8	90.10	-3,605.7	-795.8	640.6	500.9	139.74	4.584	
8,800.0	5,574.0	8,922.6	5,589.0	71.3	72.7	90.10	-3,705.7	-795.8	640.6	497.1	143.51	4.464	
8,900.0	5,574.0	9,022.6	5,589.0	73.2	74.6	90.10	-3,805.7	-795.8	640.6	493.3	147.28	4.350	
9,000.0	5,574.0	9,122.6	5,589.0	75.1	76.4	90.10	-3,905.7	-795.8	640.6	489.5	151.05	4.241	
9,100.0	5,574.0	9,222.6	5,589.0	77.0	78.3	90.10	-4,005.7	-795.8	640.6	485.8	154.83	4.137	
9,200.0	5,574.0	9,322.6	5,589.0	78.9	80.2	90.10	-4,105.7	-795.8	640.6	482.0	158.61	4.039	
9,300.0	5,574.0	9,422.6	5,589.0	80.8	82.1	90.10	-4,205.7	-795.8	640.6	478.2	162.39	3.945	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Separation Factor		
9,400.0	5,574.0	9,522.6	5,589.0	82.7	83.9	90.10	-4,305.7	-795.8	640.6	474.4	166.17	3.855		
9,500.0	5,574.0	9,622.6	5,589.0	84.6	85.8	90.10	-4,405.7	-795.8	640.5	470.6	169.96	3.769		
9,600.0	5,574.0	9,722.6	5,589.0	86.5	87.7	90.10	-4,505.7	-795.8	640.5	466.8	173.75	3.687		
9,700.0	5,574.0	9,822.6	5,589.0	88.4	89.6	90.10	-4,605.7	-795.8	640.5	463.0	177.54	3.608		
9,800.0	5,574.0	9,922.6	5,589.0	90.3	91.5	90.10	-4,705.7	-795.8	640.5	459.2	181.33	3.532		
9,900.0	5,574.0	10,022.6	5,589.0	92.2	93.4	90.10	-4,805.7	-795.8	640.5	455.4	185.12	3.460		
10,000.0	5,574.0	10,122.6	5,589.0	94.1	95.2	90.10	-4,905.7	-795.8	640.5	451.6	188.92	3.390		
10,100.0	5,574.0	10,222.6	5,589.0	96.0	97.1	90.10	-5,005.7	-795.8	640.5	447.8	192.72	3.323		
10,200.0	5,574.0	10,322.6	5,589.0	97.9	99.0	90.10	-5,105.7	-795.7	640.5	444.0	196.51	3.259		
10,300.0	5,574.0	10,422.6	5,589.0	99.8	100.9	90.10	-5,205.7	-795.7	640.5	440.2	200.31	3.197		
10,400.0	5,574.0	10,522.6	5,589.0	101.7	102.8	90.10	-5,305.7	-795.7	640.5	436.3	204.11	3.138		
10,500.0	5,574.0	10,622.6	5,589.0	103.6	104.7	90.10	-5,405.7	-795.7	640.5	432.5	207.92	3.080		
10,600.0	5,574.0	10,722.6	5,589.0	105.5	106.6	90.10	-5,505.7	-795.7	640.4	428.7	211.72	3.025		
10,700.0	5,574.0	10,822.6	5,589.0	107.4	108.5	90.10	-5,605.7	-795.7	640.4	424.9	215.52	2.972		
10,800.0	5,574.0	10,922.6	5,589.0	109.3	110.4	90.10	-5,705.7	-795.7	640.4	421.1	219.33	2.920		
10,900.0	5,574.0	11,022.6	5,589.0	111.2	112.3	90.10	-5,805.7	-795.7	640.4	417.3	223.14	2.870		
11,000.0	5,574.0	11,122.6	5,589.0	113.1	114.2	90.10	-5,905.7	-795.7	640.4	413.5	226.94	2.822		
11,100.0	5,574.0	11,222.6	5,589.0	115.0	116.1	90.10	-6,005.7	-795.7	640.4	409.6	230.75	2.775		
11,200.0	5,574.0	11,322.6	5,589.0	116.9	118.0	90.10	-6,105.7	-795.7	640.4	405.8	234.56	2.730		
11,300.0	5,574.0	11,422.6	5,589.0	118.8	119.9	90.10	-6,205.7	-795.7	640.4	402.0	238.37	2.686		
11,400.0	5,574.0	11,522.6	5,589.0	120.7	121.8	90.10	-6,305.7	-795.7	640.4	398.2	242.18	2.644		
11,500.0	5,574.0	11,622.6	5,589.0	122.6	123.7	90.10	-6,405.7	-795.7	640.4	394.4	245.99	2.603		
11,600.0	5,574.0	11,722.6	5,589.0	124.5	125.6	90.10	-6,505.7	-795.7	640.3	390.5	249.80	2.563		
11,700.0	5,574.0	11,822.6	5,589.0	126.4	127.5	90.10	-6,605.7	-795.7	640.3	386.7	253.62	2.525		
11,800.0	5,574.0	11,922.6	5,589.0	128.3	129.4	90.10	-6,705.7	-795.7	640.3	382.9	257.43	2.487		
11,900.0	5,574.0	12,022.6	5,589.0	130.2	131.3	90.10	-6,805.7	-795.7	640.3	379.1	261.24	2.451		
12,000.0	5,574.0	12,122.6	5,589.0	132.1	133.2	90.10	-6,905.7	-795.6	640.3	375.3	265.06	2.416		
12,062.4	5,574.0	12,185.0	5,589.0	133.3	134.4	90.10	-6,968.1	-795.6	640.3	372.9	267.44	2.394 CC, ES, SF		

