

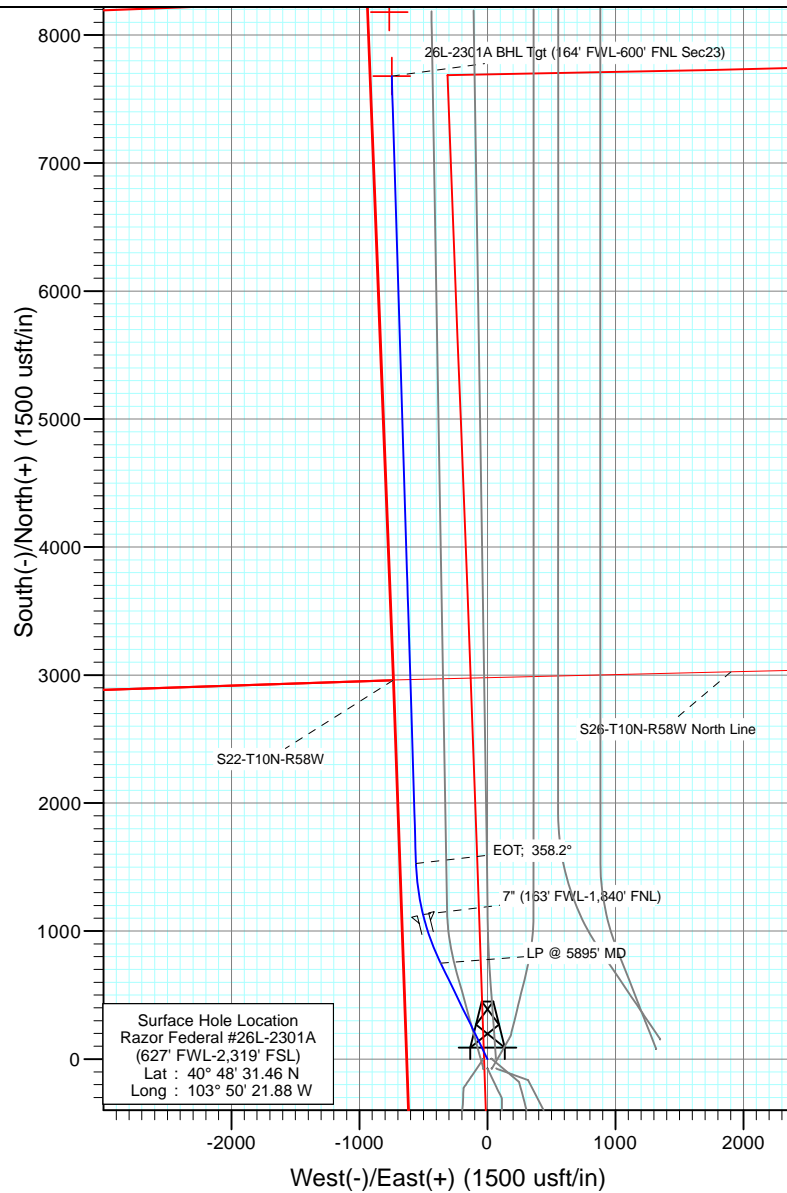
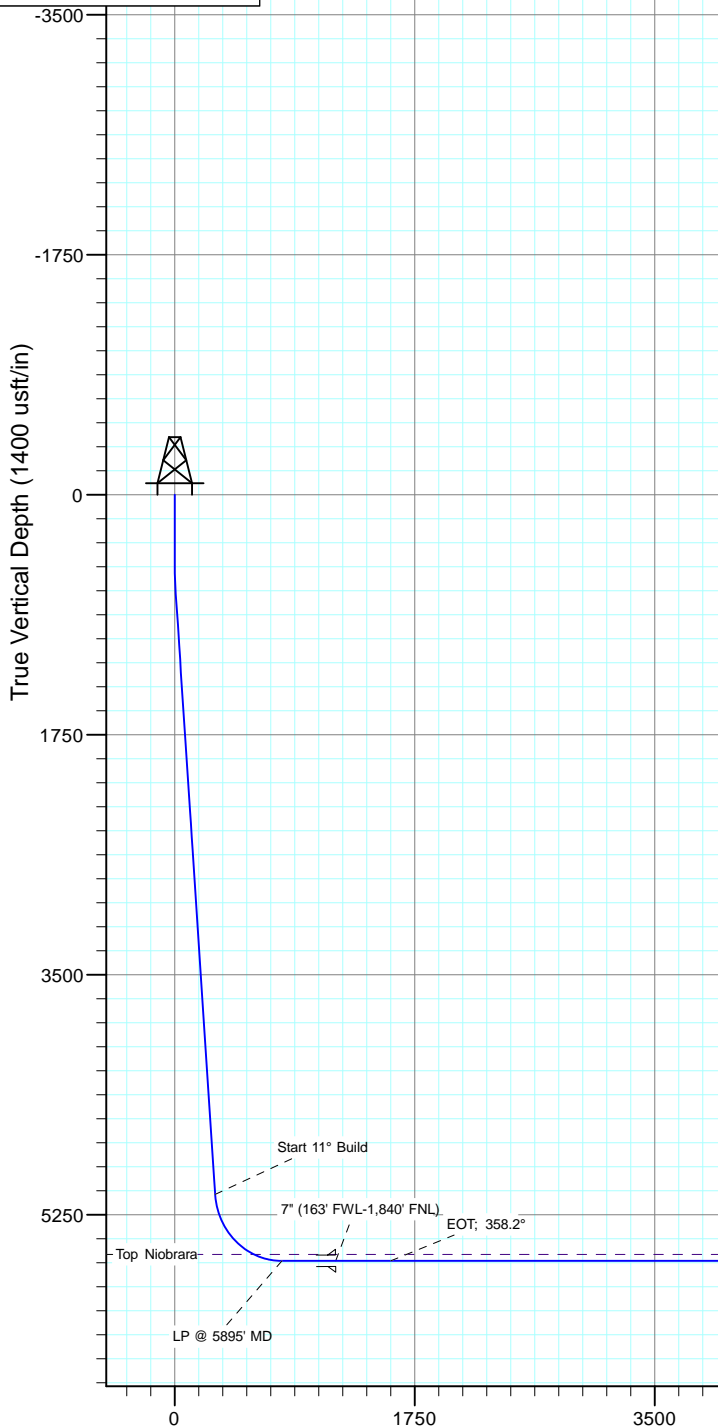
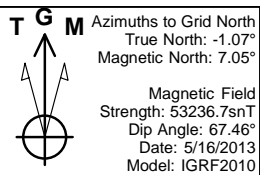


Project: Weld County, CO  
Site: S26-T10N-R58W  
Well: Razor Federal #26L-2301A  
Wellbore: HZ  
Design: Plan #3



#### 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	334.00	699.8	6.3	-3.1	2.00	334.00	6.5		EOB; 4"
4	5113.4	4.00	334.00	5102.5	283.0	-138.0	0.00	0.00	295.0		Start 11° Build
5	5895.2	90.00	334.00	5587.0	750.0	-365.8	11.00	0.00	781.9		LP @ 5895' MD
6	6702.9	90.00	358.23	5587.0	1528.3	-558.2	3.00	90.00	1575.2		EOT; 358.2°
7	12857.6	90.00	358.23	5587.0	7680.1	-748.1	0.00	0.00	7716.4	26L-2301A BHL Tgt (164' FWL-600' FNL Sec23)	PBHL @ 12857' MD



#### FORMATION TOP DETAILS

TVDPth	MDPath	Formation
5540.0	5672.2	Top Niobrara

Plan #3  
Razor Federal #26L-2301A  
WELL @ 4751.0usft (Original Well Elev)  
Ground Elevation @ 4734.5  
North American Datum 1983  
Well Razor Federal #26L-2301A, Grid North

26L-2301A BHL Tgt (164' FWL-600' FNL Sec23)

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Company:</b>	Whiting Petroleum Corporation	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site:</b>	S26-T10N-R58W	<b>North Reference:</b>	Grid
<b>Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #3		

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

Site		S26-T10N-R58W			
Site Position:		Northing:	1,541,774.28 usft	Latitude:	40° 48' 31.46 N
From:	Lat/Long	Easting:	3,459,642.55 usft	Longitude:	103° 50' 22.31 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.07 °

Well	Razor Federal #26L-2301A, (627' FWL-2,319' FSL)					
Well Position	+N/-S	0.0 usft	Northing:	1,541,774.86 usft	Latitude:	40° 48' 31.46 N
	+E/-W	0.0 usft	Easting:	3,459,675.77 usft	Longitude:	103° 50' 21.88 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,734.5 usft

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

<b>Design</b>	Plan #3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	354.44

<b>Plan Sections</b>										
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	334.00	699.8	6.3	-3.1	2.00	2.00	0.00	334.00	
5,113.4	4.00	334.00	5,102.5	283.0	-138.0	0.00	0.00	0.00	0.00	
5,895.2	90.00	334.00	5,587.0	750.0	-365.8	11.00	11.00	0.00	0.00	
6,702.9	90.00	358.23	5,587.0	1,528.3	-558.2	3.00	0.00	3.00	90.00	
12,857.6	90.00	358.23	5,587.0	7,680.1	-748.1	0.00	0.00	0.00	0.00	26L-2301A BHL Tgt (°)

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Company:</b>	Whiting Petroleum Corporation	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site:</b>	S26-T10N-R58W	<b>North Reference:</b>	Grid
<b>Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #3		

**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	334.00	600.0	1.6	-0.8	1.6	2.00	2.00	
700.0	4.00	334.00	699.8	6.3	-3.1	6.5	2.00	2.00	EOB; 4°
800.0	4.00	334.00	799.6	12.5	-6.1	13.1	0.00	0.00	
900.0	4.00	334.00	899.3	18.8	-9.2	19.6	0.00	0.00	
1,000.0	4.00	334.00	999.1	25.1	-12.2	26.1	0.00	0.00	
1,100.0	4.00	334.00	1,098.9	31.4	-15.3	32.7	0.00	0.00	
1,200.0	4.00	334.00	1,198.6	37.6	-18.3	39.2	0.00	0.00	
1,300.0	4.00	334.00	1,298.4	43.9	-21.4	45.8	0.00	0.00	
1,400.0	4.00	334.00	1,398.1	50.2	-24.5	52.3	0.00	0.00	
1,500.0	4.00	334.00	1,497.9	56.4	-27.5	58.8	0.00	0.00	
1,600.0	4.00	334.00	1,597.6	62.7	-30.6	65.4	0.00	0.00	
1,700.0	4.00	334.00	1,697.4	69.0	-33.6	71.9	0.00	0.00	
1,800.0	4.00	334.00	1,797.2	75.2	-36.7	78.4	0.00	0.00	
1,900.0	4.00	334.00	1,896.9	81.5	-39.8	85.0	0.00	0.00	
2,000.0	4.00	334.00	1,996.7	87.8	-42.8	91.5	0.00	0.00	
2,100.0	4.00	334.00	2,096.4	94.0	-45.9	98.1	0.00	0.00	
2,200.0	4.00	334.00	2,196.2	100.3	-48.9	104.6	0.00	0.00	
2,300.0	4.00	334.00	2,295.9	106.6	-52.0	111.1	0.00	0.00	
2,400.0	4.00	334.00	2,395.7	112.9	-55.0	117.7	0.00	0.00	
2,500.0	4.00	334.00	2,495.4	119.1	-58.1	124.2	0.00	0.00	
2,600.0	4.00	334.00	2,595.2	125.4	-61.2	130.7	0.00	0.00	
2,700.0	4.00	334.00	2,695.0	131.7	-64.2	137.3	0.00	0.00	
2,800.0	4.00	334.00	2,794.7	137.9	-67.3	143.8	0.00	0.00	
2,900.0	4.00	334.00	2,894.5	144.2	-70.3	150.3	0.00	0.00	
3,000.0	4.00	334.00	2,994.2	150.5	-73.4	156.9	0.00	0.00	
3,100.0	4.00	334.00	3,094.0	156.7	-76.4	163.4	0.00	0.00	
3,200.0	4.00	334.00	3,193.7	163.0	-79.5	170.0	0.00	0.00	
3,300.0	4.00	334.00	3,293.5	169.3	-82.6	176.5	0.00	0.00	
3,400.0	4.00	334.00	3,393.3	175.6	-85.6	183.0	0.00	0.00	
3,500.0	4.00	334.00	3,493.0	181.8	-88.7	189.6	0.00	0.00	
3,600.0	4.00	334.00	3,592.8	188.1	-91.7	196.1	0.00	0.00	
3,700.0	4.00	334.00	3,692.5	194.4	-94.8	202.6	0.00	0.00	
3,800.0	4.00	334.00	3,792.3	200.6	-97.9	209.2	0.00	0.00	
3,900.0	4.00	334.00	3,892.0	206.9	-100.9	215.7	0.00	0.00	
4,000.0	4.00	334.00	3,991.8	213.2	-104.0	222.2	0.00	0.00	
4,100.0	4.00	334.00	4,091.5	219.4	-107.0	228.8	0.00	0.00	
4,200.0	4.00	334.00	4,191.3	225.7	-110.1	235.3	0.00	0.00	
4,300.0	4.00	334.00	4,291.1	232.0	-113.1	241.9	0.00	0.00	
4,400.0	4.00	334.00	4,390.8	238.2	-116.2	248.4	0.00	0.00	
4,500.0	4.00	334.00	4,490.6	244.5	-119.3	254.9	0.00	0.00	
4,600.0	4.00	334.00	4,590.3	250.8	-122.3	261.5	0.00	0.00	
4,700.0	4.00	334.00	4,690.1	257.1	-125.4	268.0	0.00	0.00	
4,800.0	4.00	334.00	4,789.8	263.3	-128.4	274.5	0.00	0.00	
4,900.0	4.00	334.00	4,889.6	269.6	-131.5	281.1	0.00	0.00	
5,000.0	4.00	334.00	4,989.4	275.9	-134.5	287.6	0.00	0.00	
5,100.0	4.00	334.00	5,089.1	282.1	-137.6	294.1	0.00	0.00	

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Company:</b>	Whiting Petroleum Corporation	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site:</b>	S26-T10N-R58W	<b>North Reference:</b>	Grid
<b>Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #3		

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
5,113.4	4.00	334.00	5,102.5	283.0	-138.0	295.0	0.00	0.00	Start 11° Build
5,200.0	13.53	334.00	5,188.0	294.8	-143.8	307.4	11.00	11.00	
5,300.0	24.53	334.00	5,282.4	324.1	-158.1	337.9	11.00	11.00	
5,400.0	35.53	334.00	5,368.8	369.0	-180.0	384.7	11.00	11.00	
5,500.0	46.53	334.00	5,444.1	427.9	-208.7	446.1	11.00	11.00	
5,600.0	57.53	334.00	5,505.6	498.6	-243.2	519.9	11.00	11.00	
5,672.2	65.46	334.00	5,540.0	555.6	-271.0	579.2	11.00	11.00	Top Niobrara
5,700.0	68.53	334.00	5,550.9	578.6	-282.2	603.2	11.00	11.00	
5,800.0	79.53	334.00	5,578.3	664.9	-324.3	693.2	11.00	11.00	
5,895.2	90.00	334.00	5,587.0	750.0	-365.8	781.9	11.00	11.00	LP @ 5895' MD
5,900.0	90.00	334.14	5,587.0	754.3	-367.9	786.4	3.00	0.00	
6,000.0	90.00	337.14	5,587.0	845.4	-409.1	881.1	3.00	0.00	
6,100.0	90.00	340.14	5,587.0	938.5	-445.5	977.3	3.00	0.00	
6,200.0	90.00	343.14	5,587.0	1,033.4	-477.0	1,074.8	3.00	0.00	
6,300.0	90.00	346.14	5,587.0	1,129.8	-503.5	1,173.3	3.00	0.00	7" (163' FWL-1,840' FNL)
6,400.0	90.00	349.14	5,587.0	1,227.5	-524.9	1,272.6	3.00	0.00	
6,500.0	90.00	352.14	5,587.0	1,326.1	-541.2	1,372.4	3.00	0.00	
6,600.0	90.00	355.14	5,587.0	1,425.5	-552.2	1,472.3	3.00	0.00	
6,700.0	90.00	358.14	5,587.0	1,525.3	-558.1	1,572.3	3.00	0.00	
6,702.9	90.00	358.23	5,587.0	1,528.2	-558.2	1,575.2	3.00	0.00	EOT; 358.2°
6,800.0	90.00	358.23	5,587.0	1,625.3	-561.2	1,672.0	0.00	0.00	
6,900.0	90.00	358.23	5,587.0	1,725.2	-564.3	1,771.8	0.00	0.00	
7,000.0	90.00	358.23	5,587.0	1,825.2	-567.3	1,871.6	0.00	0.00	
7,100.0	90.00	358.23	5,587.0	1,925.1	-570.4	1,971.4	0.00	0.00	
7,200.0	90.00	358.23	5,587.0	2,025.1	-573.5	2,071.2	0.00	0.00	
7,300.0	90.00	358.23	5,587.0	2,125.0	-576.6	2,170.9	0.00	0.00	
7,400.0	90.00	358.23	5,587.0	2,225.0	-579.7	2,270.7	0.00	0.00	
7,500.0	90.00	358.23	5,587.0	2,325.0	-582.8	2,370.5	0.00	0.00	
7,600.0	90.00	358.23	5,587.0	2,424.9	-585.9	2,470.3	0.00	0.00	
7,700.0	90.00	358.23	5,587.0	2,524.9	-588.9	2,570.1	0.00	0.00	
7,800.0	90.00	358.23	5,587.0	2,624.8	-592.0	2,669.8	0.00	0.00	
7,900.0	90.00	358.23	5,587.0	2,724.8	-595.1	2,769.6	0.00	0.00	
8,000.0	90.00	358.23	5,587.0	2,824.7	-598.2	2,869.4	0.00	0.00	
8,100.0	90.00	358.23	5,587.0	2,924.7	-601.3	2,969.2	0.00	0.00	
8,200.0	90.00	358.23	5,587.0	3,024.6	-604.4	3,069.0	0.00	0.00	
8,300.0	90.00	358.23	5,587.0	3,124.6	-607.5	3,168.7	0.00	0.00	
8,400.0	90.00	358.23	5,587.0	3,224.5	-610.5	3,268.5	0.00	0.00	
8,500.0	90.00	358.23	5,587.0	3,324.5	-613.6	3,368.3	0.00	0.00	
8,600.0	90.00	358.23	5,587.0	3,424.4	-616.7	3,468.1	0.00	0.00	
8,700.0	90.00	358.23	5,587.0	3,524.4	-619.8	3,567.9	0.00	0.00	
8,800.0	90.00	358.23	5,587.0	3,624.3	-622.9	3,667.6	0.00	0.00	
8,900.0	90.00	358.23	5,587.0	3,724.3	-626.0	3,767.4	0.00	0.00	
9,000.0	90.00	358.23	5,587.0	3,824.2	-629.1	3,867.2	0.00	0.00	
9,100.0	90.00	358.23	5,587.0	3,924.2	-632.1	3,967.0	0.00	0.00	
9,200.0	90.00	358.23	5,587.0	4,024.1	-635.2	4,066.8	0.00	0.00	
9,300.0	90.00	358.23	5,587.0	4,124.1	-638.3	4,166.5	0.00	0.00	
9,400.0	90.00	358.23	5,587.0	4,224.0	-641.4	4,266.3	0.00	0.00	
9,500.0	90.00	358.23	5,587.0	4,324.0	-644.5	4,366.1	0.00	0.00	
9,600.0	90.00	358.23	5,587.0	4,423.9	-647.6	4,465.9	0.00	0.00	
9,700.0	90.00	358.23	5,587.0	4,523.9	-650.6	4,565.7	0.00	0.00	
9,800.0	90.00	358.23	5,587.0	4,623.9	-653.7	4,665.4	0.00	0.00	
9,900.0	90.00	358.23	5,587.0	4,723.8	-656.8	4,765.2	0.00	0.00	

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Company:</b>	Whiting Petroleum Corporation	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site:</b>	S26-T10N-R58W	<b>North Reference:</b>	Grid
<b>Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #3		

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	358.23	5,587.0	4,823.8	-659.9	4,865.0	0.00	0.00	
10,100.0	90.00	358.23	5,587.0	4,923.7	-663.0	4,964.8	0.00	0.00	
10,200.0	90.00	358.23	5,587.0	5,023.7	-666.1	5,064.6	0.00	0.00	
10,300.0	90.00	358.23	5,587.0	5,123.6	-669.2	5,164.4	0.00	0.00	
10,400.0	90.00	358.23	5,587.0	5,223.6	-672.2	5,264.1	0.00	0.00	
10,500.0	90.00	358.23	5,587.0	5,323.5	-675.3	5,363.9	0.00	0.00	
10,600.0	90.00	358.23	5,587.0	5,423.5	-678.4	5,463.7	0.00	0.00	
10,700.0	90.00	358.23	5,587.0	5,523.4	-681.5	5,563.5	0.00	0.00	
10,800.0	90.00	358.23	5,587.0	5,623.4	-684.6	5,663.3	0.00	0.00	
10,900.0	90.00	358.23	5,587.0	5,723.3	-687.7	5,763.0	0.00	0.00	
11,000.0	90.00	358.23	5,587.0	5,823.3	-690.8	5,862.8	0.00	0.00	
11,100.0	90.00	358.23	5,587.0	5,923.2	-693.8	5,962.6	0.00	0.00	
11,200.0	90.00	358.23	5,587.0	6,023.2	-696.9	6,062.4	0.00	0.00	
11,300.0	90.00	358.23	5,587.0	6,123.1	-700.0	6,162.2	0.00	0.00	
11,400.0	90.00	358.23	5,587.0	6,223.1	-703.1	6,261.9	0.00	0.00	
11,500.0	90.00	358.23	5,587.0	6,323.0	-706.2	6,361.7	0.00	0.00	
11,600.0	90.00	358.23	5,587.0	6,423.0	-709.3	6,461.5	0.00	0.00	
11,700.0	90.00	358.23	5,587.0	6,522.9	-712.4	6,561.3	0.00	0.00	
11,800.0	90.00	358.23	5,587.0	6,622.9	-715.4	6,661.1	0.00	0.00	
11,900.0	90.00	358.23	5,587.0	6,722.8	-718.5	6,760.8	0.00	0.00	
12,000.0	90.00	358.23	5,587.0	6,822.8	-721.6	6,860.6	0.00	0.00	
12,100.0	90.00	358.23	5,587.0	6,922.8	-724.7	6,960.4	0.00	0.00	
12,200.0	90.00	358.23	5,587.0	7,022.7	-727.8	7,060.2	0.00	0.00	
12,300.0	90.00	358.23	5,587.0	7,122.7	-730.9	7,160.0	0.00	0.00	
12,400.0	90.00	358.23	5,587.0	7,222.6	-734.0	7,259.7	0.00	0.00	
12,500.0	90.00	358.23	5,587.0	7,322.6	-737.0	7,359.5	0.00	0.00	
12,600.0	90.00	358.23	5,587.0	7,422.5	-740.1	7,459.3	0.00	0.00	
12,700.0	90.00	358.23	5,587.0	7,522.5	-743.2	7,559.1	0.00	0.00	
12,800.0	90.00	358.23	5,587.0	7,622.4	-746.3	7,658.9	0.00	0.00	
12,857.6	90.00	358.23	5,587.0	7,680.0	-748.1	7,716.4	0.00	0.00	PBHL @ 12857' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
26L-2301A PBHL - hit/miss target - Shape - Point	0.00	0.00	5,587.0	8,178.6	-767.6	1,549,953.43	3,458,908.12	40° 49' 52.40 N	103° 50' 29.87 W
- plan misses target center by 498.9usft at 12857.6usft MD (5587.0 TVD, 7680.0 N, -748.1 E)									
26L-2301A BHL Tgt (16" - plan hits target center - Point	0.00	0.00	5,587.0	7,680.1	-748.1	1,549,454.92	3,458,927.69	40° 49' 47.47 N	103° 50' 29.74 W

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
6,300.0	5,587.0	7" (163' FWL-1,840' FNL)	0	0	

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Company:</b>	Whiting Petroleum Corporation	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site:</b>	S26-T10N-R58W	<b>North Reference:</b>	Grid
<b>Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #3		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,672.2	5,540.0	Top Niobrara		0.00	

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	6.3	-3.1	EOB; 4°
5,113.4	5,102.5	283.0	-138.0	Start 11° Build
5,895.2	5,587.0	750.0	-365.8	LP @ 5895' MD
6,702.9	5,587.0	1,528.2	-558.2	EOT; 358.2°
12,857.6	5,587.0	7,680.0	-748.1	PBHL @ 12857' MD



**CATHEDRAL**

# **Whiting Petroleum Corporation**

**Weld County, CO**

**S26-T10N-R58W**

**Razor Federal #26L-2301A**

**HZ**

**Plan #3**

## **Anticollision Report**

**19 August, 2013**



**CATHEDRAL**

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	8/12/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	12,857.6	Plan #3 (HZ)	ISCWSA MWD	MWD - ISCWSA	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S26-T10N-R58W						
Razor #26K-2305A - HZ - Plan #1	7,001.9	7,000.0	1,120.8	1,047.2	15.225	CC
Razor #26K-2305A - HZ - Plan #1	12,857.6	12,818.3	1,300.4	1,010.2	4.482	ES, SF
Razor #26K-2306B - HZ - Plan #1	5,572.0	6,074.6	1,315.4	1,278.2	35.338	CC
Razor #26K-2306B - HZ - Plan #1	5,600.0	6,100.0	1,315.8	1,277.8	34.617	ES
Razor #26K-2306B - HZ - Plan #1	12,857.6	12,855.7	1,633.8	1,342.7	5.612	SF
Razor #26L-2302B - HZ - Plan #2	500.0	500.0	82.1	80.1	41.319	CC
Razor #26L-2302B - HZ - Plan #2	12,857.6	12,974.0	330.9	44.6	1.156	Level 2, ES, SF
Razor #26L-2303A - HZ - Plan #2	500.0	500.0	66.2	64.2	33.318	CC, ES
Razor #26L-2303A - HZ - Plan #2	12,857.6	12,786.2	648.0	353.7	2.202	SF
Razor #26L-2304B - HZ - Plan #1	500.0	500.0	82.0	80.0	41.274	CC, ES
Razor #26L-2304B - HZ - Plan #1	12,857.6	12,981.6	1,112.2	819.3	3.797	SF
Razor #26L-3501A - HZ - Plan #2	800.3	799.9	30.1	26.8	8.994	CC, ES
Razor #26L-3501A - HZ - Plan #2	900.0	898.3	32.5	28.7	8.595	SF
Razor #26L-3502B - HZ - Plan #2	500.0	500.0	75.0	73.1	37.787	CC, ES
Razor #26L-3502B - HZ - Plan #2	1,200.0	1,194.9	115.9	110.8	22.663	SF
Razor #26L-3503A - HZ - Plan #2	500.0	500.0	32.9	31.0	16.589	CC, ES
Razor #26L-3503A - HZ - Plan #2	600.0	599.0	35.1	32.7	14.550	SF
Razor #26L-3504B - HZ - Plan #2	500.0	500.0	100.1	98.1	50.387	CC, ES
Razor #26L-3504B - HZ - Plan #2	5,113.4	5,111.6	637.9	615.1	27.941	SF



