

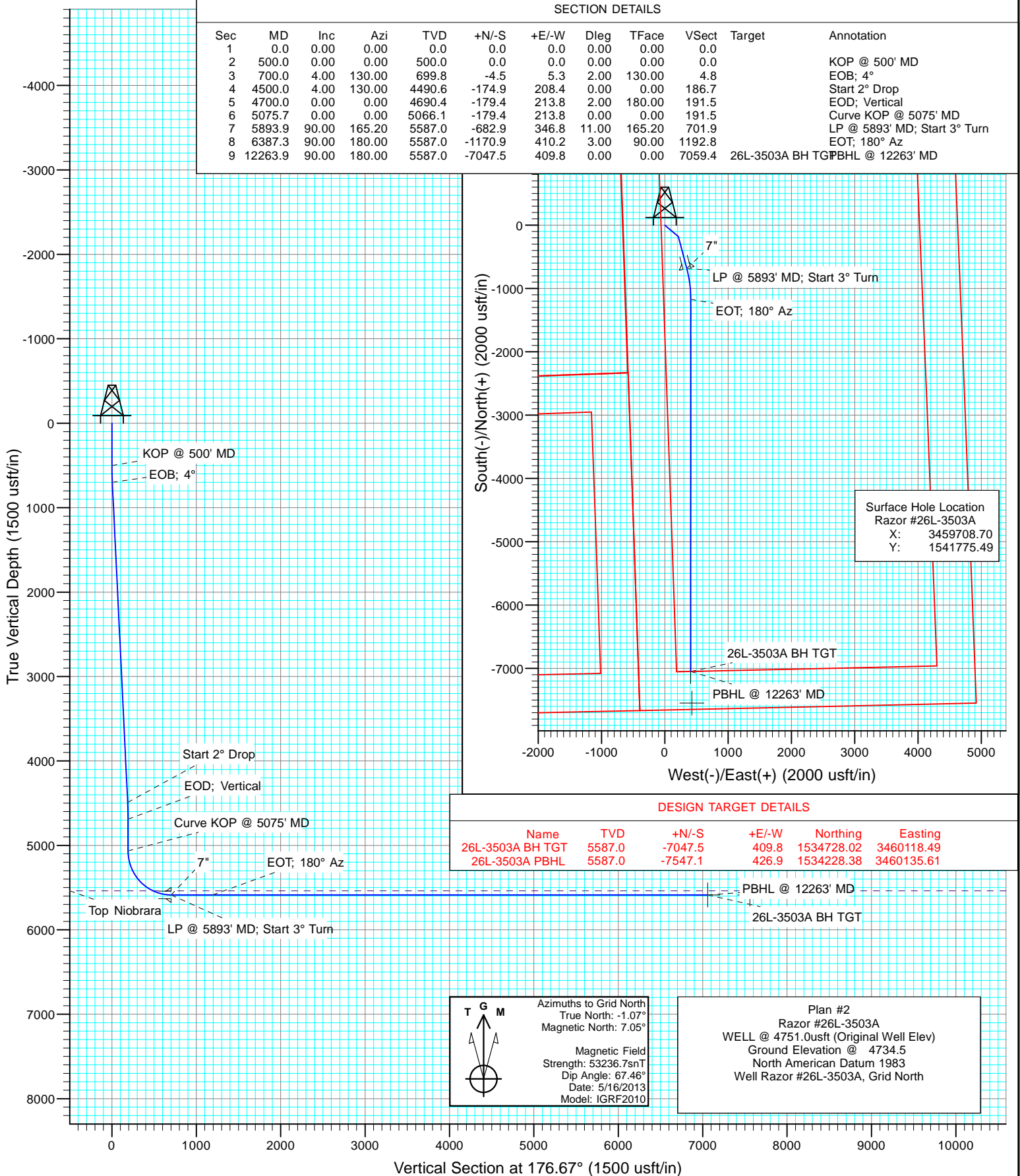


Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26L-3503A
Wellbore: HZ
Design: Plan #2



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0		KOP @ 500' MD
3	700.0	4.00	130.00	699.8	-4.5	5.3	2.00	130.00	4.8		EOB; 4°
4	4500.0	4.00	130.00	4490.6	-174.9	208.4	0.00	0.00	186.7		Start 2° Drop
5	4700.0	0.00	0.00	4690.4	-179.4	213.8	2.00	180.00	191.5		EOD; Vertical
6	5075.7	0.00	0.00	5066.1	-179.4	213.8	0.00	0.00	191.5		Curve KOP @ 5075' MD
7	5893.9	90.00	165.20	5587.0	-682.9	346.8	11.00	165.20	701.9		LP @ 5893' MD; Start 3° Turn
8	6387.3	90.00	180.00	5587.0	-1170.9	410.2	3.00	90.00	1192.8		EOT; 180° Az
9	12263.9	90.00	180.00	5587.0	-7047.5	409.8	0.00	0.00	7059.4	26L-3503A BH TGPBHL @ 12263' MD	



Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Project	Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S26-T10N-R58W			
Site Position:		Northing:	1,541,774.28 usft	Latitude:	40° 48' 31.460 N
From:	Lat/Long	Easting:	3,459,642.55 usft	Longitude:	103° 50' 22.312 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.07 °

Well	Razor #26L-3503A					
Well Position	+N/-S	0.0 usft	Northing:	1,541,775.49 usft	Latitude:	40° 48' 31.460 N
	+E/-W	0.0 usft	Easting:	3,459,708.70 usft	Longitude:	103° 50' 21.451 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,734.5 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/16/2013	8.13	67.46	53,237

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	176.67

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
700.0	4.00	130.00	699.8	-4.5	5.3	2.00	2.00	0.00	130.00	
4,500.0	4.00	130.00	4,490.6	-174.9	208.4	0.00	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,690.4	-179.4	213.8	2.00	-2.00	0.00	180.00	
5,075.7	0.00	0.00	5,066.1	-179.4	213.8	0.00	0.00	0.00	0.00	
5,893.9	90.00	165.20	5,587.0	-682.9	346.8	11.00	11.00	0.00	165.20	
6,387.3	90.00	180.00	5,587.0	-1,170.9	410.2	3.00	0.00	3.00	90.00	
12,263.9	90.00	180.00	5,587.0	-7,047.5	409.8	0.00	0.00	0.00	0.00	26L-3503A BH TGT

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500' MD
600.0	2.00	130.00	600.0	-1.1	1.3	1.2	2.00	2.00	
700.0	4.00	130.00	699.8	-4.5	5.3	4.8	2.00	2.00	EOB; 4°
800.0	4.00	130.00	799.6	-9.0	10.7	9.6	0.00	0.00	
900.0	4.00	130.00	899.3	-13.5	16.0	14.4	0.00	0.00	
1,000.0	4.00	130.00	999.1	-17.9	21.4	19.1	0.00	0.00	
1,100.0	4.00	130.00	1,098.9	-22.4	26.7	23.9	0.00	0.00	
1,200.0	4.00	130.00	1,198.6	-26.9	32.1	28.7	0.00	0.00	
1,300.0	4.00	130.00	1,298.4	-31.4	37.4	33.5	0.00	0.00	
1,400.0	4.00	130.00	1,398.1	-35.9	42.8	38.3	0.00	0.00	
1,500.0	4.00	130.00	1,497.9	-40.4	48.1	43.1	0.00	0.00	
1,600.0	4.00	130.00	1,597.6	-44.8	53.4	47.9	0.00	0.00	
1,700.0	4.00	130.00	1,697.4	-49.3	58.8	52.7	0.00	0.00	
1,800.0	4.00	130.00	1,797.2	-53.8	64.1	57.4	0.00	0.00	
1,900.0	4.00	130.00	1,896.9	-58.3	69.5	62.2	0.00	0.00	
2,000.0	4.00	130.00	1,996.7	-62.8	74.8	67.0	0.00	0.00	
2,100.0	4.00	130.00	2,096.4	-67.3	80.2	71.8	0.00	0.00	
2,200.0	4.00	130.00	2,196.2	-71.7	85.5	76.6	0.00	0.00	
2,300.0	4.00	130.00	2,295.9	-76.2	90.8	81.4	0.00	0.00	
2,400.0	4.00	130.00	2,395.7	-80.7	96.2	86.2	0.00	0.00	
2,500.0	4.00	130.00	2,495.4	-85.2	101.5	90.9	0.00	0.00	
2,600.0	4.00	130.00	2,595.2	-89.7	106.9	95.7	0.00	0.00	
2,700.0	4.00	130.00	2,695.0	-94.2	112.2	100.5	0.00	0.00	
2,800.0	4.00	130.00	2,794.7	-98.6	117.6	105.3	0.00	0.00	
2,900.0	4.00	130.00	2,894.5	-103.1	122.9	110.1	0.00	0.00	
3,000.0	4.00	130.00	2,994.2	-107.6	128.2	114.9	0.00	0.00	
3,100.0	4.00	130.00	3,094.0	-112.1	133.6	119.7	0.00	0.00	
3,200.0	4.00	130.00	3,193.7	-116.6	138.9	124.4	0.00	0.00	
3,300.0	4.00	130.00	3,293.5	-121.1	144.3	129.2	0.00	0.00	
3,400.0	4.00	130.00	3,393.3	-125.5	149.6	134.0	0.00	0.00	
3,500.0	4.00	130.00	3,493.0	-130.0	155.0	138.8	0.00	0.00	
3,600.0	4.00	130.00	3,592.8	-134.5	160.3	143.6	0.00	0.00	
3,700.0	4.00	130.00	3,692.5	-139.0	165.7	148.4	0.00	0.00	
3,800.0	4.00	130.00	3,792.3	-143.5	171.0	153.2	0.00	0.00	
3,900.0	4.00	130.00	3,892.0	-148.0	176.3	158.0	0.00	0.00	
4,000.0	4.00	130.00	3,991.8	-152.5	181.7	162.7	0.00	0.00	
4,100.0	4.00	130.00	4,091.5	-156.9	187.0	167.5	0.00	0.00	
4,200.0	4.00	130.00	4,191.3	-161.4	192.4	172.3	0.00	0.00	
4,300.0	4.00	130.00	4,291.1	-165.9	197.7	177.1	0.00	0.00	
4,400.0	4.00	130.00	4,390.8	-170.4	203.1	181.9	0.00	0.00	
4,500.0	4.00	130.00	4,490.6	-174.9	208.4	186.7	0.00	0.00	Start 2° Drop
4,600.0	2.00	130.00	4,590.4	-178.2	212.4	190.3	2.00	-2.00	
4,700.0	0.00	0.00	4,690.4	-179.4	213.8	191.5	2.00	-2.00	EOD; Vertical
4,800.0	0.00	0.00	4,790.4	-179.4	213.8	191.5	0.00	0.00	
4,900.0	0.00	0.00	4,890.4	-179.4	213.8	191.5	0.00	0.00	
5,000.0	0.00	0.00	4,990.4	-179.4	213.8	191.5	0.00	0.00	
5,075.7	0.00	0.00	5,066.1	-179.4	213.8	191.5	0.00	0.00	Curve KOP @ 5075' MD

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Razor #26L-3503A
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor #26L-3503A	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
5,100.0	2.67	165.20	5,090.4	-179.9	213.9	192.0	11.00	11.00	
5,200.0	13.67	165.20	5,189.2	-193.6	217.5	205.9	11.00	11.00	
5,300.0	24.67	165.20	5,283.5	-225.3	225.9	238.1	11.00	11.00	
5,400.0	35.67	165.20	5,369.9	-273.8	238.7	287.2	11.00	11.00	
5,500.0	46.67	165.20	5,445.0	-337.4	255.5	351.7	11.00	11.00	
5,600.0	57.67	165.20	5,506.3	-413.6	275.7	428.9	11.00	11.00	
5,670.9	65.47	165.20	5,540.0	-473.9	291.6	490.0	11.00	11.00	Top Niobrara
5,700.0	68.67	165.20	5,551.3	-499.8	298.4	516.3	11.00	11.00	
5,800.0	79.67	165.20	5,578.5	-592.7	322.9	610.4	11.00	11.00	
5,893.9	90.00	165.20	5,587.0	-683.0	346.8	701.9	11.00	11.00	LP @ 5893' MD; Start 3° Turn - 7"
5,900.0	90.00	165.38	5,587.0	-688.9	348.4	707.9	3.01	0.00	
6,000.0	90.00	168.38	5,587.0	-786.2	371.0	806.4	3.00	0.00	
6,100.0	90.00	171.38	5,587.0	-884.7	388.6	905.7	3.00	0.00	
6,200.0	90.00	174.38	5,587.0	-983.9	401.0	1,005.5	3.00	0.00	
6,300.0	90.00	177.38	5,587.0	-1,083.6	408.2	1,105.5	3.00	0.00	
6,387.3	90.00	180.00	5,587.0	-1,170.9	410.2	1,192.7	3.00	0.00	EOT; 180° Az
6,400.0	90.00	180.00	5,587.0	-1,183.6	410.2	1,205.4	0.01	0.00	
6,500.0	90.00	180.00	5,587.0	-1,283.6	410.2	1,305.2	0.00	0.00	
6,600.0	90.00	180.00	5,587.0	-1,383.6	410.2	1,405.1	0.00	0.00	
6,700.0	90.00	180.00	5,587.0	-1,483.6	410.1	1,504.9	0.00	0.00	
6,800.0	90.00	180.00	5,587.0	-1,583.6	410.1	1,604.7	0.00	0.00	
6,900.0	90.00	180.00	5,587.0	-1,683.6	410.1	1,704.6	0.00	0.00	
7,000.0	90.00	180.00	5,587.0	-1,783.6	410.1	1,804.4	0.00	0.00	
7,100.0	90.00	180.00	5,587.0	-1,883.6	410.1	1,904.2	0.00	0.00	
7,200.0	90.00	180.00	5,587.0	-1,983.6	410.1	2,004.0	0.00	0.00	
7,300.0	90.00	180.00	5,587.0	-2,083.6	410.1	2,103.9	0.00	0.00	
7,400.0	90.00	180.00	5,587.0	-2,183.6	410.1	2,203.7	0.00	0.00	
7,500.0	90.00	180.00	5,587.0	-2,283.6	410.1	2,303.5	0.00	0.00	
7,600.0	90.00	180.00	5,587.0	-2,383.6	410.1	2,403.4	0.00	0.00	
7,700.0	90.00	180.00	5,587.0	-2,483.6	410.1	2,503.2	0.00	0.00	
7,800.0	90.00	180.00	5,587.0	-2,583.6	410.1	2,603.0	0.00	0.00	
7,900.0	90.00	180.00	5,587.0	-2,683.6	410.1	2,702.9	0.00	0.00	
8,000.0	90.00	180.00	5,587.0	-2,783.6	410.1	2,802.7	0.00	0.00	
8,100.0	90.00	180.00	5,587.0	-2,883.6	410.1	2,902.5	0.00	0.00	
8,200.0	90.00	180.00	5,587.0	-2,983.6	410.1	3,002.4	0.00	0.00	
8,300.0	90.00	180.00	5,587.0	-3,083.6	410.0	3,102.2	0.00	0.00	
8,400.0	90.00	180.00	5,587.0	-3,183.6	410.0	3,202.0	0.00	0.00	
8,500.0	90.00	180.00	5,587.0	-3,283.6	410.0	3,301.8	0.00	0.00	
8,600.0	90.00	180.00	5,587.0	-3,383.6	410.0	3,401.7	0.00	0.00	
8,700.0	90.00	180.00	5,587.0	-3,483.6	410.0	3,501.5	0.00	0.00	
8,800.0	90.00	180.00	5,587.0	-3,583.6	410.0	3,601.3	0.00	0.00	
8,900.0	90.00	180.00	5,587.0	-3,683.6	410.0	3,701.2	0.00	0.00	
9,000.0	90.00	180.00	5,587.0	-3,783.6	410.0	3,801.0	0.00	0.00	
9,100.0	90.00	180.00	5,587.0	-3,883.6	410.0	3,900.8	0.00	0.00	
9,200.0	90.00	180.00	5,587.0	-3,983.6	410.0	4,000.7	0.00	0.00	
9,300.0	90.00	180.00	5,587.0	-4,083.6	410.0	4,100.5	0.00	0.00	
9,400.0	90.00	180.00	5,587.0	-4,183.6	410.0	4,200.3	0.00	0.00	
9,500.0	90.00	180.00	5,587.0	-4,283.6	410.0	4,300.2	0.00	0.00	
9,600.0	90.00	180.00	5,587.0	-4,383.6	410.0	4,400.0	0.00	0.00	
9,700.0	90.00	180.00	5,587.0	-4,483.6	410.0	4,499.8	0.00	0.00	
9,800.0	90.00	180.00	5,587.0	-4,583.6	409.9	4,599.6	0.00	0.00	
9,900.0	90.00	180.00	5,587.0	-4,683.6	409.9	4,699.5	0.00	0.00	

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Site:	S26-T10N-R58W	North Reference:	Grid
Well:	Razor #26L-3503A	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
10,000.0	90.00	180.00	5,587.0	-4,783.6	409.9	4,799.3	0.00	0.00	
10,100.0	90.00	180.00	5,587.0	-4,883.6	409.9	4,899.1	0.00	0.00	
10,200.0	90.00	180.00	5,587.0	-4,983.6	409.9	4,999.0	0.00	0.00	
10,300.0	90.00	180.00	5,587.0	-5,083.6	409.9	5,098.8	0.00	0.00	
10,400.0	90.00	180.00	5,587.0	-5,183.6	409.9	5,198.6	0.00	0.00	
10,500.0	90.00	180.00	5,587.0	-5,283.6	409.9	5,298.5	0.00	0.00	
10,600.0	90.00	180.00	5,587.0	-5,383.6	409.9	5,398.3	0.00	0.00	
10,700.0	90.00	180.00	5,587.0	-5,483.6	409.9	5,498.1	0.00	0.00	
10,800.0	90.00	180.00	5,587.0	-5,583.6	409.9	5,598.0	0.00	0.00	
10,900.0	90.00	180.00	5,587.0	-5,683.6	409.9	5,697.8	0.00	0.00	
11,000.0	90.00	180.00	5,587.0	-5,783.6	409.9	5,797.6	0.00	0.00	
11,100.0	90.00	180.00	5,587.0	-5,883.6	409.9	5,897.4	0.00	0.00	
11,200.0	90.00	180.00	5,587.0	-5,983.6	409.9	5,997.3	0.00	0.00	
11,300.0	90.00	180.00	5,587.0	-6,083.6	409.9	6,097.1	0.00	0.00	
11,400.0	90.00	180.00	5,587.0	-6,183.6	409.8	6,196.9	0.00	0.00	
11,500.0	90.00	180.00	5,587.0	-6,283.6	409.8	6,296.8	0.00	0.00	
11,600.0	90.00	180.00	5,587.0	-6,383.6	409.8	6,396.6	0.00	0.00	
11,700.0	90.00	180.00	5,587.0	-6,483.6	409.8	6,496.4	0.00	0.00	
11,800.0	90.00	180.00	5,587.0	-6,583.6	409.8	6,596.3	0.00	0.00	
11,900.0	90.00	180.00	5,587.0	-6,683.6	409.8	6,696.1	0.00	0.00	
12,000.0	90.00	180.00	5,587.0	-6,783.6	409.8	6,795.9	0.00	0.00	
12,100.0	90.00	180.00	5,587.0	-6,883.6	409.8	6,895.8	0.00	0.00	
12,200.0	90.00	180.00	5,587.0	-6,983.6	409.8	6,995.6	0.00	0.00	
12,263.9	90.00	180.00	5,587.0	-7,047.5	409.8	7,059.4	0.00	0.00	PBHL @ 12263' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
26L-3503A PBHL - hit/miss target - Shape - Point	0.00	0.00	5,587.0	-7,547.1	426.9	1,534,228.38	3,460,135.61	40° 47' 16.822 N	103° 50' 17.740 W
- plan misses target center by 499.9usft at 12263.9usft MD (5587.0 TVD, -7047.5 N, 409.8 E)									
26L-3503A BH TGT - plan hits target center - Point	0.00	0.00	5,587.0	-7,047.5	409.8	1,534,728.02	3,460,118.49	40° 47' 21.761 N	103° 50' 17.840 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
5,893.9	5,587.0	7"	0	0	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,670.9	5,540.0	Top Niobrara		0.00	

