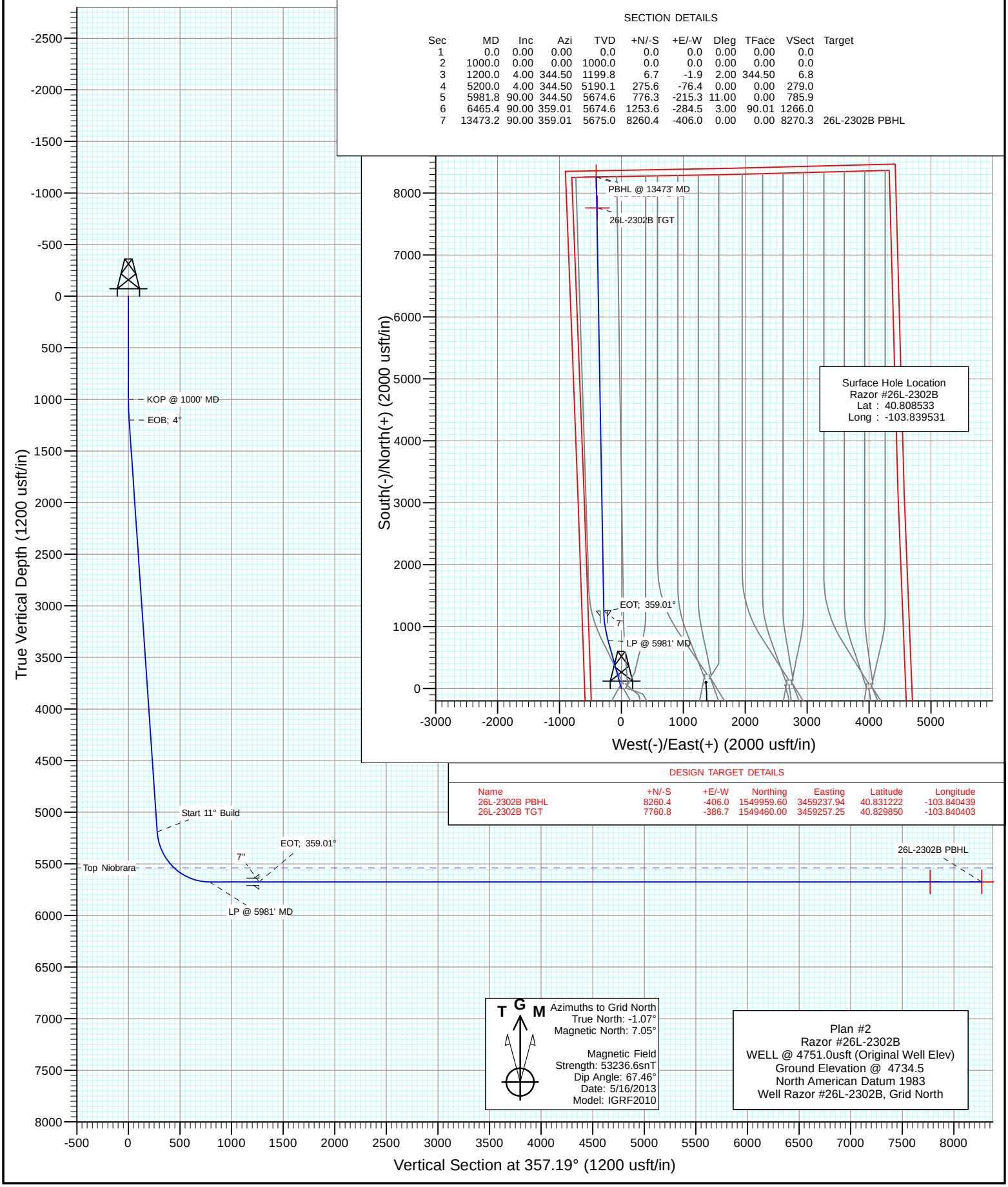
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: S26-T10N-R58W
Well: Razor #26L-2302B
Wellbore: HZ
Design: Plan #2

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1200.0	4.00	344.50	1199.8	6.7	-1.9	2.00	344.50	6.8	
4	5200.0	4.00	344.50	5190.1	275.6	-76.4	0.00	0.00	279.0	
5	5981.8	90.00	344.50	5674.6	776.3	-215.3	11.00	0.00	785.9	
6	6465.4	90.00	359.01	5674.6	1253.6	-284.5	3.00	90.01	1266.0	
7	13473.2	90.00	359.01	5675.0	8260.4	-406.0	0.00	0.00	8270.3	26L-2302B PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
26L-2302B PBHL	8260.4	-406.0	1549959.60	3459237.94	40.831222	-103.840439
26L-2302B TGT	7760.8	-386.7	1549460.00	3459257.25	40.829850	-103.840403

T G M

Azimuths to Grid North
True North: -1.07°
Magnetic North: 7.05°

Magnetic Field
Strength: 53236.6snT
Dip Angle: 67.46°
Date: 5/16/2013
Model: IGRF2010

Plan #2
Razor #26L-2302B
WELL @ 4751.0usft (Original Well Elev)
Ground Elevation @ 4734.5
North American Datum 1983
Well Razor #26L-2302B, Grid North

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Project Weld County, CO

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site S26-T10N-R58W

Site Position:		**Northing:**	1,541,774.28 usft	**Latitude:**	40.808739
From:	Lat/Long	**Easting:**	3,459,642.55 usft	**Longitude:**	-103.839531
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	1.07 °

Well Razor #26L-2302B

Well Position	**+N/-S**	0.0 usft	**Northing:**	1,541,699.23 usft	**Latitude:**	40.808533
	+E/-W	0.0 usft	**Easting:**	3,459,643.96 usft	**Longitude:**	-103.839531
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	4,734.5 usft

Wellbore HZ

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

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	357.19

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	4.00	344.50	1,199.8	6.7	-1.9	2.00	2.00	0.00	344.50	
5,200.0	4.00	344.50	5,190.1	275.6	-76.4	0.00	0.00	0.00	0.00	
5,981.8	90.00	344.50	5,674.6	776.3	-215.3	11.00	11.00	0.00	0.00	
6,465.4	90.00	359.01	5,674.6	1,253.6	-284.5	3.00	0.00	3.00	90.01	
13,473.2	90.00	359.01	5,675.0	8,260.4	-406.0	0.00	0.00	0.00	0.00	26L-2302B PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1000' MD
1,100.0	2.00	344.50	1,100.0	1.7	-0.5	1.7	2.00	2.00	
1,200.0	4.00	344.50	1,199.8	6.7	-1.9	6.8	2.00	2.00	EOB; 4°
1,300.0	4.00	344.50	1,299.6	13.4	-3.7	13.6	0.00	0.00	
1,400.0	4.00	344.50	1,399.4	20.2	-5.6	20.4	0.00	0.00	
1,500.0	4.00	344.50	1,499.1	26.9	-7.5	27.2	0.00	0.00	
1,600.0	4.00	344.50	1,598.9	33.6	-9.3	34.0	0.00	0.00	
1,700.0	4.00	344.50	1,698.6	40.3	-11.2	40.8	0.00	0.00	
1,800.0	4.00	344.50	1,798.4	47.1	-13.0	47.6	0.00	0.00	
1,900.0	4.00	344.50	1,898.1	53.8	-14.9	54.4	0.00	0.00	
2,000.0	4.00	344.50	1,997.9	60.5	-16.8	61.3	0.00	0.00	
2,100.0	4.00	344.50	2,097.6	67.2	-18.6	68.1	0.00	0.00	
2,200.0	4.00	344.50	2,197.4	73.9	-20.5	74.9	0.00	0.00	
2,300.0	4.00	344.50	2,297.2	80.7	-22.4	81.7	0.00	0.00	
2,400.0	4.00	344.50	2,396.9	87.4	-24.2	88.5	0.00	0.00	
2,500.0	4.00	344.50	2,496.7	94.1	-26.1	95.3	0.00	0.00	
2,600.0	4.00	344.50	2,596.4	100.8	-28.0	102.1	0.00	0.00	
2,700.0	4.00	344.50	2,696.2	107.6	-29.8	108.9	0.00	0.00	
2,800.0	4.00	344.50	2,795.9	114.3	-31.7	115.7	0.00	0.00	
2,900.0	4.00	344.50	2,895.7	121.0	-33.6	122.5	0.00	0.00	
3,000.0	4.00	344.50	2,995.5	127.7	-35.4	129.3	0.00	0.00	
3,100.0	4.00	344.50	3,095.2	134.4	-37.3	136.1	0.00	0.00	
3,200.0	4.00	344.50	3,195.0	141.2	-39.1	142.9	0.00	0.00	
3,300.0	4.00	344.50	3,294.7	147.9	-41.0	149.7	0.00	0.00	
3,400.0	4.00	344.50	3,394.5	154.6	-42.9	156.5	0.00	0.00	
3,500.0	4.00	344.50	3,494.2	161.3	-44.7	163.3	0.00	0.00	
3,600.0	4.00	344.50	3,594.0	168.1	-46.6	170.1	0.00	0.00	
3,700.0	4.00	344.50	3,693.7	174.8	-48.5	176.9	0.00	0.00	
3,800.0	4.00	344.50	3,793.5	181.5	-50.3	183.7	0.00	0.00	
3,900.0	4.00	344.50	3,893.3	188.2	-52.2	190.6	0.00	0.00	
4,000.0	4.00	344.50	3,993.0	194.9	-54.1	197.4	0.00	0.00	
4,100.0	4.00	344.50	4,092.8	201.7	-55.9	204.2	0.00	0.00	
4,200.0	4.00	344.50	4,192.5	208.4	-57.8	211.0	0.00	0.00	
4,300.0	4.00	344.50	4,292.3	215.1	-59.7	217.8	0.00	0.00	
4,400.0	4.00	344.50	4,392.0	221.8	-61.5	224.6	0.00	0.00	
4,500.0	4.00	344.50	4,491.8	228.5	-63.4	231.4	0.00	0.00	
4,600.0	4.00	344.50	4,591.6	235.3	-65.2	238.2	0.00	0.00	
4,700.0	4.00	344.50	4,691.3	242.0	-67.1	245.0	0.00	0.00	
4,800.0	4.00	344.50	4,791.1	248.7	-69.0	251.8	0.00	0.00	
4,900.0	4.00	344.50	4,890.8	255.4	-70.8	258.6	0.00	0.00	
5,000.0	4.00	344.50	4,990.6	262.2	-72.7	265.4	0.00	0.00	
5,100.0	4.00	344.50	5,090.3	268.9	-74.6	272.2	0.00	0.00	

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Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
5,200.0	4.00	344.50	5,190.1	275.6	-76.4	279.0	0.00	0.00	Start 11° Build
5,300.0	15.00	344.50	5,288.6	291.5	-80.8	295.1	11.00	11.00	
5,400.0	26.00	344.50	5,382.1	325.2	-90.2	329.2	11.00	11.00	
5,500.0	37.00	344.50	5,467.2	375.5	-104.1	380.1	11.00	11.00	
5,598.7	47.86	344.50	5,540.0	439.5	-121.9	445.0	11.00	11.00	Top Niobrara
5,600.0	48.00	344.50	5,540.8	440.5	-122.1	445.9	11.00	11.00	
5,700.0	59.00	344.50	5,600.2	517.8	-143.6	524.2	11.00	11.00	
5,800.0	70.00	344.50	5,643.2	604.6	-167.7	612.1	11.00	11.00	
5,900.0	81.00	344.50	5,668.2	697.8	-193.5	706.4	11.00	11.00	
5,981.8	90.00	344.50	5,674.6	776.3	-215.3	785.9	11.00	11.00	LP @ 5981' MD
6,000.0	90.00	345.05	5,674.6	793.9	-220.1	803.7	3.00	0.00	
6,100.0	90.00	348.05	5,674.6	891.1	-243.3	902.0	3.00	0.00	
6,200.0	90.00	351.05	5,674.6	989.4	-261.5	1,001.1	3.00	0.00	
6,300.0	90.00	354.05	5,674.6	1,088.6	-274.4	1,100.7	3.00	0.00	
6,400.0	90.00	357.05	5,674.6	1,188.3	-282.2	1,200.7	3.00	0.00	
6,465.0	90.00	359.00	5,674.6	1,253.2	-284.5	1,265.7	3.00	0.00	7"
6,465.4	90.00	359.01	5,674.6	1,253.6	-284.5	1,266.0	3.00	0.00	EOT; 359.01°
6,500.0	90.00	359.01	5,674.6	1,288.2	-285.1	1,300.6	0.00	0.00	
6,600.0	90.00	359.01	5,674.6	1,388.2	-286.8	1,400.6	0.00	0.00	
6,700.0	90.00	359.01	5,674.7	1,488.2	-288.5	1,500.5	0.00	0.00	
6,800.0	90.00	359.01	5,674.7	1,588.2	-290.3	1,600.5	0.00	0.00	
6,900.0	90.00	359.01	5,674.7	1,688.1	-292.0	1,700.4	0.00	0.00	
7,000.0	90.00	359.01	5,674.7	1,788.1	-293.7	1,800.4	0.00	0.00	
7,100.0	90.00	359.01	5,674.7	1,888.1	-295.5	1,900.3	0.00	0.00	
7,200.0	90.00	359.01	5,674.7	1,988.1	-297.2	2,000.3	0.00	0.00	
7,300.0	90.00	359.01	5,674.7	2,088.1	-298.9	2,100.2	0.00	0.00	
7,400.0	90.00	359.01	5,674.7	2,188.1	-300.7	2,200.2	0.00	0.00	
7,500.0	90.00	359.01	5,674.7	2,288.1	-302.4	2,300.1	0.00	0.00	
7,600.0	90.00	359.01	5,674.7	2,388.0	-304.1	2,400.1	0.00	0.00	
7,700.0	90.00	359.01	5,674.7	2,488.0	-305.9	2,500.0	0.00	0.00	
7,800.0	90.00	359.01	5,674.7	2,588.0	-307.6	2,600.0	0.00	0.00	
7,900.0	90.00	359.01	5,674.7	2,688.0	-309.3	2,699.9	0.00	0.00	
8,000.0	90.00	359.01	5,674.7	2,788.0	-311.1	2,799.9	0.00	0.00	
8,100.0	90.00	359.01	5,674.7	2,888.0	-312.8	2,899.8	0.00	0.00	
8,200.0	90.00	359.01	5,674.7	2,988.0	-314.6	2,999.8	0.00	0.00	
8,300.0	90.00	359.01	5,674.7	3,087.9	-316.3	3,099.7	0.00	0.00	
8,400.0	90.00	359.01	5,674.7	3,187.9	-318.0	3,199.7	0.00	0.00	
8,500.0	90.00	359.01	5,674.7	3,287.9	-319.8	3,299.6	0.00	0.00	
8,600.0	90.00	359.01	5,674.7	3,387.9	-321.5	3,399.6	0.00	0.00	
8,700.0	90.00	359.01	5,674.8	3,487.9	-323.2	3,499.5	0.00	0.00	
8,800.0	90.00	359.01	5,674.8	3,587.9	-325.0	3,599.5	0.00	0.00	
8,900.0	90.00	359.01	5,674.8	3,687.8	-326.7	3,699.4	0.00	0.00	
9,000.0	90.00	359.01	5,674.8	3,787.8	-328.4	3,799.4	0.00	0.00	
9,100.0	90.00	359.01	5,674.8	3,887.8	-330.2	3,899.3	0.00	0.00	
9,200.0	90.00	359.01	5,674.8	3,987.8	-331.9	3,999.3	0.00	0.00	
9,300.0	90.00	359.01	5,674.8	4,087.8	-333.6	4,099.2	0.00	0.00	
9,400.0	90.00	359.01	5,674.8	4,187.8	-335.4	4,199.2	0.00	0.00	
9,500.0	90.00	359.01	5,674.8	4,287.8	-337.1	4,299.1	0.00	0.00	
9,600.0	90.00	359.01	5,674.8	4,387.7	-338.8	4,399.1	0.00	0.00	
9,700.0	90.00	359.01	5,674.8	4,487.7	-340.6	4,499.0	0.00	0.00	
9,800.0	90.00	359.01	5,674.8	4,587.7	-342.3	4,599.0	0.00	0.00	
9,900.0	90.00	359.01	5,674.8	4,687.7	-344.0	4,698.9	0.00	0.00	