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	13.9	13.9	0.0	0.0	-87.09	62.1	-1,222.5	1,224.0					
100.0	100.0	113.9	113.9	0.1	0.1	-87.09	62.1	-1,222.5	1,224.0	1,223.8	0.22	5,591.198		
200.0	200.0	213.9	213.9	0.3	0.3	-87.09	62.1	-1,222.5	1,224.0	1,223.4	0.67	1,831.148		
300.0	300.0	313.9	313.9	0.5	0.6	-87.09	62.1	-1,222.5	1,224.0	1,222.9	1.12	1,094.860		
400.0	400.0	413.9	413.9	0.8	0.8	-87.09	62.1	-1,222.5	1,224.0	1,222.5	1.57	780.877		
500.0	500.0	513.9	513.9	1.0	1.0	-87.09	62.1	-1,222.5	1,224.0	1,222.0	2.02	606.846		
600.0	600.0	613.9	613.9	1.2	1.2	-87.09	62.1	-1,222.5	1,224.0	1,221.6	2.47	496.249		
700.0	700.0	713.9	713.9	1.4	1.5	-87.09	62.1	-1,222.5	1,224.0	1,221.1	2.92	419.750		
800.0	800.0	816.7	816.7	1.7	1.7	-87.09	62.1	-1,222.4	1,224.0	1,220.7	3.37	363.491		
900.0	900.0	937.1	937.1	1.9	1.9	-87.23	59.0	-1,221.3	1,223.0	1,219.1	3.82	319.862		
1,000.0	1,000.0	1,047.5	1,047.3	2.1	2.1	-87.53	52.5	-1,218.8	1,220.4	1,216.2	4.26	286.808		
1,100.0	1,100.0	1,147.4	1,146.9	2.3	2.3	82.95	46.0	-1,216.4	1,217.5	1,212.9	4.65	261.802		
1,200.0	1,199.8	1,247.3	1,246.5	2.5	2.6	82.96	39.4	-1,214.0	1,214.2	1,209.1	5.04	241.031		
1,300.0	1,299.6	1,347.2	1,346.2	2.7	2.8	82.98	32.9	-1,211.5	1,210.6	1,205.1	5.45	222.282		
1,400.0	1,399.4	1,447.2	1,445.9	2.9	3.0	83.01	26.4	-1,209.1	1,207.0	1,201.1	5.87	205.506		
1,500.0	1,499.1	1,547.1	1,545.6	3.1	3.2	83.03	19.9	-1,206.6	1,203.5	1,197.1	6.32	190.560		
1,600.0	1,598.9	1,647.0	1,645.3	3.3	3.5	83.06	13.3	-1,204.2	1,199.9	1,193.1	6.77	177.258		
1,700.0	1,698.6	1,747.0	1,745.0	3.5	3.7	83.08	6.8	-1,201.7	1,196.3	1,189.1	7.23	165.408		
1,800.0	1,798.4	1,846.9	1,844.7	3.8	4.0	83.10	0.3	-1,199.3	1,192.8	1,185.1	7.70	154.823		
1,900.0	1,898.1	1,946.9	1,944.4	4.0	4.2	83.13	-6.3	-1,196.8	1,189.2	1,181.0	8.18	145.337		
2,000.0	1,997.9	2,046.8	2,044.1	4.2	4.5	83.15	-12.8	-1,194.4	1,185.6	1,177.0	8.67	136.811		
2,100.0	2,097.6	2,146.7	2,143.8	4.5	4.7	83.18	-19.3	-1,191.9	1,182.1	1,172.9	9.15	129.122		
2,200.0	2,197.4	2,246.7	2,243.5	4.7	5.0	83.20	-25.8	-1,189.5	1,178.5	1,168.9	9.65	122.161		
2,300.0	2,297.2	2,346.6	2,343.2	5.0	5.2	83.23	-32.4	-1,187.0	1,175.0	1,164.8	10.14	115.837		
2,400.0	2,396.9	2,446.5	2,442.8	5.2	5.5	83.25	-38.9	-1,184.6	1,171.4	1,160.7	10.64	110.073		
2,500.0	2,496.7	2,546.5	2,542.5	5.5	5.7	83.28	-45.4	-1,182.1	1,167.8	1,156.7	11.14	104.801		
2,600.0	2,596.4	2,646.4	2,642.2	5.7	6.0	83.30	-52.0	-1,179.7	1,164.3	1,152.6	11.65	99.964		
2,700.0	2,696.2	2,746.3	2,741.9	6.0	6.3	83.33	-58.5	-1,177.3	1,160.7	1,148.6	12.15	95.512		
2,800.0	2,795.9	2,846.3	2,841.6	6.2	6.5	83.35	-65.0	-1,174.8	1,157.1	1,144.5	12.66	91.403		
2,900.0	2,895.7	2,946.2	2,941.3	6.5	6.8	83.38	-71.5	-1,172.4	1,153.6	1,140.4	13.17	87.601		
3,000.0	2,895.5	3,046.1	3,041.0	6.7	7.0	83.40	-78.1	-1,169.9	1,150.0	1,136.3	13.68	84.073		
3,100.0	3,095.2	3,146.1	3,140.7	7.0	7.3	83.43	-84.6	-1,167.5	1,146.5	1,132.3	14.19	80.792		
3,200.0	3,195.0	3,246.0	3,240.4	7.2	7.5	83.46	-91.1	-1,165.0	1,142.9	1,128.2	14.70	77.734		
3,300.0	3,294.7	3,345.9	3,340.1	7.5	7.8	83.48	-97.6	-1,162.6	1,139.3	1,124.1	15.22	74.876		
3,400.0	3,394.5	3,445.9	3,439.8	7.8	8.1	83.51	-104.2	-1,160.1	1,135.8	1,120.0	15.73	72.201		
3,500.0	3,494.2	3,545.8	3,539.5	8.0	8.3	83.54	-110.7	-1,157.7	1,132.2	1,116.0	16.25	69.692		
3,600.0	3,594.0	3,645.8	3,639.1	8.3	8.6	83.56	-117.2	-1,155.2	1,128.7	1,111.9	16.76	67.333		
3,700.0	3,693.7	3,745.7	3,738.8	8.5	8.8	83.59	-123.8	-1,152.8	1,125.1	1,107.8	17.28	65.114		
3,800.0	3,793.5	3,845.6	3,838.5	8.8	9.1	83.62	-130.3	-1,150.3	1,121.5	1,103.7	17.80	63.020		
3,900.0	3,893.3	3,945.6	3,938.2	9.0	9.4	83.64	-136.8	-1,147.9	1,118.0	1,099.7	18.31	61.043		
4,000.0	3,993.0	4,045.5	4,037.9	9.3	9.6	83.67	-143.3	-1,145.4	1,114.4	1,095.6	18.83	59.173		
4,100.0	4,092.8	4,145.4	4,137.6	9.6	9.9	83.70	-149.9	-1,143.0	1,110.9	1,091.5	19.35	57.402		
4,200.0	4,192.5	4,245.4	4,237.3	9.8	10.2	83.73	-156.4	-1,140.5	1,107.3	1,087.4	19.87	55.722		
4,300.0	4,292.3	4,345.3	4,337.0	10.1	10.4	83.76	-162.9	-1,138.1	1,103.8	1,083.4	20.39	54.127		
4,400.0	4,392.0	4,445.2	4,436.7	10.3	10.7	83.78	-169.4	-1,135.7	1,100.2	1,079.3	20.91	52.609		
4,500.0	4,491.8	4,545.2	4,536.4	10.6	10.9	83.81	-176.0	-1,133.2	1,096.6	1,075.2	21.43	51.165		
4,600.0	4,591.6	4,645.1	4,636.1	10.9	11.2	83.84	-182.5	-1,130.8	1,093.1	1,071.1	21.95	49.788		
4,700.0	4,691.3	4,745.0	4,735.8	11.1	11.5	83.87	-189.0	-1,128.3	1,089.5	1,067.0	22.48	48.474		
4,800.0	4,791.1	4,845.0	4,835.4	11.4	11.7	83.90	-195.6	-1,125.9	1,086.0	1,063.0	23.00	47.219		
4,900.0	4,890.8	4,944.9	4,935.1	11.7	12.0	83.93	-202.1	-1,123.4	1,082.4	1,058.9	23.52	46.020		
5,000.0	4,990.6	5,044.8	5,034.8	11.9	12.3	83.96	-208.6	-1,121.0	1,078.9	1,054.8	24.04	44.872		
5,099.1	5,089.4	5,284.2	5,268.7	12.2	13.1	82.67	-249.6	-1,105.6	1,073.4	1,048.2	25.16	42.665		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,150.0	5,140.0	5,507.9	5,450.7	12.3	14.9	78.64	-368.7	-1,060.9	1,060.8	1,033.9	26.91	39.414	
5,200.0	5,188.8	5,646.7	5,530.2	12.5	16.5	75.44	-474.7	-1,021.2	1,043.0	1,014.4	28.62	36.446	
5,250.0	5,236.4	5,739.2	5,565.4	12.8	17.8	73.61	-554.8	-991.2	1,022.6	992.6	30.00	34.083	
5,300.0	5,282.2	5,807.0	5,581.3	13.0	18.8	72.79	-616.4	-968.1	1,000.7	969.6	31.12	32.152	
5,350.0	5,326.0	5,860.8	5,587.7	13.4	19.6	72.62	-666.4	-949.4	978.0	945.9	32.08	30.484	
5,400.0	5,367.3	5,900.0	5,588.9	13.7	20.2	73.24	-703.1	-935.6	954.8	921.9	32.86	29.058	
5,450.0	5,405.7	5,919.1	5,588.9	14.1	20.5	74.98	-721.0	-929.0	931.6	898.3	33.37	27.919	
5,500.0	5,440.8	5,940.2	5,588.9	14.6	20.8	76.65	-740.9	-922.0	908.9	874.9	33.97	26.756	
5,550.0	5,472.3	5,963.5	5,588.9	15.1	21.1	78.26	-762.9	-914.4	886.6	851.9	34.66	25.577	
5,600.0	5,500.0	6,000.0	5,588.9	15.7	21.6	79.41	-797.6	-903.2	864.7	829.2	35.56	24.316	
5,650.0	5,523.6	6,016.1	5,588.9	16.3	21.9	81.44	-813.0	-898.4	843.1	806.8	36.33	23.208	
5,700.0	5,542.9	6,045.0	5,588.9	16.9	22.3	83.09	-840.7	-890.2	822.1	784.8	37.31	22.035	
5,750.0	5,557.6	6,075.4	5,588.9	17.6	22.7	84.84	-870.0	-882.0	801.4	763.1	38.36	20.892	
5,800.0	5,567.7	6,100.0	5,588.9	18.3	23.1	86.81	-893.8	-875.7	781.4	742.0	39.39	19.836	