Database: USA EDM 5000 Multi Users DB
Company: Whiting Petroleum Corporation
Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26L-3503A
Wellbore: HZ
Design: Plan #2

Local Co-ordinate Reference: Well Razor #26L-3503A
TVD Reference: WELL @ 4751.0usft (Original Well Elev)
MD Reference: WELL @ 4751.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
500.0	500.0	0.0	0.0	KOP @ 500' MD
700.0	699.8	-4.5	5.3	EOB; 4°
4,500.0	4,490.6	-174.9	208.4	Start 2° Drop
4,700.0	4,690.4	-179.4	213.8	EOD; Vertical
5,075.7	5,066.1	-179.4	213.8	Curve KOP @ 5075' MD
5,893.9	5,587.0	-682.9	346.8	LP @ 5893' MD; Start 3° Turn
6,387.3	5,587.0	-1,170.9	410.2	EOT; 180° Az
12,263.9	5,587.0	-7,047.5	409.8	PBHL @ 12263' MD



WHITING PETROLEUM CORPORATION

Whiting Petroleum Corporation

Weld County, CO

S26-T10N-R58W

Razor #26L-3503A

HZ

Plan #2

Anticollision Report

18 June, 2013

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 6/18/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	12,263.9	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
S26-T10N-R58W						
Razor #26K-3505A - HZ - Plan #1	6,387.2	6,458.0	676.6	624.2	12.929	CC
Razor #26K-3505A - HZ - Plan #1	12,264.6	12,335.4	677.1	405.1	2.489	ES, SF
Razor #26K-3507A - HZ - Plan #1						Out of range
Razor #26K-3508B - HZ - Plan #1						Out of range
Razor #26L-2301A - HZ - Plan #2	466.7	466.7	32.9	31.1	17.943	CC
Razor #26L-2301A - HZ - Plan #2	500.0	500.0	32.9	31.0	16.589	ES
Razor #26L-2301A - HZ - Plan #2	600.0	599.4	35.1	32.7	14.548	SF
Razor #26L-2302B - HZ - Plan #2	500.0	500.0	100.0	98.1	50.378	CC
Razor #26L-2302B - HZ - Plan #2	700.0	699.8	100.3	97.5	35.365	ES
Razor #26L-2302B - HZ - Plan #2	1,700.0	1,695.4	135.3	127.9	18.343	SF
Razor #26L-2303A - HZ - Plan #2	959.1	958.3	21.8	17.8	5.452	CC
Razor #26L-2303A - HZ - Plan #2	1,000.0	999.1	22.0	17.8	5.251	ES, SF
Razor #26L-2304B - HZ - Plan #1	1,343.6	1,344.0	16.1	10.3	2.774	CC, ES, SF
Razor #26L-3501A - HZ - Plan #2	500.0	500.0	66.2	64.2	33.318	CC, ES
Razor #26L-3501A - HZ - Plan #2	12,264.6	12,195.9	659.7	389.1	2.437	SF
Razor #26L-3502B - HZ - Plan #2	950.8	950.0	78.2	74.2	19.690	CC
Razor #26L-3502B - HZ - Plan #2	1,000.0	999.1	78.3	74.1	18.645	ES
Razor #26L-3502B - HZ - Plan #2	12,264.6	12,199.8	341.5	79.5	1.303	Level 3, SF
Razor #26L-3504B - HZ - Plan #1	2,798.2	2,794.7	32.7	20.7	2.716	CC
Razor #26L-3504B - HZ - Plan #1	3,100.0	3,096.4	33.5	20.0	2.479	ES
Razor #26L-3504B - HZ - Plan #1	12,264.6	12,442.9	358.1	97.4	1.374	Level 3, SF
Razor 26-3524H (Existing) - Existing - SURVEYs	6,379.4	6,573.6	946.4	897.1	19.176	CC
Razor 26-3524H (Existing) - Existing - SURVEYs	10,100.0	10,285.9	989.1	807.8	5.455	ES
Razor 26-3524H (Existing) - Existing - SURVEYs	10,300.0	10,427.0	996.4	808.8	5.312	SF

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-3505A - 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		
5,250.0	5,237.2	5,394.7	5,369.3	12.7	13.5	-78.69	-202.0	1,212.0	999.3	973.6	25.72	38.856		
5,300.0	5,283.6	5,479.8	5,437.0	13.0	14.2	-78.68	-252.4	1,201.8	987.8	961.2	26.56	37.187		
5,350.0	5,327.9	5,557.9	5,491.0	13.3	14.9	-78.74	-307.6	1,190.6	973.9	946.4	27.48	35.438		
5,400.0	5,369.9	5,629.2	5,532.5	13.6	15.7	-78.94	-364.4	1,179.0	958.1	929.6	28.46	33.662		
5,450.0	5,409.0	5,694.3	5,563.1	13.9	16.5	-79.30	-420.7	1,167.6	940.6	911.1	29.47	31.912		
5,500.0	5,445.0	5,754.1	5,584.7	14.4	17.3	-79.83	-475.3	1,156.5	921.7	891.2	30.52	30.203		
5,550.0	5,477.5	5,809.4	5,598.9	14.8	18.1	-80.53	-527.7	1,145.9	901.8	870.2	31.60	28.534		
5,600.0	5,506.3	5,861.0	5,607.0	15.3	18.8	-81.38	-577.6	1,135.8	881.0	848.3	32.77	26.888		
5,650.0	5,530.9	5,909.6	5,609.9	15.9	19.5	-82.38	-625.0	1,126.1	859.6	825.7	33.96	25.313		
5,700.0	5,551.3	5,941.0	5,610.0	16.5	20.0	-83.99	-655.9	1,120.0	838.1	803.1	34.99	23.952		
5,750.0	5,567.2	5,971.0	5,610.0	17.2	20.4	-85.79	-685.4	1,114.6	817.1	781.1	36.05	22.668		
5,800.0	5,578.6	6,000.0	5,610.0	17.9	20.8	-87.72	-714.0	1,109.9	796.7	759.6	37.13	21.461		
5,850.0	5,585.1	6,034.5	5,610.0	18.6	21.3	-89.72	-748.1	1,104.8	777.0	738.7	38.28	20.298		
5,893.9	5,587.0	6,063.4	5,610.0	19.3	21.7	-91.62	-776.7	1,101.0	760.3	721.0	39.28	19.358		
5,900.0	5,587.0	6,067.4	5,610.0	19.3	21.7	-91.63	-780.8	1,100.5	758.0	718.6	39.42	19.229		
6,000.0	5,587.0	6,135.5	5,610.0	20.6	22.7	-91.65	-848.5	1,093.5	725.4	683.6	41.76	17.371		
6,100.0	5,587.0	6,200.0	5,610.0	22.0	23.6	-91.66	-912.8	1,089.0	701.3	657.1	44.13	15.891		
6,200.0	5,587.0	6,278.7	5,610.0	23.4	24.8	-91.68	-991.4	1,086.5	685.9	639.1	46.77	14.666		
6,300.0	5,587.0	6,370.8	5,610.0	24.8	26.2	-91.69	-1,083.6	1,086.4	678.5	628.9	49.66	13.663		
6,387.2	5,587.0	6,458.0	5,610.0	26.1	27.6	-91.69	-1,170.7	1,086.4	676.6	624.2	52.33	12.929 CC		
6,387.3	5,587.0	6,458.2	5,610.0	26.1	27.6	-91.69	-1,170.9	1,086.4	676.6	624.2	52.33	12.928		
6,400.0	5,587.0	6,470.8	5,610.0	26.3	27.9	-91.69	-1,183.6	1,086.4	676.6	623.8	52.75	12.826		
6,500.0	5,587.0	6,570.8	5,610.0	27.9	29.6	-91.69	-1,283.6	1,086.4	676.6	620.4	56.12	12.055		
6,600.0	5,587.0	6,670.8	5,610.0	29.5	31.3	-91.69	-1,383.6	1,086.4	676.6	617.0	59.55	11.361		
6,700.0	5,587.0	6,770.8	5,610.0	31.2	33.0	-91.69	-1,483.6	1,086.4	676.6	613.6	63.03	10.735		
6,800.0	5,587.0	6,870.8	5,610.0	32.9	34.8	-91.69	-1,583.6	1,086.4	676.6	610.1	66.54	10.168		
6,900.0	5,587.0	6,970.8	5,610.0	34.6	36.6	-91.69	-1,683.6	1,086.4	676.6	606.5	70.09	9.653		
7,000.0	5,587.0	7,070.8	5,610.0	36.3	38.4	-91.69	-1,783.6	1,086.4	676.6	602.9	73.67	9.185		
7,100.0	5,587.0	7,170.8	5,610.0	38.1	40.2	-91.69	-1,883.6	1,086.5	676.6	599.4	77.27	8.757		
7,200.0	5,587.0	7,270.8	5,610.0	39.9	42.0	-91.69	-1,983.6	1,086.5	676.6	595.7	80.89	8.365		
7,300.0	5,587.0	7,370.8	5,610.0	41.7	43.8	-91.69	-2,083.6	1,086.5	676.6	592.1	84.53	8.004		
7,400.0	5,587.0	7,470.8	5,610.0	43.4	45.6	-91.69	-2,183.6	1,086.5	676.7	588.5	88.19	7.673		
7,500.0	5,587.0	7,570.8	5,610.0	45.3	47.5	-91.69	-2,283.6	1,086.5	676.7	584.8	91.86	7.366		
7,600.0	5,587.0	7,670.8	5,610.0	47.1	49.3	-91.69	-2,383.6	1,086.5	676.7	581.1	95.55	7.082		
7,700.0	5,587.0	7,770.8	5,610.0	48.9	51.2	-91.69	-2,483.6	1,086.5	676.7	577.4	99.24	6.818		
7,800.0	5,587.0	7,870.8	5,610.0	50.7	53.0	-91.69	-2,583.6	1,086.5	676.7	573.7	102.95	6.573		
7,900.0	5,587.0	7,970.8	5,610.0	52.5	54.9	-91.69	-2,683.6	1,086.5	676.7	570.0	106.66	6.344		
8,000.0	5,587.0	8,070.8	5,610.0	54.4	56.7	-91.69	-2,783.6	1,086.5	676.7	566.3	110.39	6.130		
8,100.0	5,587.0	8,170.8	5,610.0	56.2	58.6	-91.69	-2,883.6	1,086.5	676.7	562.6	114.12	5.930		
8,200.0	5,587.0	8,270.8	5,610.0	58.1	60.5	-91.69	-2,983.6	1,086.5	676.7	558.9	117.85	5.742		
8,300.0	5,587.0	8,370.8	5,610.0	59.9	62.3	-91.69	-3,083.6	1,086.5	676.7	555.1	121.60	5.565		
8,400.0	5,587.0	8,470.8	5,610.0	61.8	64.2	-91.69	-3,183.6	1,086.5	676.8	551.4	125.35	5.399		
8,500.0	5,587.0	8,570.8	5,610.0	63.7	66.1	-91.69	-3,283.6	1,086.5	676.8	547.7	129.10	5.242		
8,600.0	5,587.0	8,670.8	5,610.0	65.5	68.0	-91.69	-3,383.6	1,086.5	676.8	543.9	132.86	5.094		
8,700.0	5,587.0	8,770.8	5,610.0	67.4	69.8	-91.69	-3,483.6	1,086.5	676.8	540.2	136.62	4.954		
8,800.0	5,587.0	8,870.8	5,610.0	69.3	71.7	-91.69	-3,583.6	1,086.5	676.8	536.4	140.38	4.821		
8,900.0	5,587.0	8,970.8	5,610.0	71.1	73.6	-91.69	-3,683.6	1,086.5	676.8	532.6	144.15	4.695		
9,000.0	5,587.0	9,070.8	5,610.0	73.0	75.5	-91.69	-3,783.6	1,086.5	676.8	528.9	147.92	4.575		
9,100.0	5,587.0	9,170.8	5,610.0	74.9	77.4	-91.69	-3,883.6	1,086.5	676.8	525.1	151.70	4.462		
9,200.0	5,587.0	9,270.8	5,610.0	76.8	79.3	-91.69	-3,983.6	1,086.5	676.8	521.3	155.48	4.353		
9,300.0	5,587.0	9,370.8	5,610.0	78.6	81.2	-91.69	-4,083.6	1,086.5	676.8	517.6	159.26	4.250		
9,400.0	5,587.0	9,470.8	5,610.0	80.5	83.1	-91.69	-4,183.6	1,086.5	676.8	513.8	163.04	4.151		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-3505A - HZ - Plan #1													Offset Site Error: 0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,500.0	5,587.0	9,570.8	5,610.0	82.4	84.9	-91.69	-4,283.6	1,086.5	676.9	510.0	166.83	4.057	
9,600.0	5,587.0	9,670.8	5,610.0	84.3	86.8	-91.69	-4,383.6	1,086.5	676.9	506.3	170.61	3.967	
9,700.0	5,587.0	9,770.8	5,610.0	86.2	88.7	-91.69	-4,483.6	1,086.5	676.9	502.5	174.40	3.881	
9,800.0	5,587.0	9,870.8	5,610.0	88.1	90.6	-91.69	-4,583.6	1,086.5	676.9	498.7	178.19	3.799	
9,900.0	5,587.0	9,970.8	5,610.0	90.0	92.5	-91.69	-4,683.6	1,086.5	676.9	494.9	181.99	3.719	
10,000.0	5,587.0	10,070.8	5,610.0	91.8	94.4	-91.69	-4,783.6	1,086.5	676.9	491.1	185.78	3.644	
10,100.0	5,587.0	10,170.8	5,610.0	93.7	96.3	-91.69	-4,883.6	1,086.5	676.9	487.3	189.58	3.571	
10,200.0	5,587.0	10,270.8	5,610.0	95.6	98.2	-91.69	-4,983.6	1,086.6	676.9	483.5	193.38	3.501	
10,300.0	5,587.0	10,370.8	5,610.0	97.5	100.1	-91.69	-5,083.6	1,086.6	676.9	479.8	197.17	3.433	
10,400.0	5,587.0	10,470.8	5,610.0	99.4	102.0	-91.69	-5,183.6	1,086.6	676.9	476.0	200.98	3.368	
10,500.0	5,587.0	10,570.8	5,610.0	101.3	103.9	-91.69	-5,283.6	1,086.6	677.0	472.2	204.78	3.306	
10,600.0	5,587.0	10,670.8	5,610.0	103.2	105.8	-91.69	-5,383.6	1,086.6	677.0	468.4	208.58	3.246	
10,700.0	5,587.0	10,770.8	5,610.0	105.1	107.7	-91.69	-5,483.6	1,086.6	677.0	464.6	212.38	3.188	
10,800.0	5,587.0	10,870.8	5,610.0	107.0	109.6	-91.69	-5,583.6	1,086.6	677.0	460.8	216.19	3.131	
10,900.0	5,587.0	10,970.8	5,610.0	108.9	111.5	-91.69	-5,683.6	1,086.6	677.0	457.0	219.99	3.077	
11,000.0	5,587.0	11,070.8	5,610.0	110.8	113.4	-91.69	-5,783.6	1,086.6	677.0	453.2	223.80	3.025	
11,100.0	5,587.0	11,170.8	5,610.0	112.7	115.3	-91.69	-5,883.6	1,086.6	677.0	449.4	227.61	2.974	
11,200.0	5,587.0	11,270.8	5,610.0	114.6	117.2	-91.69	-5,983.6	1,086.6	677.0	445.6	231.41	2.926	
11,300.0	5,587.0	11,370.8	5,610.0	116.5	119.1	-91.69	-6,083.6	1,086.6	677.0	441.8	235.22	2.878	
11,400.0	5,587.0	11,470.8	5,610.0	118.4	121.1	-91.69	-6,183.6	1,086.6	677.0	438.0	239.03	2.832	
11,500.0	5,587.0	11,570.8	5,610.0	120.3	123.0	-91.69	-6,283.6	1,086.6	677.0	434.2	242.84	2.788	
11,600.0	5,587.0	11,670.8	5,610.0	122.2	124.9	-91.69	-6,383.6	1,086.6	677.1	430.4	246.65	2.745	
11,700.0	5,587.0	11,770.8	5,610.0	124.1	126.8	-91.69	-6,483.6	1,086.6	677.1	426.6	250.47	2.703	
11,800.0	5,587.0	11,870.8	5,610.0	126.0	128.7	-91.69	-6,583.6	1,086.6	677.1	422.8	254.28	2.663	
11,900.0	5,587.0	11,970.8	5,610.0	127.9	130.6	-91.69	-6,683.6	1,086.6	677.1	419.0	258.09	2.623	
12,000.0	5,587.0	12,070.8	5,610.0	129.8	132.5	-91.69	-6,783.6	1,086.6	677.1	415.2	261.90	2.585	
12,100.0	5,587.0	12,170.8	5,610.0	131.7	134.4	-91.69	-6,883.6	1,086.6	677.1	411.4	265.72	2.548	
12,200.0	5,587.0	12,270.8	5,610.0	133.6	136.3	-91.69	-6,983.6	1,086.6	677.1	407.6	269.53	2.512	
12,263.9	5,587.0	12,334.7	5,610.0	134.8	137.5	-91.69	-7,047.5	1,086.6	677.1	405.2	271.97	2.490	
12,264.6	5,587.0	12,335.4	5,610.0	134.8	137.5	-91.69	-7,048.1	1,086.6	677.1	405.1	271.99	2.489 ES, SF	