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Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft	Build Rate (°/100u	Comments / Formations
10,000.0	90.00	359.01	5,674.8	4,787.7	-345.8	4,798.9	0.00	0.00	
10,100.0	90.00	359.01	5,674.8	4,887.7	-347.5	4,898.8	0.00	0.00	
10,200.0	90.00	359.01	5,674.8	4,987.7	-349.2	4,998.8	0.00	0.00	
10,300.0	90.00	359.01	5,674.8	5,087.6	-351.0	5,098.7	0.00	0.00	
10,400.0	90.00	359.01	5,674.8	5,187.6	-352.7	5,198.7	0.00	0.00	
10,500.0	90.00	359.01	5,674.8	5,287.6	-354.4	5,298.6	0.00	0.00	
10,600.0	90.00	359.01	5,674.8	5,387.6	-356.2	5,398.6	0.00	0.00	
10,700.0	90.00	359.01	5,674.9	5,487.6	-357.9	5,498.5	0.00	0.00	
10,800.0	90.00	359.01	5,674.9	5,587.6	-359.7	5,598.5	0.00	0.00	
10,900.0	90.00	359.01	5,674.9	5,687.5	-361.4	5,698.4	0.00	0.00	
11,000.0	90.00	359.01	5,674.9	5,787.5	-363.1	5,798.4	0.00	0.00	
11,100.0	90.00	359.01	5,674.9	5,887.5	-364.9	5,898.3	0.00	0.00	
11,200.0	90.00	359.01	5,674.9	5,987.5	-366.6	5,998.3	0.00	0.00	
11,300.0	90.00	359.01	5,674.9	6,087.5	-368.3	6,098.2	0.00	0.00	
11,400.0	90.00	359.01	5,674.9	6,187.5	-370.1	6,198.2	0.00	0.00	
11,500.0	90.00	359.01	5,674.9	6,287.5	-371.8	6,298.1	0.00	0.00	
11,600.0	90.00	359.01	5,674.9	6,387.4	-373.5	6,398.1	0.00	0.00	
11,700.0	90.00	359.01	5,674.9	6,487.4	-375.3	6,498.0	0.00	0.00	
11,800.0	90.00	359.01	5,674.9	6,587.4	-377.0	6,598.0	0.00	0.00	
11,900.0	90.00	359.01	5,674.9	6,687.4	-378.7	6,697.9	0.00	0.00	
12,000.0	90.00	359.01	5,674.9	6,787.4	-380.5	6,797.9	0.00	0.00	
12,100.0	90.00	359.01	5,674.9	6,887.4	-382.2	6,897.8	0.00	0.00	
12,200.0	90.00	359.01	5,674.9	6,987.3	-383.9	6,997.8	0.00	0.00	
12,300.0	90.00	359.01	5,674.9	7,087.3	-385.7	7,097.7	0.00	0.00	
12,400.0	90.00	359.01	5,674.9	7,187.3	-387.4	7,197.7	0.00	0.00	
12,500.0	90.00	359.01	5,674.9	7,287.3	-389.1	7,297.6	0.00	0.00	
12,600.0	90.00	359.01	5,674.9	7,387.3	-390.9	7,397.6	0.00	0.00	
12,700.0	90.00	359.01	5,675.0	7,487.3	-392.6	7,497.5	0.00	0.00	
12,800.0	90.00	359.01	5,675.0	7,587.3	-394.3	7,597.5	0.00	0.00	
12,900.0	90.00	359.01	5,675.0	7,687.2	-396.1	7,697.4	0.00	0.00	
13,000.0	90.00	359.01	5,675.0	7,787.2	-397.8	7,797.4	0.00	0.00	
13,100.0	90.00	359.01	5,675.0	7,887.2	-399.5	7,897.3	0.00	0.00	
13,200.0	90.00	359.01	5,675.0	7,987.2	-401.3	7,997.3	0.00	0.00	
13,300.0	90.00	359.01	5,675.0	8,087.2	-403.0	8,097.2	0.00	0.00	
13,400.0	90.00	359.01	5,675.0	8,187.2	-404.7	8,197.2	0.00	0.00	
13,473.2	90.00	359.01	5,675.0	8,260.4	-406.0	8,270.3	0.00	0.00	PBHL @ 13473' MD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
26L-2302B TGT	0.00	0.00	5,675.0	7,760.8	-386.7	1,549,460.00	3,459,257.25	40.829850	-103.840403
- plan misses target center by 10.6usft at 12973.3usft MD (5675.0 TVD, 7760.6 N, -397.3 E)									
- Point									
26L-2302B PBHL	0.00	0.00	5,675.0	8,260.4	-406.0	1,549,959.60	3,459,237.94	40.831222	-103.840439
- plan hits target center									
- Point									

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Company:	Whiting Petroleum Corporation	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Project:	Weld County, CO	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site:	S26-T10N-R58W	**North Reference:**	Grid
Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,465.0	5,674.6	7"	0	0

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,598.7	5,540.0	Top Niobrara		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.0	1,000.0	0.0	0.0	KOP @ 1000' MD
1,200.0	1,199.8	6.7	-1.9	EOB; 4°
5,200.0	5,190.1	275.6	-76.4	Start 11° Build
5,981.8	5,674.6	776.3	-215.3	LP @ 5981' MD
6,465.4	5,674.6	1,253.6	-284.5	EOT; 359.01°
13,473.2	5,675.0	8,260.4	-406.0	PBHL @ 13473' MD

WHITING WHITING PETROLEUM CORPORATION

Whiting Petroleum Corporation

Weld County, CO
S26-T10N-R58W
Razor #26L-2302B
HZ
Plan #2

Anticollision Report

30 May, 2013

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 5/30/2013

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	13,473.2	Plan #2 (HZ)	ISCWSA MWD	MWD - ISCWSA

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
S26-T10N-R58W						
Razor #26J-2633L - HZ - Plan #1						Out of range
Razor #26K-2305A - HZ - Plan #1						Out of range
Razor #26K-2306B - HZ - Plan #1						Out of range
Razor #26K-2307A - HZ - Plan #1						Out of range
Razor #26K-2308B - HZ - Plan #1						Out of range
Razor #26K-3505A - HZ - Plan #1						Out of range
Razor #26K-3507A - HZ - Plan #1						Out of range
Razor #26K-3508B - HZ - Plan #1						Out of range
Razor #26L-2301A - HZ - Plan #2	466.7	466.7	82.1	80.2	44.703	CC
Razor #26L-2301A - HZ - Plan #2	13,473.2	13,352.3	341.4	36.3	1.119	Level 2, ES, SF
Razor #26L-2303A - HZ - Plan #2	966.7	966.7	124.5	120.4	30.493	CC
Razor #26L-2303A - HZ - Plan #2	13,473.2	13,285.9	341.4	35.9	1.117	Level 2, ES, SF
Razor #26L-2304B - HZ - Plan #1	566.7	566.7	66.2	63.9	28.949	CC
Razor #26L-2304B - HZ - Plan #1	600.0	600.0	66.2	63.7	27.168	ES
Razor #26L-2304B - HZ - Plan #1	5,200.0	5,197.0	290.0	265.2	11.697	SF
Razor #26L-3501A - HZ - Plan #1	1,577.1	1,577.2	16.3	9.5	2.409	CC, ES, SF
Razor #26L-3502B - HZ - Plan #1	1,000.0	1,000.0	33.2	29.0	7.847	CC, ES
Razor #26L-3502B - HZ - Plan #1	1,100.0	1,100.0	33.7	29.0	7.198	SF
Razor #26L-3503A - HZ - Plan #1	500.0	500.0	100.0	98.1	50.378	CC
Razor #26L-3503A - HZ - Plan #1	700.0	699.6	100.3	97.5	35.382	ES
Razor #26L-3503A - HZ - Plan #1	1,700.0	1,693.4	135.2	127.9	18.340	SF
Razor #26L-3504B - HZ - Plan #1	1,000.0	1,000.0	99.4	95.1	23.475	CC, ES
Razor #26L-3504B - HZ - Plan #1	1,200.0	1,193.0	107.8	102.7	21.266	SF
Razor 26-3524H (Existing) - Existing - SURVEYs						Out of range
Razor Federal #26I-2313A - HZ - Plan #1						Out of range
Razor Federal #26I-2314B - HZ - Plan #1						Out of range
Razor Federal #26I-2315A - HZ - Plan #1						Out of range
Razor Federal #26I-2316B - HZ - Plan #1						Out of range
Razor Federal #26I-3513A - HZ - Plan #1						Out of range
Razor Federal #26I-3514B - HZ - Plan #1						Out of range
Razor Federal #26I-3515A - HZ - Plan #1						Out of range
Razor Federal #26I-3516B - HZ - Plan #1						Out of range
Razor Federal #26J-2309A - HZ - Plan #1						Out of range
Razor Federal #26J-2310B - HZ - Plan #1						Out of range
Razor Federal #26J-2311A - HZ - Plan #1						Out of range
Razor Federal #26J-2312B - HZ - Plan #1						Out of range
Razor Federal #26J-3509A - HZ - Plan #1						Out of range
Razor Federal #26J-3510B - HZ - Plan #1						Out of range
Razor Federal #26J-3511A - HZ - Plan #1						Out of range
Razor Federal #26J-3512B - HZ - Plan #1						Out of range

