



Whiting Petroleum Corp.

Weld County, CO

Sec 25-T10N-R58W

Razor #25N-2406

Hz

APD

Anticollision Report

15 May, 2015



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.00 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	3.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	5/15/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,668.31	APD (Hz)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag	

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						
Sec 25-T10N-R58W						
Razor #25N-2405 - Hz - APD	300.00	300.00	30.01	28.39	18.582	CC
Razor #25N-2405 - Hz - APD	500.00	497.94	30.24	27.38	10.586	ES
Razor #25N-2405 - Hz - APD	15,668.31	15,626.44	335.93	38.19	1.128	Level 2, SF
Razor #25N-2407 - Hz - APD	300.00	300.00	29.22	27.61	18.096	CC, ES
Razor #25N-2407 - Hz - APD	15,668.31	15,690.21	335.93	37.53	1.126	Level 2, SF
Razor #25N-2408 - HZ - APD	300.00	300.00	59.99	58.38	37.149	CC, ES
Razor #25N-2408 - HZ - APD	15,668.31	15,719.80	660.33	357.63	2.181	SF
Razor #25N-2437 - Hz - APD	600.00	596.02	57.15	53.65	16.335	CC, ES
Razor #25N-2437 - Hz - APD	15,668.31	15,918.20	509.61	214.78	1.729	SF
Razor #25N-2438 - Hz - APD	500.00	498.80	50.59	47.73	17.709	CC
Razor #25N-2438 - Hz - APD	600.00	598.20	50.72	47.21	14.441	ES
Razor #25N-2438 - Hz - APD	15,668.31	16,022.10	280.34	80.92	1.406	Level 3, SF
Razor #25N-2439 - Hz - APD	300.00	300.00	57.96	56.34	35.889	CC
Razor #25N-2439 - Hz - APD	15,668.31	15,827.64	206.62	-45.70	0.819	Level 1, ES, SF
Razor #25N-2440 - Hz - APD	300.00	300.00	77.83	76.21	48.193	CC, ES
Razor #25N-2440 - Hz - APD	15,668.31	16,009.08	544.62	264.62	1.945	SF

Offset Design												Offset Site Error:	0.00 usft
Sec 25-T10N-R58W - Razor #25N-2405 - Hz - APD												Offset Well Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-91.93	-1.01	-29.99	30.01				
100.00	100.00	100.00	100.00	0.13	0.13	-91.93	-1.01	-29.99	30.01	29.74	0.27	112.670	
200.00	200.00	200.00	200.00	0.47	0.47	-91.93	-1.01	-29.99	30.01	29.07	0.94	31.903	
300.00	300.00	300.00	300.00	0.81	0.81	-91.93	-1.01	-29.99	30.01	28.39	1.61	18.582	CC
400.00	399.98	398.97	398.95	1.12	1.12	18.63	-1.31	-31.68	30.06	27.82	2.24	13.404	
500.00	499.84	497.94	497.78	1.44	1.44	20.31	-2.20	-36.72	30.24	27.38	2.86	10.586	ES
600.00	599.49	596.90	596.37	1.77	1.77	22.74	-3.68	-45.13	30.99	27.50	3.49	8.874	
700.00	699.11	695.73	694.47	2.10	2.12	23.89	-5.75	-56.87	34.74	30.59	4.15	8.371	
800.00	798.73	794.83	792.43	2.45	2.49	23.72	-8.35	-71.63	41.49	36.67	4.82	8.605	
900.00	898.35	894.56	890.94	2.80	2.87	23.46	-11.06	-87.00	48.76	43.26	5.49	8.877	
1,000.00	997.97	994.30	989.44	3.16	3.26	23.26	-13.77	-102.36	56.02	49.85	6.17	9.082	
1,100.00	1,097.59	1,094.03	1,087.95	3.52	3.66	23.11	-16.48	-117.73	63.28	56.44	6.85	9.241	

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



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Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
1,200.00	1,197.21	1,193.77	1,186.46	3.88	4.06	22.99	-19.19	-133.09	70.55	63.02	7.53	9.368		
1,300.00	1,296.83	1,293.51	1,284.97	4.24	4.46	22.90	-21.90	-148.46	77.81	69.60	8.22	9.471		
1,400.00	1,396.45	1,393.24	1,383.47	4.60	4.86	22.82	-24.61	-163.82	85.08	76.18	8.90	9.557		
1,500.00	1,496.07	1,492.98	1,481.98	4.96	5.26	22.75	-27.32	-179.19	92.34	82.75	9.59	9.629		
1,600.00	1,595.69	1,592.71	1,580.49	5.32	5.67	22.69	-30.03	-194.55	99.61	89.33	10.28	9.691		
1,700.00	1,695.31	1,692.45	1,679.00	5.68	6.07	22.64	-32.74	-209.92	106.87	95.90	10.97	9.743		
1,800.00	1,794.93	1,792.18	1,777.51	6.04	6.48	22.60	-35.45	-225.28	114.14	102.48	11.66	9.789		
1,900.00	1,894.55	1,891.92	1,876.01	6.40	6.88	22.56	-38.16	-240.65	121.40	109.05	12.35	9.830		
2,000.00	1,994.17	1,991.66	1,974.52	6.77	7.29	22.52	-40.87	-256.01	128.67	115.63	13.04	9.866		
2,100.00	2,093.78	2,091.39	2,073.03	7.13	7.70	22.49	-43.57	-271.38	135.94	122.20	13.73	9.897		
2,200.00	2,193.40	2,191.13	2,171.54	7.49	8.11	22.47	-46.28	-286.74	143.20	128.77	14.43	9.926		
2,300.00	2,293.02	2,290.86	2,270.04	7.85	8.51	22.44	-48.99	-302.11	150.47	135.35	15.12	9.952		
2,400.00	2,392.64	2,390.60	2,368.55	8.22	8.92	22.42	-51.70	-317.47	157.73	141.92	15.81	9.975		
2,500.00	2,492.26	2,490.33	2,467.06	8.58	9.33	22.40	-54.41	-332.84	165.00	148.49	16.51	9.996		
2,600.00	2,591.88	2,590.07	2,565.57	8.94	9.74	22.38	-57.12	-348.20	172.26	155.06	17.20	10.016		
2,700.00	2,691.50	2,689.81	2,664.08	9.31	10.15	22.36	-59.83	-363.57	179.53	161.64	17.89	10.033		
2,800.00	2,791.12	2,789.54	2,762.58	9.67	10.55	22.35	-62.54	-378.93	186.79	168.21	18.59	10.050		
2,900.00	2,890.74	2,889.28	2,861.09	10.03	10.96	22.33	-65.25	-394.30	194.06	174.78	19.28	10.065		
3,000.00	2,990.36	2,989.01	2,959.60	10.40	11.37	22.32	-67.96	-409.66	201.33	181.35	19.97	10.079		
3,100.00	3,089.98	3,088.75	3,058.11	10.76	11.78	22.31	-70.67	-425.03	208.59	187.92	20.67	10.092		
3,200.00	3,189.60	3,188.48	3,156.61	11.12	12.19	22.29	-73.38	-440.39	215.86	194.49	21.36	10.104		
3,300.00	3,289.22	3,288.22	3,255.12	11.49	12.60	22.28	-76.09	-455.76	223.12	201.06	22.06	10.115		
3,400.00	3,388.84	3,387.96	3,353.63	11.85	13.01	22.27	-78.80	-471.12	230.39	207.64	22.75	10.126		
3,500.00	3,488.46	3,487.69	3,452.14	12.21	13.42	22.26	-81.50	-486.49	237.65	214.21	23.45	10.136		
3,600.00	3,588.08	3,587.43	3,550.65	12.58	13.83	22.25	-84.21	-501.86	244.92	220.78	24.14	10.145		
3,700.00	3,687.70	3,687.16	3,649.15	12.94	14.23	22.25	-86.92	-517.22	252.19	227.35	24.84	10.154		
3,800.00	3,787.32	3,786.90	3,747.66	13.31	14.64	22.24	-89.63	-532.59	259.45	233.92	25.53	10.162		
3,900.00	3,886.94	3,886.63	3,846.17	13.67	15.05	22.23	-92.34	-547.95	266.72	240.49	26.23	10.170		
4,000.00	3,986.55	3,986.37	3,944.68	14.03	15.46	22.22	-95.05	-563.32	273.98	247.06	26.92	10.177		
4,100.00	4,086.17	4,086.11	4,043.18	14.40	15.87	22.22	-97.76	-578.68	281.25	253.63	27.62	10.184		
4,200.00	4,185.79	4,185.84	4,141.69	14.76	16.28	22.21	-100.47	-594.05	288.51	260.20	28.31	10.191		
4,300.00	4,285.41	4,285.58	4,240.20	15.12	16.69	22.20	-103.18	-609.41	295.78	266.77	29.01	10.197		
4,400.00	4,385.03	4,385.31	4,338.71	15.49	17.10	22.20	-105.89	-624.78	303.05	273.34	29.70	10.203		
4,500.00	4,484.65	4,486.24	4,438.39	15.85	17.51	22.19	-108.63	-640.30	310.29	279.90	30.40	10.208		
4,600.00	4,584.40	4,597.97	4,549.13	16.16	17.82	22.20	-111.21	-654.97	316.89	285.92	30.96	10.235		
4,700.00	4,684.34	4,710.02	4,660.67	16.40	18.11	22.11	-113.05	-665.39	322.90	291.45	31.45	10.267		
4,800.00	4,784.33	4,822.38	4,772.84	16.67	18.38	-88.06	-114.13	-671.52	327.91	295.93	31.98	10.253		
4,900.00	4,884.33	4,933.89	4,884.33	16.95	18.65	-88.13	-114.45	-673.33	329.51	296.96	32.55	10.122		
5,000.00	4,984.33	5,033.89	4,984.33	17.23	18.91	-88.13	-114.45	-673.33	329.51	296.96	33.12	9.948		
5,100.00	5,084.33	5,131.90	5,082.10	17.51	19.16	-87.25	-109.31	-673.33	329.72	296.00	33.72	9.778		
5,200.00	5,183.49	5,227.26	5,174.78	17.78	19.40	-85.28	-87.41	-673.33	330.47	296.14	34.33	9.625		
5,300.00	5,278.59	5,320.85	5,260.36	18.04	19.62	-83.49	-49.86	-673.33	331.50	296.62	34.88	9.504		
5,400.00	5,366.15	5,412.94	5,336.69	18.27	19.80	-81.94	1.44	-673.33	332.65	297.30	35.36	9.409		
5,500.00	5,442.93	5,503.82	5,402.02	18.47	19.96	-80.67	64.46	-673.33	333.78	297.99	35.79	9.326		
5,600.00	5,506.13	5,593.79	5,454.95	18.62	20.09	-79.72	137.07	-673.33	334.73	298.49	36.24	9.236		
5,700.00	5,553.42	5,683.13	5,494.38	18.72	20.20	-79.11	217.12	-673.33	335.39	298.60	36.79	9.116		
5,800.00	5,583.06	5,772.13	5,519.51	18.84	20.32	-78.86	302.39	-673.33	335.68	298.19	37.49	8.953		
5,900.00	5,593.96	5,861.08	5,529.76	19.27	20.49	-78.97	390.63	-673.33	335.56	297.19	38.37	8.746		
5,944.12	5,594.42	5,903.25	5,530.00	19.51	20.60	-78.93	432.80	-673.33	335.60	296.79	38.81	8.648		
6,000.00	5,594.00	5,959.13	5,530.00	19.82	20.78	-79.00	488.69	-673.33	335.52	296.10	39.42	8.511		
6,100.00	5,594.00	6,059.13	5,530.00	20.46	21.24	-79.00	588.69	-673.33	335.53	294.87	40.66	8.253		
6,200.00	5,594.00	6,159.13	5,530.00	21.18	21.84	-79.00	688.69	-673.33	335.53	293.48	42.05	7.979		