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - 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)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-91.05	-0.6	-32.9	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	-91.05	-0.6	-32.9	32.9	32.8	0.19	175.527		
200.0	200.0	200.0	200.0	0.3	0.3	-91.05	-0.6	-32.9	32.9	32.3	0.64	51.698		
300.0	300.0	300.0	300.0	0.5	0.5	-91.05	-0.6	-32.9	32.9	31.9	1.09	30.313		
400.0	400.0	400.0	400.0	0.8	0.8	-91.05	-0.6	-32.9	32.9	31.4	1.54	21.443		
466.7	466.7	466.7	466.7	0.9	0.9	-91.05	-0.6	-32.9	32.9	31.1	1.84	17.943 CC		
500.0	500.0	500.0	500.0	1.0	1.0	-91.05	-0.6	-32.9	32.9	31.0	1.99	16.589 ES		
600.0	600.0	599.4	599.4	1.2	1.2	143.34	0.9	-33.7	35.1	32.7	2.41	14.548 SF		
700.0	699.8	698.1	698.0	1.4	1.4	153.53	5.5	-35.9	42.5	39.7	2.84	14.995		
800.0	799.6	797.2	796.8	1.6	1.7	162.55	11.8	-39.0	53.9	50.6	3.27	16.496		
900.0	899.4	896.2	895.6	1.8	1.9	168.36	18.0	-42.0	66.1	62.4	3.70	17.873		
1,000.0	999.1	995.3	994.4	2.1	2.2	172.34	24.2	-45.0	78.8	74.6	4.13	19.054		
1,100.0	1,098.9	1,094.4	1,093.3	2.3	2.4	175.20	30.4	-48.1	91.7	87.1	4.57	20.053		
1,200.0	1,198.6	1,193.4	1,192.1	2.6	2.6	177.35	36.6	-51.1	104.8	99.8	5.02	20.899		
1,300.0	1,298.4	1,292.5	1,290.9	2.8	2.9	179.03	42.8	-54.1	118.1	112.6	5.46	21.620		
1,400.0	1,398.1	1,391.6	1,389.7	3.1	3.1	-179.64	49.0	-57.1	131.4	125.5	5.91	22.238		
1,500.0	1,497.9	1,490.7	1,488.6	3.3	3.4	-178.55	55.2	-60.2	144.7	138.4	6.36	22.773		
1,600.0	1,597.6	1,589.7	1,587.4	3.6	3.6	-177.64	61.4	-63.2	158.1	151.3	6.80	23.240		
1,700.0	1,697.4	1,688.8	1,686.2	3.8	3.9	-176.88	67.7	-66.2	171.6	164.3	7.25	23.651		
1,800.0	1,797.2	1,787.9	1,785.0	4.1	4.1	-176.23	73.9	-69.3	185.0	177.3	7.71	24.014		
1,900.0	1,896.9	1,886.9	1,883.9	4.4	4.4	-175.66	80.1	-72.3	198.5	190.4	8.16	24.337		
2,000.0	1,996.7	1,986.0	1,982.7	4.6	4.6	-175.17	86.3	-75.3	212.0	203.4	8.61	24.627		
2,100.0	2,096.4	2,085.1	2,081.5	4.9	4.9	-174.74	92.5	-78.4	225.5	216.5	9.06	24.887		
2,200.0	2,196.2	2,184.1	2,180.4	5.1	5.2	-174.35	98.7	-81.4	239.1	229.6	9.52	25.123		
2,300.0	2,295.9	2,283.2	2,279.2	5.4	5.4	-174.01	104.9	-84.4	252.6	242.6	9.97	25.338		
2,400.0	2,395.7	2,382.3	2,378.0	5.6	5.7	-173.70	111.1	-87.4	266.2	255.7	10.42	25.533		
2,500.0	2,495.5	2,481.3	2,476.8	5.9	5.9	-173.42	117.4	-90.5	279.7	268.8	10.88	25.713		
2,600.0	2,595.2	2,580.4	2,575.7	6.2	6.2	-173.17	123.6	-93.5	293.3	281.9	11.33	25.878		
2,700.0	2,695.0	2,679.5	2,674.5	6.4	6.4	-172.94	129.8	-96.5	306.8	295.0	11.79	26.030		
2,800.0	2,794.7	2,778.5	2,773.3	6.7	6.7	-172.73	136.0	-99.6	320.4	308.1	12.24	26.170		
2,900.0	2,894.5	2,877.6	2,872.1	7.0	6.9	-172.53	142.2	-102.6	334.0	321.3	12.70	26.301		
3,000.0	2,994.2	2,976.7	2,971.0	7.2	7.2	-172.36	148.4	-105.6	347.5	334.4	13.15	26.422		
3,100.0	3,094.0	3,075.8	3,069.8	7.5	7.4	-172.19	154.6	-108.6	361.1	347.5	13.61	26.536		
3,200.0	3,193.7	3,174.8	3,168.6	7.7	7.7	-172.04	160.8	-111.7	374.7	360.6	14.06	26.641		
3,300.0	3,293.5	3,273.9	3,267.5	8.0	7.9	-171.90	167.0	-114.7	388.3	373.8	14.52	26.741		
3,400.0	3,393.3	3,373.0	3,366.3	8.3	8.2	-171.76	173.3	-117.7	401.9	386.9	14.98	26.834		
3,500.0	3,493.0	3,472.0	3,465.1	8.5	8.5	-171.64	179.5	-120.8	415.4	400.0	15.43	26.921		
3,600.0	3,592.8	3,571.1	3,563.9	8.8	8.7	-171.52	185.7	-123.8	429.0	413.1	15.89	27.004		
3,700.0	3,692.5	3,670.2	3,662.8	9.1	9.0	-171.41	191.9	-126.8	442.6	426.3	16.34	27.081		
3,800.0	3,792.3	3,769.2	3,761.6	9.3	9.2	-171.31	198.1	-129.9	456.2	439.4	16.80	27.155		
3,900.0	3,892.0	3,868.3	3,860.4	9.6	9.5	-171.21	204.3	-132.9	469.8	452.6	17.26	27.224		
4,000.0	3,991.8	3,967.4	3,959.3	9.8	9.7	-171.12	210.5	-135.9	483.4	465.7	17.71	27.290		
4,100.0	4,091.6	4,066.4	4,058.1	10.1	10.0	-171.04	216.7	-138.9	497.0	478.8	18.17	27.353		
4,200.0	4,191.3	4,165.5	4,156.9	10.4	10.2	-170.95	222.9	-142.0	510.6	492.0	18.63	27.413		
4,300.0	4,291.1	4,264.6	4,255.7	10.6	10.5	-170.88	229.2	-145.0	524.2	505.1	19.08	27.469		
4,400.0	4,390.8	4,363.6	4,354.6	10.9	10.7	-170.80	235.4	-148.0	537.8	518.2	19.54	27.523		
4,500.0	4,490.6	4,462.7	4,453.4	11.2	11.0	-170.73	241.6	-151.1	551.4	531.4	20.00	27.575		
4,600.0	4,590.4	4,562.0	4,552.4	11.4	11.3	-170.68	247.8	-154.1	563.3	542.8	20.46	27.531		
4,700.0	4,690.4	4,661.6	4,651.8	11.6	11.5	-40.56	254.0	-157.1	571.7	550.3	21.42	26.686		
4,800.0	4,790.4	4,761.4	4,751.3	11.7	11.8	-40.38	260.3	-160.2	578.5	556.6	21.86	26.466		
4,900.0	4,890.4	4,861.1	4,850.8	11.9	12.0	-40.21	266.6	-163.2	585.3	563.0	22.28	26.265		
5,000.0	4,990.4	4,960.9	4,950.4	12.1	12.3	-40.05	272.8	-166.3	592.0	569.3	22.71	26.071		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,075.7	5,066.1	5,036.4	5,025.7	12.2	12.5	-39.92	277.5	-168.6	597.2	574.1	23.03	25.927		
5,100.0	5,090.4	5,060.6	5,049.8	12.2	12.5	154.84	279.1	-169.3	599.3	576.8	22.55	26.577		
5,150.0	5,140.2	5,109.9	5,099.0	12.4	12.7	154.74	282.2	-170.8	607.0	584.3	22.61	26.840		
5,200.0	5,189.2	5,134.2	5,123.2	12.5	12.7	154.35	284.0	-171.8	619.7	597.3	22.47	27.576		
5,250.0	5,237.2	5,150.0	5,138.9	12.7	12.8	153.59	285.8	-172.6	638.6	616.5	22.18	28.788		
5,300.0	5,283.6	5,174.4	5,162.9	13.0	12.9	152.69	289.4	-174.4	663.1	641.3	21.81	30.403		
5,350.0	5,327.9	5,200.0	5,188.0	13.3	13.0	151.51	294.2	-176.7	692.8	671.5	21.37	32.420		
5,400.0	5,369.9	5,200.0	5,188.0	13.6	13.0	148.96	294.2	-176.7	726.9	705.9	20.95	34.690		
5,450.0	5,409.0	5,218.7	5,206.1	13.9	13.0	146.33	298.4	-178.8	764.8	744.2	20.69	36.970		
5,500.0	5,445.0	5,228.8	5,215.7	14.4	13.1	142.23	301.0	-180.0	806.1	785.3	20.81	38.740		
5,550.0	5,477.5	5,250.0	5,236.0	14.8	13.2	137.52	306.8	-182.9	850.2	828.8	21.41	39.712		
5,600.0	5,506.3	5,250.0	5,236.0	15.3	13.2	128.56	306.8	-182.9	895.8	872.5	23.30	38.448		
5,650.0	5,530.9	5,250.0	5,236.0	15.9	13.2	115.49	306.8	-182.9	942.8	916.4	26.40	35.712		
5,700.0	5,551.3	5,250.0	5,236.0	16.5	13.2	97.59	306.8	-182.9	990.8	961.4	29.39	33.708		

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-139.67	-76.3	-64.7	100.0					
100.0	100.0	100.0	100.0	0.1	0.1	-139.67	-76.3	-64.7	100.0	99.9	0.19	533.041		
200.0	200.0	200.0	200.0	0.3	0.3	-139.67	-76.3	-64.7	100.0	99.4	0.64	156.998		
300.0	300.0	300.0	300.0	0.5	0.5	-139.67	-76.3	-64.7	100.0	99.0	1.09	92.056		
400.0	400.0	400.0	400.0	0.8	0.8	-139.67	-76.3	-64.7	100.0	98.5	1.54	65.119		
500.0	500.0	500.0	500.0	1.0	1.0	-139.67	-76.3	-64.7	100.0	98.1	1.99	50.378 CC		
505.7	505.7	505.7	505.7	1.0	1.0	90.33	-76.3	-64.7	100.0	98.0	2.01	49.758		
600.0	600.0	600.0	600.0	1.2	1.2	91.33	-76.3	-64.7	100.1	97.7	2.41	41.451		
700.0	699.8	699.8	699.8	1.4	1.4	94.31	-76.3	-64.7	100.3	97.5	2.84	35.365 ES		
800.0	799.6	799.6	799.6	1.6	1.7	98.24	-76.3	-64.7	101.1	97.8	3.28	30.827		
900.0	899.4	899.4	899.4	1.8	1.9	102.10	-76.3	-64.7	102.3	98.6	3.73	27.413		
1,000.0	999.1	999.1	999.1	2.1	2.1	105.86	-76.3	-64.7	104.0	99.8	4.19	24.809		
1,100.0	1,098.9	1,099.8	1,099.8	2.3	2.3	110.41	-74.6	-65.2	105.7	101.0	4.66	22.706		
1,200.0	1,198.6	1,199.8	1,199.6	2.6	2.6	116.60	-69.6	-66.6	107.5	102.4	5.11	21.023		
1,300.0	1,298.4	1,298.9	1,298.5	2.8	2.8	123.37	-62.9	-68.5	110.5	104.9	5.57	19.838		
1,400.0	1,398.1	1,398.0	1,397.4	3.1	3.0	129.71	-56.2	-70.3	114.9	108.9	6.02	19.083		
1,500.0	1,497.9	1,497.1	1,496.3	3.3	3.3	135.51	-49.6	-72.2	120.6	114.1	6.47	18.633		
1,600.0	1,597.6	1,596.3	1,595.1	3.6	3.5	140.75	-42.9	-74.0	127.5	120.6	6.93	18.407		
1,700.0	1,697.4	1,695.4	1,694.0	3.8	3.7	145.43	-36.2	-75.8	135.3	127.9	7.38	18.343 SF		
1,800.0	1,797.2	1,794.5	1,792.9	4.1	4.0	149.57	-29.6	-77.7	143.9	136.1	7.83	18.392		
1,900.0	1,896.9	1,893.6	1,891.7	4.4	4.2	153.24	-22.9	-79.5	153.2	145.0	8.28	18.517		
2,000.0	1,996.7	1,992.7	1,990.6	4.6	4.5	156.48	-16.3	-81.4	163.1	154.4	8.72	18.694		
2,100.0	2,096.4	2,091.8	2,089.5	4.9	4.7	159.34	-9.6	-83.2	173.4	164.2	9.17	18.902		
2,200.0	2,196.2	2,190.9	2,188.4	5.1	5.0	161.88	-2.9	-85.1	184.1	174.5	9.62	19.131		
2,300.0	2,295.9	2,290.0	2,287.2	5.4	5.2	164.13	3.7	-86.9	195.1	185.1	10.07	19.369		
2,400.0	2,395.7	2,389.2	2,386.1	5.6	5.4	166.15	10.4	-88.8	206.4	195.9	10.52	19.612		
2,500.0	2,495.5	2,488.3	2,485.0	5.9	5.7	167.95	17.1	-90.6	217.9	206.9	10.98	19.855		
2,600.0	2,595.2	2,587.4	2,583.8	6.2	5.9	169.57	23.7	-92.5	229.6	218.2	11.43	20.094		
2,700.0	2,695.0	2,686.5	2,682.7	6.4	6.2	171.04	30.4	-94.3	241.5	229.6	11.88	20.328		
2,800.0	2,794.7	2,785.6	2,781.6	6.7	6.4	172.36	37.0	-96.2	253.5	241.2	12.33	20.555		
2,900.0	2,894.5	2,884.7	2,880.5	7.0	6.7	173.57	43.7	-98.0	265.6	252.9	12.79	20.775		
3,000.0	2,994.2	2,983.8	2,979.3	7.2	6.9	174.67	50.4	-99.9	277.9	264.6	13.24	20.988		
3,100.0	3,094.0	3,082.9	3,078.2	7.5	7.2	175.68	57.0	-101.7	290.2	276.5	13.69	21.192		
3,200.0	3,193.7	3,182.1	3,177.1	7.7	7.4	176.61	63.7	-103.6	302.6	288.5	14.15	21.389		
3,300.0	3,293.5	3,281.2	3,275.9	8.0	7.7	177.46	70.4	-105.4	315.1	300.5	14.60	21.577		
3,400.0	3,393.3	3,380.3	3,374.8	8.3	8.0	178.25	77.0	-107.3	327.7	312.6	15.06	21.758		
3,500.0	3,493.0	3,479.4	3,473.7	8.5	8.2	178.98	83.7	-109.1	340.3	324.8	15.51	21.932		
3,600.0	3,592.8	3,578.5	3,572.6	8.8	8.5	179.65	90.3	-111.0	352.9	337.0	15.97	22.098		
3,700.0	3,692.5	3,677.6	3,671.4	9.1	8.7	-179.71	97.0	-112.8	365.6	349.2	16.43	22.258		
3,800.0	3,792.3	3,776.7	3,770.3	9.3	9.0	-179.13	103.7	-114.6	378.4	361.5	16.88	22.411		
3,900.0	3,892.0	3,875.8	3,869.2	9.6	9.2	-178.58	110.3	-116.5	391.1	373.8	17.34	22.558		
4,000.0	3,991.8	3,975.0	3,968.0	9.8	9.5	-178.06	117.0	-118.3	404.0	386.2	17.80	22.699		
4,100.0	4,091.6	4,074.1	4,066.9	10.1	9.7	-177.58	123.7	-120.2	416.8	398.5	18.25	22.834		
4,200.0	4,191.3	4,173.2	4,165.8	10.4	10.0	-177.12	130.3	-122.0	429.7	411.0	18.71	22.964		
4,300.0	4,291.1	4,272.3	4,264.6	10.6	10.2	-176.69	137.0	-123.9	442.6	423.4	19.17	23.089		
4,400.0	4,390.8	4,371.4	4,363.5	10.9	10.5	-176.29	143.6	-125.7	455.5	435.9	19.63	23.209		
4,500.0	4,490.6	4,470.5	4,462.4	11.2	10.7	-175.91	150.3	-127.6	468.4	448.3	20.08	23.325		
4,600.0	4,590.4	4,569.8	4,561.5	11.4	11.0	-175.55	157.0	-129.4	479.7	459.1	20.54	23.348		
4,700.0	4,690.4	4,669.5	4,660.9	11.6	11.2	-45.17	163.7	-131.3	487.4	466.1	21.37	22.814		
4,800.0	4,790.4	4,769.2	4,760.4	11.7	11.5	-44.77	170.4	-133.1	493.5	471.7	21.80	22.636		
4,900.0	4,890.4	4,869.0	4,859.9	11.9	11.7	-44.38	177.1	-135.0	499.6	477.4	22.23	22.476		
5,000.0	4,990.4	4,968.7	4,959.4	12.1	12.0	-43.99	183.8	-136.9	505.7	483.1	22.66	22.323		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - HZ - Plan #2													Offset Site Error: 0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,075.7	5,066.1	5,044.3	5,034.7	12.2	12.2	-43.71	188.9	-138.3	510.4	487.4	22.98	22.210	
5,100.0	5,090.4	5,068.4	5,058.9	12.2	12.3	151.10	190.5	-138.7	512.4	489.7	22.64	22.629	
5,150.0	5,140.2	5,117.8	5,108.0	12.4	12.4	151.15	193.8	-139.6	519.6	496.9	22.73	22.858	
5,200.0	5,189.2	5,166.0	5,156.2	12.5	12.5	151.20	197.1	-140.5	531.0	508.3	22.67	23.419	
5,250.0	5,237.2	5,200.0	5,190.1	12.7	12.6	150.93	199.3	-141.2	546.7	524.2	22.45	24.348	
5,300.0	5,283.6	5,229.1	5,219.1	13.0	12.7	150.41	202.1	-141.9	567.6	545.5	22.12	25.662	
5,350.0	5,327.9	5,250.0	5,239.7	13.3	12.7	149.39	205.0	-142.7	594.0	572.3	21.71	27.368	
5,400.0	5,369.9	5,266.8	5,256.2	13.6	12.8	147.80	207.9	-143.6	625.4	604.1	21.31	29.356	
5,450.0	5,409.0	5,281.6	5,270.7	13.9	12.9	145.50	210.9	-144.4	661.1	640.1	21.02	31.447	
5,500.0	5,445.0	5,300.0	5,288.6	14.4	12.9	142.65	215.2	-145.6	700.5	679.6	20.97	33.399	
5,550.0	5,477.5	5,300.0	5,288.6	14.8	12.9	137.01	215.2	-145.6	742.8	721.1	21.66	34.300	
5,600.0	5,506.3	5,300.0	5,288.6	15.3	12.9	128.86	215.2	-145.6	787.6	764.3	23.34	33.751	
5,650.0	5,530.9	5,300.0	5,288.6	15.9	12.9	117.12	215.2	-145.6	834.1	808.0	26.13	31.928	
5,700.0	5,551.3	5,317.0	5,304.9	16.5	13.0	104.73	219.7	-146.8	881.3	852.5	28.74	30.660	
5,750.0	5,567.2	5,317.6	5,305.5	17.2	13.0	85.79	219.9	-146.9	929.3	899.0	30.36	30.615	
5,800.0	5,578.6	5,316.4	5,304.3	17.9	13.0	66.45	219.5	-146.8	977.5	948.8	28.76	33.987	