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	22.80	75.7	31.8	82.1				
100.0	100.0	100.0	100.0	0.1	0.1	22.80	75.7	31.8	82.1	81.9	0.19	437.305	
200.0	200.0	200.0	200.0	0.3	0.3	22.80	75.7	31.8	82.1	81.4	0.64	128.801	
300.0	300.0	300.0	300.0	0.5	0.5	22.80	75.7	31.8	82.1	81.0	1.09	75.522	
400.0	400.0	400.0	400.0	0.8	0.8	22.80	75.7	31.8	82.1	80.5	1.54	53.424	
466.7	466.7	466.7	466.7	0.9	0.9	22.80	75.7	31.8	82.1	80.2	1.84	44.703	CC
500.0	500.0	500.0	500.0	1.0	1.0	22.80	75.7	31.8	82.1	80.1	1.99	41.330	
600.0	600.0	598.1	598.1	1.2	1.2	21.93	77.2	31.1	83.2	80.8	2.43	34.240	
700.0	700.0	696.0	695.8	1.4	1.4	19.47	81.7	28.9	86.7	83.9	2.88	30.133	
800.0	800.0	795.7	795.3	1.7	1.7	16.37	87.9	25.8	91.8	88.4	3.34	27.500	
900.0	900.0	895.4	894.8	1.9	1.9	13.59	94.2	22.8	97.0	93.2	3.80	25.549	
1,000.0	1,000.0	995.2	994.3	2.1	2.2	11.11	100.4	19.7	102.5	98.3	4.26	24.062	
1,100.0	1,100.0	1,095.0	1,093.9	2.3	2.4	24.73	106.7	16.7	106.6	101.9	4.70	22.653	
1,200.0	1,199.8	1,195.0	1,193.6	2.6	2.6	23.75	113.0	13.6	107.5	102.4	5.16	20.841	
1,300.0	1,299.6	1,295.0	1,293.4	2.8	2.9	23.15	119.2	10.6	106.9	101.3	5.62	19.019	
1,400.0	1,399.4	1,395.0	1,393.1	3.0	3.1	22.54	125.5	7.5	106.3	100.2	6.09	17.473	
1,500.0	1,499.1	1,495.0	1,492.9	3.3	3.4	21.93	131.8	4.4	105.7	99.2	6.55	16.145	
1,600.0	1,598.9	1,595.0	1,592.6	3.5	3.7	21.31	138.0	1.4	105.2	98.1	7.01	14.993	
1,700.0	1,698.6	1,695.0	1,692.4	3.7	3.9	20.69	144.3	-1.7	104.6	97.1	7.48	13.985	
1,800.0	1,798.4	1,795.0	1,792.1	4.0	4.2	20.06	150.6	-4.7	104.0	96.1	7.94	13.097	
1,900.0	1,898.1	1,894.9	1,891.9	4.2	4.4	19.42	156.9	-7.8	103.5	95.1	8.41	12.309	
2,000.0	1,997.9	1,994.9	1,991.6	4.5	4.7	18.77	163.1	-10.8	103.0	94.1	8.87	11.605	
2,100.0	2,097.6	2,094.9	2,091.4	4.7	4.9	18.12	169.4	-13.9	102.5	93.1	9.34	10.973	
2,200.0	2,197.4	2,194.9	2,191.1	5.0	5.2	17.46	175.7	-17.0	102.0	92.2	9.80	10.403	
2,300.0	2,297.2	2,294.9	2,290.9	5.2	5.4	16.80	181.9	-20.0	101.5	91.2	10.26	9.887	
2,400.0	2,396.9	2,394.9	2,390.6	5.5	5.7	16.12	188.2	-23.1	101.0	90.3	10.73	9.416	
2,500.0	2,496.7	2,494.9	2,490.4	5.7	5.9	15.45	194.5	-26.1	100.6	89.4	11.19	8.987	
2,600.0	2,596.4	2,594.9	2,590.1	6.0	6.2	14.76	200.7	-29.2	100.1	88.5	11.65	8.593	
2,700.0	2,696.2	2,694.9	2,689.9	6.2	6.5	14.07	207.0	-32.3	99.7	87.6	12.11	8.230	
2,800.0	2,795.9	2,794.9	2,789.6	6.5	6.7	13.38	213.3	-35.3	99.3	86.7	12.57	7.896	
2,900.0	2,895.7	2,894.9	2,889.4	6.7	7.0	12.68	219.5	-38.4	98.9	85.8	13.03	7.587	
3,000.0	2,995.5	2,994.9	2,989.1	7.0	7.2	11.97	225.8	-41.4	98.5	85.0	13.49	7.301	
3,100.0	3,095.2	3,094.8	3,088.9	7.2	7.5	11.26	232.1	-44.5	98.1	84.2	13.95	7.034	
3,200.0	3,195.0	3,194.8	3,188.6	7.5	7.7	10.54	238.3	-47.5	97.8	83.4	14.40	6.786	
3,300.0	3,294.7	3,294.8	3,288.3	7.7	8.0	9.82	244.6	-50.6	97.4	82.6	14.86	6.555	
3,400.0	3,394.5	3,394.8	3,388.1	8.0	8.3	9.09	250.9	-53.7	97.1	81.8	15.32	6.338	
3,500.0	3,494.2	3,494.8	3,487.8	8.3	8.5	8.36	257.2	-56.7	96.8	81.0	15.77	6.136	
3,600.0	3,594.0	3,594.8	3,587.6	8.5	8.8	7.62	263.4	-59.8	96.5	80.3	16.23	5.946	
3,700.0	3,693.7	3,694.8	3,687.3	8.8	9.0	6.88	269.7	-62.8	96.2	79.5	16.68	5.767	
3,800.0	3,793.5	3,794.8	3,787.1	9.0	9.3	6.14	276.0	-65.9	96.0	78.8	17.14	5.599	
3,900.0	3,893.3	3,894.8	3,886.8	9.3	9.5	5.39	282.2	-68.9	95.7	78.1	17.59	5.440	
4,000.0	3,993.0	3,994.8	3,986.6	9.5	9.8	4.63	288.5	-72.0	95.5	77.4	18.05	5.291	
4,100.0	4,092.8	4,094.8	4,086.3	9.8	10.1	3.88	294.8	-75.1	95.3	76.8	18.50	5.150	
4,200.0	4,192.5	4,194.8	4,186.1	10.0	10.3	3.12	301.0	-78.1	95.1	76.1	18.95	5.016	
4,300.0	4,292.3	4,294.8	4,285.8	10.3	10.6	2.36	307.3	-81.2	94.9	75.5	19.41	4.890	
4,400.0	4,392.0	4,394.7	4,385.6	10.5	10.8	1.59	313.6	-84.2	94.7	74.9	19.86	4.770	
4,500.0	4,491.8	4,494.7	4,485.3	10.8	11.1	0.82	319.8	-87.3	94.6	74.3	20.32	4.657	
4,600.0	4,591.6	4,594.7	4,585.1	11.1	11.3	0.05	326.1	-90.3	94.5	73.7	20.77	4.549	
4,700.0	4,691.3	4,694.7	4,684.8	11.3	11.6	-0.72	332.4	-93.4	94.4	73.1	21.22	4.446	
4,800.0	4,791.1	4,794.7	4,784.6	11.6	11.9	-1.49	338.7	-96.5	94.3	72.6	21.68	4.349	
4,900.0	4,890.8	4,894.7	4,884.3	11.8	12.1	-2.27	344.9	-99.5	94.2	72.1	22.13	4.256	
5,000.0	4,990.6	4,994.7	4,984.1	12.1	12.4	-3.04	351.2	-102.6	94.1	71.6	22.59	4.168	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,090.3	5,094.7	5,083.8	12.3	12.6	-3.82	357.5	-105.6	94.1	71.1	23.04	4.084	
5,105.5	5,095.9	5,100.2	5,089.3	12.3	12.6	-3.86	357.8	-105.8	94.1	71.0	23.07	4.080	
5,200.0	5,190.1	5,181.9	5,170.3	12.6	12.9	-4.77	367.0	-110.3	99.4	75.9	23.47	4.235	
5,250.0	5,239.7	5,223.4	5,210.6	12.7	13.1	-5.47	375.8	-114.6	105.5	82.0	23.57	4.478	
5,300.0	5,288.6	5,264.5	5,249.6	12.9	13.2	-6.43	387.5	-120.3	110.9	87.4	23.47	4.724	
5,350.0	5,336.2	5,305.3	5,287.2	13.1	13.5	-7.62	401.7	-127.2	115.4	92.2	23.19	4.979	
5,400.0	5,382.1	5,350.0	5,326.8	13.4	13.7	-9.17	420.3	-136.3	119.3	96.6	22.74	5.247	
5,450.0	5,425.9	5,386.3	5,357.5	13.7	14.0	-10.62	437.6	-144.7	122.3	100.2	22.11	5.531	
5,500.0	5,467.2	5,426.4	5,389.9	14.0	14.3	-12.44	458.9	-155.1	124.7	103.3	21.39	5.830	
5,550.0	5,505.7	5,466.5	5,420.3	14.4	14.6	-14.48	482.4	-166.6	126.4	105.8	20.60	6.138	
5,600.0	5,540.8	5,506.4	5,448.5	14.9	15.0	-16.74	507.8	-178.9	127.6	107.8	19.83	6.435	
5,650.0	5,572.5	5,550.0	5,476.7	15.4	15.5	-19.48	537.6	-193.5	128.3	109.1	19.24	6.670	
5,657.0	5,576.6	5,550.0	5,476.7	15.4	15.5	-19.48	537.6	-193.5	128.3	109.2	19.08	6.724	
5,700.0	5,600.2	5,586.2	5,498.0	15.9	15.9	-21.99	563.9	-206.3	128.5	109.7	18.81	6.830	
5,750.0	5,623.9	5,626.1	5,519.0	16.5	16.3	-25.01	594.4	-221.2	128.4	109.6	18.87	6.808	
5,800.0	5,643.2	5,666.1	5,537.4	17.1	16.8	-28.31	626.3	-236.8	128.2	108.7	19.49	6.578	
5,850.0	5,658.0	5,706.3	5,553.1	17.8	17.4	-31.88	659.5	-253.0	127.9	107.1	20.75	6.162	
5,900.0	5,668.2	5,750.0	5,566.9	18.5	18.0	-36.04	696.8	-271.2	127.6	104.8	22.82	5.592	
5,925.4	5,671.6	5,767.3	5,571.4	18.9	18.3	-37.77	711.8	-278.5	127.5	103.7	23.84	5.348	
5,950.0	5,673.7	5,787.3	5,575.9	19.3	18.6	-39.83	729.4	-287.0	127.5	102.4	25.12	5.077	
5,981.8	5,674.6	5,813.4	5,580.6	19.7	19.0	-42.56	752.4	-298.3	127.7	100.7	26.91	4.743	
6,000.0	5,674.6	5,828.4	5,582.7	20.0	19.2	-44.11	765.7	-304.8	128.1	100.1	27.98	4.578	
6,100.0	5,674.6	5,915.5	5,587.0	21.4	20.6	-50.71	843.9	-342.8	140.7	107.7	32.97	4.267	
6,200.0	5,674.6	6,019.4	5,587.0	22.9	22.2	-55.95	938.9	-384.7	159.4	121.9	37.50	4.252	
6,300.0	5,674.6	6,124.7	5,587.0	24.4	23.8	-60.05	1,037.4	-422.0	179.0	137.5	41.57	4.306	
6,400.0	5,674.6	6,231.5	5,587.0	25.9	25.5	-63.30	1,139.3	-454.1	199.1	153.7	45.31	4.393	
6,465.4	5,674.6	6,302.0	5,587.0	26.9	26.7	-65.07	1,207.5	-472.2	212.2	164.6	47.60	4.459	
6,500.0	5,674.6	6,339.8	5,587.0	27.5	27.3	-65.97	1,244.2	-480.8	218.9	170.0	48.98	4.470	
6,600.0	5,674.6	6,450.4	5,587.0	29.1	29.1	-67.89	1,352.8	-501.9	235.0	182.1	52.84	4.447	
6,700.0	5,674.7	6,562.9	5,587.0	30.8	31.0	-69.04	1,464.3	-516.9	245.8	189.2	56.57	4.345	
6,800.0	5,674.7	6,676.6	5,587.0	32.5	32.8	-69.57	1,577.7	-525.4	251.1	191.0	60.17	4.173	
6,900.0	5,674.7	6,779.7	5,587.0	34.2	34.5	-69.70	1,680.7	-528.8	252.6	189.1	63.51	3.977	
7,000.0	5,674.7	6,879.7	5,587.0	36.0	36.1	-69.81	1,780.6	-531.9	253.9	187.1	66.84	3.799	
7,100.0	5,674.7	6,979.7	5,587.0	37.7	37.8	-69.91	1,880.6	-535.1	255.3	185.1	70.20	3.636	
7,200.0	5,674.7	7,079.7	5,587.0	39.5	39.5	-70.02	1,980.5	-538.2	256.6	183.0	73.59	3.487	
7,300.0	5,674.7	7,179.7	5,587.0	41.3	41.2	-70.13	2,080.5	-541.4	257.9	180.9	77.02	3.349	