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



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Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
6,300.00	5,594.00	6,259.13	5,530.00	21.98	22.55	-79.00	788.69	-673.33	335.54	291.94	43.60	7.697		
6,400.00	5,594.00	6,359.13	5,530.00	22.84	23.35	-79.00	888.69	-673.33	335.54	290.27	45.27	7.412		
6,500.00	5,594.00	6,459.13	5,530.00	23.76	24.22	-79.00	988.69	-673.33	335.54	288.48	47.07	7.129		
6,600.00	5,594.00	6,559.13	5,530.00	24.73	25.15	-79.00	1,088.69	-673.34	335.55	286.58	48.97	6.852		
6,700.00	5,594.00	6,659.13	5,530.00	25.75	26.14	-79.00	1,188.69	-673.34	335.55	284.59	50.96	6.584		
6,800.00	5,594.00	6,759.13	5,530.00	26.81	27.17	-79.00	1,288.69	-673.34	335.56	282.52	53.04	6.327		
6,900.00	5,594.00	6,859.13	5,530.00	27.91	28.24	-79.00	1,388.69	-673.34	335.56	280.37	55.19	6.080		
7,000.00	5,594.00	6,959.13	5,530.00	29.04	29.35	-79.00	1,488.69	-673.34	335.57	278.16	57.41	5.845		
7,100.00	5,594.00	7,059.13	5,530.00	30.20	30.48	-79.00	1,588.69	-673.34	335.57	275.89	59.68	5.623		
7,200.00	5,594.00	7,159.13	5,530.00	31.39	31.65	-79.00	1,688.69	-673.34	335.57	273.56	62.01	5.412		
7,300.00	5,594.00	7,259.13	5,530.00	32.60	32.84	-79.00	1,788.69	-673.34	335.58	271.20	64.38	5.212		
7,400.00	5,594.00	7,359.13	5,530.00	33.83	34.05	-79.01	1,888.69	-673.34	335.58	268.79	66.80	5.024		
7,500.00	5,594.00	7,459.13	5,530.00	35.08	35.28	-79.01	1,988.69	-673.34	335.59	266.34	69.25	4.846		
7,600.00	5,594.00	7,559.13	5,530.00	36.34	36.53	-79.01	2,088.69	-673.34	335.59	263.86	71.73	4.678		
7,700.00	5,594.00	7,659.13	5,530.00	37.62	37.80	-79.01	2,188.69	-673.34	335.60	261.35	74.25	4.520		
7,800.00	5,594.00	7,759.13	5,530.00	38.92	39.08	-79.01	2,288.69	-673.34	335.60	258.81	76.79	4.371		
7,900.00	5,594.00	7,859.13	5,530.00	40.22	40.37	-79.01	2,388.69	-673.34	335.60	256.25	79.35	4.229		
8,000.00	5,594.00	7,959.13	5,530.00	41.54	41.68	-79.01	2,488.69	-673.34	335.61	253.67	81.94	4.096		
8,100.00	5,594.00	8,059.13	5,530.00	42.87	42.99	-79.01	2,588.69	-673.35	335.61	251.07	84.55	3.970		
8,200.00	5,594.00	8,159.13	5,530.00	44.20	44.32	-79.01	2,688.69	-673.35	335.62	248.44	87.17	3.850		
8,300.00	5,594.00	8,259.13	5,530.00	45.55	45.65	-79.01	2,788.69	-673.35	335.62	245.81	89.81	3.737		
8,400.00	5,594.00	8,359.13	5,530.00	46.90	46.99	-79.01	2,888.69	-673.35	335.62	243.15	92.47	3.630		
8,500.00	5,594.00	8,459.13	5,530.00	48.26	48.34	-79.01	2,988.69	-673.35	335.63	240.49	95.14	3.528		
8,600.00	5,594.00	8,559.13	5,530.00	49.62	49.70	-79.01	3,088.69	-673.35	335.63	237.81	97.83	3.431		
8,700.00	5,594.00	8,659.13	5,530.00	50.99	51.06	-79.01	3,188.69	-673.35	335.64	235.12	100.52	3.339		
8,800.00	5,594.00	8,759.13	5,530.00	52.37	52.43	-79.01	3,288.69	-673.35	335.64	232.41	103.23	3.251		
8,900.00	5,594.00	8,859.13	5,530.00	53.75	53.81	-79.01	3,388.69	-673.35	335.65	229.70	105.94	3.168		
9,000.00	5,594.00	8,959.13	5,530.00	55.14	55.19	-79.01	3,488.69	-673.35	335.65	226.98	108.67	3.089		
9,100.00	5,594.00	9,059.13	5,530.00	56.53	56.57	-79.01	3,588.69	-673.35	335.65	224.25	111.40	3.013		
9,200.00	5,594.00	9,159.13	5,530.00	57.92	57.96	-79.01	3,688.69	-673.35	335.66	221.51	114.15	2.941		
9,300.00	5,594.00	9,259.13	5,530.00	59.32	59.35	-79.01	3,788.69	-673.35	335.66	218.77	116.90	2.871		
9,400.00	5,594.00	9,359.13	5,530.00	60.72	60.75	-79.01	3,888.69	-673.35	335.67	216.01	119.65	2.805		
9,500.00	5,594.00	9,459.13	5,530.00	62.13	62.15	-79.01	3,988.69	-673.35	335.67	213.26	122.42	2.742		
9,600.00	5,594.00	9,559.13	5,530.00	63.54	63.55	-79.01	4,088.69	-673.36	335.68	210.49	125.19	2.681		
9,700.00	5,594.00	9,659.13	5,530.00	64.95	64.95	-79.01	4,188.69	-673.36	335.68	207.72	127.96	2.623		
9,800.00	5,594.00	9,759.13	5,530.00	66.36	66.36	-79.01	4,288.69	-673.36	335.68	204.94	130.74	2.568		
9,900.00	5,594.00	9,859.13	5,530.00	67.78	67.77	-79.01	4,388.69	-673.36	335.69	202.16	133.52	2.514		
10,000.00	5,594.00	9,959.13	5,530.00	69.19	69.19	-79.01	4,488.69	-673.36	335.69	199.38	136.31	2.463		
10,100.00	5,594.00	10,059.13	5,530.00	70.61	70.60	-79.01	4,588.69	-673.36	335.70	196.59	139.11	2.413		
10,200.00	5,594.00	10,159.13	5,530.00	72.04	72.02	-79.01	4,688.69	-673.36	335.70	193.80	141.90	2.366		
10,300.00	5,594.00	10,259.13	5,530.00	73.46	73.44	-79.01	4,788.69	-673.36	335.71	191.00	144.71	2.320		
10,400.00	5,594.00	10,359.13	5,530.00	74.89	74.86	-79.01	4,888.69	-673.36	335.71	188.20	147.51	2.276		
10,500.00	5,594.00	10,459.13	5,530.00	76.31	76.29	-79.01	4,988.69	-673.36	335.71	185.39	150.32	2.233		
10,600.00	5,594.00	10,559.13	5,530.00	77.74	77.71	-79.01	5,088.69	-673.36	335.72	182.59	153.13	2.192		
10,700.00	5,594.00	10,659.13	5,530.00	79.18	79.14	-79.01	5,188.69	-673.36	335.72	179.78	155.95	2.153		
10,800.00	5,594.00	10,759.13	5,530.00	80.61	80.57	-79.01	5,288.69	-673.36	335.73	176.96	158.77	2.115		
10,900.00	5,594.00	10,859.13	5,530.00	82.04	82.00	-79.01	5,388.69	-673.36	335.73	174.15	161.59	2.078		
11,000.00	5,594.00	10,959.13	5,530.00	83.48	83.43	-79.01	5,488.69	-673.37	335.74	171.33	164.41	2.042		
11,100.00	5,594.00	11,059.13	5,530.00	84.91	84.87	-79.01	5,588.69	-673.37	335.74	168.50	167.23	2.008		
11,200.00	5,594.00	11,159.13	5,530.00	86.35	86.30	-79.01	5,688.69	-673.37	335.74	165.68	170.06	1.974		
11,300.00	5,594.00	11,259.13	5,530.00	87.79	87.74	-79.01	5,788.69	-673.37	335.75	162.86	172.89	1.942		