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2305A - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	3.0	3.0	0.0	0.0	83.49	154.0	1,349.9	1,358.7					
100.0	100.0	103.0	103.0	0.1	0.1	83.49	154.0	1,349.9	1,358.7	1,358.5	0.19	6,988.356		
200.0	200.0	203.0	203.0	0.3	0.3	83.49	154.0	1,349.9	1,358.7	1,358.1	0.64	2,109.925		
300.0	300.0	303.0	303.0	0.5	0.6	83.49	154.0	1,349.9	1,358.7	1,357.6	1.09	1,242.536		
400.0	400.0	403.0	403.0	0.8	0.8	83.49	154.0	1,349.9	1,358.7	1,357.2	1.54	880.544		
500.0	500.0	503.8	503.8	1.0	1.0	83.49	154.0	1,349.9	1,358.7	1,356.7	1.99	681.265		
600.0	600.0	632.0	632.0	1.2	1.3	109.48	156.5	1,348.2	1,358.2	1,355.7	2.50	542.640		
700.0	699.8	746.9	746.7	1.4	1.6	109.46	162.5	1,344.2	1,357.0	1,354.0	2.99	454.165		
800.0	799.6	846.9	846.4	1.7	1.8	109.48	168.2	1,340.3	1,356.1	1,352.6	3.45	392.638		
900.0	899.4	946.9	946.2	1.9	2.0	109.50	174.0	1,336.4	1,355.2	1,351.2	3.93	344.892		
1,000.0	999.1	1,046.9	1,045.9	2.2	2.3	109.51	179.8	1,332.4	1,354.3	1,349.9	4.41	306.995		
1,100.0	1,098.9	1,146.9	1,145.7	2.4	2.5	109.53	185.6	1,328.5	1,353.4	1,348.5	4.90	276.302		
1,200.0	1,198.6	1,246.9	1,245.4	2.7	2.8	109.55	191.3	1,324.6	1,352.4	1,347.1	5.39	251.001		
1,300.0	1,298.4	1,346.9	1,345.2	2.9	3.0	109.57	197.1	1,320.7	1,351.5	1,345.7	5.88	229.820		
1,400.0	1,398.1	1,446.9	1,444.9	3.2	3.3	109.58	202.9	1,316.8	1,350.6	1,344.3	6.38	211.850		
1,500.0	1,497.9	1,546.9	1,544.7	3.4	3.5	109.60	208.7	1,312.9	1,349.7	1,342.9	6.87	196.422		
1,600.0	1,597.6	1,646.9	1,644.4	3.7	3.8	109.62	214.4	1,309.0	1,348.8	1,341.5	7.37	183.042		
1,700.0	1,697.4	1,746.9	1,744.2	3.9	4.0	109.63	220.2	1,305.1	1,347.9	1,340.1	7.87	171.333		
1,800.0	1,797.2	1,846.9	1,843.9	4.2	4.3	109.65	226.0	1,301.1	1,347.0	1,338.6	8.37	161.003		
1,900.0	1,896.9	1,946.9	1,943.7	4.4	4.6	109.67	231.8	1,297.2	1,346.1	1,337.2	8.87	151.825		
2,000.0	1,996.7	2,046.9	2,043.4	4.7	4.8	109.68	237.5	1,293.3	1,345.2	1,335.8	9.37	143.618		
2,100.0	2,096.4	2,146.9	2,143.2	4.9	5.1	109.70	243.3	1,289.4	1,344.3	1,334.4	9.87	136.237		
2,200.0	2,196.2	2,246.9	2,242.9	5.2	5.3	109.72	249.1	1,285.5	1,343.4	1,333.0	10.37	129.563		
2,300.0	2,295.9	2,346.9	2,342.7	5.4	5.6	109.73	254.9	1,281.6	1,342.5	1,331.6	10.87	123.502		
2,400.0	2,395.7	2,446.8	2,442.4	5.7	5.8	109.75	260.6	1,277.7	1,341.6	1,330.2	11.37	117.971		
2,500.0	2,495.5	2,546.8	2,542.2	6.0	6.1	109.77	266.4	1,273.7	1,340.7	1,328.8	11.87	112.906		
2,600.0	2,595.2	2,646.8	2,641.9	6.2	6.3	109.79	272.2	1,269.8	1,339.8	1,327.4	12.38	108.250		
2,700.0	2,695.0	2,746.8	2,741.7	6.5	6.6	109.80	277.9	1,265.9	1,338.9	1,326.0	12.88	103.955		
2,800.0	2,794.7	2,846.8	2,841.4	6.7	6.9	109.82	283.7	1,262.0	1,338.0	1,324.6	13.38	99.982		
2,900.0	2,894.5	2,946.8	2,941.2	7.0	7.1	109.84	289.5	1,258.1	1,337.1	1,323.2	13.88	96.295		
3,000.0	2,994.2	3,046.8	3,040.9	7.2	7.4	109.85	295.3	1,254.2	1,336.2	1,321.8	14.39	92.866		
3,100.0	3,094.0	3,146.8	3,140.7	7.5	7.6	109.87	301.0	1,250.3	1,335.3	1,320.4	14.89	89.667		
3,200.0	3,193.7	3,246.8	3,240.4	7.8	7.9	109.89	306.8	1,246.3	1,334.3	1,319.0	15.39	86.676		
3,300.0	3,293.5	3,346.8	3,340.2	8.0	8.1	109.91	312.6	1,242.4	1,333.4	1,317.5	15.90	83.875		
3,400.0	3,393.3	3,446.8	3,439.9	8.3	8.4	109.92	318.4	1,238.5	1,332.5	1,316.1	16.40	81.245		
3,500.0	3,493.0	3,546.8	3,539.7	8.5	8.7	109.94	324.1	1,234.6	1,331.6	1,314.7	16.91	78.771		
3,600.0	3,592.8	3,646.8	3,639.4	8.8	8.9	109.96	329.9	1,230.7	1,330.7	1,313.3	17.41	76.440		
3,700.0	3,692.5	3,746.8	3,739.2	9.0	9.2	109.98	335.7	1,226.8	1,329.8	1,311.9	17.91	74.240		
3,800.0	3,792.3	3,846.8	3,839.0	9.3	9.4	109.99	341.5	1,222.9	1,328.9	1,310.5	18.42	72.160		
3,900.0	3,892.0	3,946.8	3,938.7	9.6	9.7	110.01	347.2	1,219.0	1,328.0	1,309.1	18.92	70.190		
4,000.0	3,991.8	4,046.8	4,038.5	9.8	9.9	110.03	353.0	1,215.0	1,327.1	1,307.7	19.42	68.323		
4,100.0	4,091.6	4,146.8	4,138.2	10.1	10.2	110.04	358.8	1,211.1	1,326.2	1,306.3	19.93	66.550		
4,200.0	4,191.3	4,246.8	4,238.0	10.3	10.5	110.06	364.6	1,207.2	1,325.3	1,304.9	20.43	64.864		
4,300.0	4,291.1	4,346.8	4,337.7	10.6	10.7	110.08	370.3	1,203.3	1,324.4	1,303.5	20.94	63.259		
4,400.0	4,390.8	4,446.8	4,437.5	10.8	11.0	110.10	376.1	1,199.4	1,323.5	1,302.1	21.44	61.729		
4,500.0	4,490.6	4,546.7	4,537.2	11.1	11.2	110.11	381.9	1,195.5	1,322.6	1,300.7	21.94	60.270		
4,600.0	4,590.3	4,646.7	4,637.0	11.4	11.5	110.13	387.7	1,191.6	1,321.7	1,299.3	22.45	58.876		
4,700.0	4,690.1	4,746.7	4,736.7	11.6	11.7	110.15	393.4	1,187.6	1,320.8	1,297.9	22.95	57.544		
4,800.0	4,789.9	4,846.7	4,836.5	11.9	12.0	110.17	399.2	1,183.7	1,319.9	1,296.4	23.46	56.268		
4,900.0	4,889.6	4,946.7	4,936.2	12.1	12.3	110.18	405.0	1,179.8	1,319.0	1,295.0	23.96	55.046		
5,000.0	4,989.4	5,046.7	5,036.0	12.4	12.6	110.19	410.8	1,175.9	1,318.1	1,294.1	24.46	53.874		
5,100.0	5,089.1	5,146.7	5,136.0	12.6	12.8	110.20	416.6	1,172.0	1,317.2	1,293.2	24.96	52.702		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2305A - 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)						
							+N/-S (usft)	+E/-W (usft)						
5,113.4	5,102.5	5,983.9	5,610.0	12.7	21.6	85.59	901.0	845.0	1,266.0	1,229.8	36.15	35.024		
5,150.0	5,138.9	6,000.0	5,610.0	12.8	21.9	86.52	914.7	836.4	1,251.7	1,215.1	36.57	34.231		
5,200.0	5,188.0	6,000.0	5,610.0	13.0	21.9	88.71	914.7	836.4	1,233.1	1,196.5	36.69	33.608		
5,250.0	5,236.0	6,000.0	5,610.0	13.2	21.9	90.68	914.7	836.4	1,216.3	1,179.5	36.83	33.021		
5,300.0	5,282.4	6,000.0	5,610.0	13.4	21.9	92.41	914.7	836.4	1,201.3	1,164.3	37.00	32.468		
5,350.0	5,326.8	6,026.4	5,610.0	13.7	22.3	92.74	937.3	822.7	1,188.0	1,150.3	37.78	31.448		
5,400.0	5,368.8	6,043.2	5,610.0	14.1	22.6	93.33	951.7	814.1	1,176.7	1,138.3	38.39	30.654		
5,450.0	5,408.1	6,062.5	5,610.0	14.5	22.9	93.64	968.4	804.5	1,167.2	1,128.1	39.09	29.858		
5,500.0	5,444.1	6,100.0	5,610.0	14.9	23.5	93.18	1,001.1	786.2	1,159.7	1,119.5	40.24	28.819		
5,550.0	5,476.7	6,100.0	5,610.0	15.5	23.5	93.86	1,001.1	786.2	1,153.6	1,113.0	40.63	28.395		
5,600.0	5,505.6	6,133.2	5,610.0	16.0	24.1	93.38	1,030.4	770.5	1,149.2	1,107.4	41.79	27.501		
5,650.0	5,530.4	6,160.3	5,610.0	16.6	24.5	93.02	1,054.5	758.1	1,146.3	1,103.4	42.86	26.747		
5,700.0	5,550.9	6,200.0	5,610.0	17.3	25.2	92.41	1,090.1	740.5	1,144.9	1,100.6	44.23	25.883		
5,728.5	5,560.6	6,200.0	5,610.0	17.7	25.2	92.45	1,090.1	740.5	1,144.5	1,100.0	44.50	25.718		
5,750.0	5,566.9	6,200.0	5,610.0	18.0	25.2	92.42	1,090.1	740.5	1,144.7	1,099.9	44.81	25.543		
5,800.0	5,578.3	6,248.9	5,610.0	18.8	26.0	91.73	1,134.4	719.9	1,145.2	1,098.8	46.44	24.662		
5,850.0	5,585.1	6,279.8	5,610.0	19.6	26.6	91.33	1,162.7	707.4	1,147.0	1,099.3	47.71	24.041		
5,895.2	5,587.0	6,300.0	5,610.0	20.3	26.9	91.00	1,181.3	699.6	1,149.5	1,100.8	48.72	23.594		
5,900.0	5,587.0	6,300.0	5,610.0	20.4	26.9	91.00	1,181.3	699.6	1,149.9	1,101.1	48.77	23.576		
6,000.0	5,587.0	6,373.2	5,610.0	21.9	28.2	90.99	1,249.4	672.6	1,154.9	1,103.6	51.26	22.529		
6,100.0	5,587.0	6,435.5	5,610.0	23.4	29.2	90.99	1,308.1	651.8	1,158.1	1,104.5	53.53	21.635		
6,200.0	5,587.0	6,500.0	5,610.0	25.0	30.3	90.99	1,369.5	632.2	1,159.3	1,103.5	55.80	20.777		
6,300.0	5,587.0	6,560.0	5,610.0	26.7	31.3	90.99	1,427.2	615.9	1,158.5	1,100.6	57.89	20.010		
6,400.0	5,587.0	6,622.2	5,610.0	28.3	32.4	90.99	1,487.6	600.9	1,155.7	1,095.7	59.95	19.278		
6,500.0	5,587.0	6,700.0	5,610.0	29.9	33.7	91.00	1,563.8	585.0	1,151.1	1,088.9	62.19	18.511		
6,600.0	5,587.0	6,746.8	5,610.0	31.6	34.5	91.00	1,609.9	576.9	1,144.2	1,080.5	63.69	17.965		
6,702.9	5,587.0	6,800.0	5,610.0	33.2	35.4	91.01	1,662.5	569.0	1,135.3	1,070.1	65.21	17.412		
6,800.0	5,587.0	6,871.8	5,610.0	34.8	36.5	91.02	1,733.8	560.8	1,127.4	1,059.3	68.08	16.559		
6,900.0	5,587.0	6,934.6	5,610.0	36.4	37.5	91.02	1,796.4	555.8	1,122.5	1,051.6	70.85	15.843		
7,000.0	5,587.0	7,000.0	5,610.0	38.1	38.6	91.02	1,861.7	552.7	1,120.8	1,047.2	73.67	15.214		
7,001.9	5,587.0	7,000.0	5,610.0	38.1	38.6	91.02	1,861.7	552.7	1,120.8	1,047.2	73.62	15.225 CC		
7,100.0	5,587.0	7,063.4	5,610.0	39.8	39.5	91.02	1,925.1	551.9	1,122.5	1,046.1	76.45	14.683		
7,200.0	5,587.0	7,163.3	5,610.0	41.5	41.1	91.02	2,025.1	551.9	1,125.6	1,045.7	79.87	14.094		
7,300.0	5,587.0	7,263.3	5,610.0	43.3	42.7	91.01	2,125.0	551.9	1,128.7	1,045.4	83.30	13.549		
7,400.0	5,587.0	7,363.3	5,610.0	45.0	44.3	91.01	2,225.0	551.9	1,131.8	1,045.0	86.78	13.043		
7,500.0	5,587.0	7,463.2	5,610.0	46.8	45.9	91.01	2,324.9	551.9	1,134.9	1,044.6	90.28	12.571		
7,600.0	5,587.0	7,563.2	5,610.0	48.5	47.5	91.01	2,424.9	551.9	1,138.0	1,044.2	93.80	12.132		
7,700.0	5,587.0	7,663.1	5,610.0	50.3	49.2	91.00	2,524.8	551.9	1,141.1	1,043.7	97.35	11.721		
7,800.0	5,587.0	7,763.1	5,610.0	52.1	50.9	91.00	2,624.8	551.9	1,144.1	1,043.2	100.92	11.337		
7,900.0	5,587.0	7,863.0	5,610.0	53.9	52.5	91.00	2,724.7	552.0	1,147.2	1,042.7	104.50	10.978		
8,000.0	5,587.0	7,963.0	5,610.0	55.7	54.3	90.99	2,824.7	552.0	1,150.3	1,042.2	108.11	10.641		
8,100.0	5,587.0	8,062.9	5,610.0	57.5	56.0	90.99	2,924.6	552.0	1,153.4	1,041.7	111.72	10.324		
8,200.0	5,587.0	8,162.9	5,610.0	59.4	57.7	90.99	3,024.6	552.0	1,156.5	1,041.1	115.35	10.026		
8,300.0	5,587.0	8,262.8	5,610.0	61.2	59.4	90.99	3,124.5	552.0	1,159.6	1,040.6	118.99	9.745		
8,400.0	5,587.0	8,362.8	5,610.0	63.0	61.2	90.98	3,224.5	552.0	1,162.7	1,040.0	122.65	9.480		
8,500.0	5,587.0	8,462.7	5,610.0	64.9	63.0	90.98	3,324.4	552.0	1,165.8	1,039.5	126.31	9.229		
8,600.0	5,587.0	8,562.7	5,610.0	66.7	64.7	90.98	3,424.4	552.0	1,168.9	1,038.9	129.98	8.992		
8,700.0	5,587.0	8,662.6	5,610.0	68.6	66.5	90.98	3,524.3	552.0	1,171.9	1,038.3	133.66	8.768		
8,800.0	5,587.0	8,762.6	5,610.0	70.4	68.3	90.97	3,624.3	552.0	1,175.0	1,037.7	137.35	8.555		
8,900.0	5,587.0	8,862.5	5,610.0	72.3	70.1	90.97	3,724.3	552.0	1,178.1	1,037.1	141.04	8.353		
9,000.0	5,587.0	8,962.5	5,610.0	74.1	71.9	90.97	3,824.2	552.0	1,181.2	1,036.5	144.75	8.161		
9,100.0	5,587.0	9,062.4	5,610.0	76.0	73.7	90.97	3,924.2	552.0	1,184.3	1,035.8	148.45	7.978		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2305A - 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
9,200.0	5,587.0	9,162.4	5,610.0	77.9	75.5	90.96	4,024.1	552.0	1,187.4	1,035.2	152.17	7.803	
9,300.0	5,587.0	9,262.3	5,610.0	79.7	77.3	90.96	4,124.1	552.0	1,190.5	1,034.6	155.88	7.637	
9,400.0	5,587.0	9,362.3	5,610.0	81.6	79.2	90.96	4,224.0	552.0	1,193.6	1,034.0	159.61	7.478	
9,500.0	5,587.0	9,462.2	5,610.0	83.5	81.0	90.96	4,324.0	552.0	1,196.7	1,033.3	163.33	7.326	
9,600.0	5,587.0	9,562.2	5,610.0	85.4	82.8	90.95	4,423.9	552.0	1,199.7	1,032.7	167.07	7.181	
9,700.0	5,587.0	9,662.2	5,610.0	87.2	84.6	90.95	4,523.9	552.0	1,202.8	1,032.0	170.80	7.042	
9,800.0	5,587.0	9,762.1	5,610.0	89.1	86.5	90.95	4,623.8	552.0	1,205.9	1,031.4	174.54	6.909	
9,900.0	5,587.0	9,862.1	5,610.0	91.0	88.3	90.95	4,723.8	552.0	1,209.0	1,030.7	178.28	6.781	
10,000.0	5,587.0	9,962.0	5,610.0	92.9	90.2	90.94	4,823.7	552.0	1,212.1	1,030.1	182.03	6.659	
10,100.0	5,587.0	10,062.0	5,610.0	94.8	92.0	90.94	4,923.7	552.0	1,215.2	1,029.4	185.78	6.541	
10,200.0	5,587.0	10,161.9	5,610.0	96.7	93.9	90.94	5,023.6	552.0	1,218.3	1,028.8	189.53	6.428	
10,300.0	5,587.0	10,261.9	5,610.0	98.6	95.7	90.94	5,123.6	552.0	1,221.4	1,028.1	193.28	6.319	
10,400.0	5,587.0	10,361.8	5,610.0	100.4	97.6	90.94	5,223.5	552.0	1,224.5	1,027.4	197.04	6.214	
10,500.0	5,587.0	10,461.8	5,610.0	102.3	99.4	90.93	5,323.5	552.1	1,227.5	1,026.8	200.80	6.113	
10,600.0	5,587.0	10,561.7	5,610.0	104.2	101.3	90.93	5,423.4	552.1	1,230.6	1,026.1	204.56	6.016	
10,700.0	5,587.0	10,661.7	5,610.0	106.1	103.2	90.93	5,523.4	552.1	1,233.7	1,025.4	208.32	5.922	
10,800.0	5,587.0	10,761.6	5,610.0	108.0	105.0	90.93	5,623.3	552.1	1,236.8	1,024.7	212.09	5.832	
10,900.0	5,587.0	10,861.6	5,610.0	109.9	106.9	90.92	5,723.3	552.1	1,239.9	1,024.1	215.86	5.744	
11,000.0	5,587.0	10,961.5	5,610.0	111.8	108.7	90.92	5,823.3	552.1	1,243.0	1,023.4	219.62	5.660	
11,100.0	5,587.0	11,061.5	5,610.0	113.7	110.6	90.92	5,923.2	552.1	1,246.1	1,022.7	223.40	5.578	
11,200.0	5,587.0	11,161.4	5,610.0	115.6	112.5	90.92	6,023.2	552.1	1,249.2	1,022.0	227.17	5.499	
11,300.0	5,587.0	11,261.4	5,610.0	117.5	114.4	90.91	6,123.1	552.1	1,252.3	1,021.3	230.94	5.422	
11,400.0	5,587.0	11,361.3	5,610.0	119.4	116.2	90.91	6,223.1	552.1	1,255.4	1,020.6	234.72	5.348	
11,500.0	5,587.0	11,461.3	5,610.0	121.3	118.1	90.91	6,323.0	552.1	1,258.4	1,019.9	238.50	5.276	
11,600.0	5,587.0	11,561.2	5,610.0	123.2	120.0	90.91	6,423.0	552.1	1,261.5	1,019.2	242.30	5.206	
11,700.0	5,587.0	11,661.2	5,610.0	125.1	121.9	90.91	6,522.9	552.1	1,264.6	1,018.5	246.10	5.139	
11,800.0	5,587.0	11,761.1	5,610.0	127.0	123.7	90.90	6,622.9	552.1	1,267.7	1,017.8	249.90	5.073	
11,900.0	5,587.0	11,861.1	5,610.0	128.9	125.6	90.90	6,722.8	552.1	1,270.8	1,017.1	253.70	5.009	
12,000.0	5,587.0	11,961.1	5,610.0	130.8	127.5	90.90	6,822.8	552.1	1,273.9	1,016.4	257.50	4.947	
12,100.0	5,587.0	12,061.0	5,610.0	132.7	129.4	90.90	6,922.7	552.1	1,277.0	1,015.7	261.31	4.887	
12,200.0	5,587.0	12,161.0	5,610.0	134.6	131.3	90.90	7,022.7	552.1	1,280.1	1,015.0	265.11	4.828	
12,300.0	5,587.0	12,260.9	5,610.0	136.5	133.2	90.89	7,122.6	552.1	1,283.2	1,014.2	268.92	4.772	
12,400.0	5,587.0	12,360.9	5,610.0	138.4	135.0	90.89	7,222.6	552.1	1,286.2	1,013.5	272.73	4.716	
12,500.0	5,587.0	12,460.8	5,610.0	140.4	136.9	90.89	7,322.5	552.1	1,289.3	1,012.8	276.53	4.662	
12,600.0	5,587.0	12,560.8	5,610.0	142.3	138.8	90.89	7,422.5	552.1	1,292.4	1,012.1	280.34	4.610	
12,700.0	5,587.0	12,660.7	5,610.0	144.2	140.7	90.88	7,522.4	552.1	1,295.5	1,011.4	284.15	4.559	
12,800.0	5,587.0	12,760.7	5,610.0	146.1	142.6	90.88	7,622.4	552.1	1,298.6	1,010.6	287.96	4.510	
12,857.6	5,587.0	12,818.3	5,610.0	147.2	143.7	90.88	7,680.0	552.1	1,300.4	1,010.2	290.16	4.482	ES, SF