7,400.0	5,674.7	7,279.7	5,587.0	43.1	42.9	-70.23	2,180.4	-544.5	259.2	178.8	80.47	3.222	
7,500.0	5,674.7	7,379.7	5,587.0	44.9	44.6	-70.34	2,280.3	-547.7	260.6	176.6	83.94	3.104	
7,600.0	5,674.7	7,479.7	5,587.0	46.7	46.4	-70.44	2,380.3	-550.8	261.9	174.5	87.43	2.996	
7,700.0	5,674.7	7,579.6	5,587.0	48.6	48.2	-70.54	2,480.2	-554.0	263.2	172.3	90.95	2.894	
7,800.0	5,674.7	7,679.6	5,587.0	50.4	50.0	-70.64	2,580.2	-557.1	264.6	170.1	94.48	2.800	
7,900.0	5,674.7	7,779.6	5,587.0	52.3	51.7	-70.74	2,680.1	-560.3	265.9	167.9	98.03	2.713	
8,000.0	5,674.7	7,879.6	5,587.0	54.1	53.5	-70.84	2,780.0	-563.4	267.3	165.7	101.59	2.631	
8,100.0	5,674.7	7,979.6	5,587.0	56.0	55.4	-70.94	2,880.0	-566.6	268.6	163.4	105.16	2.554	
8,200.0	5,674.7	8,079.6	5,587.0	57.8	57.2	-71.04	2,979.9	-569.7	269.9	161.2	108.75	2.482	
8,300.0	5,674.7	8,179.6	5,587.0	59.7	59.0	-71.13	3,079.9	-572.9	271.3	158.9	112.34	2.415	
8,400.0	5,674.7	8,279.6	5,587.0	61.5	60.8	-71.23	3,179.8	-576.0	272.6	156.7	115.95	2.351	
8,500.0	5,674.7	8,379.6	5,587.0	63.4	62.7	-71.32	3,279.7	-579.2	274.0	154.4	119.57	2.291	
8,600.0	5,674.7	8,479.6	5,587.0	65.3	64.5	-71.41	3,379.7	-582.3	275.3	152.1	123.19	2.235	
8,700.0	5,674.8	8,579.5	5,587.0	67.1	66.3	-71.51	3,479.6	-585.4	276.6	149.8	126.83	2.181	
8,800.0	5,674.8	8,679.5	5,587.0	69.0	68.2	-71.60	3,579.6	-588.6	278.0	147.5	130.47	2.131	
8,900.0	5,674.8	8,779.5	5,587.0	70.9	70.1	-71.69	3,679.5	-591.7	279.3	145.2	134.12	2.083	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2301A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	5,674.8	8,879.5	5,587.0	72.8	71.9	-71.78	3,779.4	-594.9	280.7	142.9	137.78	2.037	
9,100.0	5,674.8	8,979.5	5,587.0	74.7	73.8	-71.87	3,879.4	-598.0	282.0	140.6	141.44	1.994	
9,200.0	5,674.8	9,079.5	5,587.0	76.5	75.6	-71.95	3,979.3	-601.2	283.4	138.2	145.11	1.953	
9,300.0	5,674.8	9,179.5	5,587.0	78.4	77.5	-72.04	4,079.3	-604.3	284.7	135.9	148.78	1.914	
9,400.0	5,674.8	9,279.5	5,587.0	80.3	79.4	-72.13	4,179.2	-607.5	286.1	133.6	152.46	1.876	
9,500.0	5,674.8	9,379.5	5,587.0	82.2	81.2	-72.21	4,279.1	-610.6	287.4	131.3	156.15	1.841	
9,600.0	5,674.8	9,479.5	5,587.0	84.1	83.1	-72.30	4,379.1	-613.8	288.7	128.9	159.84	1.807	
9,700.0	5,674.8	9,579.4	5,587.0	86.0	85.0	-72.38	4,479.0	-616.9	290.1	126.6	163.53	1.774	
9,800.0	5,674.8	9,679.4	5,587.0	87.9	86.9	-72.47	4,579.0	-620.1	291.4	124.2	167.23	1.743	
9,900.0	5,674.8	9,779.4	5,587.0	89.8	88.8	-72.55	4,678.9	-623.2	292.8	121.9	170.94	1.713	
10,000.0	5,674.8	9,879.4	5,587.0	91.7	90.6	-72.63	4,778.8	-626.4	294.1	119.5	174.64	1.684	
10,100.0	5,674.8	9,979.4	5,587.0	93.6	92.5	-72.71	4,878.8	-629.5	295.5	117.1	178.35	1.657	
10,200.0	5,674.8	10,079.4	5,587.0	95.5	94.4	-72.79	4,978.7	-632.7	296.9	114.8	182.07	1.630	
10,300.0	5,674.8	10,179.4	5,587.0	97.4	96.3	-72.87	5,078.7	-635.8	298.2	112.4	185.79	1.605	
10,400.0	5,674.8	10,279.4	5,587.0	99.3	98.2	-72.95	5,178.6	-639.0	299.6	110.0	189.51	1.581	
10,500.0	5,674.8	10,379.4	5,587.0	101.2	100.1	-73.03	5,278.5	-642.1	300.9	107.7	193.24	1.557	
10,600.0	5,674.8	10,479.4	5,587.0	103.1	102.0	-73.10	5,378.5	-645.3	302.3	105.3	196.97	1.535	
10,700.0	5,674.9	10,579.3	5,587.0	105.0	103.9	-73.18	5,478.4	-648.4	303.6	102.9	200.70	1.513	
10,800.0	5,674.9	10,679.3	5,587.0	106.9	105.7	-73.26	5,578.4	-651.6	305.0	100.5	204.43	1.492	Level 3
10,900.0	5,674.9	10,779.3	5,587.0	108.8	107.6	-73.33	5,678.3	-654.7	306.3	98.2	208.17	1.472	Level 3
11,000.0	5,674.9	10,879.3	5,587.0	110.7	109.5	-73.41	5,778.2	-657.8	307.7	95.8	211.91	1.452	Level 3
11,100.0	5,674.9	10,979.3	5,587.0	112.6	111.4	-73.48	5,878.2	-661.0	309.0	93.4	215.66	1.433	Level 3
11,200.0	5,674.9	11,079.3	5,587.0	114.5	113.3	-73.55	5,978.1	-664.1	310.4	91.0	219.40	1.415	Level 3
11,300.0	5,674.9	11,179.3	5,587.0	116.4	115.2	-73.63	6,078.1	-667.3	311.8	88.6	223.15	1.397	Level 3
11,400.0	5,674.9	11,279.3	5,587.0	118.3	117.1	-73.70	6,178.0	-670.4	313.1	86.2	226.90	1.380	Level 3
11,500.0	5,674.9	11,379.3	5,587.0	120.2	119.0	-73.77	6,277.9	-673.6	314.5	83.8	230.65	1.363	Level 3
11,600.0	5,674.9	11,479.3	5,587.0	122.1	120.9	-73.84	6,377.9	-676.7	315.8	81.4	234.41	1.347	Level 3
11,700.0	5,674.9	11,579.2	5,587.0	124.0	122.8	-73.91	6,477.8	-679.9	317.2	79.0	238.17	1.332	Level 3
11,800.0	5,674.9	11,679.2	5,587.0	125.9	124.7	-73.98	6,577.8	-683.0	318.6	76.6	241.93	1.317	Level 3
11,900.0	5,674.9	11,779.2	5,587.0	127.8	126.6	-74.05	6,677.7	-686.2	319.9	74.2	245.69	1.302	Level 3
12,000.0	5,674.9	11,879.2	5,587.0	129.7	128.5	-74.12	6,777.7	-689.3	321.3	71.8	249.45	1.288	Level 3
12,100.0	5,674.9	11,979.2	5,587.0	131.6	130.4	-74.18	6,877.6	-692.5	322.6	69.4	253.22	1.274	Level 3
12,200.0	5,674.9	12,079.2	5,587.0	133.6	132.4	-74.25	6,977.5	-695.6	324.0	67.0	256.99	1.261	Level 3
12,300.0	5,674.9	12,179.2	5,587.0	135.5	134.3	-74.32	7,077.5	-698.8	325.4	64.6	260.76	1.248	Level 2
12,400.0	5,674.9	12,279.2	5,587.0	137.4	136.2	-74.38	7,177.4	-701.9	326.7	62.2	264.53	1.235	Level 2
12,500.0	5,674.9	12,379.2	5,587.0	139.3	138.1	-74.45	7,277.4	-705.1	328.1	59.8	268.30	1.223	Level 2
12,600.0	5,674.9	12,479.2	5,587.0	141.2	140.0	-74.51	7,377.3	-708.2	329.5	57.4	272.08	1.211	Level 2
12,700.0	5,675.0	12,579.1	5,587.0	143.1	141.9	-74.58	7,477.2	-711.4	330.8	55.0	275.85	1.199	Level 2
12,800.0	5,675.0	12,679.1	5,587.0	145.0	143.8	-74.64	7,577.2	-714.5	332.2	52.6	279.63	1.188	Level 2
12,900.0	5,675.0	12,779.1	5,587.0	146.9	145.7	-74.71	7,677.1	-717.7	333.5	50.1	283.41	1.177	Level 2
13,000.0	5,675.0	12,879.1	5,587.0	148.8	147.6	-74.77	7,777.1	-720.8	334.9	47.7	287.19	1.166	Level 2
13,100.0	5,675.0	12,979.1	5,587.0	150.7	149.5	-74.83	7,877.0	-724.0	336.3	45.3	290.97	1.156	Level 2
13,200.0	5,675.0	13,079.1	5,587.0	152.7	151.4	-74.89	7,976.9	-727.1	337.6	42.9	294.76	1.146	Level 2
13,300.0	5,675.0	13,179.1	5,587.0	154.6	153.3	-74.96	8,076.9	-730.2	339.0	40.5	298.54	1.136	Level 2
13,400.0	5,675.0	13,279.1	5,587.0	156.5	155.2	-75.02	8,176.8	-733.4	340.4	38.1	302.33	1.126	Level 2
13,473.2	5,675.0	13,352.3	5,587.0	157.9	156.6	-75.06	8,250.0	-735.7	341.4	36.3	305.10	1.119	Level 2, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	51.88	76.9	98.0	124.5				
100.0	100.0	100.0	100.0	0.1	0.1	51.88	76.9	98.0	124.5	124.3	0.19	663.482	
200.0	200.0	200.0	200.0	0.3	0.3	51.88	76.9	98.0	124.5	123.9	0.64	195.417	
300.0	300.0	300.0	300.0	0.5	0.5	51.88	76.9	98.0	124.5	123.4	1.09	114.583	
400.0	400.0	400.0	400.0	0.8	0.8	51.88	76.9	98.0	124.5	123.0	1.54	81.055	
500.0	500.0	500.0	500.0	1.0	1.0	51.88	76.9	98.0	124.5	122.5	1.99	62.706	
600.0	600.0	600.0	600.0	1.2	1.2	51.88	76.9	98.0	124.5	122.1	2.44	51.131	
700.0	700.0	700.0	700.0	1.4	1.4	51.88	76.9	98.0	124.5	121.6	2.88	43.164	
800.0	800.0	800.0	800.0	1.7	1.7	51.88	76.9	98.0	124.5	121.2	3.33	37.345	
900.0	900.0	900.0	900.0	1.9	1.9	51.88	76.9	98.0	124.5	120.7	3.78	32.908	
966.7	966.7	966.7	966.7	2.0	2.0	51.88	76.9	98.0	124.5	120.4	4.08	30.493	CC
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	51.88	76.9	98.0	124.5	120.3	4.23	29.414	
1,100.0	1,100.0	1,097.6	1,097.6	2.3	2.3	67.46	78.5	97.8	124.8	120.1	4.68	26.691	
1,200.0	1,199.8	1,195.2	1,195.1	2.6	2.6	67.71	83.5	97.5	125.7	120.5	5.12	24.547	
1,300.0	1,299.6	1,295.1	1,294.7	2.8	2.8	68.01	90.5	97.0	126.9	121.3	5.58	22.757	
1,400.0	1,399.4	1,395.1	1,394.5	3.0	3.0	68.30	97.4	96.5	128.1	122.1	6.04	21.213	
1,500.0	1,499.1	1,495.1	1,494.2	3.3	3.3	68.59	104.4	96.0	129.4	122.9	6.51	19.871	
1,600.0	1,598.9	1,595.1	1,594.0	3.5	3.5	68.87	111.3	95.6	130.6	123.6	6.99	18.698	