11,400.00	5,594.00	11,359.13	5,530.00	89.23	89.18	-79.01	5,888.69	-673.37	335.75	160.03	175.73	1.911		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T10N-R58W - Razor #25N-2405 - Hz - APD		Offset Site Error:		0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:		0.00 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)	Minimum Separation (usft)	Separation Factor					
11,500.00	5,594.00	11,459.13	5,530.00	90.67	90.61	-79.01	5,988.69	-673.37	335.76	157.20	178.56	1.880					
11,600.00	5,594.00	11,559.13	5,530.00	92.11	92.05	-79.01	6,088.69	-673.37	335.76	154.36	181.40	1.851					
11,700.00	5,594.00	11,659.13	5,530.00	93.56	93.49	-79.01	6,188.69	-673.37	335.76	151.53	184.23	1.822					
11,800.00	5,594.00	11,759.13	5,530.00	95.00	94.93	-79.01	6,288.69	-673.37	335.77	148.69	187.07	1.795					
11,900.00	5,594.00	11,859.13	5,530.00	96.44	96.38	-79.01	6,388.69	-673.37	335.77	145.86	189.92	1.768					
12,000.00	5,594.00	11,959.13	5,530.00	97.89	97.82	-79.01	6,488.69	-673.37	335.78	143.02	192.76	1.742					
12,100.00	5,594.00	12,059.13	5,530.00	99.34	99.26	-79.01	6,588.69	-673.37	335.78	140.18	195.60	1.717					
12,200.00	5,594.00	12,159.13	5,530.00	100.78	100.71	-79.01	6,688.69	-673.37	335.79	137.34	198.45	1.692					
12,300.00	5,594.00	12,259.13	5,530.00	102.23	102.15	-79.01	6,788.69	-673.37	335.79	134.49	201.30	1.668					
12,400.00	5,594.00	12,359.13	5,530.00	103.68	103.60	-79.01	6,888.69	-673.37	335.79	131.65	204.15	1.645					
12,500.00	5,594.00	12,459.13	5,530.00	105.13	105.05	-79.01	6,988.69	-673.38	335.80	128.80	207.00	1.622					
12,600.00	5,594.00	12,559.13	5,530.00	106.58	106.49	-79.01	7,088.69	-673.38	335.80	125.95	209.85	1.600					
12,700.00	5,594.00	12,659.13	5,530.00	108.03	107.94	-79.01	7,188.69	-673.38	335.81	123.11	212.70	1.579					
12,800.00	5,594.00	12,759.13	5,530.00	109.48	109.39	-79.01	7,288.69	-673.38	335.81	120.26	215.56	1.558					
12,900.00	5,594.00	12,859.13	5,530.00	110.93	110.84	-79.01	7,388.69	-673.38	335.82	117.41	218.41	1.538					
13,000.00	5,594.00	12,959.13	5,530.00	112.38	112.29	-79.01	7,488.69	-673.38	335.82	114.55	221.27	1.518					
13,100.00	5,594.00	13,059.13	5,530.00	113.83	113.74	-79.01	7,588.69	-673.38	335.82	111.70	224.12	1.498 Level 3					
13,200.00	5,594.00	13,159.13	5,530.00	115.29	115.19	-79.01	7,688.69	-673.38	335.83	108.85	226.98	1.480 Level 3					
13,300.00	5,594.00	13,259.13	5,530.00	116.74	116.64	-79.01	7,788.69	-673.38	335.83	105.99	229.84	1.461 Level 3					
13,400.00	5,594.00	13,359.13	5,530.00	118.19	118.10	-79.01	7,888.69	-673.38	335.84	103.14	232.70	1.443 Level 3					
13,500.00	5,594.00	13,459.13	5,530.00	119.65	119.55	-79.01	7,988.69	-673.38	335.84	100.28	235.56	1.426 Level 3					
13,600.00	5,594.00	13,559.13	5,530.00	121.10	121.00	-79.01	8,088.69	-673.38	335.85	97.42	238.42	1.409 Level 3					
13,700.00	5,594.00	13,659.13	5,530.00	122.56	122.46	-79.01	8,188.69	-673.38	335.85	94.57	241.28	1.392 Level 3					
13,800.00	5,594.00	13,759.13	5,530.00	124.01	123.91	-79.01	8,288.69	-673.38	335.85	91.71	244.15	1.376 Level 3					
13,900.00	5,594.00	13,859.13	5,530.00	125.47	125.36	-79.01	8,388.69	-673.38	335.86	88.85	247.01	1.360 Level 3					
14,000.00	5,594.00	13,959.13	5,530.00	126.92	126.82	-79.01	8,488.69	-673.39	335.86	85.99	249.88	1.344 Level 3					
14,100.00	5,594.00	14,059.13	5,530.00	128.38	128.27	-79.01	8,588.69	-673.39	335.87	83.12	252.74	1.329 Level 3					
14,200.00	5,594.00	14,159.13	5,530.00	129.84	129.73	-79.01	8,688.69	-673.39	335.87	80.26	255.61	1.314 Level 3					
14,300.00	5,594.00	14,259.13	5,530.00	131.29	131.18	-79.01	8,788.69	-673.39	335.88	77.40	258.47	1.299 Level 3					
14,400.00	5,594.00	14,359.13	5,530.00	132.75	132.64	-79.01	8,888.69	-673.39	335.88	74.54	261.34	1.285 Level 3					
14,500.00	5,594.00	14,459.13	5,530.00	134.21	134.10	-79.02	8,988.69	-673.39	335.88	71.67	264.21	1.271 Level 3					
14,600.00	5,594.00	14,559.13	5,530.00	135.67	135.55	-79.02	9,088.69	-673.39	335.89	68.81	267.08	1.258 Level 3					
14,700.00	5,594.00	14,659.13	5,530.00	137.13	137.01	-79.02	9,188.69	-673.39	335.89	65.94	269.95	1.244 Level 2					
14,800.00	5,594.00	14,759.13	5,530.00	138.58	138.47	-79.02	9,288.69	-673.39	335.90	63.08	272.82	1.231 Level 2					
14,900.00	5,594.00	14,859.13	5,530.00	140.04	139.93	-79.02	9,388.69	-673.39	335.90	60.21	275.69	1.218 Level 2					
15,000.00	5,594.00	14,959.13	5,530.00	141.50	141.38	-79.02	9,488.69	-673.39	335.90	57.35	278.56	1.206 Level 2					
15,100.00	5,594.00	15,059.13	5,530.00	142.96	142.84	-79.02	9,588.69	-673.39	335.91	54.48	281.43	1.194 Level 2					
15,200.00	5,594.00	15,159.13	5,530.00	144.42	144.30	-79.02	9,688.69	-673.39	335.91	51.61	284.30	1.182 Level 2					
15,300.00	5,594.00	15,259.13	5,530.00	145.88	145.76	-79.02	9,788.69	-673.39	335.92	48.74	287.17	1.170 Level 2					
15,400.00	5,594.00	15,359.13	5,530.00	147.34	147.22	-79.02	9,888.69	-673.40	335.92	45.88	290.05	1.158 Level 2					
15,500.00	5,594.00	15,459.13	5,530.00	148.80	148.68	-79.02	9,988.69	-673.40	335.93	43.01	292.92	1.147 Level 2					
15,600.00	5,594.00	15,559.13	5,530.00	150.26	150.14	-79.02	10,088.69	-673.40	335.93	40.14	295.79	1.136 Level 2					
15,639.15	5,594.00	15,598.28	5,530.00	150.83	150.71	-79.02	10,127.83	-673.40	335.93	39.01	296.92	1.131 Level 2					
15,668.31	5,594.00	15,626.44	5,530.00	151.26	151.12	-79.02	10,155.99	-673.40	335.93	38.19	297.74	1.128 Level 2, SF					



