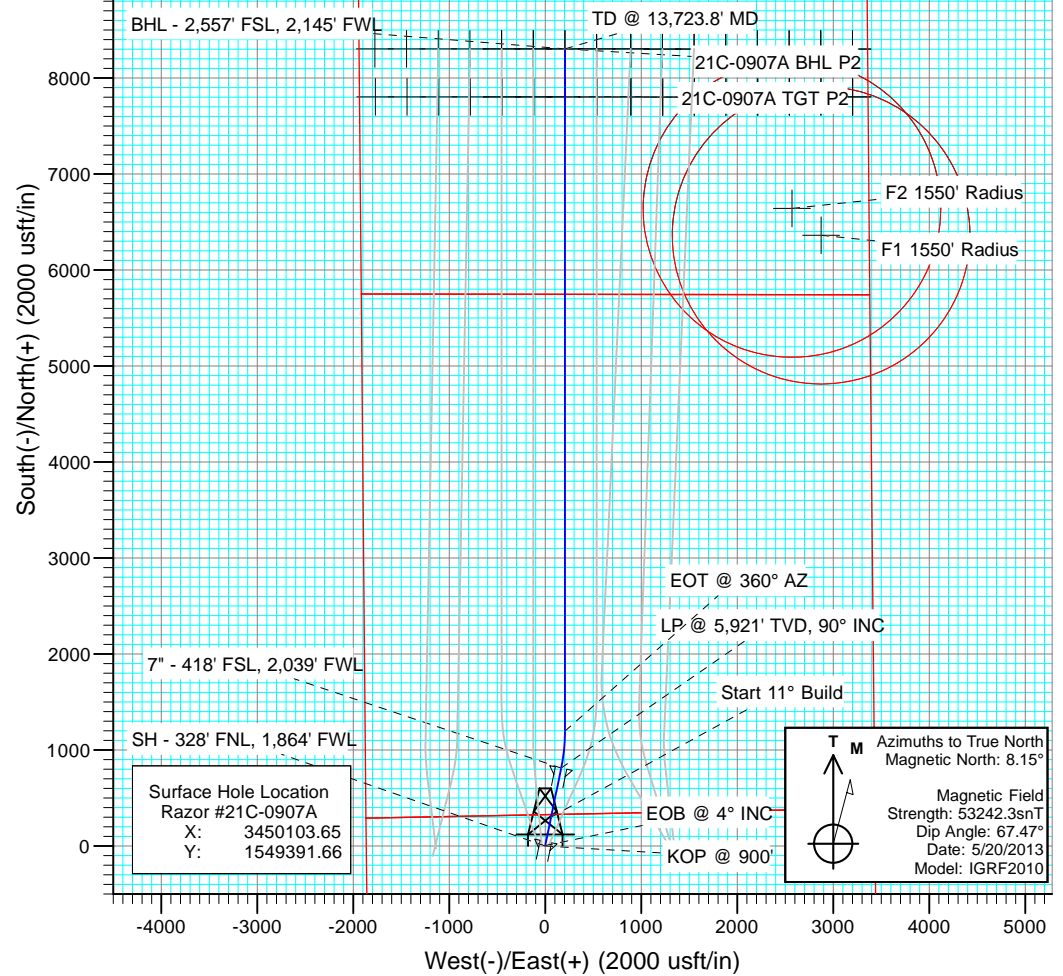
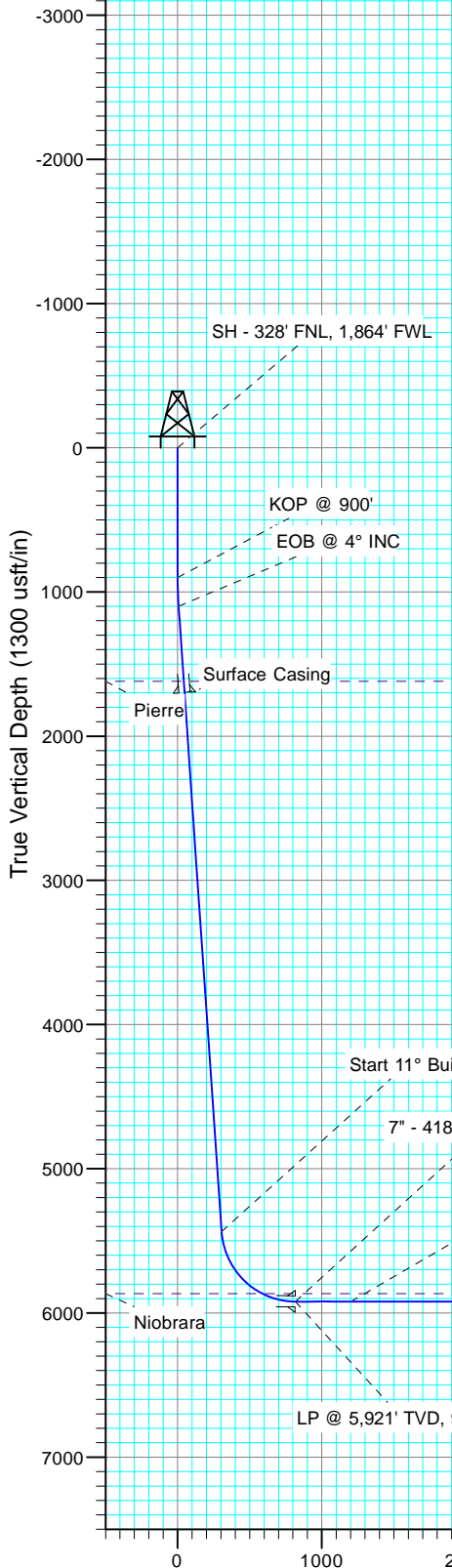


Plan #2
 Razor #21C-0907A
 KB=17' @ 4861.0usft
 Ground Elevation @ 4844.0
 North American Datum 1983
 Well Razor #21C-0907A, True North

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1100.0	4.00	11.64	1099.8	6.8	1.4	2.00	11.64	6.9	
4	5447.2	4.00	11.64	5436.4	303.8	62.6	0.00	0.00	305.3	
5	6229.0	90.00	11.64	5921.0	812.8	167.4	11.00	0.00	816.7	
6	6617.0	90.00	360.00	5921.0	1198.1	206.7	3.00	-90.00	1202.9	
7	13723.8	90.00	360.00	5921.0	8304.8	206.7	0.00	0.00	8307.4	21C-0907A BHL P2



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
21C-0907A BHL P2	5921.0	8304.8	206.7	1557698.90	3450157.95
21C-0907A TGT P2	5921.0	7805.0	211.4	1557199.19	3450171.82

Vertical Section at 1.43° (1300 usft/in)

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #21C-0907A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=17' @ 4861.0usft
Project:	Weld County, CO	MD Reference:	KB=17' @ 4861.0usft
Site:	S21-T10N-R58W	North Reference:	True
Well:	Razor #21C-0907A	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		S21-T10N-R58W			
Site Position:		Northing:	1,549,494.62 usft	Latitude:	40.830272
From:	Lat/Long	Easting:	3,452,846.68 usft	Longitude:	-103.863561
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.06 °

Well	Razor #21C-0907A					
Well Position	+N/-S	0.0 usft	Northing:	1,549,391.66 usft	Latitude:	40.830128
	+E/-W	0.0 usft	Easting:	3,450,103.65 usft	Longitude:	-103.873478
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,844.0 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	5/20/2013	8.15	67.47	53,242

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	1.43

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	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	4.00	11.64	1,099.8	6.8	1.4	2.00	2.00	0.00	11.64	
5,447.2	4.00	11.64	5,436.4	303.8	62.6	0.00	0.00	0.00	0.00	
6,229.0	90.00	11.64	5,921.0	812.8	167.4	11.00	11.00	0.00	0.00	
6,617.0	90.00	360.00	5,921.0	1,198.1	206.7	3.00	0.00	-3.00	-90.00	
13,723.8	90.00	360.00	5,921.0	8,304.8	206.7	0.00	0.00	0.00	0.00	21C-0907A BHL P2

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #21C-0907A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=17' @ 4861.0usft
Project:	Weld County, CO	MD Reference:	KB=17' @ 4861.0usft
Site:	S21-T10N-R58W	North Reference:	True
Well:	Razor #21C-0907A	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	
0.5	0.00	0.00	0.5	0.0	0.0	0.0	0.00	0.00	SH - 328' FNL, 1,864' FWL
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	KOP @ 900'
1,000.0	2.00	11.64	1,000.0	1.7	0.4	1.7	2.00	2.00	
1,100.0	4.00	11.64	1,099.8	6.8	1.4	6.9	2.00	2.00	EOB @ 4° INC
1,200.0	4.00	11.64	1,199.6	13.7	2.8	13.7	0.00	0.00	
1,300.0	4.00	11.64	1,299.4	20.5	4.2	20.6	0.00	0.00	
1,400.0	4.00	11.64	1,399.1	27.3	5.6	27.5	0.00	0.00	
1,500.0	4.00	11.64	1,498.9	34.2	7.0	34.3	0.00	0.00	
1,600.0	4.00	11.64	1,598.6	41.0	8.4	41.2	0.00	0.00	
1,621.4	4.00	11.64	1,620.0	42.5	8.7	42.7	0.00	0.00	Pierre
1,700.0	4.00	11.64	1,698.4	47.8	9.9	48.1	0.00	0.00	Surface Casing
1,800.0	4.00	11.64	1,798.1	54.7	11.3	54.9	0.00	0.00	
1,900.0	4.00	11.64	1,897.9	61.5	12.7	61.8	0.00	0.00	
2,000.0	4.00	11.64	1,997.6	68.3	14.1	68.7	0.00	0.00	
2,100.0	4.00	11.64	2,097.4	75.2	15.5	75.5	0.00	0.00	
2,200.0	4.00	11.64	2,197.2	82.0	16.9	82.4	0.00	0.00	
2,300.0	4.00	11.64	2,296.9	88.8	18.3	89.2	0.00	0.00	
2,400.0	4.00	11.64	2,396.7	95.7	19.7	96.1	0.00	0.00	
2,500.0	4.00	11.64	2,496.4	102.5	21.1	103.0	0.00	0.00	
2,600.0	4.00	11.64	2,596.2	109.3	22.5	109.8	0.00	0.00	
2,700.0	4.00	11.64	2,695.9	116.2	23.9	116.7	0.00	0.00	
2,800.0	4.00	11.64	2,795.7	123.0	25.3	123.6	0.00	0.00	
2,900.0	4.00	11.64	2,895.5	129.8	26.7	130.4	0.00	0.00	
3,000.0	4.00	11.64	2,995.2	136.6	28.1	137.3	0.00	0.00	
3,100.0	4.00	11.64	3,095.0	143.5	29.6	144.2	0.00	0.00	
3,200.0	4.00	11.64	3,194.7	150.3	31.0	151.0	0.00	0.00	
3,300.0	4.00	11.64	3,294.5	157.1	32.4	157.9	0.00	0.00	
3,400.0	4.00	11.64	3,394.2	164.0	33.8	164.8	0.00	0.00	
3,500.0	4.00	11.64	3,494.0	170.8	35.2	171.6	0.00	0.00	
3,600.0	4.00	11.64	3,593.7	177.6	36.6	178.5	0.00	0.00	
3,700.0	4.00	11.64	3,693.5	184.5	38.0	185.4	0.00	0.00	
3,800.0	4.00	11.64	3,793.3	191.3	39.4	192.2	0.00	0.00	
3,900.0	4.00	11.64	3,893.0	198.1	40.8	199.1	0.00	0.00	
4,000.0	4.00	11.64	3,992.8	205.0	42.2	206.0	0.00	0.00	
4,100.0	4.00	11.64	4,092.5	211.8	43.6	212.8	0.00	0.00	
4,200.0	4.00	11.64	4,192.3	218.6	45.0	219.7	0.00	0.00	
4,300.0	4.00	11.64	4,292.0	225.5	46.4	226.6	0.00	0.00	
4,400.0	4.00	11.64	4,391.8	232.3	47.9	233.4	0.00	0.00	
4,500.0	4.00	11.64	4,491.6	239.1	49.3	240.3	0.00	0.00	
4,600.0	4.00	11.64	4,591.3	246.0	50.7	247.1	0.00	0.00	
4,700.0	4.00	11.64	4,691.1	252.8	52.1	254.0	0.00	0.00	
4,800.0	4.00	11.64	4,790.8	259.6	53.5	260.9	0.00	0.00	
4,900.0	4.00	11.64	4,890.6	266.5	54.9	267.7	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #21C-0907A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=17' @ 4861.0usft
Project:	Weld County, CO	MD Reference:	KB=17' @ 4861.0usft
Site:	S21-T10N-R58W	North Reference:	True
Well:	Razor #21C-0907A	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
5,000.0	4.00	11.64	4,990.3	273.3	56.3	274.6	0.00	0.00	
5,100.0	4.00	11.64	5,090.1	280.1	57.7	281.5	0.00	0.00	
5,200.0	4.00	11.64	5,189.9	287.0	59.1	288.3	0.00	0.00	
5,300.0	4.00	11.64	5,289.6	293.8	60.5	295.2	0.00	0.00	
5,400.0	4.00	11.64	5,389.4	300.6	61.9	302.1	0.00	0.00	
5,447.2	4.00	11.64	5,436.4	303.8	62.6	305.3	0.00	0.00	Start 11° Build
5,450.0	4.31	11.64	5,439.2	304.0	62.6	305.5	11.01	11.01	
5,500.0	9.81	11.64	5,488.8	310.1	63.9	311.6	11.00	11.00	
5,550.0	15.31	11.64	5,537.6	320.7	66.1	322.2	11.00	11.00	
5,600.0	20.81	11.64	5,585.1	335.9	69.2	337.5	11.00	11.00	
5,650.0	26.31	11.64	5,631.0	355.4	73.2	357.2	11.00	11.00	
5,700.0	31.81	11.64	5,674.7	379.2	78.1	381.0	11.00	11.00	
5,750.0	37.31	11.64	5,715.8	407.0	83.8	408.9	11.00	11.00	
5,800.0	42.81	11.64	5,754.1	438.5	90.3	440.6	11.00	11.00	
5,850.0	48.31	11.64	5,789.1	473.4	97.5	475.7	11.00	11.00	
5,900.0	53.81	11.64	5,820.5	511.5	105.4	514.0	11.00	11.00	
5,950.0	59.31	11.64	5,848.0	552.4	113.8	555.0	11.00	11.00	
5,989.8	63.68	11.64	5,867.0	586.6	120.8	589.4	11.00	11.00	Niobrara
6,000.0	64.81	11.64	5,871.4	595.6	122.7	598.5	11.00	11.00	
6,050.0	70.31	11.64	5,890.5	640.9	132.0	643.9	11.00	11.00	
6,100.0	75.81	11.64	5,905.1	687.7	141.7	691.0	11.00	11.00	
6,150.0	81.31	11.64	5,915.0	735.7	151.5	739.2	11.00	11.00	
6,200.0	86.81	11.64	5,920.2	784.4	161.6	788.1	11.00	11.00	
6,229.0	90.00	11.64	5,921.0	812.7	167.4	816.7	11.00	11.00	LP @ 5,921' TVD, 90° INC - 7" - 418' FSL, 2,03
6,300.0	90.00	9.51	5,921.0	882.5	180.5	886.8	3.00	0.00	
6,400.0	90.00	6.51	5,921.0	981.5	194.4	986.1	3.00	0.00	
6,500.0	90.00	3.51	5,921.0	1,081.2	203.1	1,085.9	3.00	0.00	
6,600.0	90.00	0.51	5,921.0	1,181.1	206.6	1,185.9	3.00	0.00	
6,617.0	90.00	0.00	5,921.0	1,198.1	206.7	1,202.9	3.00	0.00	EOT @ 360° AZ
6,700.0	90.00	360.00	5,921.0	1,281.1	206.7	1,285.8	0.00	0.00	
6,800.0	90.00	360.00	5,921.0	1,381.1	206.7	1,385.8	0.00	0.00	
6,900.0	90.00	360.00	5,921.0	1,481.1	206.7	1,485.8	0.00	0.00	
7,000.0	90.00	360.00	5,921.0	1,581.1	206.7	1,585.7	0.00	0.00	
7,100.0	90.00	360.00	5,921.0	1,681.1	206.7	1,685.7	0.00	0.00	
7,200.0	90.00	360.00	5,921.0	1,781.1	206.7	1,785.7	0.00	0.00	
7,300.0	90.00	360.00	5,921.0	1,881.1	206.7	1,885.6	0.00	0.00	
7,400.0	90.00	360.00	5,921.0	1,981.1	206.7	1,985.6	0.00	0.00	
7,500.0	90.00	360.00	5,921.0	2,081.1	206.7	2,085.6	0.00	0.00	
7,600.0	90.00	360.00	5,921.0	2,181.1	206.7	2,185.5	0.00	0.00	
7,700.0	90.00	360.00	5,921.0	2,281.1	206.7	2,285.5	0.00	0.00	
7,800.0	90.00	360.00	5,921.0	2,381.1	206.7	2,385.5	0.00	0.00	
7,900.0	90.00	360.00	5,921.0	2,481.1	206.7	2,485.5	0.00	0.00	
8,000.0	90.00	360.00	5,921.0	2,581.1	206.7	2,585.4	0.00	0.00	
8,100.0	90.00	360.00	5,921.0	2,681.1	206.7	2,685.4	0.00	0.00	
8,200.0	90.00	360.00	5,921.0	2,781.1	206.7	2,785.4	0.00	0.00	
8,300.0	90.00	360.00	5,921.0	2,881.1	206.7	2,885.3	0.00	0.00	
8,400.0	90.00	360.00	5,921.0	2,981.1	206.7	2,985.3	0.00	0.00	
8,500.0	90.00	360.00	5,921.0	3,081.1	206.7	3,085.3	0.00	0.00	
8,600.0	90.00	360.00	5,921.0	3,181.1	206.7	3,185.2	0.00	0.00	
8,700.0	90.00	360.00	5,921.0	3,281.1	206.7	3,285.2	0.00	0.00	
8,800.0	90.00	360.00	5,921.0	3,381.1	206.7	3,385.2	0.00	0.00	
8,900.0	90.00	360.00	5,921.0	3,481.1	206.7	3,485.1	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #21C-0907A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=17' @ 4861.0usft
Project:	Weld County, CO	MD Reference:	KB=17' @ 4861.0usft
Site:	S21-T10N-R58W	North Reference:	True
Well:	Razor #21C-0907A	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
9,000.0	90.00	360.00	5,921.0	3,581.1	206.7	3,585.1	0.00	0.00	
9,100.0	90.00	360.00	5,921.0	3,681.1	206.7	3,685.1	0.00	0.00	
9,200.0	90.00	360.00	5,921.0	3,781.1	206.7	3,785.1	0.00	0.00	
9,300.0	90.00	360.00	5,921.0	3,881.1	206.7	3,885.0	0.00	0.00	
9,400.0	90.00	360.00	5,921.0	3,981.1	206.7	3,985.0	0.00	0.00	
9,500.0	90.00	360.00	5,921.0	4,081.1	206.7	4,085.0	0.00	0.00	
9,600.0	90.00	360.00	5,921.0	4,181.1	206.7	4,184.9	0.00	0.00	
9,700.0	90.00	360.00	5,921.0	4,281.1	206.7	4,284.9	0.00	0.00	
9,800.0	90.00	360.00	5,921.0	4,381.1	206.7	4,384.9	0.00	0.00	
9,900.0	90.00	360.00	5,921.0	4,481.1	206.7	4,484.8	0.00	0.00	
10,000.0	90.00	360.00	5,921.0	4,581.1	206.7	4,584.8	0.00	0.00	
10,100.0	90.00	360.00	5,921.0	4,681.1	206.7	4,684.8	0.00	0.00	
10,200.0	90.00	360.00	5,921.0	4,781.1	206.7	4,784.7	0.00	0.00	
10,300.0	90.00	360.00	5,921.0	4,881.1	206.7	4,884.7	0.00	0.00	
10,400.0	90.00	360.00	5,921.0	4,981.1	206.7	4,984.7	0.00	0.00	
10,500.0	90.00	360.00	5,921.0	5,081.1	206.7	5,084.7	0.00	0.00	
10,600.0	90.00	360.00	5,921.0	5,181.1	206.7	5,184.6	0.00	0.00	
10,700.0	90.00	360.00	5,921.0	5,281.1	206.7	5,284.6	0.00	0.00	
10,800.0	90.00	360.00	5,921.0	5,381.1	206.7	5,384.6	0.00	0.00	
10,900.0	90.00	360.00	5,921.0	5,481.1	206.7	5,484.5	0.00	0.00	
11,000.0	90.00	360.00	5,921.0	5,581.1	206.7	5,584.5	0.00	0.00	
11,100.0	90.00	360.00	5,921.0	5,681.1	206.7	5,684.5	0.00	0.00	
11,200.0	90.00	360.00	5,921.0	5,781.1	206.7	5,784.4	0.00	0.00	
11,300.0	90.00	360.00	5,921.0	5,881.1	206.7	5,884.4	0.00	0.00	
11,400.0	90.00	360.00	5,921.0	5,981.1	206.7	5,984.4	0.00	0.00	
11,500.0	90.00	360.00	5,921.0	6,081.1	206.7	6,084.3	0.00	0.00	
11,600.0	90.00	360.00	5,921.0	6,181.1	206.7	6,184.3	0.00	0.00	
11,700.0	90.00	360.00	5,921.0	6,281.1	206.7	6,284.3	0.00	0.00	
11,800.0	90.00	360.00	5,921.0	6,381.1	206.7	6,384.2	0.00	0.00	
11,900.0	90.00	360.00	5,921.0	6,481.1	206.7	6,484.2	0.00	0.00	
12,000.0	90.00	360.00	5,921.0	6,581.1	206.7	6,584.2	0.00	0.00	
12,100.0	90.00	360.00	5,921.0	6,681.1	206.7	6,684.2	0.00	0.00	
12,200.0	90.00	360.00	5,921.0	6,781.1	206.7	6,784.1	0.00	0.00	
12,300.0	90.00	360.00	5,921.0	6,881.1	206.7	6,884.1	0.00	0.00	
12,400.0	90.00	360.00	5,921.0	6,981.1	206.7	6,984.1	0.00	0.00	
12,500.0	90.00	360.00	5,921.0	7,081.1	206.7	7,084.0	0.00	0.00	
12,600.0	90.00	360.00	5,921.0	7,181.1	206.7	7,184.0	0.00	0.00	
12,700.0	90.00	360.00	5,921.0	7,281.1	206.7	7,284.0	0.00	0.00	
12,800.0	90.00	360.00	5,921.0	7,381.1	206.7	7,383.9	0.00	0.00	
12,900.0	90.00	360.00	5,921.0	7,481.1	206.7	7,483.9	0.00	0.00	
13,000.0	90.00	360.00	5,921.0	7,581.1	206.7	7,583.9	0.00	0.00	
13,100.0	90.00	360.00	5,921.0	7,681.1	206.7	7,683.8	0.00	0.00	
13,200.0	90.00	360.00	5,921.0	7,781.1	206.7	7,783.8	0.00	0.00	
13,300.0	90.00	360.00	5,921.0	7,881.1	206.7	7,883.8	0.00	0.00	
13,400.0	90.00	360.00	5,921.0	7,981.1	206.7	7,983.8	0.00	0.00	
13,500.0	90.00	360.00	5,921.0	8,081.1	206.7	8,083.7	0.00	0.00	
13,600.0	90.00	360.00	5,921.0	8,181.1	206.7	8,183.7	0.00	0.00	
13,700.0	90.00	360.00	5,921.0	8,281.1	206.7	8,283.7	0.00	0.00	
13,723.8	90.00	360.00	5,921.0	8,304.8	206.7	8,307.4	0.00	0.00	BHL - 2,557' FSL, 2,145' FWL - TD @ 13,723.8'

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #21C-0907A
Company:	Whiting Petroleum Corporation	TVD Reference:	KB=17' @ 4861.0usft
Project:	Weld County, CO	MD Reference:	KB=17' @ 4861.0usft
Site:	S21-T10N-R58W	North Reference:	True
Well:	Razor #21C-0907A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
21C-0907A BHL P2	0.00	1.05	5,921.0	8,304.8	206.7	1,557,698.90	3,450,157.95	40.852922	-103.872731
- plan hits target center									
- Point									
21C-0907A BHL	0.00	1.05	5,808.5	8,304.8	206.7	1,557,698.90	3,450,157.95	40.852922	-103.872731
- plan misses target center by 112.5usft at 13723.8usft MD (5921.0 TVD, 8304.8 N, 206.7 E)									
- Point									
21C-0907A TGT P2	0.00	1.05	5,921.0	7,805.0	211.4	1,557,199.19	3,450,171.82	40.851550	-103.872714
- plan misses target center by 4.7usft at 13223.9usft MD (5921.0 TVD, 7805.0 N, 206.7 E)									
- Point									
21C-0907A TGT	0.00	1.05	5,808.5	7,805.0	211.4	1,557,199.19	3,450,171.82	40.851550	-103.872714
- plan misses target center by 112.6usft at 13223.9usft MD (5921.0 TVD, 7805.0 N, 206.7 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(")	(")	
1,700.0	1,698.4	Surface Casing	0	0	
6,229.0	5,921.0	7" - 418' FSL, 2,039' FWL	0	0	

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
1,621.4	1,620.0	Pierre			
5,989.8	5,867.0	Niobrara			

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
0.5	0.5	0.0	0.0	SH - 328' FNL, 1,864' FWL	
900.0	900.0	0.0	0.0	KOP @ 900'	
1,100.0	1,099.8	6.8	1.4	EOB @ 4° INC	
5,447.2	5,436.4	303.8	62.6	Start 11° Build	
6,229.0	5,921.0	812.7	167.4	LP @ 5,921' TVD, 90° INC	
6,617.0	5,921.0	1,198.1	206.7	EOT @ 360° AZ	
13,723.8	5,921.0	8,304.8	206.7	BHL - 2,557' FSL, 2,145' FWL	
13,723.8	5,921.0	8,304.8	206.7	TD @ 13,723.8' MD	