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCSWA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.0	0.0	3.0	3.0	0.0	0.0	86.60	78.3	1,318.4	1,320.7					
100.0	100.0	103.0	103.0	0.1	0.1	86.60	78.3	1,318.4	1,320.7	1,320.5	0.19	6,793.129		
200.0	200.0	203.0	203.0	0.3	0.3	86.60	78.3	1,318.4	1,320.7	1,320.1	0.64	2,050.982		
300.0	300.0	303.0	303.0	0.5	0.6	86.60	78.3	1,318.4	1,320.7	1,319.6	1.09	1,207.824		
400.0	400.0	403.0	403.0	0.8	0.8	86.60	78.3	1,318.4	1,320.7	1,319.2	1.54	855.945		
500.0	500.0	503.0	503.0	1.0	1.0	86.60	78.3	1,318.4	1,320.7	1,318.7	1.99	662.840		
600.0	600.0	603.0	603.0	1.2	1.2	112.66	78.3	1,318.4	1,321.4	1,319.0	2.44	541.462		
700.0	699.8	703.3	703.3	1.4	1.4	112.83	78.3	1,318.4	1,323.4	1,320.5	2.89	457.802		
800.0	799.6	820.4	820.3	1.7	1.7	113.05	80.7	1,317.5	1,325.5	1,322.1	3.38	391.791		
900.0	899.4	932.1	931.9	1.9	2.0	113.09	86.9	1,315.0	1,326.3	1,322.4	3.87	342.565		
1,000.0	999.1	1,032.1	1,031.6	2.2	2.2	113.08	93.4	1,312.5	1,326.8	1,322.5	4.34	305.464		
1,100.0	1,098.9	1,132.1	1,131.4	2.4	2.4	113.07	99.9	1,309.9	1,327.3	1,322.5	4.82	275.233		
1,200.0	1,198.6	1,232.1	1,231.1	2.7	2.7	113.06	106.4	1,307.4	1,327.8	1,322.5	5.31	250.223		
1,300.0	1,298.4	1,332.1	1,330.9	2.9	2.9	113.05	112.9	1,304.8	1,328.3	1,322.5	5.79	229.244		
1,400.0	1,398.1	1,432.1	1,430.6	3.2	3.2	113.05	119.3	1,302.3	1,328.8	1,322.6	6.29	211.423		
1,500.0	1,497.9	1,532.1	1,530.4	3.4	3.4	113.04	125.8	1,299.7	1,329.4	1,322.6	6.78	196.117		
1,600.0	1,597.6	1,632.1	1,630.1	3.7	3.7	113.03	132.3	1,297.1	1,329.9	1,322.6	7.27	182.842		
1,700.0	1,697.4	1,732.1	1,729.9	3.9	3.9	113.02	138.8	1,294.6	1,330.4	1,322.6	7.77	171.225		
1,800.0	1,797.2	1,832.1	1,829.7	4.2	4.2	113.01	145.3	1,292.0	1,330.9	1,322.6	8.27	160.980		
1,900.0	1,896.9	1,932.1	1,929.4	4.4	4.4	113.00	151.8	1,289.5	1,331.4	1,322.6	8.77	151.880		
2,000.0	1,996.7	2,032.1	2,029.2	4.7	4.7	113.00	158.3	1,286.9	1,331.9	1,322.7	9.27	143.747		
2,100.0	2,096.4	2,132.1	2,128.9	4.9	4.9	112.99	164.8	1,284.4	1,332.4	1,322.7	9.77	136.436		
2,200.0	2,196.2	2,232.1	2,228.7	5.2	5.2	112.98	171.3	1,281.8	1,332.9	1,322.7	10.27	129.830		
2,300.0	2,295.9	2,332.1	2,328.4	5.4	5.4	112.97	177.8	1,279.2	1,333.5	1,322.7	10.77	123.832		
2,400.0	2,395.7	2,432.1	2,428.2	5.7	5.7	112.96	184.3	1,276.7	1,334.0	1,322.7	11.27	118.362		
2,500.0	2,495.5	2,532.1	2,527.9	6.0	5.9	112.95	190.7	1,274.1	1,334.5	1,322.7	11.77	113.356		
2,600.0	2,595.2	2,632.1	2,627.7	6.2	6.2	112.95	197.2	1,271.6	1,335.0	1,322.7	12.28	108.756		
2,700.0	2,695.0	2,732.1	2,727.4	6.5	6.4	112.94	203.7	1,269.0	1,335.5	1,322.7	12.78	104.515		
2,800.0	2,794.7	2,832.1	2,827.2	6.7	6.7	112.93	210.2	1,266.5	1,336.0	1,322.7	13.28	100.593		
2,900.0	2,894.5	2,932.1	2,927.0	7.0	7.0	112.92	216.7	1,263.9	1,336.5	1,322.7	13.78	96.956		
3,000.0	2,994.2	3,032.1	3,026.7	7.2	7.2	112.91	223.2	1,261.3	1,337.0	1,322.8	14.29	93.574		
3,100.0	3,094.0	3,132.1	3,126.5	7.5	7.5	112.90	229.7	1,258.8	1,337.6	1,322.8	14.79	90.420		
3,200.0	3,193.7	3,232.1	3,226.2	7.8	7.7	112.90	236.2	1,256.2	1,338.1	1,322.8	15.30	87.474		
3,300.0	3,293.5	3,332.1	3,326.0	8.0	8.0	112.89	242.7	1,253.7	1,338.6	1,322.8	15.80	84.715		
3,400.0	3,393.3	3,432.1	3,425.7	8.3	8.2	112.88	249.2	1,251.1	1,339.1	1,322.8	16.31	82.125		
3,500.0	3,493.0	3,532.1	3,525.5	8.5	8.5	112.87	255.6	1,248.6	1,339.6	1,322.8	16.81	79.690		
3,600.0	3,592.8	3,632.1	3,625.2	8.8	8.7	112.86	262.1	1,246.0	1,340.1	1,322.8	17.31	77.397		
3,700.0	3,692.5	3,732.1	3,725.0	9.0	9.0	112.85	268.6	1,243.5	1,340.6	1,322.8	17.82	75.233		
3,800.0	3,792.3	3,832.1	3,824.8	9.3	9.3	112.85	275.1	1,240.9	1,341.1	1,322.8	18.32	73.188		
3,900.0	3,892.0	3,932.1	3,924.5	9.6	9.5	112.84	281.6	1,238.3	1,341.7	1,322.8	18.83	71.252		
4,000.0	3,991.8	4,032.1	4,024.3	9.8	9.8	112.83	288.1	1,235.8	1,342.2	1,322.8	19.33	69.417		
4,100.0	4,091.6	4,132.1	4,124.0	10.1	10.0	112.82	294.6	1,233.2	1,342.7	1,322.8	19.84	67.675		
4,200.0	4,191.3	4,232.0	4,223.8	10.3	10.3	112.81	301.1	1,230.7	1,343.2	1,322.9	20.35	66.019		
4,300.0	4,291.1	4,332.0	4,323.5	10.6	10.5	112.81	307.6	1,228.1	1,343.7	1,322.9	20.85	64.444		
4,400.0	4,390.8	4,432.0	4,423.3	10.8	10.8	112.80	314.1	1,225.6	1,344.2	1,322.9	21.36	62.942		
4,500.0	4,490.6	4,532.0	4,523.0	11.1	11.1	112.79	320.5	1,223.0	1,344.7	1,322.9	21.86	61.510		
4,600.0	4,590.3	4,632.0	4,622.8	11.4	11.3	112.78	327.0	1,220.4	1,345.2	1,322.9	22.37	60.143		
4,700.0	4,690.1	4,732.0	4,722.5	11.6	11.6	112.77	333.5	1,217.9	1,345.8	1,322.9	22.87	58.836		
4,800.0	4,789.9	4,832.0	4,822.3	11.9	11.8	112.76	340.0	1,215.3	1,346.3	1,322.9	23.38	57.585		
4,900.0	4,889.6	4,932.0	4,922.1	12.1	12.1	112.76	346.5	1,212.8	1,346.8	1,322.9	23.88	56.387		
5,000.0	4,989.4	5,032.0	5,021.8	12.4	12.3	112.75	353.0	1,210.2	1,347.3	1,322.9	24.39	55.239		
5,100.0	5,089.1	5,132.0	5,121.6	12.6	12.6	112.74	359.5	1,207.7	1,347.8	1,322.9	24.90	54.137		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,113.4	5,102.5	5,145.4	5,134.9	12.7	12.6	112.74	360.4	1,207.3	1,347.9	1,322.9	24.96	53.992	
5,150.0	5,138.9	5,182.0	5,171.4	12.8	12.7	112.72	362.7	1,206.4	1,348.6	1,323.4	25.15	53.624	
5,200.0	5,188.0	5,257.1	5,246.2	13.0	12.9	112.81	368.4	1,204.1	1,351.1	1,325.6	25.48	53.035	
5,250.0	5,236.0	5,533.5	5,498.5	13.2	14.4	111.57	466.2	1,165.6	1,350.3	1,323.2	27.12	49.785	
5,300.0	5,282.4	5,745.5	5,635.3	13.4	16.5	108.04	615.0	1,107.0	1,344.4	1,314.6	29.80	45.122	
5,350.0	5,326.8	5,886.7	5,686.0	13.7	18.4	104.87	737.2	1,058.9	1,336.6	1,304.2	32.36	41.306	
5,400.0	5,368.8	5,984.3	5,699.5	14.1	19.9	102.52	827.0	1,023.5	1,328.7	1,294.3	34.46	38.558	
5,450.0	5,408.1	6,008.0	5,700.0	14.5	20.2	102.41	849.0	1,014.8	1,322.2	1,287.0	35.17	37.592	
5,500.0	5,444.1	6,041.8	5,700.0	14.9	20.8	101.80	880.5	1,002.7	1,317.7	1,281.6	36.12	36.480	
5,550.0	5,476.7	6,064.2	5,700.0	15.5	21.1	101.38	901.6	995.0	1,315.7	1,278.8	36.90	35.651	
5,572.0	5,489.9	6,074.6	5,700.0	15.7	21.3	101.13	911.4	991.5	1,315.4	1,278.2	37.23	35.338 CC	
5,600.0	5,505.6	6,100.0	5,700.0	16.0	21.6	100.48	935.4	983.2	1,315.8	1,277.8	38.01	34.617 ES	
5,650.0	5,530.4	6,100.0	5,700.0	16.6	21.6	100.25	935.4	983.2	1,318.0	1,279.5	38.48	34.255	
5,700.0	5,550.9	6,140.7	5,700.0	17.3	22.2	99.05	974.1	970.5	1,321.8	1,282.0	39.77	33.237	
5,750.0	5,566.9	6,168.4	5,700.0	18.0	22.7	98.03	1,000.5	962.4	1,327.4	1,286.5	40.86	32.482	
5,800.0	5,578.3	6,200.0	5,700.0	18.8	23.1	96.91	1,030.9	953.5	1,334.5	1,292.4	42.07	31.720	
5,850.0	5,585.1	6,225.3	5,700.0	19.6	23.5	95.81	1,055.3	946.8	1,343.0	1,299.8	43.20	31.090	
5,895.2	5,587.0	6,251.3	5,700.0	20.3	23.9	94.77	1,080.5	940.3	1,351.7	1,307.4	44.28	30.524	
5,900.0	5,587.0	6,254.1	5,700.0	20.4	24.0	94.76	1,083.2	939.6	1,352.7	1,308.3	44.39	30.470	
6,000.0	5,587.0	6,300.0	5,700.0	21.9	24.7	94.68	1,127.8	929.0	1,372.0	1,325.5	46.44	29.543	
6,100.0	5,587.0	6,368.7	5,700.0	23.4	25.7	94.60	1,195.1	915.0	1,388.9	1,339.9	48.95	28.375	
6,200.0	5,587.0	6,425.9	5,700.0	25.0	26.6	94.54	1,251.4	905.3	1,403.7	1,352.3	51.35	27.337	
6,300.0	5,587.0	6,500.0	5,700.0	26.7	27.8	94.48	1,324.8	895.1	1,416.4	1,362.5	53.96	26.248	
6,400.0	5,587.0	6,540.1	5,700.0	28.3	28.5	94.44	1,364.7	890.8	1,426.6	1,370.7	55.95	25.497	
6,500.0	5,587.0	6,600.0	5,700.0	29.9	29.4	94.41	1,424.4	886.0	1,434.8	1,376.6	58.16	24.670	
6,600.0	5,587.0	6,654.2	5,700.0	31.6	30.3	94.38	1,478.5	883.2	1,440.6	1,380.5	60.15	23.949	
6,702.9	5,587.0	6,712.9	5,700.0	33.2	31.2	94.37	1,537.2	882.0	1,444.4	1,382.2	62.12	23.252	
6,800.0	5,587.0	6,801.0	5,700.0	34.8	32.6	94.36	1,625.3	881.9	1,447.3	1,382.1	65.21	22.194	
6,900.0	5,587.0	6,900.9	5,700.0	36.4	34.3	94.35	1,725.2	881.9	1,450.4	1,381.8	68.60	21.142	
7,000.0	5,587.0	7,000.9	5,700.0	38.1	35.9	94.34	1,825.2	881.9	1,453.4	1,381.4	72.03	20.177	
7,100.0	5,587.0	7,100.8	5,700.0	39.8	37.6	94.33	1,925.1	881.9	1,456.5	1,381.0	75.51	19.290	
7,200.0	5,587.0	7,200.8	5,700.0	41.5	39.3	94.32	2,025.1	881.9	1,459.6	1,380.6	79.01	18.473	
7,300.0	5,587.0	7,300.7	5,700.0	43.3	41.1	94.32	2,125.1	881.9	1,462.7	1,380.1	82.55	17.719	
7,400.0	5,587.0	7,400.7	5,700.0	45.0	42.8	94.31	2,225.0	881.9	1,465.8	1,379.6	86.11	17.022	
7,500.0	5,587.0	7,500.6	5,700.0	46.8	44.6	94.30	2,325.0	881.9	1,468.8	1,379.1	89.69	16.376	
7,600.0	5,587.0	7,600.6	5,700.0	48.5	46.3	94.29	2,424.9	881.9	1,471.9	1,378.6	93.29	15.777	
7,700.0	5,587.0	7,700.5	5,700.0	50.3	48.1	94.28	2,524.9	881.9	1,475.0	1,378.1	96.91	15.220	
7,800.0	5,587.0	7,800.5	5,700.0	52.1	49.9	94.27	2,624.8	881.9	1,478.1	1,377.5	100.55	14.700	
7,900.0	5,587.0	7,900.4	5,700.0	53.9	51.7	94.26	2,724.8	881.9	1,481.1	1,376.9	104.20	14.215	
8,000.0	5,587.0	8,000.4	5,700.0	55.7	53.5	94.25	2,824.7	881.9	1,484.2	1,376.4	107.86	13.760	
8,100.0	5,587.0	8,100.3	5,700.0	57.5	55.3	94.24	2,924.7	881.9	1,487.3	1,375.8	111.53	13.335	
8,200.0	5,587.0	8,200.3	5,700.0	59.4	57.2	94.24	3,024.6	881.9	1,490.4	1,375.2	115.22	12.935	
8,300.0	5,587.0	8,300.2	5,700.0	61.2	59.0	94.23	3,124.6	881.9	1,493.5	1,374.5	118.91	12.559	
8,400.0	5,587.0	8,400.2	5,700.0	63.0	60.8	94.22	3,224.5	881.9	1,496.5	1,373.9	122.61	12.205	
8,500.0	5,587.0	8,500.2	5,700.0	64.9	62.7	94.21	3,324.5	881.9	1,499.6	1,373.3	126.32	11.871	
8,600.0	5,587.0	8,600.1	5,700.0	66.7	64.5	94.20	3,424.4	881.9	1,502.7	1,372.6	130.04	11.556	
8,700.0	5,587.0	8,700.1	5,700.0	68.6	66.4	94.19	3,524.4	881.9	1,505.8	1,372.0	133.76	11.257	
8,800.0	5,587.0	8,800.0	5,700.0	70.4	68.2	94.18	3,624.3	881.9	1,508.8	1,371.3	137.49	10.974	
8,900.0	5,587.0	8,900.0	5,700.0	72.3	70.1	94.17	3,724.3	881.9	1,511.9	1,370.7	141.23	10.706	
9,000.0	5,587.0	8,999.9	5,700.0	74.1	71.9	94.17	3,824.2	881.9	1,515.0	1,370.0	144.97	10.451	
9,100.0	5,587.0	9,099.9	5,700.0	76.0	73.8	94.16	3,924.2	881.9	1,518.1	1,369.4	148.71	10.208	
9,200.0	5,587.0	9,199.8	5,700.0	77.9	75.7	94.15	4,024.1	881.9	1,521.2	1,368.7	152.46	9.977	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26K-2306B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,587.0	9,299.8	5,700.0	79.7	77.5	94.14	4,124.1	881.9	1,524.2	1,368.0	156.21	9.757	
9,400.0	5,587.0	9,399.7	5,700.0	81.6	79.4	94.13	4,224.1	881.9	1,527.3	1,367.3	159.97	9.548	
9,500.0	5,587.0	9,499.7	5,700.0	83.5	81.3	94.12	4,324.0	882.0	1,530.4	1,366.7	163.73	9.347	
9,600.0	5,587.0	9,599.6	5,700.0	85.4	83.1	94.12	4,424.0	882.0	1,533.5	1,366.0	167.49	9.155	
9,700.0	5,587.0	9,699.6	5,700.0	87.2	85.0	94.11	4,523.9	882.0	1,536.5	1,365.3	171.26	8.972	
9,800.0	5,587.0	9,799.5	5,700.0	89.1	86.9	94.10	4,623.9	882.0	1,539.6	1,364.6	175.03	8.796	
9,900.0	5,587.0	9,899.5	5,700.0	91.0	88.8	94.09	4,723.8	882.0	1,542.7	1,363.9	178.80	8.628	
10,000.0	5,587.0	9,999.4	5,700.0	92.9	90.6	94.08	4,823.8	882.0	1,545.8	1,363.2	182.58	8.467	
10,100.0	5,587.0	10,099.4	5,700.0	94.8	92.5	94.07	4,923.7	882.0	1,548.9	1,362.5	186.35	8.311	
10,200.0	5,587.0	10,199.3	5,700.0	96.7	94.4	94.07	5,023.7	882.0	1,551.9	1,361.8	190.13	8.162	
10,300.0	5,587.0	10,299.3	5,700.0	98.6	96.3	94.06	5,123.6	882.0	1,555.0	1,361.1	193.91	8.019	
10,400.0	5,587.0	10,399.2	5,700.0	100.4	98.2	94.05	5,223.6	882.0	1,558.1	1,360.4	197.70	7.881	
10,500.0	5,587.0	10,499.2	5,700.0	102.3	100.1	94.04	5,323.5	882.0	1,561.2	1,359.7	201.48	7.748	
10,600.0	5,587.0	10,599.2	5,700.0	104.2	102.0	94.03	5,423.5	882.0	1,564.3	1,359.0	205.27	7.620	
10,700.0	5,587.0	10,699.1	5,700.0	106.1	103.8	94.03	5,523.4	882.0	1,567.3	1,358.3	209.06	7.497	
10,800.0	5,587.0	10,799.1	5,700.0	108.0	105.7	94.02	5,623.4	882.0	1,570.4	1,357.6	212.85	7.378	
10,900.0	5,587.0	10,899.0	5,700.0	109.9	107.6	94.01	5,723.3	882.0	1,573.5	1,356.8	216.64	7.263	
11,000.0	5,587.0	10,999.0	5,700.0	111.8	109.5	94.00	5,823.3	882.0	1,576.6	1,356.1	220.43	7.152	
11,100.0	5,587.0	11,098.9	5,700.0	113.7	111.4	94.00	5,923.2	882.0	1,579.6	1,355.4	224.23	7.045	
11,200.0	5,587.0	11,198.9	5,700.0	115.6	113.3	93.99	6,023.2	882.0	1,582.7	1,354.7	228.03	6.941	
11,300.0	5,587.0	11,298.8	5,700.0	117.5	115.2	93.98	6,123.1	882.0	1,585.8	1,354.0	231.82	6.841	
11,400.0	5,587.0	11,398.8	5,700.0	119.4	117.1	93.97	6,223.1	882.0	1,588.9	1,353.3	235.62	6.743	
11,500.0	5,587.0	11,498.7	5,700.0	121.3	119.0	93.96	6,323.1	882.0	1,592.0	1,352.5	239.42	6.649	
11,600.0	5,587.0	11,598.7	5,700.0	123.2	120.9	93.96	6,423.0	882.0	1,595.0	1,351.8	243.22	6.558	
11,700.0	5,587.0	11,698.6	5,700.0	125.1	122.8	93.95	6,523.0	882.0	1,598.1	1,351.1	247.02	6.469	
11,800.0	5,587.0	11,798.6	5,700.0	127.0	124.7	93.94	6,622.9	882.0	1,601.2	1,350.4	250.83	6.384	
11,900.0	5,587.0	11,898.5	5,700.0	128.9	126.6	93.93	6,722.9	882.0	1,604.3	1,349.6	254.63	6.300	
12,000.0	5,587.0	11,998.5	5,700.0	130.8	128.5	93.93	6,822.8	882.0	1,607.4	1,348.9	258.44	6.220	
12,100.0	5,587.0	12,098.4	5,700.0	132.7	130.4	93.92	6,922.8	882.0	1,610.4	1,348.2	262.24	6.141	
12,200.0	5,587.0	12,198.4	5,700.0	134.6	132.3	93.91	7,022.7	882.0	1,613.5	1,347.5	266.05	6.065	
12,300.0	5,587.0	12,298.3	5,700.0	136.5	134.2	93.90	7,122.7	882.0	1,616.6	1,346.7	269.86	5.991	
12,400.0	5,587.0	12,398.3	5,700.0	138.4	136.1	93.90	7,222.6	882.0	1,619.7	1,346.0	273.66	5.918	
12,500.0	5,587.0	12,498.2	5,700.0	140.4	138.0	93.89	7,322.6	882.0	1,622.8	1,345.3	277.47	5.848	
12,600.0	5,587.0	12,598.2	5,700.0	142.3	139.9	93.88	7,422.5	882.0	1,625.8	1,344.5	281.28	5.780	
12,700.0	5,587.0	12,698.2	5,700.0	144.2	141.8	93.87	7,522.5	882.0	1,628.9	1,343.8	285.09	5.714	
12,800.0	5,587.0	12,798.1	5,700.0	146.1	143.7	93.87	7,622.4	882.0	1,632.0	1,343.1	288.90	5.649	
12,857.6	5,587.0	12,855.7	5,700.0	147.2	144.8	93.86	7,680.0	882.0	1,633.8	1,342.7	291.10	5.612 SF	



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - HZ - Plan #2													Offset Site Error: 0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-157.19	-75.6	-31.8	82.1				
100.0	100.0	100.0	100.0	0.1	0.1	-157.19	-75.6	-31.8	82.1	81.9	0.19	437.189	
200.0	200.0	200.0	200.0	0.3	0.3	-157.19	-75.6	-31.8	82.1	81.4	0.64	128.767	
300.0	300.0	300.0	300.0	0.5	0.5	-157.19	-75.6	-31.8	82.1	81.0	1.09	75.502	
400.0	400.0	400.0	400.0	0.8	0.8	-157.19	-75.6	-31.8	82.1	80.5	1.54	53.409	
500.0	500.0	500.0	500.0	1.0	1.0	-157.19	-75.6	-31.8	82.1	80.1	1.99	41.319 CC	
600.0	600.0	600.0	600.0	1.2	1.2	-132.08	-75.6	-31.8	83.2	80.8	2.44	34.166	
700.0	699.8	699.8	699.8	1.4	1.4	-134.59	-75.6	-31.8	86.8	83.9	2.89	30.060	
800.0	799.6	799.6	799.6	1.7	1.7	-137.69	-75.6	-31.8	91.8	88.5	3.34	27.480	
900.0	899.4	899.4	899.4	1.9	1.9	-140.45	-75.6	-31.8	97.1	93.3	3.80	25.567	
1,000.0	999.1	999.1	999.1	2.2	2.1	-142.93	-75.6	-31.8	102.6	98.3	4.26	24.109	
1,100.0	1,098.9	1,102.3	1,102.3	2.4	2.3	-144.83	-73.9	-32.3	106.6	101.9	4.72	22.598	
1,200.0	1,198.6	1,205.7	1,205.5	2.7	2.6	-145.81	-68.5	-33.8	107.5	102.3	5.19	20.727	
1,300.0	1,298.4	1,305.7	1,305.2	2.9	2.8	-146.41	-61.8	-35.6	106.9	101.2	5.65	18.922	
1,400.0	1,398.1	1,405.6	1,405.0	3.2	3.0	-147.01	-55.1	-37.5	106.3	100.2	6.11	17.390	
1,500.0	1,497.9	1,505.6	1,504.7	3.4	3.3	-147.62	-48.4	-39.4	105.7	99.1	6.58	16.073	
1,600.0	1,597.6	1,605.6	1,604.5	3.7	3.5	-148.24	-41.6	-41.2	105.1	98.1	7.04	14.930	
1,700.0	1,697.4	1,705.6	1,704.2	3.9	3.8	-148.87	-34.9	-43.1	104.5	97.0	7.51	13.930	
1,800.0	1,797.2	1,805.6	1,804.0	4.2	4.0	-149.50	-28.2	-45.0	104.0	96.0	7.97	13.048	
1,900.0	1,896.9	1,905.6	1,903.7	4.4	4.2	-150.14	-21.5	-46.8	103.5	95.0	8.44	12.265	
2,000.0	1,996.7	2,005.6	2,003.5	4.7	4.5	-150.79	-14.8	-48.7	102.9	94.0	8.90	11.566	
2,100.0	2,096.4	2,105.6	2,103.2	4.9	4.7	-151.44	-8.0	-50.6	102.4	93.1	9.36	10.938	
2,200.0	2,196.2	2,205.6	2,203.0	5.2	5.0	-152.10	-1.3	-52.4	101.9	92.1	9.83	10.371	
2,300.0	2,295.9	2,305.6	2,302.7	5.4	5.2	-152.76	5.4	-54.3	101.4	91.1	10.29	9.857	
2,400.0	2,395.7	2,405.6	2,402.5	5.7	5.5	-153.44	12.1	-56.1	101.0	90.2	10.75	9.389	
2,500.0	2,495.5	2,505.6	2,502.2	6.0	5.7	-154.11	18.8	-58.0	100.5	89.3	11.21	8.962	
2,600.0	2,595.2	2,605.5	2,602.0	6.2	6.0	-154.80	25.6	-59.9	100.1	88.4	11.68	8.570	
2,700.0	2,695.0	2,705.5	2,701.7	6.5	6.2	-155.49	32.3	-61.7	99.6	87.5	12.14	8.209	
2,800.0	2,794.7	2,805.5	2,801.5	6.7	6.5	-156.18	39.0	-63.6	99.2	86.6	12.60	7.877	
2,900.0	2,894.5	2,905.5	2,901.2	7.0	6.7	-156.89	45.7	-65.5	98.8	85.8	13.06	7.569	
3,000.0	2,994.2	3,005.5	3,001.0	7.2	7.0	-157.59	52.5	-67.3	98.4	84.9	13.51	7.284	
3,100.0	3,094.0	3,105.5	3,100.7	7.5	7.3	-158.31	59.2	-69.2	98.1	84.1	13.97	7.019	
3,200.0	3,193.7	3,205.5	3,200.4	7.8	7.5	-159.02	65.9	-71.1	97.7	83.3	14.43	6.772	
3,300.0	3,293.5	3,305.5	3,300.2	8.0	7.8	-159.75	72.6	-72.9	97.4	82.5	14.89	6.541	
3,400.0	3,393.3	3,405.5	3,399.9	8.3	8.0	-160.47	79.3	-74.8	97.1	81.7	15.34	6.325	
3,500.0	3,493.0	3,505.5	3,499.7	8.5	8.3	-161.21	86.1	-76.7	96.7	80.9	15.80	6.124	
3,600.0	3,592.8	3,605.5	3,599.4	8.8	8.5	-161.94	92.8	-78.5	96.5	80.2	16.25	5.934	
3,700.0	3,692.5	3,705.5	3,699.2	9.0	8.8	-162.69	99.5	-80.4	96.2	79.5	16.71	5.756	
3,800.0	3,792.3	3,805.4	3,798.9	9.3	9.0	-163.43	106.2	-82.2	95.9	78.8	17.16	5.588	
3,900.0	3,892.0	3,905.4	3,898.7	9.6	9.3	-164.18	112.9	-84.1	95.7	78.1	17.62	5.431	
4,000.0	3,991.8	4,005.4	3,998.4	9.8	9.5	-164.93	119.7	-86.0	95.4	77.4	18.07	5.282	
4,100.0	4,091.6	4,105.4	4,098.2	10.1	9.8	-165.69	126.4	-87.8	95.2	76.7	18.53	5.141	
4,200.0	4,191.3	4,205.4	4,197.9	10.3	10.1	-166.45	133.1	-89.7	95.0	76.1	18.98	5.008	
4,300.0	4,291.1	4,305.4	4,297.7	10.6	10.3	-167.21	139.8	-91.6	94.9	75.4	19.43	4.882	
4,400.0	4,390.8	4,405.4	4,397.4	10.8	10.6	-167.98	146.6	-93.4	94.7	74.8	19.89	4.763	
4,500.0	4,490.6	4,505.4	4,497.2	11.1	10.8	-168.75	153.3	-95.3	94.6	74.2	20.34	4.650	
4,600.0	4,590.3	4,605.4	4,596.9	11.4	11.1	-169.52	160.0	-97.2	94.4	73.7	20.79	4.542	
4,700.0	4,690.1	4,705.4	4,696.7	11.6	11.3	-170.29	166.7	-99.0	94.3	73.1	21.25	4.440	
4,800.0	4,789.9	4,805.4	4,796.4	11.9	11.6	-171.06	173.4	-100.9	94.2	72.5	21.70	4.343	
4,900.0	4,889.6	4,905.4	4,896.2	12.1	11.8	-171.84	180.2	-102.7	94.2	72.0	22.16	4.251	
5,000.0	4,989.4	5,005.4	4,995.9	12.4	12.1	-172.61	186.9	-104.6	94.1	71.5	22.61	4.163	
5,100.0	5,089.1	5,105.3	5,095.7	12.6	12.3	-173.39	193.6	-106.5	94.1	71.0	23.06	4.079	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2302B - 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		
5,113.4	5,102.5	5,118.7	5,109.0	12.7	12.4	-173.49	194.5	-106.7	94.1	70.9	23.13	4.068		
5,113.5	5,102.6	5,118.9	5,109.2	12.7	12.4	-173.50	194.5	-106.7	94.1	70.9	23.12	4.068		
5,150.0	5,138.9	5,155.3	5,145.5	12.8	12.5	-173.85	197.0	-107.4	95.3	72.1	23.22	4.105		
5,200.0	5,188.0	5,206.1	5,196.2	13.0	12.6	-174.52	200.4	-108.4	101.2	78.0	23.19	4.362		
5,250.0	5,236.0	5,268.0	5,257.4	13.2	12.8	-175.75	208.8	-110.7	108.3	85.3	22.99	4.711		
5,300.0	5,282.4	5,330.9	5,318.1	13.4	13.1	-177.48	224.4	-115.0	114.3	91.7	22.59	5.061		
5,350.0	5,326.8	5,394.7	5,377.3	13.7	13.4	-179.68	247.3	-121.4	119.2	97.2	22.01	5.416		
5,400.0	5,368.8	5,459.1	5,433.6	14.1	13.8	177.66	277.4	-129.7	123.0	101.7	21.28	5.779		
5,450.0	5,408.1	5,523.9	5,485.9	14.5	14.2	174.54	314.1	-139.9	125.7	105.2	20.46	6.144		
5,500.0	5,444.1	5,588.7	5,533.2	14.9	14.8	170.95	356.8	-151.7	127.4	107.7	19.64	6.487		
5,550.0	5,476.7	5,653.3	5,574.4	15.5	15.4	166.89	404.7	-165.0	128.3	109.3	19.00	6.751		
5,600.0	5,505.6	5,717.4	5,608.9	16.0	16.1	162.37	456.7	-179.4	128.5	109.7	18.78	6.841		
5,650.0	5,530.4	5,780.8	5,636.3	16.6	16.9	157.39	511.7	-194.7	128.3	109.0	19.25	6.663		
5,700.0	5,550.9	5,843.2	5,666.3	17.3	17.7	151.97	568.7	-210.5	127.9	107.3	20.61	6.207		
5,750.0	5,566.9	5,904.6	5,668.9	18.0	18.6	146.16	626.5	-226.5	127.6	104.7	22.88	5.576		
5,776.1	5,573.5	5,936.2	5,672.6	18.4	19.1	142.99	656.7	-234.9	127.5	103.1	24.39	5.228		
5,800.0	5,578.3	5,964.8	5,674.4	18.8	19.5	140.02	684.3	-242.6	127.6	101.6	25.93	4.920		
5,850.0	5,585.1	6,015.0	5,674.6	19.6	20.2	134.82	732.8	-255.7	129.3	100.5	28.85	4.482		
5,895.2	5,587.0	6,057.0	5,674.6	20.3	20.8	131.16	773.5	-265.8	135.0	103.9	31.18	4.331		
5,900.0	5,587.0	6,061.5	5,674.6	20.4	20.9	130.87	777.8	-266.8	135.8	104.4	31.42	4.323		
6,000.0	5,587.0	6,153.5	5,674.6	21.9	22.2	125.53	868.0	-285.5	153.2	117.1	36.14	4.240		
6,100.0	5,587.0	6,244.7	5,674.6	23.4	23.5	121.36	958.0	-299.7	171.2	130.8	40.42	4.236		
6,200.0	5,587.0	6,335.0	5,674.6	25.0	24.9	118.05	1,047.8	-309.6	189.5	145.2	44.37	4.271		
6,300.0	5,587.0	6,424.5	5,674.6	26.7	26.3	115.39	1,137.1	-315.1	207.9	159.8	48.06	4.325		
6,400.0	5,587.0	6,518.5	5,674.6	28.3	27.8	113.18	1,231.1	-317.2	225.5	173.8	51.63	4.367		
6,500.0	5,587.0	6,617.5	5,674.6	29.9	29.4	111.66	1,330.0	-318.9	238.9	183.9	55.02	4.343		
6,600.0	5,587.0	6,717.0	5,674.7	31.6	31.1	110.77	1,429.5	-320.6	247.7	189.5	58.14	4.260		
6,702.9	5,587.0	6,819.9	5,674.7	33.2	32.9	110.39	1,532.4	-322.4	251.6	190.5	61.08	4.118		
6,800.0	5,587.0	6,916.9	5,674.7	34.8	34.5	110.29	1,629.4	-324.1	252.8	188.5	64.28	3.933		
6,900.0	5,587.0	7,016.9	5,674.7	36.4	36.3	110.18	1,729.4	-325.8	254.1	186.4	67.61	3.758		
7,000.0	5,587.0	7,116.9	5,674.7	38.1	38.0	110.08	1,829.4	-327.6	255.3	184.4	70.97	3.598		
7,100.0	5,587.0	7,216.9	5,674.7	39.8	39.8	109.98	1,929.3	-329.3	256.6	182.2	74.37	3.450		
7,200.0	5,587.0	7,316.9	5,674.7	41.5	41.6	109.88	2,029.3	-331.0	257.9	180.1	77.80	3.315		
7,300.0	5,587.0	7,416.9	5,674.7	43.3	43.4	109.78	2,129.3	-332.8	259.1	177.9	81.25	3.189		
7,400.0	5,587.0	7,516.8	5,674.7	45.0	45.2	109.68	2,229.3	-334.5	260.4	175.7	84.73	3.074		
7,500.0	5,587.0	7,616.8	5,674.7	46.8	47.1	109.58	2,329.2	-336.2	261.7	173.5	88.23	2.966		
7,600.0	5,587.0	7,716.8	5,674.7	48.5	48.9	109.48	2,429.2	-338.0	263.0	171.2	91.74	2.866		
7,700.0	5,587.0	7,816.8	5,674.7	50.3	50.7	109.38	2,529.2	-339.7	264.2	169.0	95.27	2.774		
7,800.0	5,587.0	7,916.8	5,674.7	52.1	52.6	109.29	2,629.2	-341.4	265.5	166.7	98.82	2.687		
7,900.0	5,587.0	8,016.8	5,674.7	53.9	54.4	109.19	2,729.1	-343.2	266.8	164.4	102.38	2.606		
8,000.0	5,587.0	8,116.8	5,674.7	55.7	56.3	109.10	2,829.1	-344.9	268.1	162.1	105.96	2.530		
8,100.0	5,587.0	8,216.8	5,674.7	57.5	58.1	109.01	2,929.1	-346.7	269.4	159.8	109.54	2.459		
8,200.0	5,587.0	8,316.8	5,674.7	59.4	60.0	108.91	3,029.1	-348.4	270.6	157.5	113.14	2.392		
8,300.0	5,587.0	8,416.8	5,674.7	61.2	61.8	108.82	3,129.0	-350.1	271.9	155.2	116.74	2.329		
8,400.0	5,587.0	8,516.8	5,674.7	63.0	63.7	108.73	3,229.0	-351.9	273.2	152.8	120.36	2.270		
8,500.0	5,587.0	8,616.7	5,674.7	64.9	65.6	108.64	3,329.0	-353.6	274.5	150.5	123.98	2.214		
8,600.0	5,587.0	8,716.7	5,674.8	66.7	67.5	108.56	3,429.0	-355.3	275.8	148.1	127.62	2.161		
8,700.0	5,587.0	8,816.7	5,674.8	68.6	69.3	108.47	3,528.9	-357.1	277.0	145.8	131.26	2.111		
8,800.0	5,587.0	8,916.7	5,674.8	70.4	71.2	108.38	3,628.9	-358.8	278.3	143.4	134.90	2.063		
8,900.0	5,587.0	9,016.7	5,674.8	72.3	73.1	108.29	3,728.9	-360.5	279.6	141.0	138.56	2.018		
9,000.0	5,587.0	9,116.7	5,674.8	74.1	75.0	108.21	3,828.9	-362.3	280.9	138.7	142.22	1.975		
9,100.0	5,587.0	9,216.7	5,674.8	76.0	76.9	108.12	3,928.9	-364.0	282.2	136.3	145.89	1.934		