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	88.95	0.6	33.2	33.2					
100.0	100.0	100.0	100.0	0.1	0.1	88.95	0.6	33.2	33.2	33.0	0.19	177.002		
200.0	200.0	200.0	200.0	0.3	0.3	88.95	0.6	33.2	33.2	32.6	0.64	52.133		
300.0	300.0	300.0	300.0	0.5	0.5	88.95	0.6	33.2	33.2	32.1	1.09	30.568		
400.0	400.0	400.0	400.0	0.8	0.8	88.95	0.6	33.2	33.2	31.7	1.54	21.624		
500.0	500.0	500.0	500.0	1.0	1.0	88.95	0.6	33.2	33.2	31.2	1.99	16.729		
600.0	600.0	600.0	600.0	1.2	1.2	-43.13	0.6	33.2	31.9	29.5	2.41	13.223		
700.0	699.8	699.8	699.8	1.4	1.4	-50.43	0.6	33.2	28.3	25.5	2.83	9.998		
800.0	799.6	799.6	799.6	1.6	1.7	-63.10	0.6	33.2	24.5	21.2	3.27	7.483		
900.0	899.4	899.4	899.4	1.8	1.9	-79.33	0.6	33.2	22.2	18.5	3.73	5.956		
959.1	958.3	958.3	958.3	2.0	2.0	-90.00	0.6	33.2	21.8	17.8	4.00	5.452 CC		
1,000.0	999.1	999.1	999.1	2.1	2.1	-97.44	0.6	33.2	22.0	17.8	4.19	5.251 ES, SF		
1,100.0	1,098.9	1,098.1	1,098.0	2.3	2.3	-115.36	2.3	33.1	25.5	20.9	4.64	5.501		
1,200.0	1,198.6	1,196.4	1,196.3	2.6	2.6	-128.58	7.3	32.7	34.3	29.2	5.08	6.751		
1,300.0	1,298.4	1,295.6	1,295.2	2.8	2.8	-136.17	14.2	32.3	46.0	40.5	5.53	8.326		
1,400.0	1,398.1	1,394.7	1,394.1	3.1	3.0	-140.65	21.1	31.8	58.2	52.2	5.97	9.747		
1,500.0	1,497.9	1,493.9	1,493.0	3.3	3.2	-143.57	28.0	31.3	70.6	64.2	6.42	11.001		
1,600.0	1,597.6	1,593.1	1,592.0	3.6	3.5	-145.62	34.9	30.8	83.1	76.2	6.86	12.107		
1,700.0	1,697.4	1,692.3	1,690.9	3.8	3.7	-147.12	41.8	30.3	95.7	88.4	7.32	13.083		
1,800.0	1,797.2	1,791.4	1,789.8	4.1	4.0	-148.28	48.7	29.8	108.4	100.6	7.77	13.949		
1,900.0	1,896.9	1,890.6	1,888.8	4.4	4.2	-149.19	55.6	29.4	121.0	112.8	8.22	14.722		
2,000.0	1,996.7	1,989.8	1,987.7	4.6	4.5	-149.93	62.5	28.9	133.8	125.1	8.68	15.415		
2,100.0	2,096.4	2,089.0	2,086.6	4.9	4.7	-150.55	69.4	28.4	146.5	137.4	9.13	16.039		
2,200.0	2,196.2	2,188.1	2,185.6	5.1	4.9	-151.06	76.3	27.9	159.2	149.6	9.59	16.603		
2,300.0	2,295.9	2,287.3	2,284.5	5.4	5.2	-151.50	83.2	27.4	172.0	161.9	10.05	17.116		
2,400.0	2,395.7	2,386.5	2,383.4	5.6	5.4	-151.88	90.1	27.0	184.7	174.2	10.51	17.584		
2,500.0	2,495.5	2,485.7	2,482.4	5.9	5.7	-152.21	97.0	26.5	197.5	186.6	10.97	18.013		
2,600.0	2,595.2	2,584.8	2,581.3	6.2	5.9	-152.49	103.9	26.0	210.3	198.9	11.42	18.407		
2,700.0	2,695.0	2,684.0	2,680.2	6.4	6.2	-152.75	110.8	25.5	223.1	211.2	11.88	18.770		
2,800.0	2,794.7	2,783.2	2,779.2	6.7	6.4	-152.98	117.7	25.0	235.9	223.5	12.34	19.106		
2,900.0	2,894.5	2,882.4	2,878.1	7.0	6.7	-153.18	124.6	24.5	248.6	235.8	12.81	19.418		
3,000.0	2,994.2	2,981.5	2,977.0	7.2	6.9	-153.37	131.5	24.1	261.4	248.2	13.27	19.707		
3,100.0	3,094.0	3,080.7	3,076.0	7.5	7.2	-153.53	138.4	23.6	274.2	260.5	13.73	19.977		
3,200.0	3,193.7	3,179.9	3,174.9	7.7	7.4	-153.69	145.3	23.1	287.0	272.8	14.19	20.230		
3,300.0	3,293.5	3,279.1	3,273.8	8.0	7.7	-153.83	152.2	22.6	299.8	285.2	14.65	20.466		
3,400.0	3,393.3	3,378.2	3,372.8	8.3	7.9	-153.95	159.1	22.1	312.6	297.5	15.11	20.688		
3,500.0	3,493.0	3,477.4	3,471.7	8.5	8.2	-154.07	166.0	21.6	325.4	309.8	15.57	20.896		
3,600.0	3,592.8	3,576.6	3,570.6	8.8	8.4	-154.18	173.0	21.2	338.2	322.2	16.03	21.093		
3,700.0	3,692.5	3,675.8	3,669.6	9.1	8.7	-154.28	179.9	20.7	351.0	334.5	16.50	21.278		
3,800.0	3,792.3	3,774.9	3,768.5	9.3	8.9	-154.38	186.8	20.2	363.8	346.9	16.96	21.453		
3,900.0	3,892.0	3,874.1	3,867.4	9.6	9.2	-154.46	193.7	19.7	376.6	359.2	17.42	21.618		
4,000.0	3,991.8	3,973.3	3,966.4	9.8	9.4	-154.55	200.6	19.2	389.4	371.5	17.88	21.775		
4,100.0	4,091.6	4,072.5	4,065.3	10.1	9.7	-154.62	207.5	18.7	402.2	383.9	18.35	21.924		
4,200.0	4,191.3	4,171.7	4,164.2	10.4	10.0	-154.69	214.4	18.3	415.0	396.2	18.81	22.066		
4,300.0	4,291.1	4,270.8	4,263.2	10.6	10.2	-154.76	221.3	17.8	427.8	408.6	19.27	22.201		
4,400.0	4,390.8	4,370.0	4,362.1	10.9	10.5	-154.82	228.2	17.3	440.7	420.9	19.73	22.329		
4,500.0	4,490.6	4,469.2	4,461.1	11.2	10.7	-154.88	235.1	16.8	453.5	433.3	20.20	22.451		
4,600.0	4,590.4	4,568.5	4,560.2	11.4	11.0	-154.95	242.0	16.3	464.7	444.0	20.66	22.494		
4,700.0	4,690.4	4,668.2	4,659.6	11.6	11.2	-24.80	248.9	15.9	472.8	451.1	21.69	21.797		
4,800.0	4,790.4	4,767.9	4,759.1	11.7	11.5	-24.51	255.9	15.4	479.3	457.2	22.12	21.667		
4,900.0	4,890.4	4,867.7	4,858.6	11.9	11.7	-24.22	262.8	14.9	485.9	463.3	22.54	21.551		
5,000.0	4,990.4	4,967.5	4,958.1	12.1	12.0	-23.94	269.7	14.4	492.4	469.4	22.97	21.439		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,075.7	5,066.1	5,043.0	5,033.5	12.2	12.2	-23.73	275.0	14.0	497.4	474.1	23.29	21.356		
5,100.0	5,090.4	5,067.2	5,057.6	12.2	12.2	171.11	276.7	13.9	499.5	476.8	22.75	21.956		
5,150.0	5,140.2	5,112.0	5,102.3	12.4	12.4	171.17	279.8	13.7	507.5	484.7	22.77	22.285		
5,200.0	5,189.2	5,139.1	5,129.3	12.5	12.4	171.11	282.4	13.5	521.3	498.8	22.57	23.102		
5,250.0	5,237.2	5,150.0	5,140.1	12.7	12.5	170.83	283.8	13.4	542.0	519.9	22.14	24.483		
5,300.0	5,283.6	5,183.2	5,172.8	13.0	12.6	170.74	289.6	13.0	568.1	546.5	21.59	26.316		
5,350.0	5,327.9	5,200.0	5,189.2	13.3	12.6	170.30	293.3	12.7	599.8	579.0	20.83	28.795		
5,400.0	5,369.9	5,217.6	5,206.1	13.6	12.7	169.70	297.7	12.4	636.1	616.2	19.93	31.919		
5,450.0	5,409.0	5,230.7	5,218.8	13.9	12.8	168.69	301.4	12.2	676.4	657.5	18.91	35.763		
5,500.0	5,445.0	5,250.0	5,237.1	14.4	12.8	167.47	307.4	11.8	720.0	702.1	17.85	40.343		
5,550.0	5,477.5	5,250.0	5,237.1	14.8	12.8	164.38	307.4	11.8	765.8	748.9	16.94	45.216		
5,600.0	5,506.3	5,250.0	5,237.1	15.3	12.8	158.64	307.4	11.8	813.6	796.9	16.75	48.573		
5,650.0	5,530.9	5,250.0	5,237.1	15.9	12.8	145.29	307.4	11.8	862.7	843.2	19.46	44.338		
5,700.0	5,551.3	5,250.0	5,237.1	16.5	12.8	104.04	307.4	11.8	912.4	883.6	28.81	31.669		
5,750.0	5,567.2	5,250.0	5,237.1	17.2	12.8	44.62	307.4	11.8	962.2	939.9	22.34	43.074		

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	178.93	-75.0	1.4	75.1					
100.0	100.0	100.0	100.0	0.1	0.1	178.93	-75.0	1.4	75.1	74.9	0.19	399.945		
200.0	200.0	200.0	200.0	0.3	0.3	178.93	-75.0	1.4	75.1	74.4	0.64	117.797		
300.0	300.0	300.0	300.0	0.5	0.5	178.93	-75.0	1.4	75.1	74.0	1.09	69.070		
400.0	400.0	400.0	400.0	0.8	0.8	178.93	-75.0	1.4	75.1	73.5	1.54	48.860		
500.0	500.0	500.0	500.0	1.0	1.0	178.93	-75.0	1.4	75.1	73.1	1.99	37.799		
600.0	600.0	600.0	600.0	1.2	1.2	49.96	-75.0	1.4	73.9	71.5	2.42	30.606		
700.0	699.8	702.0	702.0	1.4	1.4	52.68	-73.5	2.3	69.1	66.2	2.85	24.282		
800.0	799.6	803.6	803.4	1.6	1.7	55.69	-68.8	5.0	60.2	56.9	3.29	18.274		
900.0	899.4	903.0	902.6	1.8	1.9	58.98	-62.8	8.5	50.0	46.3	3.75	13.338		
1,000.0	999.1	1,002.4	1,001.8	2.1	2.1	63.93	-56.8	12.0	40.1	35.8	4.21	9.513		
1,100.0	1,098.9	1,101.9	1,101.0	2.3	2.4	72.03	-50.8	15.4	30.6	25.9	4.68	6.533		
1,200.0	1,198.6	1,201.3	1,200.2	2.6	2.6	86.70	-44.8	18.9	22.2	17.1	5.16	4.310		
1,300.0	1,298.4	1,300.7	1,299.3	2.8	2.9	114.08	-38.8	22.4	16.8	11.2	5.63	2.983		
1,343.6	1,341.8	1,344.0	1,342.6	2.9	3.0	130.07	-36.1	23.9	16.1	10.3	5.81	2.774 CC, ES, SF		
1,400.0	1,398.1	1,400.2	1,398.5	3.1	3.1	150.44	-32.7	25.8	17.2	11.2	6.04	2.851		
1,500.0	1,497.9	1,499.6	1,497.7	3.3	3.4	175.90	-26.7	29.3	23.2	16.7	6.47	3.587		
1,600.0	1,597.6	1,599.0	1,596.9	3.6	3.6	-170.58	-20.7	32.8	31.8	24.8	6.94	4.579		
1,700.0	1,697.4	1,698.4	1,696.1	3.8	3.9	-163.02	-14.7	36.2	41.3	33.9	7.41	5.575		
1,800.0	1,797.2	1,797.9	1,795.3	4.1	4.1	-158.35	-8.7	39.7	51.3	43.4	7.89	6.506		
1,900.0	1,896.9	1,897.3	1,894.5	4.4	4.4	-155.21	-2.7	43.2	61.5	53.2	8.36	7.357		
2,000.0	1,996.7	1,996.7	1,993.7	4.6	4.6	-152.97	3.3	46.6	71.9	63.0	8.84	8.130		
2,100.0	2,096.4	2,096.2	2,092.8	4.9	4.9	-151.29	9.3	50.1	82.3	73.0	9.32	8.833		
2,200.0	2,196.2	2,195.6	2,192.0	5.1	5.1	-149.99	15.3	53.6	92.8	83.0	9.80	9.472		
2,300.0	2,295.9	2,295.0	2,291.2	5.4	5.4	-148.96	21.3	57.0	103.3	93.1	10.28	10.055		
2,400.0	2,395.7	2,394.4	2,390.4	5.6	5.6	-148.12	27.3	60.5	113.9	103.1	10.76	10.588		
2,500.0	2,495.5	2,493.9	2,489.6	5.9	5.9	-147.42	33.3	64.0	124.5	113.2	11.24	11.078		
2,600.0	2,595.2	2,593.3	2,588.8	6.2	6.1	-146.83	39.3	67.4	135.1	123.3	11.71	11.528		
2,700.0	2,695.0	2,692.7	2,688.0	6.4	6.4	-146.32	45.3	70.9	145.7	133.5	12.19	11.944		
2,800.0	2,794.7	2,792.2	2,787.1	6.7	6.6	-145.89	51.3	74.4	156.3	143.6	12.67	12.329		
2,900.0	2,894.5	2,891.6	2,886.3	7.0	6.9	-145.51	57.4	77.8	166.9	153.7	13.15	12.687		
3,000.0	2,994.2	2,991.0	2,985.5	7.2	7.1	-145.17	63.4	81.3	177.5	163.9	13.63	13.019		
3,100.0	3,094.0	3,090.5	3,084.7	7.5	7.4	-144.88	69.4	84.8	188.1	174.0	14.11	13.329		
3,200.0	3,193.7	3,189.9	3,183.9	7.7	7.7	-144.61	75.4	88.2	198.8	184.2	14.60	13.619		
3,300.0	3,293.5	3,289.3	3,283.1	8.0	7.9	-144.37	81.4	91.7	209.4	194.3	15.08	13.891		
3,400.0	3,393.3	3,388.7	3,382.3	8.3	8.2	-144.16	87.4	95.2	220.1	204.5	15.56	14.146		
3,500.0	3,493.0	3,488.2	3,481.5	8.5	8.4	-143.96	93.4	98.7	230.7	214.7	16.04	14.385		
3,600.0	3,592.8	3,587.6	3,580.6	8.8	8.7	-143.78	99.4	102.1	241.3	224.8	16.52	14.611		
3,700.0	3,692.5	3,687.0	3,679.8	9.1	8.9	-143.62	105.4	105.6	252.0	235.0	17.00	14.824		
3,800.0	3,792.3	3,786.5	3,779.0	9.3	9.2	-143.47	111.4	109.1	262.6	245.2	17.48	15.025		
3,900.0	3,892.0	3,885.9	3,878.2	9.6	9.4	-143.33	117.4	112.5	273.3	255.3	17.96	15.216		
4,000.0	3,991.8	3,985.3	3,977.4	9.8	9.7	-143.21	123.4	116.0	284.0	265.5	18.44	15.397		
4,100.0	4,091.6	4,084.7	4,076.6	10.1	9.9	-143.09	129.4	119.5	294.6	275.7	18.92	15.568		
4,200.0	4,191.3	4,184.2	4,175.8	10.4	10.2	-142.98	135.4	122.9	305.3	285.9	19.40	15.731		
4,300.0	4,291.1	4,283.6	4,274.9	10.6	10.5	-142.87	141.4	126.4	315.9	296.0	19.89	15.839		
4,400.0	4,390.8	4,383.0	4,374.1	10.9	10.7	-142.78	147.4	129.9	326.6	306.2	20.37	16.034		
4,500.0	4,490.6	4,482.5	4,473.3	11.2	11.0	-142.69	153.5	133.3	337.2	316.4	20.85	16.175		
4,600.0	4,590.4	4,582.0	4,572.6	11.4	11.2	-142.54	159.5	136.8	346.5	325.2	21.32	16.252		
4,700.0	4,690.4	4,681.7	4,672.1	11.6	11.5	-12.03	165.5	140.3	353.1	330.9	22.19	15.912		
4,800.0	4,790.4	4,781.5	4,771.6	11.7	11.7	-11.28	171.5	143.8	358.3	335.7	22.62	15.839		
4,900.0	4,890.4	4,889.9	4,879.8	11.9	12.0	-10.64	176.8	146.8	362.6	339.6	23.03	15.744		
5,000.0	4,990.4	5,000.5	4,990.4	12.1	12.2	-10.42	178.7	147.9	364.0	340.6	23.40	15.558		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1													Offset Site Error: 0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
5,075.7	5,066.1	5,076.2	5,066.1	12.2	12.3	-10.42	178.7	147.9	364.0	340.4	23.68	15.375	
5,100.0	5,090.4	5,100.5	5,090.4	12.2	12.3	-175.62	178.7	147.9	364.6	341.3	23.32	15.633	
5,150.0	5,140.2	5,150.2	5,140.2	12.4	12.4	-175.64	178.7	147.9	369.3	346.0	23.34	15.826	
5,200.0	5,189.2	5,185.3	5,175.2	12.5	12.5	-175.60	179.1	148.0	379.4	356.3	23.13	16.405	
5,250.0	5,237.2	5,213.3	5,203.2	12.7	12.6	-175.42	180.9	148.4	396.4	373.7	22.72	17.449	
5,300.0	5,283.6	5,239.0	5,228.7	13.0	12.7	-175.10	183.9	149.2	420.0	397.8	22.12	18.985	
5,350.0	5,327.9	5,262.0	5,251.3	13.3	12.7	-174.65	187.6	150.1	449.3	428.0	21.34	21.058	
5,400.0	5,369.9	5,281.9	5,270.8	13.6	12.8	-174.02	191.5	151.1	483.8	463.4	20.38	23.735	
5,450.0	5,409.0	5,300.0	5,288.4	13.9	12.9	-173.17	195.8	152.1	522.6	503.4	19.28	27.106	
5,500.0	5,445.0	5,300.0	5,288.4	14.4	12.9	-172.01	195.8	152.1	565.3	547.2	18.03	31.346	
5,550.0	5,477.5	5,322.7	5,310.2	14.8	13.0	-170.18	201.9	153.6	610.1	593.3	16.79	36.335	
5,600.0	5,506.3	5,330.4	5,317.6	15.3	13.0	-167.12	204.2	154.2	657.4	641.7	15.68	41.932	
5,650.0	5,530.9	5,335.5	5,322.4	15.9	13.0	-160.74	205.8	154.6	706.1	690.6	15.42	45.789	
5,700.0	5,551.3	5,350.0	5,336.0	16.5	13.1	-145.15	210.5	155.7	755.8	737.1	18.72	40.365	
5,750.0	5,567.2	5,350.0	5,336.0	17.2	13.1	-74.21	210.5	155.7	805.7	777.0	28.66	28.111	
5,800.0	5,578.6	5,350.0	5,336.0	17.9	13.1	-25.36	210.5	155.7	855.5	839.7	15.78	54.209	
5,850.0	5,585.1	5,334.4	5,321.3	18.6	13.0	-12.16	205.5	154.5	904.5	893.8	10.73	84.331	
5,893.9	5,587.0	5,330.4	5,317.5	19.3	13.0	-8.52	204.2	154.2	947.0	937.5	9.45	100.204	
5,900.0	5,587.0	5,329.8	5,316.9	19.3	13.0	-7.88	204.0	154.1	952.8	943.6	9.30	102.511	