Whiting Petroleum Corporation

Weld County, CO

S21-T10N-R58W

Razor #21C-0907A

HZ

Plan #2

Anticollision Report

09 April, 2014

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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:	MD Interval 100.0usft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	4/9/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,723.8	Plan #2 (HZ)	ISCWSA MWD	MWD - ISCWSA	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S21-T10N-R58W						
Razor #21B-0909A - HZ - Plan #1	7,140.5	7,110.0	399.8	330.0	5.726	CC
Razor #21B-0909A - HZ - Plan #1	7,200.0	7,159.5	400.6	328.9	5.589	ES
Razor #21B-0909A - HZ - Plan #1	13,723.8	13,668.5	694.1	382.1	2.225	SF
Razor #21B-0910B - HZ - Plan #1	6,810.9	6,757.0	772.1	712.7	13.002	CC
Razor #21B-0910B - HZ - Plan #1	13,723.8	13,638.3	1,014.5	699.2	3.218	ES, SF
Razor #21B-0911A - HZ - Plan #1	6,562.2	6,373.1	1,038.8	989.4	21.032	CC
Razor #21B-0911A - HZ - Plan #1	6,600.0	6,401.7	1,039.4	989.1	20.630	ES
Razor #21B-0911A - HZ - Plan #1	13,723.8	13,512.4	1,348.5	1,034.8	4.299	SF
Razor #21C-0905A - HZ - Plan #2	466.7	466.7	65.3	63.5	35.601	CC
Razor #21C-0905A - HZ - Plan #2	500.0	500.0	65.3	63.3	32.913	ES
Razor #21C-0905A - HZ - Plan #2	13,723.8	13,737.7	660.1	343.4	2.084	SF
Razor #21C-0906B - HZ - Plan #2	666.7	666.7	32.9	30.2	12.046	CC
Razor #21C-0906B - HZ - Plan #2	800.0	799.8	33.1	29.8	9.947	ES
Razor #21C-0906B - HZ - Plan #2	13,723.8	13,790.8	345.2	40.3	1.132	Level 2, SF
Razor #21C-0908B - HZ - Plan #2	1,095.9	1,095.8	32.5	27.9	6.978	CC
Razor #21C-0908B - HZ - Plan #2	1,100.0	1,099.8	32.5	27.8	6.951	ES
Razor #21C-0908B - HZ - Plan #2	13,723.8	13,909.0	345.5	43.0	1.142	Level 2, SF
Razor #21D-0903A - HZ - Plan #1	900.0	897.9	1,138.0	1,134.2	301.163	CC
Razor #21D-0903A - HZ - Plan #1	13,723.8	13,631.8	1,324.0	1,007.6	4.184	ES, SF
Razor #21D-0904B - HZ - Plan #1	13,723.8	13,821.2	989.9	671.1	3.105	CC, ES, SF

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0909A - 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	88.82	26.3	1,275.5	1,275.8					
100.0	100.0	92.8	92.8	0.1	0.1	88.82	26.3	1,275.5	1,275.8	1,275.6	0.18	7,073.880		
200.0	200.0	192.8	192.8	0.3	0.3	88.82	26.3	1,275.5	1,275.8	1,275.2	0.62	2,056.195		
300.0	300.0	292.8	292.8	0.5	0.5	88.82	26.3	1,275.5	1,275.8	1,274.7	1.07	1,192.330		
400.0	400.0	392.8	392.8	0.8	0.8	88.82	26.3	1,275.5	1,275.8	1,274.3	1.52	839.593		
500.0	500.0	492.8	492.8	1.0	1.0	88.82	26.3	1,275.5	1,275.8	1,273.8	1.97	647.915		
600.0	600.0	618.4	618.3	1.2	1.3	88.72	28.4	1,274.3	1,274.8	1,272.4	2.47	515.205		
700.0	700.0	735.7	735.5	1.4	1.5	88.45	34.4	1,270.7	1,271.9	1,269.0	2.97	428.605		
800.0	800.0	835.5	835.0	1.7	1.8	88.17	40.5	1,267.2	1,268.6	1,265.2	3.43	369.980		
900.0	900.0	935.2	934.5	1.9	2.0	87.89	46.5	1,263.7	1,265.3	1,261.4	3.89	324.858		
1,000.0	1,000.0	1,035.1	1,034.1	2.1	2.2	76.12	52.5	1,260.2	1,261.6	1,257.2	4.36	289.646		
1,100.0	1,099.8	1,135.0	1,133.7	2.3	2.5	76.16	58.5	1,256.7	1,257.0	1,252.2	4.82	260.593		
1,200.0	1,199.6	1,234.8	1,233.4	2.6	2.7	76.19	64.5	1,253.2	1,252.1	1,246.8	5.30	236.317		
1,300.0	1,299.4	1,334.7	1,333.0	2.8	3.0	76.22	70.5	1,249.7	1,247.1	1,241.4	5.78	215.813		
1,400.0	1,399.1	1,434.6	1,432.6	3.0	3.2	76.25	76.6	1,246.2	1,242.2	1,235.9	6.26	198.312		
1,500.0	1,498.9	1,534.5	1,532.3	3.3	3.5	76.28	82.6	1,242.7	1,237.2	1,230.5	6.75	183.229		
1,600.0	1,598.6	1,634.3	1,631.9	3.5	3.8	76.31	88.6	1,239.2	1,232.3	1,225.1	7.24	170.115		
1,700.0	1,698.4	1,734.2	1,731.5	3.8	4.0	76.33	94.6	1,235.7	1,227.4	1,219.6	7.74	158.618		
1,800.0	1,798.1	1,834.1	1,831.2	4.0	4.3	76.36	100.6	1,232.1	1,222.4	1,214.2	8.23	148.466		
1,900.0	1,897.9	1,934.0	1,930.8	4.3	4.5	76.39	106.6	1,228.6	1,217.5	1,208.7	8.73	139.441		
2,000.0	1,997.6	2,033.8	2,030.4	4.5	4.8	76.42	112.7	1,225.1	1,212.5	1,203.3	9.23	131.369		
2,100.0	2,097.4	2,133.7	2,130.1	4.8	5.0	76.45	118.7	1,221.6	1,207.6	1,197.8	9.73	124.110		
2,200.0	2,197.2	2,233.6	2,229.7	5.0	5.3	76.48	124.7	1,218.1	1,202.6	1,192.4	10.23	117.549		
2,300.0	2,296.9	2,333.5	2,329.3	5.3	5.5	76.51	130.7	1,214.6	1,197.7	1,187.0	10.73	111.591		
2,400.0	2,396.7	2,433.3	2,429.0	5.5	5.8	76.55	136.7	1,211.1	1,192.7	1,181.5	11.24	106.158		
2,500.0	2,496.4	2,533.2	2,528.6	5.8	6.1	76.58	142.8	1,207.6	1,187.8	1,176.1	11.74	101.184		
2,600.0	2,596.2	2,633.1	2,628.2	6.0	6.3	76.61	148.8	1,204.1	1,182.9	1,170.6	12.24	96.614		
2,700.0	2,695.9	2,733.0	2,727.9	6.3	6.6	76.64	154.8	1,200.6	1,177.9	1,165.2	12.75	92.401		
2,800.0	2,795.7	2,832.8	2,827.5	6.5	6.8	76.67	160.8	1,197.0	1,173.0	1,159.7	13.25	88.506		
2,900.0	2,895.5	2,932.7	2,927.1	6.8	7.1	76.70	166.8	1,193.5	1,168.0	1,154.3	13.76	84.894		
3,000.0	2,895.2	3,032.6	3,026.8	7.0	7.3	76.74	172.8	1,190.0	1,163.1	1,148.8	14.26	81.536		
3,100.0	3,095.0	3,132.5	3,126.4	7.3	7.6	76.77	178.9	1,186.5	1,158.1	1,143.4	14.77	78.406		
3,200.0	3,194.7	3,232.3	3,226.0	7.5	7.8	76.80	184.9	1,183.0	1,153.2	1,137.9	15.28	75.481		
3,300.0	3,294.5	3,332.2	3,325.6	7.8	8.1	76.84	190.9	1,179.5	1,148.3	1,132.5	15.79	72.743		
3,400.0	3,394.2	3,432.1	3,425.3	8.0	8.4	76.87	196.9	1,176.0	1,143.3	1,127.0	16.29	70.174		
3,500.0	3,494.0	3,532.0	3,524.9	8.3	8.6	76.90	202.9	1,172.5	1,138.4	1,121.6	16.80	67.759		
3,600.0	3,593.7	3,631.8	3,624.5	8.5	8.9	76.94	209.0	1,169.0	1,133.4	1,116.1	17.31	65.484		
3,700.0	3,693.5	3,731.7	3,724.2	8.8	9.1	76.97	215.0	1,165.5	1,128.5	1,110.7	17.82	63.338		
3,800.0	3,793.3	3,831.6	3,823.8	9.1	9.4	77.01	221.0	1,161.9	1,123.6	1,105.2	18.33	61.311		
3,900.0	3,893.0	3,931.5	3,923.4	9.3	9.6	77.04	227.0	1,158.4	1,118.6	1,099.8	18.83	59.392		
4,000.0	3,992.8	4,031.4	4,023.1	9.6	9.9	77.08	233.0	1,154.9	1,113.7	1,094.3	19.34	57.574		
4,100.0	4,092.5	4,131.2	4,122.7	9.8	10.2	77.11	239.1	1,151.4	1,108.8	1,088.9	19.85	55.848		
4,200.0	4,192.3	4,231.1	4,222.3	10.1	10.4	77.15	245.1	1,147.9	1,103.8	1,083.5	20.36	54.208		
4,300.0	4,292.0	4,331.0	4,322.0	10.3	10.7	77.19	251.1	1,144.4	1,098.9	1,078.0	20.87	52.647		
4,400.0	4,391.8	4,430.9	4,421.6	10.6	10.9	77.22	257.1	1,140.9	1,093.9	1,072.6	21.38	51.161		
4,500.0	4,491.6	4,530.7	4,521.2	10.8	11.2	77.26	263.1	1,137.4	1,089.0	1,067.1	21.89	49.743		
4,600.0	4,591.3	4,630.6	4,620.9	11.1	11.4	77.30	269.1	1,133.9	1,084.1	1,061.7	22.40	48.390		
4,700.0	4,691.1	4,730.5	4,720.5	11.3	11.7	77.33	275.2	1,130.4	1,079.1	1,056.2	22.91	47.096		
4,800.0	4,790.8	4,830.4	4,820.1	11.6	12.0	77.37	281.2	1,126.9	1,074.2	1,050.8	23.42	45.859		
4,900.0	4,890.6	4,930.2	4,919.8	11.9	12.2	77.41	287.2	1,123.3	1,069.3	1,045.3	23.94	44.674		
5,000.0	4,990.3	5,030.1	5,019.4	12.1	12.5	77.45	293.2	1,119.8	1,064.3	1,039.9	24.45	43.538		
5,100.0	5,090.1	5,130.0	5,119.0	12.4	12.7	77.49	299.2	1,116.3	1,059.4	1,034.4	24.96	42.448		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0909A - 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		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		
5,200.0	5,189.9	5,229.9	5,218.7	12.6	13.0	77.53	305.3	1,112.8	1,054.5	1,029.0	25.47	41.403		
5,300.0	5,289.6	5,850.0	5,733.4	12.9	17.1	64.38	550.5	969.8	1,046.9	1,016.5	30.47	34.363		
5,400.0	5,389.4	6,099.4	5,793.0	13.1	20.9	49.68	757.5	849.1	998.6	963.2	35.33	28.264		
5,500.0	5,488.8	6,101.7	5,793.0	13.4	20.9	51.61	759.5	847.9	955.9	920.3	35.55	26.886		
5,600.0	5,585.1	6,119.7	5,793.0	13.8	21.2	54.71	775.1	838.9	912.0	876.2	35.75	25.512		
5,700.0	5,674.7	6,142.6	5,793.0	14.4	21.6	57.86	795.1	827.7	866.3	830.5	35.86	24.156		
5,800.0	5,754.1	6,174.8	5,793.0	15.1	22.1	60.79	823.3	812.3	819.4	783.3	36.17	22.654		
5,900.0	5,820.5	6,215.6	5,793.0	16.0	22.7	63.60	859.6	793.5	771.4	734.6	36.81	20.954		
6,000.0	5,871.4	6,264.5	5,793.0	17.1	23.5	66.58	903.5	772.0	722.1	684.2	37.92	19.045		
6,100.0	5,905.1	6,320.2	5,793.0	18.4	24.4	70.11	954.2	748.9	671.3	631.7	39.60	16.953		
6,200.0	5,920.2	6,381.3	5,793.0	19.8	25.4	74.71	1,010.5	725.2	619.0	577.1	41.98	14.746		
6,300.0	5,921.0	6,446.5	5,793.0	21.2	26.5	75.97	1,071.4	702.0	567.7	522.7	44.93	12.635		
6,400.0	5,921.0	6,516.2	5,793.0	22.5	27.7	75.42	1,137.4	679.4	523.6	475.6	47.95	10.919		
6,500.0	5,921.0	6,600.0	5,793.0	24.0	29.1	74.76	1,217.7	655.6	487.8	436.5	51.23	9.520		
6,600.0	5,921.0	6,667.5	5,793.0	25.5	30.2	74.36	1,283.1	638.9	460.3	406.0	54.29	8.478		
6,700.0	5,921.0	6,747.2	5,793.0	27.0	31.5	73.79	1,361.0	622.2	440.0	382.9	57.10	7.706		
6,800.0	5,921.0	6,828.2	5,793.0	28.6	32.8	73.28	1,440.8	608.6	423.9	364.0	59.91	7.076		
6,900.0	5,921.0	6,910.2	5,793.0	30.3	34.2	72.86	1,522.2	598.3	411.9	349.1	62.78	6.561		
7,000.0	5,921.0	7,000.0	5,793.0	32.0	35.6	72.56	1,611.7	591.0	404.0	338.2	65.81	6.139		
7,100.0	5,921.0	7,076.2	5,793.0	33.7	36.8	72.43	1,687.8	588.2	400.2	331.5	68.66	5.829		
7,140.5	5,921.0	7,110.0	5,793.0	34.4	37.4	72.42	1,721.6	587.9	399.8	330.0	69.83	5.726 CC		
7,200.0	5,921.0	7,159.5	5,793.0	35.4	38.1	72.45	1,771.2	588.5	400.6	328.9	71.67	5.589 ES		
7,300.0	5,921.0	7,251.7	5,793.0	37.2	39.6	72.61	1,863.2	592.4	404.5	329.7	74.88	5.402		
7,400.0	5,921.0	7,351.6	5,793.0	39.0	41.1	72.81	1,963.0	597.0	409.0	330.7	78.24	5.227		
7,500.0	5,921.0	7,451.5	5,793.0	40.8	42.7	73.00	2,062.8	601.6	413.4	331.7	81.64	5.064		
7,600.0	5,921.0	7,551.3	5,793.0	42.6	44.3	73.18	2,162.6	606.2	417.8	332.8	85.06	4.912		
7,700.0	5,921.0	7,651.2	5,793.0	44.4	45.9	73.36	2,262.4	610.9	422.2	333.7	88.52	4.770		
7,800.0	5,921.0	7,751.1	5,793.0	46.2	47.6	73.54	2,362.1	615.5	426.7	334.7	92.00	4.638		
7,900.0	5,921.0	7,851.0	5,793.0	48.0	49.3	73.72	2,461.9	620.1	431.1	335.6	95.51	4.514		
8,000.0	5,921.0	7,950.9	5,793.0	49.8	50.9	73.89	2,561.7	624.7	435.6	336.5	99.03	4.398		
8,100.0	5,921.0	8,050.8	5,793.0	51.7	52.6	74.05	2,661.5	629.4	440.0	337.5	102.57	4.290		
8,200.0	5,921.0	8,150.7	5,793.0	53.5	54.3	74.22	2,761.3	634.0	444.5	338.3	106.14	4.188		
8,300.0	5,921.0	8,250.6	5,793.0	55.4	56.1	74.38	2,861.1	638.6	448.9	339.2	109.71	4.092		
8,400.0	5,921.0	8,350.5	5,793.0	57.2	57.8	74.54	2,960.9	643.2	453.4	340.1	113.30	4.002		
8,500.0	5,921.0	8,450.4	5,793.0	59.1	59.6	74.69	3,060.6	647.9	457.9	341.0	116.91	3.916		
8,600.0	5,921.0	8,550.3	5,793.0	60.9	61.3	74.84	3,160.4	652.5	462.3	341.8	120.52	3.836		
8,700.0	5,921.0	8,650.2	5,793.0	62.8	63.1	74.99	3,260.2	657.1	466.8	342.7	124.15	3.760		
8,800.0	5,921.0	8,750.1	5,793.0	64.7	64.9	75.14	3,360.0	661.7	471.3	343.5	127.78	3.688		
8,900.0	5,921.0	8,850.0	5,793.0	66.6	66.6	75.28	3,459.8	666.4	475.7	344.3	131.43	3.620		
9,000.0	5,921.0	8,949.8	5,793.0	68.4	68.4	75.42	3,559.6	671.0	480.2	345.1	135.08	3.555		
9,100.0	5,921.0	9,049.7	5,793.0	70.3	70.2	75.56	3,659.4	675.6	484.7	346.0	138.74	3.494		
9,200.0	5,921.0	9,149.6	5,793.0	72.2	72.0	75.69	3,759.1	680.2	489.2	346.8	142.41	3.435		
9,300.0	5,921.0	9,249.5	5,793.0	74.1	73.8	75.82	3,858.9	684.9	493.7	347.6	146.09	3.379		
9,400.0	5,921.0	9,349.4	5,793.0	76.0	75.6	75.96	3,958.7	689.5	498.2	348.4	149.77	3.326		
9,500.0	5,921.0	9,449.3	5,793.0	77.8	77.5	76.08	4,058.5	694.1	502.7	349.2	153.46	3.276		
9,600.0	5,921.0	9,549.2	5,793.0	79.7	79.3	76.21	4,158.3	698.7	507.2	350.0	157.15	3.227		
9,700.0	5,921.0	9,649.1	5,793.0	81.6	81.1	76.33	4,258.1	703.4	511.7	350.8	160.85	3.181		
9,800.0	5,921.0	9,749.0	5,793.0	83.5	82.9	76.45	4,357.9	708.0	516.2	351.6	164.56	3.137		
9,900.0	5,921.0	9,848.9	5,793.0	85.4	84.8	76.57	4,457.6	712.6	520.7	352.4	168.27	3.094		
10,000.0	5,921.0	9,948.8	5,793.0	87.3	86.6	76.69	4,557.4	717.2	525.2	353.2	171.98	3.054		
10,100.0	5,921.0	10,048.7	5,793.0	89.2	88.4	76.81	4,657.2	721.8	529.7	354.0	175.70	3.015		
10,200.0	5,921.0	10,148.6	5,793.0	91.1	90.3	76.92	4,757.0	726.5	534.2	354.8	179.42	2.977		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0909A - 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		
10,300.0	5,921.0	10,248.5	5,793.0	93.0	92.1	77.03	4,856.8	731.1	538.7	355.5	183.15	2.941		
10,400.0	5,921.0	10,348.3	5,793.0	94.9	94.0	77.14	4,956.6	735.7	543.2	356.3	186.87	2.907		
10,500.0	5,921.0	10,448.2	5,793.0	96.8	95.8	77.25	5,056.4	740.3	547.7	357.1	190.61	2.874		
10,600.0	5,921.0	10,548.1	5,793.0	98.7	97.7	77.35	5,156.1	745.0	552.2	357.9	194.34	2.842		
10,700.0	5,921.0	10,648.0	5,793.0	100.6	99.5	77.46	5,255.9	749.6	556.8	358.7	198.08	2.811		
10,800.0	5,921.0	10,747.9	5,793.0	102.5	101.4	77.56	5,355.7	754.2	561.3	359.5	201.82	2.781		
10,900.0	5,921.0	10,847.8	5,793.0	104.4	103.2	77.66	5,455.5	758.8	565.8	360.2	205.56	2.752		
11,000.0	5,921.0	10,947.7	5,793.0	106.3	105.1	77.76	5,555.3	763.5	570.3	361.0	209.31	2.725		
11,100.0	5,921.0	11,047.6	5,793.0	108.2	107.0	77.86	5,655.1	768.1	574.8	361.8	213.06	2.698		
11,200.0	5,921.0	11,147.5	5,793.0	110.1	108.8	77.95	5,754.9	772.7	579.4	362.6	216.81	2.672		
11,300.0	5,921.0	11,247.4	5,793.0	112.0	110.7	78.05	5,854.6	777.3	583.9	363.3	220.56	2.647		
11,400.0	5,921.0	11,347.3	5,793.0	113.9	112.6	78.14	5,954.4	782.0	588.4	364.1	224.32	2.623		
11,500.0	5,921.0	11,447.2	5,793.0	115.8	114.4	78.23	6,054.2	786.6	593.0	364.9	228.07	2.600		
11,600.0	5,921.0	11,547.1	5,793.0	117.7	116.3	78.32	6,154.0	791.2	597.5	365.7	231.83	2.577		
11,700.0	5,921.0	11,647.0	5,793.0	119.6	118.2	78.41	6,253.8	795.8	602.0	366.4	235.59	2.555		
11,800.0	5,921.0	11,746.8	5,793.0	121.5	120.0	78.50	6,353.6	800.5	606.6	367.2	239.35	2.534		
11,900.0	5,921.0	11,846.7	5,793.0	123.4	121.9	78.59	6,453.4	805.1	611.1	368.0	243.12	2.514		
12,000.0	5,921.0	11,946.6	5,793.0	125.3	123.8	78.67	6,553.1	809.7	615.6	368.8	246.88	2.494		
12,100.0	5,921.0	12,046.5	5,793.0	127.2	125.7	78.76	6,652.9	814.3	620.2	369.5	250.65	2.474		
12,200.0	5,921.0	12,146.4	5,793.0	129.1	127.5	78.84	6,752.7	818.9	624.7	370.3	254.42	2.456		
12,300.0	5,921.0	12,246.3	5,793.0	131.1	129.4	78.92	6,852.5	823.6	629.3	371.1	258.19	2.437		
12,400.0	5,921.0	12,346.2	5,793.0	133.0	131.3	79.00	6,952.3	828.2	633.8	371.9	261.96	2.420		
12,500.0	5,921.0	12,446.1	5,793.0	134.9	133.2	79.08	7,052.1	832.8	638.4	372.6	265.73	2.402		
12,600.0	5,921.0	12,546.0	5,793.0	136.8	135.0	79.16	7,151.9	837.4	642.9	373.4	269.50	2.386		
12,700.0	5,921.0	12,645.9	5,793.0	138.7	136.9	79.24	7,251.6	842.1	647.5	374.2	273.28	2.369		
12,800.0	5,921.0	12,745.8	5,793.0	140.6	138.8	79.31	7,351.4	846.7	652.0	374.9	277.05	2.353		
12,900.0	5,921.0	12,845.7	5,793.0	142.5	140.7	79.39	7,451.2	851.3	656.6	375.7	280.83	2.338		
13,000.0	5,921.0	12,945.6	5,793.0	144.4	142.6	79.46	7,551.0	855.9	661.1	376.5	284.61	2.323		
13,100.0	5,921.0	13,045.4	5,793.0	146.3	144.5	79.53	7,650.8	860.6	665.7	377.3	288.39	2.308		
13,200.0	5,921.0	13,145.3	5,793.0	148.2	146.3	79.61	7,750.6	865.2	670.2	378.0	292.17	2.294		
13,300.0	5,921.0	13,245.2	5,793.0	150.2	148.2	79.68	7,850.4	869.8	674.8	378.8	295.95	2.280		
13,400.0	5,921.0	13,345.1	5,793.0	152.1	150.1	79.75	7,950.1	874.4	679.3	379.6	299.73	2.266		
13,500.0	5,921.0	13,445.0	5,793.0	154.0	152.0	79.82	8,049.9	879.1	683.9	380.4	303.51	2.253		
13,600.0	5,921.0	13,544.9	5,793.0	155.9	153.9	79.88	8,149.7	883.7	688.4	381.1	307.29	2.240		
13,700.0	5,921.0	13,644.8	5,793.0	157.8	155.8	79.95	8,249.5	888.3	693.0	381.9	311.08	2.228		
13,723.8	5,921.0	13,668.5	5,793.0	158.3	156.2	79.97	8,273.2	889.4	694.1	382.1	311.97	2.225 SF		