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



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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
9,200.0	5,587.0	9,316.7	5,674.8	77.9	78.7	108.04	4,028.8	-365.7	283.5	133.9	149.56	1.895	
9,300.0	5,587.0	9,416.7	5,674.8	79.7	80.6	107.96	4,128.8	-367.5	284.8	131.5	153.24	1.858	
9,400.0	5,587.0	9,516.7	5,674.8	81.6	82.5	107.87	4,228.8	-369.2	286.0	129.1	156.92	1.823	
9,500.0	5,587.0	9,616.7	5,674.8	83.5	84.4	107.79	4,328.8	-370.9	287.3	126.7	160.61	1.789	
9,600.0	5,587.0	9,716.6	5,674.8	85.4	86.3	107.71	4,428.7	-372.7	288.6	124.3	164.30	1.757	
9,700.0	5,587.0	9,816.6	5,674.8	87.2	88.2	107.63	4,528.7	-374.4	289.9	121.9	167.99	1.726	
9,800.0	5,587.0	9,916.6	5,674.8	89.1	90.1	107.55	4,628.7	-376.1	291.2	119.5	171.70	1.696	
9,900.0	5,587.0	10,016.6	5,674.8	91.0	92.0	107.47	4,728.7	-377.9	292.5	117.1	175.40	1.668	
10,000.0	5,587.0	10,116.6	5,674.8	92.9	93.9	107.40	4,828.6	-379.6	293.8	114.7	179.11	1.640	
10,100.0	5,587.0	10,216.6	5,674.8	94.8	95.8	107.32	4,928.6	-381.3	295.1	112.2	182.82	1.614	
10,200.0	5,587.0	10,316.6	5,674.8	96.7	97.7	107.24	5,028.6	-383.1	296.4	109.8	186.54	1.589	
10,300.0	5,587.0	10,416.6	5,674.8	98.6	99.6	107.16	5,128.6	-384.8	297.7	107.4	190.26	1.564	
10,400.0	5,587.0	10,516.6	5,674.8	100.4	101.5	107.09	5,228.5	-386.5	298.9	105.0	193.98	1.541	
10,500.0	5,587.0	10,616.6	5,674.8	102.3	103.4	107.01	5,328.5	-388.3	300.2	102.5	197.71	1.519	
10,600.0	5,587.0	10,716.6	5,674.9	104.2	105.3	106.94	5,428.5	-390.0	301.5	100.1	201.43	1.497 Level 3	
10,700.0	5,587.0	10,816.5	5,674.9	106.1	107.2	106.87	5,528.5	-391.7	302.8	97.7	205.17	1.476 Level 3	
10,800.0	5,587.0	10,916.5	5,674.9	108.0	109.1	106.79	5,628.4	-393.5	304.1	95.2	208.90	1.456 Level 3	
10,900.0	5,587.0	11,016.5	5,674.9	109.9	111.0	106.72	5,728.4	-395.2	305.4	92.8	212.64	1.436 Level 3	
11,000.0	5,587.0	11,116.5	5,674.9	111.8	112.9	106.65	5,828.4	-396.9	306.7	90.3	216.38	1.417 Level 3	
11,100.0	5,587.0	11,216.5	5,674.9	113.7	114.8	106.58	5,928.4	-398.7	308.0	87.9	220.12	1.399 Level 3	
11,200.0	5,587.0	11,316.5	5,674.9	115.6	116.7	106.51	6,028.3	-400.4	309.3	85.4	223.87	1.382 Level 3	
11,300.0	5,587.0	11,416.5	5,674.9	117.5	118.6	106.44	6,128.3	-402.2	310.6	83.0	227.61	1.365 Level 3	
11,400.0	5,587.0	11,516.5	5,674.9	119.4	120.5	106.37	6,228.3	-403.9	311.9	80.5	231.36	1.348 Level 3	
11,500.0	5,587.0	11,616.5	5,674.9	121.3	122.4	106.30	6,328.3	-405.6	313.2	78.1	235.12	1.332 Level 3	
11,600.0	5,587.0	11,716.5	5,674.9	123.2	124.3	106.23	6,428.2	-407.4	314.5	75.6	238.87	1.317 Level 3	
11,700.0	5,587.0	11,816.5	5,674.9	125.1	126.2	106.16	6,528.2	-409.1	315.8	73.2	242.63	1.302 Level 3	
11,800.0	5,587.0	11,916.4	5,674.9	127.0	128.1	106.10	6,628.2	-410.8	317.1	70.7	246.39	1.287 Level 3	
11,900.0	5,587.0	12,016.4	5,674.9	128.9	130.1	106.03	6,728.2	-412.6	318.4	68.3	250.15	1.273 Level 3	
12,000.0	5,587.0	12,116.4	5,674.9	130.8	132.0	105.97	6,828.2	-414.3	319.7	65.8	253.91	1.259 Level 3	
12,100.0	5,587.0	12,216.4	5,674.9	132.7	133.9	105.90	6,928.1	-416.0	321.0	63.3	257.67	1.246 Level 2	
12,200.0	5,587.0	12,316.4	5,674.9	134.6	135.8	105.84	7,028.1	-417.8	322.3	60.9	261.44	1.233 Level 2	
12,300.0	5,587.0	12,416.4	5,674.9	136.5	137.7	105.77	7,128.1	-419.5	323.6	58.4	265.21	1.220 Level 2	
12,400.0	5,587.0	12,516.4	5,674.9	138.4	139.6	105.71	7,228.1	-421.2	324.9	55.9	268.98	1.208 Level 2	
12,500.0	5,587.0	12,616.4	5,674.9	140.4	141.5	105.64	7,328.0	-423.0	326.2	53.5	272.75	1.196 Level 2	
12,600.0	5,587.0	12,716.4	5,675.0	142.3	143.4	105.58	7,428.0	-424.7	327.5	51.0	276.52	1.184 Level 2	
12,700.0	5,587.0	12,816.4	5,675.0	144.2	145.3	105.52	7,528.0	-426.4	328.8	48.5	280.30	1.173 Level 2	
12,800.0	5,587.0	12,916.4	5,675.0	146.1	147.2	105.46	7,628.0	-428.2	330.1	46.0	284.07	1.162 Level 2	
12,857.6	5,587.0	12,974.0	5,675.0	147.2	148.3	105.42	7,685.6	-429.2	330.9	44.6	286.25	1.156 Level 2, ES, SF	

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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		
0.0	0.0	0.0	0.0	0.0	0.0	88.93	1.2	66.2	66.2					
100.0	100.0	100.0	100.0	0.1	0.1	88.93	1.2	66.2	66.2	66.0	0.19	352.529		
200.0	200.0	200.0	200.0	0.3	0.3	88.93	1.2	66.2	66.2	65.5	0.64	103.831		
300.0	300.0	300.0	300.0	0.5	0.5	88.93	1.2	66.2	66.2	65.1	1.09	60.882		
400.0	400.0	400.0	400.0	0.8	0.8	88.93	1.2	66.2	66.2	64.6	1.54	43.067		
500.0	500.0	500.0	500.0	1.0	1.0	88.93	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	116.27	1.2	66.2	66.9	64.5	2.43	27.495		
700.0	699.8	699.8	699.8	1.4	1.4	120.10	1.2	66.2	69.4	66.5	2.88	24.068		
800.0	799.6	799.6	799.6	1.7	1.7	124.82	1.2	66.2	73.1	69.8	3.34	21.922		
900.0	899.4	899.4	899.4	1.9	1.9	129.06	1.2	66.2	77.3	73.6	3.79	20.394		
1,000.0	999.1	999.1	999.1	2.2	2.1	132.85	1.2	66.2	81.9	77.7	4.25	19.280		
1,100.0	1,098.9	1,100.1	1,100.1	2.4	2.3	135.20	3.0	66.0	86.1	81.4	4.71	18.295		
1,200.0	1,198.6	1,201.2	1,201.1	2.7	2.6	135.26	8.3	65.7	89.0	83.8	5.17	17.216		
1,300.0	1,298.4	1,301.2	1,300.8	2.9	2.8	134.31	15.2	65.2	91.2	85.6	5.64	16.182		
1,400.0	1,398.1	1,401.2	1,400.5	3.2	3.0	133.42	22.2	64.7	93.5	87.4	6.11	15.296		
1,500.0	1,497.9	1,501.1	1,500.2	3.4	3.3	132.56	29.2	64.2	95.7	89.1	6.59	14.530		
1,600.0	1,597.6	1,601.1	1,600.0	3.7	3.5	131.75	36.1	63.7	98.0	90.9	7.07	13.863		
1,700.0	1,697.4	1,701.1	1,699.7	3.9	3.7	130.97	43.1	63.2	100.3	92.7	7.55	13.278		
1,800.0	1,797.2	1,801.0	1,799.4	4.2	4.0	130.23	50.0	62.7	102.6	94.6	8.04	12.761		
1,900.0	1,896.9	1,901.0	1,899.1	4.4	4.2	129.52	57.0	62.3	104.9	96.4	8.53	12.301		
2,000.0	1,996.7	2,001.0	1,998.8	4.7	4.5	128.84	63.9	61.8	107.3	98.3	9.02	11.891		
2,100.0	2,096.4	2,100.9	2,098.6	4.9	4.7	128.19	70.9	61.3	109.6	100.1	9.52	11.522		
2,200.0	2,196.2	2,200.9	2,198.3	5.2	5.0	127.56	77.8	60.8	112.0	102.0	10.01	11.189		
2,300.0	2,295.9	2,300.9	2,298.0	5.4	5.2	126.97	84.8	60.3	114.4	103.9	10.51	10.887		
2,400.0	2,395.7	2,400.8	2,397.7	5.7	5.5	126.40	91.8	59.8	116.8	105.8	11.01	10.613		
2,500.0	2,495.5	2,500.8	2,497.4	6.0	5.7	125.85	98.7	59.3	119.2	107.7	11.51	10.361		
2,600.0	2,595.2	2,600.7	2,597.2	6.2	6.0	125.32	105.7	58.8	121.6	109.6	12.01	10.131		
2,700.0	2,695.0	2,700.7	2,696.9	6.5	6.2	124.81	112.6	58.4	124.1	111.6	12.51	9.920		
2,800.0	2,794.7	2,800.7	2,796.6	6.7	6.5	124.33	119.6	57.9	126.5	113.5	13.01	9.724		
2,900.0	2,894.5	2,900.6	2,896.3	7.0	6.7	123.86	126.5	57.4	129.0	115.4	13.51	9.544		
3,000.0	2,994.2	3,000.6	2,996.1	7.2	7.0	123.41	133.5	56.9	131.4	117.4	14.02	9.376		
3,100.0	3,094.0	3,100.6	3,095.8	7.5	7.2	122.97	140.5	56.4	133.9	119.4	14.52	9.220		
3,200.0	3,193.7	3,200.5	3,195.5	7.8	7.5	122.55	147.4	55.9	136.3	121.3	15.02	9.075		
3,300.0	3,293.5	3,300.5	3,295.2	8.0	7.7	122.15	154.4	55.4	138.8	123.3	15.53	8.939		
3,400.0	3,393.3	3,400.5	3,394.9	8.3	8.0	121.76	161.3	55.0	141.3	125.3	16.03	8.813		
3,500.0	3,493.0	3,500.4	3,494.7	8.5	8.2	121.38	168.3	54.5	143.8	127.3	16.54	8.694		
3,600.0	3,592.8	3,600.4	3,594.4	8.8	8.5	121.02	175.2	54.0	146.3	129.3	17.05	8.582		
3,700.0	3,692.5	3,700.4	3,694.1	9.0	8.8	120.67	182.2	53.5	148.8	131.2	17.55	8.477		
3,800.0	3,792.3	3,800.3	3,793.8	9.3	9.0	120.33	189.1	53.0	151.3	133.2	18.06	8.377		
3,900.0	3,892.0	3,900.3	3,893.5	9.6	9.3	120.00	196.1	52.5	153.8	135.3	18.57	8.284		
4,000.0	3,991.8	4,000.2	3,993.3	9.8	9.5	119.68	203.1	52.0	156.3	137.3	19.08	8.195		
4,100.0	4,091.6	4,100.2	4,093.0	10.1	9.8	119.37	210.0	51.6	158.9	139.3	19.59	8.112		
4,200.0	4,191.3	4,200.2	4,192.7	10.3	10.0	119.07	217.0	51.1	161.4	141.3	20.09	8.032		
4,300.0	4,291.1	4,300.1	4,292.4	10.6	10.3	118.79	223.9	50.6	163.9	143.3	20.60	7.957		
4,400.0	4,390.8	4,400.1	4,392.1	10.8	10.5	118.51	230.9	50.1	166.5	145.4	21.11	7.885		
4,500.0	4,490.6	4,500.1	4,491.9	11.1	10.8	118.23	237.8	49.6	169.0	147.4	21.62	7.817		
4,600.0	4,590.3	4,600.0	4,591.6	11.4	11.0	117.97	244.8	49.1	171.5	149.4	22.13	7.752		
4,700.0	4,690.1	4,700.0	4,691.3	11.6	11.3	117.71	251.8	48.6	174.1	151.5	22.64	7.690		
4,800.0	4,789.9	4,800.0	4,791.0	11.9	11.6	117.46	258.7	48.1	176.6	153.5	23.15	7.631		
4,900.0	4,889.6	4,899.9	4,890.8	12.1	11.8	117.22	265.7	47.7	179.2	155.5	23.66	7.575		
5,000.0	4,989.4	4,999.9	4,990.5	12.4	12.1	116.99	272.6	47.2	181.8	157.6	24.17	7.521		
5,100.0	5,089.1	5,099.9	5,090.2	12.6	12.3	116.76	279.6	46.7	184.3	159.6	24.68	7.469		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,113.4	5,102.5	5,113.3	5,103.6	12.7	12.4	116.73	280.5	46.6	184.7	159.9	24.75	7.462	
5,150.0	5,138.9	5,151.0	5,141.0	12.8	12.5	116.43	284.6	46.3	186.1	161.1	24.94	7.461	
5,200.0	5,188.0	5,202.3	5,191.4	13.0	12.6	115.70	294.4	45.6	189.5	164.2	25.24	7.508	
5,250.0	5,236.0	5,253.3	5,240.2	13.2	12.9	114.65	309.1	44.6	194.6	169.0	25.59	7.605	
5,300.0	5,282.4	5,303.9	5,287.0	13.4	13.1	113.32	328.3	43.3	201.4	175.4	26.01	7.744	
5,350.0	5,326.8	5,354.1	5,331.3	13.7	13.4	111.75	351.6	41.6	209.9	183.4	26.52	7.915	
5,400.0	5,368.8	5,403.7	5,372.8	14.1	13.7	110.00	378.9	39.7	220.0	192.8	27.13	8.107	
5,450.0	5,408.1	5,452.8	5,411.1	14.5	14.1	108.11	409.6	37.6	231.5	203.6	27.86	8.309	
5,500.0	5,444.1	5,501.4	5,445.9	14.9	14.5	106.12	443.3	35.2	244.4	215.7	28.71	8.514	
5,550.0	5,476.7	5,549.4	5,477.1	15.5	15.0	104.06	479.7	32.7	258.6	228.9	29.68	8.714	
5,600.0	5,505.6	5,597.0	5,504.5	16.0	15.5	101.96	518.4	30.0	273.9	243.1	30.76	8.905	
5,650.0	5,530.4	5,644.1	5,528.1	16.6	16.0	99.85	559.1	27.1	290.2	258.2	31.94	9.086	
5,700.0	5,550.9	5,690.8	5,547.8	17.3	16.5	97.75	601.3	24.2	307.3	274.1	33.20	9.256	
5,750.0	5,566.9	5,737.2	5,563.5	18.0	17.1	95.67	644.9	21.1	325.0	290.5	34.52	9.414	
5,800.0	5,578.3	5,783.5	5,575.2	18.8	17.8	93.62	689.5	18.0	343.2	307.3	35.90	9.560	
5,850.0	5,585.1	5,829.6	5,582.9	19.6	18.4	91.63	734.9	14.8	361.8	324.4	37.31	9.696	
5,895.2	5,587.0	5,871.4	5,586.4	20.3	19.0	89.89	776.4	11.9	378.7	340.1	38.61	9.809	
5,900.0	5,587.0	5,875.9	5,586.5	20.4	19.1	89.92	780.9	11.6	380.5	341.7	38.75	9.819	
6,000.0	5,587.0	5,956.0	5,586.8	21.9	20.2	89.97	860.9	7.1	416.5	375.1	41.39	10.061	
6,100.0	5,587.0	6,040.7	5,586.8	23.4	21.4	89.98	945.6	5.3	450.9	406.7	44.22	10.195	
6,200.0	5,587.0	6,136.1	5,586.8	25.0	22.9	89.98	1,040.9	3.8	480.9	433.5	47.35	10.157	
6,300.0	5,587.0	6,232.9	5,586.8	26.7	24.5	89.98	1,137.7	2.3	505.8	455.3	50.53	10.011	
6,400.0	5,587.0	6,330.9	5,586.8	28.3	26.1	89.98	1,235.7	0.7	525.7	472.0	53.73	9.784	
6,500.0	5,587.0	6,429.8	5,586.9	29.9	27.8	89.98	1,334.6	-0.8	540.4	483.5	56.92	9.495	
6,600.0	5,587.0	6,529.4	5,586.9	31.6	29.5	89.98	1,434.1	-2.4	549.9	489.9	60.04	9.160	
6,702.9	5,587.0	6,632.2	5,586.9	33.2	31.3	89.98	1,537.0	-4.0	554.3	491.1	63.15	8.777	
6,800.0	5,587.0	6,729.2	5,586.9	34.8	33.0	89.98	1,634.0	-5.5	555.8	489.3	66.51	8.357	
6,900.0	5,587.0	6,829.2	5,586.9	36.4	34.8	89.98	1,734.0	-7.0	557.3	487.3	70.00	7.962	
7,000.0	5,587.0	6,929.2	5,586.9	38.1	36.6	89.98	1,833.9	-8.6	558.8	485.3	73.52	7.601	
7,100.0	5,587.0	7,029.2	5,586.9	39.8	38.4	89.98	1,933.9	-10.2	560.3	483.2	77.08	7.270	
7,200.0	5,587.0	7,129.2	5,586.9	41.5	40.2	89.98	2,033.9	-11.7	561.8	481.2	80.66	6.966	
7,300.0	5,587.0	7,229.2	5,586.9	43.3	42.1	89.98	2,133.9	-13.3	563.4	479.1	84.26	6.686	
7,400.0	5,587.0	7,329.2	5,586.9	45.0	43.9	89.99	2,233.8	-14.9	564.9	477.0	87.89	6.427	
7,500.0	5,587.0	7,429.2	5,586.9	46.8	45.8	89.99	2,333.8	-16.4	566.4	474.9	91.53	6.188	
7,600.0	5,587.0	7,529.1	5,586.9	48.5	47.6	89.99	2,433.8	-18.0	567.9	472.7	95.19	5.966	
7,700.0	5,587.0	7,629.1	5,586.9	50.3	49.5	89.99	2,533.8	-19.6	569.5	470.6	98.86	5.760	
7,800.0	5,587.0	7,729.1	5,586.9	52.1	51.3	89.99	2,633.8	-21.1	571.0	468.4	102.55	5.568	
7,900.0	5,587.0	7,829.1	5,586.9	53.9	53.2	89.99	2,733.7	-22.7	572.5	466.3	106.25	5.389	
8,000.0	5,587.0	7,929.1	5,586.9	55.7	55.1	89.99	2,833.7	-24.2	574.0	464.1	109.95	5.221	
8,100.0	5,587.0	8,029.1	5,586.9	57.5	56.9	89.99	2,933.7	-25.8	575.5	461.9	113.67	5.063	
8,200.0	5,587.0	8,129.1	5,586.9	59.4	58.8	89.99	3,033.7	-27.4	577.1	459.7	117.39	4.916	
8,300.0	5,587.0	8,229.1	5,586.9	61.2	60.7	89.99	3,133.6	-28.9	578.6	457.5	121.12	4.777	
8,400.0	5,587.0	8,329.1	5,586.9	63.0	62.6	89.99	3,233.6	-30.5	580.1	455.3	124.86	4.646	
8,500.0	5,587.0	8,429.0	5,586.9	64.9	64.4	89.99	3,333.6	-32.1	581.6	453.0	128.61	4.523	
8,600.0	5,587.0	8,529.0	5,586.9	66.7	66.3	89.99	3,433.6	-33.6	583.2	450.8	132.36	4.406	
8,700.0	5,587.0	8,629.0	5,586.9	68.6	68.2	89.99	3,533.5	-35.2	584.7	448.6	136.11	4.296	
8,800.0	5,587.0	8,729.0	5,586.9	70.4	70.1	89.99	3,633.5	-36.7	586.2	446.3	139.87	4.191	
8,900.0	5,587.0	8,829.0	5,586.9	72.3	72.0	89.99	3,733.5	-38.3	587.7	444.1	143.64	4.092	
9,000.0	5,587.0	8,929.0	5,586.9	74.1	73.9	89.99	3,833.5	-39.9	589.2	441.8	147.41	3.997	
9,100.0	5,587.0	9,029.0	5,586.9	76.0	75.8	89.99	3,933.4	-41.4	590.8	439.6	151.18	3.908	
9,200.0	5,587.0	9,129.0	5,586.9	77.9	77.7	89.99	4,033.4	-43.0	592.3	437.3	154.95	3.822	
9,300.0	5,587.0	9,229.0	5,586.9	79.7	79.6	89.99	4,133.4	-44.6	593.8	435.1	158.73	3.741	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (")	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
9,400.0	5,587.0	9,328.9	5,586.9	81.6	81.5	89.99	4,233.4	-46.1	595.3	432.8	162.52	3.663		
9,500.0	5,587.0	9,428.9	5,586.9	83.5	83.4	89.99	4,333.3	-47.7	596.9	430.6	166.30	3.589		
9,600.0	5,587.0	9,528.9	5,586.9	85.4	85.3	89.99	4,433.3	-49.3	598.4	428.3	170.09	3.518		
9,700.0	5,587.0	9,628.9	5,586.9	87.2	87.2	89.99	4,533.3	-50.8	599.9	426.0	173.88	3.450		
9,800.0	5,587.0	9,728.9	5,586.9	89.1	89.1	89.99	4,633.3	-52.4	601.4	423.8	177.67	3.385		
9,900.0	5,587.0	9,828.9	5,586.9	91.0	91.0	89.99	4,733.3	-53.9	602.9	421.5	181.47	3.323		
10,000.0	5,587.0	9,928.9	5,586.9	92.9	92.9	89.99	4,833.2	-55.5	604.5	419.2	185.26	3.263		
10,100.0	5,587.0	10,028.9	5,586.9	94.8	94.8	89.99	4,933.2	-57.1	606.0	416.9	189.06	3.205		
10,200.0	5,587.0	10,128.8	5,586.9	96.7	96.7	89.99	5,033.2	-58.6	607.5	414.7	192.86	3.150		
10,300.0	5,587.0	10,228.8	5,586.9	98.6	98.6	89.99	5,133.2	-60.2	609.0	412.4	196.66	3.097		
10,400.0	5,587.0	10,328.8	5,586.9	100.4	100.5	89.99	5,233.1	-61.8	610.6	410.1	200.47	3.046		
10,500.0	5,587.0	10,428.8	5,586.9	102.3	102.4	89.99	5,333.1	-63.3	612.1	407.8	204.27	2.996		
10,600.0	5,587.0	10,528.8	5,586.9	104.2	104.3	89.99	5,433.1	-64.9	613.6	405.5	208.08	2.949		
10,700.0	5,587.0	10,628.8	5,586.9	106.1	106.2	89.99	5,533.1	-66.5	615.1	403.2	211.89	2.903		
10,800.0	5,587.0	10,728.8	5,586.9	108.0	108.1	89.99	5,633.0	-68.0	616.6	401.0	215.70	2.859		
10,900.0	5,587.0	10,828.8	5,586.9	109.9	110.0	89.99	5,733.0	-69.6	618.2	398.7	219.51	2.816		
11,000.0	5,587.0	10,928.8	5,586.9	111.8	111.9	89.99	5,833.0	-71.1	619.7	396.4	223.32	2.775		
11,100.0	5,587.0	11,028.7	5,586.9	113.7	113.8	90.00	5,933.0	-72.7	621.2	394.1	227.13	2.735		
11,200.0	5,587.0	11,128.7	5,586.9	115.6	115.7	90.00	6,032.9	-74.3	622.7	391.8	230.94	2.696		
11,300.0	5,587.0	11,228.7	5,586.9	117.5	117.6	90.00	6,132.9	-75.8	624.3	389.5	234.76	2.659		
11,400.0	5,587.0	11,328.7	5,586.9	119.4	119.5	90.00	6,232.9	-77.4	625.8	387.2	238.58	2.623		
11,500.0	5,587.0	11,428.7	5,587.0	121.3	121.5	90.00	6,332.9	-79.0	627.3	384.9	242.39	2.588		
11,600.0	5,587.0	11,528.7	5,587.0	123.2	123.4	90.00	6,432.8	-80.5	628.8	382.6	246.21	2.554		
11,700.0	5,587.0	11,628.7	5,587.0	125.1	125.3	90.00	6,532.8	-82.1	630.4	380.3	250.03	2.521		
11,800.0	5,587.0	11,728.7	5,587.0	127.0	127.2	90.00	6,632.8	-83.6	631.9	378.0	253.85	2.489		
11,900.0	5,587.0	11,828.7	5,587.0	128.9	129.1	90.00	6,732.8	-85.2	633.4	375.7	257.67	2.458		
12,000.0	5,587.0	11,928.6	5,587.0	130.8	131.0	90.00	6,832.8	-86.8	634.9	373.4	261.49	2.428		
12,100.0	5,587.0	12,028.6	5,587.0	132.7	132.9	90.00	6,932.7	-88.3	636.4	371.1	265.31	2.399		
12,200.0	5,587.0	12,128.6	5,587.0	134.6	134.8	90.00	7,032.7	-89.9	638.0	368.8	269.13	2.370		
12,300.0	5,587.0	12,228.6	5,587.0	136.5	136.7	90.00	7,132.7	-91.5	639.5	366.5	272.95	2.343		
12,400.0	5,587.0	12,328.6	5,587.0	138.4	138.7	90.00	7,232.7	-93.0	641.0	364.2	276.77	2.316		
12,500.0	5,587.0	12,428.6	5,587.0	140.4	140.6	90.00	7,332.6	-94.6	642.5	361.9	280.60	2.290		
12,600.0	5,587.0	12,528.6	5,587.0	142.3	142.5	90.00	7,432.6	-96.2	644.1	359.6	284.42	2.264		
12,700.0	5,587.0	12,628.6	5,587.0	144.2	144.4	90.00	7,532.6	-97.7	645.6	357.3	288.25	2.240		
12,800.0	5,587.0	12,728.5	5,587.0	146.1	146.3	90.00	7,632.6	-99.3	647.1	355.0	292.07	2.216		
12,857.6	5,587.0	12,786.2	5,587.0	147.2	147.4	90.00	7,690.2	-100.2	648.0	353.7	294.28	2.202 SF		