5,850.0	5,573.0	6,139.5	5,588.9	19.1	23.7	88.75	-932.2	-866.2	761.8	721.1	40.68	18.726	
5,880.9	5,574.0	6,160.0	5,588.9	19.5	24.0	90.09	-952.1	-861.6	750.1	708.6	41.44	18.101	
5,900.0	5,574.0	6,172.8	5,588.9	19.8	24.2	90.09	-964.6	-858.9	743.1	701.1	41.96	17.710	
6,000.0	5,574.0	6,241.4	5,588.9	21.1	25.3	90.09	-1,031.9	-845.5	711.3	666.7	44.65	15.932	
6,100.0	5,574.0	6,300.0	5,588.9	22.5	26.2	90.09	-1,089.7	-836.0	688.3	641.1	47.25	14.568	
6,192.5	5,574.0	6,380.1	5,588.9	23.9	27.4	90.09	-1,169.1	-825.9	674.6	624.5	50.09	13.467	
6,200.0	5,574.0	6,385.6	5,588.9	24.0	27.5	90.09	-1,174.6	-825.4	673.8	623.5	50.29	13.397	
6,300.0	5,574.0	6,459.4	5,588.9	25.7	28.7	90.09	-1,248.2	-819.2	665.5	612.4	53.12	12.527	
6,400.0	5,574.0	6,533.5	5,588.9	27.3	29.9	90.09	-1,322.2	-815.9	661.0	605.0	56.01	11.803	
6,500.0	5,574.0	6,617.0	5,588.9	29.0	31.2	90.09	-1,405.7	-815.3	660.2	601.1	59.10	11.171	
6,600.0	5,574.0	6,717.0	5,588.9	30.8	32.9	90.09	-1,505.7	-815.3	660.2	597.6	62.56	10.553	
6,700.0	5,574.0	6,817.0	5,588.9	32.5	34.6	90.09	-1,605.7	-815.3	660.2	594.1	66.07	9.993	
6,800.0	5,574.0	6,917.0	5,588.9	34.3	36.3	90.09	-1,705.7	-815.3	660.2	590.6	69.61	9.485	
6,900.0	5,574.0	7,017.0	5,588.9	36.1	38.0	90.09	-1,805.7	-815.3	660.2	587.0	73.17	9.022	
7,000.0	5,574.0	7,117.0	5,588.9	37.9	39.8	90.09	-1,905.7	-815.3	660.2	583.4	76.77	8.600	
7,100.0	5,574.0	7,217.0	5,588.9	39.7	41.5	90.09	-2,005.7	-815.3	660.2	579.8	80.38	8.213	
7,200.0	5,574.0	7,317.0	5,588.9	41.5	43.3	90.09	-2,105.7	-815.3	660.2	576.2	84.02	7.857	
7,300.0	5,574.0	7,417.0	5,588.9	43.4	45.1	90.09	-2,205.7	-815.3	660.2	572.5	87.67	7.530	
7,400.0	5,574.0	7,517.0	5,589.0	45.2	46.9	90.09	-2,305.7	-815.3	660.2	568.8	91.34	7.228	
7,500.0	5,574.0	7,617.0	5,589.0	47.0	48.7	90.09	-2,405.7	-815.3	660.2	565.1	95.02	6.948	
7,600.0	5,574.0	7,717.0	5,589.0	48.9	50.5	90.09	-2,505.7	-815.3	660.2	561.4	98.71	6.688	
7,700.0	5,574.0	7,817.0	5,589.0	50.7	52.3	90.09	-2,605.7	-815.3	660.2	557.7	102.41	6.446	
7,800.0	5,574.0	7,917.0	5,589.0	52.6	54.2	90.09	-2,705.7	-815.3	660.1	554.0	106.13	6.220	
7,900.0	5,574.0	8,017.0	5,589.0	54.5	56.0	90.09	-2,805.7	-815.3	660.1	550.3	109.85	6.010	
8,000.0	5,574.0	8,117.0	5,589.0	56.3	57.9	90.09	-2,905.7	-815.3	660.1	546.6	113.57	5.812	
8,100.0	5,574.0	8,217.0	5,589.0	58.2	59.7	90.09	-3,005.7	-815.3	660.1	542.8	117.31	5.627	
8,200.0	5,574.0	8,317.0	5,589.0	60.1	61.6	90.09	-3,105.7	-815.3	660.1	539.1	121.05	5.453	
8,300.0	5,574.0	8,417.0	5,589.0	61.9	63.4	90.09	-3,205.7	-815.3	660.1	535.3	124.79	5.290	
8,400.0	5,574.0	8,517.0	5,589.0	63.8	65.3	90.09	-3,305.7	-815.3	660.1	531.6	128.55	5.135	
8,500.0	5,574.0	8,617.0	5,589.0	65.7	67.1	90.09	-3,405.7	-815.3	660.1	527.8	132.30	4.989	
8,600.0	5,574.0	8,717.0	5,589.0	67.6	69.0	90.09	-3,505.7	-815.3	660.1	524.0	136.06	4.852	
8,700.0	5,574.0	8,817.0	5,589.0	69.5	70.9	90.09	-3,605.7	-815.3	660.1	520.3	139.83	4.721	
8,800.0	5,574.0	8,917.0	5,589.0	71.3	72.7	90.09	-3,705.7	-815.3	660.1	516.5	143.59	4.597	
8,900.0	5,574.0	9,017.0	5,589.0	73.2	74.6	90.09	-3,805.7	-815.3	660.1	512.7	147.37	4.479	
9,000.0	5,574.0	9,117.0	5,589.0	75.1	76.5	90.09	-3,905.7	-815.3	660.1	508.9	151.14	4.367	
9,100.0	5,574.0	9,217.0	5,589.0	77.0	78.4	90.09	-4,005.7	-815.3	660.1	505.2	154.92	4.261	
9,200.0	5,574.0	9,317.0	5,589.0	78.9	80.2	90.09	-4,105.7	-815.3	660.1	501.4	158.70	4.159	
9,300.0	5,574.0	9,417.0	5,589.0	80.8	82.1	90.09	-4,205.7	-815.3	660.1	497.6	162.48	4.062	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,574.0	9,517.0	5,589.0	82.7	84.0	90.09	-4,305.7	-815.3	660.1	493.8	166.27	3.970	
9,500.0	5,574.0	9,617.0	5,589.0	84.6	85.9	90.09	-4,405.7	-815.3	660.1	490.0	170.05	3.882	
9,600.0	5,574.0	9,717.0	5,589.0	86.5	87.8	90.09	-4,505.7	-815.3	660.1	486.2	173.84	3.797	
9,700.0	5,574.0	9,817.0	5,589.0	88.4	89.7	90.09	-4,605.7	-815.3	660.1	482.4	177.63	3.716	
9,800.0	5,574.0	9,917.0	5,589.0	90.3	91.5	90.09	-4,705.7	-815.3	660.1	478.6	181.43	3.638	
9,900.0	5,574.0	10,017.0	5,589.0	92.2	93.4	90.09	-4,805.7	-815.3	660.0	474.8	185.22	3.564	
10,000.0	5,574.0	10,117.0	5,589.0	94.1	95.3	90.09	-4,905.7	-815.3	660.0	471.0	189.02	3.492	
10,100.0	5,574.0	10,217.0	5,589.0	96.0	97.2	90.09	-5,005.7	-815.3	660.0	467.2	192.82	3.423	
10,200.0	5,574.0	10,317.0	5,589.0	97.9	99.1	90.09	-5,105.7	-815.3	660.0	463.4	196.61	3.357	
10,300.0	5,574.0	10,417.0	5,589.0	99.8	101.0	90.09	-5,205.7	-815.3	660.0	459.6	200.42	3.293	
10,400.0	5,574.0	10,517.0	5,589.0	101.7	102.9	90.09	-5,305.7	-815.3	660.0	455.8	204.22	3.232	
10,500.0	5,574.0	10,617.0	5,589.0	103.6	104.8	90.09	-5,405.7	-815.3	660.0	452.0	208.02	3.173	
10,600.0	5,574.0	10,717.0	5,589.0	105.5	106.7	90.09	-5,505.7	-815.3	660.0	448.2	211.82	3.116	
10,700.0	5,574.0	10,817.0	5,589.0	107.4	108.6	90.09	-5,605.7	-815.3	660.0	444.4	215.63	3.061	
10,800.0	5,574.0	10,917.0	5,589.0	109.3	110.5	90.09	-5,705.7	-815.3	660.0	440.6	219.43	3.008	
10,900.0	5,574.0	11,017.0	5,589.0	111.2	112.4	90.09	-5,805.7	-815.3	660.0	436.8	223.24	2.956	
11,000.0	5,574.0	11,117.0	5,589.0	113.1	114.3	90.09	-5,905.7	-815.3	660.0	432.9	227.05	2.907	
11,100.0	5,574.0	11,217.0	5,589.0	115.0	116.2	90.09	-6,005.7	-815.3	660.0	429.1	230.86	2.859	
11,200.0	5,574.0	11,317.0	5,589.0	116.9	118.1	90.09	-6,105.7	-815.3	660.0	425.3	234.67	2.812	
11,300.0	5,574.0	11,417.0	5,589.0	118.8	120.0	90.09	-6,205.7	-815.3	660.0	421.5	238.48	2.767	
11,400.0	5,574.0	11,517.0	5,589.0	120.7	121.9	90.09	-6,305.7	-815.3	660.0	417.7	242.29	2.724	
11,500.0	5,574.0	11,617.0	5,589.0	122.6	123.8	90.09	-6,405.7	-815.3	660.0	413.9	246.10	2.682	
11,600.0	5,574.0	11,717.0	5,589.0	124.5	125.7	90.09	-6,505.7	-815.3	660.0	410.0	249.91	2.641	
11,700.0	5,574.0	11,817.0	5,589.0	126.4	127.6	90.09	-6,605.7	-815.3	660.0	406.2	253.73	2.601	
11,800.0	5,574.0	11,917.0	5,589.0	128.3	129.5	90.09	-6,705.7	-815.3	660.0	402.4	257.54	2.563	
11,900.0	5,574.0	12,017.0	5,589.0	130.2	131.4	90.09	-6,805.7	-815.3	659.9	398.6	261.35	2.525	
12,000.0	5,574.0	12,117.0	5,589.0	132.1	133.2	90.09	-6,905.7	-815.3	659.9	394.8	265.11	2.489	
12,062.4	5,574.0	12,179.4	5,589.0	133.3	134.2	90.09	-6,968.1	-815.3	659.9	392.7	267.27	2.469	CC, ES, SF