1,700.0	1,698.6	1,695.1	1,693.7	3.7	3.7	69.14	118.3	95.1	131.9	124.4	7.46	17.666	
1,800.0	1,798.4	1,795.1	1,793.4	4.0	4.0	69.41	125.2	94.6	133.1	125.2	7.95	16.751	
1,900.0	1,898.1	1,895.0	1,893.2	4.2	4.2	69.67	132.2	94.1	134.4	125.9	8.43	15.937	
2,000.0	1,997.9	1,995.0	1,992.9	4.5	4.5	69.93	139.2	93.6	135.6	126.7	8.92	15.207	
2,100.0	2,097.6	2,095.0	2,092.7	4.7	4.7	70.19	146.1	93.1	136.9	127.5	9.41	14.550	
2,200.0	2,197.4	2,195.0	2,192.4	5.0	5.0	70.44	153.1	92.6	138.2	128.3	9.90	13.955	
2,300.0	2,297.2	2,295.0	2,292.2	5.2	5.2	70.68	160.0	92.1	139.4	129.0	10.39	13.415	
2,400.0	2,396.9	2,395.0	2,391.9	5.5	5.5	70.92	167.0	91.7	140.7	129.8	10.89	12.923	
2,500.0	2,496.7	2,495.0	2,491.7	5.7	5.7	71.16	173.9	91.2	142.0	130.6	11.38	12.472	
2,600.0	2,596.4	2,595.0	2,591.4	6.0	6.0	71.39	180.9	90.7	143.2	131.4	11.88	12.058	
2,700.0	2,696.2	2,695.0	2,691.2	6.2	6.2	71.62	187.9	90.2	144.5	132.1	12.38	11.676	
2,800.0	2,795.9	2,795.0	2,790.9	6.5	6.5	71.85	194.8	89.7	145.8	132.9	12.87	11.323	
2,900.0	2,895.7	2,895.0	2,890.7	6.7	6.7	72.07	201.8	89.2	147.1	133.7	13.37	10.996	
3,000.0	2,995.5	2,994.9	2,990.4	7.0	7.0	72.28	208.7	88.7	148.3	134.5	13.87	10.692	
3,100.0	3,095.2	3,094.9	3,090.2	7.2	7.2	72.50	215.7	88.3	149.6	135.2	14.37	10.409	
3,200.0	3,195.0	3,194.9	3,189.9	7.5	7.5	72.71	222.7	87.8	150.9	136.0	14.88	10.145	
3,300.0	3,294.7	3,294.9	3,289.6	7.7	7.7	72.91	229.6	87.3	152.2	136.8	15.38	9.897	
3,400.0	3,394.5	3,394.9	3,389.4	8.0	8.0	73.11	236.6	86.8	153.5	137.6	15.88	9.665	
3,500.0	3,494.2	3,494.9	3,489.1	8.3	8.2	73.31	243.5	86.3	154.8	138.4	16.38	9.447	
3,600.0	3,594.0	3,594.9	3,588.9	8.5	8.5	73.51	250.5	85.8	156.1	139.2	16.89	9.242	
3,700.0	3,693.7	3,694.9	3,688.6	8.8	8.7	73.70	257.4	85.3	157.4	140.0	17.39	9.049	
3,800.0	3,793.5	3,794.9	3,788.4	9.0	9.0	73.89	264.4	84.8	158.7	140.8	17.89	8.866	
3,900.0	3,893.3	3,894.9	3,888.1	9.3	9.3	74.08	271.4	84.4	160.0	141.6	18.40	8.694	
4,000.0	3,993.0	3,994.8	3,987.9	9.5	9.5	74.26	278.3	83.9	161.3	142.4	18.90	8.530	
4,100.0	4,092.8	4,094.8	4,087.6	9.8	9.8	74.44	285.3	83.4	162.6	143.2	19.41	8.375	
4,200.0	4,192.5	4,194.8	4,187.4	10.0	10.0	74.62	292.2	82.9	163.9	143.9	19.92	8.228	
4,300.0	4,292.3	4,294.8	4,287.1	10.3	10.3	74.79	299.2	82.4	165.2	144.7	20.42	8.088	
4,400.0	4,392.0	4,394.8	4,386.9	10.5	10.5	74.97	306.2	81.9	166.5	145.5	20.93	7.955	
4,500.0	4,491.8	4,494.8	4,486.6	10.8	10.8	75.13	313.1	81.4	167.8	146.3	21.43	7.828	
4,600.0	4,591.6	4,594.8	4,586.4	11.1	11.0	75.30	320.1	81.0	169.1	147.2	21.94	7.707	
4,700.0	4,691.3	4,694.8	4,686.1	11.3	11.3	75.47	327.0	80.5	170.4	148.0	22.45	7.591	
4,800.0	4,791.1	4,794.8	4,785.8	11.6	11.5	75.63	334.0	80.0	171.7	148.8	22.96	7.480	
4,900.0	4,890.8	4,894.8	4,885.6	11.8	11.8	75.79	340.9	79.5	173.0	149.6	23.46	7.374	
5,000.0	4,990.6	4,994.7	4,985.3	12.1	12.1	75.94	347.9	79.0	174.3	150.4	23.97	7.273	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,090.3	5,094.7	5,085.1	12.3	12.3	76.10	354.9	78.5	175.7	151.2	24.48	7.176	
5,200.0	5,190.1	5,183.8	5,173.4	12.6	12.6	74.80	366.0	77.7	179.5	154.5	24.97	7.188	
5,250.0	5,239.7	5,226.4	5,214.7	12.7	12.7	72.92	376.4	77.0	183.6	158.4	25.23	7.278	
5,300.0	5,288.6	5,268.7	5,254.6	12.9	12.9	71.31	390.1	76.1	188.4	162.9	25.51	7.384	
5,350.0	5,336.2	5,310.5	5,293.0	13.1	13.1	69.98	406.7	74.9	193.7	167.9	25.82	7.501	
5,400.0	5,382.1	5,350.0	5,327.8	13.4	13.4	68.93	425.2	73.6	199.4	173.3	26.15	7.628	
5,450.0	5,425.9	5,393.3	5,364.3	13.7	13.7	68.11	448.5	72.0	205.5	179.0	26.53	7.746	
5,500.0	5,467.2	5,434.3	5,397.0	14.0	14.0	67.53	473.2	70.2	211.9	184.9	26.95	7.862	
5,550.0	5,505.7	5,475.1	5,427.4	14.4	14.3	67.18	500.3	68.4	218.5	191.0	27.43	7.965	
5,600.0	5,540.8	5,515.7	5,455.6	14.9	14.6	67.02	529.5	66.3	225.2	197.2	27.98	8.048	
5,650.0	5,572.5	5,556.3	5,481.2	15.4	15.0	67.04	560.7	64.1	232.1	203.5	28.63	8.106	
5,700.0	5,600.2	5,600.0	5,506.1	15.9	15.5	67.30	596.6	61.6	239.1	209.7	29.44	8.123	
5,750.0	5,623.9	5,637.1	5,524.9	16.5	15.9	67.55	628.6	59.4	246.2	215.9	30.28	8.128	
5,800.0	5,643.2	5,677.6	5,542.6	17.1	16.4	68.01	664.8	56.8	253.3	222.0	31.30	8.093	
5,850.0	5,658.0	5,718.1	5,557.5	17.8	16.9	68.58	702.4	54.2	260.5	228.1	32.43	8.031	
5,900.0	5,668.2	5,758.8	5,569.4	18.5	17.4	69.25	741.2	51.5	267.7	234.0	33.69	7.947	
5,950.0	5,673.7	5,800.0	5,578.4	19.3	18.0	70.02	781.3	48.7	275.0	239.9	35.06	7.844	
5,981.8	5,674.6	5,825.8	5,582.4	19.7	18.4	70.53	806.8	46.9	279.6	243.6	35.97	7.774	
6,000.0	5,674.6	5,840.9	5,584.2	20.0	18.6	71.09	821.7	45.9	282.3	245.7	36.54	7.726	
6,100.0	5,674.6	5,925.7	5,586.8	21.4	19.8	72.62	906.2	40.2	297.2	257.9	39.32	7.560	
6,200.0	5,674.6	6,013.6	5,586.8	22.9	21.0	73.48	994.1	37.5	311.6	269.6	42.02	7.417	
6,300.0	5,674.6	6,113.0	5,586.8	24.4	22.5	74.15	1,093.4	36.0	322.6	277.6	45.02	7.166	
6,400.0	5,674.6	6,212.8	5,586.8	25.9	24.2	74.49	1,193.2	34.4	328.6	280.6	47.99	6.848	
6,465.4	5,674.6	6,278.1	5,586.8	26.9	25.2	74.56	1,258.5	33.4	329.8	279.9	49.89	6.611	
6,500.0	5,674.6	6,312.7	5,586.8	27.5	25.8	74.56	1,293.2	32.8	329.8	278.8	50.99	6.468	
6,600.0	5,674.6	6,412.7	5,586.9	29.1	27.5	74.57	1,393.2	31.3	330.0	275.8	54.25	6.083	
6,700.0	5,674.7	6,512.7	5,586.9	30.8	29.2	74.58	1,493.2	29.7	330.2	272.6	57.57	5.735	
6,800.0	5,674.7	6,612.7	5,586.9	32.5	31.0	74.59	1,593.1	28.2	330.3	269.4	60.94	5.421	
6,900.0	5,674.7	6,712.7	5,586.9	34.2	32.7	74.59	1,693.1	26.6	330.5	266.2	64.34	5.137	
7,000.0	5,674.7	6,812.7	5,586.9	36.0	34.5	74.60	1,793.1	25.0	330.7	262.9	67.78	4.879	
7,100.0	5,674.7	6,912.7	5,586.9	37.7	36.3	74.61	1,893.1	23.5	330.8	259.6	71.25	4.643	
7,200.0	5,674.7	7,012.7	5,586.9	39.5	38.1	74.62	1,993.1	21.9	331.0	256.3	74.74	4.429	
7,300.0	5,674.7	7,112.7	5,586.9	41.3	39.9	74.62	2,093.1	20.3	331.2	252.9	78.26	4.232	
7,400.0	5,674.7	7,212.7	5,586.9	43.1	41.8	74.63	2,193.1	18.8	331.3	249.5	81.79	4.051	
7,500.0	5,674.7	7,312.7	5,586.9	44.9	43.6	74.64	2,293.1	17.2	331.5	246.2	85.34	3.884	
7,600.0	5,674.7	7,412.7	5,586.9	46.7	45.5	74.64	2,393.0	15.6	331.7	242.8	88.91	3.731	
7,700.0	5,674.7	7,512.7	5,586.9	48.6	47.3	74.65	2,493.0	14.1	331.8	239.3	92.48	3.588	
7,800.0	5,674.7	7,612.7	5,586.9	50.4	49.2	74.66	2,593.0	12.5	332.0	235.9	96.07	3.456	
7,900.0	5,674.7	7,712.7	5,586.9	52.3	51.0	74.67	2,693.0	11.0	332.2	232.5	99.67	3.333	
8,000.0	5,674.7	7,812.7	5,586.9	54.1	52.9	74.67	2,793.0	9.4	332.3	229.0	103.28	3.218	
8,100.0	5,674.7	7,912.7	5,586.9	56.0	54.7	74.68	2,893.0	7.8	332.5	225.6	106.90	3.110	
8,200.0	5,674.7	8,012.7	5,586.9	57.8	56.6	74.69	2,993.0	6.3	332.7	222.1	110.52	3.010	
8,300.0	5,674.7	8,112.7	5,586.9	59.7	58.5	74.70	3,093.0	4.7	332.8	218.7	114.16	2.916	
8,400.0	5,674.7	8,212.7	5,586.9	61.5	60.4	74.70	3,192.9	3.1	333.0	215.2	117.80	2.827	
8,500.0	5,674.7	8,312.7	5,586.9	63.4	62.2	74.71	3,292.9	1.6	333.2	211.7	121.44	2.743	
8,600.0	5,674.7	8,412.7	5,586.9	65.3	64.1	74.72	3,392.9	0.0	333.3	208.2	125.09	2.665	
8,700.0	5,674.8	8,512.7	5,586.9	67.1	66.0	74.72	3,492.9	-1.6	333.5	204.7	128.74	2.590	
8,800.0	5,674.8	8,612.7	5,586.9	69.0	67.9	74.73	3,592.9	-3.1	333.7	201.3	132.40	2.520	
8,900.0	5,674.8	8,712.7	5,586.9	70.9	69.8	74.74	3,692.9	-4.7	333.8	197.8	136.06	2.453	
9,000.0	5,674.8	8,812.7	5,586.9	72.8	71.7	74.75	3,792.9	-6.2	334.0	194.3	139.73	2.390	
9,100.0	5,674.8	8,912.7	5,586.9	74.7	73.6	74.75	3,892.9	-7.8	334.2	190.8	143.40	2.330	
9,200.0	5,674.8	9,012.7	5,586.9	76.5	75.5	74.76	3,992.8	-9.4	334.3	187.2	147.07	2.273	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2303A - HZ - Plan #2