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0910B - 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)				Between Centres (usft)	Between Ellipses (usft)	
0.0	0.0	0.0	0.0	0.0	0.0	88.85	26.3	1,310.1	1,310.4					
100.0	100.0	92.8	92.8	0.1	0.1	88.85	26.3	1,310.1	1,310.4	1,310.2	0.18	7,265.650		
200.0	200.0	192.8	192.8	0.3	0.3	88.85	26.3	1,310.1	1,310.4	1,309.7	0.62	2,111.937		
300.0	300.0	292.8	292.8	0.5	0.5	88.85	26.3	1,310.1	1,310.4	1,309.3	1.07	1,224.653		
400.0	400.0	392.8	392.8	0.8	0.8	88.85	26.3	1,310.1	1,310.4	1,308.8	1.52	862.354		
500.0	500.0	492.8	492.8	1.0	1.0	88.85	26.3	1,310.1	1,310.4	1,308.4	1.97	665.480		
600.0	600.0	592.8	592.8	1.2	1.2	88.85	26.3	1,310.1	1,310.4	1,307.9	2.42	541.790		
700.0	700.0	692.8	692.8	1.4	1.4	88.85	26.3	1,310.1	1,310.4	1,307.5	2.87	456.873		
800.0	800.0	806.1	806.1	1.7	1.7	88.77	28.1	1,309.5	1,309.9	1,306.5	3.35	391.426		
900.0	900.0	917.6	917.4	1.9	1.9	88.51	34.1	1,307.7	1,308.4	1,304.5	3.82	342.148		
1,000.0	1,000.0	1,017.5	1,017.0	2.1	2.2	76.69	40.8	1,305.6	1,306.1	1,301.8	4.28	305.125		
1,100.0	1,099.8	1,117.4	1,116.7	2.3	2.4	76.68	47.4	1,303.6	1,303.0	1,298.3	4.74	274.777		
1,200.0	1,199.6	1,217.4	1,216.4	2.6	2.6	76.68	54.1	1,301.5	1,299.6	1,294.4	5.21	249.333		
1,300.0	1,299.4	1,317.3	1,316.1	2.8	2.9	76.68	60.8	1,299.5	1,296.1	1,290.4	5.69	227.807		
1,400.0	1,399.1	1,417.2	1,415.8	3.0	3.1	76.69	67.4	1,297.4	1,292.6	1,286.5	6.17	209.422		
1,500.0	1,498.9	1,517.2	1,515.5	3.3	3.4	76.69	74.1	1,295.4	1,289.2	1,282.5	6.66	193.577		
1,600.0	1,598.6	1,617.1	1,615.2	3.5	3.6	76.69	80.7	1,293.3	1,285.7	1,278.6	7.15	179.803		
1,700.0	1,698.4	1,717.1	1,714.9	3.8	3.9	76.69	87.4	1,291.3	1,282.2	1,274.6	7.64	167.736		
1,800.0	1,798.1	1,817.0	1,814.6	4.0	4.1	76.70	94.1	1,289.2	1,278.8	1,270.6	8.14	157.088		
1,900.0	1,897.9	1,916.9	1,914.3	4.3	4.4	76.70	100.7	1,287.2	1,275.3	1,266.7	8.64	147.629		
2,000.0	1,997.6	2,016.9	2,014.0	4.5	4.6	76.70	107.4	1,285.1	1,271.9	1,262.7	9.14	139.176		
2,100.0	2,097.4	2,116.8	2,113.7	4.8	4.9	76.71	114.1	1,283.1	1,268.4	1,258.8	9.64	131.580		
2,200.0	2,197.2	2,216.8	2,213.4	5.0	5.1	76.71	120.7	1,281.0	1,264.9	1,254.8	10.14	124.720		
2,300.0	2,296.9	2,316.7	2,313.1	5.3	5.4	76.71	127.4	1,279.0	1,261.5	1,250.8	10.65	118.496		
2,400.0	2,396.7	2,416.6	2,412.8	5.5	5.6	76.71	134.0	1,276.9	1,258.0	1,246.9	11.15	112.825		
2,500.0	2,496.4	2,516.6	2,512.5	5.8	5.9	76.72	140.7	1,274.9	1,254.5	1,242.9	11.66	107.637		
2,600.0	2,596.2	2,616.5	2,612.2	6.0	6.2	76.72	147.4	1,272.8	1,251.1	1,238.9	12.16	102.873		
2,700.0	2,695.9	2,716.5	2,711.9	6.3	6.4	76.72	154.0	1,270.7	1,247.6	1,234.9	12.67	98.485		
2,800.0	2,795.7	2,816.4	2,811.6	6.5	6.7	76.73	160.7	1,268.7	1,244.1	1,231.0	13.18	94.431		
2,900.0	2,895.5	2,916.3	2,911.3	6.8	6.9	76.73	167.4	1,266.6	1,240.7	1,227.0	13.68	90.673		
3,000.0	2,995.2	3,016.3	3,011.0	7.0	7.2	76.73	174.0	1,264.6	1,237.2	1,223.0	14.19	87.182		
3,100.0	3,095.0	3,116.2	3,110.7	7.3	7.4	76.74	180.7	1,262.5	1,233.8	1,219.1	14.70	83.929		
3,200.0	3,194.7	3,216.2	3,210.4	7.5	7.7	76.74	187.3	1,260.5	1,230.3	1,215.1	15.21	80.892		
3,300.0	3,294.5	3,316.1	3,310.1	7.8	7.9	76.74	194.0	1,258.4	1,226.8	1,211.1	15.72	78.049		
3,400.0	3,394.2	3,416.0	3,409.7	8.0	8.2	76.74	200.7	1,256.4	1,223.4	1,207.1	16.23	75.384		
3,500.0	3,494.0	3,516.0	3,509.4	8.3	8.4	76.75	207.3	1,254.3	1,219.9	1,203.2	16.74	72.879		
3,600.0	3,593.7	3,615.9	3,609.1	8.5	8.7	76.75	214.0	1,252.3	1,216.4	1,199.2	17.25	70.521		
3,700.0	3,693.5	3,715.9	3,708.8	8.8	9.0	76.75	220.7	1,250.2	1,213.0	1,195.2	17.76	68.298		
3,800.0	3,793.3	3,815.8	3,808.5	9.1	9.2	76.76	227.3	1,248.2	1,209.5	1,191.2	18.27	66.198		
3,900.0	3,893.0	3,915.7	3,908.2	9.3	9.5	76.76	234.0	1,246.1	1,206.0	1,187.3	18.78	64.212		
4,000.0	3,992.8	4,015.7	4,007.9	9.6	9.7	76.76	240.6	1,244.1	1,202.6	1,183.3	19.29	62.330		
4,100.0	4,092.5	4,115.6	4,107.6	9.8	10.0	76.77	247.3	1,242.0	1,199.1	1,179.3	19.81	60.544		
4,200.0	4,192.3	4,215.6	4,207.3	10.1	10.2	76.77	254.0	1,240.0	1,195.7	1,175.3	20.32	58.848		
4,300.0	4,292.0	4,315.5	4,307.0	10.3	10.5	76.77	260.6	1,237.9	1,192.2	1,171.4	20.83	57.234		
4,400.0	4,391.8	4,415.4	4,406.7	10.6	10.8	76.78	267.3	1,235.9	1,188.7	1,167.4	21.34	55.698		
4,500.0	4,491.6	4,515.4	4,506.4	10.8	11.0	76.78	274.0	1,233.8	1,185.3	1,163.4	21.86	54.233		
4,600.0	4,591.3	4,615.3	4,606.1	11.1	11.3	76.78	280.6	1,231.8	1,181.8	1,159.4	22.37	52.835		
4,700.0	4,691.1	4,715.3	4,705.8	11.3	11.5	76.79	287.3	1,229.7	1,178.3	1,155.5	22.88	51.499		
4,800.0	4,790.8	4,815.2	4,805.5	11.6	11.8	76.79	293.9	1,227.7	1,174.9	1,151.5	23.39	50.221		
4,900.0	4,890.6	4,915.1	4,905.2	11.9	12.0	76.79	300.6	1,225.6	1,171.4	1,147.5	23.91	48.998		
5,000.0	4,990.3	5,015.1	5,004.9	12.1	12.3	76.80	307.3	1,223.6	1,168.0	1,143.5	24.42	47.826		
5,100.0	5,090.1	5,115.0	5,104.6	12.4	12.5	76.80	313.9	1,221.5	1,164.5	1,139.6	24.93	46.701		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0910B - 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		
5,200.0	5,189.9	5,215.0	5,204.3	12.6	12.8	76.80	320.6	1,219.4	1,161.0	1,135.6	25.45	45.622		
5,300.0	5,289.6	5,314.9	5,304.0	12.9	13.1	76.81	327.3	1,217.4	1,157.6	1,131.6	25.96	44.586		
5,400.0	5,389.4	5,429.7	5,418.4	13.1	13.4	76.78	335.5	1,214.9	1,154.0	1,127.5	26.52	43.508		
5,500.0	5,488.8	5,655.1	5,629.7	13.4	14.4	74.98	405.6	1,193.3	1,143.1	1,115.1	27.92	40.941		
5,600.0	5,585.1	5,830.7	5,761.2	13.8	15.9	73.52	515.7	1,159.4	1,120.0	1,090.1	29.85	37.515		
5,700.0	5,674.7	5,964.5	5,831.4	14.4	17.4	73.09	624.1	1,126.0	1,088.5	1,056.6	31.91	34.112		
5,800.0	5,754.1	6,071.0	5,865.3	15.1	18.9	73.73	720.4	1,096.3	1,051.4	1,017.5	33.95	30.968		
5,900.0	5,820.5	6,160.8	5,877.4	16.0	20.2	75.25	805.4	1,070.1	1,010.6	974.5	36.03	28.049		
6,000.0	5,871.4	6,221.5	5,878.0	17.1	21.1	78.20	863.4	1,052.6	967.8	929.8	37.95	25.501		
6,100.0	5,905.1	6,277.6	5,878.0	18.4	21.9	81.87	917.5	1,037.9	925.4	885.3	40.08	23.089		
6,200.0	5,920.2	6,338.2	5,878.0	19.8	22.8	86.09	976.5	1,023.7	884.0	841.5	42.52	20.790		
6,300.0	5,921.0	6,400.0	5,878.0	21.2	23.7	87.42	1,037.0	1,011.3	845.8	800.6	45.21	18.711		
6,400.0	5,921.0	6,468.2	5,878.0	22.5	24.7	87.39	1,104.3	999.8	815.5	767.5	48.01	16.984		
6,500.0	5,921.0	6,536.9	5,878.0	24.0	25.8	87.38	1,172.3	990.7	793.6	742.8	50.84	15.610		
6,600.0	5,921.0	6,600.0	5,878.0	25.5	26.7	87.36	1,235.1	984.4	780.5	727.0	53.55	14.577		
6,700.0	5,921.0	6,678.1	5,878.0	27.0	28.0	87.35	1,313.1	979.6	774.4	718.0	56.39	13.734		
6,800.0	5,921.0	6,749.3	5,878.0	28.6	29.1	87.34	1,384.2	978.0	772.1	713.0	59.15	13.053		
6,810.9	5,921.0	6,757.0	5,878.0	28.8	29.2	87.34	1,392.0	978.0	772.1	712.7	59.39	13.002 CC		
6,900.0	5,921.0	6,820.5	5,878.0	30.3	30.2	87.35	1,455.4	979.0	773.6	711.6	61.95	12.488		
7,000.0	5,921.0	6,918.8	5,878.0	32.0	31.8	87.36	1,553.7	982.5	777.1	711.9	65.25	11.911		
7,100.0	5,921.0	7,018.7	5,878.0	33.7	33.4	87.37	1,653.5	986.0	780.7	712.0	68.63	11.375		
7,200.0	5,921.0	7,118.7	5,878.0	35.4	35.1	87.38	1,753.4	989.6	784.2	712.1	72.05	10.883		
7,300.0	5,921.0	7,218.6	5,878.0	37.2	36.8	87.39	1,853.3	993.1	787.7	712.2	75.52	10.431		
7,400.0	5,921.0	7,318.5	5,878.0	39.0	38.5	87.41	1,953.2	996.6	791.2	712.2	79.02	10.014		
7,500.0	5,921.0	7,418.5	5,878.0	40.8	40.2	87.42	2,053.0	1,000.2	794.8	712.2	82.54	9.629		
7,600.0	5,921.0	7,518.4	5,878.0	42.6	42.0	87.43	2,152.9	1,003.7	798.3	712.2	86.09	9.273		
7,700.0	5,921.0	7,618.3	5,878.0	44.4	43.7	87.44	2,252.8	1,007.2	801.8	712.2	89.66	8.943		
7,800.0	5,921.0	7,718.3	5,878.0	46.2	45.5	87.45	2,352.7	1,010.8	805.4	712.1	93.25	8.636		
7,900.0	5,921.0	7,818.2	5,878.0	48.0	47.3	87.46	2,452.5	1,014.3	808.9	712.0	96.86	8.351		
8,000.0	5,921.0	7,918.2	5,878.0	49.8	49.1	87.47	2,552.4	1,017.8	812.4	711.9	100.49	8.085		
8,100.0	5,921.0	8,018.1	5,878.0	51.7	50.9	87.48	2,652.3	1,021.4	816.0	711.8	104.12	7.836		
8,200.0	5,921.0	8,118.0	5,878.0	53.5	52.7	87.50	2,752.2	1,024.9	819.5	711.7	107.77	7.604		
8,300.0	5,921.0	8,218.0	5,878.0	55.4	54.5	87.51	2,852.0	1,028.4	823.0	711.6	111.43	7.386		
8,400.0	5,921.0	8,317.9	5,878.0	57.2	56.3	87.52	2,951.9	1,032.0	826.6	711.4	115.10	7.181		
8,500.0	5,921.0	8,417.8	5,878.0	59.1	58.2	87.53	3,051.8	1,035.5	830.1	711.3	118.78	6.988		
8,600.0	5,921.0	8,517.8	5,878.0	60.9	60.0	87.54	3,151.7	1,039.0	833.6	711.1	122.47	6.807		
8,700.0	5,921.0	8,617.7	5,878.0	62.8	61.8	87.55	3,251.5	1,042.5	837.1	711.0	126.16	6.635		
8,800.0	5,921.0	8,717.7	5,878.0	64.7	63.7	87.56	3,351.4	1,046.1	840.7	710.8	129.86	6.474		
8,900.0	5,921.0	8,817.6	5,878.0	66.6	65.5	87.57	3,451.3	1,049.6	844.2	710.6	133.57	6.320		
9,000.0	5,921.0	8,917.5	5,878.0	68.4	67.4	87.58	3,551.2	1,053.1	847.7	710.5	137.28	6.175		
9,100.0	5,921.0	9,017.5	5,878.0	70.3	69.2	87.59	3,651.0	1,056.7	851.3	710.3	141.00	6.037		
9,200.0	5,921.0	9,117.4	5,878.0	72.2	71.1	87.60	3,750.9	1,060.2	854.8	710.1	144.72	5.906		
9,300.0	5,921.0	9,217.3	5,878.0	74.1	72.9	87.61	3,850.8	1,063.7	858.3	709.9	148.45	5.782		
9,400.0	5,921.0	9,317.3	5,878.0	76.0	74.8	87.62	3,950.7	1,067.3	861.9	709.7	152.18	5.663		
9,500.0	5,921.0	9,417.2	5,878.0	77.8	76.7	87.63	4,050.5	1,070.8	865.4	709.5	155.92	5.550		
9,600.0	5,921.0	9,517.2	5,878.0	79.7	78.5	87.64	4,150.4	1,074.3	868.9	709.3	159.66	5.442		
9,700.0	5,921.0	9,617.1	5,878.0	81.6	80.4	87.65	4,250.3	1,077.9	872.5	709.1	163.40	5.339		
9,800.0	5,921.0	9,717.0	5,878.0	83.5	82.3	87.66	4,350.2	1,081.4	876.0	708.8	167.14	5.241		
9,900.0	5,921.0	9,817.0	5,878.0	85.4	84.2	87.67	4,450.0	1,084.9	879.5	708.6	170.89	5.147		
10,000.0	5,921.0	9,916.9	5,878.0	87.3	86.0	87.68	4,549.9	1,088.4	883.0	708.4	174.64	5.056		
10,100.0	5,921.0	10,016.8	5,878.0	89.2	87.9	87.68	4,649.8	1,092.0	886.6	708.2	178.39	4.970		
10,200.0	5,921.0	10,116.8	5,878.0	91.1	89.8	87.69	4,749.7	1,095.5	890.1	708.0	182.15	4.887		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0910B - 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
10,300.0	5,921.0	10,216.7	5,878.0	93.0	91.7	87.70	4,849.5	1,099.0	893.6	707.7	185.91	4.807	
10,400.0	5,921.0	10,316.7	5,878.0	94.9	93.6	87.71	4,949.4	1,102.6	897.2	707.5	189.67	4.730	
10,500.0	5,921.0	10,416.6	5,878.0	96.8	95.4	87.72	5,049.3	1,106.1	900.7	707.3	193.43	4.656	
10,600.0	5,921.0	10,516.5	5,878.0	98.7	97.3	87.73	5,149.2	1,109.6	904.2	707.0	197.19	4.586	
10,700.0	5,921.0	10,616.5	5,878.0	100.6	99.2	87.74	5,249.0	1,113.2	907.8	706.8	200.96	4.517	
10,800.0	5,921.0	10,716.4	5,878.0	102.5	101.1	87.75	5,348.9	1,116.7	911.3	706.6	204.72	4.451	
10,900.0	5,921.0	10,816.3	5,878.0	104.4	103.0	87.76	5,448.8	1,120.2	914.8	706.3	208.49	4.388	
11,000.0	5,921.0	10,916.3	5,878.0	106.3	104.9	87.76	5,548.7	1,123.8	918.4	706.1	212.26	4.327	
11,100.0	5,921.0	11,016.2	5,878.0	108.2	106.8	87.77	5,648.5	1,127.3	921.9	705.9	216.03	4.267	
11,200.0	5,921.0	11,116.2	5,878.0	110.1	108.6	87.78	5,748.4	1,130.8	925.4	705.6	219.81	4.210	
11,300.0	5,921.0	11,216.1	5,878.0	112.0	110.5	87.79	5,848.3	1,134.4	929.0	705.4	223.58	4.155	
11,400.0	5,921.0	11,316.0	5,878.0	113.9	112.4	87.80	5,948.2	1,137.9	932.5	705.1	227.36	4.101	
11,500.0	5,921.0	11,416.0	5,878.0	115.8	114.3	87.81	6,048.0	1,141.4	936.0	704.9	231.13	4.050	
11,600.0	5,921.0	11,515.9	5,878.0	117.7	116.2	87.82	6,147.9	1,144.9	939.5	704.6	234.91	4.000	
11,700.0	5,921.0	11,615.8	5,878.0	119.6	118.1	87.82	6,247.8	1,148.5	943.1	704.4	238.69	3.951	
11,800.0	5,921.0	11,715.8	5,878.0	121.5	120.0	87.83	6,347.7	1,152.0	946.6	704.1	242.47	3.904	
11,900.0	5,921.0	11,815.7	5,878.0	123.4	121.9	87.84	6,447.5	1,155.5	950.1	703.9	246.25	3.858	
12,000.0	5,921.0	11,915.7	5,878.0	125.3	123.8	87.85	6,547.4	1,159.1	953.7	703.6	250.03	3.814	
12,100.0	5,921.0	12,015.6	5,878.0	127.2	125.7	87.86	6,647.3	1,162.6	957.2	703.4	253.81	3.771	
12,200.0	5,921.0	12,115.5	5,878.0	129.1	127.6	87.86	6,747.2	1,166.1	960.7	703.1	257.59	3.730	
12,300.0	5,921.0	12,215.5	5,878.0	131.1	129.5	87.87	6,847.0	1,169.7	964.3	702.9	261.38	3.689	
12,400.0	5,921.0	12,315.4	5,878.0	133.0	131.4	87.88	6,946.9	1,173.2	967.8	702.6	265.16	3.650	
12,500.0	5,921.0	12,415.3	5,878.0	134.9	133.3	87.89	7,046.8	1,176.7	971.3	702.4	268.95	3.612	
12,600.0	5,921.0	12,515.3	5,878.0	136.8	135.2	87.89	7,146.7	1,180.3	974.9	702.1	272.73	3.574	
12,700.0	5,921.0	12,615.2	5,878.0	138.7	137.1	87.90	7,246.5	1,183.8	978.4	701.9	276.52	3.538	
12,800.0	5,921.0	12,715.2	5,878.0	140.6	139.0	87.91	7,346.4	1,187.3	981.9	701.6	280.30	3.503	
12,900.0	5,921.0	12,815.1	5,878.0	142.5	140.9	87.92	7,446.3	1,190.9	985.5	701.4	284.09	3.469	
13,000.0	5,921.0	12,915.0	5,878.0	144.4	142.8	87.92	7,546.2	1,194.4	989.0	701.1	287.88	3.435	
13,100.0	5,921.0	13,015.0	5,878.0	146.3	144.7	87.93	7,646.0	1,197.9	992.5	700.8	291.67	3.403	
13,200.0	5,921.0	13,114.9	5,878.0	148.2	146.6	87.94	7,745.9	1,201.4	996.1	700.6	295.46	3.371	
13,300.0	5,921.0	13,214.8	5,878.0	150.2	148.5	87.95	7,845.8	1,205.0	999.6	700.3	299.25	3.340	
13,400.0	5,921.0	13,314.8	5,878.0	152.1	150.4	87.95	7,945.7	1,208.5	1,003.1	700.1	303.04	3.310	
13,500.0	5,921.0	13,414.7	5,878.0	154.0	152.3	87.96	8,045.5	1,212.0	1,006.6	699.8	306.83	3.281	
13,600.0	5,921.0	13,514.7	5,878.0	155.9	154.2	87.97	8,145.4	1,215.6	1,010.2	699.6	310.62	3.252	
13,700.0	5,921.0	13,614.6	5,878.0	157.8	156.1	87.97	8,245.3	1,219.1	1,013.7	699.3	314.41	3.224	
13,723.8	5,921.0	13,638.3	5,878.0	158.3	156.5	87.98	8,269.0	1,219.9	1,014.5	699.2	315.31	3.218 ES, SF	