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	13.9	13.9	0.0	0.0	-90.59	-12.3	-1,188.1	1,188.2					
100.0	100.0	113.9	113.9	0.1	0.1	-90.59	-12.3	-1,188.1	1,188.2	1,188.0	0.22	5,427.374		
200.0	200.0	213.9	213.9	0.3	0.3	-90.59	-12.3	-1,188.1	1,188.2	1,187.5	0.67	1,777.495		
300.0	300.0	313.9	313.9	0.5	0.6	-90.59	-12.3	-1,188.1	1,188.2	1,187.1	1.12	1,062.781		
400.0	400.0	413.9	413.9	0.8	0.8	-90.59	-12.3	-1,188.1	1,188.2	1,186.6	1.57	757.997		
500.0	500.0	513.9	513.9	1.0	1.0	-90.59	-12.3	-1,188.1	1,188.2	1,186.2	2.02	589.065		
600.0	600.0	613.9	613.9	1.2	1.2	-90.59	-12.3	-1,188.1	1,188.2	1,185.7	2.47	481.709		
700.0	700.0	713.9	713.9	1.4	1.5	-90.59	-12.3	-1,188.1	1,188.2	1,185.3	2.92	407.451		
800.0	800.0	813.9	813.9	1.7	1.7	-90.59	-12.3	-1,188.1	1,188.2	1,184.8	3.37	353.030		
900.0	900.0	913.9	913.9	1.9	1.9	-90.59	-12.3	-1,188.1	1,188.2	1,184.4	3.82	311.434		
1,000.0	1,000.0	1,017.8	1,017.8	2.1	2.2	-90.60	-12.4	-1,188.1	1,188.2	1,183.9	4.27	278.343		
1,100.0	1,100.0	1,145.4	1,145.4	2.3	2.4	80.05	-15.4	-1,186.1	1,186.4	1,181.6	4.71	251.902		
1,200.0	1,199.8	1,257.2	1,256.9	2.5	2.6	80.10	-21.6	-1,182.3	1,182.0	1,176.9	5.09	232.063		
1,300.0	1,299.6	1,357.0	1,356.5	2.7	2.8	80.15	-27.5	-1,178.6	1,177.2	1,171.7	5.48	214.826		
1,400.0	1,399.4	1,456.9	1,456.1	2.9	3.0	80.19	-33.4	-1,174.8	1,172.3	1,166.4	5.89	199.162		
1,500.0	1,499.1	1,556.8	1,555.8	3.1	3.2	80.24	-39.3	-1,171.1	1,167.4	1,161.1	6.31	185.024		
1,600.0	1,598.9	1,656.7	1,655.4	3.3	3.5	80.29	-45.2	-1,167.4	1,162.6	1,155.8	6.75	172.314		
1,700.0	1,698.6	1,756.5	1,755.0	3.5	3.7	80.33	-51.1	-1,163.7	1,157.7	1,150.5	7.20	160.899		
1,800.0	1,798.4	1,856.4	1,854.7	3.8	3.9	80.38	-57.0	-1,160.0	1,152.9	1,145.2	7.65	150.640		
1,900.0	1,898.1	1,956.3	1,954.3	4.0	4.2	80.43	-62.9	-1,156.3	1,148.0	1,139.9	8.12	141.406		
2,000.0	1,997.9	2,056.2	2,053.9	4.2	4.4	80.48	-68.8	-1,152.6	1,143.2	1,134.6	8.59	133.072		
2,100.0	2,097.6	2,156.1	2,153.6	4.5	4.7	80.52	-74.7	-1,148.9	1,138.3	1,129.3	9.07	125.531		
2,200.0	2,197.4	2,255.9	2,253.2	4.7	4.9	80.57	-80.6	-1,145.2	1,133.5	1,123.9	9.55	118.686		
2,300.0	2,297.2	2,355.8	2,352.8	5.0	5.1	80.62	-86.5	-1,141.5	1,128.6	1,118.6	10.04	112.454		
2,400.0	2,396.9	2,455.7	2,452.5	5.2	5.4	80.67	-92.4	-1,137.7	1,123.8	1,113.3	10.53	106.763		
2,500.0	2,496.7	2,555.6	2,552.1	5.5	5.6	80.72	-98.3	-1,134.0	1,118.9	1,107.9	11.02	101.550		
2,600.0	2,596.4	2,655.4	2,651.7	5.7	5.9	80.77	-104.2	-1,130.3	1,114.1	1,102.6	11.51	96.761		
2,700.0	2,696.2	2,755.3	2,751.4	6.0	6.1	80.82	-110.0	-1,126.6	1,109.2	1,097.2	12.01	92.349		
2,800.0	2,795.9	2,855.2	2,851.0	6.2	6.4	80.87	-115.9	-1,122.9	1,104.4	1,091.9	12.51	88.274		
2,900.0	2,895.7	2,955.1	2,950.6	6.5	6.7	80.93	-121.8	-1,119.2	1,099.6	1,086.5	13.01	84.500		
3,000.0	2,895.5	3,055.0	3,050.3	6.7	6.9	80.98	-127.7	-1,115.5	1,094.7	1,081.2	13.52	80.996		
3,100.0	3,095.2	3,154.8	3,149.9	7.0	7.2	81.03	-133.6	-1,111.8	1,089.9	1,075.9	14.02	77.736		
3,200.0	3,195.0	3,254.7	3,249.5	7.2	7.4	81.08	-139.5	-1,108.1	1,085.0	1,070.5	14.53	74.695		
3,300.0	3,294.7	3,354.6	3,349.2	7.5	7.7	81.14	-145.4	-1,104.3	1,080.2	1,065.2	15.03	71.854		
3,400.0	3,394.5	3,454.5	3,448.8	7.8	7.9	81.19	-151.3	-1,100.6	1,075.4	1,059.8	15.54	69.193		
3,500.0	3,494.2	3,554.3	3,548.4	8.0	8.2	81.25	-157.2	-1,096.9	1,070.5	1,054.5	16.05	66.696		
3,600.0	3,594.0	3,654.2	3,648.1	8.3	8.5	81.30	-163.1	-1,093.2	1,065.7	1,049.1	16.56	64.350		
3,700.0	3,693.7	3,754.1	3,747.7	8.5	8.7	81.36	-169.0	-1,089.5	1,060.8	1,043.8	17.07	62.141		
3,800.0	3,793.5	3,854.0	3,847.3	8.8	9.0	81.41	-174.9	-1,085.8	1,056.0	1,038.4	17.58	60.057		
3,900.0	3,893.3	3,953.9	3,947.0	9.0	9.2	81.47	-180.8	-1,082.1	1,051.2	1,033.1	18.10	58.090		
4,000.0	3,993.0	4,053.7	4,046.6	9.3	9.5	81.53	-186.7	-1,078.4	1,046.3	1,027.7	18.61	56.228		
4,100.0	4,092.8	4,153.6	4,146.3	9.6	9.8	81.59	-192.6	-1,074.7	1,041.5	1,022.4	19.12	54.465		
4,200.0	4,192.5	4,253.5	4,245.9	9.8	10.0	81.64	-198.5	-1,071.0	1,036.7	1,017.0	19.64	52.793		
4,300.0	4,292.3	4,353.4	4,345.5	10.1	10.3	81.70	-204.4	-1,067.2	1,031.8	1,011.7	20.15	51.205		
4,400.0	4,392.0	4,453.2	4,445.2	10.3	10.5	81.76	-210.3	-1,063.5	1,027.0	1,006.4	20.67	49.694		
4,500.0	4,491.8	4,553.1	4,544.8	10.6	10.8	81.82	-216.2	-1,059.8	1,022.2	1,001.0	21.18	48.256		
4,600.0	4,591.6	4,653.0	4,644.4	10.9	11.1	81.88	-222.1	-1,056.1	1,017.4	995.7	21.70	46.886		
4,700.0	4,691.3	4,752.9	4,744.1	11.1	11.3	81.94	-228.0	-1,052.4	1,012.5	990.3	22.22	45.579		
4,800.0	4,791.1	4,852.8	4,843.7	11.4	11.6	82.00	-233.9	-1,048.7	1,007.7	985.0	22.73	44.330		
4,900.0	4,890.8	4,952.6	4,943.3	11.7	11.8	82.07	-239.8	-1,045.0	1,002.9	979.6	23.25	43.136		
5,000.0	4,990.6	5,052.5	5,043.0	11.9	12.1	82.13	-245.7	-1,041.3	998.1	974.3	23.77	41.994		
5,099.1	5,089.4	5,151.5	5,141.7	12.2	12.4	82.19	-251.5	-1,037.6	993.3	969.0	24.28	40.909		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,150.0	5,140.0	6,000.0	5,678.0	12.3	20.6	54.93	-706.9	-751.1	976.1	943.7	32.35	30.168		
5,200.0	5,188.8	6,000.0	5,678.0	12.5	20.6	58.62	-706.9	-751.1	944.8	912.5	32.32	29.236		
5,250.0	5,236.4	6,019.9	5,678.0	12.8	20.9	61.02	-723.9	-740.7	912.8	880.3	32.54	28.050		
5,300.0	5,282.2	6,030.5	5,678.0	13.0	21.1	64.31	-733.0	-735.3	880.7	848.0	32.63	26.990		
5,350.0	5,326.0	6,043.6	5,678.0	13.4	21.3	67.57	-744.3	-728.6	848.4	815.6	32.79	25.876		
5,400.0	5,367.3	6,059.1	5,678.0	13.7	21.5	70.78	-757.7	-720.8	816.0	783.0	33.03	24.703		
5,450.0	5,405.7	6,077.0	5,678.0	14.1	21.8	73.93	-773.2	-711.9	783.8	750.4	33.38	23.478		
5,500.0	5,440.8	6,100.0	5,678.0	14.6	22.1	76.84	-793.3	-700.8	751.8	717.9	33.88	22.190		
5,550.0	5,472.3	6,119.5	5,678.0	15.1	22.4	80.07	-810.4	-691.5	720.1	685.6	34.43	20.912		
5,600.0	5,500.0	6,143.9	5,678.0	15.7	22.8	83.10	-832.1	-680.1	688.8	653.6	35.13	19.609		
5,650.0	5,523.6	6,170.3	5,678.0	16.3	23.2	86.14	-855.6	-668.1	658.0	622.1	35.91	18.325		
5,700.0	5,542.9	6,200.0	5,678.0	16.9	23.7	89.20	-882.2	-655.0	627.8	591.0	36.77	17.072		
5,750.0	5,557.6	6,228.4	5,678.0	17.6	24.2	92.45	-907.9	-642.8	598.4	560.7	37.69	15.877		
5,800.0	5,567.7	6,259.7	5,678.0	18.3	24.7	95.79	-936.4	-629.9	569.8	531.2	38.65	14.744		
5,850.0	5,573.0	6,300.0	5,678.0	19.1	25.3	99.33	-973.4	-614.0	542.4	502.7	39.70	13.663		