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	29.22	29.22					
100.00	100.00	100.00	100.00	0.13	0.13	90.00	0.00	29.22	29.22	28.96	0.27	109.719		
200.00	200.00	200.00	200.00	0.47	0.47	90.00	0.00	29.22	29.22	28.28	0.94	31.067		
300.00	300.00	300.00	300.00	0.81	0.81	90.00	0.00	29.22	29.22	27.61	1.61	18.096 CC, ES		
400.00	399.98	400.17	400.14	1.12	1.11	-157.89	-1.72	28.89	30.55	28.32	2.23	13.691		
500.00	499.84	500.15	499.99	1.44	1.41	-152.55	-6.86	27.89	34.74	31.90	2.83	12.255		
600.00	599.49	599.86	599.46	1.77	1.72	-148.20	-13.69	26.56	41.77	38.30	3.47	12.031		
700.00	699.11	699.55	698.90	2.10	2.04	-145.43	-20.51	25.24	49.33	45.20	4.13	11.949		
800.00	798.73	799.24	798.35	2.45	2.37	-143.40	-27.34	23.91	56.97	52.17	4.80	11.869		
900.00	898.35	898.93	897.80	2.80	2.71	-141.85	-34.17	22.58	64.67	59.18	5.48	11.796		
1,000.00	997.97	998.62	997.25	3.16	3.06	-140.63	-40.99	21.26	72.40	66.23	6.17	11.732		
1,100.00	1,097.59	1,098.31	1,096.69	3.52	3.41	-139.64	-47.82	19.93	80.16	73.29	6.86	11.677		
1,200.00	1,197.21	1,198.00	1,196.14	3.88	3.76	-138.83	-54.65	18.60	87.94	80.38	7.56	11.629		
1,300.00	1,296.83	1,297.69	1,295.59	4.24	4.11	-138.15	-61.47	17.27	95.73	87.47	8.26	11.587		
1,400.00	1,396.45	1,397.38	1,395.03	4.60	4.46	-137.58	-68.30	15.95	103.54	94.57	8.96	11.551		
1,500.00	1,496.07	1,497.07	1,494.48	4.96	4.81	-137.08	-75.12	14.62	111.35	101.68	9.67	11.519		
1,600.00	1,595.69	1,596.76	1,593.93	5.32	5.17	-136.65	-81.95	13.29	119.17	108.80	10.37	11.491		
1,700.00	1,695.31	1,696.45	1,693.37	5.68	5.52	-136.27	-88.78	11.97	127.00	115.92	11.08	11.465		
1,800.00	1,794.93	1,796.14	1,792.82	6.04	5.87	-135.94	-95.60	10.64	134.83	123.05	11.78	11.443		
1,900.00	1,894.55	1,895.83	1,892.27	6.40	6.23	-135.64	-102.43	9.31	142.67	130.18	12.49	11.423		
2,000.00	1,994.17	1,995.52	1,991.72	6.77	6.58	-135.38	-109.26	7.99	150.51	137.31	13.20	11.404		
2,100.00	2,093.78	2,095.21	2,091.16	7.13	6.94	-135.14	-116.08	6.66	158.35	144.44	13.91	11.388		
2,200.00	2,193.40	2,194.90	2,190.61	7.49	7.29	-134.92	-122.91	5.33	166.20	151.58	14.61	11.372		
2,300.00	2,293.02	2,294.59	2,290.06	7.85	7.65	-134.72	-129.73	4.01	174.04	158.72	15.32	11.359		
2,400.00	2,392.64	2,394.28	2,389.50	8.22	8.00	-134.54	-136.56	2.68	181.89	165.86	16.03	11.346		
2,500.00	2,492.26	2,493.97	2,488.95	8.58	8.36	-134.38	-143.39	1.35	189.74	173.00	16.74	11.334		
2,600.00	2,591.88	2,593.66	2,588.40	8.94	8.72	-134.22	-150.21	0.03	197.59	180.14	17.45	11.323		
2,700.00	2,691.50	2,693.35	2,687.85	9.31	9.07	-134.08	-157.04	-1.30	205.45	187.29	18.16	11.313		
2,800.00	2,791.12	2,793.04	2,787.29	9.67	9.43	-133.95	-163.87	-2.63	213.30	194.43	18.87	11.304		
2,900.00	2,890.74	2,892.73	2,886.74	10.03	9.78	-133.83	-170.69	-3.96	221.16	201.58	19.58	11.295		
3,000.00	2,990.36	2,992.42	2,986.19	10.40	10.14	-133.72	-177.52	-5.28	229.01	208.72	20.29	11.287		
3,100.00	3,089.98	3,092.11	3,085.63	10.76	10.50	-133.61	-184.34	-6.61	236.87	215.87	21.00	11.279		
3,200.00	3,189.60	3,191.80	3,185.08	11.12	10.85	-133.51	-191.17	-7.94	244.73	223.02	21.71	11.272		
3,300.00	3,289.22	3,291.49	3,284.53	11.49	11.21	-133.42	-198.00	-9.26	252.59	230.17	22.42	11.265		
3,400.00	3,388.84	3,391.18	3,383.98	11.85	11.57	-133.34	-204.82	-10.59	260.45	237.31	23.13	11.259		
3,500.00	3,488.46	3,490.87	3,483.42	12.21	11.92	-133.25	-211.65	-11.92	268.31	244.46	23.84	11.253		
3,600.00	3,588.08	3,592.95	3,585.34	12.58	12.24	-133.48	-217.16	-12.99	275.77	251.26	24.51	11.251		
3,700.00	3,687.70	3,695.21	3,687.58	12.94	12.53	-134.40	-219.12	-13.37	282.34	257.18	25.15	11.224		
3,800.00	3,787.32	3,794.95	3,787.32	13.31	12.82	-135.64	-219.13	-13.37	288.51	262.73	25.78	11.189		
3,900.00	3,886.94	3,894.57	3,886.94	13.67	13.07	-136.82	-219.13	-13.37	294.82	268.44	26.38	11.176		
4,000.00	3,986.55	3,994.19	3,986.55	14.03	13.32	-137.95	-219.13	-13.37	301.25	274.27	26.98	11.167		
4,100.00	4,086.17	4,093.81	4,086.17	14.40	13.58	-139.04	-219.13	-13.37	307.78	280.21	27.58	11.162		
4,200.00	4,185.79	4,193.43	4,185.79	14.76	13.84	-140.08	-219.13	-13.37	314.43	286.25	28.18	11.159		
4,300.00	4,285.41	4,293.05	4,285.41	15.12	14.10	-141.07	-219.13	-13.37	321.17	292.39	28.78	11.160		
4,400.00	4,385.03	4,392.67	4,385.03	15.49	14.37	-142.03	-219.13	-13.37	328.01	298.62	29.39	11.162		
4,500.00	4,484.65	4,492.28	4,484.65	15.85	14.64	-142.94	-219.13	-13.37	334.93	304.94	29.99	11.167		
4,600.00	4,584.40	4,592.04	4,584.40	16.16	14.91	-143.72	-219.13	-13.37	340.53	309.96	30.56	11.141		
4,700.00	4,684.34	4,691.97	4,684.34	16.40	15.19	-144.09	-219.13	-13.37	343.35	312.27	31.08	11.048		
4,800.00	4,784.33	4,791.97	4,784.33	16.67	15.46	-105.86	-219.13	-13.37	343.70	312.07	31.63	10.866		
4,900.00	4,884.33	4,891.97	4,884.33	16.95	15.74	-105.86	-219.13	-13.37	343.70	311.52	32.19	10.678		
5,000.00	4,984.33	4,991.97	4,984.33	17.23	16.03	-105.86	-219.13	-13.37	343.70	310.95	32.75	10.495		
5,100.00	5,084.33	5,107.61	5,099.52	17.51	16.34	-104.65	-211.22	-13.37	342.00	308.66	33.33	10.260		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T10N-R58W - Razor #25N-2407 - Hz - APD		Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error: 0.00 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)	Minimum Separation (usft)	Separation Factor				