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
9,300.0	5,674.8	9,112.7	5,586.9	78.4	77.4	74.77	4,092.8	-10.9	334.5	183.7	150.75	2.219	
9,400.0	5,674.8	9,212.7	5,586.9	80.3	79.3	74.78	4,192.8	-12.5	334.6	180.2	154.43	2.167	
9,500.0	5,674.8	9,312.7	5,586.9	82.2	81.1	74.78	4,292.8	-14.1	334.8	176.7	158.11	2.118	
9,600.0	5,674.8	9,412.7	5,586.9	84.1	83.0	74.79	4,392.8	-15.6	335.0	173.2	161.79	2.070	
9,700.0	5,674.8	9,512.7	5,586.9	86.0	84.9	74.80	4,492.8	-17.2	335.1	169.7	165.48	2.025	
9,800.0	5,674.8	9,612.7	5,586.9	87.9	86.8	74.80	4,592.8	-18.8	335.3	166.1	169.17	1.982	
9,900.0	5,674.8	9,712.7	5,586.9	89.8	88.7	74.81	4,692.8	-20.3	335.5	162.6	172.86	1.941	
10,000.0	5,674.8	9,812.7	5,586.9	91.7	90.6	74.82	4,792.7	-21.9	335.6	159.1	176.55	1.901	
10,100.0	5,674.8	9,912.7	5,586.9	93.6	92.5	74.83	4,892.7	-23.4	335.8	155.6	180.25	1.863	
10,200.0	5,674.8	10,012.7	5,586.9	95.5	94.5	74.83	4,992.7	-25.0	336.0	152.0	183.94	1.827	
10,300.0	5,674.8	10,112.7	5,586.9	97.4	96.4	74.84	5,092.7	-26.6	336.1	148.5	187.64	1.791	
10,400.0	5,674.8	10,212.7	5,586.9	99.3	98.3	74.85	5,192.7	-28.1	336.3	145.0	191.34	1.758	
10,500.0	5,674.8	10,312.7	5,586.9	101.2	100.2	74.85	5,292.7	-29.7	336.5	141.4	195.04	1.725	
10,600.0	5,674.8	10,412.7	5,586.9	103.1	102.1	74.86	5,392.7	-31.3	336.6	137.9	198.74	1.694	
10,700.0	5,674.9	10,512.7	5,586.9	105.0	104.0	74.87	5,492.7	-32.8	336.8	134.4	202.45	1.664	
10,800.0	5,674.9	10,612.7	5,586.9	106.9	105.9	74.88	5,592.6	-34.4	337.0	130.8	206.15	1.635	
10,900.0	5,674.9	10,712.7	5,586.9	108.8	107.8	74.88	5,692.6	-36.0	337.1	127.3	209.86	1.606	
11,000.0	5,674.9	10,812.7	5,586.9	110.7	109.7	74.89	5,792.6	-37.5	337.3	123.7	213.57	1.579	
11,100.0	5,674.9	10,912.7	5,586.9	112.6	111.6	74.90	5,892.6	-39.1	337.5	120.2	217.27	1.553	
11,200.0	5,674.9	11,012.7	5,586.9	114.5	113.5	74.90	5,992.6	-40.6	337.6	116.7	220.98	1.528	
11,300.0	5,674.9	11,112.7	5,586.9	116.4	115.4	74.91	6,092.6	-42.2	337.8	113.1	224.69	1.503	
11,400.0	5,674.9	11,212.7	5,586.9	118.3	117.3	74.92	6,192.6	-43.8	338.0	109.6	228.41	1.480	Level 3
11,500.0	5,674.9	11,312.7	5,586.9	120.2	119.2	74.93	6,292.6	-45.3	338.1	106.0	232.12	1.457	Level 3
11,600.0	5,674.9	11,412.7	5,587.0	122.1	121.1	74.93	6,392.5	-46.9	338.3	102.5	235.83	1.434	Level 3
11,700.0	5,674.9	11,512.7	5,587.0	124.0	123.1	74.94	6,492.5	-48.5	338.5	98.9	239.55	1.413	Level 3
11,800.0	5,674.9	11,612.7	5,587.0	125.9	125.0	74.95	6,592.5	-50.0	338.6	95.4	243.26	1.392	Level 3
11,900.0	5,674.9	11,712.7	5,587.0	127.8	126.9	74.95	6,692.5	-51.6	338.8	91.8	246.98	1.372	Level 3
12,000.0	5,674.9	11,812.7	5,587.0	129.7	128.8	74.96	6,792.5	-53.2	339.0	88.3	250.69	1.352	Level 3
12,100.0	5,674.9	11,912.7	5,587.0	131.6	130.7	74.97	6,892.5	-54.7	339.1	84.7	254.41	1.333	Level 3
12,200.0	5,674.9	12,012.7	5,587.0	133.6	132.6	74.97	6,992.5	-56.3	339.3	81.2	258.13	1.314	Level 3
12,300.0	5,674.9	12,112.7	5,587.0	135.5	134.5	74.98	7,092.5	-57.8	339.5	77.6	261.85	1.296	Level 3
12,400.0	5,674.9	12,212.7	5,587.0	137.4	136.4	74.99	7,192.5	-59.4	339.6	74.1	265.57	1.279	Level 3
12,500.0	5,674.9	12,312.7	5,587.0	139.3	138.4	75.00	7,292.4	-61.0	339.8	70.5	269.29	1.262	Level 3
12,600.0	5,674.9	12,412.7	5,587.0	141.2	140.3	75.00	7,392.4	-62.5	340.0	66.9	273.01	1.245	Level 2
12,700.0	5,675.0	12,512.7	5,587.0	143.1	142.2	75.01	7,492.4	-64.1	340.1	63.4	276.73	1.229	Level 2
12,800.0	5,675.0	12,612.7	5,587.0	145.0	144.1	75.02	7,592.4	-65.7	340.3	59.8	280.45	1.213	Level 2
12,900.0	5,675.0	12,712.7	5,587.0	146.9	146.0	75.02	7,692.4	-67.2	340.5	56.3	284.18	1.198	Level 2
13,000.0	5,675.0	12,812.7	5,587.0	148.8	147.9	75.03	7,792.4	-68.8	340.6	52.7	287.90	1.183	Level 2
13,100.0	5,675.0	12,912.7	5,587.0	150.7	149.8	75.04	7,892.4	-70.4	340.8	49.2	291.63	1.169	Level 2
13,200.0	5,675.0	13,012.7	5,587.0	152.7	151.7	75.04	7,992.4	-71.9	341.0	45.6	295.35	1.154	Level 2
13,300.0	5,675.0	13,112.7	5,587.0	154.6	153.7	75.05	8,092.3	-73.5	341.1	42.0	299.08	1.141	Level 2
13,400.0	5,675.0	13,212.7	5,587.0	156.5	155.6	75.06	8,192.3	-75.0	341.3	38.5	302.80	1.127	Level 2
13,473.2	5,675.0	13,285.9	5,587.0	157.9	157.0	75.06	8,265.5	-76.2	341.4	35.9	305.53	1.117	Level 2, ES, SF