5,880.9	5,574.0	6,312.7	5,678.0	19.5	25.5	101.55	-985.1	-609.1	526.1	485.9	40.21	13.084		
5,900.0	5,574.0	6,325.6	5,678.0	19.8	25.8	101.66	-997.0	-604.2	516.3	475.6	40.73	12.676		
6,000.0	5,574.0	6,400.0	5,678.0	21.1	27.0	102.28	-1,066.6	-577.7	469.9	426.4	43.49	10.805		
6,100.0	5,574.0	6,470.6	5,678.0	22.5	28.2	102.84	-1,133.4	-555.1	431.6	385.3	46.31	9.319		
6,192.5	5,574.0	6,543.1	5,678.0	23.9	29.4	103.37	-1,203.0	-534.5	403.8	354.7	49.07	8.229		
6,200.0	5,574.0	6,549.1	5,678.0	24.0	29.5	103.42	-1,208.8	-532.9	401.8	352.6	49.27	8.157		
6,300.0	5,574.0	6,630.1	5,678.0	25.7	30.8	104.13	-1,287.3	-513.3	378.2	326.2	52.03	7.270		
6,400.0	5,574.0	6,712.6	5,678.0	27.3	32.2	104.78	-1,368.1	-496.7	358.7	303.9	54.85	6.540		
6,500.0	5,574.0	6,800.0	5,678.0	29.0	33.6	105.38	-1,454.4	-482.9	343.4	285.7	57.80	5.942		
6,600.0	5,574.0	6,881.3	5,678.0	30.8	34.9	105.80	-1,535.2	-473.7	332.4	271.7	60.69	5.476		
6,700.0	5,574.0	6,966.9	5,678.0	32.5	36.3	106.09	-1,620.6	-467.7	325.7	261.9	63.71	5.112		
6,800.0	5,574.0	7,052.8	5,678.0	34.3	37.6	106.19	-1,706.5	-465.5	323.2	256.4	66.79	4.840		
6,829.6	5,574.0	7,081.6	5,678.0	34.8	38.1	106.19	-1,735.2	-465.5	323.2	255.5	67.77	4.770 CC		
6,900.0	5,574.0	7,152.0	5,678.0	36.1	39.2	106.19	-1,805.7	-465.5	323.2	253.1	70.15	4.608		
7,000.0	5,574.0	7,252.0	5,678.0	37.9	40.8	106.19	-1,905.7	-465.6	323.2	249.7	73.55	4.395		
7,100.0	5,574.0	7,352.0	5,678.0	39.7	42.4	106.19	-2,005.7	-465.6	323.2	246.3	76.97	4.199		
7,200.0	5,574.0	7,452.0	5,678.0	41.5	44.1	106.19	-2,105.7	-465.6	323.2	242.8	80.43	4.019		
7,300.0	5,574.0	7,552.0	5,678.0	43.4	45.7	106.19	-2,205.7	-465.6	323.2	239.3	83.90	3.853		
7,400.0	5,574.0	7,652.0	5,678.0	45.2	47.4	106.19	-2,305.7	-465.6	323.2	235.8	87.39	3.699		
7,500.0	5,574.0	7,752.0	5,678.0	47.0	49.1	106.19	-2,405.7	-465.6	323.2	232.3	90.90	3.556		
7,600.0	5,574.0	7,852.0	5,678.0	48.9	50.8	106.19	-2,505.7	-465.6	323.2	228.8	94.43	3.423		
7,700.0	5,574.0	7,952.0	5,678.0	50.7	52.6	106.19	-2,605.7	-465.6	323.2	225.3	97.97	3.299		
7,800.0	5,574.0	8,052.0	5,678.0	52.6	54.3	106.19	-2,705.7	-465.6	323.2	221.7	101.52	3.184		
7,900.0	5,574.0	8,152.0	5,678.0	54.5	56.1	106.19	-2,805.7	-465.6	323.2	218.2	105.08	3.076		
8,000.0	5,574.0	8,252.0	5,678.0	56.3	57.9	106.19	-2,905.7	-465.6	323.2	214.6	108.65	2.975		
8,100.0	5,574.0	8,352.0	5,678.0	58.2	59.6	106.19	-3,005.7	-465.6	323.2	211.0	112.23	2.880		
8,200.0	5,574.0	8,452.0	5,678.0	60.1	61.4	106.19	-3,105.7	-465.6	323.3	207.4	115.81	2.791		
8,300.0	5,574.0	8,552.0	5,678.0	61.9	63.2	106.19	-3,205.7	-465.6	323.3	203.8	119.41	2.707		
8,400.0	5,574.0	8,652.0	5,678.0	63.8	65.0	106.19	-3,305.7	-465.6	323.3	200.2	123.01	2.628		
8,500.0	5,574.0	8,752.0	5,678.0	65.7	66.8	106.19	-3,405.7	-465.6	323.3	196.6	126.62	2.553		
8,600.0	5,574.0	8,852.0	5,678.0	67.6	68.6	106.19	-3,505.7	-465.6	323.3	193.0	130.23	2.482		
8,700.0	5,574.0	8,952.0	5,678.0	69.5	70.4	106.19	-3,605.7	-465.7	323.3	189.4	133.84	2.415		
8,800.0	5,574.0	9,052.0	5,678.0	71.3	72.3	106.19	-3,705.7	-465.7	323.3	185.8	137.47	2.352		
8,900.0	5,574.0	9,152.0	5,678.0	73.2	74.1	106.19	-3,805.7	-465.7	323.3	182.2	141.09	2.291		
9,000.0	5,574.0	9,252.0	5,678.0	75.1	75.9	106.19	-3,905.7	-465.7	323.3	178.5	144.72	2.234		
9,100.0	5,574.0	9,352.0	5,678.0	77.0	77.8	106.19	-4,005.7	-465.7	323.3	174.9	148.36	2.179		
9,200.0	5,574.0	9,452.0	5,678.0	78.9	79.6	106.19	-4,105.7	-465.7	323.3	171.3	151.99	2.127		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,574.0	9,552.0	5,678.0	80.8	81.4	106.19	-4,205.7	-465.7	323.3	167.6	155.64	2.077	
9,400.0	5,574.0	9,652.0	5,678.0	82.7	83.3	106.19	-4,305.7	-465.7	323.3	164.0	159.28	2.030	
9,500.0	5,574.0	9,752.0	5,678.0	84.6	85.1	106.19	-4,405.7	-465.7	323.3	160.3	162.93	1.984	
9,600.0	5,574.0	9,852.0	5,678.0	86.5	87.0	106.19	-4,505.7	-465.7	323.3	156.7	166.57	1.941	
9,700.0	5,574.0	9,952.0	5,678.0	88.4	88.9	106.19	-4,605.7	-465.7	323.3	153.1	170.23	1.899	
9,800.0	5,574.0	10,052.0	5,678.0	90.3	90.7	106.19	-4,705.7	-465.7	323.3	149.4	173.88	1.859	
9,900.0	5,574.0	10,152.0	5,678.0	92.2	92.6	106.18	-4,805.7	-465.7	323.3	145.7	177.53	1.821	
10,000.0	5,574.0	10,252.0	5,678.0	94.1	94.4	106.18	-4,905.7	-465.7	323.3	142.1	181.19	1.784	
10,100.0	5,574.0	10,352.0	5,678.0	96.0	96.3	106.18	-5,005.7	-465.7	323.3	138.4	184.85	1.749	
10,200.0	5,574.0	10,452.0	5,678.0	97.9	98.2	106.18	-5,105.7	-465.7	323.3	134.8	188.51	1.715	
10,300.0	5,574.0	10,552.0	5,678.0	99.8	100.0	106.18	-5,205.7	-465.7	323.3	131.1	192.18	1.682	
10,400.0	5,574.0	10,652.0	5,678.0	101.7	101.9	106.18	-5,305.7	-465.8	323.3	127.4	195.84	1.651	
10,500.0	5,574.0	10,752.0	5,678.0	103.6	103.8	106.18	-5,405.7	-465.8	323.3	123.8	199.51	1.620	
10,600.0	5,574.0	10,852.0	5,678.0	105.5	105.7	106.18	-5,505.7	-465.8	323.3	120.1	203.18	1.591	
10,700.0	5,574.0	10,952.0	5,678.0	107.4	107.5	106.18	-5,605.7	-465.8	323.3	116.4	206.85	1.563	
10,800.0	5,574.0	11,052.0	5,678.0	109.3	109.4	106.18	-5,705.7	-465.8	323.3	112.8	210.52	1.536	
10,900.0	5,574.0	11,152.0	5,678.0	111.2	111.3	106.18	-5,805.7	-465.8	323.3	109.1	214.19	1.509	
11,000.0	5,574.0	11,252.0	5,678.0	113.1	113.2	106.18	-5,905.7	-465.8	323.3	105.4	217.86	1.484 Level 3	
11,100.0	5,574.0	11,352.0	5,678.0	115.0	115.0	106.18	-6,005.7	-465.8	323.3	101.8	221.53	1.459 Level 3	
11,200.0	5,574.0	11,452.0	5,678.0	116.9	116.9	106.18	-6,105.7	-465.8	323.3	98.1	225.21	1.436 Level 3	
11,300.0	5,574.0	11,552.0	5,678.0	118.8	118.8	106.18	-6,205.7	-465.8	323.3	94.4	228.88	1.413 Level 3	
11,400.0	5,574.0	11,652.0	5,678.0	120.7	120.7	106.18	-6,305.7	-465.8	323.3	90.7	232.56	1.390 Level 3	
11,500.0	5,574.0	11,752.0	5,678.0	122.6	122.6	106.18	-6,405.7	-465.8	323.3	87.1	236.24	1.369 Level 3	
11,600.0	5,574.0	11,852.0	5,678.0	124.5	124.5	106.18	-6,505.7	-465.8	323.3	83.4	239.92	1.348 Level 3	
11,700.0	5,574.0	11,952.0	5,678.0	126.4	126.4	106.18	-6,605.7	-465.8	323.3	79.7	243.60	1.327 Level 3	
11,800.0	5,574.0	12,052.0	5,678.0	128.3	128.2	106.18	-6,705.7	-465.8	323.3	76.0	247.28	1.307 Level 3	
11,900.0	5,574.0	12,152.0	5,678.0	130.2	130.1	106.18	-6,805.7	-465.8	323.3	72.4	250.96	1.288 Level 3	
12,000.0	5,574.0	12,252.0	5,678.0	132.1	132.0	106.18	-6,905.7	-465.8	323.3	68.7	254.64	1.270 Level 3	
12,062.4	5,574.0	12,314.4	5,678.0	133.3	133.2	106.18	-6,968.0	-465.9	323.3	66.4	256.94	1.258 Level 3, ES, SF	