5,200.00	5,183.49	5,223.89	5,210.84	17.78	16.62	101.86	-178.48	-13.37	338.08	304.24	33.83	9.992				
5,300.00	5,278.59	5,335.03	5,307.96	18.04	16.87	98.61	-124.87	-13.37	334.55	300.30	34.26	9.767				
5,400.00	5,366.15	5,441.10	5,388.06	18.27	17.10	95.08	-55.62	-13.38	331.98	297.31	34.67	9.575				
5,500.00	5,442.93	5,542.48	5,450.02	18.47	17.35	91.41	24.41	-13.38	330.71	295.58	35.13	9.414				
5,538.92	5,469.29	5,580.77	5,469.20	18.52	17.46	89.98	57.54	-13.38	330.60	295.28	35.33	9.359				
5,600.00	5,506.13	5,639.67	5,493.82	18.62	17.65	87.76	111.01	-13.38	330.86	295.23	35.63	9.286				
5,700.00	5,553.42	5,733.25	5,520.10	18.72	17.99	84.25	200.70	-13.39	332.33	296.17	36.17	9.189				
5,800.00	5,583.06	5,823.79	5,529.88	18.84	18.38	81.01	290.59	-13.39	334.84	298.12	36.72	9.119				
5,900.00	5,593.96	5,921.90	5,530.00	19.27	18.89	79.05	388.70	-13.40	336.71	299.23	37.48	8.984				
6,000.00	5,594.00	6,021.90	5,530.00	19.82	19.50	79.04	488.70	-13.40	336.71	298.11	38.60	8.724				
6,100.00	5,594.00	6,121.90	5,530.00	20.46	20.19	79.04	588.70	-13.41	336.70	296.80	39.89	8.440				
6,200.00	5,594.00	6,221.90	5,530.00	21.18	20.97	79.04	688.70	-13.41	336.69	295.33	41.36	8.141				
6,300.00	5,594.00	6,321.90	5,530.00	21.98	21.82	79.04	788.70	-13.42	336.68	293.72	42.96	7.836				
6,400.00	5,594.00	6,421.90	5,530.00	22.84	22.74	79.04	888.70	-13.42	336.67	291.97	44.70	7.531				
6,500.00	5,594.00	6,521.90	5,530.00	23.76	23.71	79.04	988.70	-13.42	336.67	290.11	46.56	7.231				
6,600.00	5,594.00	6,621.90	5,530.00	24.73	24.73	79.04	1,088.70	-13.43	336.66	288.15	48.51	6.940				
6,700.00	5,594.00	6,721.90	5,530.00	25.75	25.79	79.04	1,188.70	-13.43	336.65	286.09	50.56	6.659				
6,800.00	5,594.00	6,821.90	5,530.00	26.81	26.89	79.04	1,288.70	-13.44	336.64	283.96	52.69	6.390				
6,900.00	5,594.00	6,921.90	5,530.00	27.91	28.03	79.04	1,388.70	-13.44	336.63	281.75	54.88	6.134				
7,000.00	5,594.00	7,021.90	5,530.00	29.04	29.19	79.04	1,488.70	-13.45	336.63	279.48	57.14	5.891				
7,100.00	5,594.00	7,121.90	5,530.00	30.20	30.39	79.04	1,588.70	-13.45	336.62	277.16	59.46	5.662				
7,200.00	5,594.00	7,221.90	5,530.00	31.39	31.60	79.04	1,688.70	-13.46	336.61	274.79	61.82	5.445				
7,300.00	5,594.00	7,321.90	5,530.00	32.60	32.84	79.04	1,788.70	-13.46	336.60	272.37	64.23	5.241				
7,400.00	5,594.00	7,421.90	5,530.00	33.83	34.10	79.04	1,888.70	-13.46	336.60	269.92	66.68	5.048				
7,500.00	5,594.00	7,521.90	5,530.00	35.08	35.37	79.04	1,988.70	-13.47	336.59	267.43	69.16	4.867				
7,600.00	5,594.00	7,621.90	5,530.00	36.34	36.66	79.04	2,088.70	-13.47	336.58	264.91	71.67	4.696				
7,700.00	5,594.00	7,721.90	5,530.00	37.62	37.96	79.04	2,188.70	-13.48	336.57	262.36	74.21	4.535				
7,800.00	5,594.00	7,821.90	5,530.00	38.92	39.27	79.04	2,288.70	-13.48	336.56	259.78	76.78	4.383				
7,900.00	5,594.00	7,921.90	5,530.00	40.22	40.59	79.04	2,388.70	-13.49	336.56	257.18	79.37	4.240				
8,000.00	5,594.00	8,021.90	5,530.00	41.54	41.93	79.04	2,488.70	-13.49	336.55	254.57	81.98	4.105				
8,100.00	5,594.00	8,121.90	5,530.00	42.87	43.27	79.04	2,588.70	-13.50	336.54	251.93	84.61	3.978				
8,200.00	5,594.00	8,221.90	5,530.00	44.20	44.62	79.04	2,688.70	-13.50	336.53	249.28	87.26	3.857				
8,300.00	5,594.00	8,321.90	5,530.00	45.55	45.98	79.04	2,788.70	-13.51	336.52	246.61	89.92	3.743				
8,400.00	5,594.00	8,421.90	5,530.00	46.90	47.34	79.04	2,888.70	-13.51	336.52	243.92	92.59	3.634				
8,500.00	5,594.00	8,521.90	5,530.00	48.26	48.71	79.03	2,988.70	-13.51	336.51	241.23	95.28	3.532				
8,600.00	5,594.00	8,621.90	5,530.00	49.62	50.09	79.03	3,088.70	-13.52	336.50	238.52	97.98	3.434				
8,700.00	5,594.00	8,721.90	5,530.00	50.99	51.47	79.03	3,188.70	-13.52	336.49	235.80	100.69	3.342				
8,800.00	5,594.00	8,821.90	5,530.00	52.37	52.86	79.03	3,288.70	-13.53	336.48	233.07	103.42	3.254				
8,900.00	5,594.00	8,921.90	5,530.00	53.75	54.25	79.03	3,388.70	-13.53	336.48	230.33	106.15	3.170				
9,000.00	5,594.00	9,021.90	5,530.00	55.14	55.65	79.03	3,488.70	-13.54	336.47	227.58	108.89	3.090				
9,100.00	5,594.00	9,121.90	5,530.00	56.53	57.05	79.03	3,588.70	-13.54	336.46	224.82	111.63	3.014				
9,200.00	5,594.00	9,221.90	5,530.00	57.92	58.45	79.03	3,688.70	-13.55	336.45	222.06	114.39	2.941				
9,300.00	5,594.00	9,321.90	5,530.00	59.32	59.86	79.03	3,788.70	-13.55	336.44	219.29	117.15	2.872				
9,400.00	5,594.00	9,421.90	5,530.00	60.72	61.26	79.03	3,888.70	-13.55	336.44	216.51	119.92	2.805				
9,500.00	5,594.00	9,521.90	5,530.00	62.13	62.68	79.03	3,988.70	-13.56	336.43	213.73	122.69	2.742				
9,600.00	5,594.00	9,621.90	5,530.00	63.54	64.09	79.03	4,088.70	-13.56	336.42	210.94	125.47	2.681				
9,700.00	5,594.00	9,721.90	5,530.00	64.95	65.51	79.03	4,188.70	-13.57	336.41	208.15	128.26	2.623				
9,800.00	5,594.00	9,821.90	5,530.00	66.36	66.93	79.03	4,288.70	-13.57	336.40	205.35	131.05	2.567				
9,900.00	5,594.00	9,921.90	5,530.00	67.78	68.35	79.03	4,388.70	-13.58	336.40	202.55	133.85	2.513				
10,000.00	5,594.00	10,021.90	5,530.00	69.19	69.78	79.03	4,488.70	-13.58	336.39	199.74	136.64	2.462				
10,100.00	5,594.00	10,121.90	5,530.00	70.61	71.20	79.03	4,588.70	-13.59	336.38	196.93	139.45	2.412				
10,200.00	5,594.00	10,221.90	5,530.00	72.04	72.63	79.03	4,688.70	-13.59	336.37	194.12	142.25	2.365				