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	155.23	-74.4	34.3	82.0					
100.0	100.0	100.0	100.0	0.1	0.1	155.23	-74.4	34.3	82.0	81.8	0.19	436.710		
200.0	200.0	200.0	200.0	0.3	0.3	155.23	-74.4	34.3	82.0	81.3	0.64	128.625		
300.0	300.0	300.0	300.0	0.5	0.5	155.23	-74.4	34.3	82.0	80.9	1.09	75.419		
400.0	400.0	400.0	400.0	0.8	0.8	155.23	-74.4	34.3	82.0	80.4	1.54	53.351		
500.0	500.0	500.0	500.0	1.0	1.0	155.23	-74.4	34.3	82.0	80.0	1.99	41.274	CC, ES	
600.0	600.0	600.0	600.0	1.2	1.2	-178.80	-74.4	34.3	83.7	81.3	2.44	34.354		
700.0	699.8	701.6	701.6	1.4	1.4	-179.83	-72.9	35.2	87.9	85.0	2.89	30.447		
800.0	799.6	803.1	802.9	1.7	1.7	177.38	-68.2	37.9	92.0	88.7	3.34	27.578		
900.0	899.4	902.9	902.5	1.9	1.9	174.00	-62.2	41.4	95.5	91.7	3.79	25.191		
1,000.0	999.1	1,002.7	1,002.0	2.2	2.1	170.87	-56.1	44.9	99.3	95.1	4.25	23.348		
1,100.0	1,098.9	1,102.5	1,101.6	2.4	2.4	167.98	-50.1	48.4	103.4	98.7	4.72	21.899		
1,200.0	1,198.6	1,202.3	1,201.1	2.7	2.6	165.31	-44.1	51.9	107.7	102.6	5.20	20.740		
1,300.0	1,298.4	1,302.0	1,300.7	2.9	2.9	162.86	-38.0	55.3	112.3	106.6	5.67	19.798		
1,400.0	1,398.1	1,401.8	1,400.2	3.2	3.1	160.60	-32.0	58.8	117.0	110.9	6.15	19.024		
1,500.0	1,497.9	1,501.6	1,499.7	3.4	3.4	158.51	-26.0	62.3	121.9	115.3	6.63	18.378		
1,600.0	1,597.6	1,601.4	1,599.3	3.7	3.6	156.59	-20.0	65.8	127.0	119.9	7.12	17.835		
1,700.0	1,697.4	1,701.2	1,698.8	3.9	3.9	154.82	-13.9	69.3	132.2	124.5	7.61	17.374		
1,800.0	1,797.2	1,801.0	1,798.4	4.2	4.1	153.18	-7.9	72.7	137.4	129.4	8.10	16.979		
1,900.0	1,896.9	1,900.8	1,897.9	4.4	4.4	151.67	-1.9	76.2	142.8	134.3	8.59	16.638		
2,000.0	1,996.7	2,000.5	1,997.5	4.7	4.6	150.27	4.1	79.7	148.3	139.3	9.08	16.341		
2,100.0	2,096.4	2,100.3	2,097.0	4.9	4.9	148.96	10.2	83.2	153.9	144.3	9.57	16.082		
2,200.0	2,196.2	2,200.1	2,196.5	5.2	5.1	147.75	16.2	86.7	159.6	149.5	10.06	15.854		
2,300.0	2,295.9	2,299.9	2,296.1	5.4	5.4	146.63	22.2	90.1	165.3	154.7	10.56	15.653		
2,400.0	2,395.7	2,399.7	2,395.6	5.7	5.6	145.57	28.3	93.6	171.1	160.0	11.05	15.473		
2,500.0	2,495.5	2,499.5	2,495.2	6.0	5.9	144.59	34.3	97.1	176.9	165.3	11.55	15.313		
2,600.0	2,595.2	2,599.3	2,594.7	6.2	6.1	143.67	40.3	100.6	182.8	170.7	12.05	15.170		
2,700.0	2,695.0	2,699.0	2,694.2	6.5	6.4	142.81	46.3	104.1	188.7	176.1	12.54	15.041		
2,800.0	2,794.7	2,798.8	2,793.8	6.7	6.7	142.00	52.4	107.5	194.6	181.6	13.04	14.924		
2,900.0	2,894.5	2,898.6	2,893.3	7.0	6.9	141.24	58.4	111.0	200.6	187.1	13.54	14.819		
3,000.0	2,994.2	2,998.4	2,992.9	7.2	7.2	140.52	64.4	114.5	206.7	192.6	14.04	14.722		
3,100.0	3,094.0	3,098.2	3,092.4	7.5	7.4	139.84	70.5	118.0	212.7	198.2	14.54	14.635		
3,200.0	3,193.7	3,198.0	3,192.0	7.8	7.7	139.20	76.5	121.5	218.8	203.8	15.03	14.554		
3,300.0	3,293.5	3,297.8	3,291.5	8.0	7.9	138.60	82.5	124.9	224.9	209.4	15.53	14.481		
3,400.0	3,393.3	3,397.5	3,391.0	8.3	8.2	138.03	88.5	128.4	231.1	215.0	16.03	14.413		
3,500.0	3,493.0	3,497.3	3,490.6	8.5	8.4	137.48	94.6	131.9	237.2	220.7	16.53	14.350		
3,600.0	3,592.8	3,597.1	3,590.1	8.8	8.7	136.97	100.6	135.4	243.4	226.4	17.03	14.292		
3,700.0	3,692.5	3,696.9	3,689.7	9.0	9.0	136.48	106.6	138.9	249.6	232.1	17.53	14.239		
3,800.0	3,792.3	3,796.7	3,789.2	9.3	9.2	136.01	112.7	142.4	255.8	237.8	18.03	14.189		
3,900.0	3,892.0	3,896.5	3,888.8	9.6	9.5	135.57	118.7	145.8	262.1	243.5	18.53	14.143		
4,000.0	3,991.8	3,996.2	3,988.3	9.8	9.7	135.15	124.7	149.3	268.3	249.3	19.03	14.100		
4,100.0	4,091.6	4,096.0	4,087.8	10.1	10.0	134.74	130.7	152.8	274.6	255.0	19.53	14.060		
4,200.0	4,191.3	4,195.8	4,187.4	10.3	10.2	134.36	136.8	156.3	280.8	260.8	20.03	14.022		
4,300.0	4,291.1	4,295.6	4,286.9	10.6	10.5	133.99	142.8	159.8	287.1	266.6	20.53	13.987		
4,400.0	4,390.8	4,395.4	4,386.5	10.8	10.7	133.63	148.8	163.2	293.4	272.4	21.03	13.954		
4,500.0	4,490.6	4,495.2	4,486.0	11.1	11.0	133.29	154.9	166.7	299.7	278.2	21.53	13.923		
4,600.0	4,590.3	4,595.0	4,585.6	11.4	11.3	132.97	160.9	170.2	306.1	284.0	22.03	13.894		
4,700.0	4,690.1	4,694.7	4,685.1	11.6	11.5	132.66	166.9	173.7	312.4	289.9	22.53	13.866		
4,800.0	4,789.9	4,794.5	4,784.6	11.9	11.8	132.36	172.9	177.2	318.7	295.7	23.03	13.840		
4,900.0	4,889.6	4,894.2	4,886.9	12.1	12.0	132.05	177.7	179.9	324.7	301.2	23.50	13.819		
5,000.0	4,989.4	4,999.4	4,989.3	12.4	12.2	131.75	179.3	180.8	329.8	305.9	23.91	13.796		
5,100.0	5,089.1	5,099.2	5,089.1	12.6	12.3	131.45	179.3	180.8	334.6	310.3	24.32	13.760		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - 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		
5,113.4	5,102.5	5,112.6	5,102.5	12.7	12.4	133.94	179.3	180.8	335.3	310.9	24.38	13.754		
5,150.0	5,138.9	5,148.9	5,138.9	12.8	12.4	134.20	179.3	180.8	338.0	313.5	24.48	13.806		
5,200.0	5,188.0	5,200.4	5,190.3	13.0	12.6	134.64	180.5	181.1	344.5	319.9	24.56	14.025		
5,250.0	5,236.0	5,253.0	5,242.5	13.2	12.7	134.60	186.6	182.6	353.9	329.3	24.61	14.378		
5,300.0	5,282.4	5,305.5	5,293.7	13.4	12.9	134.03	197.8	185.4	366.1	341.4	24.65	14.850		
5,350.0	5,326.8	5,357.6	5,343.1	13.7	13.1	132.96	213.8	189.3	381.0	356.3	24.72	15.414		
5,400.0	5,368.8	5,409.0	5,390.0	14.1	13.4	131.40	234.1	194.3	398.4	373.5	24.85	16.034		
5,450.0	5,408.1	5,459.4	5,433.8	14.5	13.7	129.41	258.4	200.3	418.2	393.1	25.09	16.666		
5,500.0	5,444.1	5,508.8	5,474.2	14.9	14.0	127.02	286.1	207.1	440.3	414.8	25.51	17.263		
5,550.0	5,476.7	5,557.1	5,510.8	15.5	14.4	124.27	316.6	214.5	464.5	438.4	26.12	17.782		
5,600.0	5,505.6	5,604.3	5,543.7	16.0	14.8	121.19	349.4	222.6	490.6	463.7	26.96	18.196		
5,650.0	5,530.4	5,650.4	5,572.7	16.6	15.3	117.81	384.1	231.1	518.4	490.4	28.03	18.496		
5,700.0	5,550.9	5,695.6	5,598.0	17.3	15.7	114.19	420.5	240.1	547.7	518.4	29.30	18.693		
5,750.0	5,566.9	5,740.1	5,619.6	18.0	16.2	110.35	458.2	249.3	578.2	547.5	30.73	18.817		
5,800.0	5,578.3	5,784.1	5,637.7	18.8	16.8	106.35	497.2	258.9	609.7	577.5	32.26	18.901		
5,850.0	5,585.1	5,827.8	5,652.2	19.6	17.3	102.26	537.3	268.8	641.9	608.1	33.83	18.975		
5,895.2	5,587.0	5,867.5	5,662.4	20.3	17.8	98.54	574.5	277.9	671.4	636.2	35.24	19.053		
5,900.0	5,587.0	5,871.7	5,663.3	20.4	17.9	98.58	578.5	278.9	674.6	639.2	35.36	19.079		
6,000.0	5,587.0	5,964.6	5,674.7	21.9	19.2	98.52	667.9	300.8	737.0	699.1	37.96	19.416		
6,100.0	5,587.0	6,096.4	5,675.0	23.4	21.0	97.37	796.7	329.0	792.3	751.0	41.24	19.213		
6,200.0	5,587.0	6,251.9	5,675.0	25.0	23.2	96.53	950.6	350.7	836.5	791.4	45.08	18.557		
6,300.0	5,587.0	6,422.5	5,675.0	26.7	25.7	96.00	1,120.8	360.1	868.1	818.7	49.41	17.571		
6,400.0	5,587.0	6,529.1	5,675.0	28.3	27.3	95.78	1,227.4	360.2	889.5	836.5	52.96	16.795		
6,500.0	5,587.0	6,627.8	5,675.0	29.9	28.9	95.63	1,326.1	360.2	905.7	849.3	56.39	16.060		
6,600.0	5,587.0	6,727.1	5,675.0	31.6	30.6	95.53	1,425.5	360.2	916.7	856.9	59.79	15.333		
6,702.9	5,587.0	6,829.9	5,675.0	33.2	32.3	95.47	1,528.2	360.2	922.6	859.4	63.20	14.599		
6,800.0	5,587.0	6,926.9	5,675.0	34.8	34.0	95.46	1,625.2	360.2	925.6	859.1	66.50	13.919		
6,900.0	5,587.0	7,026.8	5,675.0	36.4	35.7	95.44	1,725.2	360.2	928.7	858.7	69.94	13.278		
7,000.0	5,587.0	7,126.8	5,675.0	38.1	37.4	95.42	1,825.1	360.3	931.8	858.3	73.42	12.691		
7,100.0	5,587.0	7,226.8	5,675.0	39.8	39.2	95.40	1,925.1	360.3	934.8	857.9	76.93	12.152		
7,200.0	5,587.0	7,326.7	5,675.0	41.5	41.0	95.38	2,025.0	360.3	937.9	857.4	80.47	11.656		
7,300.0	5,587.0	7,426.7	5,675.0	43.3	42.7	95.37	2,125.0	360.3	941.0	857.0	84.03	11.198		
7,400.0	5,587.0	7,526.6	5,675.0	45.0	44.5	95.35	2,224.9	360.3	944.1	856.5	87.62	10.774		
7,500.0	5,587.0	7,626.6	5,675.0	46.8	46.4	95.33	2,324.9	360.3	947.2	855.9	91.23	10.382		
7,600.0	5,587.0	7,726.5	5,675.0	48.5	48.2	95.31	2,424.9	360.3	950.2	855.4	94.85	10.018		
7,700.0	5,587.0	7,826.5	5,675.0	50.3	50.0	95.30	2,524.8	360.3	953.3	854.8	98.49	9.679		
7,800.0	5,587.0	7,926.4	5,675.0	52.1	51.8	95.28	2,624.8	360.3	956.4	854.2	102.15	9.363		
7,900.0	5,587.0	8,026.4	5,675.0	53.9	53.7	95.26	2,724.7	360.3	959.5	853.7	105.81	9.068		
8,000.0	5,587.0	8,126.3	5,675.0	55.7	55.5	95.25	2,824.7	360.3	962.5	853.1	109.49	8.791		
8,100.0	5,587.0	8,226.3	5,675.0	57.5	57.3	95.23	2,924.6	360.3	965.6	852.5	113.18	8.532		
8,200.0	5,587.0	8,326.2	5,675.0	59.4	59.2	95.21	3,024.6	360.3	968.7	851.8	116.87	8.288		
8,300.0	5,587.0	8,426.2	5,675.0	61.2	61.0	95.20	3,124.5	360.3	971.8	851.2	120.58	8.059		
8,400.0	5,587.0	8,526.1	5,675.0	63.0	62.9	95.18	3,224.5	360.4	974.9	850.6	124.29	7.843		
8,500.0	5,587.0	8,626.1	5,675.0	64.9	64.8	95.16	3,324.4	360.4	977.9	849.9	128.01	7.640		
8,600.0	5,587.0	8,726.0	5,675.0	66.7	66.6	95.15	3,424.4	360.4	981.0	849.3	131.74	7.447		
8,700.0	5,587.0	8,826.0	5,675.0	68.6	68.5	95.13	3,524.3	360.4	984.1	848.6	135.47	7.264		
8,800.0	5,587.0	8,925.9	5,675.0	70.4	70.4	95.12	3,624.3	360.4	987.2	848.0	139.21	7.092		
8,900.0	5,587.0	9,025.9	5,675.0	72.3	72.2	95.10	3,724.2	360.4	990.3	847.3	142.95	6.927		
9,000.0	5,587.0	9,125.8	5,675.0	74.1	74.1	95.08	3,824.2	360.4	993.3	846.7	146.70	6.772		
9,100.0	5,587.0	9,225.8	5,675.0	76.0	76.0	95.07	3,924.1	360.4	996.4	846.0	150.45	6.623		
9,200.0	5,587.0	9,325.7	5,675.0	77.9	77.9	95.05	4,024.1	360.4	999.5	845.3	154.20	6.482		
9,300.0	5,587.0	9,425.7	5,675.0	79.7	79.7	95.04	4,124.0	360.4	1,002.6	844.6	157.96	6.347		

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



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,587.0	9,525.7	5,675.0	81.6	81.6	95.02	4,224.0	360.4	1,005.7	843.9	161.72	6.219	
9,500.0	5,587.0	9,625.6	5,675.0	83.5	83.5	95.01	4,323.9	360.4	1,008.8	843.3	165.49	6.096	
9,600.0	5,587.0	9,725.6	5,675.0	85.4	85.4	94.99	4,423.9	360.4	1,011.8	842.6	169.26	5.978	
9,700.0	5,587.0	9,825.5	5,675.0	87.2	87.3	94.98	4,523.8	360.4	1,014.9	841.9	173.03	5.866	
9,800.0	5,587.0	9,925.5	5,675.0	89.1	89.2	94.96	4,623.8	360.5	1,018.0	841.2	176.80	5.758	
9,900.0	5,587.0	10,025.4	5,675.0	91.0	91.1	94.95	4,723.8	360.5	1,021.1	840.5	180.58	5.655	
10,000.0	5,587.0	10,125.4	5,675.0	92.9	92.9	94.93	4,823.7	360.5	1,024.2	839.8	184.35	5.555	
10,100.0	5,587.0	10,225.3	5,675.0	94.8	94.8	94.92	4,923.7	360.5	1,027.2	839.1	188.14	5.460	
10,200.0	5,587.0	10,325.3	5,675.0	96.7	96.7	94.90	5,023.6	360.5	1,030.3	838.4	191.92	5.369	
10,300.0	5,587.0	10,425.2	5,675.0	98.6	98.6	94.89	5,123.6	360.5	1,033.4	837.7	195.70	5.280	
10,400.0	5,587.0	10,525.2	5,675.0	100.4	100.5	94.87	5,223.5	360.5	1,036.5	837.0	199.49	5.196	
10,500.0	5,587.0	10,625.1	5,675.0	102.3	102.4	94.86	5,323.5	360.5	1,039.6	836.3	203.28	5.114	
10,600.0	5,587.0	10,725.1	5,675.0	104.2	104.3	94.84	5,423.4	360.5	1,042.6	835.6	207.07	5.035	
10,700.0	5,587.0	10,825.0	5,675.0	106.1	106.2	94.83	5,523.4	360.5	1,045.7	834.9	210.86	4.959	
10,800.0	5,587.0	10,925.0	5,675.0	108.0	108.1	94.81	5,623.3	360.5	1,048.8	834.2	214.65	4.886	
10,900.0	5,587.0	11,024.9	5,675.0	109.9	110.0	94.80	5,723.3	360.5	1,051.9	833.4	218.45	4.815	
11,000.0	5,587.0	11,124.9	5,675.0	111.8	111.9	94.79	5,823.2	360.5	1,055.0	832.7	222.24	4.747	
11,100.0	5,587.0	11,224.8	5,675.0	113.7	113.8	94.77	5,923.2	360.5	1,058.1	832.0	226.04	4.681	
11,200.0	5,587.0	11,324.8	5,675.0	115.6	115.7	94.76	6,023.1	360.5	1,061.1	831.3	229.84	4.617	
11,300.0	5,587.0	11,424.7	5,675.0	117.5	117.6	94.75	6,123.1	360.6	1,064.2	830.6	233.64	4.555	
11,400.0	5,587.0	11,524.7	5,675.0	119.4	119.5	94.73	6,223.0	360.6	1,067.3	829.9	237.44	4.495	
11,500.0	5,587.0	11,624.6	5,675.0	121.3	121.4	94.72	6,323.0	360.6	1,070.4	829.1	241.24	4.437	
11,600.0	5,587.0	11,724.6	5,675.0	123.2	123.3	94.70	6,422.9	360.6	1,073.5	828.4	245.04	4.381	
11,700.0	5,587.0	11,824.6	5,675.0	125.1	125.2	94.69	6,522.9	360.6	1,076.5	827.7	248.85	4.326	
11,800.0	5,587.0	11,924.5	5,675.0	127.0	127.1	94.68	6,622.8	360.6	1,079.6	827.0	252.65	4.273	
11,900.0	5,587.0	12,024.5	5,675.0	128.9	129.0	94.66	6,722.8	360.6	1,082.7	826.3	256.46	4.222	
12,000.0	5,587.0	12,124.4	5,675.0	130.8	130.9	94.65	6,822.7	360.6	1,085.8	825.5	260.26	4.172	
12,100.0	5,587.0	12,224.4	5,675.0	132.7	132.8	94.64	6,922.7	360.6	1,088.9	824.8	264.07	4.123	
12,200.0	5,587.0	12,324.3	5,675.0	134.6	134.7	94.62	7,022.7	360.6	1,092.0	824.1	267.88	4.076	
12,300.0	5,587.0	12,424.3	5,675.0	136.5	136.6	94.61	7,122.6	360.6	1,095.0	823.3	271.69	4.030	
12,400.0	5,587.0	12,524.2	5,675.0	138.4	138.5	94.60	7,222.6	360.6	1,098.1	822.6	275.50	3.986	
12,500.0	5,587.0	12,624.2	5,675.0	140.4	140.4	94.59	7,322.5	360.6	1,101.2	821.9	279.31	3.943	
12,600.0	5,587.0	12,724.1	5,675.0	142.3	142.3	94.57	7,422.5	360.6	1,104.3	821.2	283.12	3.900	
12,700.0	5,587.0	12,824.1	5,675.0	144.2	144.2	94.56	7,522.4	360.7	1,107.4	820.4	286.93	3.859	
12,800.0	5,587.0	12,924.0	5,675.0	146.1	146.1	94.55	7,622.4	360.7	1,110.5	819.7	290.74	3.819	
12,857.6	5,587.0	12,981.6	5,675.0	147.2	147.2	94.54	7,680.0	360.7	1,112.2	819.3	292.94	3.797 SF	

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-91.03	-0.6	-33.2	33.2	33.0	0.19	177.002		
100.0	100.0	100.0	100.0	0.1	0.1	-91.03	-0.6	-33.2	33.2	32.6	0.64	52.133		
200.0	200.0	200.0	200.0	0.3	0.3	-91.03	-0.6	-33.2	33.2	32.1	1.09	30.568		
300.0	300.0	300.0	300.0	0.5	0.5	-91.03	-0.6	-33.2	33.2	31.7	1.54	21.624		
400.0	400.0	400.0	400.0	0.8	0.8	-91.03	-0.6	-33.2	33.2	31.2	1.99	16.729		
500.0	500.0	500.0	500.0	1.0	1.0	-91.03	-0.6	-33.2	33.2	30.1	2.43	13.362		
600.0	600.0	600.0	600.0	1.2	1.2	-67.83	-0.6	-33.2	30.9	28.0	2.88	10.722		
700.0	699.8	699.8	699.8	1.4	1.4	-76.87	-0.6	-33.2	30.1	26.8	3.35	9.002		
800.0	799.6	799.6	799.6	1.7	1.7	-89.87	-0.6	-33.2	30.1	26.8	3.35	8.994 CC, ES		
800.3	799.9	799.9	799.9	1.7	1.7	-89.92	-0.6	-33.2	30.1	26.8	3.78	8.595 SF		
900.0	899.4	898.3	898.3	1.9	1.9	-103.62	-2.0	-34.2	32.5	28.7	4.21	9.495		
1,000.0	999.1	996.5	996.4	2.2	2.0	-115.28	-6.2	-37.0	40.0	35.8	4.64	10.856		
1,100.0	1,098.9	1,095.8	1,095.4	2.4	2.2	-123.05	-11.9	-40.9	50.4	45.7	5.07	12.100		
1,200.0	1,198.6	1,195.0	1,194.4	2.7	2.5	-128.11	-17.6	-44.8	61.4	56.3	5.51	13.196		
1,300.0	1,298.4	1,294.3	1,293.4	2.9	2.7	-131.61	-23.3	-48.7	72.7	67.2	5.95	14.152		
1,400.0	1,398.1	1,393.6	1,392.4	3.2	2.9	-134.17	-29.0	-52.6	84.2	78.3	6.40	14.986		
1,500.0	1,497.9	1,492.8	1,491.5	3.4	3.1	-136.10	-34.8	-56.5	95.9	89.5	6.85	15.715		
1,600.0	1,597.6	1,592.1	1,590.5	3.7	3.4	-137.62	-40.5	-60.4	107.6	100.8	7.30	16.357		
1,700.0	1,697.4	1,691.4	1,689.5	3.9	3.6	-138.84	-46.2	-64.3	119.5	112.1	7.76	16.923		
1,800.0	1,797.2	1,790.7	1,788.6	4.2	3.9	-139.84	-51.9	-68.2	131.3	123.5	8.22	17.427		
1,900.0	1,896.9	1,889.9	1,887.6	4.4	4.1	-140.67	-57.6	-72.1	143.2	135.0	8.67	17.877		
2,000.0	1,996.7	1,989.2	1,986.6	4.7	4.3	-141.37	-63.4	-76.0	155.1	146.4	9.14	18.281		
2,100.0	2,096.4	2,088.5	2,085.7	4.9	4.6	-141.98	-69.1	-79.9	167.0	157.9	9.60	18.645		
2,200.0	2,196.2	2,187.7	2,184.7	5.2	4.8	-142.50	-74.8	-83.8	178.9	169.3	10.06	18.975		
2,300.0	2,295.9	2,287.0	2,283.7	5.4	5.1	-142.96	-80.5	-87.7	190.9	180.8	10.52	19.275		
2,400.0	2,395.7	2,386.3	2,382.8	5.7	5.3	-143.37	-86.2	-91.6	202.9	192.3	10.99	19.550		
2,500.0	2,495.5	2,485.6	2,481.8	6.0	5.6	-143.72	-92.0	-95.5	214.8	203.8	11.45	19.801		
2,600.0	2,595.2	2,584.8	2,580.8	6.2	5.9	-144.05	-97.7	-99.4	226.8	215.4	11.92	20.032		
2,700.0	2,695.0	2,684.1	2,679.8	6.5	6.1	-144.34	-103.4	-103.3	238.8	226.9	12.39	20.245		
2,800.0	2,794.7	2,783.4	2,778.9	6.7	6.4	-144.60	-109.1	-107.3	250.8	238.4	12.85	20.443		
2,900.0	2,894.5	2,882.7	2,877.9	7.0	6.6	-144.83	-114.9	-111.2	262.8	249.9	13.32	20.626		
3,000.0	2,994.2	2,981.9	2,976.9	7.2	6.9	-145.05	-120.6	-115.1	274.8	261.5	13.79	20.796		
3,100.0	3,094.0	3,081.2	3,076.0	7.5	7.1	-145.25	-126.3	-119.0	286.8	273.0	14.26	20.955		
3,200.0	3,193.7	3,180.5	3,175.0	7.8	7.4	-145.43	-132.0	-122.9	298.8	284.5	14.73	21.103		
3,300.0	3,293.5	3,279.7	3,274.0	8.0	7.7	-145.60	-137.7	-126.8	310.8	296.1	15.20	21.242		
3,400.0	3,393.3	3,379.0	3,373.1	8.3	7.9	-145.76	-143.5	-130.7	322.8	307.6	15.67	21.373		
3,500.0	3,493.0	3,478.3	3,472.1	8.5	8.2	-145.90	-149.2	-134.6	334.8	319.2	16.14	21.495		
3,600.0	3,592.8	3,577.6	3,571.1	8.8	8.4	-146.04	-154.9	-138.5	346.8	330.7	16.61	21.611		
3,700.0	3,692.5	3,676.8	3,670.1	9.0	8.7	-146.16	-160.6	-142.4	358.9	342.2	17.08	21.720		
3,800.0	3,792.3	3,776.1	3,769.2	9.3	9.0	-146.28	-166.3	-146.3	370.9	353.8	17.55	21.823		
3,900.0	3,892.0	3,875.4	3,868.2	9.6	9.2	-146.39	-172.1	-150.2	382.9	365.3	18.02	21.920		
4,000.0	3,991.8	3,974.6	3,967.2	9.8	9.5	-146.49	-177.8	-154.1	394.9	376.9	18.49	22.013		
4,100.0	4,091.6	4,073.9	4,066.3	10.1	9.7	-146.59	-183.5	-158.0	406.9	388.4	18.96	22.100		
4,200.0	4,191.3	4,173.2	4,165.3	10.3	10.0	-146.68	-189.2	-161.9	419.0	400.0	19.43	22.183		
4,300.0	4,291.1	4,272.5	4,264.3	10.6	10.3	-146.77	-194.9	-165.8	431.0	411.6	19.90	22.263		
4,400.0	4,390.8	4,371.7	4,363.4	10.8	10.5	-146.85	-200.7	-169.7	443.0	423.1	20.37	22.338		
4,500.0	4,490.6	4,471.0	4,462.4	11.1	10.8	-146.93	-206.4	-173.6	455.0	434.7	20.84	22.410		
4,600.0	4,590.3	4,570.3	4,561.4	11.4	11.0	-147.00	-212.1	-177.5	467.1	446.2	21.31	22.479		
4,700.0	4,690.1	4,669.6	4,660.5	11.6	11.3	-147.07	-217.8	-181.4	479.1	457.8	21.79	22.498		
4,800.0	4,789.9	4,781.1	4,771.8	11.9	11.6	-147.21	-223.3	-185.1	490.3	468.5	22.26	22.370		
4,900.0	4,889.6	4,889.8	4,889.4	12.1	11.8	-147.59	-225.3	-186.5	498.0	475.7	22.69	22.204		
5,000.0	4,989.4	4,989.7	4,989.4	12.4	12.0	-148.02	-225.3	-186.5	503.9	481.2				