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #261-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #261-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	13.9	13.9	0.0	0.0	-90.59	-12.3	-1,188.1	1,188.2					
100.0	100.0	113.9	113.9	0.1	0.1	-90.59	-12.3	-1,188.1	1,188.2	1,188.0	0.22	5,427.374		
200.0	200.0	213.9	213.9	0.3	0.3	-90.59	-12.3	-1,188.1	1,188.2	1,187.5	0.67	1,777.495		
300.0	300.0	313.9	313.9	0.5	0.6	-90.59	-12.3	-1,188.1	1,188.2	1,187.1	1.12	1,062.781		
400.0	400.0	413.9	413.9	0.8	0.8	-90.59	-12.3	-1,188.1	1,188.2	1,186.6	1.57	757.997		
500.0	500.0	513.9	513.9	1.0	1.0	-90.59	-12.3	-1,188.1	1,188.2	1,186.2	2.02	589.065		
600.0	600.0	613.9	613.9	1.2	1.2	-90.59	-12.3	-1,188.1	1,188.2	1,185.7	2.47	481.709		
700.0	700.0	713.9	713.9	1.4	1.5	-90.59	-12.3	-1,188.1	1,188.2	1,185.3	2.92	407.451		
800.0	800.0	813.9	813.9	1.7	1.7	-90.59	-12.3	-1,188.1	1,188.2	1,184.8	3.37	353.030		
900.0	900.0	913.9	913.9	1.9	1.9	-90.59	-12.3	-1,188.1	1,188.2	1,184.4	3.82	311.434		
1,000.0	1,000.0	1,017.7	1,017.7	2.1	2.2	-90.60	-12.4	-1,188.1	1,188.2	1,183.9	4.27	278.357		
1,100.0	1,100.0	1,144.7	1,144.6	2.3	2.4	80.04	-15.4	-1,186.2	1,186.4	1,181.7	4.71	251.996		
1,200.0	1,199.8	1,256.3	1,256.0	2.5	2.6	80.10	-21.6	-1,182.4	1,182.1	1,177.0	5.09	232.176		
1,300.0	1,299.6	1,356.2	1,355.7	2.7	2.8	80.14	-27.6	-1,178.8	1,177.3	1,171.9	5.48	214.943		
1,400.0	1,399.4	1,456.1	1,455.3	2.9	3.0	80.19	-33.5	-1,175.1	1,172.6	1,166.7	5.88	199.278		
1,500.0	1,499.1	1,556.0	1,554.9	3.1	3.2	80.23	-39.4	-1,171.5	1,167.8	1,161.5	6.31	185.138		
1,600.0	1,598.9	1,655.8	1,654.6	3.3	3.5	80.28	-45.4	-1,167.9	1,163.0	1,156.2	6.74	172.425		
1,700.0	1,698.6	1,755.7	1,754.2	3.5	3.7	80.32	-51.3	-1,164.2	1,158.2	1,151.0	7.19	161.008		
1,800.0	1,798.4	1,855.6	1,853.8	3.8	3.9	80.36	-57.3	-1,160.6	1,153.4	1,145.8	7.65	150.746		
1,900.0	1,898.1	1,955.5	1,953.5	4.0	4.2	80.41	-63.2	-1,156.9	1,148.6	1,140.5	8.12	141.509		
2,000.0	1,997.9	2,055.4	2,053.1	4.2	4.4	80.46	-69.1	-1,153.3	1,143.9	1,135.3	8.59	133.173		
2,100.0	2,097.6	2,155.3	2,152.8	4.5	4.6	80.50	-75.1	-1,149.6	1,139.1	1,130.0	9.07	125.630		
2,200.0	2,197.4	2,255.1	2,252.4	4.7	4.9	80.55	-81.0	-1,146.0	1,134.3	1,124.7	9.55	118.784		
2,300.0	2,297.2	2,355.0	2,352.0	5.0	5.1	80.59	-87.0	-1,142.4	1,129.5	1,119.5	10.04	112.551		
2,400.0	2,396.9	2,454.9	2,451.7	5.2	5.4	80.64	-92.9	-1,138.7	1,124.7	1,114.2	10.53	106.859		
2,500.0	2,496.7	2,554.8	2,551.3	5.5	5.6	80.69	-98.8	-1,135.1	1,120.0	1,108.9	11.02	101.645		
2,600.0	2,596.4	2,654.7	2,651.0	5.7	5.9	80.74	-104.8	-1,131.4	1,115.2	1,103.7	11.51	96.856		
2,700.0	2,696.2	2,754.5	2,750.6	6.0	6.1	80.79	-110.7	-1,127.8	1,110.4	1,098.4	12.01	92.444		
2,800.0	2,795.9	2,854.4	2,850.2	6.2	6.4	80.83	-116.7	-1,124.2	1,105.6	1,093.1	12.51	88.368		
2,900.0	2,895.7	2,954.3	2,949.9	6.5	6.7	80.88	-122.6	-1,120.5	1,100.9	1,087.8	13.01	84.594		
3,000.0	2,995.5	3,054.2	3,049.5	6.7	6.9	80.93	-128.5	-1,116.9	1,096.1	1,082.6	13.52	81.091		
3,100.0	3,095.2	3,154.1	3,149.1	7.0	7.2	80.98	-134.5	-1,113.2	1,091.3	1,077.3	14.02	77.830		
3,200.0	3,195.0	3,253.9	3,248.8	7.2	7.4	81.03	-140.4	-1,109.6	1,086.5	1,072.0	14.53	74.790		
3,300.0	3,294.7	3,353.8	3,348.4	7.5	7.7	81.09	-146.4	-1,106.0	1,081.8	1,066.7	15.04	71.949		
3,400.0	3,394.5	3,453.7	3,448.1	7.8	7.9	81.14	-152.3	-1,102.3	1,077.0	1,061.5	15.54	69.288		
3,500.0	3,494.2	3,553.6	3,547.7	8.0	8.2	81.19	-158.3	-1,098.7	1,072.2	1,056.2	16.05	66.792		
3,600.0	3,594.0	3,653.5	3,647.3	8.3	8.5	81.24	-164.2	-1,095.0	1,067.5	1,050.9	16.56	64.446		
3,700.0	3,693.7	3,753.4	3,747.0	8.5	8.7	81.29	-170.1	-1,091.4	1,062.7	1,045.6	17.07	62.237		
3,800.0	3,793.5	3,853.2	3,846.6	8.8	9.0	81.35	-176.1	-1,087.8	1,057.9	1,040.3	17.59	60.154		
3,900.0	3,893.3	3,953.1	3,946.2	9.0	9.2	81.40	-182.0	-1,084.1	1,053.2	1,035.1	18.10	58.187		
4,000.0	3,993.0	4,053.0	4,045.9	9.3	9.5	81.46	-188.0	-1,080.5	1,048.4	1,029.8	18.61	56.326		
4,100.0	4,092.8	4,152.9	4,145.5	9.6	9.7	81.51	-193.9	-1,076.8	1,043.6	1,024.5	19.13	54.563		
4,200.0	4,192.5	4,252.8	4,245.2	9.8	10.0	81.57	-199.8	-1,073.2	1,038.9	1,019.2	19.64	52.891		
4,300.0	4,292.3	4,352.6	4,344.8	10.1	10.3	81.62	-205.8	-1,069.6	1,034.1	1,014.0	20.16	51.303		
4,400.0	4,392.0	4,452.5	4,444.4	10.3	10.5	81.68	-211.7	-1,065.9	1,029.4	1,008.7	20.67	49.793		
4,500.0	4,491.8	4,552.4	4,544.1	10.6	10.8	81.73	-217.7	-1,062.3	1,024.6	1,003.4	21.19	48.356		
4,600.0	4,591.6	4,652.3	4,643.7	10.9	11.0	81.79	-223.6	-1,058.6	1,019.8	998.1	21.71	46.986		
4,700.0	4,691.3	4,752.2	4,743.4	11.1	11.3	81.85	-229.5	-1,055.0	1,015.1	992.9	22.22	45.679		
4,800.0	4,791.1	4,852.1	4,843.0	11.4	11.6	81.91	-235.5	-1,051.4	1,010.3	987.6	22.74	44.431		
4,900.0	4,890.8	4,951.9	4,942.6	11.7	11.8	81.97	-241.4	-1,047.7	1,005.6	982.3	23.26	43.237		
5,000.0	4,990.6	5,051.8	5,042.3	11.9	12.1	82.03	-247.4	-1,044.1	1,000.8	977.0	23.78	42.095		
5,099.1	5,089.4	5,150.8	5,141.0	12.2	12.4	82.09	-253.2	-1,040.5	996.1	971.8	24.29	41.011		