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
10,300.00	5,594.00	10,321.90	5,530.00	73.46	74.06	79.03	4,788.70	-13.60	336.36	191.30	145.06	2.319		
10,400.00	5,594.00	10,421.90	5,530.00	74.89	75.49	79.03	4,888.70	-13.60	336.36	188.48	147.88	2.275		
10,500.00	5,594.00	10,521.90	5,530.00	76.31	76.92	79.03	4,988.70	-13.60	336.35	185.65	150.70	2.232		
10,600.00	5,594.00	10,621.90	5,530.00	77.74	78.36	79.03	5,088.70	-13.61	336.34	182.82	153.52	2.191		
10,700.00	5,594.00	10,721.90	5,530.00	79.18	79.79	79.03	5,188.70	-13.61	336.33	179.99	156.34	2.151		
10,800.00	5,594.00	10,821.90	5,530.00	80.61	81.23	79.03	5,288.70	-13.62	336.32	177.16	159.16	2.113		
10,900.00	5,594.00	10,921.90	5,530.00	82.04	82.67	79.03	5,388.70	-13.62	336.32	174.32	161.99	2.076		
11,000.00	5,594.00	11,021.90	5,530.00	83.48	84.11	79.03	5,488.70	-13.63	336.31	171.48	164.82	2.040		
11,100.00	5,594.00	11,121.90	5,530.00	84.91	85.55	79.03	5,588.70	-13.63	336.30	168.64	167.66	2.006		
11,200.00	5,594.00	11,221.90	5,530.00	86.35	86.99	79.03	5,688.70	-13.64	336.29	165.80	170.49	1.972		
11,300.00	5,594.00	11,321.90	5,530.00	87.79	88.43	79.03	5,788.70	-13.64	336.28	162.96	173.33	1.940		
11,400.00	5,594.00	11,421.90	5,530.00	89.23	89.87	79.03	5,888.70	-13.64	336.28	160.11	176.17	1.909		
11,500.00	5,594.00	11,521.90	5,530.00	90.67	91.32	79.03	5,988.70	-13.65	336.27	157.26	179.01	1.879		
11,600.00	5,594.00	11,621.90	5,530.00	92.11	92.76	79.03	6,088.70	-13.65	336.26	154.41	181.85	1.849		
11,700.00	5,594.00	11,721.90	5,530.00	93.56	94.21	79.03	6,188.70	-13.66	336.25	151.56	184.70	1.821		
11,800.00	5,594.00	11,821.90	5,530.00	95.00	95.65	79.03	6,288.70	-13.66	336.24	148.70	187.54	1.793		
11,900.00	5,594.00	11,921.90	5,530.00	96.44	97.10	79.03	6,388.70	-13.67	336.24	145.85	190.39	1.766		
12,000.00	5,594.00	12,021.90	5,530.00	97.89	98.55	79.03	6,488.70	-13.67	336.23	142.99	193.24	1.740		
12,100.00	5,594.00	12,121.90	5,530.00	99.34	100.00	79.03	6,588.70	-13.68	336.22	140.13	196.09	1.715		
12,200.00	5,594.00	12,221.90	5,530.00	100.78	101.45	79.03	6,688.70	-13.68	336.21	137.27	198.94	1.690		
12,300.00	5,594.00	12,321.90	5,530.00	102.23	102.90	79.02	6,788.70	-13.69	336.20	134.41	201.79	1.666		
12,400.00	5,594.00	12,421.90	5,530.00	103.68	104.35	79.02	6,888.70	-13.69	336.20	131.55	204.65	1.643		
12,500.00	5,594.00	12,521.90	5,530.00	105.13	105.80	79.02	6,988.70	-13.69	336.19	128.68	207.50	1.620		
12,600.00	5,594.00	12,621.90	5,530.00	106.58	107.25	79.02	7,088.70	-13.70	336.18	125.82	210.36	1.598		
12,700.00	5,594.00	12,721.90	5,530.00	108.03	108.70	79.02	7,188.70	-13.70	336.17	122.95	213.22	1.577		
12,800.00	5,594.00	12,821.90	5,530.00	109.48	110.16	79.02	7,288.70	-13.71	336.16	120.09	216.08	1.556		
12,900.00	5,594.00	12,921.90	5,530.00	110.93	111.61	79.02	7,388.70	-13.71	336.16	117.22	218.94	1.535		
13,000.00	5,594.00	13,021.90	5,530.00	112.38	113.06	79.02	7,488.70	-13.72	336.15	114.35	221.80	1.516		
13,100.00	5,594.00	13,121.90	5,530.00	113.83	114.52	79.02	7,588.70	-13.72	336.14	111.48	224.66	1.496 Level 3		
13,200.00	5,594.00	13,221.90	5,530.00	115.29	115.97	79.02	7,688.70	-13.73	336.13	108.61	227.52	1.477 Level 3		
13,300.00	5,594.00	13,321.90	5,530.00	116.74	117.43	79.02	7,788.70	-13.73	336.12	105.74	230.39	1.459 Level 3		
13,400.00	5,594.00	13,421.90	5,530.00	118.19	118.88	79.02	7,888.70	-13.73	336.12	102.86	233.25	1.441 Level 3		
13,500.00	5,594.00	13,521.90	5,530.00	119.65	120.34	79.02	7,988.70	-13.74	336.11	99.99	236.12	1.423 Level 3		
13,600.00	5,594.00	13,621.90	5,530.00	121.10	121.80	79.02	8,088.70	-13.74	336.10	97.12	238.98	1.406 Level 3		
13,700.00	5,594.00	13,721.90	5,530.00	122.56	123.25	79.02	8,188.70	-13.75	336.09	94.24	241.85	1.390 Level 3		
13,800.00	5,594.00	13,821.90	5,530.00	124.01	124.71	79.02	8,288.70	-13.75	336.08	91.36	244.72	1.373 Level 3		
13,900.00	5,594.00	13,921.90	5,530.00	125.47	126.17	79.02	8,388.70	-13.76	336.08	88.49	247.59	1.357 Level 3		
14,000.00	5,594.00	14,021.90	5,530.00	126.92	127.63	79.02	8,488.70	-13.76	336.07	85.61	250.46	1.342 Level 3		
14,100.00	5,594.00	14,121.90	5,530.00	128.38	129.08	79.02	8,588.70	-13.77	336.06	82.73	253.33	1.327 Level 3		
14,200.00	5,594.00	14,221.90	5,530.00	129.84	130.54	79.02	8,688.70	-13.77	336.05	79.86	256.20	1.312 Level 3		
14,300.00	5,594.00	14,321.90	5,530.00	131.29	132.00	79.02	8,788.70	-13.78	336.04	76.98	259.07	1.297 Level 3		
14,400.00	5,594.00	14,421.90	5,530.00	132.75	133.46	79.02	8,888.70	-13.78	336.04	74.10	261.94	1.283 Level 3		
14,500.00	5,594.00	14,521.90	5,530.00	134.21	134.92	79.02	8,988.70	-13.78	336.03	71.22	264.81	1.269 Level 3		
14,600.00	5,594.00	14,621.90	5,530.00	135.67	136.38	79.02	9,088.70	-13.79	336.02	68.34	267.68	1.255 Level 3		
14,700.00	5,594.00	14,721.90	5,530.00	137.13	137.84	79.02	9,188.70	-13.79	336.01	65.46	270.56	1.242 Level 2		
14,800.00	5,594.00	14,821.90	5,530.00	138.58	139.30	79.02	9,288.70	-13.80	336.00	62.57	273.43	1.229 Level 2		
14,900.00	5,594.00	14,921.90	5,530.00	140.04	140.76	79.02	9,388.70	-13.80	336.00	59.69	276.30	1.216 Level 2		
15,000.00	5,594.00	15,021.90	5,530.00	141.50	142.22	79.02	9,488.70	-13.81	335.99	56.81	279.18	1.203 Level 2		
15,100.00	5,594.00	15,121.90	5,530.00	142.96	143.68	79.02	9,588.70	-13.81	335.98	53.93	282.05	1.191 Level 2		
15,200.00	5,594.00	15,221.90	5,530.00	144.42	145.14	79.02	9,688.70	-13.82	335.97	51.04	284.93	1.179 Level 2		
15,300.00	5,594.00	15,321.90	5,530.00	145.88	146.60	79.02	9,788.70	-13.82	335.96	48.16	287.81	1.167 Level 2		
15,400.00	5,594.00	15,421.90	5,530.00	147.34	148.06	79.02	9,888.70	-13.82	335.96	45.27	290.68	1.156 Level 2		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2407 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	5,594.00	15,521.90	5,530.00	148.80	149.52	79.02	9,988.70	-13.83	335.95	42.39	293.56	1.144	Level 2
15,600.00	5,594.00	15,621.90	5,530.00	150.26	150.99	79.02	10,088.70	-13.83	335.94	39.50	296.44	1.133	Level 2
15,668.31	5,594.00	15,690.21	5,530.00	151.26	151.98	79.02	10,157.01	-13.84	335.93	37.53	298.40	1.126	Level 2, SF