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	88.95	1.2	66.2	66.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.95	1.2	66.2	66.2	66.0	0.19	352.530	
200.0	200.0	200.0	200.0	0.3	0.3	88.95	1.2	66.2	66.2	65.5	0.64	103.832	
300.0	300.0	300.0	300.0	0.5	0.5	88.95	1.2	66.2	66.2	65.1	1.09	60.882	
400.0	400.0	400.0	400.0	0.8	0.8	88.95	1.2	66.2	66.2	64.6	1.54	43.067	
500.0	500.0	500.0	500.0	1.0	1.0	88.95	1.2	66.2	66.2	64.2	1.99	33.318	
566.7	566.7	566.7	566.7	1.1	1.1	88.95	1.2	66.2	66.2	63.9	2.29	28.949	CC
600.0	600.0	600.0	600.0	1.2	1.2	88.95	1.2	66.2	66.2	63.7	2.44	27.168	ES
700.0	700.0	698.8	698.8	1.4	1.4	87.70	2.7	67.0	67.1	64.2	2.88	23.290	
800.0	800.0	797.3	797.2	1.7	1.7	84.17	7.1	69.5	70.0	66.6	3.32	21.044	
900.0	900.0	897.1	896.7	1.9	1.9	79.81	13.1	73.0	74.3	70.5	3.78	19.657	
1,000.0	1,000.0	996.8	996.2	2.1	2.1	75.95	19.1	76.5	79.0	74.7	4.24	18.642	
1,100.0	1,100.0	1,096.6	1,095.7	2.3	2.4	89.12	25.2	80.0	83.9	79.2	4.69	17.912	
1,200.0	1,199.8	1,196.5	1,195.4	2.6	2.6	89.29	31.2	83.5	88.9	83.7	5.14	17.287	
1,300.0	1,299.6	1,296.4	1,295.0	2.8	2.9	90.60	37.2	87.0	93.9	88.3	5.61	16.741	
1,400.0	1,399.4	1,396.2	1,394.6	3.0	3.1	91.77	43.3	90.4	98.9	92.8	6.08	16.269	
1,500.0	1,499.1	1,496.1	1,494.2	3.3	3.4	92.83	49.3	93.9	103.9	97.4	6.55	15.859	
1,600.0	1,598.9	1,595.9	1,593.8	3.5	3.6	93.80	55.3	97.4	109.0	102.0	7.03	15.500	
1,700.0	1,698.6	1,695.8	1,693.4	3.7	3.9	94.67	61.4	100.9	114.1	106.6	7.52	15.184	
1,800.0	1,798.4	1,795.6	1,793.0	4.0	4.1	95.48	67.4	104.4	119.3	111.3	8.00	14.904	
1,900.0	1,898.1	1,895.5	1,892.6	4.2	4.4	96.21	73.4	107.8	124.4	116.0	8.49	14.655	
2,000.0	1,997.9	1,995.3	1,992.3	4.5	4.6	96.89	79.5	111.3	129.6	120.6	8.98	14.432	
2,100.0	2,097.6	2,095.2	2,091.9	4.7	4.9	97.51	85.5	114.8	134.8	125.4	9.47	14.231	
2,200.0	2,197.4	2,195.0	2,191.5	5.0	5.1	98.09	91.5	118.3	140.0	130.1	9.97	14.050	
2,300.0	2,297.2	2,294.9	2,291.1	5.2	5.4	98.63	97.6	121.8	145.3	134.8	10.46	13.885	
2,400.0	2,396.9	2,394.8	2,390.7	5.5	5.6	99.13	103.6	125.3	150.5	139.5	10.96	13.736	
2,500.0	2,496.7	2,494.6	2,490.3	5.7	5.9	99.59	109.6	128.7	155.8	144.3	11.45	13.599	
2,600.0	2,596.4	2,594.5	2,589.9	6.0	6.1	100.03	115.7	132.2	161.0	149.1	11.95	13.473	
2,700.0	2,696.2	2,694.3	2,689.5	6.2	6.4	100.43	121.7	135.7	166.3	153.8	12.45	13.358	
2,800.0	2,795.9	2,794.2	2,789.2	6.5	6.6	100.82	127.7	139.2	171.5	158.6	12.95	13.251	
2,900.0	2,895.7	2,894.0	2,888.8	6.7	6.9	101.18	133.8	142.7	176.8	163.4	13.44	13.152	
3,000.0	2,995.5	2,993.9	2,988.4	7.0	7.2	101.52	139.8	146.2	182.1	168.2	13.94	13.061	
3,100.0	3,095.2	3,093.7	3,088.0	7.2	7.4	101.84	145.8	149.6	187.4	173.0	14.44	12.975	
3,200.0	3,195.0	3,193.6	3,187.6	7.5	7.7	102.14	151.9	153.1	192.7	177.8	14.94	12.896	
3,300.0	3,294.7	3,293.4	3,287.2	7.7	7.9	102.42	157.9	156.6	198.0	182.6	15.44	12.822	
3,400.0	3,394.5	3,393.3	3,386.8	8.0	8.2	102.70	163.9	160.1	203.3	187.4	15.94	12.752	
3,500.0	3,494.2	3,493.2	3,486.4	8.3	8.4	102.95	170.0	163.6	208.6	192.2	16.45	12.687	
3,600.0	3,594.0	3,593.0	3,586.0	8.5	8.7	103.20	176.0	167.1	214.0	197.0	16.95	12.626	
3,700.0	3,693.7	3,692.9	3,685.7	8.8	8.9	103.43	182.0	170.5	219.3	201.8	17.45	12.568	
3,800.0	3,793.5	3,792.7	3,785.3	9.0	9.2	103.65	188.1	174.0	224.6	206.7	17.95	12.513	
3,900.0	3,893.3	3,892.6	3,884.9	9.3	9.5	103.86	194.1	177.5	229.9	211.5	18.45	12.462	
4,000.0	3,993.0	3,992.4	3,984.5	9.5	9.7	104.06	200.1	181.0	235.3	216.3	18.95	12.413	
4,100.0	4,092.8	4,092.3	4,084.1	9.8	10.0	104.26	206.1	184.5	240.6	221.1	19.45	12.367	
4,200.0	4,192.5	4,192.1	4,183.7	10.0	10.2	104.44	212.2	188.0	245.9	226.0	19.96	12.324	
4,300.0	4,292.3	4,292.0	4,283.3	10.3	10.5	104.62	218.2	191.4	251.3	230.8	20.46	12.282	
4,400.0	4,392.0	4,391.8	4,382.9	10.5	10.7	104.79	224.2	194.9	256.6	235.6	20.96	12.242	
4,500.0	4,491.8	4,491.7	4,482.5	10.8	11.0	104.95	230.3	198.4	262.0	240.5	21.46	12.205	
4,600.0	4,591.6	4,591.6	4,582.2	11.1	11.2	105.11	236.3	201.9	267.3	245.3	21.97	12.169	
4,700.0	4,691.3	4,691.4	4,681.8	11.3	11.5	105.26	242.3	205.4	272.6	250.2	22.47	12.135	
4,800.0	4,791.1	4,791.3	4,781.4	11.6	11.8	105.40	248.4	208.8	278.0	255.0	22.97	12.102	
4,900.0	4,890.8	4,895.8	4,885.8	11.8	12.0	105.83	253.3	211.7	282.6	259.1	23.45	12.049	
5,000.0	4,990.6	5,000.6	4,990.6	12.1	12.2	106.91	254.9	212.6	285.4	261.5	23.89	11.947	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-2304B - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,090.3	5,100.4	5,090.3	12.3	12.3	108.24	254.9	212.6	287.5	263.2	24.33	11.817	
5,200.0	5,190.1	5,197.0	5,186.9	12.6	12.5	109.30	256.0	212.9	290.0	265.2	24.79	11.697	SF
5,250.0	5,239.7	5,242.6	5,232.2	12.7	12.7	109.06	260.7	214.0	292.9	267.8	25.03	11.700	
5,300.0	5,288.6	5,287.9	5,276.7	12.9	12.8	108.61	269.1	216.1	298.0	272.7	25.31	11.777	
5,350.0	5,336.2	5,332.9	5,319.9	13.1	13.0	107.98	281.3	219.1	305.5	279.8	25.63	11.919	
5,400.0	5,382.1	5,377.6	5,361.6	13.4	13.2	107.15	296.8	222.9	315.1	289.1	26.00	12.116	
5,450.0	5,425.9	5,421.8	5,401.4	13.7	13.5	106.16	315.6	227.5	326.7	300.3	26.44	12.356	
5,500.0	5,467.2	5,465.5	5,438.9	14.0	13.7	105.00	337.3	232.9	340.3	313.4	26.95	12.626	
5,550.0	5,505.7	5,508.8	5,474.1	14.4	14.0	103.69	361.6	238.9	355.7	328.2	27.55	12.911	
5,600.0	5,540.8	5,550.0	5,505.6	14.9	14.3	102.23	387.5	245.2	372.8	344.6	28.23	13.206	
5,650.0	5,572.5	5,593.7	5,536.6	15.4	14.7	100.68	417.4	252.5	391.4	362.4	29.03	13.484	
5,700.0	5,600.2	5,635.4	5,563.7	15.9	15.1	99.01	448.2	260.1	411.3	381.4	29.90	13.755	
5,750.0	5,623.9	5,676.9	5,587.9	16.5	15.5	97.25	480.8	268.1	432.4	401.5	30.86	14.010	
5,800.0	5,643.2	5,718.0	5,609.3	17.1	16.0	95.42	514.9	276.5	454.4	422.5	31.89	14.248	
5,850.0	5,658.0	5,759.0	5,627.8	17.8	16.4	93.54	550.5	285.2	477.3	444.3	32.99	14.469	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-1.07	75.0	-1.4	75.0				
100.0	100.0	100.0	100.0	0.1	0.1	-1.07	75.0	-1.4	75.0	74.9	0.19	399.882	
200.0	200.0	200.0	200.0	0.3	0.3	-1.07	75.0	-1.4	75.0	74.4	0.64	117.778	
300.0	300.0	300.0	300.0	0.5	0.5	-1.07	75.0	-1.4	75.0	74.0	1.09	69.059	
400.0	400.0	400.0	400.0	0.8	0.8	-1.07	75.0	-1.4	75.0	73.5	1.54	48.852	
500.0	500.0	500.0	500.0	1.0	1.0	-1.07	75.0	-1.4	75.0	73.1	1.99	37.793	
600.0	600.0	600.0	600.0	1.2	1.2	-1.07	75.0	-1.4	75.0	72.6	2.44	30.817	
700.0	700.0	700.0	700.0	1.4	1.4	-1.07	75.0	-1.4	75.0	72.2	2.88	26.015	
800.0	800.0	800.0	800.0	1.7	1.7	-1.07	75.0	-1.4	75.0	71.7	3.33	22.508	
900.0	900.0	902.3	902.2	1.9	1.9	-1.81	73.5	-2.3	73.5	69.8	3.76	19.538	
1,000.0	1,000.0	1,004.2	1,004.0	2.1	2.1	-4.19	68.7	-5.0	69.0	64.9	4.18	16.522	
1,100.0	1,100.0	1,103.8	1,103.4	2.3	2.3	8.01	62.7	-8.5	61.7	57.1	4.60	13.395	
1,200.0	1,199.8	1,203.2	1,202.5	2.6	2.5	4.09	56.7	-12.0	51.1	46.0	5.03	10.150	
1,300.0	1,299.6	1,302.3	1,301.4	2.8	2.7	-1.95	50.7	-15.4	39.1	33.6	5.47	7.150	
1,400.0	1,399.4	1,401.5	1,400.4	3.0	2.9	-13.00	44.7	-18.9	28.0	22.0	5.93	4.719	
1,500.0	1,499.1	1,500.7	1,499.3	3.3	3.1	-36.08	38.7	-22.4	19.0	12.6	6.40	2.976	
1,577.1	1,576.0	1,577.2	1,575.6	3.4	3.3	-67.20	34.1	-25.0	16.3	9.5	6.75	2.409	CC, ES, SF
1,600.0	1,598.9	1,599.9	1,598.2	3.5	3.4	-77.36	32.8	-25.8	16.5	9.7	6.84	2.415	
1,700.0	1,698.6	1,699.0	1,697.2	3.7	3.6	-111.09	26.8	-29.3	22.7	15.4	7.24	3.131	
1,800.0	1,798.4	1,798.2	1,796.1	4.0	3.9	-127.38	20.8	-32.7	32.9	25.3	7.66	4.297	
1,900.0	1,898.1	1,897.4	1,895.0	4.2	4.1	-135.61	14.8	-36.2	44.5	36.4	8.10	5.498	
2,000.0	1,997.9	1,996.5	1,994.0	4.5	4.4	-140.39	8.8	-39.7	56.7	48.1	8.55	6.632	
2,100.0	2,097.6	2,095.7	2,092.9	4.7	4.6	-143.47	2.8	-43.1	69.1	60.1	9.00	7.677	
2,200.0	2,197.4	2,194.9	2,191.8	5.0	4.9	-145.61	-3.2	-46.6	81.6	72.2	9.45	8.636	
2,300.0	2,297.2	2,294.1	2,290.7	5.2	5.1	-147.18	-9.2	-50.0	94.2	84.3	9.91	9.513	
2,400.0	2,396.9	2,393.2	2,389.7	5.5	5.4	-148.38	-15.2	-53.5	106.9	96.5	10.36	10.317	
2,500.0	2,496.7	2,492.4	2,488.6	5.7	5.6	-149.32	-21.2	-56.9	119.6	108.8	10.82	11.056	
2,600.0	2,596.4	2,591.6	2,587.5	6.0	5.9	-150.08	-27.2	-60.4	132.3	121.1	11.28	11.736	
2,700.0	2,696.2	2,690.8	2,686.5	6.2	6.1	-150.71	-33.1	-63.9	145.1	133.4	11.73	12.365	
2,800.0	2,795.9	2,789.9	2,785.4	6.5	6.4	-151.24	-39.1	-67.3	157.8	145.7	12.19	12.946	
2,900.0	2,895.7	2,889.1	2,884.3	6.7	6.6	-151.68	-45.1	-70.8	170.6	158.0	12.65	13.486	
3,000.0	2,995.5	2,988.3	2,983.3	7.0	6.9	-152.07	-51.1	-74.2	183.4	170.3	13.11	13.987	
3,100.0	3,095.2	3,087.4	3,082.2	7.2	7.1	-152.41	-57.1	-77.7	196.2	182.6	13.57	14.455	
3,200.0	3,195.0	3,186.6	3,181.1	7.5	7.4	-152.70	-63.1	-81.2	209.0	195.0	14.03	14.892	
3,300.0	3,294.7	3,285.8	3,280.1	7.7	7.7	-152.96	-69.1	-84.6	221.8	207.3	14.50	15.302	
3,400.0	3,394.5	3,385.0	3,379.0	8.0	7.9	-153.19	-75.1	-88.1	234.6	219.7	14.96	15.686	
3,500.0	3,494.2	3,484.1	3,477.9	8.3	8.2	-153.40	-81.1	-91.5	247.4	232.0	15.42	16.047	
3,600.0	3,594.0	3,583.3	3,576.8	8.5	8.4	-153.59	-87.1	-95.0	260.2	244.4	15.88	16.386	
3,700.0	3,693.7	3,682.5	3,675.8	8.8	8.7	-153.76	-93.1	-98.5	273.0	256.7	16.34	16.707	
3,800.0	3,793.5	3,781.6	3,774.7	9.0	9.0	-153.91	-99.0	-101.9	285.9	269.1	16.81	17.010	
3,900.0	3,893.3	3,880.8	3,873.6	9.3	9.2	-154.05	-105.0	-105.4	298.7	281.4	17.27	17.296	
4,000.0	3,993.0	3,980.0	3,972.6	9.5	9.5	-154.18	-111.0	-108.8	311.5	293.8	17.73	17.568	
4,100.0	4,092.8	4,079.2	4,071.5	9.8	9.7	-154.30	-117.0	-112.3	324.3	306.1	18.19	17.825	
4,200.0	4,192.5	4,178.3	4,170.4	10.0	10.0	-154.41	-123.0	-115.7	337.2	318.5	18.66	18.070	
4,300.0	4,292.3	4,277.5	4,269.4	10.3	10.3	-154.51	-129.0	-119.2	350.0	330.9	19.12	18.303	
4,400.0	4,392.0	4,376.7	4,368.3	10.5	10.5	-154.61	-135.0	-122.7	362.8	343.2	19.59	18.524	
4,500.0	4,491.8	4,475.9	4,467.2	10.8	10.8	-154.70	-141.0	-126.1	375.6	355.6	20.05	18.736	
4,600.0	4,591.6	4,575.0	4,566.2	11.1	11.0	-154.78	-147.0	-129.6	388.5	367.9	20.51	18.937	
4,700.0	4,691.3	4,674.2	4,665.1	11.3	11.3	-154.86	-153.0	-133.0	401.3	380.3	20.98	19.130	
4,800.0	4,791.1	4,784.8	4,775.5	11.6	11.6	-155.00	-158.6	-136.3	413.1	391.7	21.45	19.262	
4,900.0	4,890.8	4,900.2	4,890.8	11.8	11.8	-155.35	-160.6	-137.4	421.3	399.4	21.91	19.229	
5,000.0	4,990.6	4,999.9	4,990.6	12.1	12.0	-155.74	-160.6	-137.4	427.7	405.3	22.34	19.143	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3501A - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,090.3	5,088.7	5,079.4	12.3	12.1	-156.08	-160.7	-137.4	434.3	411.6	22.74	19.099	
5,200.0	5,190.1	5,150.0	5,140.4	12.6	12.3	-156.37	-165.9	-137.7	448.5	425.4	23.11	19.404	
5,250.0	5,239.7	5,168.2	5,158.3	12.7	12.3	-155.94	-168.8	-137.9	461.2	438.2	23.08	19.983	
5,300.0	5,288.6	5,200.0	5,189.5	12.9	12.4	-155.44	-175.4	-138.2	480.7	457.7	22.94	20.957	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3502B - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	88.95	0.6	33.2	33.2				
100.0	100.0	100.0	100.0	0.1	0.1	88.95	0.6	33.2	33.2	33.0	0.19	177.003	
200.0	200.0	200.0	200.0	0.3	0.3	88.95	0.6	33.2	33.2	32.6	0.64	52.133	
300.0	300.0	300.0	300.0	0.5	0.5	88.95	0.6	33.2	33.2	32.1	1.09	30.568	
400.0	400.0	400.0	400.0	0.8	0.8	88.95	0.6	33.2	33.2	31.7	1.54	21.624	
500.0	500.0	500.0	500.0	1.0	1.0	88.95	0.6	33.2	33.2	31.2	1.99	16.729	
600.0	600.0	600.0	600.0	1.2	1.2	88.95	0.6	33.2	33.2	30.8	2.44	13.641	
700.0	700.0	700.0	700.0	1.4	1.4	88.95	0.6	33.2	33.2	30.3	2.88	11.515	
800.0	800.0	800.0	800.0	1.7	1.7	88.95	0.6	33.2	33.2	29.9	3.33	9.963	
900.0	900.0	900.0	900.0	1.9	1.9	88.95	0.6	33.2	33.2	29.4	3.78	8.779	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	88.95	0.6	33.2	33.2	29.0	4.23	7.847	CC, ES
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	107.31	0.6	33.2	33.7	29.0	4.68	7.198	SF
1,200.0	1,199.8	1,199.0	1,199.0	2.6	2.5	117.30	-0.9	34.1	36.7	31.6	5.10	7.204	
1,300.0	1,299.6	1,297.2	1,297.1	2.8	2.7	130.15	-5.3	36.6	44.5	39.0	5.50	8.093	
1,400.0	1,399.4	1,396.2	1,395.9	3.0	2.9	139.80	-11.2	40.1	55.5	49.6	5.92	9.387	
1,500.0	1,499.1	1,495.3	1,494.7	3.3	3.1	146.17	-17.2	43.5	67.6	61.2	6.33	10.672	
1,600.0	1,598.9	1,594.3	1,593.5	3.5	3.3	150.58	-23.2	47.0	80.2	73.4	6.75	11.876	
1,700.0	1,698.6	1,693.4	1,692.3	3.7	3.5	153.78	-29.2	50.4	93.1	85.9	7.17	12.980	
1,800.0	1,798.4	1,792.4	1,791.1	4.0	3.8	156.20	-35.2	53.9	106.3	98.7	7.60	13.983	
1,900.0	1,898.1	1,891.5	1,889.9	4.2	4.0	158.08	-41.2	57.3	119.6	111.6	8.03	14.891	
2,000.0	1,997.9	1,990.5	1,988.7	4.5	4.2	159.58	-47.1	60.8	133.0	124.5	8.46	15.714	
2,100.0	2,097.6	2,089.5	2,087.5	4.7	4.4	160.81	-53.1	64.2	146.5	137.6	8.90	16.461	
2,200.0	2,197.4	2,188.6	2,186.3	5.0	4.7	161.83	-59.1	67.7	160.0	150.7	9.34	17.141	
2,300.0	2,297.2	2,287.6	2,285.1	5.2	4.9	162.69	-65.1	71.2	173.6	163.8	9.77	17.761	
2,400.0	2,396.9	2,386.7	2,383.9	5.5	5.2	163.43	-71.1	74.6	187.2	177.0	10.22	18.328	
2,500.0	2,496.7	2,485.7	2,482.7	5.7	5.4	164.07	-77.1	78.1	200.9	190.2	10.66	18.848	
2,600.0	2,596.4	2,584.8	2,581.5	6.0	5.7	164.62	-83.0	81.5	214.5	203.4	11.10	19.327	
2,700.0	2,696.2	2,683.8	2,680.3	6.2	5.9	165.11	-89.0	85.0	228.2	216.7	11.54	19.769	
2,800.0	2,795.9	2,782.8	2,779.1	6.5	6.1	165.54	-95.0	88.4	241.9	229.9	11.99	20.178	
2,900.0	2,895.7	2,881.9	2,877.9	6.7	6.4	165.93	-101.0	91.9	255.6	243.2	12.43	20.556	
3,000.0	2,995.5	2,980.9	2,976.7	7.0	6.6	166.28	-107.0	95.3	269.3	256.4	12.88	20.909	
3,100.0	3,095.2	3,080.0	3,075.5	7.2	6.9	166.59	-113.0	98.8	283.0	269.7	13.33	21.237	
3,200.0	3,195.0	3,179.0	3,174.3	7.5	7.1	166.88	-118.9	102.2	296.8	283.0	13.78	21.544	
3,300.0	3,294.7	3,278.1	3,273.1	7.7	7.4	167.14	-124.9	105.7	310.5	296.3	14.22	21.830	
3,400.0	3,394.5	3,377.1	3,371.9	8.0	7.7	167.38	-130.9	109.1	324.3	309.6	14.67	22.099	
3,500.0	3,494.2	3,476.1	3,470.7	8.3	7.9	167.59	-136.9	112.6	338.0	322.9	15.12	22.352	
3,600.0	3,594.0	3,575.2	3,569.5	8.5	8.2	167.80	-142.9	116.1	351.8	336.2	15.57	22.590	
3,700.0	3,693.7	3,674.2	3,668.3	8.8	8.4	167.98	-148.9	119.5	365.5	349.5	16.02	22.814	
3,800.0	3,793.5	3,773.3	3,767.1	9.0	8.7	168.15	-154.8	123.0	379.3	362.8	16.47	23.025	
3,900.0	3,893.3	3,872.3	3,865.9	9.3	8.9	168.32	-160.8	126.4	393.0	376.1	16.92	23.225	
4,000.0	3,993.0	3,971.3	3,964.7	9.5	9.2	168.47	-166.8	129.9	406.8	389.4	17.37	23.415	
4,100.0	4,092.8	4,070.4	4,063.5	9.8	9.4	168.61	-172.8	133.3	420.6	402.8	17.83	23.594	
4,200.0	4,192.5	4,169.4	4,162.3	10.0	9.7	168.74	-178.8	136.8	434.4	416.1	18.28	23.765	
4,300.0	4,292.3	4,268.5	4,261.1	10.3	10.0	168.86	-184.8	140.2	448.1	429.4	18.73	23.927	
4,400.0	4,392.0	4,367.5	4,359.9	10.5	10.2	168.97	-190.7	143.7	461.9	442.7	19.18	24.081	
4,500.0	4,491.8	4,466.6	4,458.7	10.8	10.5	169.08	-196.7	147.1	475.7	456.1	19.63	24.228	
4,600.0	4,591.6	4,565.6	4,557.5	11.1	10.7	169.19	-202.7	150.6	489.5	469.4	20.09	24.368	