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0911A - 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	0.0	0.0	0.0	0.0	88.88	26.3	1,342.2	1,342.5					
100.0	100.0	92.8	92.8	0.1	0.1	88.88	26.3	1,342.2	1,342.5	1,342.3	0.18	7,443.614		
200.0	200.0	192.8	192.8	0.3	0.3	88.88	26.3	1,342.2	1,342.5	1,341.8	0.62	2,163.667		
300.0	300.0	292.8	292.8	0.5	0.5	88.88	26.3	1,342.2	1,342.5	1,341.4	1.07	1,254.650		
400.0	400.0	392.8	392.8	0.8	0.8	88.88	26.3	1,342.2	1,342.5	1,340.9	1.52	883.476		
500.0	500.0	492.8	492.8	1.0	1.0	88.88	26.3	1,342.2	1,342.5	1,340.5	1.97	681.780		
600.0	600.0	592.8	592.8	1.2	1.2	88.88	26.3	1,342.2	1,342.5	1,340.0	2.42	555.060		
700.0	700.0	692.8	692.8	1.4	1.4	88.88	26.3	1,342.2	1,342.5	1,339.6	2.87	468.063		
800.0	800.0	792.8	792.8	1.7	1.7	88.88	26.3	1,342.2	1,342.5	1,339.1	3.32	404.642		
900.0	900.0	892.8	892.8	1.9	1.9	88.88	26.3	1,342.2	1,342.5	1,338.7	3.77	356.357		
1,000.0	1,000.0	997.1	997.1	2.1	2.1	77.26	27.9	1,342.0	1,341.9	1,337.7	4.22	317.673		
1,100.0	1,099.8	1,101.6	1,101.4	2.3	2.3	77.28	33.3	1,341.4	1,340.3	1,335.6	4.68	286.179		
1,200.0	1,199.6	1,201.6	1,201.2	2.6	2.6	77.28	40.2	1,340.6	1,338.1	1,332.9	5.14	260.191		
1,300.0	1,299.4	1,301.6	1,300.9	2.8	2.8	77.27	47.2	1,339.8	1,335.9	1,330.3	5.61	238.073		
1,400.0	1,399.1	1,401.5	1,400.6	3.0	3.0	77.27	54.1	1,339.0	1,333.7	1,327.6	6.09	219.105		
1,500.0	1,498.9	1,501.5	1,500.4	3.3	3.3	77.26	61.0	1,338.2	1,331.5	1,324.9	6.57	202.714		
1,600.0	1,598.6	1,601.5	1,600.1	3.5	3.5	77.25	68.0	1,337.4	1,329.3	1,322.2	7.05	188.441		
1,700.0	1,698.4	1,701.5	1,699.8	3.8	3.8	77.25	74.9	1,336.6	1,327.1	1,319.5	7.54	175.922		
1,800.0	1,798.1	1,801.4	1,799.6	4.0	4.0	77.24	81.8	1,335.8	1,324.9	1,316.9	8.04	164.868		
1,900.0	1,897.9	1,901.4	1,899.3	4.3	4.3	77.24	88.7	1,335.1	1,322.7	1,314.2	8.53	155.045		
2,000.0	1,997.6	2,001.4	1,999.0	4.5	4.5	77.23	95.7	1,334.3	1,320.5	1,311.5	9.03	146.266		
2,100.0	2,097.4	2,101.4	2,098.8	4.8	4.8	77.22	102.6	1,333.5	1,318.3	1,308.8	9.53	138.377		
2,200.0	2,197.2	2,201.4	2,198.5	5.0	5.0	77.22	109.5	1,332.7	1,316.1	1,306.1	10.03	131.254		
2,300.0	2,296.9	2,301.3	2,298.2	5.3	5.3	77.21	116.5	1,331.9	1,313.9	1,303.4	10.53	124.792		
2,400.0	2,396.7	2,401.3	2,398.0	5.5	5.5	77.20	123.4	1,331.1	1,311.7	1,300.7	11.03	118.905		
2,500.0	2,496.4	2,501.3	2,497.7	5.8	5.8	77.20	130.3	1,330.3	1,309.5	1,298.0	11.54	113.522		
2,600.0	2,596.2	2,601.3	2,597.4	6.0	6.0	77.19	137.2	1,329.5	1,307.3	1,295.3	12.04	108.582		
2,700.0	2,695.9	2,701.2	2,697.2	6.3	6.3	77.19	144.2	1,328.7	1,305.1	1,292.6	12.55	104.032		
2,800.0	2,795.7	2,801.2	2,796.9	6.5	6.5	77.18	151.1	1,327.9	1,302.9	1,289.9	13.05	99.830		
2,900.0	2,895.5	2,901.2	2,896.6	6.8	6.8	77.17	158.0	1,327.1	1,300.7	1,287.2	13.56	95.937		
3,000.0	2,995.2	3,001.2	2,996.4	7.0	7.0	77.17	165.0	1,326.3	1,298.5	1,284.5	14.07	92.321		
3,100.0	3,095.0	3,101.1	3,096.1	7.3	7.3	77.16	171.9	1,325.5	1,296.3	1,281.7	14.57	88.953		
3,200.0	3,194.7	3,201.1	3,195.8	7.5	7.5	77.15	178.8	1,324.7	1,294.1	1,279.0	15.08	85.810		
3,300.0	3,294.5	3,301.1	3,295.6	7.8	7.8	77.15	185.7	1,324.0	1,291.9	1,276.3	15.59	82.869		
3,400.0	3,394.2	3,401.1	3,395.3	8.0	8.0	77.14	192.7	1,323.2	1,289.7	1,273.6	16.10	80.112		
3,500.0	3,494.0	3,501.0	3,495.0	8.3	8.3	77.13	199.6	1,322.4	1,287.5	1,270.9	16.61	77.522		
3,600.0	3,593.7	3,601.0	3,594.8	8.5	8.6	77.13	206.5	1,321.6	1,285.3	1,268.2	17.12	75.086		
3,700.0	3,693.5	3,701.0	3,694.5	8.8	8.8	77.12	213.5	1,320.8	1,283.1	1,265.5	17.63	72.788		
3,800.0	3,793.3	3,801.0	3,794.2	9.1	9.1	77.11	220.4	1,320.0	1,280.9	1,262.8	18.14	70.619		
3,900.0	3,893.0	3,900.9	3,894.0	9.3	9.3	77.11	227.3	1,319.2	1,278.7	1,260.1	18.65	68.568		
4,000.0	3,992.8	4,000.9	3,993.7	9.6	9.6	77.10	234.2	1,318.4	1,276.5	1,257.4	19.16	66.625		
4,100.0	4,092.5	4,100.9	4,093.4	9.8	9.8	77.09	241.2	1,317.6	1,274.3	1,254.7	19.67	64.782		
4,200.0	4,192.3	4,200.9	4,193.2	10.1	10.1	77.09	248.1	1,316.8	1,272.1	1,252.0	20.18	63.032		
4,300.0	4,292.0	4,300.8	4,292.9	10.3	10.3	77.08	255.0	1,316.0	1,269.9	1,249.3	20.69	61.368		
4,400.0	4,391.8	4,400.8	4,392.6	10.6	10.6	77.07	262.0	1,315.2	1,267.7	1,246.5	21.21	59.783		
4,500.0	4,491.6	4,500.8	4,492.3	10.8	10.8	77.07	268.9	1,314.4	1,265.6	1,243.8	21.72	58.273		
4,600.0	4,591.3	4,600.8	4,592.1	11.1	11.1	77.06	275.8	1,313.6	1,263.4	1,241.1	22.23	56.832		
4,700.0	4,691.1	4,700.7	4,691.8	11.3	11.4	77.05	282.7	1,312.9	1,261.2	1,238.4	22.74	55.455		
4,800.0	4,790.8	4,800.7	4,791.5	11.6	11.6	77.05	289.7	1,312.1	1,259.0	1,235.7	23.25	54.138		
4,900.0	4,890.6	4,900.7	4,891.3	11.9	11.9	77.04	296.6	1,311.3	1,256.8	1,233.0	23.77	52.878		
5,000.0	4,990.3	5,000.7	4,991.0	12.1	12.1	77.03	303.5	1,310.5	1,254.6	1,230.3	24.28	51.671		
5,100.0	5,090.1	5,100.6	5,090.7	12.4	12.4	77.03	310.5	1,309.7	1,252.4	1,227.6	24.79	50.513		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0911A - 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)				
5,200.0	5,189.9	5,200.6	5,190.5	12.6	12.6	77.02	317.4	1,308.9	1,250.2	1,224.9	25.31	49.403		
5,300.0	5,289.6	5,300.6	5,290.2	12.9	12.9	77.01	324.3	1,308.1	1,248.0	1,222.2	25.82	48.336		
5,400.0	5,389.4	5,421.5	5,409.4	13.1	13.3	76.54	342.6	1,306.0	1,245.1	1,218.6	26.47	47.035		
5,500.0	5,488.8	5,537.3	5,516.9	13.4	13.9	75.37	385.0	1,301.1	1,240.0	1,212.7	27.33	45.377		
5,600.0	5,585.1	5,643.3	5,604.8	13.8	14.6	74.80	443.6	1,294.4	1,230.3	1,201.8	28.42	43.284		
5,700.0	5,674.7	5,741.2	5,673.7	14.4	15.4	74.78	512.3	1,286.6	1,215.8	1,186.0	29.77	40.844		
5,800.0	5,754.1	5,832.2	5,725.3	15.1	16.4	75.32	586.7	1,278.1	1,197.1	1,165.8	31.38	38.155		
5,900.0	5,820.5	5,917.9	5,761.2	16.0	17.4	76.38	663.9	1,269.2	1,174.9	1,141.7	33.27	35.311		
6,000.0	5,871.4	6,000.0	5,783.3	17.1	18.5	77.92	742.4	1,260.3	1,149.8	1,114.4	35.48	32.409		
6,100.0	5,905.1	6,078.1	5,792.5	18.4	19.7	79.91	819.3	1,251.4	1,122.5	1,084.6	37.95	29.579		
6,200.0	5,920.2	6,143.1	5,793.0	19.8	20.6	82.48	884.0	1,244.5	1,094.1	1,053.7	40.45	27.051		
6,300.0	5,921.0	6,200.0	5,793.0	21.2	21.4	83.35	940.7	1,240.1	1,068.1	1,025.2	42.91	24.895		
6,400.0	5,921.0	6,268.3	5,793.0	22.5	22.4	83.33	1,008.9	1,237.1	1,050.1	1,004.7	45.43	23.114		
6,500.0	5,921.0	6,332.7	5,793.0	24.0	23.3	83.32	1,073.4	1,236.5	1,040.5	992.6	47.89	21.725		
6,562.2	5,921.0	6,373.1	5,793.0	24.9	23.9	83.32	1,113.7	1,237.3	1,038.8	989.4	49.39	21.032 CC		
6,600.0	5,921.0	6,401.7	5,793.0	25.5	24.3	83.32	1,142.3	1,238.3	1,039.4	989.1	50.39	20.630 ES		
6,700.0	5,921.0	6,495.4	5,793.0	27.0	25.7	83.35	1,235.9	1,242.4	1,043.7	990.3	53.37	19.557		
6,800.0	5,921.0	6,595.3	5,793.0	28.6	27.4	83.38	1,335.7	1,246.7	1,048.0	991.4	56.61	18.513		
6,900.0	5,921.0	6,695.2	5,793.0	30.3	29.0	83.40	1,435.5	1,251.1	1,052.4	992.4	59.92	17.562		
7,000.0	5,921.0	6,795.1	5,793.0	32.0	30.7	83.43	1,535.3	1,255.5	1,056.7	993.4	63.29	16.697		
7,100.0	5,921.0	6,895.0	5,793.0	33.7	32.5	83.46	1,635.1	1,259.8	1,061.0	994.3	66.70	15.908		
7,200.0	5,921.0	6,994.9	5,793.0	35.4	34.2	83.48	1,734.9	1,264.2	1,065.4	995.2	70.15	15.187		
7,300.0	5,921.0	7,094.8	5,793.0	37.2	36.0	83.51	1,834.7	1,268.5	1,069.7	996.1	73.63	14.527		
7,400.0	5,921.0	7,194.7	5,793.0	39.0	37.7	83.54	1,934.5	1,272.9	1,074.0	996.9	77.15	13.922		
7,500.0	5,921.0	7,294.6	5,793.0	40.8	39.5	83.56	2,034.3	1,277.2	1,078.4	997.7	80.69	13.365		
7,600.0	5,921.0	7,394.5	5,793.0	42.6	41.3	83.59	2,134.2	1,281.6	1,082.7	998.4	84.25	12.851		
7,700.0	5,921.0	7,494.4	5,793.0	44.4	43.1	83.61	2,234.0	1,286.0	1,087.0	999.2	87.83	12.377		
7,800.0	5,921.0	7,594.3	5,793.0	46.2	44.9	83.64	2,333.8	1,290.3	1,091.4	999.9	91.43	11.937		
7,900.0	5,921.0	7,694.2	5,793.0	48.0	46.8	83.66	2,433.6	1,294.7	1,095.7	1,000.7	95.04	11.529		
8,000.0	5,921.0	7,794.1	5,793.0	49.8	48.6	83.69	2,533.4	1,299.0	1,100.0	1,001.4	98.67	11.149		
8,100.0	5,921.0	7,894.0	5,793.0	51.7	50.4	83.71	2,633.2	1,303.4	1,104.4	1,002.1	102.30	10.795		
8,200.0	5,921.0	7,993.9	5,793.0	53.5	52.3	83.74	2,733.0	1,307.8	1,108.7	1,002.8	105.95	10.464		
8,300.0	5,921.0	8,093.8	5,793.0	55.4	54.1	83.76	2,832.8	1,312.1	1,113.0	1,003.4	109.61	10.154		
8,400.0	5,921.0	8,193.7	5,793.0	57.2	56.0	83.79	2,932.6	1,316.5	1,117.4	1,004.1	113.28	9.864		
8,500.0	5,921.0	8,293.6	5,793.0	59.1	57.8	83.81	3,032.4	1,320.8	1,121.7	1,004.8	116.95	9.591		
8,600.0	5,921.0	8,393.5	5,793.0	60.9	59.7	83.84	3,132.3	1,325.2	1,126.1	1,005.4	120.64	9.334		
8,700.0	5,921.0	8,493.4	5,793.0	62.8	61.5	83.86	3,232.1	1,329.5	1,130.4	1,006.1	124.33	9.092		
8,800.0	5,921.0	8,593.4	5,793.0	64.7	63.4	83.88	3,331.9	1,333.9	1,134.7	1,006.7	128.02	8.864		
8,900.0	5,921.0	8,693.3	5,793.0	66.6	65.3	83.91	3,431.7	1,338.3	1,139.1	1,007.3	131.72	8.647		
9,000.0	5,921.0	8,793.2	5,793.0	68.4	67.1	83.93	3,531.5	1,342.6	1,143.4	1,008.0	135.43	8.443		
9,100.0	5,921.0	8,893.1	5,793.0	70.3	69.0	83.95	3,631.3	1,347.0	1,147.7	1,008.6	139.14	8.249		
9,200.0	5,921.0	8,993.0	5,793.0	72.2	70.9	83.98	3,731.1	1,351.3	1,152.1	1,009.2	142.85	8.065		
9,300.0	5,921.0	9,092.9	5,793.0	74.1	72.8	84.00	3,830.9	1,355.7	1,156.4	1,009.8	146.57	7.890		
9,400.0	5,921.0	9,192.8	5,793.0	76.0	74.6	84.02	3,930.7	1,360.0	1,160.8	1,010.5	150.30	7.723		
9,500.0	5,921.0	9,292.7	5,793.0	77.8	76.5	84.04	4,030.5	1,364.4	1,165.1	1,011.1	154.02	7.564		
9,600.0	5,921.0	9,392.6	5,793.0	79.7	78.4	84.07	4,130.3	1,368.8	1,169.4	1,011.7	157.75	7.413		
9,700.0	5,921.0	9,492.5	5,793.0	81.6	80.3	84.09	4,230.2	1,373.1	1,173.8	1,012.3	161.49	7.269		
9,800.0	5,921.0	9,592.4	5,793.0	83.5	82.2	84.11	4,330.0	1,377.5	1,178.1	1,012.9	165.22	7.131		
9,900.0	5,921.0	9,692.3	5,793.0	85.4	84.1	84.13	4,429.8	1,381.8	1,182.5	1,013.5	168.96	6.998		
10,000.0	5,921.0	9,792.2	5,793.0	87.3	85.9	84.15	4,529.6	1,386.2	1,186.8	1,014.1	172.70	6.872		
10,100.0	5,921.0	9,892.1	5,793.0	89.2	87.8	84.17	4,629.4	1,390.5	1,191.1	1,014.7	176.44	6.751		
10,200.0	5,921.0	9,992.0	5,793.0	91.1	89.7	84.20	4,729.2	1,394.9	1,195.5	1,015.3	180.19	6.635		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21B-0911A - 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
10,300.0	5,921.0	10,091.9	5,793.0	93.0	91.6	84.22	4,829.0	1,399.3	1,199.8	1,015.9	183.93	6.523	
10,400.0	5,921.0	10,191.8	5,793.0	94.9	93.5	84.24	4,928.8	1,403.6	1,204.2	1,016.5	187.68	6.416	
10,500.0	5,921.0	10,291.7	5,793.0	96.8	95.4	84.26	5,028.6	1,408.0	1,208.5	1,017.1	191.43	6.313	
10,600.0	5,921.0	10,391.6	5,793.0	98.7	97.3	84.28	5,128.4	1,412.3	1,212.8	1,017.6	195.19	6.214	
10,700.0	5,921.0	10,491.5	5,793.0	100.6	99.2	84.30	5,228.3	1,416.7	1,217.2	1,018.2	198.94	6.118	
10,800.0	5,921.0	10,591.4	5,793.0	102.5	101.1	84.32	5,328.1	1,421.0	1,221.5	1,018.8	202.70	6.026	
10,900.0	5,921.0	10,691.4	5,793.0	104.4	103.0	84.34	5,427.9	1,425.4	1,225.9	1,019.4	206.46	5.938	
11,000.0	5,921.0	10,791.3	5,793.0	106.3	104.9	84.36	5,527.7	1,429.8	1,230.2	1,020.0	210.21	5.852	
11,100.0	5,921.0	10,891.2	5,793.0	108.2	106.7	84.38	5,627.5	1,434.1	1,234.5	1,020.6	213.97	5.770	
11,200.0	5,921.0	10,991.1	5,793.0	110.1	108.6	84.40	5,727.3	1,438.5	1,238.9	1,021.1	217.76	5.689	
11,300.0	5,921.0	11,091.0	5,793.0	112.0	110.5	84.42	5,827.1	1,442.8	1,243.2	1,021.7	221.55	5.611	
11,400.0	5,921.0	11,190.9	5,793.0	113.9	112.4	84.44	5,926.9	1,447.2	1,247.6	1,022.2	225.34	5.536	
11,500.0	5,921.0	11,290.8	5,793.0	115.8	114.3	84.46	6,026.7	1,451.5	1,251.9	1,022.8	229.14	5.464	
11,600.0	5,921.0	11,390.7	5,793.0	117.7	116.2	84.48	6,126.5	1,455.9	1,256.2	1,023.3	232.93	5.393	
11,700.0	5,921.0	11,490.6	5,793.0	119.6	118.1	84.50	6,226.4	1,460.3	1,260.6	1,023.9	236.72	5.325	
11,800.0	5,921.0	11,590.5	5,793.0	121.5	120.0	84.51	6,326.2	1,464.6	1,264.9	1,024.4	240.52	5.259	
11,900.0	5,921.0	11,690.4	5,793.0	123.4	121.9	84.53	6,426.0	1,469.0	1,269.3	1,025.0	244.32	5.195	
12,000.0	5,921.0	11,790.3	5,793.0	125.3	123.8	84.55	6,525.8	1,473.3	1,273.6	1,025.5	248.12	5.133	
12,100.0	5,921.0	11,890.2	5,793.0	127.2	125.7	84.57	6,625.6	1,477.7	1,278.0	1,026.0	251.92	5.073	
12,200.0	5,921.0	11,990.1	5,793.0	129.1	127.6	84.59	6,725.4	1,482.0	1,282.3	1,026.6	255.72	5.015	
12,300.0	5,921.0	12,090.0	5,793.0	131.1	129.5	84.61	6,825.2	1,486.4	1,286.6	1,027.1	259.52	4.958	
12,400.0	5,921.0	12,189.9	5,793.0	133.0	131.4	84.63	6,925.0	1,490.8	1,291.0	1,027.7	263.32	4.903	
12,500.0	5,921.0	12,289.8	5,793.0	134.9	133.3	84.64	7,024.8	1,495.1	1,295.3	1,028.2	267.12	4.849	
12,600.0	5,921.0	12,389.7	5,793.0	136.8	135.2	84.66	7,124.6	1,499.5	1,299.7	1,028.7	270.92	4.797	
12,700.0	5,921.0	12,489.6	5,793.0	138.7	137.1	84.68	7,224.4	1,503.8	1,304.0	1,029.3	274.73	4.747	
12,800.0	5,921.0	12,589.5	5,793.0	140.6	139.0	84.70	7,324.3	1,508.2	1,308.4	1,029.8	278.53	4.697	
12,900.0	5,921.0	12,689.4	5,793.0	142.5	140.9	84.72	7,424.1	1,512.6	1,312.7	1,030.4	282.33	4.649	
13,000.0	5,921.0	12,789.4	5,793.0	144.4	142.8	84.73	7,523.9	1,516.9	1,317.0	1,030.9	286.14	4.603	
13,100.0	5,921.0	12,889.3	5,793.0	146.3	144.7	84.75	7,623.7	1,521.3	1,321.4	1,031.4	289.95	4.557	
13,200.0	5,921.0	12,989.2	5,793.0	148.2	146.6	84.77	7,723.5	1,525.6	1,325.7	1,032.0	293.75	4.513	
13,300.0	5,921.0	13,089.1	5,793.0	150.2	148.5	84.78	7,823.3	1,530.0	1,330.1	1,032.5	297.56	4.470	
13,400.0	5,921.0	13,189.0	5,793.0	152.1	150.4	84.80	7,923.1	1,534.3	1,334.4	1,033.1	301.37	4.428	
13,500.0	5,921.0	13,288.9	5,793.0	154.0	152.3	84.82	8,022.9	1,538.7	1,338.8	1,033.6	305.18	4.387	
13,600.0	5,921.0	13,388.8	5,793.0	155.9	154.2	84.83	8,122.7	1,543.1	1,343.1	1,034.1	308.98	4.347	
13,700.0	5,921.0	13,488.7	5,793.0	157.8	156.1	84.85	8,222.5	1,547.4	1,347.5	1,034.7	312.79	4.308	
13,723.8	5,921.0	13,512.4	5,793.0	158.3	156.6	84.86	8,246.3	1,548.4	1,348.5	1,034.8	313.70	4.299 SF	