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Sec 25-T10N-R58W - Razor #25N-2408 - HZ - APD		Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error: 0.00 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)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	89.03	1.01	59.98	59.99							
100.00	100.00	100.00	100.00	0.13	0.13	89.03	1.01	59.98	59.99	59.73	0.27	225.244				
200.00	200.00	200.00	200.00	0.47	0.47	89.03	1.01	59.98	59.99	59.05	0.94	63.779				
300.00	300.00	300.00	300.00	0.81	0.81	89.03	1.01	59.98	59.99	58.38	1.61	37.149	CC, ES			
400.00	399.98	398.24	398.22	1.12	1.11	-160.56	0.05	61.36	63.03	60.79	2.24	28.112				
500.00	499.84	495.93	495.78	1.44	1.42	-159.52	-2.83	65.47	72.14	69.27	2.88	25.081				
600.00	599.49	593.68	593.19	1.77	1.74	-158.33	-7.42	72.03	86.63	83.10	3.53	24.531				
700.00	699.11	692.48	691.62	2.10	2.06	-157.44	-12.36	79.09	101.98	97.81	4.17	24.474				
800.00	798.73	791.28	790.05	2.45	2.40	-156.78	-17.30	86.14	117.34	112.53	4.82	24.366				
900.00	898.35	890.09	888.48	2.80	2.75	-156.27	-22.24	93.20	132.72	127.24	5.47	24.242				
1,000.00	997.97	988.89	986.91	3.16	3.10	-155.87	-27.18	100.25	148.10	141.96	6.14	24.120				
1,100.00	1,097.59	1,087.70	1,085.34	3.52	3.45	-155.54	-32.12	107.30	163.49	156.68	6.81	24.006				
1,200.00	1,197.21	1,186.50	1,183.76	3.88	3.80	-155.27	-37.06	114.36	178.89	171.40	7.48	23.902				
1,300.00	1,296.83	1,285.31	1,282.19	4.24	4.16	-155.05	-42.00	121.41	194.29	186.13	8.16	23.808				
1,400.00	1,396.45	1,384.11	1,380.62	4.60	4.51	-154.85	-46.94	128.47	209.69	200.85	8.84	23.724				
1,500.00	1,496.07	1,482.92	1,479.05	4.96	4.87	-154.68	-51.88	135.52	225.09	215.57	9.52	23.647				
1,600.00	1,595.69	1,581.72	1,577.48	5.32	5.22	-154.54	-56.82	142.57	240.49	230.29	10.20	23.578				
1,700.00	1,695.31	1,680.53	1,675.91	5.68	5.58	-154.41	-61.76	149.63	255.90	245.02	10.88	23.516				
1,800.00	1,794.93	1,779.33	1,774.34	6.04	5.94	-154.30	-66.70	156.68	271.31	259.74	11.57	23.459				
1,900.00	1,894.55	1,878.14	1,872.77	6.40	6.29	-154.20	-71.63	163.74	286.71	274.47	12.25	23.407				
2,000.00	1,994.17	1,976.94	1,971.19	6.77	6.65	-154.10	-76.57	170.79	302.12	289.19	12.93	23.360				
2,100.00	2,093.78	2,075.75	2,069.62	7.13	7.01	-154.02	-81.51	177.84	317.53	303.91	13.62	23.316				
2,200.00	2,193.40	2,174.55	2,168.05	7.49	7.37	-153.95	-86.45	184.90	332.94	318.64	14.30	23.276				
2,300.00	2,293.02	2,273.36	2,266.48	7.85	7.73	-153.88	-91.39	191.95	348.35	333.36	14.99	23.240				
2,400.00	2,392.64	2,372.16	2,364.91	8.22	8.08	-153.82	-96.33	199.01	363.76	348.09	15.68	23.206				
2,500.00	2,492.26	2,470.96	2,463.34	8.58	8.44	-153.76	-101.27	206.06	379.17	362.81	16.36	23.174				
2,600.00	2,591.88	2,569.77	2,561.77	8.94	8.80	-153.71	-106.21	213.11	394.58	377.54	17.05	23.144				
2,700.00	2,691.50	2,668.57	2,660.19	9.31	9.16	-153.66	-111.15	220.17	410.00	392.26	17.74	23.117				
2,800.00	2,791.12	2,767.38	2,758.62	9.67	9.52	-153.61	-116.09	227.22	425.41	406.99	18.42	23.091				
2,900.00	2,890.74	2,866.18	2,857.05	10.03	9.88	-153.57	-121.03	234.28	440.82	421.71	19.11	23.067				
3,000.00	2,990.36	2,964.99	2,955.48	10.40	10.24	-153.53	-125.97	241.33	456.23	436.43	19.80	23.044				
3,100.00	3,089.98	3,063.79	3,053.91	10.76	10.60	-153.50	-130.91	248.38	471.65	451.16	20.49	23.023				
3,200.00	3,189.60	3,162.60	3,152.34	11.12	10.95	-153.46	-135.85	255.44	487.06	465.88	21.17	23.003				
3,300.00	3,289.22	3,261.40	3,250.77	11.49	11.31	-153.43	-140.78	262.49	502.47	480.61	21.86	22.984				
3,400.00	3,388.84	3,360.21	3,349.20	11.85	11.67	-153.40	-145.72	269.55	517.88	495.33	22.55	22.966				
3,500.00	3,488.46	3,459.01	3,447.62	12.21	12.03	-153.37	-150.66	276.60	533.30	510.06	23.24	22.949				
3,600.00	3,588.08	3,557.82	3,546.05	12.58	12.39	-153.34	-155.60	283.65	548.71	524.78	23.93	22.933				
3,700.00	3,687.70	3,656.62	3,644.48	12.94	12.75	-153.32	-160.54	290.71	564.12	539.51	24.62	22.918				
3,800.00	3,787.32	3,755.43	3,742.91	13.31	13.11	-153.29	-165.48	297.76	579.54	554.23	25.30	22.903				
3,900.00	3,886.94	3,854.23	3,841.34	13.67	13.47	-153.27	-170.42	304.82	594.95	568.96	25.99	22.889				
4,000.00	3,986.55	3,965.25	3,952.00	14.03	13.84	-153.28	-175.55	312.14	609.83	583.14	26.69	22.847				
4,100.00	4,086.17	4,087.69	4,074.31	14.40	14.16	-153.49	-178.57	316.46	621.41	594.05	27.36	22.712				
4,200.00	4,185.79	4,199.18	4,185.79	14.76	14.46	-153.86	-178.96	317.01	629.71	601.69	28.02	22.474				
4,300.00	4,285.41	4,298.80	4,285.41	15.12	14.73	-154.20	-178.96	317.01	637.55	608.91	28.64	22.262				
4,400.00	4,385.03	4,398.41	4,385.03	15.49	15.00	-154.54	-178.96	317.01	645.41	616.15	29.26	22.059				
4,500.00	4,484.65	4,498.03	4,484.65	15.85	15.27	-154.87	-178.96	317.01	653.30	623.42	29.88	21.864				
4,600.00	4,584.40	4,597.79	4,584.40	16.16	15.55	-155.18	-178.96	317.01	659.62	629.13	30.49	21.634				
4,700.00	4,684.34	4,697.72	4,684.34	16.40	15.83	-155.33	-178.96	317.01	662.79	631.75	31.04	21.354				
4,800.00	4,784.33	4,797.72	4,784.33	16.67	16.11	94.65	-178.96	317.01	663.19	631.58	31.61	20.983				
4,900.00	4,884.33	4,897.72	4,884.33	16.95	16.39	94.65	-178.96	317.01	663.19	631.01	32.17	20.613				
5,000.00	4,984.33	4,997.72	4,984.33	17.23	16.67	94.65	-178.96	317.01	663.19	630.44	32.74	20.254				
5,100.00	5,084.33	5,099.01	5,085.62	17.51	16.97	94.65	-178.81	317.01	663.19	629.86	33.32	19.902				