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-91.06	-1.2	-66.2	66.2					
100.0	100.0	100.0	100.0	0.1	0.1	-91.06	-1.2	-66.2	66.2	66.0	0.19	352.529		
200.0	200.0	200.0	200.0	0.3	0.3	-91.06	-1.2	-66.2	66.2	65.5	0.64	103.831		
300.0	300.0	300.0	300.0	0.5	0.5	-91.06	-1.2	-66.2	66.2	65.1	1.09	60.882		
400.0	400.0	400.0	400.0	0.8	0.8	-91.06	-1.2	-66.2	66.2	64.6	1.54	43.067		
500.0	500.0	500.0	500.0	1.0	1.0	-91.06	-1.2	-66.2	66.2	64.2	1.99	33.318 CC, ES		
600.0	600.0	600.0	600.0	1.2	1.2	139.89	-1.2	-66.2	67.5	65.1	2.41	27.952		
700.0	699.8	699.8	699.8	1.4	1.4	142.54	-1.2	-66.2	71.6	68.7	2.83	25.257		
800.0	799.6	799.6	799.6	1.6	1.7	145.69	-1.2	-66.2	77.2	74.0	3.26	23.674		
900.0	899.4	898.1	898.1	1.8	1.9	147.33	-2.6	-67.1	83.8	80.2	3.67	22.834		
1,000.0	999.1	996.4	996.2	2.1	2.0	146.83	-6.8	-69.9	92.0	88.0	4.07	22.589		
1,100.0	1,098.9	1,095.9	1,095.5	2.3	2.2	145.48	-12.5	-73.9	101.1	96.6	4.50	22.483		
1,200.0	1,198.6	1,195.4	1,194.8	2.6	2.5	144.36	-18.3	-77.8	110.2	105.3	4.93	22.344		
1,300.0	1,298.4	1,295.0	1,294.1	2.8	2.7	143.40	-24.0	-81.7	119.4	114.0	5.38	22.188		
1,400.0	1,398.1	1,394.6	1,393.4	3.1	2.9	142.58	-29.7	-85.6	128.6	122.7	5.84	22.027		
1,500.0	1,497.9	1,494.1	1,492.7	3.3	3.1	141.88	-35.5	-89.5	137.8	131.5	6.30	21.870		
1,600.0	1,597.6	1,593.7	1,592.1	3.6	3.4	141.26	-41.2	-93.4	147.0	140.2	6.77	21.719		
1,700.0	1,697.4	1,693.2	1,691.4	3.8	3.6	140.71	-46.9	-97.3	156.3	149.0	7.24	21.576		
1,800.0	1,797.2	1,792.8	1,790.7	4.1	3.9	140.22	-52.7	-101.2	165.5	157.8	7.72	21.444		
1,900.0	1,896.9	1,892.4	1,890.0	4.4	4.1	139.79	-58.4	-105.2	174.8	166.6	8.20	21.320		
2,000.0	1,996.7	1,991.9	1,989.3	4.6	4.4	139.40	-64.2	-109.1	184.0	175.4	8.68	21.205		
2,100.0	2,096.4	2,091.5	2,088.7	4.9	4.6	139.05	-69.9	-113.0	193.3	184.2	9.16	21.099		
2,200.0	2,196.2	2,191.0	2,188.0	5.1	4.9	138.72	-75.6	-116.9	202.6	193.0	9.65	21.000		
2,300.0	2,295.9	2,290.6	2,287.3	5.4	5.1	138.43	-81.4	-120.8	211.9	201.8	10.13	20.908		
2,400.0	2,395.7	2,390.2	2,386.6	5.6	5.4	138.16	-87.1	-124.7	221.2	210.6	10.62	20.823		
2,500.0	2,495.5	2,489.7	2,485.9	5.9	5.6	137.92	-92.8	-128.6	230.5	219.4	11.11	20.743		
2,600.0	2,595.2	2,589.3	2,585.3	6.2	5.9	137.69	-98.6	-132.6	239.8	228.2	11.60	20.669		
2,700.0	2,695.0	2,688.9	2,684.6	6.4	6.1	137.48	-104.3	-136.5	249.1	237.0	12.09	20.600		
2,800.0	2,794.7	2,788.4	2,783.9	6.7	6.4	137.29	-110.1	-140.4	258.4	245.8	12.58	20.535		
2,900.0	2,894.5	2,888.0	2,883.2	7.0	6.6	137.10	-115.8	-144.3	267.7	254.7	13.08	20.474		
3,000.0	2,994.2	2,987.5	2,982.5	7.2	6.9	136.93	-121.5	-148.2	277.1	263.5	13.57	20.418		
3,100.0	3,094.0	3,087.1	3,081.9	7.5	7.2	136.78	-127.3	-152.1	286.4	272.3	14.06	20.364		
3,200.0	3,193.7	3,186.7	3,181.2	7.7	7.4	136.63	-133.0	-156.0	295.7	281.1	14.56	20.314		
3,300.0	3,293.5	3,286.2	3,280.5	8.0	7.7	136.49	-138.7	-160.0	305.0	290.0	15.05	20.266		
3,400.0	3,393.3	3,385.8	3,379.8	8.3	7.9	136.36	-144.5	-163.9	314.4	298.8	15.55	20.221		
3,500.0	3,493.0	3,485.3	3,479.1	8.5	8.2	136.23	-150.2	-167.8	323.7	307.6	16.04	20.179		
3,600.0	3,592.8	3,584.9	3,578.5	8.8	8.5	136.12	-155.9	-171.7	333.0	316.5	16.54	20.139		
3,700.0	3,692.5	3,684.5	3,677.8	9.1	8.7	136.01	-161.7	-175.6	342.3	325.3	17.03	20.101		
3,800.0	3,792.3	3,784.0	3,777.1	9.3	9.0	135.90	-167.4	-179.5	351.7	334.1	17.53	20.065		
3,900.0	3,892.0	3,883.6	3,876.4	9.6	9.2	135.80	-173.2	-183.4	361.0	343.0	18.02	20.030		
4,000.0	3,991.8	3,983.2	3,975.7	9.8	9.5	135.71	-178.9	-187.4	370.3	351.8	18.52	19.998		
4,100.0	4,091.6	4,082.7	4,075.0	10.1	9.8	135.62	-184.6	-191.3	379.7	360.7	19.02	19.967		
4,200.0	4,191.3	4,182.3	4,174.4	10.4	10.0	135.54	-190.4	-195.2	389.0	369.5	19.51	19.937		
4,300.0	4,291.1	4,281.8	4,273.7	10.6	10.3	135.45	-196.1	-199.1	398.3	378.3	20.01	19.909		
4,400.0	4,390.8	4,381.4	4,373.0	10.9	10.5	135.38	-201.8	-203.0	407.7	387.2	20.51	19.881		
4,500.0	4,490.6	4,481.0	4,472.3	11.2	10.8	135.30	-207.6	-206.9	417.0	396.0	21.00	19.856		
4,600.0	4,590.4	4,580.6	4,571.7	11.4	11.1	135.18	-213.3	-210.8	425.1	403.6	21.48	19.794		
4,700.0	4,690.4	4,680.4	4,671.2	11.6	11.3	-95.30	-219.1	-214.8	430.8	408.8	22.02	19.566		
4,800.0	4,790.4	4,788.8	4,779.5	11.7	11.6	-95.92	-224.2	-218.2	434.5	412.0	22.46	19.347		
4,900.0	4,890.4	4,899.7	4,890.4	11.9	11.8	-96.14	-226.0	-219.5	435.7	412.9	22.85	19.071		
5,000.0	4,990.4	4,999.8	4,990.4	12.1	12.0	-96.14	-226.0	-219.5	435.7	412.5	23.21	18.774		
5,075.7	5,066.1	5,075.5	5,066.1	12.2	12.1	-96.14	-226.0	-219.5	435.7	412.2	23.47	18.563		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - 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	5,090.4	5,096.9	5,087.5	12.2	12.1	98.65	-226.4	-219.5	435.9	412.4	23.44	18.592		
5,150.0	5,140.2	5,141.0	5,131.4	12.4	12.2	98.56	-230.1	-219.7	437.3	413.6	23.69	18.458		
5,200.0	5,189.2	5,185.0	5,174.9	12.5	12.4	98.39	-237.4	-220.1	440.0	416.0	23.98	18.346		
5,250.0	5,237.2	5,229.0	5,217.5	12.7	12.6	98.14	-248.4	-220.7	444.2	419.8	24.33	18.252		
5,300.0	5,283.6	5,273.0	5,259.0	13.0	12.7	97.80	-262.9	-221.5	449.6	424.9	24.74	18.171		
5,350.0	5,327.9	5,316.9	5,299.0	13.3	13.0	97.38	-280.8	-222.4	456.3	431.1	25.22	18.096		
5,400.0	5,369.9	5,360.8	5,337.4	13.6	13.2	96.89	-302.1	-223.6	464.3	438.5	25.77	18.020		
5,450.0	5,409.0	5,404.7	5,373.9	13.9	13.5	96.32	-326.4	-224.9	473.4	447.0	26.39	17.938		
5,500.0	5,445.0	5,450.0	5,409.2	14.4	13.8	95.70	-354.7	-226.4	483.6	456.5	27.11	17.837		
5,550.0	5,477.5	5,492.4	5,440.0	14.8	14.2	94.98	-383.9	-228.0	494.7	466.8	27.90	17.731		
5,600.0	5,506.3	5,536.4	5,469.2	15.3	14.6	94.23	-416.6	-229.8	506.8	478.0	28.82	17.583		
5,650.0	5,530.9	5,580.5	5,495.7	15.9	15.0	93.43	-451.8	-231.7	519.7	489.8	29.86	17.405		
5,700.0	5,551.3	5,624.7	5,519.1	16.5	15.5	92.59	-489.3	-233.7	533.2	502.2	30.98	17.212		
5,750.0	5,567.2	5,669.2	5,539.4	17.2	16.0	91.72	-528.8	-235.9	547.3	515.2	32.18	17.008		
5,800.0	5,578.6	5,714.1	5,556.4	17.9	16.6	90.83	-570.3	-238.1	561.9	528.5	33.46	16.796		
5,850.0	5,585.1	5,759.3	5,569.8	18.6	17.1	89.93	-613.4	-240.4	576.9	542.1	34.80	16.580		
5,893.9	5,587.0	5,799.5	5,578.5	19.3	17.7	89.14	-652.6	-242.6	590.2	554.2	36.01	16.389		
5,900.0	5,587.0	5,805.2	5,579.5	19.3	17.8	89.24	-658.1	-242.9	592.1	555.9	36.18	16.363		
6,000.0	5,587.0	5,903.5	5,587.0	20.6	19.1	90.00	-755.9	-248.1	619.9	580.9	38.98	15.903		
6,100.0	5,587.0	6,032.4	5,587.0	22.0	20.9	90.00	-884.7	-250.4	639.0	596.9	42.14	15.163		
6,200.0	5,587.0	6,131.6	5,587.0	23.4	22.4	90.00	-983.9	-250.4	651.4	606.2	45.19	14.416		
6,300.0	5,587.0	6,231.3	5,587.0	24.8	24.0	90.00	-1,083.7	-250.4	658.6	610.3	48.25	13.649		
6,387.3	5,587.0	6,318.6	5,587.0	26.1	25.4	90.00	-1,171.0	-250.4	660.6	609.7	50.90	12.977		
6,400.0	5,587.0	6,331.3	5,587.0	26.3	25.7	90.00	-1,183.7	-250.4	660.6	609.2	51.32	12.872		
6,500.0	5,587.0	6,431.3	5,587.0	27.9	27.3	90.00	-1,283.7	-250.4	660.6	605.9	54.68	12.080		
6,600.0	5,587.0	6,531.3	5,587.0	29.5	29.1	90.00	-1,383.7	-250.4	660.5	602.4	58.10	11.368		
6,700.0	5,587.0	6,631.3	5,587.0	31.2	30.8	90.00	-1,483.7	-250.4	660.5	598.9	61.57	10.727		
6,800.0	5,587.0	6,731.3	5,587.0	32.9	32.6	90.00	-1,583.7	-250.4	660.5	595.4	65.09	10.148		
6,900.0	5,587.0	6,831.3	5,587.0	34.6	34.3	90.00	-1,683.7	-250.4	660.5	591.9	68.63	9.624		
7,000.0	5,587.0	6,931.3	5,587.0	36.3	36.1	90.00	-1,783.7	-250.4	660.5	588.3	72.21	9.147		
7,100.0	5,587.0	7,031.3	5,587.0	38.1	37.9	90.00	-1,883.7	-250.3	660.5	584.7	75.81	8.712		
7,200.0	5,587.0	7,131.3	5,587.0	39.9	39.7	90.00	-1,983.7	-250.3	660.4	581.0	79.44	8.314		
7,300.0	5,587.0	7,231.3	5,587.0	41.7	41.6	90.00	-2,083.7	-250.3	660.4	577.4	83.08	7.950		
7,400.0	5,587.0	7,331.3	5,587.0	43.4	43.4	90.00	-2,183.7	-250.3	660.4	573.7	86.74	7.614		
7,500.0	5,587.0	7,431.3	5,587.0	45.3	45.2	90.00	-2,283.7	-250.3	660.4	570.0	90.41	7.304		
7,600.0	5,587.0	7,531.3	5,587.0	47.1	47.1	90.00	-2,383.7	-250.3	660.4	566.3	94.10	7.018		
7,700.0	5,587.0	7,631.3	5,587.0	48.9	48.9	90.00	-2,483.7	-250.3	660.4	562.6	97.80	6.753		
7,800.0	5,587.0	7,731.3	5,587.0	50.7	50.8	90.00	-2,583.7	-250.3	660.4	558.9	101.51	6.506		
7,900.0	5,587.0	7,831.3	5,587.0	52.5	52.6	90.00	-2,683.7	-250.3	660.3	555.1	105.22	6.276		
8,000.0	5,587.0	7,931.3	5,587.0	54.4	54.5	90.00	-2,783.7	-250.3	660.3	551.4	108.95	6.061		
8,100.0	5,587.0	8,031.3	5,587.0	56.2	56.4	90.00	-2,883.7	-250.3	660.3	547.6	112.68	5.860		
8,200.0	5,587.0	8,131.3	5,587.0	58.1	58.3	90.00	-2,983.7	-250.3	660.3	543.9	116.42	5.672		
8,300.0	5,587.0	8,231.3	5,587.0	59.9	60.1	90.00	-3,083.7	-250.2	660.3	540.1	120.17	5.495		
8,400.0	5,587.0	8,331.3	5,587.0	61.8	62.0	90.00	-3,183.7	-250.2	660.3	536.4	123.92	5.328		
8,500.0	5,587.0	8,431.3	5,587.0	63.7	63.9	90.00	-3,283.7	-250.2	660.3	532.6	127.67	5.172		
8,600.0	5,587.0	8,531.3	5,587.0	65.5	65.8	90.00	-3,383.7	-250.2	660.2	528.8	131.43	5.023		
8,700.0	5,587.0	8,631.3	5,587.0	67.4	67.6	90.00	-3,483.7	-250.2	660.2	525.0	135.20	4.883		
8,800.0	5,587.0	8,731.3	5,587.0	69.3	69.5	90.00	-3,583.7	-250.2	660.2	521.3	138.97	4.751		
8,900.0	5,587.0	8,831.3	5,587.0	71.1	71.4	90.00	-3,683.7	-250.2	660.2	517.5	142.74	4.625		
9,000.0	5,587.0	8,931.3	5,587.0	73.0	73.3	90.00	-3,783.7	-250.2	660.2	513.7	146.51	4.506		
9,100.0	5,587.0	9,031.3	5,587.0	74.9	75.2	90.00	-3,883.7	-250.2	660.2	509.9	150.29	4.393		
9,200.0	5,587.0	9,131.3	5,587.0	76.8	77.1	90.00	-3,983.7	-250.2	660.2	506.1	154.07	4.285		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - 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)						
9,300.0	5,587.0	9,231.3	5,587.0	78.6	79.0	90.00	-4,083.7	-250.2	660.1	502.3	157.85	4.182		
9,400.0	5,587.0	9,331.3	5,587.0	80.5	80.9	90.00	-4,183.7	-250.2	660.1	498.5	161.64	4.084		
9,500.0	5,587.0	9,431.3	5,587.0	82.4	82.8	90.00	-4,283.7	-250.2	660.1	494.7	165.43	3.990		
9,600.0	5,587.0	9,531.3	5,587.0	84.3	84.7	90.00	-4,383.7	-250.1	660.1	490.9	169.22	3.901		
9,700.0	5,587.0	9,631.3	5,587.0	86.2	86.5	90.00	-4,483.7	-250.1	660.1	487.1	173.01	3.815		
9,800.0	5,587.0	9,731.3	5,587.0	88.1	88.4	90.00	-4,583.7	-250.1	660.1	483.3	176.80	3.733		
9,900.0	5,587.0	9,831.3	5,587.0	90.0	90.3	90.00	-4,683.7	-250.1	660.1	479.5	180.60	3.655		
10,000.0	5,587.0	9,931.3	5,587.0	91.8	92.2	90.00	-4,783.7	-250.1	660.0	475.7	184.40	3.580		
10,100.0	5,587.0	10,031.3	5,587.0	93.7	94.1	90.00	-4,883.7	-250.1	660.0	471.8	188.19	3.507		
10,200.0	5,587.0	10,131.3	5,587.0	95.6	96.0	90.00	-4,983.7	-250.1	660.0	468.0	191.99	3.438		
10,300.0	5,587.0	10,231.3	5,587.0	97.5	97.9	90.00	-5,083.7	-250.1	660.0	464.2	195.79	3.371		
10,400.0	5,587.0	10,331.3	5,587.0	99.4	99.8	90.00	-5,183.7	-250.1	660.0	460.4	199.60	3.307		
10,500.0	5,587.0	10,431.3	5,587.0	101.3	101.7	90.00	-5,283.7	-250.1	660.0	456.6	203.40	3.245		
10,600.0	5,587.0	10,531.3	5,587.0	103.2	103.6	90.00	-5,383.7	-250.1	660.0	452.8	207.21	3.185		
10,700.0	5,587.0	10,631.3	5,587.0	105.1	105.6	90.00	-5,483.7	-250.1	659.9	448.9	211.01	3.128		
10,800.0	5,587.0	10,731.3	5,587.0	107.0	107.5	90.00	-5,583.7	-250.0	659.9	445.1	214.82	3.072		
10,900.0	5,587.0	10,831.3	5,587.0	108.9	109.4	90.00	-5,683.7	-250.0	659.9	441.3	218.63	3.018		
11,000.0	5,587.0	10,931.3	5,587.0	110.8	111.3	90.00	-5,783.7	-250.0	659.9	437.5	222.43	2.967		
11,100.0	5,587.0	11,031.3	5,587.0	112.7	113.2	90.00	-5,883.7	-250.0	659.9	433.6	226.24	2.917		
11,200.0	5,587.0	11,131.3	5,587.0	114.6	115.1	90.00	-5,983.7	-250.0	659.9	429.8	230.05	2.868		
11,300.0	5,587.0	11,231.3	5,587.0	116.5	117.0	90.00	-6,083.7	-250.0	659.9	426.0	233.87	2.822		
11,400.0	5,587.0	11,331.3	5,587.0	118.4	118.9	90.00	-6,183.7	-250.0	659.8	422.2	237.68	2.776		
11,500.0	5,587.0	11,431.3	5,587.0	120.3	120.8	90.00	-6,283.7	-250.0	659.8	418.3	241.49	2.732		
11,600.0	5,587.0	11,531.3	5,587.0	122.2	122.7	90.00	-6,383.7	-250.0	659.8	414.5	245.30	2.690		
11,700.0	5,587.0	11,631.3	5,587.0	124.1	124.6	90.00	-6,483.7	-250.0	659.8	410.7	249.12	2.649		
11,800.0	5,587.0	11,731.3	5,587.0	126.0	126.5	90.00	-6,583.7	-250.0	659.8	406.9	252.93	2.609		
11,900.0	5,587.0	11,831.3	5,587.0	127.9	128.4	90.00	-6,683.7	-250.0	659.8	403.0	256.75	2.570		
12,000.0	5,587.0	11,931.3	5,587.0	129.8	130.3	90.00	-6,783.7	-250.0	659.8	399.2	260.56	2.532		
12,100.0	5,587.0	12,031.3	5,587.0	131.7	132.2	90.00	-6,883.7	-249.9	659.7	395.4	264.38	2.495		
12,200.0	5,587.0	12,131.3	5,587.0	133.6	134.1	90.00	-6,983.7	-249.9	659.7	391.5	268.19	2.460		
12,263.9	5,587.0	12,195.2	5,587.0	134.8	135.4	90.00	-7,047.5	-249.9	659.7	389.1	270.63	2.438		
12,264.6	5,587.0	12,195.9	5,587.0	134.8	135.4	90.00	-7,048.2	-249.9	659.7	389.1	270.66	2.437 SF		