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

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3503A - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	40.33	76.3	64.7	100.0				
100.0	100.0	100.0	100.0	0.1	0.1	40.33	76.3	64.7	100.0	99.9	0.19	533.041	
200.0	200.0	200.0	200.0	0.3	0.3	40.33	76.3	64.7	100.0	99.4	0.64	156.998	
300.0	300.0	300.0	300.0	0.5	0.5	40.33	76.3	64.7	100.0	99.0	1.09	92.056	
400.0	400.0	400.0	400.0	0.8	0.8	40.33	76.3	64.7	100.0	98.5	1.54	65.119	
500.0	500.0	500.0	500.0	1.0	1.0	40.33	76.3	64.7	100.0	98.1	1.99	50.378	CC
505.7	505.7	505.7	505.7	1.0	1.0	40.33	76.3	64.8	100.0	98.0	2.01	49.769	
600.0	600.0	599.9	599.9	1.2	1.2	41.33	75.1	66.1	100.1	97.7	2.41	41.457	
700.0	700.0	699.6	699.5	1.4	1.4	44.30	71.8	70.1	100.3	97.5	2.84	35.382	ES
800.0	800.0	799.4	799.0	1.7	1.6	48.24	67.3	75.4	101.1	97.8	3.28	30.864	
900.0	900.0	899.1	898.5	1.9	1.8	52.10	62.8	80.7	102.3	98.6	3.72	27.476	
1,000.0	1,000.0	998.9	998.0	2.1	2.1	55.85	58.4	86.1	104.0	99.8	4.18	24.898	
1,100.0	1,100.0	1,098.5	1,097.4	2.3	2.3	75.84	53.9	91.4	105.7	101.0	4.65	22.716	
1,200.0	1,199.8	1,197.9	1,196.5	2.6	2.6	81.96	49.5	96.7	107.5	102.4	5.11	21.033	
1,300.0	1,299.6	1,297.0	1,295.3	2.8	2.8	88.73	45.0	102.0	110.4	104.8	5.56	19.843	
1,400.0	1,399.4	1,396.1	1,394.2	3.0	3.1	95.07	40.6	107.3	114.8	108.8	6.02	19.084	
1,500.0	1,499.1	1,495.2	1,493.1	3.3	3.3	100.88	36.1	112.6	120.5	114.1	6.47	18.631	
1,600.0	1,598.9	1,594.3	1,592.0	3.5	3.6	106.12	31.7	117.9	127.4	120.5	6.92	18.405	
1,700.0	1,698.6	1,693.4	1,690.8	3.7	3.8	110.81	27.2	123.2	135.2	127.9	7.37	18.340	SF
1,800.0	1,798.4	1,792.5	1,789.7	4.0	4.1	114.96	22.8	128.5	143.8	136.0	7.82	18.389	
1,900.0	1,898.1	1,891.6	1,888.6	4.2	4.3	118.63	18.3	133.8	153.1	144.9	8.27	18.514	
2,000.0	1,997.9	1,990.8	1,987.4	4.5	4.6	121.87	13.9	139.1	163.0	154.3	8.72	18.691	
2,100.0	2,097.6	2,089.9	2,086.3	4.7	4.8	124.73	9.5	144.4	173.3	164.1	9.17	18.900	
2,200.0	2,197.4	2,189.0	2,185.2	5.0	5.1	127.27	5.0	149.7	184.0	174.4	9.62	19.129	
2,300.0	2,297.2	2,288.1	2,284.1	5.2	5.4	129.53	0.6	155.0	195.0	184.9	10.07	19.369	
2,400.0	2,396.9	2,387.2	2,382.9	5.5	5.6	131.55	-3.9	160.3	206.3	195.8	10.52	19.612	
2,500.0	2,496.7	2,486.3	2,481.8	5.7	5.9	133.35	-8.3	165.5	217.8	206.8	10.97	19.855	
2,600.0	2,596.4	2,585.4	2,580.7	6.0	6.1	134.98	-12.8	170.8	229.5	218.1	11.42	20.095	
2,700.0	2,696.2	2,684.5	2,679.5	6.2	6.4	136.44	-17.2	176.1	241.4	229.5	11.87	20.329	
2,800.0	2,795.9	2,783.7	2,778.4	6.5	6.7	137.77	-21.6	181.4	253.4	241.1	12.33	20.557	
2,900.0	2,895.7	2,882.8	2,877.3	6.7	6.9	138.98	-26.1	186.7	265.5	252.7	12.78	20.777	
3,000.0	2,995.5	2,981.9	2,976.2	7.0	7.2	140.08	-30.5	192.0	277.8	264.5	13.23	20.990	
3,100.0	3,095.2	3,081.0	3,075.0	7.2	7.4	141.09	-35.0	197.3	290.1	276.4	13.69	21.195	
3,200.0	3,195.0	3,180.1	3,173.9	7.5	7.7	142.02	-39.4	202.6	302.5	288.4	14.14	21.392	
3,300.0	3,294.7	3,279.2	3,272.8	7.7	7.9	142.87	-43.9	207.9	315.0	300.4	14.60	21.580	
3,400.0	3,394.5	3,378.3	3,371.6	8.0	8.2	143.66	-48.3	213.2	327.5	312.5	15.05	21.762	
3,500.0	3,494.2	3,477.4	3,470.5	8.3	8.5	144.39	-52.8	218.5	340.1	324.6	15.51	21.935	
3,600.0	3,594.0	3,576.6	3,569.4	8.5	8.7	145.07	-57.2	223.8	352.8	336.8	15.96	22.102	
3,700.0	3,693.7	3,675.7	3,668.3	8.8	9.0	145.70	-61.6	229.1	365.5	349.1	16.42	22.262	
3,800.0	3,793.5	3,774.8	3,767.1	9.0	9.2	146.29	-66.1	234.4	378.2	361.4	16.87	22.415	
3,900.0	3,893.3	3,873.9	3,866.0	9.3	9.5	146.84	-70.5	239.7	391.0	373.7	17.33	22.562	
4,000.0	3,993.0	3,973.0	3,964.9	9.5	9.8	147.35	-75.0	245.0	403.8	386.0	17.79	22.703	
4,100.0	4,092.8	4,072.1	4,063.7	9.8	10.0	147.84	-79.4	250.3	416.7	398.4	18.24	22.838	
4,200.0	4,192.5	4,171.2	4,162.6	10.0	10.3	148.29	-83.9	255.6	429.5	410.8	18.70	22.968	
4,300.0	4,292.3	4,270.3	4,261.5	10.3	10.6	148.72	-88.3	260.9	442.4	423.3	19.16	23.093	
4,400.0	4,392.0	4,369.5	4,360.3	10.5	10.8	149.13	-92.8	266.2	455.4	435.7	19.62	23.214	
4,500.0	4,491.8	4,468.6	4,459.2	10.8	11.1	149.51	-97.2	271.5	468.3	448.2	20.07	23.329	
4,600.0	4,591.6	4,581.3	4,571.7	11.1	11.3	149.93	-101.5	276.6	480.3	459.8	20.54	23.384	
4,700.0	4,691.3	4,700.9	4,691.3	11.3	11.6	150.40	-103.1	278.5	488.4	467.4	21.00	23.255	
4,800.0	4,791.1	4,800.6	4,791.1	11.6	11.7	150.80	-103.1	278.5	494.5	473.0	21.43	23.076	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S26-T10N-R58W - Razor #26L-3504B - HZ - Plan #1

Offset Site Error: 0.0 usft

Survey Program: 0-ISCWSA MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	88.95	1.8	99.4	99.4				
100.0	100.0	100.0	100.0	0.1	0.1	88.95	1.8	99.4	99.4	99.2	0.19	529.532	
200.0	200.0	200.0	200.0	0.3	0.3	88.95	1.8	99.4	99.4	98.7	0.64	155.965	
300.0	300.0	300.0	300.0	0.5	0.5	88.95	1.8	99.4	99.4	98.3	1.09	91.450	
400.0	400.0	400.0	400.0	0.8	0.8	88.95	1.8	99.4	99.4	97.8	1.54	64.691	
500.0	500.0	500.0	500.0	1.0	1.0	88.95	1.8	99.4	99.4	97.4	1.99	50.046	
600.0	600.0	600.0	600.0	1.2	1.2	88.95	1.8	99.4	99.4	96.9	2.44	40.809	
700.0	700.0	700.0	700.0	1.4	1.4	88.95	1.8	99.4	99.4	96.5	2.88	34.450	
800.0	800.0	800.0	800.0	1.7	1.7	88.95	1.8	99.4	99.4	96.0	3.33	29.805	
900.0	900.0	900.0	900.0	1.9	1.9	88.95	1.8	99.4	99.4	95.6	3.78	26.264	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	88.95	1.8	99.4	99.4	95.1	4.23	23.475	CC, ES
1,100.0	1,100.0	1,096.8	1,096.8	2.3	2.3	105.66	1.3	100.9	101.4	96.8	4.66	21.780	
1,200.0	1,199.8	1,193.0	1,192.9	2.6	2.5	109.01	-0.4	105.5	107.8	102.7	5.07	21.266	SF
1,300.0	1,299.6	1,292.0	1,291.6	2.8	2.7	113.17	-2.8	112.0	117.1	111.6	5.49	21.313	
1,400.0	1,399.4	1,391.2	1,390.6	3.0	2.9	116.72	-5.1	118.5	126.9	121.0	5.92	21.425	
1,500.0	1,499.1	1,490.5	1,489.6	3.3	3.2	119.75	-7.5	125.0	137.1	130.8	6.36	21.570	
1,600.0	1,598.9	1,589.7	1,588.6	3.5	3.4	122.36	-9.9	131.5	147.7	140.9	6.80	21.731	
1,700.0	1,698.6	1,688.9	1,687.6	3.7	3.6	124.62	-12.2	138.0	158.5	151.3	7.24	21.898	
1,800.0	1,798.4	1,788.1	1,786.6	4.0	3.8	126.58	-14.6	144.5	169.6	161.9	7.68	22.066	
1,900.0	1,898.1	1,887.4	1,885.5	4.2	4.1	128.31	-17.0	151.0	180.8	172.7	8.13	22.231	
2,000.0	1,997.9	1,986.6	1,984.5	4.5	4.3	129.83	-19.3	157.5	192.1	183.6	8.58	22.390	
2,100.0	2,097.6	2,085.8	2,083.5	4.7	4.6	131.18	-21.7	164.0	203.6	194.6	9.03	22.543	
2,200.0	2,197.4	2,185.1	2,182.5	5.0	4.8	132.39	-24.1	170.5	215.2	205.7	9.48	22.688	
2,300.0	2,297.2	2,284.3	2,281.5	5.2	5.1	133.47	-26.4	177.0	226.9	216.9	9.94	22.826	
2,400.0	2,396.9	2,383.5	2,380.5	5.5	5.3	134.45	-28.8	183.5	238.6	228.2	10.39	22.956	
2,500.0	2,496.7	2,482.8	2,479.5	5.7	5.6	135.34	-31.2	190.0	250.4	239.5	10.85	23.079	
2,600.0	2,596.4	2,582.0	2,578.5	6.0	5.8	136.14	-33.5	196.5	262.2	250.9	11.31	23.195	
2,700.0	2,696.2	2,681.2	2,677.5	6.2	6.1	136.88	-35.9	203.0	274.1	262.4	11.76	23.305	
2,800.0	2,795.9	2,780.5	2,776.4	6.5	6.3	137.56	-38.3	209.5	286.1	273.8	12.22	23.408	
2,900.0	2,895.7	2,879.7	2,875.4	6.7	6.6	138.18	-40.6	216.0	298.0	285.4	12.68	23.506	
3,000.0	2,995.5	2,978.9	2,974.4	7.0	6.8	138.75	-43.0	222.5	310.0	296.9	13.14	23.598	
3,100.0	3,095.2	3,078.1	3,073.4	7.2	7.1	139.28	-45.4	229.0	322.1	308.5	13.60	23.685	
3,200.0	3,195.0	3,177.4	3,172.4	7.5	7.3	139.77	-47.7	235.5	334.1	320.1	14.06	23.768	
3,300.0	3,294.7	3,276.6	3,271.4	7.7	7.6	140.23	-50.1	242.0	346.2	331.7	14.52	23.846	
3,400.0	3,394.5	3,375.8	3,370.4	8.0	7.8	140.66	-52.5	248.5	358.3	343.3	14.98	23.920	
3,500.0	3,494.2	3,475.1	3,469.4	8.3	8.1	141.06	-54.8	255.1	370.4	355.0	15.44	23.991	
3,600.0	3,594.0	3,574.3	3,568.4	8.5	8.3	141.43	-57.2	261.6	382.6	366.7	15.90	24.057	
3,700.0	3,693.7	3,673.5	3,667.3	8.8	8.6	141.78	-59.6	268.1	394.7	378.4	16.36	24.121	
3,800.0	3,793.5	3,772.8	3,766.3	9.0	8.8	142.11	-61.9	274.6	406.9	390.1	16.83	24.181	
3,900.0	3,893.3	3,872.0	3,865.3	9.3	9.1	142.42	-64.3	281.1	419.1	401.8	17.29	24.239	
4,000.0	3,993.0	3,971.2	3,964.3	9.5	9.4	142.71	-66.7	287.6	431.3	413.5	17.75	24.294	
4,100.0	4,092.8	4,070.5	4,063.3	9.8	9.6	142.99	-69.0	294.1	443.5	425.2	18.21	24.346	
4,200.0	4,192.5	4,169.7	4,162.3	10.0	9.9	143.25	-71.4	300.6	455.7	437.0	18.68	24.397	
4,300.0	4,292.3	4,268.9	4,261.3	10.3	10.1	143.50	-73.8	307.1	467.9	448.7	19.14	24.444	
4,400.0	4,392.0	4,368.1	4,360.3	10.5	10.4	143.74	-76.1	313.6	480.1	460.5	19.60	24.490	
4,500.0	4,491.8	4,467.4	4,459.3	10.8	10.6	143.96	-78.5	320.1	492.3	472.3	20.07	24.534	

Company:	Whiting Petroleum Corporation	**Local Co-ordinate Reference:**	Well Razor #26L-2302B
Project:	Weld County, CO	**TVD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Reference Site:	S26-T10N-R58W	**MD Reference:**	WELL @ 4751.0usft (Original Well Elev)
Site Error:	0.0usft	**North Reference:**	Grid
Reference Well:	Razor #26L-2302B	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0usft	**Output errors are at**	2.00 sigma
Reference Wellbore	HZ	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4751.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Razor #26L-2302B
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.07°