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0905A - 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		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			
0.0	0.0	0.0	0.0	0.0	0.0	-90.96	-1.1	-65.3	65.3					
100.0	100.0	100.0	100.0	0.1	0.1	-90.96	-1.1	-65.3	65.3	65.1	0.19	350.180		
200.0	200.0	200.0	200.0	0.3	0.3	-90.96	-1.1	-65.3	65.3	64.7	0.64	102.695		
300.0	300.0	300.0	300.0	0.5	0.5	-90.96	-1.1	-65.3	65.3	64.2	1.09	60.170		
400.0	400.0	400.0	400.0	0.8	0.8	-90.96	-1.1	-65.3	65.3	63.8	1.54	42.550		
466.7	466.7	466.7	466.7	0.9	0.9	-90.96	-1.1	-65.3	65.3	63.5	1.83	35.601 CC		
500.0	500.0	500.0	500.0	1.0	1.0	-90.96	-1.1	-65.3	65.3	63.3	1.98	32.913 ES		
600.0	600.0	599.3	599.2	1.2	1.2	-89.54	0.5	-65.9	65.9	63.5	2.43	27.099		
700.0	700.0	698.3	698.1	1.4	1.4	-85.44	5.4	-67.6	67.8	64.9	2.88	23.547		
800.0	800.0	798.0	797.6	1.7	1.7	-80.29	12.0	-69.9	70.9	67.6	3.34	21.250		
900.0	900.0	897.8	897.1	1.9	1.9	-75.60	18.5	-72.1	74.5	70.7	3.80	19.626		
1,000.0	1,000.0	997.6	996.7	2.1	2.2	-84.19	25.1	-74.4	78.4	74.2	4.25	18.441		
1,100.0	1,099.8	1,097.5	1,096.4	2.3	2.4	-83.84	31.7	-76.7	82.1	77.3	4.71	17.406		
1,200.0	1,199.6	1,197.5	1,196.1	2.6	2.7	-84.75	38.3	-79.0	85.5	80.3	5.18	16.495		
1,300.0	1,299.4	1,297.4	1,295.8	2.8	2.9	-85.59	44.9	-81.3	89.0	83.3	5.66	15.721		
1,400.0	1,399.1	1,397.3	1,395.5	3.0	3.2	-86.37	51.4	-83.6	92.5	86.4	6.14	15.058		
1,500.0	1,498.9	1,497.3	1,495.2	3.3	3.4	-87.09	58.0	-85.9	96.0	89.4	6.63	14.485		
1,600.0	1,598.6	1,597.2	1,594.8	3.5	3.7	-87.76	64.6	-88.2	99.5	92.4	7.12	13.986		
1,700.0	1,698.4	1,697.1	1,694.5	3.8	3.9	-88.39	71.2	-90.5	103.1	95.5	7.61	13.548		
1,800.0	1,798.1	1,797.1	1,794.2	4.0	4.2	-88.97	77.8	-92.8	106.6	98.5	8.10	13.161		
1,900.0	1,897.9	1,897.0	1,893.9	4.3	4.4	-89.51	84.4	-95.1	110.2	101.6	8.60	12.817		
2,000.0	1,997.6	1,996.9	1,993.6	4.5	4.7	-90.02	90.9	-97.3	113.8	104.7	9.09	12.510		
2,100.0	2,097.4	2,096.8	2,093.3	4.8	4.9	-90.50	97.5	-99.6	117.3	107.7	9.59	12.233		
2,200.0	2,197.2	2,196.8	2,193.0	5.0	5.2	-90.95	104.1	-101.9	120.9	110.8	10.09	11.983		
2,300.0	2,296.9	2,296.7	2,292.7	5.3	5.4	-91.38	110.7	-104.2	124.5	113.9	10.59	11.756		
2,400.0	2,396.7	2,396.6	2,392.3	5.5	5.7	-91.78	117.3	-106.5	128.1	117.0	11.09	11.550		
2,500.0	2,496.4	2,496.6	2,492.0	5.8	5.9	-92.16	123.9	-108.8	131.7	120.1	11.59	11.361		
2,600.0	2,596.2	2,596.5	2,591.7	6.0	6.2	-92.52	130.4	-111.1	135.3	123.2	12.10	11.188		
2,700.0	2,695.9	2,696.4	2,691.4	6.3	6.5	-92.86	137.0	-113.4	139.0	126.4	12.60	11.028		
2,800.0	2,795.7	2,796.4	2,791.1	6.5	6.7	-93.18	143.6	-115.7	142.6	129.5	13.10	10.881		
2,900.0	2,895.5	2,896.3	2,890.8	6.8	7.0	-93.49	150.2	-118.0	146.2	132.6	13.61	10.744		
3,000.0	2,995.2	2,996.2	2,990.5	7.0	7.2	-93.78	156.8	-120.3	149.8	135.7	14.11	10.617		
3,100.0	3,095.0	3,096.2	3,090.2	7.3	7.5	-94.06	163.4	-122.5	153.5	138.9	14.62	10.499		
3,200.0	3,194.7	3,196.1	3,189.8	7.5	7.7	-94.32	169.9	-124.8	157.1	142.0	15.12	10.389		
3,300.0	3,294.5	3,296.0	3,289.5	7.8	8.0	-94.58	176.5	-127.1	160.7	145.1	15.63	10.286		
3,400.0	3,394.2	3,395.9	3,389.2	8.0	8.3	-94.82	183.1	-129.4	164.4	148.3	16.13	10.189		
3,500.0	3,494.0	3,495.9	3,488.9	8.3	8.5	-95.05	189.7	-131.7	168.0	151.4	16.64	10.099		
3,600.0	3,593.7	3,595.8	3,588.6	8.5	8.8	-95.27	196.3	-134.0	171.7	154.5	17.15	10.013		
3,700.0	3,693.5	3,695.7	3,688.3	8.8	9.0	-95.49	202.9	-136.3	175.3	157.7	17.65	9.933		
3,800.0	3,793.3	3,795.7	3,788.0	9.1	9.3	-95.69	209.4	-138.6	179.0	160.8	18.16	9.857		
3,900.0	3,893.0	3,895.6	3,887.7	9.3	9.5	-95.89	216.0	-140.9	182.6	164.0	18.67	9.785		
4,000.0	3,992.8	3,995.5	3,987.3	9.6	9.8	-96.07	222.6	-143.2	186.3	167.1	19.17	9.718		
4,100.0	4,092.5	4,095.5	4,087.0	9.8	10.0	-96.25	229.2	-145.5	190.0	170.3	19.68	9.653		
4,200.0	4,192.3	4,195.4	4,186.7	10.1	10.3	-96.43	235.8	-147.8	193.6	173.4	20.19	9.592		
4,300.0	4,292.0	4,295.3	4,286.4	10.3	10.6	-96.60	242.4	-150.0	197.3	176.6	20.69	9.534		
4,400.0	4,391.8	4,395.3	4,386.1	10.6	10.8	-96.76	248.9	-152.3	201.0	179.8	21.20	9.479		
4,500.0	4,491.6	4,495.2	4,485.8	10.8	11.1	-96.91	255.5	-154.6	204.6	182.9	21.71	9.426		
4,600.0	4,591.3	4,595.1	4,585.5	11.1	11.3	-97.06	262.1	-156.9	208.3	186.1	22.22	9.376		
4,700.0	4,691.1	4,695.1	4,685.2	11.3	11.6	-97.21	268.7	-159.2	212.0	189.2	22.72	9.328		
4,800.0	4,790.8	4,795.0	4,784.8	11.6	11.8	-97.35	275.3	-161.5	215.6	192.4	23.23	9.282		
4,900.0	4,890.6	4,894.9	4,884.5	11.9	12.1	-97.48	281.9	-163.8	219.3	195.6	23.74	9.238		
5,000.0	4,990.3	4,994.8	4,984.2	12.1	12.4	-97.61	288.4	-166.1	223.0	198.7	24.25	9.196		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0905A - 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 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)				
5,100.0	5,090.1	5,094.8	5,083.9	12.4	12.6	-97.74	295.0	-168.4	226.7	201.9	24.75	9.156		
5,200.0	5,189.9	5,194.7	5,183.6	12.6	12.9	-97.86	301.6	-170.7	230.3	205.1	25.26	9.118		
5,300.0	5,289.6	5,294.6	5,283.3	12.9	13.1	-97.98	308.2	-173.0	234.0	208.2	25.77	9.081		
5,400.0	5,389.4	5,394.6	5,383.0	13.1	13.4	-98.10	314.8	-175.2	237.7	211.4	26.28	9.045		
5,500.0	5,488.8	5,487.5	5,475.5	13.4	13.6	-98.08	322.3	-177.9	242.4	215.6	26.79	9.048		
5,600.0	5,585.1	5,571.7	5,557.5	13.8	14.0	-97.80	340.1	-184.1	254.8	227.3	27.47	9.275		
5,700.0	5,674.7	5,654.6	5,634.2	14.4	14.4	-97.19	369.6	-194.3	275.6	247.2	28.38	9.712		
5,800.0	5,754.1	5,735.8	5,703.6	15.1	14.9	-96.16	409.2	-208.1	304.1	274.6	29.54	10.293		
5,900.0	5,820.5	5,815.1	5,764.3	16.0	15.6	-94.64	457.4	-224.9	339.3	308.3	30.99	10.950		
6,000.0	5,871.4	5,893.0	5,815.7	17.1	16.4	-92.63	512.5	-244.1	380.2	347.4	32.71	11.622		
6,100.0	5,905.1	5,970.0	5,857.4	18.4	17.2	-90.21	573.5	-265.3	425.3	390.7	34.68	12.263		
6,200.0	5,920.2	6,047.1	5,889.2	19.8	18.2	-87.50	639.8	-288.4	473.6	436.8	36.85	12.853		
6,300.0	5,921.0	6,127.3	5,910.9	21.2	19.4	-88.74	712.7	-313.7	522.7	483.3	39.34	13.285		
6,400.0	5,921.0	6,214.9	5,920.8	22.5	20.7	-89.98	794.8	-342.3	568.3	526.2	42.03	13.521		
6,500.0	5,921.0	6,341.6	5,921.0	24.0	22.6	-90.00	915.4	-380.9	607.0	561.7	45.35	13.387		
6,600.0	5,921.0	6,484.2	5,921.0	25.5	24.7	-90.00	1,054.0	-414.6	634.1	585.1	49.02	12.935		
6,700.0	5,921.0	6,632.9	5,921.0	27.0	27.0	-90.00	1,200.7	-438.7	650.4	597.5	52.90	12.296		
6,800.0	5,921.0	6,784.6	5,921.0	28.6	29.4	-90.00	1,351.7	-451.5	658.9	601.9	56.95	11.569		
6,900.0	5,921.0	6,913.9	5,921.0	30.3	31.5	-90.00	1,481.1	-453.4	660.1	599.4	60.74	10.868		
7,000.0	5,921.0	7,013.9	5,921.0	32.0	33.1	-90.00	1,581.1	-453.4	660.1	596.0	64.13	10.294		
7,100.0	5,921.0	7,113.9	5,921.0	33.7	34.8	-90.00	1,681.1	-453.4	660.1	592.5	67.56	9.770		
7,200.0	5,921.0	7,213.9	5,921.0	35.4	36.5	-90.00	1,781.1	-453.4	660.1	589.0	71.04	9.291		
7,300.0	5,921.0	7,313.9	5,921.0	37.2	38.2	-90.00	1,881.1	-453.4	660.1	585.5	74.56	8.853		
7,400.0	5,921.0	7,413.9	5,921.0	39.0	39.9	-90.00	1,981.1	-453.4	660.1	582.0	78.11	8.451		
7,500.0	5,921.0	7,513.9	5,921.0	40.8	41.7	-90.00	2,081.1	-453.4	660.1	578.4	81.68	8.082		
7,600.0	5,921.0	7,613.9	5,921.0	42.6	43.5	-90.00	2,181.1	-453.4	660.1	574.8	85.28	7.741		
7,700.0	5,921.0	7,713.9	5,921.0	44.4	45.2	-90.00	2,281.1	-453.4	660.1	571.2	88.89	7.426		
7,800.0	5,921.0	7,813.9	5,921.0	46.2	47.0	-90.00	2,381.1	-453.4	660.1	567.6	92.53	7.134		
7,900.0	5,921.0	7,913.9	5,921.0	48.0	48.8	-90.00	2,481.1	-453.4	660.1	563.9	96.18	6.863		
8,000.0	5,921.0	8,013.9	5,921.0	49.8	50.6	-90.00	2,581.1	-453.4	660.1	560.2	99.84	6.611		
8,100.0	5,921.0	8,113.9	5,921.0	51.7	52.5	-90.00	2,681.1	-453.4	660.1	556.6	103.52	6.376		
8,200.0	5,921.0	8,213.9	5,921.0	53.5	54.3	-90.00	2,781.1	-453.4	660.1	552.9	107.21	6.157		
8,300.0	5,921.0	8,313.9	5,921.0	55.4	56.1	-90.00	2,881.1	-453.4	660.1	549.2	110.91	5.951		
8,400.0	5,921.0	8,413.9	5,921.0	57.2	58.0	-90.00	2,981.1	-453.4	660.1	545.5	114.62	5.759		
8,500.0	5,921.0	8,513.9	5,921.0	59.1	59.8	-90.00	3,081.1	-453.4	660.1	541.7	118.34	5.578		
8,600.0	5,921.0	8,613.9	5,921.0	60.9	61.6	-90.00	3,181.1	-453.4	660.1	538.0	122.07	5.408		
8,700.0	5,921.0	8,713.9	5,921.0	62.8	63.5	-90.00	3,281.1	-453.4	660.1	534.3	125.80	5.247		
8,800.0	5,921.0	8,813.9	5,921.0	64.7	65.4	-90.00	3,381.1	-453.4	660.1	530.6	129.54	5.096		
8,900.0	5,921.0	8,913.9	5,921.0	66.6	67.2	-90.00	3,481.1	-453.4	660.1	526.8	133.29	4.952		
9,000.0	5,921.0	9,013.9	5,921.0	68.4	69.1	-90.00	3,581.1	-453.4	660.1	523.1	137.04	4.817		
9,100.0	5,921.0	9,113.9	5,921.0	70.3	70.9	-90.00	3,681.1	-453.4	660.1	519.3	140.79	4.688		
9,200.0	5,921.0	9,213.9	5,921.0	72.2	72.8	-90.00	3,781.1	-453.4	660.1	515.5	144.55	4.566		
9,300.0	5,921.0	9,313.9	5,921.0	74.1	74.7	-90.00	3,881.1	-453.4	660.1	511.8	148.32	4.451		
9,400.0	5,921.0	9,413.9	5,921.0	76.0	76.6	-90.00	3,981.1	-453.4	660.1	508.0	152.09	4.340		
9,500.0	5,921.0	9,513.9	5,921.0	77.8	78.4	-90.00	4,081.1	-453.4	660.1	504.2	155.86	4.235		
9,600.0	5,921.0	9,613.9	5,921.0	79.7	80.3	-90.00	4,181.1	-453.4	660.1	500.5	159.63	4.135		
9,700.0	5,921.0	9,713.9	5,921.0	81.6	82.2	-90.00	4,281.1	-453.4	660.1	496.7	163.41	4.039		
9,800.0	5,921.0	9,813.9	5,921.0	83.5	84.1	-90.00	4,381.1	-453.4	660.1	492.9	167.19	3.948		
9,900.0	5,921.0	9,913.9	5,921.0	85.4	86.0	-90.00	4,481.1	-453.4	660.1	489.1	170.98	3.861		
10,000.0	5,921.0	10,013.9	5,921.0	87.3	87.8	-90.00	4,581.1	-453.4	660.1	485.3	174.76	3.777		
10,100.0	5,921.0	10,113.9	5,921.0	89.2	89.7	-90.00	4,681.1	-453.4	660.1	481.5	178.55	3.697		
10,200.0	5,921.0	10,213.9	5,921.0	91.1	91.6	-90.00	4,781.1	-453.4	660.1	477.7	182.34	3.620		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0905A - 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		Between Centres (usft)	Between Ellipses (usft)	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)					
10,300.0	5,921.0	10,313.9	5,921.0	93.0	93.5	-90.00	4,881.1	-453.4	660.1	474.0	186.14	3.546	
10,400.0	5,921.0	10,413.9	5,921.0	94.9	95.4	-90.00	4,981.1	-453.4	660.1	470.2	189.93	3.475	
10,500.0	5,921.0	10,513.9	5,921.0	96.8	97.3	-90.00	5,081.1	-453.4	660.1	466.4	193.73	3.407	
10,600.0	5,921.0	10,613.9	5,921.0	98.7	99.2	-90.00	5,181.1	-453.4	660.1	462.6	197.53	3.342	
10,700.0	5,921.0	10,713.9	5,921.0	100.6	101.1	-90.00	5,281.1	-453.4	660.1	458.8	201.33	3.279	
10,800.0	5,921.0	10,813.9	5,921.0	102.5	103.0	-90.00	5,381.1	-453.4	660.1	455.0	205.13	3.218	
10,900.0	5,921.0	10,913.9	5,921.0	104.4	104.9	-90.00	5,481.1	-453.4	660.1	451.2	208.94	3.159	
11,000.0	5,921.0	11,013.9	5,921.0	106.3	106.8	-90.00	5,581.1	-453.4	660.1	447.3	212.74	3.103	
11,100.0	5,921.0	11,113.9	5,921.0	108.2	108.7	-90.00	5,681.1	-453.4	660.1	443.5	216.55	3.048	
11,200.0	5,921.0	11,213.9	5,921.0	110.1	110.6	-90.00	5,781.1	-453.4	660.1	439.7	220.35	2.996	
11,300.0	5,921.0	11,313.9	5,921.0	112.0	112.5	-90.00	5,881.1	-453.4	660.1	435.9	224.16	2.945	
11,400.0	5,921.0	11,413.9	5,921.0	113.9	114.4	-90.00	5,981.1	-453.4	660.1	432.1	227.97	2.895	
11,500.0	5,921.0	11,513.9	5,921.0	115.8	116.3	-90.00	6,081.1	-453.4	660.1	428.3	231.78	2.848	
11,600.0	5,921.0	11,613.9	5,921.0	117.7	118.2	-90.00	6,181.1	-453.4	660.1	424.5	235.60	2.802	
11,700.0	5,921.0	11,713.9	5,921.0	119.6	120.1	-90.00	6,281.1	-453.4	660.1	420.7	239.41	2.757	
11,800.0	5,921.0	11,813.9	5,921.0	121.5	122.0	-90.00	6,381.1	-453.4	660.1	416.9	243.22	2.714	
11,900.0	5,921.0	11,913.9	5,921.0	123.4	123.9	-90.00	6,481.1	-453.4	660.1	413.0	247.04	2.672	
12,000.0	5,921.0	12,013.9	5,921.0	125.3	125.8	-90.00	6,581.1	-453.4	660.1	409.2	250.85	2.631	
12,100.0	5,921.0	12,113.9	5,921.0	127.2	127.7	-90.00	6,681.1	-453.4	660.1	405.4	254.67	2.592	
12,200.0	5,921.0	12,213.9	5,921.0	129.1	129.6	-90.00	6,781.1	-453.4	660.1	401.6	258.49	2.554	
12,300.0	5,921.0	12,313.9	5,921.0	131.1	131.5	-90.00	6,881.1	-453.4	660.1	397.8	262.31	2.516	
12,400.0	5,921.0	12,413.9	5,921.0	133.0	133.4	-90.00	6,981.1	-453.4	660.1	394.0	266.13	2.480	
12,500.0	5,921.0	12,513.9	5,921.0	134.9	135.3	-90.00	7,081.1	-453.4	660.1	390.1	269.94	2.445	
12,600.0	5,921.0	12,613.9	5,921.0	136.8	137.2	-90.00	7,181.1	-453.4	660.1	386.3	273.76	2.411	
12,700.0	5,921.0	12,713.9	5,921.0	138.7	139.1	-90.00	7,281.1	-453.4	660.1	382.5	277.59	2.378	
12,800.0	5,921.0	12,813.9	5,921.0	140.6	141.0	-90.00	7,381.1	-453.4	660.1	378.7	281.41	2.346	
12,900.0	5,921.0	12,913.9	5,921.0	142.5	142.9	-90.00	7,481.1	-453.4	660.1	374.9	285.23	2.314	
13,000.0	5,921.0	13,013.9	5,921.0	144.4	144.8	-90.00	7,581.1	-453.4	660.1	371.0	289.05	2.284	
13,100.0	5,921.0	13,113.9	5,921.0	146.3	146.8	-90.00	7,681.1	-453.4	660.1	367.2	292.87	2.254	
13,200.0	5,921.0	13,213.9	5,921.0	148.2	148.7	-90.00	7,781.1	-453.4	660.1	363.4	296.70	2.225	
13,300.0	5,921.0	13,313.9	5,921.0	150.2	150.6	-90.00	7,881.1	-453.4	660.1	359.6	300.52	2.196	
13,400.0	5,921.0	13,413.9	5,921.0	152.1	152.5	-90.00	7,981.1	-453.4	660.1	355.7	304.35	2.169	
13,500.0	5,921.0	13,513.9	5,921.0	154.0	154.4	-90.00	8,081.1	-453.4	660.1	351.9	308.17	2.142	
13,600.0	5,921.0	13,613.9	5,921.0	155.9	156.3	-90.00	8,181.1	-453.4	660.1	348.1	312.00	2.116	
13,700.0	5,921.0	13,713.9	5,921.0	157.8	158.2	-90.00	8,281.1	-453.4	660.1	344.3	315.82	2.090	
13,723.8	5,921.0	13,737.7	5,921.0	158.3	158.7	-90.00	8,304.8	-453.4	660.1	343.4	316.73	2.084 SF	

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0906B - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSA 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	-90.00	0.0	-32.9	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-32.9	32.9	32.7	0.19	176.549		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-32.9	32.9	32.3	0.64	51.775		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-32.9	32.9	31.8	1.09	30.336		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-32.9	32.9	31.4	1.54	21.453		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-32.9	32.9	30.9	1.98	16.593		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-32.9	32.9	30.5	2.43	13.529		
666.7	666.7	666.7	666.7	1.4	1.4	-90.00	0.0	-32.9	32.9	30.2	2.73	12.046 CC		
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-32.9	32.9	30.0	2.88	11.420		
800.0	800.0	799.8	799.8	1.7	1.7	-87.00	1.7	-33.1	33.1	29.8	3.33	9.947 ES		
900.0	900.0	899.5	899.3	1.9	1.9	-78.38	6.9	-33.6	34.3	30.5	3.78	9.074		
1,000.0	1,000.0	999.3	998.9	2.1	2.1	-82.27	13.8	-34.3	36.7	32.5	4.23	8.665		
1,100.0	1,099.8	1,099.3	1,098.6	2.3	2.4	-80.54	20.8	-34.9	38.9	34.2	4.69	8.299		
1,200.0	1,199.6	1,199.3	1,198.4	2.6	2.6	-81.44	27.7	-35.6	40.9	35.8	5.16	7.932		
1,300.0	1,299.4	1,299.2	1,298.1	2.8	2.8	-82.25	34.7	-36.3	42.9	37.3	5.63	7.618		
1,400.0	1,399.1	1,399.2	1,397.8	3.0	3.1	-82.99	41.6	-36.9	44.9	38.8	6.11	7.347		
1,500.0	1,498.9	1,499.2	1,497.6	3.3	3.3	-83.67	48.6	-37.6	46.9	40.3	6.60	7.111		
1,600.0	1,598.6	1,599.2	1,597.3	3.5	3.6	-84.30	55.5	-38.3	48.9	41.8	7.08	6.905		
1,700.0	1,698.4	1,699.1	1,697.0	3.8	3.8	-84.87	62.4	-38.9	50.9	43.4	7.58	6.724		
1,800.0	1,798.1	1,799.1	1,796.8	4.0	4.1	-85.40	69.4	-39.6	53.0	44.9	8.07	6.563		
1,900.0	1,897.9	1,899.1	1,896.5	4.3	4.3	-85.90	76.3	-40.3	55.0	46.4	8.56	6.419		
2,000.0	1,997.6	1,999.1	1,996.2	4.5	4.6	-86.35	83.3	-40.9	57.0	47.9	9.06	6.291		
2,100.0	2,097.4	2,099.1	2,096.0	4.8	4.8	-86.78	90.2	-41.6	59.0	49.5	9.56	6.175		
2,200.0	2,197.2	2,199.0	2,195.7	5.0	5.1	-87.18	97.1	-42.3	61.1	51.0	10.06	6.070		
2,300.0	2,296.9	2,299.0	2,295.4	5.3	5.3	-87.55	104.1	-42.9	63.1	52.5	10.56	5.975		
2,400.0	2,396.7	2,399.0	2,395.2	5.5	5.6	-87.89	111.0	-43.6	65.1	54.1	11.06	5.888		
2,500.0	2,496.4	2,499.0	2,494.9	5.8	5.8	-88.22	118.0	-44.3	67.2	55.6	11.57	5.808		
2,600.0	2,596.2	2,598.9	2,594.6	6.0	6.1	-88.53	124.9	-44.9	69.2	57.2	12.07	5.735		
2,700.0	2,695.9	2,698.9	2,694.4	6.3	6.4	-88.82	131.9	-45.6	71.3	58.7	12.58	5.668		
2,800.0	2,795.7	2,798.9	2,794.1	6.5	6.6	-89.09	138.8	-46.2	73.3	60.2	13.08	5.606		
2,900.0	2,895.5	2,898.9	2,893.9	6.8	6.9	-89.35	145.7	-46.9	75.4	61.8	13.59	5.548		
3,000.0	2,995.2	2,998.9	2,993.6	7.0	7.1	-89.60	152.7	-47.6	77.4	63.3	14.09	5.494		
3,100.0	3,095.0	3,098.8	3,093.3	7.3	7.4	-89.83	159.6	-48.2	79.5	64.9	14.60	5.444		
3,200.0	3,194.7	3,198.8	3,193.1	7.5	7.6	-90.05	166.6	-48.9	81.5	66.4	15.11	5.397		
3,300.0	3,294.5	3,298.8	3,292.8	7.8	7.9	-90.26	173.5	-49.6	83.6	68.0	15.61	5.354		
3,400.0	3,394.2	3,398.8	3,392.5	8.0	8.1	-90.46	180.5	-50.2	85.6	69.5	16.12	5.313		
3,500.0	3,494.0	3,498.8	3,492.3	8.3	8.4	-90.65	187.4	-50.9	87.7	71.1	16.63	5.274		
3,600.0	3,593.7	3,598.7	3,592.0	8.5	8.6	-90.83	194.3	-51.6	89.8	72.6	17.14	5.238		
3,700.0	3,693.5	3,698.7	3,691.7	8.8	8.9	-91.01	201.3	-52.2	91.8	74.2	17.64	5.204		
3,800.0	3,793.3	3,798.7	3,791.5	9.1	9.2	-91.17	208.2	-52.9	93.9	75.7	18.15	5.171		
3,900.0	3,893.0	3,898.7	3,891.2	9.3	9.4	-91.33	215.2	-53.6	95.9	77.3	18.66	5.141		
4,000.0	3,992.8	3,998.6	3,990.9	9.6	9.7	-91.49	222.1	-54.2	98.0	78.8	19.17	5.112		
4,100.0	4,092.5	4,098.6	4,090.7	9.8	9.9	-91.63	229.1	-54.9	100.1	80.4	19.68	5.084		
4,200.0	4,192.3	4,198.6	4,190.4	10.1	10.2	-91.77	236.0	-55.6	102.1	81.9	20.19	5.058		
4,300.0	4,292.0	4,298.6	4,290.1	10.3	10.4	-91.91	242.9	-56.2	104.2	83.5	20.70	5.034		
4,400.0	4,391.8	4,398.6	4,389.9	10.6	10.7	-92.04	249.9	-56.9	106.2	85.0	21.21	5.010		
4,500.0	4,491.6	4,498.5	4,489.6	10.8	10.9	-92.16	256.8	-57.6	108.3	86.6	21.72	4.987		
4,600.0	4,591.3	4,598.5	4,589.3	11.1	11.2	-92.28	263.8	-58.2	110.4	88.1	22.22	4.966		
4,700.0	4,691.1	4,698.5	4,689.1	11.3	11.5	-92.40	270.7	-58.9	112.4	89.7	22.73	4.945		
4,800.0	4,790.8	4,798.5	4,788.8	11.6	11.7	-92.51	277.6	-59.6	114.5	91.3	23.24	4.926		
4,900.0	4,890.6	4,898.5	4,888.6	11.9	12.0	-92.61	284.6	-60.2	116.6	92.8	23.75	4.907		
5,000.0	4,990.3	4,998.4	4,988.3	12.1	12.2	-92.72	291.5	-60.9	118.6	94.4	24.26	4.889		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0906B - 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 Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,090.1	5,098.4	5,088.0	12.4	12.5	-92.82	298.5	-61.6	120.7	95.9	24.77	4.872		
5,200.0	5,189.9	5,198.4	5,187.8	12.6	12.7	-92.91	305.4	-62.2	122.8	97.5	25.28	4.855		
5,300.0	5,289.6	5,298.4	5,287.5	12.9	13.0	-93.01	312.4	-62.9	124.8	99.0	25.79	4.840		
5,400.0	5,389.4	5,398.3	5,387.2	13.1	13.2	-93.10	319.3	-63.6	126.9	100.6	26.30	4.824		
5,500.0	5,488.8	5,498.2	5,486.9	13.4	13.5	-94.23	326.2	-64.2	129.1	102.3	26.84	4.812		
5,600.0	5,585.1	5,595.1	5,583.3	13.8	13.8	-101.05	334.8	-65.1	134.3	106.8	27.46	4.889		
5,700.0	5,674.7	5,691.9	5,677.1	14.4	14.2	-107.49	358.4	-67.3	146.9	118.8	28.12	5.226		
5,800.0	5,754.1	5,791.7	5,767.4	15.1	14.7	-111.86	400.3	-71.3	166.6	137.8	28.81	5.784		
5,900.0	5,820.5	5,894.5	5,850.3	16.0	15.5	-114.08	460.5	-77.1	191.8	162.1	29.73	6.451		
6,000.0	5,871.4	6,000.6	5,921.6	17.1	16.4	-114.46	538.4	-84.6	220.8	189.6	31.14	7.091		
6,100.0	5,905.1	6,110.1	5,977.2	18.4	17.7	-113.40	632.2	-93.5	252.2	219.0	33.21	7.593		
6,200.0	5,920.2	6,223.6	6,012.6	19.8	19.2	-111.30	739.2	-103.8	284.6	248.6	35.96	7.915		
6,300.0	5,921.0	6,341.3	6,024.0	21.2	20.8	-109.76	855.6	-114.9	314.0	274.8	39.18	8.014		
6,400.0	5,921.0	6,458.0	6,024.0	22.5	22.5	-108.21	972.1	-122.0	332.8	290.3	42.51	7.831		
6,500.0	5,921.0	6,567.1	6,024.0	24.0	24.0	-107.58	1,081.2	-122.8	341.8	296.2	45.63	7.491		
6,600.0	5,921.0	6,667.0	6,024.0	25.5	25.6	-107.37	1,181.1	-122.8	345.2	296.5	48.66	7.093		
6,700.0	5,921.0	6,767.0	6,024.0	27.0	27.3	-107.37	1,281.1	-122.8	345.3	293.5	51.75	6.671		
6,800.0	5,921.0	6,867.0	6,024.0	28.6	28.9	-107.37	1,381.1	-122.8	345.3	290.3	54.95	6.284		
6,900.0	5,921.0	6,967.0	6,024.0	30.3	30.6	-107.37	1,481.1	-122.8	345.3	287.1	58.20	5.932		
7,000.0	5,921.0	7,067.0	6,024.0	32.0	32.4	-107.37	1,581.1	-122.8	345.3	283.8	61.50	5.614		
7,100.0	5,921.0	7,167.0	6,024.0	33.7	34.1	-107.37	1,681.1	-122.8	345.3	280.4	64.85	5.324		
7,200.0	5,921.0	7,267.0	6,024.0	35.4	35.9	-107.37	1,781.1	-122.8	345.3	277.0	68.23	5.060		
7,300.0	5,921.0	7,367.0	6,024.0	37.2	37.7	-107.37	1,881.1	-122.8	345.3	273.6	71.64	4.819		
7,400.0	5,921.0	7,467.0	6,024.0	39.0	39.5	-107.37	1,981.1	-122.8	345.3	270.2	75.08	4.599		
7,500.0	5,921.0	7,567.0	6,024.0	40.8	41.3	-107.37	2,081.1	-122.8	345.3	266.7	78.54	4.396		
7,600.0	5,921.0	7,667.0	6,024.0	42.6	43.1	-107.37	2,181.1	-122.8	345.3	263.2	82.02	4.209		
7,700.0	5,921.0	7,767.0	6,024.0	44.4	44.9	-107.37	2,281.1	-122.8	345.3	259.7	85.52	4.037		
7,800.0	5,921.0	7,867.0	6,024.0	46.2	46.7	-107.37	2,381.1	-122.8	345.3	256.2	89.04	3.878		
7,900.0	5,921.0	7,967.0	6,024.0	48.0	48.6	-107.37	2,481.1	-122.8	345.3	252.7	92.57	3.730		
8,000.0	5,921.0	8,067.0	6,024.0	49.8	50.4	-107.37	2,581.1	-122.8	345.2	249.1	96.11	3.592		
8,100.0	5,921.0	8,167.0	6,024.0	51.7	52.3	-107.37	2,681.1	-122.8	345.2	245.6	99.66	3.464		
8,200.0	5,921.0	8,267.0	6,024.0	53.5	54.1	-107.37	2,781.1	-122.8	345.2	242.0	103.23	3.345		
8,300.0	5,921.0	8,367.0	6,024.0	55.4	56.0	-107.37	2,881.1	-122.8	345.2	238.4	106.80	3.233		
8,400.0	5,921.0	8,467.0	6,024.0	57.2	57.9	-107.37	2,981.1	-122.8	345.2	234.9	110.38	3.128		
8,500.0	5,921.0	8,567.0	6,024.0	59.1	59.7	-107.37	3,081.1	-122.8	345.2	231.3	113.97	3.029		
8,600.0	5,921.0	8,667.0	6,024.0	60.9	61.6	-107.37	3,181.1	-122.8	345.2	227.7	117.56	2.937		
8,700.0	5,921.0	8,767.0	6,024.0	62.8	63.5	-107.37	3,281.1	-122.8	345.2	224.1	121.16	2.849		
8,800.0	5,921.0	8,867.0	6,024.0	64.7	65.4	-107.36	3,381.1	-122.8	345.2	220.5	124.77	2.767		
8,900.0	5,921.0	8,967.0	6,024.0	66.6	67.2	-107.36	3,481.1	-122.8	345.2	216.9	128.38	2.689		
9,000.0	5,921.0	9,067.0	6,024.0	68.4	69.1	-107.36	3,581.1	-122.8	345.2	213.3	131.99	2.616		
9,100.0	5,921.0	9,167.0	6,024.0	70.3	71.0	-107.36	3,681.1	-122.8	345.2	209.6	135.61	2.546		
9,200.0	5,921.0	9,267.0	6,024.0	72.2	72.9	-107.36	3,781.1	-122.8	345.2	206.0	139.23	2.480		
9,300.0	5,921.0	9,367.0	6,024.0	74.1	74.8	-107.36	3,881.1	-122.8	345.2	202.4	142.86	2.417		
9,400.0	5,921.0	9,467.0	6,024.0	76.0	76.7	-107.36	3,981.1	-122.8	345.2	198.7	146.49	2.357		
9,500.0	5,921.0	9,567.0	6,024.0	77.8	78.6	-107.36	4,081.1	-122.8	345.2	195.1	150.13	2.300		
9,600.0	5,921.0	9,667.0	6,024.0	79.7	80.5	-107.36	4,181.1	-122.8	345.2	191.5	153.76	2.245		
9,700.0	5,921.0	9,767.0	6,024.0	81.6	82.3	-107.36	4,281.1	-122.8	345.2	187.8	157.40	2.193		
9,800.0	5,921.0	9,867.0	6,024.0	83.5	84.2	-107.36	4,381.1	-122.8	345.2	184.2	161.04	2.144		
9,900.0	5,921.0	9,967.0	6,024.0	85.4	86.1	-107.36	4,481.1	-122.8	345.2	180.6	164.69	2.096		
10,000.0	5,921.0	10,067.0	6,024.0	87.3	88.0	-107.36	4,581.1	-122.8	345.2	176.9	168.33	2.051		
10,100.0	5,921.0	10,167.0	6,024.0	89.2	89.9	-107.36	4,681.1	-122.8	345.2	173.3	171.98	2.007		
10,200.0	5,921.0	10,267.0	6,024.0	91.1	91.8	-107.36	4,781.1	-122.8	345.2	169.6	175.63	1.966		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0906B - 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
10,300.0	5,921.0	10,367.0	6,024.0	93.0	93.7	-107.36	4,881.1	-122.8	345.2	166.0	179.28	1.926	
10,400.0	5,921.0	10,467.0	6,024.0	94.9	95.6	-107.36	4,981.1	-122.8	345.2	162.3	182.94	1.887	
10,500.0	5,921.0	10,567.0	6,024.0	96.8	97.5	-107.36	5,081.1	-122.8	345.2	158.6	186.59	1.850	
10,600.0	5,921.0	10,667.0	6,024.0	98.7	99.4	-107.36	5,181.1	-122.8	345.2	155.0	190.25	1.815	
10,700.0	5,921.0	10,767.0	6,024.0	100.6	101.3	-107.36	5,281.1	-122.8	345.2	151.3	193.91	1.780	
10,800.0	5,921.0	10,867.0	6,024.0	102.5	103.2	-107.36	5,381.1	-122.8	345.2	147.7	197.57	1.747	
10,900.0	5,921.0	10,967.0	6,024.0	104.4	105.2	-107.36	5,481.1	-122.8	345.2	144.0	201.23	1.716	
11,000.0	5,921.0	11,067.0	6,024.0	106.3	107.1	-107.36	5,581.1	-122.8	345.2	140.3	204.89	1.685	
11,100.0	5,921.0	11,167.0	6,024.0	108.2	109.0	-107.36	5,681.1	-122.8	345.2	136.7	208.55	1.655	
11,200.0	5,921.0	11,267.0	6,024.0	110.1	110.9	-107.36	5,781.1	-122.8	345.2	133.0	212.22	1.627	
11,300.0	5,921.0	11,367.0	6,024.0	112.0	112.8	-107.36	5,881.1	-122.8	345.2	129.3	215.88	1.599	
11,400.0	5,921.0	11,467.0	6,024.0	113.9	114.7	-107.36	5,981.1	-122.8	345.2	125.7	219.55	1.572	
11,500.0	5,921.0	11,567.0	6,024.0	115.8	116.6	-107.36	6,081.1	-122.8	345.2	122.0	223.22	1.547	
11,600.0	5,921.0	11,667.0	6,024.0	117.7	118.5	-107.36	6,181.1	-122.8	345.2	118.3	226.88	1.522	
11,700.0	5,921.0	11,767.0	6,024.0	119.6	120.4	-107.36	6,281.1	-122.8	345.2	114.7	230.55	1.497	Level 3
11,800.0	5,921.0	11,867.0	6,024.0	121.5	122.3	-107.36	6,381.1	-122.8	345.2	111.0	234.22	1.474	Level 3
11,900.0	5,921.0	11,967.0	6,024.0	123.4	124.2	-107.36	6,481.1	-122.8	345.2	107.3	237.89	1.451	Level 3
12,000.0	5,921.0	12,067.0	6,024.0	125.3	126.1	-107.36	6,581.1	-122.8	345.2	103.7	241.57	1.429	Level 3
12,100.0	5,921.0	12,167.0	6,024.0	127.2	128.0	-107.36	6,681.1	-122.8	345.2	100.0	245.24	1.408	Level 3
12,200.0	5,921.0	12,267.0	6,024.0	129.1	130.0	-107.36	6,781.1	-122.8	345.2	96.3	248.91	1.387	Level 3
12,300.0	5,921.0	12,367.0	6,024.0	131.1	131.9	-107.36	6,881.1	-122.8	345.2	92.6	252.58	1.367	Level 3
12,400.0	5,921.0	12,467.0	6,024.0	133.0	133.8	-107.36	6,981.1	-122.8	345.2	89.0	256.26	1.347	Level 3
12,500.0	5,921.0	12,567.0	6,024.0	134.9	135.7	-107.36	7,081.1	-122.8	345.2	85.3	259.93	1.328	Level 3
12,600.0	5,921.0	12,667.0	6,024.0	136.8	137.6	-107.36	7,181.1	-122.8	345.2	81.6	263.61	1.310	Level 3
12,700.0	5,921.0	12,767.0	6,024.0	138.7	139.5	-107.36	7,281.1	-122.8	345.2	77.9	267.28	1.292	Level 3
12,800.0	5,921.0	12,867.0	6,024.0	140.6	141.4	-107.36	7,381.1	-122.8	345.2	74.3	270.96	1.274	Level 3
12,900.0	5,921.0	12,967.0	6,024.0	142.5	143.3	-107.36	7,481.1	-122.8	345.2	70.6	274.64	1.257	Level 3
13,000.0	5,921.0	13,067.0	6,024.0	144.4	145.2	-107.36	7,581.1	-122.8	345.2	66.9	278.31	1.240	Level 2
13,100.0	5,921.0	13,167.0	6,024.0	146.3	147.2	-107.36	7,681.1	-122.8	345.2	63.2	281.99	1.224	Level 2
13,200.0	5,921.0	13,267.0	6,024.0	148.2	149.1	-107.36	7,781.1	-122.8	345.2	59.5	285.67	1.208	Level 2
13,300.0	5,921.0	13,367.0	6,024.0	150.2	151.0	-107.36	7,881.1	-122.8	345.2	55.9	289.35	1.193	Level 2
13,400.0	5,921.0	13,467.0	6,024.0	152.1	152.9	-107.36	7,981.1	-122.8	345.2	52.2	293.03	1.178	Level 2
13,500.0	5,921.0	13,567.0	6,024.0	154.0	154.8	-107.36	8,081.1	-122.8	345.2	48.5	296.70	1.163	Level 2
13,600.0	5,921.0	13,667.0	6,024.0	155.9	156.7	-107.36	8,181.1	-122.8	345.2	44.8	300.38	1.149	Level 2
13,700.0	5,921.0	13,767.0	6,024.0	157.8	158.6	-107.36	8,281.1	-122.8	345.2	41.1	304.06	1.135	Level 2
13,723.8	5,921.0	13,790.8	6,024.0	158.3	159.1	-107.36	8,304.8	-122.8	345.2	40.3	304.94	1.132	Level 2, SF