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	-157.37	-75.7	-31.5	82.0					
100.0	100.0	100.0	100.0	0.1	0.1	-157.37	-75.7	-31.5	82.0	81.8	0.19	436.710		
200.0	200.0	200.0	200.0	0.3	0.3	-157.37	-75.7	-31.5	82.0	81.3	0.64	128.625		
300.0	300.0	300.0	300.0	0.5	0.5	-157.37	-75.7	-31.5	82.0	80.9	1.09	75.419		
400.0	400.0	400.0	400.0	0.8	0.8	-157.37	-75.7	-31.5	82.0	80.4	1.54	53.351		
500.0	500.0	500.0	500.0	1.0	1.0	-157.37	-75.7	-31.5	82.0	80.0	1.99	41.274		
600.0	600.0	600.0	600.0	1.2	1.2	73.81	-75.7	-31.5	81.5	79.0	2.41	33.736		
700.0	699.8	699.8	699.8	1.4	1.4	77.42	-75.7	-31.5	80.2	77.3	2.84	28.245		
800.0	799.6	799.6	799.6	1.6	1.7	82.36	-75.7	-31.5	78.9	75.6	3.28	24.056		
900.0	899.4	899.4	899.4	1.8	1.9	87.41	-75.7	-31.5	78.3	74.6	3.74	20.957		
950.8	950.0	950.0	950.0	2.0	2.0	90.00	-75.7	-31.5	78.2	74.2	3.97	19.690 CC		
1,000.0	999.1	999.1	999.1	2.1	2.1	92.51	-75.7	-31.5	78.3	74.1	4.20	18.645 ES		
1,100.0	1,098.9	1,098.9	1,098.9	2.3	2.3	97.56	-75.7	-31.5	78.9	74.2	4.67	16.910		
1,200.0	1,198.6	1,198.0	1,198.0	2.6	2.5	101.30	-77.2	-30.8	80.5	75.4	5.11	15.758		
1,300.0	1,298.4	1,297.4	1,297.2	2.8	2.7	102.56	-81.8	-28.6	83.1	77.5	5.53	15.007		
1,400.0	1,398.1	1,397.3	1,396.9	3.1	2.9	102.54	-88.1	-25.6	86.0	80.0	5.98	14.393		
1,500.0	1,497.9	1,497.3	1,496.6	3.3	3.1	102.53	-94.4	-22.6	89.0	82.6	6.43	13.837		
1,600.0	1,597.6	1,597.2	1,596.3	3.6	3.3	102.52	-100.7	-19.6	91.9	85.0	6.89	13.335		
1,700.0	1,697.4	1,697.2	1,696.0	3.8	3.5	102.51	-107.0	-16.6	94.9	87.5	7.37	12.882		
1,800.0	1,797.2	1,797.1	1,795.7	4.1	3.8	102.51	-113.3	-13.6	97.9	90.0	7.85	12.473		
1,900.0	1,896.9	1,897.1	1,895.5	4.4	4.0	102.50	-119.5	-10.6	100.8	92.5	8.33	12.103		
2,000.0	1,996.7	1,997.0	1,995.2	4.6	4.2	102.49	-125.8	-7.6	103.8	95.0	8.82	11.768		
2,100.0	2,096.4	2,097.0	2,094.9	4.9	4.5	102.48	-132.1	-4.6	106.7	97.4	9.31	11.463		
2,200.0	2,196.2	2,196.9	2,194.6	5.1	4.7	102.47	-138.4	-1.6	109.7	99.9	9.81	11.185		
2,300.0	2,295.9	2,296.9	2,294.3	5.4	4.9	102.47	-144.7	1.4	112.7	102.4	10.31	10.931		
2,400.0	2,395.7	2,396.9	2,394.0	5.6	5.2	102.46	-151.0	4.4	115.6	104.8	10.81	10.698		
2,500.0	2,495.5	2,496.8	2,493.7	5.9	5.4	102.46	-157.3	7.4	118.6	107.3	11.31	10.483		
2,600.0	2,595.2	2,596.8	2,593.4	6.2	5.7	102.45	-163.6	10.4	121.5	109.7	11.82	10.286		
2,700.0	2,695.0	2,696.7	2,693.2	6.4	5.9	102.44	-169.9	13.4	124.5	112.2	12.32	10.103		
2,800.0	2,794.7	2,796.7	2,792.9	6.7	6.2	102.44	-176.2	16.4	127.5	114.6	12.83	9.933		
2,900.0	2,894.5	2,896.6	2,892.6	7.0	6.4	102.43	-182.5	19.4	130.4	117.1	13.34	9.775		
3,000.0	2,994.2	2,996.6	2,992.3	7.2	6.7	102.43	-188.8	22.4	133.4	119.5	13.85	9.627		
3,100.0	3,094.0	3,096.5	3,092.0	7.5	6.9	102.43	-195.1	25.4	136.3	122.0	14.37	9.489		
3,200.0	3,193.7	3,196.5	3,191.7	7.7	7.2	102.42	-201.4	28.4	139.3	124.4	14.88	9.361		
3,300.0	3,293.5	3,296.5	3,291.4	8.0	7.4	102.42	-207.7	31.4	142.3	126.9	15.40	9.240		
3,400.0	3,393.3	3,396.4	3,391.1	8.3	7.7	102.41	-213.9	34.4	145.2	129.3	15.91	9.127		
3,500.0	3,493.0	3,496.4	3,490.9	8.5	8.0	102.41	-220.2	37.4	148.2	131.8	16.43	9.020		
3,600.0	3,592.8	3,596.3	3,590.6	8.8	8.2	102.41	-226.5	40.4	151.1	134.2	16.94	8.920		
3,700.0	3,692.5	3,696.3	3,690.3	9.1	8.5	102.40	-232.8	43.4	154.1	136.6	17.46	8.825		
3,800.0	3,792.3	3,796.2	3,790.0	9.3	8.7	102.40	-239.1	46.4	157.1	139.1	17.98	8.736		
3,900.0	3,892.0	3,896.2	3,889.7	9.6	9.0	102.39	-245.4	49.4	160.0	141.5	18.50	8.651		
4,000.0	3,991.8	3,996.2	3,989.4	9.8	9.2	102.39	-251.7	52.4	163.0	144.0	19.01	8.571		
4,100.0	4,091.6	4,096.1	4,089.1	10.1	9.5	102.39	-258.0	55.4	165.9	146.4	19.53	8.495		
4,200.0	4,191.3	4,196.1	4,188.9	10.4	9.8	102.39	-264.3	58.4	168.9	148.8	20.05	8.423		
4,300.0	4,291.1	4,296.0	4,288.6	10.6	10.0	102.38	-270.6	61.4	171.9	151.3	20.57	8.354		
4,400.0	4,390.8	4,396.0	4,388.3	10.9	10.3	102.38	-276.9	64.4	174.8	153.7	21.09	8.288		
4,500.0	4,490.6	4,495.9	4,488.0	11.2	10.5	102.38	-283.2	67.4	177.8	156.2	21.61	8.226		
4,600.0	4,590.4	4,595.9	4,587.7	11.4	10.8	101.88	-289.5	70.5	180.4	158.3	22.09	8.166		
4,700.0	4,690.4	4,695.7	4,687.3	11.6	11.1	-129.68	-295.8	73.4	182.3	159.8	22.49	8.108		
4,800.0	4,790.4	4,795.5	4,786.8	11.7	11.3	-131.78	-302.0	76.4	184.2	161.2	22.95	8.023		
4,900.0	4,890.4	4,897.2	4,888.4	11.9	11.5	-133.39	-307.0	78.8	185.7	162.4	23.37	7.948		
5,000.0	4,990.4	4,999.3	4,990.4	12.1	11.7	-133.93	-308.6	79.6	186.3	162.6	23.74	7.848		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - 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		
5,075.7	5,066.1	5,075.0	5,066.1	12.2	11.9	-133.93	-308.6	79.6	186.3	162.3	24.01	7.760		
5,100.0	5,090.4	5,099.3	5,090.4	12.2	11.9	61.05	-308.6	79.6	186.0	162.0	24.05	7.734		
5,150.0	5,140.2	5,149.0	5,140.2	12.4	12.0	62.55	-308.6	79.6	183.8	159.5	24.24	7.581		
5,200.0	5,189.2	5,191.7	5,182.8	12.5	12.1	64.98	-309.4	79.6	180.2	155.8	24.44	7.373		
5,250.0	5,237.2	5,232.1	5,223.0	12.7	12.2	67.71	-313.2	79.6	177.3	152.7	24.68	7.185		
5,300.0	5,283.6	5,272.9	5,263.2	13.0	12.3	70.76	-320.2	79.6	175.5	150.5	25.00	7.022		
5,343.5	5,322.2	5,308.7	5,298.0	13.2	12.5	73.62	-328.9	79.6	175.0	149.7	25.35	6.904		
5,350.0	5,327.9	5,314.1	5,303.2	13.3	12.5	74.07	-330.4	79.6	175.0	149.6	25.41	6.889		
5,400.0	5,369.9	5,355.9	5,342.7	13.6	12.7	77.56	-343.9	79.6	176.0	150.1	25.94	6.786		
5,450.0	5,409.0	5,400.0	5,383.1	13.9	12.9	81.29	-361.6	79.6	178.7	152.1	26.58	6.720		
5,500.0	5,445.0	5,441.1	5,419.2	14.4	13.1	84.66	-381.1	79.6	183.1	155.8	27.30	6.706		
5,550.0	5,477.5	5,484.6	5,455.7	14.8	13.4	88.05	-404.8	79.6	189.4	161.3	28.11	6.737		
5,600.0	5,506.3	5,529.0	5,490.7	15.3	13.7	91.23	-432.0	79.6	197.5	168.5	28.98	6.815		
5,650.0	5,530.9	5,574.1	5,523.9	15.9	14.1	94.12	-462.7	79.6	207.4	177.5	29.91	6.934		
5,700.0	5,551.3	5,620.3	5,554.9	16.5	14.5	96.69	-496.8	79.6	218.9	188.0	30.89	7.085		
5,750.0	5,567.2	5,667.6	5,583.4	17.2	15.0	98.91	-534.5	79.6	231.8	199.8	31.94	7.256		
5,800.0	5,578.6	5,716.1	5,609.0	17.9	15.5	100.79	-575.7	79.6	245.8	212.8	33.06	7.437		
5,850.0	5,585.1	5,766.0	5,631.2	18.6	16.1	102.34	-620.4	79.6	260.9	226.6	34.26	7.616		
5,893.9	5,587.0	5,811.1	5,647.5	19.3	16.7	103.44	-662.5	79.6	274.7	239.4	35.38	7.766		
5,900.0	5,587.0	5,817.6	5,649.5	19.3	16.7	103.78	-668.6	79.6	276.7	241.2	35.50	7.795		
6,000.0	5,587.0	5,929.3	5,672.4	20.6	18.3	106.75	-777.7	79.6	303.8	266.1	37.75	8.048		
6,100.0	5,587.0	6,036.4	5,675.0	22.0	19.8	106.07	-884.7	79.6	321.3	280.6	40.67	7.900		
6,200.0	5,587.0	6,135.6	5,675.0	23.4	21.4	105.38	-983.9	79.6	333.2	289.7	43.54	7.653		
6,300.0	5,587.0	6,235.3	5,675.0	24.8	23.0	105.01	-1,083.6	79.6	340.1	293.8	46.37	7.336		
6,387.3	5,587.0	6,322.6	5,675.0	26.1	24.4	104.91	-1,170.9	79.6	342.1	293.3	48.77	7.014		
6,400.0	5,587.0	6,335.3	5,675.0	26.3	24.6	104.91	-1,183.6	79.6	342.1	292.9	49.17	6.957		
6,500.0	5,587.0	6,435.3	5,675.0	27.9	26.3	104.91	-1,283.6	79.6	342.1	289.6	52.42	6.526		
6,600.0	5,587.0	6,535.3	5,675.0	29.5	28.0	104.91	-1,383.6	79.6	342.0	286.3	55.72	6.138		
6,700.0	5,587.0	6,635.3	5,675.0	31.2	29.7	104.91	-1,483.6	79.6	342.0	283.0	59.08	5.789		
6,800.0	5,587.0	6,735.3	5,675.0	32.9	31.5	104.91	-1,583.6	79.6	342.0	279.5	62.48	5.474		
6,900.0	5,587.0	6,835.3	5,675.0	34.6	33.2	104.91	-1,683.6	79.6	342.0	276.1	65.92	5.189		
7,000.0	5,587.0	6,935.3	5,675.0	36.3	35.0	104.91	-1,783.6	79.6	342.0	272.6	69.38	4.929		
7,100.0	5,587.0	7,035.3	5,675.0	38.1	36.8	104.91	-1,883.6	79.6	342.0	269.1	72.88	4.693		
7,200.0	5,587.0	7,135.3	5,675.0	39.9	38.6	104.91	-1,983.6	79.6	342.0	265.6	76.39	4.477		
7,300.0	5,587.0	7,235.3	5,675.0	41.7	40.4	104.91	-2,083.6	79.6	342.0	262.1	79.92	4.279		
7,400.0	5,587.0	7,335.3	5,675.0	43.4	42.3	104.91	-2,183.6	79.6	342.0	258.5	83.47	4.097		
7,500.0	5,587.0	7,435.3	5,675.0	45.3	44.1	104.91	-2,283.6	79.6	342.0	254.9	87.04	3.929		
7,600.0	5,587.0	7,535.3	5,675.0	47.1	46.0	104.91	-2,383.6	79.6	342.0	251.3	90.61	3.774		
7,700.0	5,587.0	7,635.3	5,675.0	48.9	47.8	104.91	-2,483.6	79.7	341.9	247.7	94.20	3.630		
7,800.0	5,587.0	7,735.3	5,675.0	50.7	49.7	104.91	-2,583.6	79.7	341.9	244.1	97.80	3.496		
7,900.0	5,587.0	7,835.3	5,675.0	52.5	51.5	104.91	-2,683.6	79.7	341.9	240.5	101.41	3.372		
8,000.0	5,587.0	7,935.3	5,675.0	54.4	53.4	104.91	-2,783.6	79.7	341.9	236.9	105.03	3.256		
8,100.0	5,587.0	8,035.3	5,675.0	56.2	55.2	104.91	-2,883.6	79.7	341.9	233.3	108.65	3.147		
8,200.0	5,587.0	8,135.3	5,675.0	58.1	57.1	104.91	-2,983.6	79.7	341.9	229.6	112.28	3.045		
8,300.0	5,587.0	8,235.3	5,675.0	59.9	59.0	104.92	-3,083.6	79.7	341.9	226.0	115.91	2.950		
8,400.0	5,587.0	8,335.3	5,675.0	61.8	60.9	104.92	-3,183.6	79.7	341.9	222.3	119.56	2.860		
8,500.0	5,587.0	8,435.3	5,675.0	63.7	62.7	104.92	-3,283.6	79.7	341.9	218.7	123.20	2.775		
8,600.0	5,587.0	8,535.3	5,675.0	65.5	64.6	104.92	-3,383.6	79.7	341.9	215.0	126.85	2.695		
8,700.0	5,587.0	8,635.3	5,675.0	67.4	66.5	104.92	-3,483.6	79.7	341.9	211.3	130.51	2.619		
8,800.0	5,587.0	8,735.3	5,675.0	69.3	68.4	104.92	-3,583.6	79.7	341.8	207.7	134.17	2.548		
8,900.0	5,587.0	8,835.3	5,675.0	71.1	70.3	104.92	-3,683.6	79.7	341.8	204.0	137.83	2.480		
9,000.0	5,587.0	8,935.3	5,675.0	73.0	72.2	104.92	-3,783.6	79.7	341.8	200.3	141.50	2.416		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - 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 (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,100.0	5,587.0	9,035.3	5,675.0	74.9	74.1	104.92	-3,883.6	79.7	341.8	196.7	145.16	2.355	
9,200.0	5,587.0	9,135.3	5,675.0	76.8	75.9	104.92	-3,983.6	79.7	341.8	193.0	148.84	2.297	
9,300.0	5,587.0	9,235.3	5,675.0	78.6	77.8	104.92	-4,083.6	79.7	341.8	189.3	152.51	2.241	
9,400.0	5,587.0	9,335.3	5,675.0	80.5	79.7	104.92	-4,183.6	79.7	341.8	185.6	156.19	2.188	
9,500.0	5,587.0	9,435.3	5,675.0	82.4	81.6	104.92	-4,283.6	79.7	341.8	181.9	159.86	2.138	
9,600.0	5,587.0	9,535.3	5,675.0	84.3	83.5	104.92	-4,383.6	79.7	341.8	178.2	163.54	2.090	
9,700.0	5,587.0	9,635.3	5,675.0	86.2	85.4	104.92	-4,483.6	79.7	341.8	174.5	167.23	2.044	
9,800.0	5,587.0	9,735.3	5,675.0	88.1	87.3	104.92	-4,583.6	79.7	341.8	170.8	170.91	2.000	
9,900.0	5,587.0	9,835.3	5,675.0	90.0	89.2	104.92	-4,683.6	79.7	341.7	167.2	174.60	1.957	
10,000.0	5,587.0	9,935.3	5,675.0	91.8	91.1	104.92	-4,783.6	79.7	341.7	163.5	178.28	1.917	
10,100.0	5,587.0	10,035.3	5,675.0	93.7	93.0	104.92	-4,883.6	79.7	341.7	159.8	181.97	1.878	
10,200.0	5,587.0	10,135.3	5,675.0	95.6	94.9	104.92	-4,983.6	79.7	341.7	156.1	185.66	1.841	
10,300.0	5,587.0	10,235.3	5,675.0	97.5	96.8	104.92	-5,083.6	79.7	341.7	152.4	189.36	1.805	
10,400.0	5,587.0	10,335.3	5,675.0	99.4	98.7	104.92	-5,183.6	79.7	341.7	148.7	193.05	1.770	
10,500.0	5,587.0	10,435.3	5,675.0	101.3	100.6	104.92	-5,283.6	79.7	341.7	145.0	196.74	1.737	
10,600.0	5,587.0	10,535.3	5,675.0	103.2	102.5	104.92	-5,383.6	79.7	341.7	141.2	200.44	1.705	
10,700.0	5,587.0	10,635.3	5,675.0	105.1	104.4	104.93	-5,483.6	79.7	341.7	137.5	204.13	1.674	
10,800.0	5,587.0	10,735.3	5,675.0	107.0	106.3	104.93	-5,583.6	79.7	341.7	133.8	207.83	1.644	
10,900.0	5,587.0	10,835.3	5,675.0	108.9	108.2	104.93	-5,683.6	79.7	341.7	130.1	211.53	1.615	
11,000.0	5,587.0	10,935.3	5,675.0	110.8	110.1	104.93	-5,783.6	79.8	341.6	126.4	215.23	1.587	
11,100.0	5,587.0	11,035.3	5,675.0	112.7	112.0	104.93	-5,883.6	79.8	341.6	122.7	218.93	1.561	
11,200.0	5,587.0	11,135.3	5,675.0	114.6	113.9	104.93	-5,983.6	79.8	341.6	119.0	222.63	1.535	
11,300.0	5,587.0	11,235.3	5,675.0	116.5	115.8	104.93	-6,083.6	79.8	341.6	115.3	226.33	1.509	
11,400.0	5,587.0	11,335.3	5,675.0	118.4	117.8	104.93	-6,183.6	79.8	341.6	111.6	230.03	1.485 Level 3	
11,500.0	5,587.0	11,435.3	5,675.0	120.3	119.7	104.93	-6,283.6	79.8	341.6	107.9	233.73	1.461 Level 3	
11,600.0	5,587.0	11,535.3	5,675.0	122.2	121.6	104.93	-6,383.6	79.8	341.6	104.2	237.44	1.439 Level 3	
11,700.0	5,587.0	11,635.3	5,675.0	124.1	123.5	104.93	-6,483.6	79.8	341.6	100.4	241.14	1.417 Level 3	
11,800.0	5,587.0	11,735.3	5,675.0	126.0	125.4	104.93	-6,583.6	79.8	341.6	96.7	244.85	1.395 Level 3	
11,900.0	5,587.0	11,835.3	5,675.0	127.9	127.3	104.93	-6,683.6	79.8	341.6	93.0	248.55	1.374 Level 3	
12,000.0	5,587.0	11,935.3	5,675.0	129.8	129.2	104.93	-6,783.6	79.8	341.6	89.3	252.26	1.354 Level 3	
12,100.0	5,587.0	12,035.3	5,675.0	131.7	131.1	104.93	-6,883.6	79.8	341.5	85.6	255.96	1.334 Level 3	
12,200.0	5,587.0	12,135.3	5,675.0	133.6	133.0	104.93	-6,983.6	79.8	341.5	81.9	259.67	1.315 Level 3	
12,263.9	5,587.0	12,199.2	5,675.0	134.8	134.2	104.93	-7,047.5	79.8	341.5	79.5	262.04	1.303 Level 3	
12,264.6	5,587.0	12,199.8	5,675.0	134.8	134.2	104.93	-7,048.2	79.8	341.5	79.5	262.06	1.303 Level 3, SF	