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2												Offset Site Error:	0.0 usft
Survey Program: 0-ICWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,150.0	5,140.0	6,000.0	5,678.0	12.3	20.6	54.86	-712.0	-759.4	984.3	951.9	32.35	30.422	
5,200.0	5,188.8	6,000.0	5,678.0	12.5	20.6	58.51	-712.0	-759.4	953.2	920.9	32.33	29.485	
5,250.0	5,236.4	6,000.0	5,678.0	12.8	20.6	62.38	-712.0	-759.4	921.7	889.5	32.27	28.565	
5,300.0	5,282.2	6,023.7	5,678.0	13.0	20.9	64.65	-732.4	-747.3	889.7	857.2	32.56	27.323	
5,350.0	5,326.0	6,036.8	5,678.0	13.4	21.1	67.87	-743.8	-740.7	857.7	825.0	32.73	26.203	
5,400.0	5,367.3	6,052.4	5,678.0	13.7	21.4	71.03	-757.3	-733.0	825.7	792.7	33.00	25.025	
5,450.0	5,405.7	6,070.3	5,678.0	14.1	21.6	74.13	-772.9	-724.2	793.8	760.4	33.36	23.794	
5,500.0	5,440.8	6,100.0	5,678.0	14.6	22.1	76.57	-799.0	-710.1	762.2	728.3	33.95	22.452	
5,550.0	5,472.3	6,100.0	5,678.0	15.1	22.1	80.89	-799.0	-710.1	730.9	696.7	34.26	21.334	
5,600.0	5,500.0	6,137.4	5,678.0	15.7	22.7	83.14	-832.2	-692.8	699.8	664.7	35.13	19.921	
5,650.0	5,523.6	6,163.8	5,678.0	16.3	23.1	86.13	-855.9	-681.0	669.4	633.5	35.92	18.636	
5,700.0	5,542.9	6,200.0	5,678.0	16.9	23.7	88.91	-888.5	-665.4	639.6	602.8	36.88	17.346	
5,750.0	5,557.6	6,222.0	5,678.0	17.6	24.0	92.30	-908.4	-656.2	610.5	572.8	37.71	16.189	
5,800.0	5,567.7	6,253.3	5,678.0	18.3	24.5	95.58	-937.0	-643.5	582.3	543.6	38.68	15.053	
5,850.0	5,573.0	6,285.7	5,678.0	19.1	25.1	99.01	-966.9	-630.8	555.2	515.6	39.66	14.000	
5,880.9	5,574.0	6,300.0	5,678.0	19.5	25.3	101.14	-980.1	-625.4	539.2	499.0	40.18	13.418	
5,900.0	5,574.0	6,319.1	5,678.0	19.8	25.6	101.31	-997.9	-618.3	529.5	488.7	40.78	12.984	
6,000.0	5,574.0	6,389.3	5,678.0	21.1	26.8	101.83	-1,063.7	-593.8	483.8	440.3	43.50	11.122	
6,100.0	5,574.0	6,463.9	5,678.0	22.5	28.0	102.38	-1,134.5	-570.4	446.2	399.8	46.37	9.623	
6,192.5	5,574.0	6,536.1	5,678.0	23.9	29.2	102.84	-1,203.9	-550.5	419.1	369.9	49.12	8.531	
6,200.0	5,574.0	6,542.1	5,678.0	24.0	29.3	102.89	-1,209.7	-548.9	417.2	367.8	49.32	8.458	
6,300.0	5,574.0	6,622.6	5,678.0	25.7	30.6	103.52	-1,287.9	-530.0	394.3	342.2	52.10	7.567	
6,400.0	5,574.0	6,700.0	5,678.0	27.3	31.9	104.06	-1,363.8	-515.0	375.5	320.6	54.88	6.842	
6,500.0	5,574.0	6,788.0	5,678.0	29.0	33.3	104.58	-1,450.8	-501.6	360.8	303.0	57.86	6.237	
6,600.0	5,574.0	6,872.2	5,678.0	30.8	34.7	104.96	-1,534.5	-492.6	350.5	289.6	60.83	5.761	
6,700.0	5,574.0	6,957.1	5,678.0	32.5	36.0	105.19	-1,619.3	-487.2	344.4	280.5	63.86	5.392	
6,800.0	5,574.0	7,043.6	5,678.0	34.3	37.4	105.26	-1,705.7	-485.6	342.6	275.6	66.97	5.115	
6,900.0	5,574.0	7,143.6	5,678.0	36.1	39.0	105.26	-1,805.7	-485.6	342.5	272.2	70.36	4.869	
7,000.0	5,574.0	7,243.6	5,678.0	37.9	40.6	105.26	-1,905.7	-485.6	342.5	268.8	73.77	4.643	
7,100.0	5,574.0	7,343.6	5,678.0	39.7	42.2	105.26	-2,005.7	-485.6	342.5	265.3	77.22	4.436	
7,200.0	5,574.0	7,443.6	5,678.0	41.5	43.9	105.26	-2,105.7	-485.6	342.5	261.8	80.69	4.245	
7,300.0	5,574.0	7,543.6	5,678.0	43.4	45.6	105.26	-2,205.7	-485.6	342.5	258.3	84.18	4.069	
7,400.0	5,574.0	7,643.6	5,678.0	45.2	47.3	105.26	-2,305.7	-485.6	342.5	254.8	87.68	3.906	
7,500.0	5,574.0	7,743.6	5,678.0	47.0	49.0	105.26	-2,405.7	-485.6	342.5	251.3	91.21	3.755	
7,600.0	5,574.0	7,843.6	5,678.0	48.9	50.7	105.26	-2,505.7	-485.6	342.5	247.7	94.75	3.615	
7,700.0	5,574.0	7,943.6	5,678.0	50.7	52.4	105.26	-2,605.7	-485.6	342.5	244.2	98.30	3.484	
7,800.0	5,574.0	8,043.6	5,678.0	52.6	54.2	105.26	-2,705.7	-485.6	342.5	240.6	101.87	3.362	
7,900.0	5,574.0	8,143.6	5,678.0	54.5	55.9	105.26	-2,805.7	-485.6	342.4	237.0	105.44	3.248	
8,000.0	5,574.0	8,243.6	5,678.0	56.3	57.7	105.26	-2,905.7	-485.6	342.4	233.4	109.03	3.141	
8,100.0	5,574.0	8,343.6	5,678.0	58.2	59.5	105.26	-3,005.7	-485.6	342.4	229.8	112.62	3.040	
8,200.0	5,574.0	8,443.6	5,678.0	60.1	61.3	105.26	-3,105.7	-485.6	342.4	226.2	116.22	2.946	
8,300.0	5,574.0	8,543.6	5,678.0	61.9	63.1	105.26	-3,205.7	-485.6	342.4	222.6	119.83	2.857	
8,400.0	5,574.0	8,643.6	5,678.0	63.8	64.9	105.26	-3,305.7	-485.6	342.4	218.9	123.45	2.774	
8,500.0	5,574.0	8,743.6	5,678.0	65.7	66.7	105.26	-3,405.7	-485.6	342.4	215.3	127.07	2.694	
8,600.0	5,574.0	8,843.6	5,678.0	67.6	68.5	105.26	-3,505.7	-485.6	342.4	211.7	130.70	2.620	
8,700.0	5,574.0	8,943.6	5,678.0	69.5	70.3	105.26	-3,605.7	-485.6	342.4	208.0	134.33	2.549	
8,800.0	5,574.0	9,043.6	5,678.0	71.3	72.2	105.26	-3,705.7	-485.6	342.4	204.4	137.96	2.481	
8,900.0	5,574.0	9,143.6	5,678.0	73.2	74.0	105.26	-3,805.7	-485.6	342.3	200.7	141.60	2.418	
9,000.0	5,574.0	9,243.6	5,678.0	75.1	75.8	105.26	-3,905.7	-485.6	342.3	197.1	145.25	2.357	
9,100.0	5,574.0	9,343.6	5,678.0	77.0	77.7	105.26	-4,005.7	-485.6	342.3	193.4	148.90	2.299	
9,200.0	5,574.0	9,443.6	5,678.0	78.9	79.5	105.26	-4,105.7	-485.6	342.3	189.8	152.55	2.244	
9,300.0	5,574.0	9,543.6	5,678.0	80.8	81.4	105.26	-4,205.7	-485.6	342.3	186.1	156.20	2.191	