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0908B - 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		Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
							+N/-S (usft)	+E/-W (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	33.2	33.2					
100.0	100.0	100.0	100.0	0.1	0.1	90.00	0.0	33.2	33.2	33.0	0.19	178.033		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	33.2	33.2	32.6	0.64	52.210		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	33.2	33.2	32.1	1.09	30.591		
400.0	400.0	400.0	400.0	0.8	0.8	90.00	0.0	33.2	33.2	31.7	1.54	21.633		
500.0	500.0	500.0	500.0	1.0	1.0	90.00	0.0	33.2	33.2	31.2	1.98	16.733		
600.0	600.0	600.0	600.0	1.2	1.2	90.00	0.0	33.2	33.2	30.8	2.43	13.643		
700.0	700.0	700.0	700.0	1.4	1.4	90.00	0.0	33.2	33.2	30.3	2.88	11.516		
800.0	800.0	800.0	800.0	1.7	1.7	90.00	0.0	33.2	33.2	29.9	3.33	9.963		
900.0	900.0	900.0	900.0	1.9	1.9	90.00	0.0	33.2	33.2	29.4	3.78	8.779		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	81.34	0.0	33.2	32.9	28.7	4.23	7.776		
1,095.9	1,095.8	1,095.8	1,095.8	2.3	2.3	89.99	0.0	33.2	32.5	27.9	4.66	6.978 CC		
1,100.0	1,099.8	1,099.8	1,099.8	2.3	2.3	90.49	0.0	33.2	32.5	27.8	4.68	6.951 ES		
1,200.0	1,199.6	1,199.6	1,199.5	2.6	2.6	99.57	1.6	33.9	33.4	28.2	5.13	6.504		
1,300.0	1,299.4	1,299.5	1,299.3	2.8	2.8	102.32	6.3	36.0	34.8	29.2	5.59	6.236		
1,400.0	1,399.1	1,399.5	1,399.1	3.0	3.0	102.07	12.7	38.9	36.3	30.3	6.05	6.007		
1,500.0	1,498.9	1,499.5	1,498.8	3.3	3.2	101.83	19.1	41.7	37.8	31.3	6.52	5.804		
1,600.0	1,598.6	1,599.5	1,598.6	3.5	3.5	101.62	25.4	44.6	39.4	32.4	7.00	5.625		
1,700.0	1,698.4	1,699.5	1,698.3	3.8	3.7	101.42	31.8	47.4	40.9	33.4	7.48	5.464		
1,800.0	1,798.1	1,799.4	1,798.1	4.0	4.0	101.23	38.2	50.3	42.4	34.4	7.96	5.321		
1,900.0	1,897.9	1,899.4	1,897.8	4.3	4.2	101.06	44.5	53.1	43.9	35.4	8.45	5.192		
2,000.0	1,997.6	1,999.4	1,997.6	4.5	4.4	100.90	50.9	56.0	45.4	36.5	8.94	5.076		
2,100.0	2,097.4	2,099.4	2,097.3	4.8	4.7	100.75	57.3	58.8	46.9	37.5	9.44	4.971		
2,200.0	2,197.2	2,199.4	2,197.0	5.0	4.9	100.60	63.6	61.7	48.4	38.5	9.93	4.875		
2,300.0	2,296.9	2,299.4	2,296.8	5.3	5.2	100.47	70.0	64.5	49.9	39.5	10.43	4.788		
2,400.0	2,396.7	2,399.4	2,396.5	5.5	5.4	100.35	76.4	67.4	51.4	40.5	10.93	4.708		
2,500.0	2,496.4	2,499.4	2,496.3	5.8	5.7	100.23	82.7	70.2	53.0	41.5	11.43	4.635		
2,600.0	2,596.2	2,599.4	2,596.0	6.0	5.9	100.12	89.1	73.1	54.5	42.5	11.93	4.567		
2,700.0	2,695.9	2,699.3	2,695.8	6.3	6.2	100.01	95.5	76.0	56.0	43.6	12.43	4.504		
2,800.0	2,795.7	2,799.3	2,795.5	6.5	6.4	99.91	101.8	78.8	57.5	44.6	12.93	4.446		
2,900.0	2,895.5	2,899.3	2,895.3	6.8	6.7	99.82	108.2	81.7	59.0	45.6	13.43	4.393		
3,000.0	2,995.2	2,999.3	2,995.0	7.0	6.9	99.73	114.6	84.5	60.5	46.6	13.94	4.342		
3,100.0	3,095.0	3,099.3	3,094.8	7.3	7.2	99.64	120.9	87.4	62.0	47.6	14.44	4.296		
3,200.0	3,194.7	3,199.3	3,194.5	7.5	7.4	99.56	127.3	90.2	63.6	48.6	14.95	4.252		
3,300.0	3,294.5	3,299.3	3,294.2	7.8	7.7	99.48	133.7	93.1	65.1	49.6	15.45	4.211		
3,400.0	3,394.2	3,399.3	3,394.0	8.0	7.9	99.41	140.0	95.9	66.6	50.6	15.96	4.172		
3,500.0	3,494.0	3,499.3	3,493.7	8.3	8.2	99.34	146.4	98.8	68.1	51.6	16.47	4.136		
3,600.0	3,593.7	3,599.2	3,593.5	8.5	8.4	99.27	152.8	101.6	69.6	52.6	16.97	4.102		
3,700.0	3,693.5	3,699.2	3,693.2	8.8	8.7	99.21	159.1	104.5	71.1	53.6	17.48	4.069		
3,800.0	3,793.3	3,799.2	3,793.0	9.1	9.0	99.14	165.5	107.3	72.6	54.7	17.99	4.039		
3,900.0	3,893.0	3,899.2	3,892.7	9.3	9.2	99.08	171.9	110.2	74.2	55.7	18.49	4.010		
4,000.0	3,992.8	3,999.2	3,992.5	9.6	9.5	99.03	178.2	113.0	75.7	56.7	19.00	3.982		
4,100.0	4,092.5	4,099.2	4,092.2	9.8	9.7	98.97	184.6	115.9	77.2	57.7	19.51	3.956		
4,200.0	4,192.3	4,199.2	4,191.9	10.1	10.0	98.92	190.9	118.7	78.7	58.7	20.02	3.931		
4,300.0	4,292.0	4,299.2	4,291.7	10.3	10.2	98.87	197.3	121.6	80.2	59.7	20.53	3.908		
4,400.0	4,391.8	4,399.1	4,391.4	10.6	10.5	98.82	203.7	124.4	81.7	60.7	21.03	3.885		
4,500.0	4,491.6	4,499.1	4,491.2	10.8	10.7	98.77	210.0	127.3	83.2	61.7	21.54	3.864		
4,600.0	4,591.3	4,599.1	4,590.9	11.1	11.0	98.73	216.4	130.1	84.8	62.7	22.05	3.844		
4,700.0	4,691.1	4,699.1	4,690.7	11.3	11.2	98.68	222.8	133.0	86.3	63.7	22.56	3.824		
4,800.0	4,790.8	4,799.1	4,790.4	11.6	11.5	98.64	229.1	135.8	87.8	64.7	23.07	3.805		
4,900.0	4,890.6	4,899.1	4,890.2	11.9	11.7	98.60	235.5	138.7	89.3	65.7	23.58	3.787		
5,000.0	4,990.3	4,999.1	4,989.9	12.1	12.0	98.56	241.9	141.5	90.8	66.7	24.09	3.770		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0908B - 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
5,100.0	5,090.1	5,099.1	5,089.7	12.4	12.3	98.52	248.2	144.4	92.3	67.7	24.60	3.754	
5,200.0	5,189.9	5,199.1	5,189.4	12.6	12.5	98.48	254.6	147.2	93.8	68.7	25.11	3.738	
5,300.0	5,289.6	5,299.0	5,289.1	12.9	12.8	98.45	261.0	150.1	95.4	69.7	25.62	3.723	
5,400.0	5,389.4	5,399.0	5,388.9	13.1	13.0	98.41	267.3	152.9	96.9	70.7	26.13	3.708	
5,500.0	5,488.8	5,498.9	5,488.5	13.4	13.3	99.78	273.7	155.8	98.8	72.2	26.65	3.708	
5,600.0	5,585.1	5,598.0	5,587.2	13.8	13.5	108.38	282.0	159.5	105.2	78.0	27.14	3.875	
5,700.0	5,674.7	5,700.0	5,685.6	14.4	14.0	115.92	305.9	170.2	118.2	90.7	27.49	4.299	
5,800.0	5,754.1	5,805.7	5,780.2	15.1	14.5	120.46	348.6	189.3	136.2	108.4	27.80	4.899	
5,900.0	5,820.5	5,915.1	5,866.1	16.0	15.4	122.35	410.2	216.9	157.4	129.0	28.38	5.547	
6,000.0	5,871.4	6,028.2	5,938.0	17.1	16.4	122.16	489.5	252.4	180.3	150.7	29.59	6.092	
6,100.0	5,905.1	6,144.5	5,990.7	18.4	17.8	120.44	583.9	294.7	203.7	172.0	31.69	6.428	
6,200.0	5,920.2	6,263.9	6,019.6	19.8	19.4	117.62	689.3	341.9	226.7	192.1	34.68	6.538	
6,300.0	5,921.0	6,380.1	6,024.0	21.2	21.0	115.12	795.5	388.7	248.1	210.2	37.90	6.547	
6,400.0	5,921.0	6,491.4	6,024.0	22.5	22.6	113.06	899.4	428.6	268.7	227.9	40.86	6.577	
6,500.0	5,921.0	6,604.3	6,024.0	24.0	24.2	111.34	1,007.0	462.8	289.1	245.3	43.80	6.600	
6,600.0	5,921.0	6,718.9	6,024.0	25.5	25.9	109.88	1,118.0	491.0	308.9	262.2	46.72	6.612	
6,700.0	5,921.0	6,835.5	6,024.0	27.0	27.6	108.61	1,232.6	512.7	326.5	276.4	50.15	6.512	
6,800.0	5,921.0	6,954.4	6,024.0	28.6	29.4	107.80	1,350.5	527.7	338.5	284.8	53.71	6.303	
6,900.0	5,921.0	7,074.7	6,024.0	30.3	31.3	107.41	1,470.6	535.3	344.5	287.3	57.26	6.017	
7,000.0	5,921.0	7,185.2	6,024.0	32.0	33.0	107.36	1,581.1	536.3	345.3	284.7	60.63	5.695	
7,100.0	5,921.0	7,285.2	6,024.0	33.7	34.6	107.36	1,681.1	536.3	345.3	281.5	63.86	5.407	
7,200.0	5,921.0	7,385.2	6,024.0	35.4	36.2	107.36	1,781.1	536.3	345.3	278.2	67.14	5.143	
7,300.0	5,921.0	7,485.2	6,024.0	37.2	37.8	107.36	1,881.1	536.3	345.3	274.9	70.47	4.901	
7,400.0	5,921.0	7,585.2	6,024.0	39.0	39.5	107.36	1,981.1	536.3	345.3	271.5	73.82	4.678	
7,500.0	5,921.0	7,685.2	6,024.0	40.8	41.2	107.36	2,081.1	536.3	345.3	268.1	77.21	4.473	
7,600.0	5,921.0	7,785.2	6,024.0	42.6	42.9	107.36	2,181.1	536.3	345.3	264.7	80.62	4.283	
7,700.0	5,921.0	7,885.2	6,024.0	44.4	44.6	107.36	2,281.1	536.3	345.3	261.3	84.06	4.108	
7,800.0	5,921.0	7,985.2	6,024.0	46.2	46.4	107.36	2,381.1	536.3	345.3	257.8	87.52	3.946	
7,900.0	5,921.0	8,085.2	6,024.0	48.0	48.1	107.36	2,481.1	536.3	345.3	254.3	90.99	3.795	
8,000.0	5,921.0	8,185.2	6,024.0	49.8	49.9	107.36	2,581.1	536.3	345.3	250.9	94.49	3.655	
8,100.0	5,921.0	8,285.2	6,024.0	51.7	51.6	107.36	2,681.1	536.3	345.3	247.4	97.99	3.524	
8,200.0	5,921.0	8,385.2	6,024.0	53.5	53.4	107.36	2,781.1	536.3	345.3	243.8	101.51	3.402	
8,300.0	5,921.0	8,485.2	6,024.0	55.4	55.2	107.36	2,881.1	536.3	345.3	240.3	105.05	3.288	
8,400.0	5,921.0	8,585.2	6,024.0	57.2	57.0	107.36	2,981.1	536.3	345.4	236.8	108.59	3.180	
8,500.0	5,921.0	8,685.2	6,024.0	59.1	58.8	107.36	3,081.1	536.3	345.4	233.2	112.14	3.080	
8,600.0	5,921.0	8,785.2	6,024.0	60.9	60.7	107.36	3,181.1	536.3	345.4	229.7	115.71	2.985	
8,700.0	5,921.0	8,885.2	6,024.0	62.8	62.5	107.36	3,281.1	536.3	345.4	226.1	119.28	2.895	
8,800.0	5,921.0	8,985.2	6,024.0	64.7	64.3	107.36	3,381.1	536.3	345.4	222.5	122.85	2.811	
8,900.0	5,921.0	9,085.2	6,024.0	66.6	66.2	107.36	3,481.1	536.3	345.4	218.9	126.44	2.732	
9,000.0	5,921.0	9,185.2	6,024.0	68.4	68.0	107.36	3,581.1	536.3	345.4	215.3	130.03	2.656	
9,100.0	5,921.0	9,285.2	6,024.0	70.3	69.8	107.36	3,681.1	536.3	345.4	211.7	133.62	2.585	
9,200.0	5,921.0	9,385.2	6,024.0	72.2	71.7	107.36	3,781.1	536.3	345.4	208.1	137.22	2.517	
9,300.0	5,921.0	9,485.2	6,024.0	74.1	73.5	107.36	3,881.1	536.3	345.4	204.5	140.83	2.452	
9,400.0	5,921.0	9,585.2	6,024.0	76.0	75.4	107.35	3,981.1	536.3	345.4	200.9	144.44	2.391	
9,500.0	5,921.0	9,685.2	6,024.0	77.8	77.2	107.35	4,081.1	536.3	345.4	197.3	148.05	2.333	
9,600.0	5,921.0	9,785.2	6,024.0	79.7	79.1	107.35	4,181.1	536.3	345.4	193.7	151.67	2.277	
9,700.0	5,921.0	9,885.2	6,024.0	81.6	81.0	107.35	4,281.1	536.3	345.4	190.1	155.29	2.224	
9,800.0	5,921.0	9,985.2	6,024.0	83.5	82.8	107.35	4,381.1	536.3	345.4	186.5	158.92	2.173	
9,900.0	5,921.0	10,085.2	6,024.0	85.4	84.7	107.35	4,481.1	536.3	345.4	182.8	162.55	2.125	
10,000.0	5,921.0	10,185.2	6,024.0	87.3	86.6	107.35	4,581.1	536.4	345.4	179.2	166.18	2.078	
10,100.0	5,921.0	10,285.2	6,024.0	89.2	88.5	107.35	4,681.1	536.4	345.4	175.6	169.81	2.034	
10,200.0	5,921.0	10,385.2	6,024.0	91.1	90.3	107.35	4,781.1	536.4	345.4	171.9	173.45	1.991	

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21C-0908B - 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)						
10,300.0	5,921.0	10,485.2	6,024.0	93.0	92.2	107.35	4,881.1	536.4	345.4	168.3	177.08	1.950		
10,400.0	5,921.0	10,585.2	6,024.0	94.9	94.1	107.35	4,981.1	536.4	345.4	164.7	180.72	1.911		
10,500.0	5,921.0	10,685.2	6,024.0	96.8	96.0	107.35	5,081.1	536.4	345.4	161.0	184.37	1.873		
10,600.0	5,921.0	10,785.2	6,024.0	98.7	97.9	107.35	5,181.1	536.4	345.4	157.4	188.01	1.837		
10,700.0	5,921.0	10,885.2	6,024.0	100.6	99.7	107.35	5,281.1	536.4	345.4	153.7	191.66	1.802		
10,800.0	5,921.0	10,985.2	6,024.0	102.5	101.6	107.35	5,381.1	536.4	345.4	150.1	195.31	1.769		
10,900.0	5,921.0	11,085.2	6,024.0	104.4	103.5	107.35	5,481.1	536.4	345.4	146.5	198.96	1.736		
11,000.0	5,921.0	11,185.2	6,024.0	106.3	105.4	107.35	5,581.1	536.4	345.4	142.8	202.61	1.705		
11,100.0	5,921.0	11,285.2	6,024.0	108.2	107.3	107.35	5,681.1	536.4	345.4	139.2	206.26	1.675		
11,200.0	5,921.0	11,385.2	6,024.0	110.1	109.2	107.35	5,781.1	536.4	345.4	135.5	209.92	1.646		
11,300.0	5,921.0	11,485.2	6,024.0	112.0	111.1	107.35	5,881.1	536.4	345.4	131.8	213.57	1.617		
11,400.0	5,921.0	11,585.2	6,024.0	113.9	113.0	107.35	5,981.1	536.4	345.4	128.2	217.23	1.590		
11,500.0	5,921.0	11,685.2	6,024.0	115.8	114.9	107.35	6,081.1	536.4	345.4	124.5	220.89	1.564		
11,600.0	5,921.0	11,785.2	6,024.0	117.7	116.8	107.35	6,181.1	536.4	345.4	120.9	224.55	1.538		
11,700.0	5,921.0	11,885.2	6,024.0	119.6	118.6	107.35	6,281.1	536.4	345.4	117.2	228.21	1.514		
11,800.0	5,921.0	11,985.2	6,024.0	121.5	120.5	107.35	6,381.1	536.4	345.4	113.6	231.87	1.490 Level 3		
11,900.0	5,921.0	12,085.2	6,024.0	123.4	122.4	107.35	6,481.1	536.4	345.4	109.9	235.53	1.467 Level 3		
12,000.0	5,921.0	12,185.2	6,024.0	125.3	124.3	107.35	6,581.1	536.4	345.4	106.2	239.19	1.444 Level 3		
12,100.0	5,921.0	12,285.2	6,024.0	127.2	126.2	107.35	6,681.1	536.4	345.4	102.6	242.86	1.422 Level 3		
12,200.0	5,921.0	12,385.2	6,024.0	129.1	128.1	107.35	6,781.1	536.4	345.4	98.9	246.52	1.401 Level 3		
12,300.0	5,921.0	12,485.2	6,024.0	131.1	130.0	107.35	6,881.1	536.4	345.4	95.3	250.19	1.381 Level 3		
12,400.0	5,921.0	12,585.2	6,024.0	133.0	131.9	107.35	6,981.1	536.4	345.4	91.6	253.86	1.361 Level 3		
12,500.0	5,921.0	12,685.2	6,024.0	134.9	133.8	107.35	7,081.1	536.4	345.4	87.9	257.53	1.341 Level 3		
12,600.0	5,921.0	12,785.2	6,024.0	136.8	135.7	107.35	7,181.1	536.4	345.5	84.3	261.19	1.323 Level 3		
12,700.0	5,921.0	12,885.2	6,024.0	138.7	137.6	107.35	7,281.1	536.4	345.5	80.6	264.86	1.304 Level 3		
12,800.0	5,921.0	12,985.2	6,024.0	140.6	139.5	107.35	7,381.1	536.4	345.5	76.9	268.53	1.286 Level 3		
12,900.0	5,921.0	13,085.2	6,024.0	142.5	141.4	107.35	7,481.1	536.4	345.5	73.3	272.20	1.269 Level 3		
13,000.0	5,921.0	13,185.2	6,024.0	144.4	143.3	107.35	7,581.1	536.4	345.5	69.6	275.87	1.252 Level 3		
13,100.0	5,921.0	13,285.2	6,024.0	146.3	145.3	107.35	7,681.1	536.4	345.5	65.9	279.55	1.236 Level 2		
13,200.0	5,921.0	13,385.2	6,024.0	148.2	147.2	107.35	7,781.1	536.4	345.5	62.2	283.22	1.220 Level 2		
13,300.0	5,921.0	13,485.2	6,024.0	150.2	149.1	107.35	7,881.1	536.4	345.5	58.6	286.89	1.204 Level 2		
13,400.0	5,921.0	13,585.2	6,024.0	152.1	151.0	107.35	7,981.1	536.4	345.5	54.9	290.56	1.189 Level 2		
13,500.0	5,921.0	13,685.2	6,024.0	154.0	152.9	107.35	8,081.1	536.4	345.5	51.2	294.24	1.174 Level 2		
13,600.0	5,921.0	13,785.2	6,024.0	155.9	154.8	107.35	8,181.1	536.4	345.5	47.6	297.91	1.160 Level 2		
13,700.0	5,921.0	13,885.2	6,024.0	157.8	156.7	107.35	8,281.1	536.4	345.5	43.9	301.59	1.146 Level 2		
13,723.8	5,921.0	13,909.0	6,024.0	158.3	157.1	107.35	8,304.8	536.4	345.5	43.0	302.46	1.142 Level 2, SF		