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



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: O-ISCWS MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,089.1	5,087.1	5,077.8	12.6	12.1	-148.39	-225.5	-186.5	510.1	487.0	23.10	22.086	
5,113.4	5,102.5	5,093.8	5,084.5	12.7	12.1	-148.41	-225.7	-186.5	511.3	488.1	23.14	22.094	
5,150.0	5,138.9	5,100.0	5,090.7	12.8	12.1	-148.12	-225.9	-186.6	516.7	493.6	23.14	22.334	
5,200.0	5,188.0	5,136.1	5,126.6	13.0	12.2	-147.75	-228.9	-186.7	529.0	505.9	23.09	22.909	
5,250.0	5,236.0	5,150.0	5,140.4	13.2	12.3	-146.78	-230.7	-186.8	547.7	524.8	22.90	23.923	
5,300.0	5,282.4	5,179.3	5,169.2	13.4	12.4	-145.78	-235.6	-187.1	571.8	549.1	22.65	25.239	
5,350.0	5,326.8	5,200.0	5,189.5	13.7	12.4	-144.18	-240.1	-187.3	601.0	578.6	22.37	26.871	
5,400.0	5,368.8	5,200.0	5,189.5	14.1	12.4	-141.07	-240.1	-187.3	635.0	612.8	22.16	28.654	
5,450.0	5,408.1	5,227.0	5,215.6	14.5	12.5	-138.42	-247.2	-187.7	672.2	650.1	22.09	30.431	
5,500.0	5,444.1	5,250.0	5,237.4	14.9	12.6	-134.75	-254.3	-188.1	713.1	690.8	22.31	31.959	
5,550.0	5,476.7	5,250.0	5,237.4	15.5	12.6	-127.78	-254.3	-188.1	756.0	732.6	23.39	32.318	
5,600.0	5,505.6	5,250.0	5,237.4	16.0	12.6	-118.15	-254.3	-188.1	801.1	775.7	25.37	31.576	
5,650.0	5,530.4	5,250.0	5,237.4	16.6	12.6	-105.26	-254.3	-188.1	847.6	819.8	27.85	30.439	
5,700.0	5,550.9	5,250.0	5,237.4	17.3	12.6	-89.48	-254.3	-188.1	894.9	865.2	29.66	30.171	
5,750.0	5,566.9	5,250.0	5,237.4	18.0	12.6	-72.88	-254.3	-188.1	942.4	912.9	29.49	31.955	
5,800.0	5,578.3	5,250.0	5,237.4	18.8	12.6	-58.16	-254.3	-188.1	989.8	962.4	27.34	36.208	
5,850.0	5,585.1	5,250.0	5,237.4	19.6	12.6	-46.60	-254.3	-188.1	1,036.6	1,012.2	24.33	42.607	
5,895.2	5,587.0	5,250.0	5,237.4	20.3	12.6	-38.74	-254.3	-188.1	1,078.1	1,056.4	21.70	49.679	
5,900.0	5,587.0	5,250.0	5,237.4	20.4	12.6	-38.50	-254.3	-188.1	1,082.5	1,060.8	21.66	49.965	
6,000.0	5,587.0	5,250.0	5,237.4	21.9	12.6	-32.58	-254.3	-188.1	1,174.9	1,154.5	20.33	57.789	
6,100.0	5,587.0	5,250.0	5,237.4	23.4	12.6	-25.00	-254.3	-188.1	1,269.3	1,251.5	17.82	71.218	
6,200.0	5,587.0	5,225.2	5,213.8	25.0	12.5	-14.18	-246.7	-187.7	1,364.4	1,351.0	13.46	101.388	
6,300.0	5,587.0	5,200.0	5,189.5	26.7	12.4	-3.04	-240.1	-187.3	1,461.1	1,450.5	10.58	138.046	
6,400.0	5,587.0	5,200.0	5,189.5	28.3	12.4	7.89	-240.1	-187.3	1,557.5	1,545.8	11.77	132.282	
6,500.0	5,587.0	5,200.0	5,189.5	29.9	12.4	18.94	-240.1	-187.3	1,654.2	1,637.6	16.66	99.287	
6,600.0	5,587.0	5,200.0	5,189.5	31.6	12.4	29.24	-240.1	-187.3	1,750.9	1,728.2	22.67	77.228	
6,702.9	5,587.0	5,200.0	5,189.5	33.2	12.4	38.49	-240.1	-187.3	1,850.1	1,821.7	28.43	65.066	
6,800.0	5,587.0	5,200.0	5,189.5	34.8	12.4	38.49	-240.1	-187.3	1,943.6	1,914.0	29.57	65.719	
6,900.0	5,587.0	5,200.0	5,189.5	36.4	12.4	38.49	-240.1	-187.3	2,040.3	2,009.5	30.76	66.321	
7,000.0	5,587.0	5,200.0	5,189.5	38.1	12.4	38.49	-240.1	-187.3	2,137.3	2,105.3	31.97	66.858	
7,100.0	5,587.0	5,176.7	5,166.7	39.8	12.4	36.98	-235.1	-187.1	2,233.9	2,201.7	32.25	69.276	
7,200.0	5,587.0	5,173.1	5,163.2	41.5	12.3	36.76	-234.4	-187.0	2,331.2	2,297.9	33.30	70.002	
7,300.0	5,587.0	5,150.0	5,140.4	43.3	12.3	35.36	-230.7	-186.8	2,429.2	2,395.6	33.58	72.346	
7,400.0	5,587.0	5,150.0	5,140.4	45.0	12.3	35.36	-230.7	-186.8	2,526.7	2,491.9	34.76	72.682	
7,500.0	5,587.0	5,150.0	5,140.4	46.8	12.3	35.36	-230.7	-186.8	2,624.4	2,588.4	35.96	72.988	
7,600.0	5,587.0	5,150.0	5,140.4	48.5	12.3	35.36	-230.7	-186.8	2,722.3	2,685.1	37.16	73.267	
7,700.0	5,587.0	5,150.0	5,140.4	50.3	12.3	35.36	-230.7	-186.8	2,820.3	2,781.9	38.36	73.522	
7,800.0	5,587.0	5,150.0	5,140.4	52.1	12.3	35.36	-230.7	-186.8	2,918.5	2,878.9	39.57	73.756	
7,900.0	5,587.0	5,150.0	5,140.4	53.9	12.3	35.36	-230.7	-186.8	3,016.7	2,976.0	40.78	73.973	
8,000.0	5,587.0	5,150.0	5,140.4	55.7	12.3	35.36	-230.7	-186.8	3,115.1	3,073.1	42.00	74.172	
8,100.0	5,587.0	5,150.0	5,140.4	57.5	12.3	35.36	-230.7	-186.8	3,213.6	3,170.4	43.22	74.357	
8,200.0	5,587.0	5,150.0	5,140.4	59.4	12.3	35.36	-230.7	-186.8	3,312.2	3,267.8	44.44	74.529	
8,300.0	5,587.0	5,150.0	5,140.4	61.2	12.3	35.36	-230.7	-186.8	3,410.9	3,365.2	45.67	74.689	
8,400.0	5,587.0	5,150.0	5,140.4	63.0	12.3	35.36	-230.7	-186.8	3,509.6	3,462.7	46.90	74.839	
8,500.0	5,587.0	5,150.0	5,140.4	64.9	12.3	35.36	-230.7	-186.8	3,608.4	3,560.3	48.13	74.979	
8,600.0	5,587.0	5,150.0	5,140.4	66.7	12.3	35.36	-230.7	-186.8	3,707.3	3,657.9	49.36	75.110	
8,700.0	5,587.0	5,150.0	5,140.4	68.6	12.3	35.36	-230.7	-186.8	3,806.2	3,755.6	50.59	75.233	
8,800.0	5,587.0	5,150.0	5,140.4	70.4	12.3	35.36	-230.7	-186.8	3,905.2	3,853.4	51.83	75.349	
8,900.0	5,587.0	5,150.0	5,140.4	72.3	12.3	35.36	-230.7	-186.8	4,004.2	3,951.2	53.07	75.458	
9,000.0	5,587.0	5,150.0	5,140.4	74.1	12.3	35.36	-230.7	-186.8	4,103.3	4,049.0	54.31	75.561	
9,100.0	5,587.0	5,150.0	5,140.4	76.0	12.3	35.36	-230.7	-186.8	4,202.5	4,146.9	55.55	75.658	
9,200.0	5,587.0	5,150.0	5,140.4	77.9	12.3	35.36	-230.7	-186.8	4,301.6	4,244.8	56.79	75.750	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)				
9,300.0	5,587.0	5,150.0	5,140.4	79.7	12.3	35.36	-230.7	-186.8	4,400.8	4,342.8	58.03	75.837		
9,400.0	5,587.0	5,150.0	5,140.4	81.6	12.3	35.36	-230.7	-186.8	4,500.1	4,440.8	59.27	75.920		
9,500.0	5,587.0	5,150.0	5,140.4	83.5	12.3	35.36	-230.7	-186.8	4,599.3	4,538.8	60.52	75.999		
9,600.0	5,587.0	5,150.0	5,140.4	85.4	12.3	35.36	-230.7	-186.8	4,698.6	4,636.9	61.76	76.074		
9,700.0	5,587.0	5,127.1	5,117.7	87.2	12.2	34.05	-227.9	-186.7	4,797.4	4,735.9	61.52	77.978		
9,800.0	5,587.0	5,126.2	5,116.7	89.1	12.2	34.00	-227.8	-186.7	4,896.7	4,834.1	62.68	78.120		
9,900.0	5,587.0	5,125.2	5,115.8	91.0	12.2	33.94	-227.7	-186.7	4,996.1	4,932.2	63.84	78.256		
10,000.0	5,587.0	5,124.4	5,114.9	92.9	12.2	33.90	-227.6	-186.6	5,095.4	5,030.4	65.00	78.387		
10,100.0	5,587.0	5,123.5	5,114.1	94.8	12.2	33.85	-227.5	-186.6	5,194.8	5,128.7	66.17	78.512		
10,200.0	5,587.0	5,100.0	5,090.7	96.7	12.1	32.59	-225.9	-186.6	5,294.8	5,228.9	65.82	80.440		
10,300.0	5,587.0	5,100.0	5,090.7	98.6	12.1	32.59	-225.9	-186.6	5,394.2	5,327.1	67.02	80.489		
10,400.0	5,587.0	5,100.0	5,090.7	100.4	12.1	32.59	-225.9	-186.6	5,493.6	5,425.4	68.21	80.536		
10,500.0	5,587.0	5,100.0	5,090.7	102.3	12.1	32.59	-225.9	-186.6	5,593.0	5,523.6	69.41	80.582		
10,600.0	5,587.0	5,100.0	5,090.7	104.2	12.1	32.59	-225.9	-186.6	5,692.5	5,621.9	70.60	80.626		
10,700.0	5,587.0	5,100.0	5,090.7	106.1	12.1	32.59	-225.9	-186.6	5,791.9	5,720.1	71.80	80.668		
10,800.0	5,587.0	5,100.0	5,090.7	108.0	12.1	32.59	-225.9	-186.6	5,891.4	5,818.4	73.00	80.708		
10,900.0	5,587.0	5,100.0	5,090.7	109.9	12.1	32.59	-225.9	-186.6	5,990.9	5,916.7	74.19	80.747		
11,000.0	5,587.0	5,100.0	5,090.7	111.8	12.1	32.59	-225.9	-186.6	6,090.5	6,015.1	75.39	80.785		
11,100.0	5,587.0	5,100.0	5,090.7	113.7	12.1	32.59	-225.9	-186.6	6,190.0	6,113.4	76.59	80.821		
11,200.0	5,587.0	5,100.0	5,090.7	115.6	12.1	32.59	-225.9	-186.6	6,289.5	6,211.8	77.79	80.856		
11,300.0	5,587.0	5,100.0	5,090.7	117.5	12.1	32.59	-225.9	-186.6	6,389.1	6,310.1	78.99	80.890		
11,400.0	5,587.0	5,100.0	5,090.7	119.4	12.1	32.59	-225.9	-186.6	6,488.7	6,408.5	80.18	80.922		
11,500.0	5,587.0	5,100.0	5,090.7	121.3	12.1	32.59	-225.9	-186.6	6,588.3	6,506.9	81.38	80.954		
11,600.0	5,587.0	5,100.0	5,090.7	123.2	12.1	32.59	-225.9	-186.6	6,687.9	6,605.3	82.58	80.984		
11,700.0	5,587.0	5,100.0	5,090.7	125.1	12.1	32.59	-225.9	-186.6	6,787.5	6,703.7	83.78	81.014		
11,800.0	5,587.0	5,100.0	5,090.7	127.0	12.1	32.59	-225.9	-186.6	6,887.1	6,802.2	84.98	81.042		
11,900.0	5,587.0	5,100.0	5,090.7	128.9	12.1	32.59	-225.9	-186.6	6,986.8	6,900.6	86.18	81.070		
12,000.0	5,587.0	5,100.0	5,090.7	130.8	12.1	32.59	-225.9	-186.6	7,086.4	6,999.0	87.38	81.097		
12,100.0	5,587.0	5,100.0	5,090.7	132.7	12.1	32.59	-225.9	-186.6	7,186.1	7,097.5	88.58	81.123		
12,200.0	5,587.0	5,100.0	5,090.7	134.6	12.1	32.59	-225.9	-186.6	7,285.8	7,196.0	89.78	81.148		
12,300.0	5,587.0	5,100.0	5,090.7	136.5	12.1	32.59	-225.9	-186.6	7,385.4	7,294.4	90.98	81.173		
12,400.0	5,587.0	5,100.0	5,090.7	138.4	12.1	32.59	-225.9	-186.6	7,485.1	7,392.9	92.19	81.197		
12,500.0	5,587.0	5,100.0	5,090.7	140.4	12.1	32.59	-225.9	-186.6	7,584.8	7,491.4	93.39	81.220		
12,600.0	5,587.0	5,100.0	5,090.7	142.3	12.1	32.59	-225.9	-186.6	7,684.5	7,589.9	94.59	81.242		
12,700.0	5,587.0	5,100.0	5,090.7	144.2	12.1	32.59	-225.9	-186.6	7,784.2	7,688.4	95.79	81.264		
12,800.0	5,587.0	5,100.0	5,090.7	146.1	12.1	32.59	-225.9	-186.6	7,883.9	7,786.9	96.99	81.285		
12,857.6	5,587.0	5,100.0	5,090.7	147.2	12.1	32.59	-225.9	-186.6	7,941.4	7,843.7	97.68	81.297		

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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		
0.0	0.0	0.0	0.0	0.0	0.0	178.93	-75.0	1.4	75.0					
100.0	100.0	100.0	100.0	0.1	0.1	178.93	-75.0	1.4	75.0	74.9	0.19	399.819		
200.0	200.0	200.0	200.0	0.3	0.3	178.93	-75.0	1.4	75.0	74.4	0.64	117.760		
300.0	300.0	300.0	300.0	0.5	0.5	178.93	-75.0	1.4	75.0	74.0	1.09	69.048		
400.0	400.0	400.0	400.0	0.8	0.8	178.93	-75.0	1.4	75.0	73.5	1.54	48.844		
500.0	500.0	500.0	500.0	1.0	1.0	178.93	-75.0	1.4	75.0	73.1	1.99	37.787	CC, ES	
600.0	600.0	600.0	600.0	1.2	1.2	-155.61	-75.0	1.4	76.6	74.2	2.44	31.449		
700.0	699.8	699.8	699.8	1.4	1.4	-157.09	-75.0	1.4	81.4	78.5	2.89	28.186		
800.0	799.6	799.6	799.6	1.7	1.7	-158.86	-75.0	1.4	87.9	84.6	3.34	26.326		
900.0	899.4	899.4	899.4	1.9	1.9	-160.39	-75.0	1.4	94.4	90.6	3.79	24.918		
1,000.0	999.1	999.1	999.1	2.2	2.1	-161.72	-75.0	1.4	101.0	96.8	4.24	23.818		
1,100.0	1,098.9	1,098.9	1,098.9	2.4	2.3	-162.88	-75.0	1.4	107.7	103.0	4.69	22.938		
1,200.0	1,198.6	1,194.9	1,194.9	2.7	2.5	-164.08	-76.4	2.1	115.9	110.8	5.12	22.663	SF	
1,300.0	1,298.4	1,290.3	1,290.2	2.9	2.7	-165.48	-80.7	4.1	127.5	122.0	5.52	23.090		
1,400.0	1,398.1	1,388.9	1,388.5	3.2	2.9	-166.87	-86.9	7.1	141.0	135.1	5.93	23.763		
1,500.0	1,497.9	1,487.9	1,487.3	3.4	3.1	-168.02	-93.2	10.1	154.6	148.2	6.35	24.353		
1,600.0	1,597.6	1,587.0	1,586.1	3.7	3.3	-168.98	-99.4	13.0	168.3	161.5	6.77	24.861		
1,700.0	1,697.4	1,686.0	1,684.9	3.9	3.5	-169.80	-105.6	16.0	181.9	174.8	7.19	25.300		
1,800.0	1,797.2	1,785.0	1,783.7	4.2	3.7	-170.50	-111.9	19.0	195.7	188.1	7.62	25.682		
1,900.0	1,896.9	1,884.0	1,882.5	4.4	4.0	-171.11	-118.1	21.9	209.4	201.4	8.05	26.017		
2,000.0	1,996.7	1,983.1	1,981.2	4.7	4.2	-171.65	-124.3	24.9	223.2	214.7	8.48	26.312		
2,100.0	2,096.4	2,082.1	2,080.0	4.9	4.4	-172.12	-130.6	27.9	237.0	228.1	8.92	26.574		
2,200.0	2,196.2	2,181.1	2,178.8	5.2	4.7	-172.55	-136.8	30.9	250.8	241.4	9.35	26.808		
2,300.0	2,295.9	2,280.2	2,277.6	5.4	4.9	-172.92	-143.0	33.8	264.6	254.8	9.79	27.017		
2,400.0	2,395.7	2,379.2	2,376.4	5.7	5.1	-173.26	-149.3	36.8	278.4	268.2	10.23	27.205		
2,500.0	2,495.5	2,478.2	2,475.2	6.0	5.4	-173.57	-155.5	39.8	292.3	281.6	10.68	27.376		
2,600.0	2,595.2	2,577.2	2,574.0	6.2	5.6	-173.85	-161.7	42.8	306.1	295.0	11.12	27.530		
2,700.0	2,695.0	2,676.3	2,672.7	6.5	5.9	-174.11	-168.0	45.7	320.0	308.4	11.56	27.671		
2,800.0	2,794.7	2,775.3	2,771.5	6.7	6.1	-174.34	-174.2	48.7	333.8	321.8	12.01	27.800		
2,900.0	2,894.5	2,874.3	2,870.3	7.0	6.4	-174.56	-180.4	51.7	347.7	335.2	12.45	27.918		
3,000.0	2,994.2	2,973.3	2,969.1	7.2	6.6	-174.76	-186.7	54.7	361.5	348.6	12.90	28.027		
3,100.0	3,094.0	3,072.4	3,067.9	7.5	6.9	-174.94	-192.9	57.6	375.4	362.0	13.35	28.127		
3,200.0	3,193.7	3,171.4	3,166.7	7.8	7.1	-175.12	-199.1	60.6	389.3	375.5	13.79	28.220		
3,300.0	3,293.5	3,270.4	3,265.5	8.0	7.4	-175.28	-205.4	63.6	403.1	388.9	14.24	28.307		
3,400.0	3,393.3	3,369.4	3,364.2	8.3	7.6	-175.42	-211.6	66.6	417.0	402.3	14.69	28.387		
3,500.0	3,493.0	3,468.5	3,463.0	8.5	7.9	-175.56	-217.9	69.5	430.9	415.8	15.14	28.462		
3,600.0	3,592.8	3,567.5	3,561.8	8.8	8.1	-175.69	-224.1	72.5	444.8	429.2	15.59	28.532		
3,700.0	3,692.5	3,666.5	3,660.6	9.0	8.4	-175.82	-230.3	75.5	458.7	442.6	16.04	28.597		
3,800.0	3,792.3	3,765.6	3,759.4	9.3	8.6	-175.93	-236.6	78.5	472.5	456.1	16.49	28.659		
3,900.0	3,892.0	3,864.6	3,858.2	9.6	8.9	-176.04	-242.8	81.4	486.4	469.5	16.94	28.716		
4,000.0	3,991.8	3,963.6	3,957.0	9.8	9.2	-176.15	-249.0	84.4	500.3	482.9	17.39	28.771		
4,100.0	4,091.6	4,062.6	4,055.7	10.1	9.4	-176.24	-255.3	87.4	514.2	496.4	17.84	28.822		
4,200.0	4,191.3	4,161.7	4,154.5	10.3	9.7	-176.34	-261.5	90.3	528.1	509.8	18.29	28.870		
4,300.0	4,291.1	4,260.7	4,253.3	10.6	9.9	-176.42	-267.7	93.3	542.0	523.3	18.74	28.916		
4,400.0	4,390.8	4,359.7	4,352.1	10.8	10.2	-176.51	-274.0	96.3	555.9	536.7	19.20	28.960		
4,500.0	4,490.6	4,458.7	4,450.9	11.1	10.4	-176.59	-280.2	99.3	569.8	550.1	19.65	29.001		
4,600.0	4,590.3	4,557.8	4,549.7	11.4	10.7	-176.66	-286.4	102.2	583.7	563.6	20.10	29.040		
4,700.0	4,690.1	4,656.8	4,648.5	11.6	11.0	-176.73	-292.7	105.2	597.6	577.0	20.55	29.077		
4,800.0	4,789.9	4,755.8	4,747.2	11.9	11.2	-176.80	-298.9	108.2	611.5	590.5	21.00	29.112		
4,900.0	4,889.6	4,870.1	4,861.3	12.1	11.5	-176.87	-305.3	111.3	624.7	603.2	21.48	29.087		
5,000.0	4,989.4	4,997.7	4,988.9	12.4	11.7	-176.93	-308.0	112.5	634.0	612.0	21.96	28.864		
5,100.0	5,089.1	5,098.0	5,089.1	12.6	11.9	-176.96	-308.0	112.5	640.9	618.5	22.40	28.619		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: O-ISCWA 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
5,113.4	5,102.5	5,111.3	5,102.5	12.7	11.9	-176.97	-308.0	112.5	641.9	619.4	22.45	28.589	
5,150.0	5,138.9	5,147.7	5,138.9	12.8	12.0	-176.96	-308.0	112.5	645.7	623.2	22.46	28.746	
5,200.0	5,188.0	5,178.7	5,169.8	13.0	12.1	-176.92	-308.2	112.5	655.5	633.2	22.29	29.414	
5,250.0	5,236.0	5,200.0	5,191.1	13.2	12.1	-176.81	-309.3	112.5	671.7	649.8	21.91	30.661	
5,300.0	5,282.4	5,220.7	5,211.7	13.4	12.2	-176.62	-311.2	112.5	694.1	672.7	21.36	32.500	
5,350.0	5,326.8	5,250.0	5,240.7	13.7	12.3	-176.33	-315.2	112.5	722.2	701.6	20.65	34.971	
5,400.0	5,368.8	5,250.0	5,240.7	14.1	12.3	-176.00	-315.2	112.5	755.1	735.3	19.72	38.284	
5,450.0	5,408.1	5,269.4	5,259.8	14.5	12.3	-175.48	-318.8	112.5	792.3	773.6	18.69	42.388	
5,500.0	5,444.1	5,281.1	5,271.2	14.9	12.4	-174.78	-321.3	112.5	833.3	815.8	17.53	47.543	
5,550.0	5,476.7	5,300.0	5,289.6	15.5	12.4	-173.72	-325.9	112.5	877.4	861.1	16.30	53.822	
5,600.0	5,505.6	5,300.0	5,289.6	16.0	12.4	-172.06	-325.9	112.5	923.6	908.6	15.06	61.313	
5,650.0	5,530.4	5,300.0	5,289.6	16.6	12.4	-168.86	-325.9	112.5	971.7	957.5	14.13	68.753	
5,700.0	5,550.9	5,300.0	5,289.6	17.3	12.4	-160.49	-325.9	112.5	1,020.9	1,005.8	15.10	67.592	
5,750.0	5,566.9	5,300.0	5,289.6	18.0	12.4	-113.04	-325.9	112.5	1,070.7	1,041.6	29.14	36.749	
5,800.0	5,578.3	5,300.0	5,289.6	18.8	12.4	-25.56	-325.9	112.5	1,120.7	1,104.7	15.99	70.090	
5,850.0	5,585.1	5,300.0	5,289.6	19.6	12.4	-12.00	-325.9	112.5	1,170.2	1,159.8	10.40	112.502	
5,895.2	5,587.0	5,300.0	5,289.6	20.3	12.4	-7.99	-325.9	112.5	1,214.4	1,205.4	8.98	135.286	
5,900.0	5,587.0	5,300.0	5,289.6	20.4	12.4	-7.43	-325.9	112.5	1,219.1	1,210.2	8.86	137.618	
6,000.0	5,587.0	5,300.0	5,289.6	21.9	12.4	4.94	-325.9	112.5	1,316.3	1,307.4	8.90	147.975	
6,100.0	5,587.0	5,300.0	5,289.6	23.4	12.4	17.78	-325.9	112.5	1,413.7	1,399.9	13.86	101.997	
6,200.0	5,587.0	5,300.0	5,289.6	25.0	12.4	29.76	-325.9	112.5	1,511.2	1,491.0	20.22	74.747	
6,300.0	5,587.0	5,276.3	5,266.5	26.7	12.4	38.05	-320.3	112.5	1,607.8	1,582.7	25.04	64.216	
6,400.0	5,587.0	5,271.0	5,261.4	28.3	12.3	45.79	-319.2	112.5	1,704.3	1,674.7	29.56	57.650	
6,500.0	5,587.0	5,250.0	5,240.7	29.9	12.3	50.71	-315.2	112.5	1,800.4	1,767.7	32.67	55.111	
6,600.0	5,587.0	5,250.0	5,240.7	31.6	12.3	56.08	-315.2	112.5	1,895.3	1,859.4	35.88	52.827	
6,702.9	5,587.0	5,250.0	5,240.7	33.2	12.3	60.56	-315.2	112.5	1,992.1	1,953.5	38.59	51.618	
6,800.0	5,587.0	5,250.0	5,240.7	34.8	12.3	60.56	-315.2	112.5	2,083.1	2,043.1	40.05	52.009	
6,900.0	5,587.0	5,250.0	5,240.7	36.4	12.3	60.56	-315.2	112.5	2,177.5	2,135.9	41.58	52.375	
7,000.0	5,587.0	5,250.0	5,240.7	38.1	12.3	60.56	-315.2	112.5	2,272.4	2,229.2	43.12	52.702	
7,100.0	5,587.0	5,250.0	5,240.7	39.8	12.3	60.56	-315.2	112.5	2,367.6	2,323.0	44.68	52.996	
7,200.0	5,587.0	5,250.0	5,240.7	41.5	12.3	60.56	-315.2	112.5	2,463.3	2,417.0	46.25	53.262	
7,300.0	5,587.0	5,250.0	5,240.7	43.3	12.3	60.56	-315.2	112.5	2,559.3	2,511.4	47.83	53.503	
7,400.0	5,587.0	5,250.0	5,240.7	45.0	12.3	60.56	-315.2	112.5	2,655.6	2,606.1	49.43	53.723	
7,500.0	5,587.0	5,250.0	5,240.7	46.8	12.3	60.56	-315.2	112.5	2,752.1	2,701.1	51.04	53.924	
7,600.0	5,587.0	5,250.0	5,240.7	48.5	12.3	60.56	-315.2	112.5	2,848.9	2,796.2	52.65	54.108	
7,700.0	5,587.0	5,250.0	5,240.7	50.3	12.3	60.56	-315.2	112.5	2,945.9	2,891.6	54.27	54.278	
7,800.0	5,587.0	5,227.9	5,218.9	52.1	12.2	59.04	-312.0	112.5	3,042.5	2,987.4	55.10	55.219	
7,900.0	5,587.0	5,226.1	5,217.1	53.9	12.2	58.92	-311.8	112.5	3,139.8	3,083.2	56.65	55.428	
8,000.0	5,587.0	5,224.4	5,215.4	55.7	12.2	58.80	-311.6	112.5	3,237.3	3,179.1	58.20	55.623	
8,100.0	5,587.0	5,222.8	5,213.8	57.5	12.2	58.69	-311.4	112.5	3,334.8	3,275.1	59.76	55.806	
8,200.0	5,587.0	5,200.0	5,191.1	59.4	12.1	57.17	-309.3	112.5	3,433.0	3,372.6	60.46	56.785	
8,300.0	5,587.0	5,200.0	5,191.1	61.2	12.1	57.17	-309.3	112.5	3,530.8	3,468.8	62.06	56.889	
8,400.0	5,587.0	5,200.0	5,191.1	63.0	12.1	57.17	-309.3	112.5	3,628.7	3,565.0	63.68	56.987	
8,500.0	5,587.0	5,200.0	5,191.1	64.9	12.1	57.17	-309.3	112.5	3,726.7	3,661.4	65.29	57.079	
8,600.0	5,587.0	5,200.0	5,191.1	66.7	12.1	57.17	-309.3	112.5	3,824.8	3,757.9	66.91	57.166	
8,700.0	5,587.0	5,200.0	5,191.1	68.6	12.1	57.17	-309.3	112.5	3,923.0	3,854.5	68.53	57.248	
8,800.0	5,587.0	5,200.0	5,191.1	70.4	12.1	57.17	-309.3	112.5	4,021.3	3,951.2	70.15	57.325	
8,900.0	5,587.0	5,200.0	5,191.1	72.3	12.1	57.17	-309.3	112.5	4,119.7	4,047.9	71.78	57.398	
9,000.0	5,587.0	5,200.0	5,191.1	74.1	12.1	57.17	-309.3	112.5	4,218.2	4,144.8	73.40	57.467	
9,100.0	5,587.0	5,200.0	5,191.1	76.0	12.1	57.17	-309.3	112.5	4,316.7	4,241.7	75.03	57.532	
9,200.0	5,587.0	5,200.0	5,191.1	77.9	12.1	57.17	-309.3	112.5	4,415.3	4,338.6	76.66	57.594	
9,300.0	5,587.0	5,200.0	5,191.1	79.7	12.1	57.17	-309.3	112.5	4,513.9	4,435.6	78.29	57.654	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	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		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,587.0	5,200.0	5,191.1	81.6	12.1	57.17	-309.3	112.5	4,612.6	4,532.7	79.93	57.710	
9,500.0	5,587.0	5,200.0	5,191.1	83.5	12.1	57.17	-309.3	112.5	4,711.4	4,629.8	81.56	57.764	
9,600.0	5,587.0	5,200.0	5,191.1	85.4	12.1	57.17	-309.3	112.5	4,810.2	4,727.0	83.20	57.815	
9,700.0	5,587.0	5,200.0	5,191.1	87.2	12.1	57.17	-309.3	112.5	4,909.1	4,824.3	84.84	57.864	
9,800.0	5,587.0	5,200.0	5,191.1	89.1	12.1	57.17	-309.3	112.5	5,008.0	4,921.5	86.48	57.911	
9,900.0	5,587.0	5,200.0	5,191.1	91.0	12.1	57.17	-309.3	112.5	5,107.0	5,018.8	88.12	57.956	
10,000.0	5,587.0	5,200.0	5,191.1	92.9	12.1	57.17	-309.3	112.5	5,205.9	5,116.2	89.76	57.999	
10,100.0	5,587.0	5,200.0	5,191.1	94.8	12.1	57.17	-309.3	112.5	5,305.0	5,213.6	91.40	58.040	
10,200.0	5,587.0	5,200.0	5,191.1	96.7	12.1	57.17	-309.3	112.5	5,404.0	5,311.0	93.05	58.080	
10,300.0	5,587.0	5,200.0	5,191.1	98.6	12.1	57.17	-309.3	112.5	5,503.1	5,408.5	94.69	58.118	
10,400.0	5,587.0	5,200.0	5,191.1	100.4	12.1	57.17	-309.3	112.5	5,602.3	5,505.9	96.33	58.154	
10,500.0	5,587.0	5,200.0	5,191.1	102.3	12.1	57.17	-309.3	112.5	5,701.4	5,603.5	97.98	58.189	
10,600.0	5,587.0	5,200.0	5,191.1	104.2	12.1	57.17	-309.3	112.5	5,800.6	5,701.0	99.63	58.223	
10,700.0	5,587.0	5,200.0	5,191.1	106.1	12.1	57.17	-309.3	112.5	5,899.8	5,798.6	101.27	58.256	
10,800.0	5,587.0	5,200.0	5,191.1	108.0	12.1	57.17	-309.3	112.5	5,999.1	5,896.2	102.92	58.287	
10,900.0	5,587.0	5,200.0	5,191.1	109.9	12.1	57.17	-309.3	112.5	6,098.4	5,993.8	104.57	58.318	
11,000.0	5,587.0	5,200.0	5,191.1	111.8	12.1	57.17	-309.3	112.5	6,197.6	6,091.4	106.22	58.347	
11,100.0	5,587.0	5,200.0	5,191.1	113.7	12.1	57.17	-309.3	112.5	6,297.0	6,189.1	107.87	58.376	
11,200.0	5,587.0	5,200.0	5,191.1	115.6	12.1	57.17	-309.3	112.5	6,396.3	6,286.8	109.52	58.403	
11,300.0	5,587.0	5,200.0	5,191.1	117.5	12.1	57.17	-309.3	112.5	6,495.7	6,384.5	111.17	58.429	
11,400.0	5,587.0	5,200.0	5,191.1	119.4	12.1	57.17	-309.3	112.5	6,595.0	6,482.2	112.82	58.455	
11,500.0	5,587.0	5,200.0	5,191.1	121.3	12.1	57.17	-309.3	112.5	6,694.4	6,579.9	114.47	58.480	
11,600.0	5,587.0	5,200.0	5,191.1	123.2	12.1	57.17	-309.3	112.5	6,793.8	6,677.7	116.13	58.504	
11,700.0	5,587.0	5,200.0	5,191.1	125.1	12.1	57.17	-309.3	112.5	6,893.3	6,775.5	117.78	58.527	
11,800.0	5,587.0	5,200.0	5,191.1	127.0	12.1	57.17	-309.3	112.5	6,992.7	6,873.3	119.43	58.550	
11,900.0	5,587.0	5,200.0	5,191.1	128.9	12.1	57.17	-309.3	112.5	7,092.2	6,971.1	121.08	58.572	
12,000.0	5,587.0	5,200.0	5,191.1	130.8	12.1	57.17	-309.3	112.5	7,191.6	7,068.9	122.74	58.593	
12,100.0	5,587.0	5,200.0	5,191.1	132.7	12.1	57.17	-309.3	112.5	7,291.1	7,166.7	124.39	58.614	
12,200.0	5,587.0	5,200.0	5,191.1	134.6	12.1	57.17	-309.3	112.5	7,390.6	7,264.6	126.05	58.634	
12,300.0	5,587.0	5,200.0	5,191.1	136.5	12.1	57.17	-309.3	112.5	7,490.2	7,362.5	127.70	58.654	
12,400.0	5,587.0	5,200.0	5,191.1	138.4	12.1	57.17	-309.3	112.5	7,589.7	7,460.3	129.36	58.673	
12,500.0	5,587.0	5,200.0	5,191.1	140.4	12.1	57.17	-309.3	112.5	7,689.2	7,558.2	131.01	58.691	
12,600.0	5,587.0	5,200.0	5,191.1	142.3	12.1	57.17	-309.3	112.5	7,788.8	7,656.1	132.67	58.709	
12,700.0	5,587.0	5,200.0	5,191.1	144.2	12.1	57.17	-309.3	112.5	7,888.3	7,754.0	134.32	58.727	
12,800.0	5,587.0	5,200.0	5,191.1	146.1	12.1	57.17	-309.3	112.5	7,987.9	7,851.9	135.98	58.744	
12,857.6	5,587.0	5,200.0	5,191.1	147.2	12.1	57.17	-309.3	112.5	8,045.3	7,908.4	136.93	58.754	