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

Cathedral Energy Services

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor Federal #26I-3513A
Project:	Weld County, CO	TVD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	KB=16.5' @ 4728.2usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor Federal #26I-3513A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	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 #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Separation Factor		
9,400.0	5,574.0	9,643.6	5,678.0	82.7	83.2	105.26	-4,305.7	-485.5	342.3	182.4	159.86	2.141		
9,500.0	5,574.0	9,743.6	5,678.0	84.6	85.1	105.26	-4,405.7	-485.4	342.3	178.8	163.52	2.093		
9,600.0	5,574.0	9,843.6	5,678.0	86.5	86.9	105.26	-4,505.7	-485.4	342.3	175.1	167.19	2.047		
9,700.0	5,574.0	9,943.6	5,678.0	88.4	88.8	105.26	-4,605.7	-485.4	342.3	171.4	170.85	2.003		
9,800.0	5,574.0	10,043.6	5,678.0	90.3	90.6	105.27	-4,705.7	-485.4	342.3	167.7	174.52	1.961		
9,900.0	5,574.0	10,143.6	5,678.0	92.2	92.5	105.27	-4,805.7	-485.4	342.2	164.1	178.19	1.921		
10,000.0	5,574.0	10,243.6	5,678.0	94.1	94.4	105.27	-4,905.7	-485.4	342.2	160.4	181.86	1.882		
10,100.0	5,574.0	10,343.6	5,678.0	96.0	96.2	105.27	-5,005.7	-485.4	342.2	156.7	185.54	1.845		
10,200.0	5,574.0	10,443.6	5,678.0	97.9	98.1	105.27	-5,105.7	-485.4	342.2	153.0	189.21	1.809		
10,300.0	5,574.0	10,543.6	5,678.0	99.8	100.0	105.27	-5,205.7	-485.4	342.2	149.3	192.89	1.774		
10,400.0	5,574.0	10,643.6	5,678.0	101.7	101.8	105.27	-5,305.7	-485.4	342.2	145.6	196.57	1.741		
10,500.0	5,574.0	10,743.6	5,678.0	103.6	103.7	105.27	-5,405.7	-485.4	342.2	141.9	200.25	1.709		
10,600.0	5,574.0	10,843.6	5,678.0	105.5	105.6	105.27	-5,505.7	-485.4	342.2	138.2	203.93	1.678		
10,700.0	5,574.0	10,943.6	5,678.0	107.4	107.5	105.27	-5,605.7	-485.4	342.2	134.5	207.61	1.648		
10,800.0	5,574.0	11,043.6	5,678.0	109.3	109.3	105.27	-5,705.7	-485.4	342.1	130.9	211.30	1.619		
10,900.0	5,574.0	11,143.6	5,678.0	111.2	111.2	105.27	-5,805.7	-485.4	342.1	127.2	214.98	1.591		
11,000.0	5,574.0	11,243.6	5,678.0	113.1	113.1	105.27	-5,905.7	-485.4	342.1	123.5	218.67	1.565		
11,100.0	5,574.0	11,343.6	5,678.0	115.0	115.0	105.27	-6,005.7	-485.3	342.1	119.8	222.35	1.539		
11,200.0	5,574.0	11,443.6	5,678.0	116.9	116.9	105.27	-6,105.7	-485.3	342.1	116.1	226.04	1.513		
11,300.0	5,574.0	11,543.6	5,678.0	118.8	118.8	105.27	-6,205.7	-485.3	342.1	112.4	229.73	1.489	Level 3	
11,400.0	5,574.0	11,643.6	5,678.0	120.7	120.6	105.27	-6,305.7	-485.3	342.1	108.7	233.42	1.466	Level 3	
11,500.0	5,574.0	11,743.6	5,678.0	122.6	122.5	105.27	-6,405.7	-485.3	342.1	105.0	237.11	1.443	Level 3	
11,600.0	5,574.0	11,843.6	5,678.0	124.5	124.4	105.27	-6,505.7	-485.3	342.1	101.3	240.81	1.421	Level 3	
11,700.0	5,574.0	11,943.6	5,678.0	126.4	126.3	105.27	-6,605.7	-485.3	342.1	97.6	244.50	1.399	Level 3	
11,800.0	5,574.0	12,043.6	5,678.0	128.3	128.2	105.27	-6,705.7	-485.3	342.0	93.9	248.19	1.378	Level 3	
11,900.0	5,574.0	12,143.6	5,678.0	130.2	130.1	105.27	-6,805.7	-485.3	342.0	90.1	251.89	1.358	Level 3	
12,000.0	5,574.0	12,243.6	5,678.0	132.1	132.0	105.27	-6,905.7	-485.3	342.0	86.4	255.58	1.338	Level 3	
12,062.4	5,574.0	12,306.0	5,678.0	133.3	133.2	105.27	-6,968.1	-485.3	342.0	84.1	257.89	1.326	Level 3, CC, ES, SF	

Cathedral Energy Services

Anticollision Report

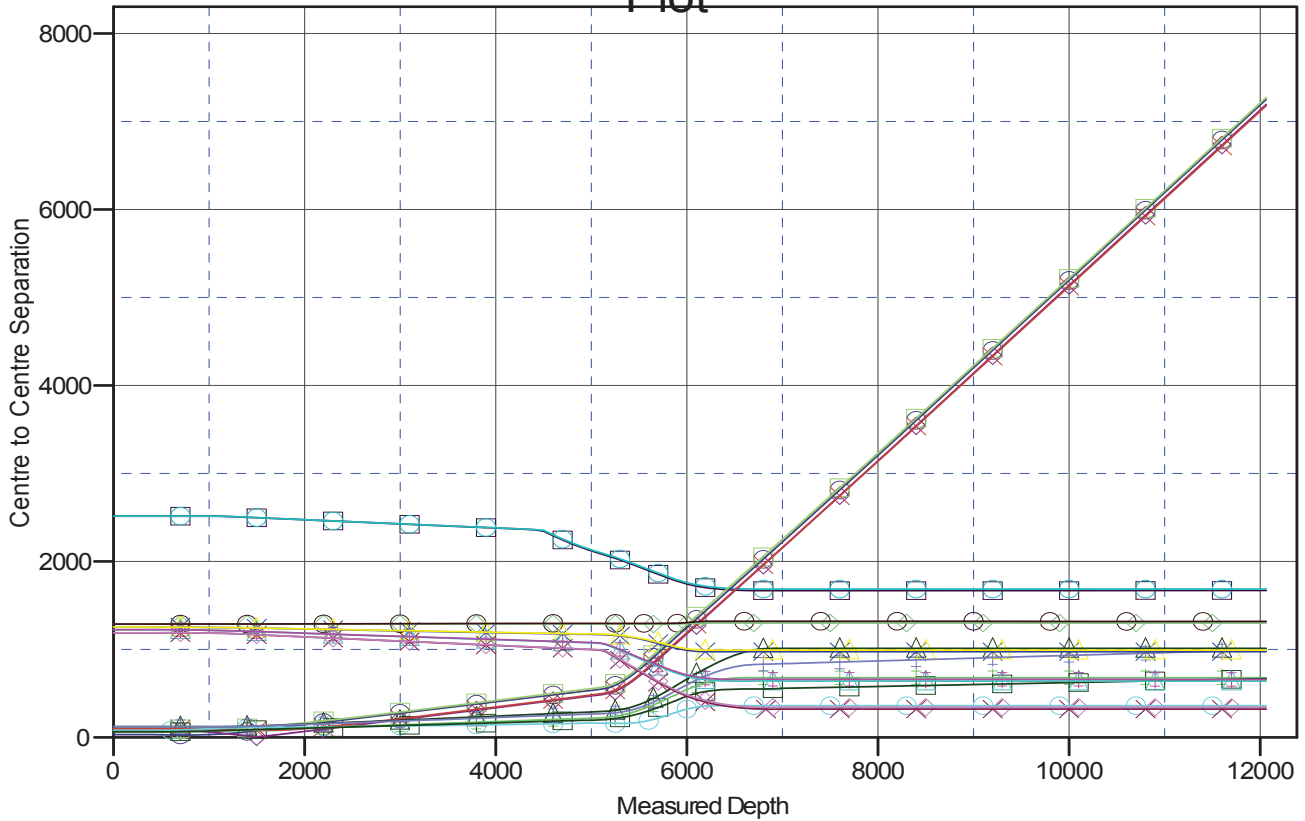
Company: Whiting Petroleum Corporation
Project: Weld County, CO
Reference Site: S26-T10N-R58W
Site Error: 0.0usft
Reference Well: Razor Federal #26I-3513A
Well Error: 0.0usft
Reference Wellbore: HZ
Reference Design: Plan #2

Local Co-ordinate Reference: Well Razor Federal #26I-3513A
TVD Reference: KB=16.5' @ 4728.2usft (Original Well Elev)
MD Reference: KB=16.5' @ 4728.2usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to KB=16.5' @ 4728.2usft (Original Well E
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.00 W °

Coordinates are relative to: Razor Federal #26I-3513A
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.08°

Ladder Plot



LEGEND

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|--|--|--|
| ■ Razor #26K-3508B, HZ, Plan #1 V0 | ■ Razor Federal #26I-3515A, HZ, Plan #1 V0 | ■ Razor Federal #26J-3510B, HZ, Plan #2 V0 |
| ■ Razor #26K-3508B, HZ, Plan #2 V0 | ■ Razor Federal #26I-3515A, HZ, Plan #2 V0 | ■ Razor Federal #26J-3511A, HZ, Plan #1 V0 |
| ■ Razor Federal #26I-2313A, HZ, Plan #1 V0 | ■ Razor Federal #26I-3516B, HZ, Plan #1 V0 | ■ Razor Federal #26J-3511A, HZ, Plan #2 V0 |
| ■ Razor Federal #26I-2314B, HZ, Plan #1 V0 | ■ Razor Federal #26I-3516B, HZ, Plan #2 V0 | ■ Razor Federal #26J-3512B, HZ, Plan #1 V0 |
| ■ Razor Federal #26I-2315A, HZ, Plan #1 V0 | ■ Razor Federal #26J-3509A, HZ, Plan #1 V0 | ■ Razor Federal #26J-3512B, HZ, Plan #2 V0 |
| ■ Razor Federal #26I-2316B, HZ, Plan #1 V0 | ■ Razor Federal #26J-3509A, HZ, Plan #2 V0 | |
| ■ Razor Federal #26I-3514B, HZ, Plan #1 V0 | ■ Razor Federal #26J-3510B, HZ, Plan #1 V0 | |