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0903A - 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)				
0.0	0.0	0.0	0.0	0.0	0.0	-91.28	-25.5	-1,137.7	1,138.0					
100.0	100.0	97.9	97.9	0.1	0.1	-91.28	-25.5	-1,137.7	1,138.0	1,137.8	0.19	6,147.006		
200.0	200.0	197.9	197.9	0.3	0.3	-91.28	-25.5	-1,137.7	1,138.0	1,137.3	0.63	1,800.891		
300.0	300.0	297.9	297.9	0.5	0.5	-91.28	-25.5	-1,137.7	1,138.0	1,136.9	1.08	1,052.291		
400.0	400.0	397.9	397.9	0.8	0.8	-91.28	-25.5	-1,137.7	1,138.0	1,136.4	1.53	743.310		
500.0	500.0	497.9	497.9	1.0	1.0	-91.28	-25.5	-1,137.7	1,138.0	1,136.0	1.98	574.593		
600.0	600.0	597.9	597.9	1.2	1.2	-91.28	-25.5	-1,137.7	1,138.0	1,135.5	2.43	468.299		
700.0	700.0	697.9	697.9	1.4	1.4	-91.28	-25.5	-1,137.7	1,138.0	1,135.1	2.88	395.192		
800.0	800.0	797.9	797.9	1.7	1.7	-91.28	-25.5	-1,137.7	1,138.0	1,134.6	3.33	341.829		
900.0	900.0	897.9	897.9	1.9	1.9	-91.28	-25.5	-1,137.7	1,138.0	1,134.2	3.78	301.163 CC		
1,000.0	1,000.0	994.4	994.3	2.1	2.1	-102.92	-24.0	-1,137.9	1,138.5	1,134.3	4.22	269.929		
1,100.0	1,099.8	1,090.7	1,090.6	2.3	2.3	-102.89	-19.2	-1,138.4	1,140.2	1,135.5	4.66	244.800		
1,200.0	1,199.6	1,190.4	1,190.0	2.6	2.6	-102.89	-12.3	-1,139.2	1,142.4	1,137.3	5.11	223.386		
1,300.0	1,299.4	1,290.3	1,289.7	2.8	2.8	-102.88	-5.4	-1,140.1	1,144.6	1,139.0	5.58	205.116		
1,400.0	1,399.1	1,390.3	1,389.4	3.0	3.0	-102.87	1.5	-1,140.9	1,146.8	1,140.8	6.05	189.437		
1,500.0	1,498.9	1,490.3	1,489.2	3.3	3.3	-102.87	8.5	-1,141.7	1,149.0	1,142.5	6.53	175.882		
1,600.0	1,598.6	1,590.3	1,588.9	3.5	3.5	-102.86	15.4	-1,142.5	1,151.3	1,144.2	7.02	164.074		
1,700.0	1,698.4	1,690.2	1,688.6	3.8	3.7	-102.85	22.3	-1,143.3	1,153.5	1,146.0	7.50	153.714		
1,800.0	1,798.1	1,790.2	1,788.4	4.0	4.0	-102.84	29.2	-1,144.1	1,155.7	1,147.7	7.99	144.565		
1,900.0	1,897.9	1,890.2	1,888.1	4.3	4.2	-102.84	36.2	-1,144.9	1,157.9	1,149.4	8.49	136.433		
2,000.0	1,997.6	1,990.2	1,987.8	4.5	4.5	-102.83	43.1	-1,145.8	1,160.1	1,151.1	8.98	129.165		
2,100.0	2,097.4	2,090.1	2,087.6	4.8	4.7	-102.82	50.0	-1,146.6	1,162.3	1,152.9	9.48	122.633		
2,200.0	2,197.2	2,190.1	2,187.3	5.0	5.0	-102.82	56.9	-1,147.4	1,164.6	1,154.6	9.98	116.734		
2,300.0	2,296.9	2,290.1	2,287.0	5.3	5.2	-102.81	63.9	-1,148.2	1,166.8	1,156.3	10.48	111.383		
2,400.0	2,396.7	2,390.1	2,386.8	5.5	5.5	-102.80	70.8	-1,149.0	1,169.0	1,158.0	10.98	106.508		
2,500.0	2,496.4	2,490.0	2,486.5	5.8	5.7	-102.80	77.7	-1,149.8	1,171.2	1,159.7	11.48	102.050		
2,600.0	2,596.2	2,590.0	2,586.2	6.0	6.0	-102.79	84.6	-1,150.6	1,173.4	1,161.5	11.98	97.958		
2,700.0	2,695.9	2,690.0	2,685.9	6.3	6.2	-102.78	91.6	-1,151.4	1,175.7	1,163.2	12.48	94.190		
2,800.0	2,795.7	2,790.0	2,785.7	6.5	6.5	-102.77	98.5	-1,152.3	1,177.9	1,164.9	12.99	90.709		
2,900.0	2,895.5	2,889.9	2,885.4	6.8	6.7	-102.77	105.4	-1,153.1	1,180.1	1,166.6	13.49	87.484		
3,000.0	2,995.2	2,989.9	2,985.1	7.0	7.0	-102.76	112.3	-1,153.9	1,182.3	1,168.3	13.99	84.488		
3,100.0	3,095.0	3,089.9	3,084.9	7.3	7.3	-102.75	119.3	-1,154.7	1,184.5	1,170.0	14.50	81.699		
3,200.0	3,194.7	3,189.9	3,184.6	7.5	7.5	-102.75	126.2	-1,155.5	1,186.7	1,171.7	15.00	79.095		
3,300.0	3,294.5	3,289.8	3,284.3	7.8	7.8	-102.74	133.1	-1,156.3	1,189.0	1,173.5	15.51	76.659		
3,400.0	3,394.2	3,389.8	3,384.1	8.0	8.0	-102.73	140.1	-1,157.1	1,191.2	1,175.2	16.02	74.375		
3,500.0	3,494.0	3,489.8	3,483.8	8.3	8.3	-102.73	147.0	-1,158.0	1,193.4	1,176.9	16.52	72.230		
3,600.0	3,593.7	3,589.8	3,583.5	8.5	8.5	-102.72	153.9	-1,158.8	1,195.6	1,178.6	17.03	70.211		
3,700.0	3,693.5	3,689.7	3,683.3	8.8	8.8	-102.71	160.8	-1,159.6	1,197.8	1,180.3	17.54	68.308		
3,800.0	3,793.3	3,789.7	3,783.0	9.1	9.0	-102.71	167.8	-1,160.4	1,200.1	1,182.0	18.04	66.511		
3,900.0	3,893.0	3,889.7	3,882.7	9.3	9.3	-102.70	174.7	-1,161.2	1,202.3	1,183.7	18.55	64.811		
4,000.0	3,992.8	3,989.7	3,982.5	9.6	9.5	-102.69	181.6	-1,162.0	1,204.5	1,185.4	19.06	63.202		
4,100.0	4,092.5	4,089.6	4,082.2	9.8	9.8	-102.69	188.5	-1,162.8	1,206.7	1,187.2	19.57	61.675		
4,200.0	4,192.3	4,189.6	4,181.9	10.1	10.1	-102.68	195.5	-1,163.6	1,208.9	1,188.9	20.07	60.225		
4,300.0	4,292.0	4,289.6	4,281.7	10.3	10.3	-102.68	202.4	-1,164.5	1,211.2	1,190.6	20.58	58.846		
4,400.0	4,391.8	4,389.6	4,381.4	10.6	10.6	-102.67	209.3	-1,165.3	1,213.4	1,192.3	21.09	57.533		
4,500.0	4,491.6	4,489.5	4,481.1	10.8	10.8	-102.66	216.2	-1,166.1	1,215.6	1,194.0	21.60	56.282		
4,600.0	4,591.3	4,589.5	4,580.9	11.1	11.1	-102.66	223.2	-1,166.9	1,217.8	1,195.7	22.11	55.088		
4,700.0	4,691.1	4,689.5	4,680.6	11.3	11.3	-102.65	230.1	-1,167.7	1,220.0	1,197.4	22.62	53.947		
4,800.0	4,790.8	4,789.5	4,780.3	11.6	11.6	-102.64	237.0	-1,168.5	1,222.2	1,199.1	23.12	52.856		
4,900.0	4,890.6	4,889.4	4,880.0	11.9	11.8	-102.64	243.9	-1,169.3	1,224.5	1,200.8	23.63	51.812		
5,000.0	4,990.3	4,989.4	4,979.8	12.1	12.1	-102.63	250.9	-1,170.2	1,226.7	1,202.5	24.14	50.812		
5,100.0	5,090.1	5,089.4	5,079.5	12.4	12.4	-102.62	257.8	-1,171.0	1,228.9	1,204.3	24.65	49.853		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0903A - 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			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)	
5,200.0	5,189.9	5,189.4	5,179.2	12.6	12.6	-102.62	264.7	-1,171.8	1,231.1	1,206.0	25.16	48.933		
5,300.0	5,289.6	5,289.3	5,279.0	12.9	12.9	-102.61	271.7	-1,172.6	1,233.3	1,207.7	25.67	48.048		
5,400.0	5,389.4	5,378.7	5,367.9	13.1	13.1	-102.52	279.7	-1,173.5	1,235.8	1,209.6	26.17	47.222		
5,500.0	5,488.8	5,457.7	5,444.7	13.4	13.4	-101.71	297.7	-1,175.7	1,240.3	1,213.6	26.73	46.402		
5,600.0	5,585.1	5,534.9	5,516.3	13.8	13.8	-100.24	326.3	-1,179.0	1,250.0	1,222.5	27.48	45.496		
5,700.0	5,674.7	5,610.8	5,581.8	14.4	14.3	-98.35	364.2	-1,183.5	1,264.9	1,236.5	28.46	44.453		
5,800.0	5,754.1	5,685.4	5,640.1	15.1	14.8	-96.11	410.4	-1,188.9	1,284.4	1,254.7	29.71	43.229		
5,900.0	5,820.5	5,759.2	5,690.6	16.0	15.5	-93.60	463.7	-1,195.2	1,307.7	1,276.4	31.25	41.839		
6,000.0	5,871.4	5,832.4	5,732.8	17.1	16.3	-90.91	523.1	-1,202.1	1,333.8	1,300.7	33.07	40.337		
6,100.0	5,905.1	5,905.6	5,766.2	18.4	17.1	-88.16	587.7	-1,209.7	1,362.0	1,326.9	35.09	38.810		
6,200.0	5,920.2	5,979.3	5,790.2	19.8	18.1	-85.46	656.8	-1,217.8	1,391.2	1,353.9	37.29	37.307		
6,300.0	5,921.0	6,055.1	5,804.4	21.2	19.1	-85.20	730.7	-1,226.5	1,419.8	1,380.0	39.75	35.717		
6,400.0	5,921.0	6,208.7	5,807.9	22.5	21.3	-85.52	883.4	-1,242.2	1,444.2	1,400.8	43.33	33.332		
6,500.0	5,921.0	6,433.3	5,808.0	24.0	24.6	-85.62	1,107.8	-1,245.2	1,452.8	1,404.7	48.07	30.223		
6,600.0	5,921.0	6,533.2	5,808.0	25.5	26.2	-85.63	1,207.8	-1,243.4	1,454.5	1,403.3	51.19	28.415		
6,700.0	5,921.0	6,633.2	5,808.0	27.0	27.9	-85.62	1,307.7	-1,241.5	1,452.7	1,398.3	54.41	26.700		
6,800.0	5,921.0	6,733.2	5,808.0	28.6	29.6	-85.61	1,407.7	-1,239.7	1,450.9	1,393.1	57.74	25.127		
6,900.0	5,921.0	6,833.2	5,808.0	30.3	31.3	-85.61	1,507.7	-1,237.8	1,449.0	1,387.9	61.13	23.703		
7,000.0	5,921.0	6,933.2	5,808.0	32.0	33.1	-85.60	1,607.6	-1,236.0	1,447.2	1,382.6	64.57	22.411		
7,100.0	5,921.0	7,033.1	5,808.0	33.7	34.8	-85.60	1,707.6	-1,234.2	1,445.4	1,377.3	68.06	21.238		
7,200.0	5,921.0	7,133.1	5,808.0	35.4	36.6	-85.59	1,807.6	-1,232.3	1,443.5	1,372.0	71.57	20.168		
7,300.0	5,921.0	7,233.1	5,808.0	37.2	38.4	-85.59	1,907.5	-1,230.5	1,441.7	1,366.6	75.12	19.191		
7,400.0	5,921.0	7,333.1	5,808.0	39.0	40.2	-85.58	2,007.5	-1,228.6	1,439.9	1,361.2	78.70	18.296		
7,500.0	5,921.0	7,433.1	5,808.0	40.8	42.0	-85.58	2,107.5	-1,226.8	1,438.0	1,355.7	82.29	17.474		
7,600.0	5,921.0	7,533.1	5,808.0	42.6	43.8	-85.57	2,207.4	-1,225.0	1,436.2	1,350.3	85.91	16.717		
7,700.0	5,921.0	7,633.0	5,808.0	44.4	45.6	-85.56	2,307.4	-1,223.1	1,434.3	1,344.8	89.54	16.018		
7,800.0	5,921.0	7,733.0	5,808.0	46.2	47.5	-85.56	2,407.4	-1,221.3	1,432.5	1,339.3	93.19	15.371		
7,900.0	5,921.0	7,833.0	5,808.0	48.0	49.3	-85.55	2,507.3	-1,219.4	1,430.7	1,333.8	96.86	14.771		
8,000.0	5,921.0	7,933.0	5,808.0	49.8	51.2	-85.55	2,607.3	-1,217.6	1,428.8	1,328.3	100.53	14.213		
8,100.0	5,921.0	8,033.0	5,808.0	51.7	53.0	-85.54	2,707.3	-1,215.8	1,427.0	1,322.8	104.22	13.692		
8,200.0	5,921.0	8,133.0	5,808.0	53.5	54.9	-85.54	2,807.2	-1,213.9	1,425.2	1,317.3	107.92	13.206		
8,300.0	5,921.0	8,232.9	5,808.0	55.4	56.7	-85.53	2,907.2	-1,212.1	1,423.3	1,311.7	111.62	12.751		
8,400.0	5,921.0	8,332.9	5,808.0	57.2	58.6	-85.52	3,007.2	-1,210.2	1,421.5	1,306.2	115.33	12.325		
8,500.0	5,921.0	8,432.9	5,808.0	59.1	60.5	-85.52	3,107.1	-1,208.4	1,419.7	1,300.6	119.05	11.924		
8,600.0	5,921.0	8,532.9	5,808.0	60.9	62.3	-85.51	3,207.1	-1,206.5	1,417.8	1,295.0	122.78	11.548		
8,700.0	5,921.0	8,632.9	5,808.0	62.8	64.2	-85.51	3,307.1	-1,204.7	1,416.0	1,289.5	126.51	11.192		
8,800.0	5,921.0	8,732.9	5,808.0	64.7	66.1	-85.50	3,407.0	-1,202.9	1,414.2	1,283.9	130.25	10.857		
8,900.0	5,921.0	8,832.8	5,808.0	66.6	68.0	-85.49	3,507.0	-1,201.0	1,412.3	1,278.3	134.00	10.540		
9,000.0	5,921.0	8,932.8	5,808.0	68.4	69.8	-85.49	3,607.0	-1,199.2	1,410.5	1,272.7	137.74	10.240		
9,100.0	5,921.0	9,032.8	5,808.0	70.3	71.7	-85.48	3,706.9	-1,197.3	1,408.6	1,267.1	141.49	9.955		
9,200.0	5,921.0	9,132.8	5,808.0	72.2	73.6	-85.48	3,806.9	-1,195.5	1,406.8	1,261.6	145.25	9.685		
9,300.0	5,921.0	9,232.8	5,808.0	74.1	75.5	-85.47	3,906.9	-1,193.7	1,405.0	1,256.0	149.01	9.429		
9,400.0	5,921.0	9,332.8	5,808.0	76.0	77.4	-85.47	4,006.8	-1,191.8	1,403.1	1,250.4	152.77	9.184		
9,500.0	5,921.0	9,432.7	5,808.0	77.8	79.3	-85.46	4,106.8	-1,190.0	1,401.3	1,244.8	156.54	8.952		
9,600.0	5,921.0	9,532.7	5,808.0	79.7	81.2	-85.45	4,206.8	-1,188.1	1,399.5	1,239.2	160.31	8.730		
9,700.0	5,921.0	9,632.7	5,808.0	81.6	83.1	-85.45	4,306.7	-1,186.3	1,397.6	1,233.6	164.08	8.518		
9,800.0	5,921.0	9,732.7	5,808.0	83.5	84.9	-85.44	4,406.7	-1,184.5	1,395.8	1,227.9	167.85	8.316		
9,900.0	5,921.0	9,832.7	5,808.0	85.4	86.8	-85.44	4,506.7	-1,182.6	1,394.0	1,222.3	171.63	8.122		
10,000.0	5,921.0	9,932.7	5,808.0	87.3	88.7	-85.43	4,606.6	-1,180.8	1,392.1	1,216.7	175.41	7.937		
10,100.0	5,921.0	10,032.6	5,808.0	89.2	90.6	-85.42	4,706.6	-1,178.9	1,390.3	1,211.1	179.19	7.759		
10,200.0	5,921.0	10,132.6	5,808.0	91.1	92.5	-85.42	4,806.6	-1,177.1	1,388.4	1,205.5	182.97	7.589		
10,300.0	5,921.0	10,232.6	5,808.0	93.0	94.4	-85.41	4,906.5	-1,175.3	1,386.6	1,199.9	186.75	7.425		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0903A - 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		
10,400.0	5,921.0	10,332.6	5,808.0	94.9	96.3	-85.41	5,006.5	-1,173.4	1,384.8	1,194.2	190.54	7.268		
10,500.0	5,921.0	10,432.6	5,808.0	96.8	98.2	-85.40	5,106.5	-1,171.6	1,382.9	1,188.6	194.32	7.117		
10,600.0	5,921.0	10,532.6	5,808.0	98.7	100.1	-85.39	5,206.4	-1,169.7	1,381.1	1,183.0	198.11	6.971		
10,700.0	5,921.0	10,632.5	5,808.0	100.6	102.0	-85.39	5,306.4	-1,167.9	1,379.3	1,177.4	201.90	6.831		
10,800.0	5,921.0	10,732.5	5,808.0	102.5	103.9	-85.38	5,406.4	-1,166.1	1,377.4	1,171.7	205.69	6.697		
10,900.0	5,921.0	10,832.5	5,808.0	104.4	105.8	-85.37	5,506.3	-1,164.2	1,375.6	1,166.1	209.48	6.567		
11,000.0	5,921.0	10,932.5	5,808.0	106.3	107.7	-85.37	5,606.3	-1,162.4	1,373.8	1,160.5	213.28	6.441		
11,100.0	5,921.0	11,032.5	5,808.0	108.2	109.6	-85.36	5,706.3	-1,160.5	1,371.9	1,154.9	217.07	6.320		
11,200.0	5,921.0	11,132.5	5,808.0	110.1	111.5	-85.36	5,806.2	-1,158.7	1,370.1	1,149.2	220.87	6.203		
11,300.0	5,921.0	11,232.4	5,808.0	112.0	113.4	-85.35	5,906.2	-1,156.9	1,368.3	1,143.6	224.66	6.090		
11,400.0	5,921.0	11,332.4	5,808.0	113.9	115.3	-85.34	6,006.2	-1,155.0	1,366.4	1,138.0	228.46	5.981		
11,500.0	5,921.0	11,432.4	5,808.0	115.8	117.2	-85.34	6,106.1	-1,153.2	1,364.6	1,132.3	232.26	5.875		
11,600.0	5,921.0	11,532.4	5,808.0	117.7	119.1	-85.33	6,206.1	-1,151.3	1,362.8	1,126.7	236.06	5.773		
11,700.0	5,921.0	11,632.4	5,808.0	119.6	121.0	-85.32	6,306.1	-1,149.5	1,360.9	1,121.1	239.86	5.674		
11,800.0	5,921.0	11,732.4	5,808.0	121.5	122.9	-85.32	6,406.0	-1,147.6	1,359.1	1,115.4	243.66	5.578		
11,900.0	5,921.0	11,832.3	5,808.0	123.4	124.9	-85.31	6,506.0	-1,145.8	1,357.2	1,109.8	247.46	5.485		
12,000.0	5,921.0	11,932.3	5,808.0	125.3	126.8	-85.31	6,606.0	-1,144.0	1,355.4	1,104.1	251.26	5.394		
12,100.0	5,921.0	12,032.3	5,808.0	127.2	128.7	-85.30	6,705.9	-1,142.1	1,353.6	1,098.5	255.06	5.307		
12,200.0	5,921.0	12,132.3	5,808.0	129.1	130.6	-85.29	6,805.9	-1,140.3	1,351.7	1,092.9	258.86	5.222		
12,300.0	5,921.0	12,232.3	5,808.0	131.1	132.5	-85.29	6,905.8	-1,138.4	1,349.9	1,087.2	262.67	5.139		
12,400.0	5,921.0	12,332.2	5,808.0	133.0	134.4	-85.28	7,005.8	-1,136.6	1,348.1	1,081.6	266.47	5.059		
12,500.0	5,921.0	12,432.2	5,808.0	134.9	136.3	-85.27	7,105.8	-1,134.8	1,346.2	1,076.0	270.28	4.981		
12,600.0	5,921.0	12,532.2	5,808.0	136.8	138.2	-85.27	7,205.7	-1,132.9	1,344.4	1,070.3	274.08	4.905		
12,700.0	5,921.0	12,632.2	5,808.0	138.7	140.1	-85.26	7,305.7	-1,131.1	1,342.6	1,064.7	277.89	4.831		
12,800.0	5,921.0	12,732.2	5,808.0	140.6	142.0	-85.25	7,405.7	-1,129.2	1,340.7	1,059.0	281.69	4.760		
12,900.0	5,921.0	12,832.2	5,808.0	142.5	143.9	-85.25	7,505.6	-1,127.4	1,338.9	1,053.4	285.50	4.690		
13,000.0	5,921.0	12,932.1	5,808.0	144.4	145.8	-85.24	7,605.6	-1,125.6	1,337.1	1,047.7	289.31	4.622		
13,100.0	5,921.0	13,032.1	5,808.0	146.3	147.7	-85.23	7,705.6	-1,123.7	1,335.2	1,042.1	293.11	4.555		
13,200.0	5,921.0	13,132.1	5,808.0	148.2	149.7	-85.23	7,805.5	-1,121.9	1,333.4	1,036.5	296.92	4.491		
13,300.0	5,921.0	13,232.1	5,808.0	150.2	151.6	-85.22	7,905.5	-1,120.0	1,331.5	1,030.8	300.73	4.428		
13,400.0	5,921.0	13,332.1	5,808.0	152.1	153.5	-85.21	8,005.5	-1,118.2	1,329.7	1,025.2	304.54	4.366		
13,500.0	5,921.0	13,432.1	5,808.0	154.0	155.4	-85.21	8,105.4	-1,116.4	1,327.9	1,019.5	308.35	4.306		
13,600.0	5,921.0	13,532.0	5,808.0	155.9	157.3	-85.20	8,205.4	-1,114.5	1,326.0	1,013.9	312.16	4.248		
13,700.0	5,921.0	13,631.8	5,808.0	157.8	159.2	-85.20	8,305.2	-1,112.7	1,324.2	1,008.2	315.96	4.191		
13,723.8	5,921.0	13,631.8	5,808.0	158.3	159.2	-85.20	8,305.2	-1,112.7	1,324.0	1,007.6	316.41	4.184 ES, SF		