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)						
0.0	0.0	0.0	0.0	0.0	0.0	88.91	0.6	32.9	32.9					
100.0	100.0	100.0	100.0	0.1	0.1	88.91	0.6	32.9	32.9	32.8	0.19	175.527		
200.0	200.0	200.0	200.0	0.3	0.3	88.91	0.6	32.9	32.9	32.3	0.64	51.698		
300.0	300.0	300.0	300.0	0.5	0.5	88.91	0.6	32.9	32.9	31.9	1.09	30.313		
400.0	400.0	400.0	400.0	0.8	0.8	88.91	0.6	32.9	32.9	31.4	1.54	21.443		
500.0	500.0	500.0	500.0	1.0	1.0	88.91	0.6	32.9	32.9	31.0	1.99	16.589 CC, ES		
600.0	600.0	599.0	599.0	1.2	1.2	119.27	-0.5	34.2	35.1	32.7	2.41	14.550 SF		
700.0	699.8	697.4	697.2	1.4	1.4	129.40	-3.7	38.1	42.5	39.6	2.84	14.979		
800.0	799.6	796.4	796.0	1.7	1.6	138.45	-8.2	43.4	53.8	50.6	3.27	16.467		
900.0	899.4	895.5	894.8	1.9	1.8	144.27	-12.6	48.7	66.0	62.3	3.70	17.846		
1,000.0	999.1	994.5	993.7	2.2	2.1	148.25	-17.1	54.0	78.7	74.6	4.14	19.029		
1,100.0	1,098.9	1,093.6	1,092.5	2.4	2.3	151.12	-21.5	59.3	91.7	87.1	4.58	20.031		
1,200.0	1,198.6	1,192.7	1,191.3	2.7	2.5	153.28	-25.9	64.6	104.8	99.8	5.02	20.879		
1,300.0	1,298.4	1,291.7	1,290.1	2.9	2.8	154.96	-30.4	69.9	118.0	112.5	5.46	21.602		
1,400.0	1,398.1	1,390.8	1,389.0	3.2	3.0	156.29	-34.8	75.2	131.3	125.4	5.91	22.222		
1,500.0	1,497.9	1,489.9	1,487.8	3.4	3.3	157.38	-39.3	80.5	144.7	138.3	6.36	22.759		
1,600.0	1,597.6	1,589.0	1,586.6	3.7	3.6	158.29	-43.7	85.8	158.1	151.3	6.81	23.227		
1,700.0	1,697.4	1,688.0	1,685.5	3.9	3.8	159.06	-48.2	91.1	171.5	164.3	7.26	23.639		
1,800.0	1,797.2	1,787.1	1,784.3	4.2	4.1	159.71	-52.6	96.4	185.0	177.3	7.71	24.003		
1,900.0	1,896.9	1,886.2	1,883.1	4.4	4.3	160.27	-57.0	101.7	198.5	190.3	8.16	24.327		
2,000.0	1,996.7	1,985.2	1,981.9	4.7	4.6	160.77	-61.5	107.0	212.0	203.4	8.61	24.617		
2,100.0	2,096.4	2,084.3	2,080.8	4.9	4.8	161.20	-65.9	112.3	225.5	216.4	9.06	24.879		
2,200.0	2,196.2	2,183.4	2,179.6	5.2	5.1	161.59	-70.4	117.5	239.0	229.5	9.52	25.115		
2,300.0	2,295.9	2,282.4	2,278.4	5.4	5.3	161.93	-74.8	122.8	252.5	242.6	9.97	25.330		
2,400.0	2,395.7	2,381.5	2,377.2	5.7	5.6	162.24	-79.3	128.1	266.1	255.7	10.42	25.527		
2,500.0	2,495.5	2,480.6	2,476.1	6.0	5.9	162.52	-83.7	133.4	279.6	268.8	10.88	25.706		
2,600.0	2,595.2	2,579.6	2,574.9	6.2	6.1	162.77	-88.1	138.7	293.2	281.9	11.33	25.872		
2,700.0	2,695.0	2,678.7	2,673.7	6.5	6.4	163.00	-92.6	144.0	306.8	295.0	11.79	26.024		
2,800.0	2,794.7	2,777.8	2,772.6	6.7	6.6	163.21	-97.0	149.3	320.3	308.1	12.24	26.165		
2,900.0	2,894.5	2,876.9	2,871.4	7.0	6.9	163.40	-101.5	154.6	333.9	321.2	12.70	26.296		
3,000.0	2,994.2	2,975.9	2,970.2	7.2	7.2	163.58	-105.9	159.9	347.5	334.3	13.15	26.417		
3,100.0	3,094.0	3,075.0	3,069.0	7.5	7.4	163.75	-110.3	165.2	361.0	347.4	13.61	26.531		
3,200.0	3,193.7	3,174.1	3,167.9	7.8	7.7	163.90	-114.8	170.5	374.6	360.6	14.06	26.637		
3,300.0	3,293.5	3,273.1	3,266.7	8.0	7.9	164.04	-119.2	175.8	388.2	373.7	14.52	26.736		
3,400.0	3,393.3	3,372.2	3,365.5	8.3	8.2	164.18	-123.7	181.1	401.8	386.8	14.98	26.830		
3,500.0	3,493.0	3,471.3	3,464.4	8.5	8.5	164.30	-128.1	186.4	415.4	399.9	15.43	26.917		
3,600.0	3,592.8	3,570.3	3,563.2	8.8	8.7	164.42	-132.6	191.7	429.0	413.1	15.89	27.000		
3,700.0	3,692.5	3,669.4	3,662.0	9.0	9.0	164.53	-137.0	197.0	442.6	426.2	16.34	27.078		
3,800.0	3,792.3	3,768.5	3,760.8	9.3	9.2	164.63	-141.4	202.3	456.1	439.3	16.80	27.151		
3,900.0	3,892.0	3,867.5	3,859.7	9.6	9.5	164.73	-145.9	207.5	469.7	452.5	17.26	27.221		
4,000.0	3,991.8	3,966.6	3,958.5	9.8	9.8	164.82	-150.3	212.8	483.3	465.6	17.71	27.287		
4,100.0	4,091.6	4,065.7	4,057.3	10.1	10.0	164.90	-154.8	218.1	496.9	478.8	18.17	27.350		
4,200.0	4,191.3	4,164.7	4,156.1	10.3	10.3	164.99	-159.2	223.4	510.5	491.9	18.63	27.410		
4,300.0	4,291.1	4,263.8	4,255.0	10.6	10.5	165.06	-163.7	228.7	524.1	505.0	19.08	27.467		
4,400.0	4,390.8	4,362.9	4,353.8	10.8	10.8	165.14	-168.1	234.0	537.7	518.2	19.54	27.521		
4,500.0	4,490.6	4,462.0	4,452.6	11.1	11.1	165.21	-172.5	239.3	551.3	531.3	20.00	27.572		
4,600.0	4,590.3	4,575.7	4,566.2	11.4	11.3	165.30	-177.0	244.6	564.1	543.7	20.47	27.565		
4,700.0	4,690.1	4,699.6	4,690.0	11.6	11.6	165.48	-178.7	246.7	573.0	552.1	20.94	27.370		
4,800.0	4,789.9	4,799.4	4,789.9	11.9	11.7	165.65	-178.7	246.7	579.8	558.4	21.36	27.141		
4,900.0	4,889.6	4,899.2	4,889.6	12.1	11.9	165.82	-178.7	246.7	586.5	564.8	21.78	26.934		
5,000.0	4,989.4	4,998.9	4,989.4	12.4	12.1	165.98	-178.7	246.7	593.3	571.1	22.19	26.734		
5,100.0	5,089.1	5,087.0	5,077.4	12.6	12.2	166.13	-178.8	246.7	600.3	577.7	22.59	26.573		

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



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - 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		
5,113.4	5,102.5	5,093.5	5,083.9	12.7	12.2	166.15	-179.0	246.8	601.5	578.9	22.63	26.576		
5,150.0	5,138.9	5,100.0	5,090.4	12.8	12.2	166.02	-179.3	246.8	607.2	584.6	22.59	26.871		
5,200.0	5,188.0	5,134.3	5,124.6	13.0	12.3	165.91	-181.9	247.5	620.0	597.6	22.45	27.618		
5,250.0	5,236.0	5,150.0	5,140.2	13.2	12.4	165.52	-183.8	248.0	639.4	617.4	22.10	28.939		
5,300.0	5,282.4	5,175.9	5,165.7	13.4	12.5	165.12	-188.0	249.1	664.6	643.0	21.61	30.758		
5,350.0	5,326.8	5,200.0	5,189.2	13.7	12.5	164.55	-193.0	250.5	695.1	674.2	20.97	33.150		
5,400.0	5,368.8	5,200.0	5,189.2	14.1	12.5	163.03	-193.0	250.5	730.3	710.1	20.20	36.146		
5,450.0	5,408.1	5,221.5	5,210.0	14.5	12.6	161.67	-198.3	251.9	769.3	749.9	19.41	39.632		
5,500.0	5,444.1	5,231.8	5,219.9	14.9	12.7	159.19	-201.2	252.6	811.7	793.0	18.71	43.390		
5,550.0	5,476.7	5,250.0	5,237.2	15.5	12.7	156.05	-206.7	254.1	856.9	838.6	18.26	46.938		
5,600.0	5,505.6	5,250.0	5,237.2	16.0	12.7	149.19	-206.7	254.1	903.7	884.8	18.90	47.811		
5,650.0	5,530.4	5,250.0	5,237.2	16.6	12.7	136.43	-206.7	254.1	952.1	930.2	21.88	43.516		
5,700.0	5,550.9	5,250.0	5,237.2	17.3	12.7	110.87	-206.7	254.1	1,001.3	973.3	28.04	35.706		
5,750.0	5,566.9	5,250.0	5,237.2	18.0	12.7	71.90	-206.7	254.1	1,050.8	1,021.4	29.45	35.685		
5,800.0	5,578.3	5,250.0	5,237.2	18.8	12.7	43.14	-206.7	254.1	1,100.2	1,077.4	22.77	48.313		
5,850.0	5,585.1	5,250.0	5,237.2	19.6	12.7	28.63	-206.7	254.1	1,149.0	1,131.7	17.30	66.427		
5,895.2	5,587.0	5,250.0	5,237.2	20.3	12.7	21.49	-206.7	254.1	1,192.4	1,178.1	14.31	83.337		
5,900.0	5,587.0	5,250.0	5,237.2	20.4	12.7	21.90	-206.7	254.1	1,196.9	1,182.4	14.52	82.461		
6,000.0	5,587.0	5,250.0	5,237.2	21.9	12.7	30.06	-206.7	254.1	1,291.9	1,273.0	18.88	68.415		
6,100.0	5,587.0	5,224.2	5,212.6	23.4	12.6	35.77	-199.0	252.1	1,386.0	1,363.7	22.26	62.257		
6,200.0	5,587.0	5,200.0	5,189.2	25.0	12.5	40.57	-193.0	250.5	1,480.4	1,455.1	25.29	58.527		
6,300.0	5,587.0	5,200.0	5,189.2	26.7	12.5	46.23	-193.0	250.5	1,573.7	1,545.0	28.75	54.732		
6,400.0	5,587.0	5,200.0	5,189.2	28.3	12.5	51.15	-193.0	250.5	1,666.5	1,634.7	31.84	52.343		
6,500.0	5,587.0	5,200.0	5,189.2	29.9	12.5	55.40	-193.0	250.5	1,758.6	1,724.1	34.56	50.886		
6,600.0	5,587.0	5,200.0	5,189.2	31.6	12.5	59.03	-193.0	250.5	1,849.9	1,813.0	36.95	50.064		
6,702.9	5,587.0	5,200.0	5,189.2	33.2	12.5	62.22	-193.0	250.5	1,942.9	1,903.8	39.11	49.679		
6,800.0	5,587.0	5,200.0	5,189.2	34.8	12.5	62.22	-193.0	250.5	2,030.6	1,990.0	40.59	50.028		
6,900.0	5,587.0	5,179.9	5,169.6	36.4	12.5	61.04	-188.8	249.3	2,121.2	2,079.6	41.66	50.921		
7,000.0	5,587.0	5,176.2	5,166.0	38.1	12.5	60.82	-188.1	249.2	2,213.0	2,169.9	43.11	51.328		
7,100.0	5,587.0	5,172.7	5,162.6	39.8	12.4	60.62	-187.4	249.0	2,305.4	2,260.8	44.59	51.703		
7,200.0	5,587.0	5,150.0	5,140.2	41.5	12.4	59.31	-183.8	248.0	2,398.8	2,353.2	45.57	52.641		
7,300.0	5,587.0	5,150.0	5,140.2	43.3	12.4	59.31	-183.8	248.0	2,492.1	2,445.0	47.14	52.869		
7,400.0	5,587.0	5,150.0	5,140.2	45.0	12.4	59.31	-183.8	248.0	2,586.0	2,537.3	48.72	53.080		
7,500.0	5,587.0	5,150.0	5,140.2	46.8	12.4	59.31	-183.8	248.0	2,680.3	2,630.0	50.31	53.277		
7,600.0	5,587.0	5,150.0	5,140.2	48.5	12.4	59.31	-183.8	248.0	2,775.0	2,723.1	51.91	53.461		
7,700.0	5,587.0	5,150.0	5,140.2	50.3	12.4	59.31	-183.8	248.0	2,870.1	2,816.6	53.51	53.633		
7,800.0	5,587.0	5,150.0	5,140.2	52.1	12.4	59.31	-183.8	248.0	2,965.5	2,910.3	55.13	53.794		
7,900.0	5,587.0	5,150.0	5,140.2	53.9	12.4	59.31	-183.8	248.0	3,061.2	3,004.4	56.74	53.946		
8,000.0	5,587.0	5,150.0	5,140.2	55.7	12.4	59.31	-183.8	248.0	3,157.1	3,098.7	58.37	54.089		
8,100.0	5,587.0	5,150.0	5,140.2	57.5	12.4	59.31	-183.8	248.0	3,253.3	3,193.3	60.00	54.223		
8,200.0	5,587.0	5,150.0	5,140.2	59.4	12.4	59.31	-183.8	248.0	3,349.7	3,288.1	61.63	54.350		
8,300.0	5,587.0	5,150.0	5,140.2	61.2	12.4	59.31	-183.8	248.0	3,446.3	3,383.1	63.27	54.471		
8,400.0	5,587.0	5,150.0	5,140.2	63.0	12.4	59.31	-183.8	248.0	3,543.1	3,478.2	64.91	54.585		
8,500.0	5,587.0	5,150.0	5,140.2	64.9	12.4	59.31	-183.8	248.0	3,640.1	3,573.6	66.56	54.693		
8,600.0	5,587.0	5,150.0	5,140.2	66.7	12.4	59.31	-183.8	248.0	3,737.3	3,669.1	68.20	54.797		
8,700.0	5,587.0	5,150.0	5,140.2	68.6	12.4	59.31	-183.8	248.0	3,834.6	3,764.7	69.85	54.895		
8,800.0	5,587.0	5,150.0	5,140.2	70.4	12.4	59.31	-183.8	248.0	3,932.0	3,860.5	71.51	54.988		
8,900.0	5,587.0	5,150.0	5,140.2	72.3	12.4	59.31	-183.8	248.0	4,029.5	3,956.4	73.16	55.077		
9,000.0	5,587.0	5,150.0	5,140.2	74.1	12.4	59.31	-183.8	248.0	4,127.2	4,052.4	74.82	55.163		
9,100.0	5,587.0	5,150.0	5,140.2	76.0	12.4	59.31	-183.8	248.0	4,225.0	4,148.5	76.48	55.244		
9,200.0	5,587.0	5,150.0	5,140.2	77.9	12.4	59.31	-183.8	248.0	4,322.9	4,244.7	78.14	55.322		
9,300.0	5,587.0	5,150.0	5,140.2	79.7	12.4	59.31	-183.8	248.0	4,420.8	4,341.0	79.80	55.397		

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - HZ - Plan #2													Offset Site Error: 0.0 usft
Survey Program: 0-ISCWSA MWD													Offset Well Error: 0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,400.0	5,587.0	5,150.0	5,140.2	81.6	12.4	59.31	-183.8	248.0	4,518.9	4,437.4	81.47	55.469	
9,500.0	5,587.0	5,150.0	5,140.2	83.5	12.4	59.31	-183.8	248.0	4,617.0	4,533.9	83.13	55.538	
9,600.0	5,587.0	5,150.0	5,140.2	85.4	12.4	59.31	-183.8	248.0	4,715.3	4,630.5	84.80	55.604	
9,700.0	5,587.0	5,126.8	5,117.1	87.2	12.3	58.01	-181.1	247.3	4,813.0	4,727.6	85.42	56.346	
9,800.0	5,587.0	5,125.8	5,116.2	89.1	12.3	57.96	-181.1	247.3	4,911.3	4,824.3	87.03	56.434	
9,900.0	5,587.0	5,125.0	5,115.3	91.0	12.3	57.91	-181.0	247.3	5,009.7	4,921.1	88.64	56.518	
10,000.0	5,587.0	5,124.1	5,114.5	92.9	12.3	57.86	-180.9	247.3	5,108.1	5,017.9	90.25	56.600	
10,100.0	5,587.0	5,123.3	5,113.6	94.8	12.3	57.82	-180.8	247.2	5,206.6	5,114.8	91.86	56.679	
10,200.0	5,587.0	5,100.0	5,090.4	96.7	12.2	56.56	-179.3	246.8	5,305.7	5,213.4	92.37	57.443	
10,300.0	5,587.0	5,100.0	5,090.4	98.6	12.2	56.56	-179.3	246.8	5,404.3	5,310.3	94.00	57.492	
10,400.0	5,587.0	5,100.0	5,090.4	100.4	12.2	56.56	-179.3	246.8	5,502.9	5,407.3	95.64	57.540	
10,500.0	5,587.0	5,100.0	5,090.4	102.3	12.2	56.56	-179.3	246.8	5,601.6	5,504.3	97.27	57.586	
10,600.0	5,587.0	5,100.0	5,090.4	104.2	12.2	56.56	-179.3	246.8	5,700.3	5,601.4	98.91	57.631	
10,700.0	5,587.0	5,100.0	5,090.4	106.1	12.2	56.56	-179.3	246.8	5,799.1	5,698.5	100.55	57.674	
10,800.0	5,587.0	5,100.0	5,090.4	108.0	12.2	56.56	-179.3	246.8	5,897.9	5,795.7	102.19	57.716	
10,900.0	5,587.0	5,100.0	5,090.4	109.9	12.2	56.56	-179.3	246.8	5,996.7	5,892.9	103.83	57.757	
11,000.0	5,587.0	5,100.0	5,090.4	111.8	12.2	56.56	-179.3	246.8	6,095.6	5,990.2	105.47	57.797	
11,100.0	5,587.0	5,100.0	5,090.4	113.7	12.2	56.56	-179.3	246.8	6,194.5	6,087.4	107.11	57.835	
11,200.0	5,587.0	5,100.0	5,090.4	115.6	12.2	56.56	-179.3	246.8	6,293.5	6,184.7	108.75	57.872	
11,300.0	5,587.0	5,100.0	5,090.4	117.5	12.2	56.56	-179.3	246.8	6,392.5	6,282.1	110.39	57.908	
11,400.0	5,587.0	5,100.0	5,090.4	119.4	12.2	56.56	-179.3	246.8	6,491.5	6,379.5	112.03	57.943	
11,500.0	5,587.0	5,100.0	5,090.4	121.3	12.2	56.56	-179.3	246.8	6,590.5	6,476.9	113.67	57.978	
11,600.0	5,587.0	5,100.0	5,090.4	123.2	12.2	56.56	-179.3	246.8	6,689.6	6,574.3	115.32	58.011	
11,700.0	5,587.0	5,100.0	5,090.4	125.1	12.2	56.56	-179.3	246.8	6,788.7	6,671.8	116.96	58.043	
11,800.0	5,587.0	5,100.0	5,090.4	127.0	12.2	56.56	-179.3	246.8	6,887.8	6,769.2	118.60	58.074	
11,900.0	5,587.0	5,100.0	5,090.4	128.9	12.2	56.56	-179.3	246.8	6,987.0	6,866.8	120.25	58.105	
12,000.0	5,587.0	5,100.0	5,090.4	130.8	12.2	56.56	-179.3	246.8	7,086.2	6,964.3	121.89	58.135	
12,100.0	5,587.0	5,100.0	5,090.4	132.7	12.2	56.56	-179.3	246.8	7,185.4	7,061.8	123.54	58.164	
12,200.0	5,587.0	5,100.0	5,090.4	134.6	12.2	56.56	-179.3	246.8	7,284.6	7,159.4	125.18	58.192	
12,300.0	5,587.0	5,100.0	5,090.4	136.5	12.2	56.56	-179.3	246.8	7,383.8	7,257.0	126.83	58.220	
12,400.0	5,587.0	5,100.0	5,090.4	138.4	12.2	56.56	-179.3	246.8	7,483.1	7,354.6	128.47	58.246	
12,500.0	5,587.0	5,100.0	5,090.4	140.4	12.2	56.56	-179.3	246.8	7,582.4	7,452.3	130.12	58.273	
12,600.0	5,587.0	5,100.0	5,090.4	142.3	12.2	56.56	-179.3	246.8	7,681.7	7,549.9	131.77	58.298	
12,700.0	5,587.0	5,100.0	5,090.4	144.2	12.2	56.56	-179.3	246.8	7,781.0	7,647.6	133.41	58.323	
12,800.0	5,587.0	5,100.0	5,090.4	146.1	12.2	56.56	-179.3	246.8	7,880.3	7,745.3	135.06	58.348	
12,857.6	5,587.0	5,100.0	5,090.4	147.2	12.2	56.56	-179.3	246.8	7,937.6	7,801.6	136.01	58.361	