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - 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)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	155.06	-74.4	34.6	82.1					
100.0	100.0	100.0	100.0	0.1	0.1	155.06	-74.4	34.6	82.1	81.9	0.19	437.420		
200.0	200.0	200.0	200.0	0.3	0.3	155.06	-74.4	34.6	82.1	81.5	0.64	128.835		
300.0	300.0	300.0	300.0	0.5	0.5	155.06	-74.4	34.6	82.1	81.0	1.09	75.542		
400.0	400.0	400.0	400.0	0.8	0.8	155.06	-74.4	34.6	82.1	80.6	1.54	53.438		
500.0	500.0	500.0	500.0	1.0	1.0	155.06	-74.4	34.6	82.1	80.1	1.99	41.341		
600.0	600.0	600.0	600.0	1.2	1.2	25.60	-74.4	34.6	80.5	78.1	2.42	33.326		
700.0	699.8	699.8	699.8	1.4	1.4	27.35	-74.4	34.6	75.8	73.0	2.84	26.723		
800.0	799.6	799.6	799.6	1.6	1.7	29.98	-74.4	34.6	69.7	66.4	3.27	21.329		
900.0	899.4	899.4	899.4	1.8	1.9	33.11	-74.4	34.6	63.8	60.0	3.71	17.189		
1,000.0	999.1	999.1	999.1	2.1	2.1	36.88	-74.4	34.6	58.0	53.9	4.16	13.953		
1,100.0	1,098.9	1,098.0	1,097.9	2.3	2.3	39.81	-75.0	36.2	53.4	48.8	4.59	11.631		
1,200.0	1,198.6	1,197.0	1,196.9	2.6	2.5	39.84	-76.8	41.0	50.7	45.7	5.02	10.096		
1,300.0	1,298.4	1,297.0	1,296.6	2.8	2.7	38.00	-79.1	47.5	48.8	43.4	5.45	8.962		
1,400.0	1,398.1	1,396.9	1,396.3	3.1	2.9	36.03	-81.5	54.1	47.1	41.2	5.89	7.995		
1,500.0	1,497.9	1,496.9	1,496.0	3.3	3.2	33.90	-83.9	60.6	45.4	39.0	6.33	7.167		
1,600.0	1,597.6	1,596.9	1,595.8	3.6	3.4	31.62	-86.3	67.2	43.7	36.9	6.77	6.456		
1,700.0	1,697.4	1,696.8	1,695.5	3.8	3.6	29.15	-88.7	73.7	42.1	34.9	7.21	5.843		
1,800.0	1,797.2	1,796.8	1,795.2	4.1	3.9	26.50	-91.1	80.3	40.7	33.0	7.65	5.313		
1,900.0	1,896.9	1,896.8	1,894.9	4.4	4.1	23.66	-93.4	86.9	39.3	31.2	8.09	4.853		
2,000.0	1,996.7	1,996.8	1,994.7	4.6	4.3	20.62	-95.8	93.4	38.0	29.5	8.53	4.454		
2,100.0	2,096.4	2,096.7	2,094.4	4.9	4.6	17.37	-98.2	100.0	36.8	27.8	8.96	4.108		
2,200.0	2,196.2	2,196.7	2,194.1	5.1	4.8	13.92	-100.6	106.5	35.8	26.4	9.39	3.807		
2,300.0	2,295.9	2,296.7	2,293.8	5.4	5.1	10.28	-103.0	113.1	34.8	25.0	9.82	3.548		
2,400.0	2,395.7	2,396.6	2,393.6	5.6	5.3	6.46	-105.4	119.6	34.1	23.8	10.25	3.324		
2,500.0	2,495.5	2,496.6	2,493.3	5.9	5.6	2.48	-107.8	126.2	33.5	22.8	10.69	3.132		
2,600.0	2,595.2	2,596.6	2,593.0	6.2	5.8	-1.62	-110.1	132.7	33.0	21.9	11.13	2.968		
2,700.0	2,695.0	2,696.6	2,692.7	6.4	6.1	-5.82	-112.5	139.3	32.8	21.2	11.58	2.830		
2,798.2	2,792.9	2,794.7	2,790.6	6.7	6.3	-9.98	-114.9	145.7	32.7	20.7	12.04	2.716 CC		
2,800.0	2,794.7	2,796.5	2,792.5	6.7	6.3	-10.05	-114.9	145.8	32.7	20.6	12.05	2.714		
2,900.0	2,894.5	2,896.5	2,892.2	7.0	6.6	-14.29	-117.3	152.4	32.8	20.3	12.52	2.618		
3,000.0	2,994.2	2,996.5	2,991.9	7.2	6.9	-18.48	-119.7	158.9	33.1	20.0	13.01	2.541		
3,100.0	3,094.0	3,096.4	3,091.7	7.5	7.1	-22.58	-122.1	165.5	33.5	20.0	13.51	2.479 ES		
3,200.0	3,193.7	3,196.4	3,191.4	7.7	7.4	-26.55	-124.5	172.0	34.1	20.1	14.03	2.432		
3,300.0	3,293.5	3,296.4	3,291.1	8.0	7.6	-30.37	-126.8	178.6	34.9	20.3	14.55	2.396		
3,400.0	3,393.3	3,396.4	3,390.8	8.3	7.9	-34.01	-129.2	185.1	35.8	20.7	15.09	2.372		
3,500.0	3,493.0	3,496.3	3,490.6	8.5	8.1	-37.45	-131.6	191.7	36.8	21.2	15.64	2.356		
3,600.0	3,592.8	3,596.3	3,590.3	8.8	8.4	-40.69	-134.0	198.3	38.0	21.8	16.19	2.349		
3,700.0	3,692.5	3,696.3	3,690.0	9.1	8.7	-43.72	-136.4	204.8	39.3	22.6	16.74	2.348		
3,800.0	3,792.3	3,796.2	3,789.7	9.3	8.9	-46.56	-138.8	211.4	40.7	23.4	17.30	2.353		
3,900.0	3,892.0	3,896.2	3,889.5	9.6	9.2	-49.20	-141.2	217.9	42.2	24.3	17.86	2.363		
4,000.0	3,991.8	3,996.2	3,989.2	9.8	9.4	-51.66	-143.5	224.5	43.8	25.4	18.42	2.376		
4,100.0	4,091.6	4,096.1	4,088.9	10.1	9.7	-53.94	-145.9	231.0	45.4	26.4	18.98	2.393		
4,200.0	4,191.3	4,196.1	4,188.7	10.4	9.9	-56.06	-148.3	237.6	47.1	27.6	19.54	2.412		
4,300.0	4,291.1	4,296.1	4,288.4	10.6	10.2	-58.03	-150.7	244.1	48.9	28.8	20.10	2.434		
4,400.0	4,390.8	4,396.1	4,388.1	10.9	10.5	-59.85	-153.1	250.7	50.7	30.1	20.65	2.457		
4,500.0	4,490.6	4,496.0	4,487.8	11.2	10.7	-61.55	-155.5	257.2	52.6	31.4	21.21	2.481		
4,600.0	4,590.4	4,596.0	4,587.6	11.4	11.0	-61.57	-157.8	263.8	55.3	33.7	21.66	2.555		
4,700.0	4,690.4	4,695.8	4,687.2	11.6	11.2	-71.32	-160.2	270.3	59.8	38.3	21.51	2.781		
4,800.0	4,790.4	4,795.6	4,786.7	11.7	11.5	-75.14	-162.6	276.9	65.4	43.6	21.80	3.000		
4,900.0	4,890.4	4,897.4	4,888.3	11.9	11.7	-77.69	-164.5	282.0	69.9	47.8	22.10	3.161		
5,000.0	4,990.4	4,999.5	4,990.4	12.1	11.9	-78.48	-165.1	283.7	71.4	49.0	22.45	3.180		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - 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							
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
5,075.7	5,066.1	5,075.2	5,066.1	12.2	12.0	78.48	-165.1	283.7	71.4	48.7	22.73	3.141	
5,100.0	5,090.4	5,099.5	5,090.4	12.2	12.1	-87.18	-165.1	283.7	71.4	48.1	23.29	3.065	
5,141.0	5,131.2	5,140.3	5,131.2	12.3	12.2	-90.00	-165.1	283.7	71.3	47.7	23.57	3.024	
5,150.0	5,140.2	5,149.3	5,140.2	12.4	12.2	-90.96	-165.1	283.7	71.3	47.7	23.64	3.015	
5,200.0	5,189.2	5,197.9	5,188.8	12.5	12.3	-97.30	-166.1	284.3	72.2	48.1	24.10	2.996	
5,250.0	5,237.2	5,246.8	5,237.3	12.7	12.4	-103.38	-171.0	286.9	75.1	50.6	24.53	3.061	
5,300.0	5,283.6	5,296.4	5,285.9	13.0	12.6	-108.72	-180.0	291.7	79.9	55.0	24.90	3.211	
5,350.0	5,327.9	5,346.7	5,333.9	13.3	12.8	-113.09	-193.3	298.8	86.5	61.3	25.18	3.434	
5,400.0	5,369.9	5,397.8	5,380.8	13.6	13.0	-116.44	-210.9	308.3	94.5	69.1	25.39	3.720	
5,450.0	5,409.0	5,449.5	5,426.2	13.9	13.3	-118.82	-232.7	320.0	103.6	78.0	25.58	4.050	
5,500.0	5,445.0	5,502.0	5,469.5	14.4	13.6	-120.36	-258.8	334.0	113.7	87.9	25.79	4.409	
5,550.0	5,477.5	5,555.2	5,510.1	14.8	14.0	-121.17	-289.1	350.2	124.6	98.5	26.08	4.776	
5,600.0	5,506.3	5,609.1	5,547.5	15.3	14.4	-121.39	-323.3	368.5	136.0	109.5	26.49	5.133	
5,650.0	5,530.9	5,663.7	5,581.0	15.9	15.0	-121.13	-361.2	388.9	147.9	120.8	27.07	5.462	
5,700.0	5,551.3	5,719.0	5,610.3	16.5	15.6	-120.46	-402.5	411.0	160.0	132.2	27.84	5.748	
5,750.0	5,567.2	5,775.0	5,634.6	17.2	16.2	-119.47	-447.0	434.8	172.4	143.6	28.82	5.982	
5,800.0	5,578.6	5,831.6	5,653.6	17.9	17.0	-118.22	-494.0	460.1	184.9	154.8	30.01	6.160	
5,850.0	5,585.1	5,888.9	5,666.8	18.6	17.8	-116.76	-543.1	486.4	197.2	165.9	31.39	6.284	
5,893.9	5,587.0	5,939.7	5,673.3	19.3	18.5	-115.33	-587.5	510.2	208.0	175.2	32.78	6.346	
5,900.0	5,587.0	5,946.9	5,673.8	19.3	18.6	-115.28	-593.7	513.6	209.5	176.5	32.94	6.359	
6,000.0	5,587.0	6,057.8	5,675.0	20.6	20.3	-112.88	-692.2	564.6	232.5	196.6	35.90	6.476	
6,100.0	5,587.0	6,167.9	5,675.0	22.0	21.8	-110.73	-792.6	609.8	255.3	216.5	38.79	6.581	
6,200.0	5,587.0	6,279.8	5,675.0	23.4	23.5	-108.96	-897.0	649.8	277.8	236.2	41.65	6.670	
6,300.0	5,587.0	6,393.4	5,675.0	24.8	25.3	-107.50	-1,005.4	684.0	299.9	255.5	44.46	6.746	
6,387.3	5,587.0	6,494.1	5,675.0	26.1	26.8	-106.41	-1,103.0	709.0	318.8	272.0	46.85	6.804	
6,400.0	5,587.0	6,508.9	5,675.0	26.3	27.1	-106.24	-1,117.3	712.2	321.5	274.1	47.33	6.792	
6,500.0	5,587.0	6,626.8	5,675.0	27.9	28.9	-105.21	-1,233.3	733.9	339.2	288.1	51.12	6.636	
6,600.0	5,587.0	6,747.1	5,675.0	29.5	30.7	-104.57	-1,352.6	748.6	351.1	296.2	54.89	6.396	
6,700.0	5,587.0	6,868.8	5,675.0	31.2	32.6	-104.28	-1,474.1	755.8	356.8	298.2	58.63	6.086	
6,800.0	5,587.0	6,978.3	5,675.0	32.9	34.2	-104.25	-1,583.6	756.5	357.4	295.3	62.09	5.756	
6,900.0	5,587.0	7,078.3	5,675.0	34.6	35.8	-104.25	-1,683.6	756.6	357.4	292.0	65.42	5.463	
7,000.0	5,587.0	7,178.3	5,675.0	36.3	37.3	-104.25	-1,783.6	756.6	357.4	288.6	68.79	5.196	
7,100.0	5,587.0	7,278.3	5,675.0	38.1	38.9	-104.25	-1,883.6	756.6	357.4	285.2	72.20	4.951	
7,200.0	5,587.0	7,378.3	5,675.0	39.9	40.6	-104.25	-1,983.6	756.6	357.5	281.8	75.63	4.726	
7,300.0	5,587.0	7,478.3	5,675.0	41.7	42.2	-104.25	-2,083.6	756.6	357.5	278.4	79.10	4.519	
7,400.0	5,587.0	7,578.3	5,675.0	43.4	43.9	-104.25	-2,183.6	756.6	357.5	274.9	82.59	4.329	
7,500.0	5,587.0	7,678.3	5,675.0	45.3	45.6	-104.25	-2,283.6	756.6	357.5	271.4	86.09	4.152	
7,600.0	5,587.0	7,778.3	5,675.0	47.1	47.3	-104.25	-2,383.6	756.6	357.5	267.9	89.62	3.989	
7,700.0	5,587.0	7,878.3	5,675.0	48.9	49.0	-104.25	-2,483.6	756.6	357.5	264.4	93.16	3.837	
7,800.0	5,587.0	7,978.3	5,675.0	50.7	50.7	-104.25	-2,583.6	756.6	357.5	260.8	96.72	3.696	
7,900.0	5,587.0	8,078.3	5,675.0	52.5	52.5	-104.25	-2,683.6	756.6	357.5	257.2	100.29	3.565	
8,000.0	5,587.0	8,178.3	5,675.0	54.4	54.3	-104.25	-2,783.6	756.6	357.6	253.7	103.88	3.442	
8,100.0	5,587.0	8,278.3	5,675.0	56.2	56.0	-104.25	-2,883.6	756.6	357.6	250.1	107.47	3.327	
8,200.0	5,587.0	8,378.3	5,675.0	58.1	57.8	-104.25	-2,983.6	756.6	357.6	246.5	111.07	3.219	
8,300.0	5,587.0	8,478.3	5,675.0	59.9	59.6	-104.24	-3,083.6	756.6	357.6	242.9	114.68	3.118	
8,400.0	5,587.0	8,578.3	5,675.0	61.8	61.4	-104.24	-3,183.6	756.6	357.6	239.3	118.30	3.023	
8,500.0	5,587.0	8,678.3	5,675.0	63.7	63.2	-104.24	-3,283.6	756.6	357.6	235.7	121.92	2.933	
8,600.0	5,587.0	8,778.3	5,675.0	65.5	65.0	-104.24	-3,383.6	756.7	357.6	232.1	125.55	2.848	
8,700.0	5,587.0	8,878.3	5,675.0	67.4	66.8	-104.24	-3,483.6	756.7	357.6	228.4	129.19	2.768	
8,800.0	5,587.0	8,978.3	5,675.0	69.3	68.6	-104.24	-3,583.6	756.7	357.6	224.8	132.83	2.692	
8,900.0	5,587.0	9,078.3	5,675.0	71.1	70.5	-104.24	-3,683.6	756.7	357.7	221.2	136.48	2.621	
9,000.0	5,587.0	9,178.3	5,675.0	73.0	72.3	-104.24	-3,783.6	756.7	357.7	217.5	140.13	2.552	