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0904B - 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			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)				
0.0	0.0	0.0	0.0	0.0	0.0	-94.89	-100.2	-1,170.6	1,174.9					
100.0	100.0	97.9	97.9	0.1	0.1	-94.89	-100.2	-1,170.6	1,174.9	1,174.7	0.19	6,346.488		
200.0	200.0	197.9	197.9	0.3	0.3	-94.89	-100.2	-1,170.6	1,174.9	1,174.3	0.63	1,859.334		
300.0	300.0	297.9	297.9	0.5	0.5	-94.89	-100.2	-1,170.6	1,174.9	1,173.8	1.08	1,086.440		
400.0	400.0	397.9	397.9	0.8	0.8	-94.89	-100.2	-1,170.6	1,174.9	1,173.4	1.53	767.431		
500.0	500.0	497.9	497.9	1.0	1.0	-94.89	-100.2	-1,170.6	1,174.9	1,172.9	1.98	593.240		
600.0	600.0	597.9	597.9	1.2	1.2	-94.89	-100.2	-1,170.6	1,174.9	1,172.5	2.43	483.496		
700.0	700.0	697.9	697.9	1.4	1.4	-94.89	-100.2	-1,170.6	1,174.9	1,172.0	2.88	408.017		
800.0	800.0	797.9	797.9	1.7	1.7	-94.89	-100.2	-1,170.6	1,174.9	1,171.6	3.33	352.922		
900.0	900.0	897.9	897.9	1.9	1.9	-94.89	-100.2	-1,170.6	1,174.9	1,171.1	3.78	310.936		
1,000.0	1,000.0	997.9	997.9	2.1	2.1	-106.60	-100.2	-1,170.6	1,175.4	1,171.2	4.23	278.085		
1,100.0	1,099.8	1,097.7	1,097.7	2.3	2.3	-106.82	-100.2	-1,170.6	1,176.9	1,172.2	4.67	251.765		
1,200.0	1,199.6	1,213.1	1,213.0	2.6	2.6	-107.09	-98.0	-1,170.1	1,178.3	1,173.1	5.16	228.340		
1,300.0	1,299.4	1,325.0	1,324.8	2.8	2.9	-107.16	-91.7	-1,168.5	1,178.4	1,172.8	5.64	208.805		
1,400.0	1,399.1	1,425.0	1,424.6	3.0	3.1	-107.16	-85.0	-1,166.8	1,178.1	1,172.0	6.11	192.894		
1,500.0	1,498.9	1,525.0	1,524.3	3.3	3.3	-107.17	-78.2	-1,165.1	1,177.8	1,171.3	6.58	179.057		
1,600.0	1,598.6	1,625.0	1,624.1	3.5	3.5	-107.17	-71.4	-1,163.4	1,177.6	1,170.5	7.05	166.944		
1,700.0	1,698.4	1,725.0	1,723.8	3.8	3.8	-107.17	-64.7	-1,161.7	1,177.3	1,169.7	7.53	156.274		
1,800.0	1,798.1	1,825.0	1,823.6	4.0	4.0	-107.18	-57.9	-1,160.0	1,177.0	1,169.0	8.02	146.819		
1,900.0	1,897.9	1,925.0	1,923.4	4.3	4.3	-107.18	-51.1	-1,158.3	1,176.7	1,168.2	8.50	138.392		
2,000.0	1,997.6	2,025.0	2,023.1	4.5	4.5	-107.19	-44.4	-1,156.6	1,176.4	1,167.4	8.99	130.842		
2,100.0	2,097.4	2,125.0	2,122.9	4.8	4.8	-107.19	-37.6	-1,154.9	1,176.1	1,166.7	9.48	124.042		
2,200.0	2,197.2	2,225.0	2,222.6	5.0	5.0	-107.20	-30.8	-1,153.2	1,175.9	1,165.9	9.97	117.890		
2,300.0	2,296.9	2,325.0	2,322.4	5.3	5.2	-107.20	-24.1	-1,151.5	1,175.6	1,165.1	10.47	112.301		
2,400.0	2,396.7	2,425.0	2,422.1	5.5	5.5	-107.21	-17.3	-1,149.8	1,175.3	1,164.3	10.96	107.203		
2,500.0	2,496.4	2,525.0	2,521.9	5.8	5.7	-107.21	-10.5	-1,148.1	1,175.0	1,163.6	11.46	102.535		
2,600.0	2,596.2	2,625.0	2,621.6	6.0	6.0	-107.22	-3.8	-1,146.4	1,174.7	1,162.8	11.96	98.247		
2,700.0	2,695.9	2,725.0	2,721.4	6.3	6.2	-107.22	3.0	-1,144.7	1,174.4	1,162.0	12.45	94.295		
2,800.0	2,795.7	2,825.0	2,821.2	6.5	6.5	-107.23	9.8	-1,143.0	1,174.2	1,161.2	12.95	90.642		
2,900.0	2,895.5	2,925.0	2,920.9	6.8	6.7	-107.23	16.5	-1,141.3	1,173.9	1,160.4	13.45	87.255		
3,000.0	2,995.2	3,025.0	3,020.7	7.0	7.0	-107.23	23.3	-1,139.6	1,173.6	1,159.6	13.95	84.107		
3,100.0	3,095.0	3,125.0	3,120.4	7.3	7.2	-107.24	30.1	-1,137.9	1,173.3	1,158.9	14.45	81.174		
3,200.0	3,194.7	3,225.0	3,220.2	7.5	7.5	-107.24	36.8	-1,136.2	1,173.0	1,158.1	14.96	78.435		
3,300.0	3,294.5	3,325.0	3,319.9	7.8	7.8	-107.25	43.6	-1,134.5	1,172.7	1,157.3	15.46	75.871		
3,400.0	3,394.2	3,425.0	3,419.7	8.0	8.0	-107.25	50.4	-1,132.8	1,172.5	1,156.5	15.96	73.467		
3,500.0	3,494.0	3,525.0	3,519.4	8.3	8.3	-107.26	57.1	-1,131.1	1,172.2	1,155.7	16.46	71.207		
3,600.0	3,593.7	3,625.0	3,619.2	8.5	8.5	-107.26	63.9	-1,129.4	1,171.9	1,154.9	16.96	69.081		
3,700.0	3,693.5	3,725.0	3,719.0	8.8	8.8	-107.27	70.7	-1,127.7	1,171.6	1,154.1	17.47	67.075		
3,800.0	3,793.3	3,825.0	3,818.7	9.1	9.0	-107.27	77.4	-1,126.0	1,171.3	1,153.4	17.97	65.181		
3,900.0	3,893.0	3,925.0	3,918.5	9.3	9.3	-107.28	84.2	-1,124.3	1,171.0	1,152.6	18.47	63.389		
4,000.0	3,992.8	4,025.0	4,018.2	9.6	9.5	-107.28	90.9	-1,122.7	1,170.8	1,151.8	18.98	61.691		
4,100.0	4,092.5	4,125.0	4,118.0	9.8	9.8	-107.29	97.7	-1,121.0	1,170.5	1,151.0	19.48	60.081		
4,200.0	4,192.3	4,225.0	4,217.7	10.1	10.0	-107.29	104.5	-1,119.3	1,170.2	1,150.2	19.99	58.551		
4,300.0	4,292.0	4,325.0	4,317.5	10.3	10.3	-107.29	111.2	-1,117.6	1,169.9	1,149.4	20.49	57.096		
4,400.0	4,391.8	4,425.0	4,417.3	10.6	10.5	-107.30	118.0	-1,115.9	1,169.6	1,148.6	20.99	55.710		
4,500.0	4,491.6	4,525.0	4,517.0	10.8	10.8	-107.30	124.8	-1,114.2	1,169.4	1,147.9	21.50	54.389		
4,600.0	4,591.3	4,625.0	4,616.8	11.1	11.1	-107.31	131.5	-1,112.5	1,169.1	1,147.1	22.00	53.129		
4,700.0	4,691.1	4,725.0	4,716.5	11.3	11.3	-107.31	138.3	-1,110.8	1,168.8	1,146.3	22.51	51.924		
4,800.0	4,790.8	4,825.0	4,816.3	11.6	11.6	-107.32	145.1	-1,109.1	1,168.5	1,145.5	23.01	50.772		
4,900.0	4,890.6	4,925.0	4,916.0	11.9	11.8	-107.32	151.8	-1,107.4	1,168.2	1,144.7	23.52	49.670		
5,000.0	4,990.3	5,025.0	5,015.8	12.1	12.1	-107.33	158.6	-1,105.7	1,167.9	1,143.9	24.03	48.613		
5,100.0	5,090.1	5,125.0	5,115.5	12.4	12.3	-107.33	165.4	-1,104.0	1,167.7	1,143.1	24.53	47.600		

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0904B - 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)			
5,200.0	5,189.9	5,225.0	5,215.3	12.6	12.6	-107.34	172.1	-1,102.3	1,167.4	1,142.3	25.04	46.628	
5,300.0	5,289.6	5,325.0	5,315.1	12.9	12.8	-107.34	178.9	-1,100.6	1,167.1	1,141.5	25.54	45.693	
5,400.0	5,389.4	5,448.0	5,437.7	13.1	13.2	-107.31	188.1	-1,098.3	1,166.7	1,140.6	26.11	44.680	
5,500.0	5,488.8	5,790.9	5,739.8	13.4	15.1	-102.50	332.2	-1,062.1	1,154.3	1,125.9	28.40	40.646	
5,600.0	5,585.1	5,992.3	5,851.4	13.8	17.2	-98.11	493.4	-1,021.6	1,134.3	1,103.3	31.00	36.585	
5,700.0	5,674.7	6,122.6	5,886.4	14.4	18.8	-95.21	614.8	-991.1	1,115.6	1,082.2	33.37	33.434	
5,800.0	5,754.1	6,199.5	5,892.0	15.1	19.9	-93.79	689.1	-972.5	1,100.9	1,065.7	35.24	31.245	
5,900.0	5,820.5	6,256.9	5,892.0	16.0	20.7	-92.69	745.0	-959.4	1,092.5	1,055.5	36.97	29.549	
5,984.5	5,864.6	6,300.0	5,892.0	17.0	21.3	-91.74	787.2	-950.6	1,090.4	1,051.9	38.51	28.314	
6,000.0	5,871.4	6,300.0	5,892.0	17.1	21.3	-91.73	787.2	-950.6	1,090.5	1,051.8	38.68	28.192	
6,100.0	5,905.1	6,371.4	5,892.0	18.4	22.3	-90.11	857.5	-938.2	1,093.2	1,052.3	40.91	26.719	
6,200.0	5,920.2	6,433.9	5,892.0	19.8	23.2	-88.90	919.4	-929.5	1,099.7	1,056.6	43.13	25.497	
6,300.0	5,921.0	6,500.0	5,892.0	21.2	24.1	-88.61	985.1	-922.5	1,108.1	1,062.6	45.41	24.399	
6,400.0	5,921.0	6,560.2	5,892.0	22.5	25.0	-88.62	1,045.1	-918.1	1,114.7	1,067.1	47.56	23.439	
6,500.0	5,921.0	6,623.2	5,892.0	24.0	26.0	-88.63	1,108.1	-915.6	1,119.3	1,069.6	49.77	22.493	
6,600.0	5,921.0	6,716.8	5,892.0	25.5	27.4	-88.63	1,201.7	-913.8	1,121.0	1,068.5	52.47	21.365	
6,700.0	5,921.0	6,816.8	5,892.0	27.0	29.1	-88.63	1,301.7	-912.0	1,119.2	1,063.6	55.64	20.117	
6,800.0	5,921.0	6,916.8	5,892.0	28.6	30.7	-88.62	1,401.7	-910.1	1,117.4	1,058.4	58.96	18.950	
6,900.0	5,921.0	7,016.8	5,892.0	30.3	32.4	-88.62	1,501.6	-908.3	1,115.5	1,053.2	62.35	17.891	
7,000.0	5,921.0	7,116.8	5,892.0	32.0	34.1	-88.62	1,601.6	-906.5	1,113.7	1,047.9	65.79	16.927	
7,100.0	5,921.0	7,216.7	5,892.0	33.7	35.9	-88.62	1,701.6	-904.6	1,111.8	1,042.6	69.27	16.050	
7,200.0	5,921.0	7,316.7	5,892.0	35.4	37.6	-88.61	1,801.5	-902.8	1,110.0	1,037.2	72.79	15.249	
7,300.0	5,921.0	7,416.7	5,892.0	37.2	39.4	-88.61	1,901.5	-900.9	1,108.1	1,031.8	76.34	14.515	
7,400.0	5,921.0	7,516.7	5,892.0	39.0	41.2	-88.61	2,001.5	-899.1	1,106.3	1,026.4	79.92	13.842	
7,500.0	5,921.0	7,616.7	5,892.0	40.8	43.0	-88.61	2,101.4	-897.2	1,104.5	1,020.9	83.52	13.223	
7,600.0	5,921.0	7,716.7	5,892.0	42.6	44.8	-88.60	2,201.4	-895.4	1,102.6	1,015.5	87.15	12.652	
7,700.0	5,921.0	7,816.6	5,892.0	44.4	46.6	-88.60	2,301.4	-893.6	1,100.8	1,010.0	90.79	12.125	
7,800.0	5,921.0	7,916.6	5,892.0	46.2	48.4	-88.60	2,401.3	-891.7	1,098.9	1,004.5	94.45	11.635	
7,900.0	5,921.0	8,016.6	5,892.0	48.0	50.2	-88.60	2,501.3	-889.9	1,097.1	999.0	98.12	11.181	
8,000.0	5,921.0	8,116.6	5,892.0	49.8	52.0	-88.59	2,601.3	-888.0	1,095.2	993.4	101.81	10.758	
8,100.0	5,921.0	8,216.6	5,892.0	51.7	53.9	-88.59	2,701.2	-886.2	1,093.4	987.9	105.50	10.364	
8,200.0	5,921.0	8,316.6	5,892.0	53.5	55.7	-88.59	2,801.2	-884.3	1,091.6	982.3	109.21	9.995	
8,300.0	5,921.0	8,416.5	5,892.0	55.4	57.6	-88.59	2,901.2	-882.5	1,089.7	976.8	112.93	9.650	
8,400.0	5,921.0	8,516.5	5,892.0	57.2	59.4	-88.59	3,001.1	-880.7	1,087.9	971.2	116.65	9.326	
8,500.0	5,921.0	8,616.5	5,892.0	59.1	61.3	-88.58	3,101.1	-878.8	1,086.0	965.6	120.39	9.021	
8,600.0	5,921.0	8,716.5	5,892.0	60.9	63.1	-88.58	3,201.1	-877.0	1,084.2	960.1	124.13	8.735	
8,700.0	5,921.0	8,816.5	5,892.0	62.8	65.0	-88.58	3,301.0	-875.1	1,082.3	954.5	127.87	8.464	
8,800.0	5,921.0	8,916.5	5,892.0	64.7	66.9	-88.58	3,401.0	-873.3	1,080.5	948.9	131.62	8.209	
8,900.0	5,921.0	9,016.4	5,892.0	66.6	68.7	-88.57	3,501.0	-871.5	1,078.7	943.3	135.38	7.968	
9,000.0	5,921.0	9,116.4	5,892.0	68.4	70.6	-88.57	3,600.9	-869.6	1,076.8	937.7	139.14	7.739	
9,100.0	5,921.0	9,216.4	5,892.0	70.3	72.5	-88.57	3,700.9	-867.8	1,075.0	932.1	142.91	7.522	
9,200.0	5,921.0	9,316.4	5,892.0	72.2	74.4	-88.57	3,800.8	-865.9	1,073.1	926.4	146.68	7.316	
9,300.0	5,921.0	9,416.4	5,892.0	74.1	76.3	-88.56	3,900.8	-864.1	1,071.3	920.8	150.46	7.120	
9,400.0	5,921.0	9,516.4	5,892.0	76.0	78.1	-88.56	4,000.8	-862.2	1,069.4	915.2	154.24	6.934	
9,500.0	5,921.0	9,616.3	5,892.0	77.8	80.0	-88.56	4,100.7	-860.4	1,067.6	909.6	158.02	6.756	
9,600.0	5,921.0	9,716.3	5,892.0	79.7	81.9	-88.56	4,200.7	-858.6	1,065.8	904.0	161.80	6.587	
9,700.0	5,921.0	9,816.3	5,892.0	81.6	83.8	-88.55	4,300.7	-856.7	1,063.9	898.3	165.59	6.425	
9,800.0	5,921.0	9,916.3	5,892.0	83.5	85.7	-88.55	4,400.6	-854.9	1,062.1	892.7	169.38	6.270	
9,900.0	5,921.0	10,016.3	5,892.0	85.4	87.6	-88.55	4,500.6	-853.0	1,060.2	887.1	173.18	6.122	
10,000.0	5,921.0	10,116.3	5,892.0	87.3	89.4	-88.54	4,600.6	-851.2	1,058.4	881.4	176.97	5.981	
10,100.0	5,921.0	10,216.2	5,892.0	89.2	91.3	-88.54	4,700.5	-849.3	1,056.5	875.8	180.77	5.845	
10,200.0	5,921.0	10,316.2	5,892.0	91.1	93.2	-88.54	4,800.5	-847.5	1,054.7	870.1	184.57	5.714	

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

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 S21-T10N-R58W - Razor #21D-0904B - 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
10,300.0	5,921.0	10,416.2	5,892.0	93.0	95.1	-88.54	4,900.5	-845.7	1,052.9	864.5	188.37	5.589	
10,400.0	5,921.0	10,516.2	5,892.0	94.9	97.0	-88.53	5,000.4	-843.8	1,051.0	858.8	192.17	5.469	
10,500.0	5,921.0	10,616.2	5,892.0	96.8	98.9	-88.53	5,100.4	-842.0	1,049.2	853.2	195.98	5.354	
10,600.0	5,921.0	10,716.2	5,892.0	98.7	100.8	-88.53	5,200.4	-840.1	1,047.3	847.5	199.79	5.242	
10,700.0	5,921.0	10,816.1	5,892.0	100.6	102.7	-88.53	5,300.3	-838.3	1,045.5	841.9	203.59	5.135	
10,800.0	5,921.0	10,916.1	5,892.0	102.5	104.6	-88.52	5,400.3	-836.4	1,043.6	836.2	207.40	5.032	
10,900.0	5,921.0	11,016.1	5,892.0	104.4	106.5	-88.52	5,500.3	-834.6	1,041.8	830.6	211.21	4.932	
11,000.0	5,921.0	11,116.1	5,892.0	106.3	108.4	-88.52	5,600.2	-832.8	1,040.0	824.9	215.03	4.836	
11,100.0	5,921.0	11,216.1	5,892.0	108.2	110.3	-88.52	5,700.2	-830.9	1,038.1	819.3	218.84	4.744	
11,200.0	5,921.0	11,316.1	5,892.0	110.1	112.2	-88.51	5,800.2	-829.1	1,036.3	813.6	222.66	4.654	
11,300.0	5,921.0	11,416.0	5,892.0	112.0	114.1	-88.51	5,900.1	-827.2	1,034.4	808.0	226.47	4.568	
11,400.0	5,921.0	11,516.0	5,892.0	113.9	116.0	-88.51	6,000.1	-825.4	1,032.6	802.3	230.29	4.484	
11,500.0	5,921.0	11,616.0	5,892.0	115.8	117.9	-88.51	6,100.1	-823.6	1,030.7	796.6	234.11	4.403	
11,600.0	5,921.0	11,716.0	5,892.0	117.7	119.8	-88.50	6,200.0	-821.7	1,028.9	791.0	237.92	4.325	
11,700.0	5,921.0	11,816.0	5,892.0	119.6	121.7	-88.50	6,300.0	-819.9	1,027.1	785.3	241.74	4.249	
11,800.0	5,921.0	11,915.9	5,892.0	121.5	123.6	-88.50	6,400.0	-818.0	1,025.2	779.7	245.56	4.175	
11,900.0	5,921.0	12,015.9	5,892.0	123.4	125.5	-88.49	6,499.9	-816.2	1,023.4	774.0	249.39	4.104	
12,000.0	5,921.0	12,115.9	5,892.0	125.3	127.4	-88.49	6,599.9	-814.3	1,021.5	768.3	253.21	4.034	
12,100.0	5,921.0	12,215.9	5,892.0	127.2	129.3	-88.49	6,699.9	-812.5	1,019.7	762.7	257.03	3.967	
12,200.0	5,921.0	12,315.9	5,892.0	129.1	131.2	-88.49	6,799.8	-810.7	1,017.9	757.0	260.85	3.902	
12,300.0	5,921.0	12,415.9	5,892.0	131.1	133.1	-88.48	6,899.8	-808.8	1,016.0	751.3	264.68	3.839	
12,400.0	5,921.0	12,515.8	5,892.0	133.0	135.0	-88.48	6,999.8	-807.0	1,014.2	745.7	268.50	3.777	
12,500.0	5,921.0	12,615.8	5,892.0	134.9	136.9	-88.48	7,099.7	-805.1	1,012.3	740.0	272.33	3.717	
12,600.0	5,921.0	12,715.8	5,892.0	136.8	138.8	-88.47	7,199.7	-803.3	1,010.5	734.3	276.16	3.659	
12,700.0	5,921.0	12,815.8	5,892.0	138.7	140.7	-88.47	7,299.7	-801.4	1,008.6	728.7	279.98	3.603	
12,800.0	5,921.0	12,915.8	5,892.0	140.6	142.6	-88.47	7,399.6	-799.6	1,006.8	723.0	283.81	3.547	
12,900.0	5,921.0	13,015.8	5,892.0	142.5	144.6	-88.47	7,499.6	-797.8	1,005.0	717.3	287.64	3.494	
13,000.0	5,921.0	13,115.7	5,892.0	144.4	146.5	-88.46	7,599.6	-795.9	1,003.1	711.6	291.47	3.442	
13,100.0	5,921.0	13,215.7	5,892.0	146.3	148.4	-88.46	7,699.5	-794.1	1,001.3	706.0	295.29	3.391	
13,200.0	5,921.0	13,315.7	5,892.0	148.2	150.3	-88.46	7,799.5	-792.2	999.4	700.3	299.12	3.341	
13,300.0	5,921.0	13,415.7	5,892.0	150.2	152.2	-88.45	7,899.5	-790.4	997.6	694.6	302.95	3.293	
13,400.0	5,921.0	13,515.7	5,892.0	152.1	154.1	-88.45	7,999.4	-788.5	995.7	689.0	306.78	3.246	
13,500.0	5,921.0	13,615.7	5,892.0	154.0	156.0	-88.45	8,099.4	-786.7	993.9	683.3	310.61	3.200	
13,600.0	5,921.0	13,715.6	5,892.0	155.9	157.9	-88.45	8,199.4	-784.9	992.1	677.6	314.44	3.155	
13,700.0	5,921.0	13,815.6	5,892.0	157.8	159.8	-88.44	8,299.3	-783.0	990.2	671.9	318.28	3.111	
13,723.8	5,921.0	13,821.2	5,892.0	158.3	159.9	-88.44	8,304.9	-782.9	989.9	671.1	318.85	3.105 CC, ES, SF	

Anticollision Report

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #21C-0907A
Project:	Weld County, CO	TVD Reference:	KB=17' @ 4861.0usft
Reference Site:	S21-T10N-R58W	MD Reference:	KB=17' @ 4861.0usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Razor #21C-0907A	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 Depths are relative to KB=17' @ 4861.0usft

Offset Depths are relative to Offset Datum

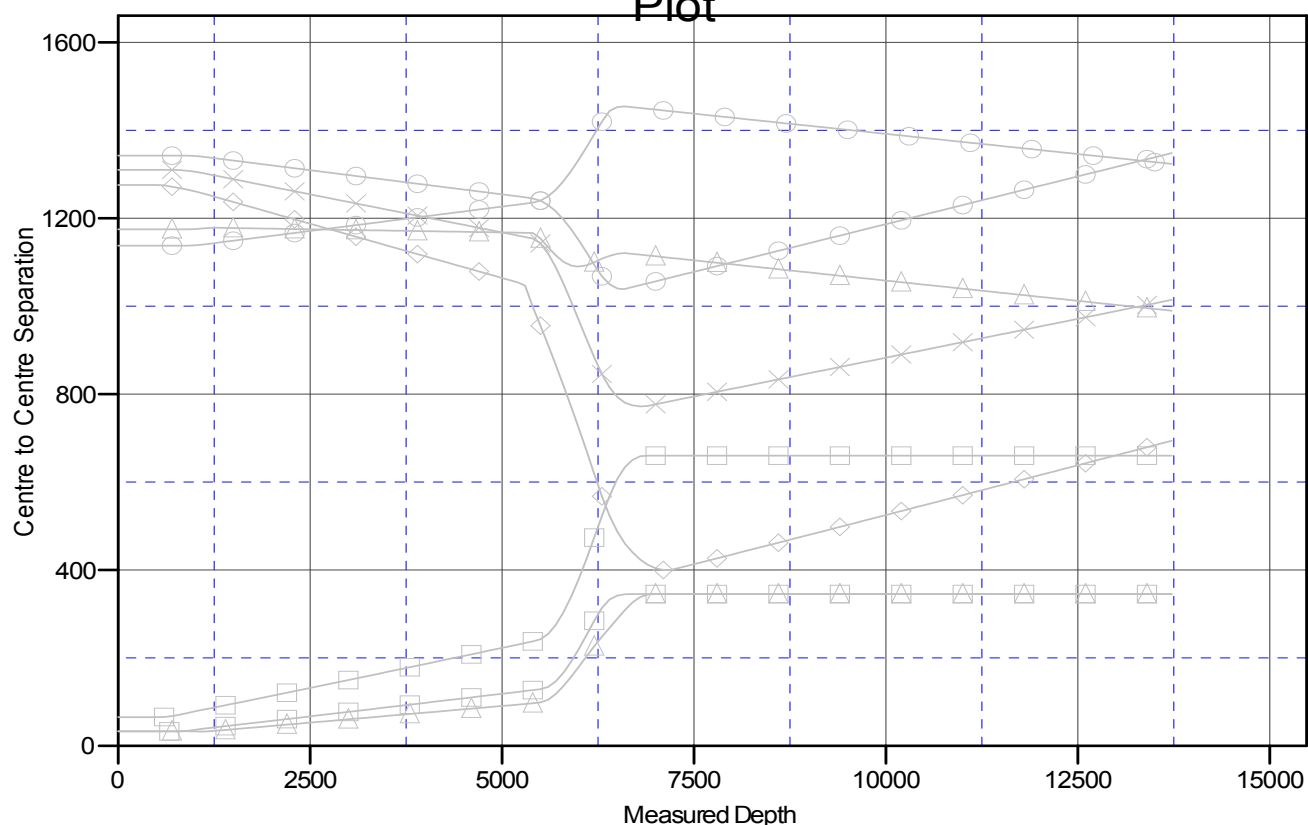
Central Meridian is -105.500000 °

Coordinates are relative to: Razor #21C-0907A

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 1.05°

Ladder Plot



LEGEND

- | | | |
|------------------------------------|------------------------------------|------------------------------------|
| ○ Razor #21B-0911A, HZ, Plan #1 V0 | □ Razor #21C-0905A, HZ, Plan #2 V0 | ○ Razor #21D-0903A, HZ, Plan #1 V0 |
| △ Razor #21D-0904B, HZ, Plan #1 V0 | △ Razor #21C-0908B, HZ, Plan #2 V0 | × Razor #21B-0910B, HZ, Plan #1 V0 |
| □ Razor #21C-0906B, HZ, Plan #2 V0 | ◇ Razor #21B-0909A, HZ, Plan #1 V0 | |