<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: 0-ISCWSA MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	137.53	-73.8	67.6	100.1				
100.0	100.0	100.0	100.0	0.1	0.1	137.53	-73.8	67.6	100.1	99.9	0.19	533.135	
200.0	200.0	200.0	200.0	0.3	0.3	137.53	-73.8	67.6	100.1	99.4	0.64	157.026	
300.0	300.0	300.0	300.0	0.5	0.5	137.53	-73.8	67.6	100.1	99.0	1.09	92.072	
400.0	400.0	400.0	400.0	0.8	0.8	137.53	-73.8	67.6	100.1	98.5	1.54	65.131	
500.0	500.0	500.0	500.0	1.0	1.0	137.53	-73.8	67.6	100.1	98.1	1.99	50.387 CC, ES	
600.0	600.0	600.0	600.0	1.2	1.2	163.80	-73.8	67.6	101.7	99.3	2.44	41.762	
700.0	699.8	699.8	699.8	1.4	1.4	164.56	-73.8	67.6	106.8	103.9	2.89	36.989	
800.0	799.6	799.6	799.6	1.7	1.7	165.50	-73.8	67.6	113.5	110.2	3.33	34.051	
900.0	899.4	899.4	899.4	1.9	1.9	166.33	-73.8	67.6	120.3	116.5	3.78	31.799	
1,000.0	999.1	999.1	999.1	2.2	2.1	167.07	-73.8	67.6	127.1	122.8	4.23	30.022	
1,100.0	1,098.9	1,095.1	1,095.0	2.4	2.3	167.36	-74.3	69.0	135.3	130.6	4.66	29.030	
1,200.0	1,198.6	1,190.4	1,190.3	2.7	2.5	166.96	-76.0	73.5	146.3	141.2	5.08	28.812	
1,300.0	1,298.4	1,289.2	1,288.8	2.9	2.7	166.24	-78.3	80.0	159.1	153.6	5.51	28.886	
1,400.0	1,398.1	1,388.3	1,387.7	3.2	2.9	165.62	-80.7	86.5	171.9	165.9	5.94	28.943	
1,500.0	1,497.9	1,487.5	1,486.6	3.4	3.1	165.08	-83.1	93.0	184.7	178.3	6.37	28.976	
1,600.0	1,597.6	1,586.7	1,585.6	3.7	3.4	164.62	-85.4	99.5	197.5	190.7	6.81	28.991	
1,700.0	1,697.4	1,685.8	1,684.5	3.9	3.6	164.21	-87.8	106.0	210.3	203.0	7.25	28.993	
1,800.0	1,797.2	1,785.0	1,783.4	4.2	3.8	163.85	-90.2	112.5	223.1	215.4	7.70	28.987	
1,900.0	1,896.9	1,884.2	1,882.3	4.4	4.1	163.53	-92.5	119.0	236.0	227.8	8.14	28.976	
2,000.0	1,996.7	1,983.3	1,981.2	4.7	4.3	163.24	-94.9	125.5	248.8	240.2	8.59	28.960	
2,100.0	2,096.4	2,082.5	2,080.2	4.9	4.6	162.98	-97.3	132.0	261.7	252.7	9.04	28.942	
2,200.0	2,196.2	2,181.6	2,179.1	5.2	4.8	162.74	-99.6	138.5	274.6	265.1	9.49	28.922	
2,300.0	2,295.9	2,280.8	2,278.0	5.4	5.0	162.53	-102.0	145.0	287.4	277.5	9.95	28.901	
2,400.0	2,395.7	2,380.0	2,376.9	5.7	5.3	162.33	-104.3	151.5	300.3	289.9	10.40	28.880	
2,500.0	2,495.5	2,479.1	2,475.9	6.0	5.5	162.15	-106.7	158.0	313.2	302.3	10.85	28.858	
2,600.0	2,595.2	2,578.3	2,574.8	6.2	5.8	161.98	-109.1	164.5	326.0	314.7	11.31	28.837	
2,700.0	2,695.0	2,677.5	2,673.7	6.5	6.0	161.83	-111.4	171.0	338.9	327.2	11.76	28.815	
2,800.0	2,794.7	2,776.6	2,772.6	6.7	6.3	161.69	-113.8	177.5	351.8	339.6	12.22	28.795	
2,900.0	2,894.5	2,875.8	2,871.5	7.0	6.5	161.56	-116.2	184.0	364.7	352.0	12.67	28.774	
3,000.0	2,994.2	2,974.9	2,970.5	7.2	6.8	161.43	-118.5	190.5	377.6	364.4	13.13	28.755	
3,100.0	3,094.0	3,074.1	3,069.4	7.5	7.1	161.32	-120.9	197.0	390.4	376.9	13.59	28.736	
3,200.0	3,193.7	3,173.3	3,168.3	7.8	7.3	161.21	-123.3	203.5	403.3	389.3	14.05	28.717	
3,300.0	3,293.5	3,272.4	3,267.2	8.0	7.6	161.11	-125.6	210.0	416.2	401.7	14.50	28.699	
3,400.0	3,393.3	3,371.6	3,366.2	8.3	7.8	161.01	-128.0	216.5	429.1	414.2	14.96	28.682	
3,500.0	3,493.0	3,470.8	3,465.1	8.5	8.1	160.92	-130.4	223.0	442.0	426.6	15.42	28.665	
3,600.0	3,592.8	3,569.9	3,564.0	8.8	8.3	160.84	-132.7	229.5	454.9	439.0	15.88	28.649	
3,700.0	3,692.5	3,669.1	3,662.9	9.0	8.6	160.76	-135.1	236.0	467.8	451.5	16.34	28.633	
3,800.0	3,792.3	3,768.3	3,761.8	9.3	8.8	160.69	-137.5	242.5	480.7	463.9	16.80	28.618	
3,900.0	3,892.0	3,867.4	3,860.8	9.6	9.1	160.61	-139.8	249.0	493.6	476.3	17.26	28.603	
4,000.0	3,991.8	3,966.6	3,959.7	9.8	9.3	160.55	-142.2	255.5	506.5	488.8	17.72	28.589	
4,100.0	4,091.6	4,065.7	4,058.6	10.1	9.6	160.48	-144.6	262.0	519.4	501.2	18.18	28.576	
4,200.0	4,191.3	4,164.9	4,157.5	10.3	9.9	160.42	-146.9	268.5	532.3	513.6	18.63	28.563	
4,300.0	4,291.1	4,264.1	4,256.4	10.6	10.1	160.36	-149.3	275.0	545.2	526.1	19.09	28.550	
4,400.0	4,390.8	4,363.2	4,355.4	10.8	10.4	160.31	-151.7	281.5	558.1	538.5	19.56	28.538	
4,500.0	4,490.6	4,462.4	4,454.3	11.1	10.6	160.25	-154.0	288.0	571.0	550.9	20.02	28.526	
4,600.0	4,590.3	4,561.6	4,553.2	11.4	10.9	160.20	-156.4	294.5	583.9	563.4	20.48	28.515	
4,700.0	4,690.1	4,660.7	4,652.1	11.6	11.1	160.15	-158.8	301.0	596.8	575.8	20.94	28.503	
4,800.0	4,789.9	4,759.9	4,751.1	11.9	11.4	160.11	-161.1	307.5	609.7	588.3	21.40	28.493	
4,900.0	4,889.6	4,873.6	4,864.6	12.1	11.7	160.09	-163.5	314.0	621.9	600.0	21.87	28.481	
5,000.0	4,989.4	4,989.1	4,989.0	12.4	11.9	160.26	-164.5	316.7	630.5	608.1	22.34	28.215	
5,100.0	5,089.1	5,098.2	5,089.1	12.6	12.1	160.47	-164.5	316.7	637.0	614.3	22.77	27.973	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - HZ - Plan #2												Offset Site Error:	0.0 usft
Survey Program: O-ISCWA 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
5,113.4	5,102.5	5,111.6	5,102.5	12.7	12.1	160.50	-164.5	316.7	637.9	615.1	22.83	27.941 SF	
5,150.0	5,138.9	5,148.0	5,138.9	12.8	12.2	160.48	-164.5	316.7	641.5	618.7	22.86	28.065	
5,200.0	5,188.0	5,178.7	5,169.6	13.0	12.2	160.30	-164.7	316.8	650.8	628.1	22.72	28.645	
5,250.0	5,236.0	5,200.0	5,190.9	13.2	12.3	159.90	-165.6	317.3	666.4	644.0	22.41	29.739	
5,300.0	5,282.4	5,219.9	5,210.7	13.4	12.3	159.28	-167.2	318.1	687.9	665.9	21.95	31.335	
5,350.0	5,326.8	5,250.0	5,240.5	13.7	12.4	158.62	-170.9	320.0	715.2	693.8	21.39	33.429	
5,400.0	5,368.8	5,250.0	5,240.5	14.1	12.4	156.90	-170.9	320.0	746.9	726.2	20.73	36.024	
5,450.0	5,408.1	5,267.2	5,257.5	14.5	12.5	155.09	-173.7	321.4	783.1	763.0	20.10	38.967	
5,500.0	5,444.1	5,278.5	5,268.5	14.9	12.5	152.34	-175.7	322.5	823.1	803.4	19.62	41.956	
5,550.0	5,476.7	5,300.0	5,289.3	15.5	12.6	149.10	-180.3	324.9	866.2	846.8	19.42	44.596	
5,600.0	5,505.6	5,300.0	5,289.3	16.0	12.6	142.64	-180.3	324.9	911.3	891.1	20.22	45.065	
5,650.0	5,530.4	5,300.0	5,289.3	16.6	12.6	132.42	-180.3	324.9	958.3	935.7	22.55	42.486	
5,700.0	5,550.9	5,300.0	5,289.3	17.3	12.6	115.98	-180.3	324.9	1,006.5	979.8	26.64	37.779	
5,750.0	5,566.9	5,300.0	5,289.3	18.0	12.6	91.92	-180.3	324.9	1,055.3	1,025.1	30.14	35.012	
5,800.0	5,578.3	5,300.0	5,289.3	18.8	12.6	66.10	-180.3	324.9	1,104.2	1,075.5	28.79	38.361	
5,850.0	5,585.1	5,300.0	5,289.3	19.6	12.6	46.83	-180.3	324.9	1,152.9	1,128.7	24.17	47.699	
5,895.2	5,587.0	5,300.0	5,289.3	20.3	12.6	35.58	-180.3	324.9	1,196.3	1,176.0	20.27	59.031	
5,900.0	5,587.0	5,300.0	5,289.3	20.4	12.6	35.94	-180.3	324.9	1,200.9	1,180.4	20.46	58.702	
6,000.0	5,587.0	5,300.0	5,289.3	21.9	12.6	43.04	-180.3	324.9	1,295.9	1,271.7	24.23	53.489	
6,100.0	5,587.0	5,300.0	5,289.3	23.4	12.6	49.18	-180.3	324.9	1,390.7	1,363.1	27.61	50.360	
6,200.0	5,587.0	5,277.0	5,267.0	25.0	12.5	52.33	-175.5	322.4	1,484.2	1,454.3	29.83	49.746	
6,300.0	5,587.0	5,271.7	5,261.8	26.7	12.5	56.38	-174.5	321.9	1,577.4	1,545.0	32.39	48.693	
6,400.0	5,587.0	5,250.0	5,240.5	28.3	12.4	58.54	-170.9	320.0	1,670.1	1,635.9	34.24	48.777	
6,500.0	5,587.0	5,250.0	5,240.5	29.9	12.4	61.88	-170.9	320.0	1,761.5	1,725.0	36.47	48.299	
6,600.0	5,587.0	5,250.0	5,240.5	31.6	12.4	64.73	-170.9	320.0	1,851.8	1,813.4	38.46	48.148	
6,702.9	5,587.0	5,250.0	5,240.5	33.2	12.4	67.22	-170.9	320.0	1,943.8	1,903.5	40.29	48.240	
6,800.0	5,587.0	5,250.0	5,240.5	34.8	12.4	67.22	-170.9	320.0	2,030.5	1,988.6	41.82	48.547	
6,900.0	5,587.0	5,250.0	5,240.5	36.4	12.4	67.22	-170.9	320.0	2,120.7	2,077.3	43.42	48.842	
7,000.0	5,587.0	5,250.0	5,240.5	38.1	12.4	67.22	-170.9	320.0	2,211.7	2,166.7	45.03	49.113	
7,100.0	5,587.0	5,250.0	5,240.5	39.8	12.4	67.22	-170.9	320.0	2,303.5	2,256.9	46.67	49.362	
7,200.0	5,587.0	5,250.0	5,240.5	41.5	12.4	67.22	-170.9	320.0	2,396.0	2,347.7	48.31	49.593	
7,300.0	5,587.0	5,250.0	5,240.5	43.3	12.4	67.22	-170.9	320.0	2,489.0	2,439.1	49.97	49.807	
7,400.0	5,587.0	5,250.0	5,240.5	45.0	12.4	67.22	-170.9	320.0	2,582.6	2,530.9	51.65	50.006	
7,500.0	5,587.0	5,250.0	5,240.5	46.8	12.4	67.22	-170.9	320.0	2,676.6	2,623.3	53.33	50.191	
7,600.0	5,587.0	5,250.0	5,240.5	48.5	12.4	67.22	-170.9	320.0	2,771.1	2,716.0	55.02	50.365	
7,700.0	5,587.0	5,250.0	5,240.5	50.3	12.4	67.22	-170.9	320.0	2,865.9	2,809.2	56.72	50.528	
7,800.0	5,587.0	5,250.0	5,240.5	52.1	12.4	67.22	-170.9	320.0	2,961.0	2,902.6	58.43	50.681	
7,900.0	5,587.0	5,227.2	5,218.0	53.9	12.4	65.87	-168.0	318.5	3,055.9	2,996.4	59.55	51.316	
8,000.0	5,587.0	5,225.6	5,216.4	55.7	12.4	65.78	-167.8	318.4	3,151.6	3,090.4	61.21	51.486	
8,100.0	5,587.0	5,224.1	5,214.9	57.5	12.3	65.69	-167.6	318.3	3,247.5	3,184.7	62.88	51.647	
8,200.0	5,587.0	5,222.7	5,213.4	59.4	12.3	65.60	-167.5	318.2	3,343.7	3,279.1	64.55	51.799	
8,300.0	5,587.0	5,200.0	5,190.9	61.2	12.3	64.29	-165.6	317.3	3,440.6	3,375.0	65.61	52.443	
8,400.0	5,587.0	5,200.0	5,190.9	63.0	12.3	64.29	-165.6	317.3	3,537.1	3,469.8	67.31	52.549	
8,500.0	5,587.0	5,200.0	5,190.9	64.9	12.3	64.29	-165.6	317.3	3,633.8	3,564.8	69.02	52.650	
8,600.0	5,587.0	5,200.0	5,190.9	66.7	12.3	64.29	-165.6	317.3	3,730.7	3,659.9	70.73	52.746	
8,700.0	5,587.0	5,200.0	5,190.9	68.6	12.3	64.29	-165.6	317.3	3,827.7	3,755.2	72.44	52.838	
8,800.0	5,587.0	5,200.0	5,190.9	70.4	12.3	64.29	-165.6	317.3	3,924.9	3,850.7	74.16	52.925	
8,900.0	5,587.0	5,200.0	5,190.9	72.3	12.3	64.29	-165.6	317.3	4,022.2	3,946.3	75.88	53.009	
9,000.0	5,587.0	5,200.0	5,190.9	74.1	12.3	64.29	-165.6	317.3	4,119.7	4,042.1	77.60	53.088	
9,100.0	5,587.0	5,200.0	5,190.9	76.0	12.3	64.29	-165.6	317.3	4,217.2	4,137.9	79.32	53.165	
9,200.0	5,587.0	5,200.0	5,190.9	77.9	12.3	64.29	-165.6	317.3	4,314.9	4,233.9	81.05	53.238	
9,300.0	5,587.0	5,200.0	5,190.9	79.7	12.3	64.29	-165.6	317.3	4,412.7	4,329.9	82.78	53.309	

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

<b>Company:</b>	Whiting Petroleum Corporation	<b>Local Co-ordinate Reference:</b>	Well Razor Federal #26L-2301A
<b>Project:</b>	Weld County, CO	<b>TVD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Reference Site:</b>	S26-T10N-R58W	<b>MD Reference:</b>	WELL @ 4751.0usft (Original Well Elev)
<b>Site Error:</b>	0.0usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Razor Federal #26L-2301A	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	HZ	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: 0-ISCSWA MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
9,400.0	5,587.0	5,200.0	5,190.9	81.6	12.3	64.29	-165.6	317.3	4,510.6	4,426.1	84.51	53.376		
9,500.0	5,587.0	5,200.0	5,190.9	83.5	12.3	64.29	-165.6	317.3	4,608.5	4,522.3	86.24	53.441		
9,600.0	5,587.0	5,200.0	5,190.9	85.4	12.3	64.29	-165.6	317.3	4,706.6	4,618.6	87.97	53.504		
9,700.0	5,587.0	5,200.0	5,190.9	87.2	12.3	64.29	-165.6	317.3	4,804.7	4,715.0	89.70	53.564		
9,800.0	5,587.0	5,200.0	5,190.9	89.1	12.3	64.29	-165.6	317.3	4,903.0	4,811.5	91.44	53.622		
9,900.0	5,587.0	5,200.0	5,190.9	91.0	12.3	64.29	-165.6	317.3	5,001.2	4,908.1	93.17	53.678		
10,000.0	5,587.0	5,200.0	5,190.9	92.9	12.3	64.29	-165.6	317.3	5,099.6	5,004.7	94.91	53.732		
10,100.0	5,587.0	5,200.0	5,190.9	94.8	12.3	64.29	-165.6	317.3	5,198.0	5,101.4	96.65	53.784		
10,200.0	5,587.0	5,200.0	5,190.9	96.7	12.3	64.29	-165.6	317.3	5,296.5	5,198.1	98.39	53.834		
10,300.0	5,587.0	5,200.0	5,190.9	98.6	12.3	64.29	-165.6	317.3	5,395.0	5,294.9	100.13	53.882		
10,400.0	5,587.0	5,200.0	5,190.9	100.4	12.3	64.29	-165.6	317.3	5,493.6	5,391.7	101.87	53.929		
10,500.0	5,587.0	5,200.0	5,190.9	102.3	12.3	64.29	-165.6	317.3	5,592.2	5,488.6	103.61	53.975		
10,600.0	5,587.0	5,200.0	5,190.9	104.2	12.3	64.29	-165.6	317.3	5,690.9	5,585.6	105.35	54.019		
10,700.0	5,587.0	5,200.0	5,190.9	106.1	12.3	64.29	-165.6	317.3	5,789.6	5,682.5	107.09	54.061		
10,800.0	5,587.0	5,200.0	5,190.9	108.0	12.3	64.29	-165.6	317.3	5,888.4	5,779.6	108.84	54.103		
10,900.0	5,587.0	5,200.0	5,190.9	109.9	12.3	64.29	-165.6	317.3	5,987.2	5,876.6	110.58	54.143		
11,000.0	5,587.0	5,200.0	5,190.9	111.8	12.3	64.29	-165.6	317.3	6,086.1	5,973.7	112.33	54.181		
11,100.0	5,587.0	5,200.0	5,190.9	113.7	12.3	64.29	-165.6	317.3	6,185.0	6,070.9	114.07	54.219		
11,200.0	5,587.0	5,200.0	5,190.9	115.6	12.3	64.29	-165.6	317.3	6,283.9	6,168.1	115.82	54.255		
11,300.0	5,587.0	5,200.0	5,190.9	117.5	12.3	64.29	-165.6	317.3	6,382.8	6,265.3	117.57	54.291		
11,400.0	5,587.0	5,200.0	5,190.9	119.4	12.3	64.29	-165.6	317.3	6,481.8	6,362.5	119.31	54.325		
11,500.0	5,587.0	5,200.0	5,190.9	121.3	12.3	64.29	-165.6	317.3	6,580.8	6,459.8	121.06	54.359		
11,600.0	5,587.0	5,200.0	5,190.9	123.2	12.3	64.29	-165.6	317.3	6,679.9	6,557.1	122.81	54.392		
11,700.0	5,587.0	5,200.0	5,190.9	125.1	12.3	64.29	-165.6	317.3	6,779.0	6,654.4	124.56	54.423		
11,800.0	5,587.0	5,200.0	5,190.9	127.0	12.3	64.29	-165.6	317.3	6,878.1	6,751.8	126.31	54.454		
11,900.0	5,587.0	5,200.0	5,190.9	128.9	12.3	64.29	-165.6	317.3	6,977.2	6,849.1	128.06	54.484		
12,000.0	5,587.0	5,200.0	5,190.9	130.8	12.3	64.29	-165.6	317.3	7,076.3	6,946.5	129.81	54.513		
12,100.0	5,587.0	5,200.0	5,190.9	132.7	12.3	64.29	-165.6	317.3	7,175.5	7,044.0	131.56	54.542		
12,200.0	5,587.0	5,200.0	5,190.9	134.6	12.3	64.29	-165.6	317.3	7,274.7	7,141.4	133.31	54.570		
12,300.0	5,587.0	5,200.0	5,190.9	136.5	12.3	64.29	-165.6	317.3	7,373.9	7,238.9	135.06	54.597		
12,400.0	5,587.0	5,200.0	5,190.9	138.4	12.3	64.29	-165.6	317.3	7,473.2	7,336.4	136.81	54.623		
12,500.0	5,587.0	5,200.0	5,190.9	140.4	12.3	64.29	-165.6	317.3	7,572.4	7,433.9	138.56	54.649		
12,600.0	5,587.0	5,200.0	5,190.9	142.3	12.3	64.29	-165.6	317.3	7,671.7	7,531.4	140.32	54.674		
12,700.0	5,587.0	5,200.0	5,190.9	144.2	12.3	64.29	-165.6	317.3	7,771.0	7,628.9	142.07	54.699		
12,800.0	5,587.0	5,200.0	5,190.9	146.1	12.3	64.29	-165.6	317.3	7,870.3	7,726.5	143.82	54.723		
12,857.6	5,587.0	5,200.0	5,190.9	147.2	12.3	64.29	-165.6	317.3	7,927.6	7,782.7	144.83	54.736		

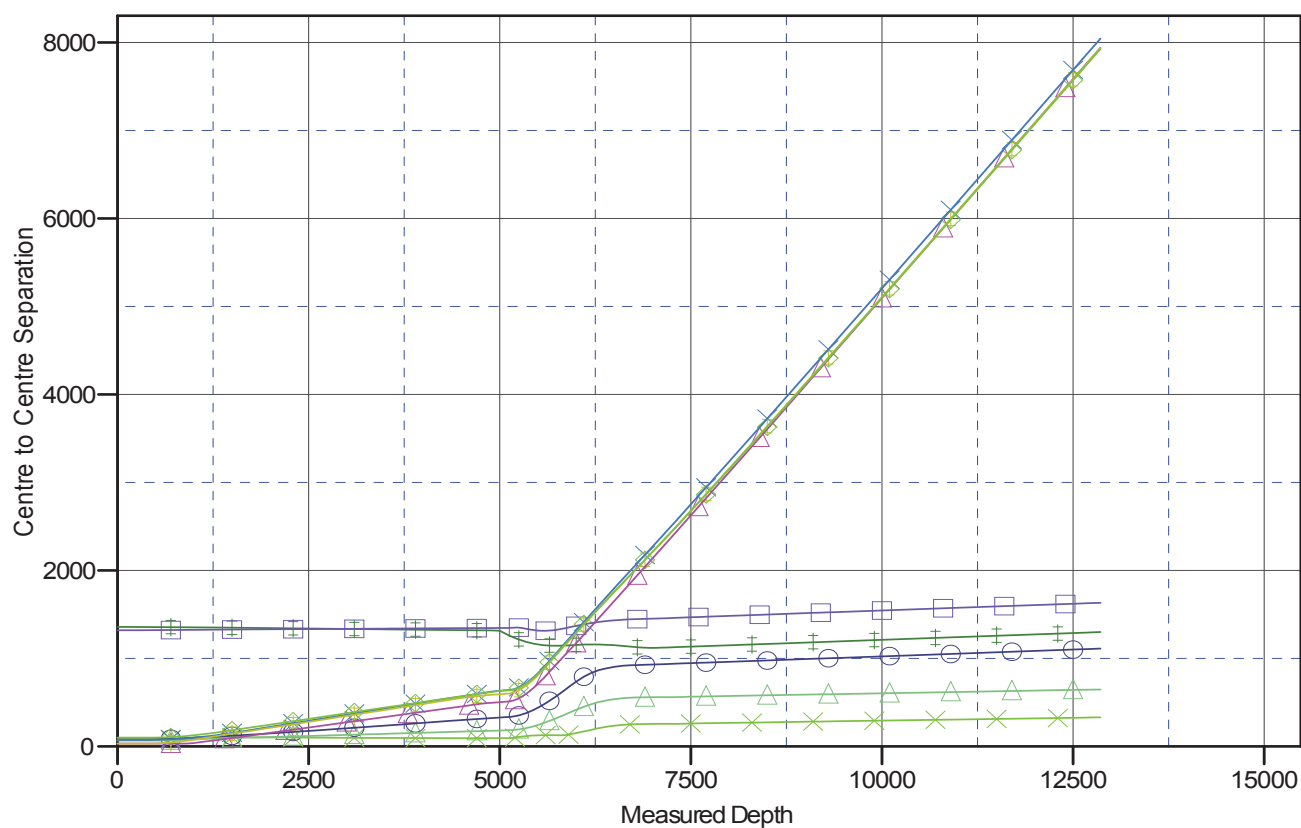
**Company:** Whiting Petroleum Corporation  
**Project:** Weld County, CO  
**Reference Site:** S26-T10N-R58W  
**Site Error:** 0.0usft  
**Reference Well:** Razor Federal #26L-2301A  
**Well Error:** 0.0usft  
**Reference Wellbore:** HZ  
**Reference Design:** Plan #3

**Local Co-ordinate Reference:** Well Razor Federal #26L-2301A  
**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' 0.00 W °

Coordinates are relative to: Razor Federal #26L-2301A  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 1.07°

## Ladder Plot



## LEGEND

- + Razor #26K-2305A, HZ, Plan #1 V0
 x Razor #26L-2303A, HZ, Plan #2 V0
 x Razor #26L-3502B, HZ, Plan #2 V0
- x Razor #26K-2306B, HZ, Plan #1 V0
 o Razor #26L-2304B, HZ, Plan #1 V0
 x Razor #26L-3503A, HZ, Plan #2 V0
- x Razor #26L-2302B, HZ, Plan #2 V0
 x Razor #26L-3501A, HZ, Plan #2 V0
 x Razor #26L-3504B, HZ, Plan #2 V0