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - HZ - Plan #1													Offset Site Error: 0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	
9,100.0	5,587.0	9,278.3	5,675.0	74.9	74.1	-104.24	-3,883.6	756.7	357.7	213.9	143.79	2.488	
9,200.0	5,587.0	9,378.3	5,675.0	76.8	76.0	-104.24	-3,983.6	756.7	357.7	210.2	147.45	2.426	
9,300.0	5,587.0	9,478.3	5,675.0	78.6	77.8	-104.24	-4,083.6	756.7	357.7	206.6	151.11	2.367	
9,400.0	5,587.0	9,578.3	5,675.0	80.5	79.6	-104.24	-4,183.6	756.7	357.7	202.9	154.78	2.311	
9,500.0	5,587.0	9,678.3	5,675.0	82.4	81.5	-104.24	-4,283.6	756.7	357.7	199.3	158.45	2.258	
9,600.0	5,587.0	9,778.3	5,675.0	84.3	83.4	-104.24	-4,383.6	756.7	357.7	195.6	162.13	2.207	
9,700.0	5,587.0	9,878.3	5,675.0	86.2	85.2	-104.24	-4,483.6	756.7	357.8	192.0	165.80	2.158	
9,800.0	5,587.0	9,978.3	5,675.0	88.1	87.1	-104.24	-4,583.6	756.7	357.8	188.3	169.48	2.111	
9,900.0	5,587.0	10,078.3	5,675.0	90.0	88.9	-104.24	-4,683.6	756.7	357.8	184.6	173.16	2.066	
10,000.0	5,587.0	10,178.3	5,675.0	91.8	90.8	-104.24	-4,783.6	756.7	357.8	180.9	176.84	2.023	
10,100.0	5,587.0	10,278.3	5,675.0	93.7	92.7	-104.24	-4,883.6	756.7	357.8	177.3	180.53	1.982	
10,200.0	5,587.0	10,378.3	5,675.0	95.6	94.5	-104.24	-4,983.6	756.8	357.8	173.6	184.22	1.942	
10,300.0	5,587.0	10,478.3	5,675.0	97.5	96.4	-104.24	-5,083.6	756.8	357.8	169.9	187.91	1.904	
10,400.0	5,587.0	10,578.3	5,675.0	99.4	98.3	-104.24	-5,183.6	756.8	357.8	166.2	191.60	1.868	
10,500.0	5,587.0	10,678.3	5,675.0	101.3	100.1	-104.23	-5,283.6	756.8	357.9	162.6	195.29	1.832	
10,600.0	5,587.0	10,778.3	5,675.0	103.2	102.0	-104.23	-5,383.6	756.8	357.9	158.9	198.98	1.798	
10,700.0	5,587.0	10,878.3	5,675.0	105.1	103.9	-104.23	-5,483.6	756.8	357.9	155.2	202.68	1.766	
10,800.0	5,587.0	10,978.3	5,675.0	107.0	105.8	-104.23	-5,583.6	756.8	357.9	151.5	206.37	1.734	
10,900.0	5,587.0	11,078.3	5,675.0	108.9	107.6	-104.23	-5,683.6	756.8	357.9	147.8	210.07	1.704	
11,000.0	5,587.0	11,178.3	5,675.0	110.8	109.5	-104.23	-5,783.6	756.8	357.9	144.1	213.77	1.674	
11,100.0	5,587.0	11,278.3	5,675.0	112.7	111.4	-104.23	-5,883.6	756.8	357.9	140.5	217.47	1.646	
11,200.0	5,587.0	11,378.3	5,675.0	114.6	113.3	-104.23	-5,983.6	756.8	357.9	136.8	221.17	1.618	
11,300.0	5,587.0	11,478.3	5,675.0	116.5	115.2	-104.23	-6,083.6	756.8	357.9	133.1	224.88	1.592	
11,400.0	5,587.0	11,578.3	5,675.0	118.4	117.0	-104.23	-6,183.6	756.8	358.0	129.4	228.58	1.566	
11,500.0	5,587.0	11,678.3	5,675.0	120.3	118.9	-104.23	-6,283.6	756.8	358.0	125.7	232.29	1.541	
11,600.0	5,587.0	11,778.3	5,675.0	122.2	120.8	-104.23	-6,383.6	756.8	358.0	122.0	235.99	1.517	
11,700.0	5,587.0	11,878.3	5,675.0	124.1	122.7	-104.23	-6,483.6	756.8	358.0	118.3	239.70	1.494 Level 3	
11,800.0	5,587.0	11,978.3	5,675.0	126.0	124.6	-104.23	-6,583.6	756.8	358.0	114.6	243.40	1.471 Level 3	
11,900.0	5,587.0	12,078.3	5,675.0	127.9	126.5	-104.23	-6,683.6	756.9	358.0	110.9	247.11	1.449 Level 3	
12,000.0	5,587.0	12,178.3	5,675.0	129.8	128.4	-104.23	-6,783.6	756.9	358.0	107.2	250.82	1.427 Level 3	
12,100.0	5,587.0	12,278.3	5,675.0	131.7	130.3	-104.23	-6,883.6	756.9	358.0	103.5	254.53	1.407 Level 3	
12,200.0	5,587.0	12,378.3	5,675.0	133.6	132.2	-104.23	-6,983.6	756.9	358.1	99.8	258.24	1.387 Level 3	
12,263.9	5,587.0	12,442.2	5,675.0	134.8	133.4	-104.23	-7,047.5	756.9	358.1	97.5	260.61	1.374 Level 3	
12,264.6	5,587.0	12,442.9	5,675.0	134.8	133.4	-104.23	-7,048.1	756.9	358.1	97.4	260.64	1.374 Level 3, SF	

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor 26-3524H (Existing) - Existing - SURVEYS													Offset Site Error:	0.0 usft
Survey Program: 113-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		
5,893.9	5,587.0	6,053.8	5,653.9	19.3	17.4	-93.77	-639.7	1,340.7	996.9	960.8	36.08	27.627		
5,900.0	5,587.0	6,059.2	5,653.9	19.3	17.4	-93.77	-645.0	1,340.9	995.6	959.4	36.22	27.485		
6,000.0	5,587.0	6,161.2	5,653.4	20.6	18.7	-93.77	-746.9	1,345.5	977.3	938.6	38.71	25.247		
6,100.0	5,587.0	6,254.4	5,653.7	22.0	19.9	-93.82	-840.1	1,349.4	964.0	922.8	41.16	23.419		
6,200.0	5,587.0	6,359.1	5,655.2	23.4	21.4	-93.93	-944.6	1,353.3	955.4	911.4	43.94	21.743		
6,300.0	5,587.0	6,509.9	5,655.8	24.8	23.7	-93.99	-1,095.5	1,354.7	948.9	901.4	47.46	19.996		
6,379.4	5,587.0	6,573.6	5,655.6	26.0	24.6	-93.98	-1,159.1	1,354.3	946.4	897.1	49.35	19.176 CC		
6,387.3	5,587.0	6,578.6	5,655.6	26.1	24.7	-93.98	-1,164.1	1,354.3	946.4	896.9	49.52	19.112		
6,400.0	5,587.0	6,590.0	5,655.6	26.3	24.9	-93.98	-1,175.5	1,354.4	946.6	896.7	49.90	18.971		
6,500.0	5,587.0	6,668.2	5,656.5	27.9	26.1	-94.02	-1,253.7	1,356.6	949.2	896.5	52.76	17.992		
6,600.0	5,587.0	6,757.3	5,658.5	29.5	27.5	-94.13	-1,342.7	1,359.7	952.9	897.1	55.81	17.073		
6,700.0	5,587.0	6,868.6	5,660.1	31.2	29.3	-94.21	-1,453.8	1,364.8	957.7	898.3	59.35	16.136		
6,800.0	5,587.0	6,974.7	5,660.5	32.9	31.0	-94.21	-1,559.9	1,368.4	961.2	898.4	62.81	15.302		
6,900.0	5,587.0	7,077.5	5,660.1	34.6	32.8	-94.18	-1,662.7	1,370.0	962.7	896.4	66.28	14.524		
7,000.0	5,587.0	7,180.5	5,659.6	36.3	34.4	-94.15	-1,765.7	1,372.4	965.0	895.3	69.74	13.837		
7,100.0	5,587.0	7,298.9	5,659.4	38.1	36.4	-94.13	-1,884.0	1,374.1	966.5	893.0	73.52	13.146		
7,107.1	5,587.0	7,308.6	5,659.4	38.2	36.6	-94.12	-1,893.8	1,374.1	966.5	892.7	73.81	13.094		
7,200.0	5,587.0	7,406.6	5,658.3	39.9	38.3	-94.06	-1,991.8	1,374.1	966.5	889.3	77.17	12.525		
7,300.0	5,587.0	7,503.9	5,657.6	41.7	39.9	-94.03	-2,089.1	1,372.9	965.2	884.6	80.58	11.978		
7,393.1	5,587.0	7,591.6	5,657.3	43.3	41.4	-94.01	-2,176.7	1,372.1	964.4	880.6	83.75	11.515		
7,400.0	5,587.0	7,596.5	5,657.4	43.4	41.4	-94.01	-2,181.6	1,372.1	964.4	880.4	83.96	11.487		
7,500.0	5,587.0	7,683.7	5,658.7	45.3	42.9	-94.09	-2,268.8	1,372.5	965.0	877.8	87.27	11.058		
7,600.0	5,587.0	7,769.5	5,660.1	47.1	44.4	-94.16	-2,354.5	1,374.7	967.6	877.0	90.57	10.684		
7,700.0	5,587.0	7,854.6	5,660.3	48.9	45.9	-94.16	-2,439.6	1,377.8	971.3	877.4	93.91	10.344		
7,800.0	5,587.0	7,990.5	5,659.4	50.7	48.3	-94.09	-2,575.5	1,380.6	973.1	875.0	98.09	9.920		
7,900.0	5,587.0	8,128.6	5,658.7	52.5	50.6	-94.06	-2,713.5	1,379.0	971.8	869.5	102.33	9.497		
8,000.0	5,587.0	8,216.8	5,658.4	54.4	52.2	-94.05	-2,801.7	1,376.9	969.4	863.7	105.69	9.172		
8,097.2	5,587.0	8,295.9	5,657.9	56.2	53.5	-94.02	-2,880.8	1,375.9	968.3	859.4	108.88	8.893		
8,100.0	5,587.0	8,298.0	5,657.8	56.2	53.6	-94.02	-2,882.9	1,375.9	968.3	859.3	108.97	8.886		
8,200.0	5,587.0	8,386.2	5,658.6	58.1	55.1	-94.07	-2,971.1	1,377.2	969.6	857.3	112.35	8.630		
8,300.0	5,587.0	8,519.0	5,657.4	59.9	57.4	-94.00	-3,103.8	1,375.9	968.4	851.8	116.56	8.308		
8,400.0	5,587.0	8,641.6	5,657.3	61.8	59.5	-94.01	-3,226.4	1,371.8	965.0	844.5	120.48	8.010		
8,500.0	5,587.0	8,724.4	5,659.7	63.7	60.9	-94.17	-3,309.0	1,368.3	961.1	837.4	123.74	7.767		
8,586.8	5,587.0	8,785.8	5,662.1	65.3	62.0	-94.32	-3,370.4	1,367.1	959.8	833.4	126.40	7.594		
8,600.0	5,587.0	8,792.9	5,662.4	65.5	62.1	-94.33	-3,377.5	1,367.1	959.9	833.1	126.77	7.572		
8,700.0	5,587.0	8,872.9	5,664.6	67.4	63.5	-94.46	-3,457.5	1,368.4	961.6	831.6	130.04	7.394		
8,800.0	5,587.0	8,971.0	5,664.9	69.3	65.3	-94.46	-3,555.5	1,371.4	964.7	831.1	133.67	7.217		
8,900.0	5,587.0	9,051.0	5,664.2	71.1	66.7	-94.41	-3,635.4	1,374.5	968.6	831.6	136.98	7.071		
9,000.0	5,587.0	9,150.1	5,664.2	73.0	68.4	-94.38	-3,734.4	1,379.7	973.8	833.2	140.60	6.926		
9,100.0	5,587.0	9,281.4	5,663.5	74.9	70.7	-94.32	-3,865.6	1,383.4	976.3	831.5	144.79	6.743		
9,200.0	5,587.0	9,387.0	5,664.2	76.8	72.6	-94.36	-3,971.2	1,385.1	978.1	829.5	148.53	6.585		
9,300.0	5,587.0	9,484.0	5,664.6	78.6	74.3	-94.37	-4,068.1	1,387.8	980.8	828.6	152.14	6.447		
9,400.0	5,587.0	9,576.0	5,663.4	80.5	76.0	-94.29	-4,160.1	1,390.1	983.1	827.5	155.67	6.316		
9,500.0	5,587.0	9,656.0	5,663.0	82.4	77.4	-94.25	-4,240.1	1,392.8	986.5	827.5	158.95	6.206		
9,600.0	5,587.0	9,774.8	5,663.2	84.3	79.4	-94.25	-4,358.8	1,396.3	989.4	826.5	162.92	6.073		
9,700.0	5,587.0	9,878.9	5,663.2	86.2	81.3	-94.24	-4,462.9	1,399.1	992.1	825.4	166.66	5.953		
9,800.0	5,587.0	10,009.9	5,664.3	88.1	83.6	-94.31	-4,593.9	1,398.1	991.0	820.2	170.83	5.801		
9,832.8	5,587.0	10,032.6	5,664.2	88.7	84.0	-94.30	-4,616.5	1,398.0	990.9	819.0	171.85	5.766		
9,900.0	5,587.0	10,091.8	5,665.1	90.0	85.0	-94.35	-4,675.7	1,398.2	991.2	817.1	174.13	5.692		
10,000.0	5,587.0	10,218.6	5,667.7	91.8	87.3	-94.51	-4,802.4	1,396.8	990.2	811.9	178.23	5.556		
10,079.4	5,587.0	10,277.8	5,667.8	93.3	88.3	-94.52	-4,861.7	1,395.8	989.0	808.2	180.78	5.471		
10,100.0	5,587.0	10,285.9	5,667.9	93.7	88.5	-94.52	-4,869.8	1,395.9	989.1	807.8	181.31	5.455 ES		

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

Company:	Whiting Petroleum Corporation	Local Co-ordinate Reference:	Well Razor #26L-3503A
Project:	Weld County, CO	TVD Reference:	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	MD Reference:	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	North Reference:	Grid
Reference Well:	Razor #26L-3503A	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T10N-R58W - Razor 26-3524H (Existing) - Existing - SURVEYS													Offset Site Error: 0.0 usft
Survey Program: 113-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
10,200.0	5,587.0	10,353.3	5,668.8	95.6	89.6	-94.57	-4,937.2	1,398.0	992.3	807.9	184.37	5.382	
10,300.0	5,587.0	10,427.0	5,669.0	97.5	91.0	-94.57	-5,010.7	1,400.5	996.4	808.8	187.58	5,312 SF	

Company: Whiting Petroleum Corporation
Project: Weld County, CO
Reference Site: S26-T10N-R58W
Site Error: 0.0usft
Reference Well: Razor #26L-3503A
Well Error: 0.0usft
Reference Wellbore: HZ
Reference Design: Plan #2

Local Co-ordinate Reference: Well Razor #26L-3503A
TVD Reference: WELL @ 4751.0usft (Original Well Elev)
MD Reference: WELL @ 4751.0usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: USA EDM 5000 Multi Users DB
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4751.0usft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Razor #26L-3503A
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 1.07°