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,183.49	5,210.39	5,195.84	17.78	17.27	94.53	-164.30	317.01	663.08	629.18	33.89	19.564		
5,300.00	5,278.59	5,321.14	5,299.90	18.04	17.55	94.23	-127.00	317.01	662.81	628.41	34.40	19.265		
5,400.00	5,366.15	5,430.75	5,392.85	18.27	17.79	93.75	-69.29	317.01	662.43	627.54	34.89	18.988		
5,500.00	5,442.93	5,538.80	5,470.69	18.47	17.98	93.14	5.38	317.01	661.99	626.61	35.39	18.708		
5,600.00	5,506.13	5,645.01	5,530.59	18.62	18.13	92.40	92.85	317.01	661.58	625.62	35.96	18.399		
5,700.00	5,553.42	5,749.19	5,570.96	18.72	18.30	91.58	188.71	317.00	661.24	624.60	36.63	18.050		
5,800.00	5,583.06	5,851.30	5,591.26	18.84	18.68	90.71	288.61	317.00	661.03	623.59	37.43	17.659		
5,900.00	5,593.96	5,951.49	5,594.00	19.27	19.16	90.00	388.71	317.00	660.97	622.61	38.36	17.229		
6,000.00	5,594.00	6,051.49	5,594.00	19.82	19.72	90.00	488.71	316.99	660.96	621.51	39.46	16.751		
6,100.00	5,594.00	6,151.49	5,594.00	20.46	20.38	90.00	588.71	316.99	660.96	620.22	40.74	16.225		
6,200.00	5,594.00	6,251.49	5,594.00	21.18	21.12	90.00	688.71	316.99	660.95	618.77	42.18	15.668		
6,300.00	5,594.00	6,351.49	5,594.00	21.98	21.93	90.00	788.71	316.99	660.94	617.16	43.78	15.097		
6,400.00	5,594.00	6,451.49	5,594.00	22.84	22.81	90.00	888.71	316.98	660.94	615.43	45.51	14.522		
6,500.00	5,594.00	6,551.49	5,594.00	23.76	23.74	90.00	988.71	316.98	660.93	613.57	47.36	13.955		
6,600.00	5,594.00	6,651.49	5,594.00	24.73	24.73	90.00	1,088.71	316.98	660.92	611.60	49.32	13.401		
6,700.00	5,594.00	6,751.49	5,594.00	25.75	25.76	90.00	1,188.71	316.97	660.92	609.55	51.37	12.865		
6,800.00	5,594.00	6,851.49	5,594.00	26.81	26.84	90.00	1,288.71	316.97	660.91	607.40	53.51	12.352		
6,900.00	5,594.00	6,951.49	5,594.00	27.91	27.95	90.00	1,388.71	316.97	660.90	605.19	55.72	11.862		
7,000.00	5,594.00	7,051.49	5,594.00	29.04	29.09	90.00	1,488.71	316.97	660.90	602.91	57.99	11.397		
7,100.00	5,594.00	7,151.49	5,594.00	30.20	30.26	90.00	1,588.71	316.96	660.89	600.57	60.32	10.956		
7,200.00	5,594.00	7,251.49	5,594.00	31.39	31.45	90.00	1,688.71	316.96	660.88	598.18	62.70	10.540		
7,300.00	5,594.00	7,351.49	5,594.00	32.60	32.67	90.00	1,788.71	316.96	660.88	595.74	65.13	10.146		
7,400.00	5,594.00	7,451.49	5,594.00	33.83	33.91	90.00	1,888.71	316.95	660.87	593.27	67.60	9.776		
7,500.00	5,594.00	7,551.49	5,594.00	35.08	35.16	90.00	1,988.71	316.95	660.87	590.75	70.11	9.426		
7,600.00	5,594.00	7,651.49	5,594.00	36.34	36.43	90.00	2,088.71	316.95	660.86	588.21	72.65	9.096		
7,700.00	5,594.00	7,751.49	5,594.00	37.62	37.72	90.00	2,188.71	316.94	660.85	585.63	75.22	8.786		
7,800.00	5,594.00	7,851.49	5,594.00	38.92	39.02	90.00	2,288.71	316.94	660.85	583.03	77.81	8.493		
7,900.00	5,594.00	7,951.49	5,594.00	40.22	40.33	90.00	2,388.71	316.94	660.84	580.40	80.43	8.216		
8,000.00	5,594.00	8,051.49	5,594.00	41.54	41.65	90.00	2,488.71	316.94	660.83	577.76	83.08	7.955		
8,100.00	5,594.00	8,151.49	5,594.00	42.87	42.98	90.00	2,588.71	316.93	660.83	575.09	85.74	7.708		
8,200.00	5,594.00	8,251.49	5,594.00	44.20	44.33	90.00	2,688.71	316.93	660.82	572.40	88.41	7.474		
8,300.00	5,594.00	8,351.49	5,594.00	45.55	45.67	90.00	2,788.71	316.93	660.81	569.70	91.11	7.253		
8,400.00	5,594.00	8,451.49	5,594.00	46.90	47.03	90.00	2,888.71	316.92	660.81	566.99	93.82	7.043		
8,500.00	5,594.00	8,551.49	5,594.00	48.26	48.39	90.00	2,988.71	316.92	660.80	564.26	96.54	6.845		
8,600.00	5,594.00	8,651.49	5,594.00	49.62	49.76	90.00	3,088.71	316.92	660.79	561.51	99.28	6.656		
8,700.00	5,594.00	8,751.49	5,594.00	50.99	51.14	90.00	3,188.71	316.92	660.79	558.76	102.03	6.477		
8,800.00	5,594.00	8,851.49	5,594.00	52.37	52.52	90.00	3,288.71	316.91	660.78	555.99	104.79	6.306		
8,900.00	5,594.00	8,951.49	5,594.00	53.75	53.90	90.00	3,388.71	316.91	660.77	553.22	107.55	6.144		
9,000.00	5,594.00	9,051.49	5,594.00	55.14	55.29	90.00	3,488.71	316.91	660.77	550.43	110.33	5.989		
9,100.00	5,594.00	9,151.49	5,594.00	56.53	56.68	90.00	3,588.71	316.90	660.76	547.64	113.12	5.841		
9,200.00	5,594.00	9,251.49	5,594.00	57.92	58.08	90.00	3,688.71	316.90	660.75	544.84	115.91	5.701		
9,300.00	5,594.00	9,351.49	5,594.00	59.32	59.48	90.00	3,788.71	316.90	660.75	542.03	118.71	5.566		
9,400.00	5,594.00	9,451.49	5,594.00	60.72	60.88	90.00	3,888.71	316.90	660.74	539.22	121.52	5.437		
9,500.00	5,594.00	9,551.49	5,594.00	62.13	62.29	90.00	3,988.71	316.89	660.73	536.40	124.33	5.314		
9,600.00	5,594.00	9,651.49	5,594.00	63.54	63.70	90.00	4,088.71	316.89	660.73	533.57	127.15	5.196		
9,700.00	5,594.00	9,751.49	5,594.00	64.95	65.11	90.00	4,188.71	316.89	660.72	530.74	129.98	5.083		
9,800.00	5,594.00	9,851.49	5,594.00	66.36	66.53	90.00	4,288.71	316.88	660.71	527.91	132.81	4.975		
9,900.00	5,594.00	9,951.49	5,594.00	67.78	67.95	90.00	4,388.71	316.88	660.71	525.06	135.64	4.871		
10,000.00	5,594.00	10,051.49	5,594.00	69.19	69.37	90.00	4,488.71	316.88	660.70	522.22	138.48	4.771		
10,100.00	5,594.00	10,151.49	5,594.00	70.61	70.79	90.00	4,588.71	316.87	660.69	519.37	141.33	4.675		
10,200.00	5,594.00	10,251.49	5,594.00	72.04	72.21	90.00	4,688.71	316.87	660.69	516.51	144.17	4.583		
10,300.00	5,594.00	10,351.49	5,594.00	73.46	73.64	90.00	4,788.71	316.87	660.68	513.65	147.03	4.494		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	5,594.00	10,451.49	5,594.00	74.89	75.07	90.00	4,888.71	316.87	660.67	510.79	149.88	4.408	
10,500.00	5,594.00	10,551.49	5,594.00	76.31	76.50	90.00	4,988.71	316.86	660.67	507.93	152.74	4.325	
10,600.00	5,594.00	10,651.49	5,594.00	77.74	77.93	90.00	5,088.71	316.86	660.66	505.06	155.60	4.246	
10,700.00	5,594.00	10,751.49	5,594.00	79.18	79.36	90.00	5,188.71	316.86	660.65	502.19	158.47	4.169	
10,800.00	5,594.00	10,851.49	5,594.00	80.61	80.79	90.00	5,288.71	316.85	660.65	499.31	161.33	4.095	
10,900.00	5,594.00	10,951.49	5,594.00	82.04	82.23	90.00	5,388.71	316.85	660.64	496.44	164.20	4.023	
11,000.00	5,594.00	11,051.49	5,594.00	83.48	83.67	90.00	5,488.71	316.85	660.64	493.56	167.08	3.954	
11,100.00	5,594.00	11,151.49	5,594.00	84.91	85.10	90.00	5,588.71	316.85	660.63	490.68	169.95	3.887	
11,200.00	5,594.00	11,251.49	5,594.00	86.35	86.54	90.00	5,688.71	316.84	660.62	487.79	172.83	3.822	
11,300.00	5,594.00	11,351.49	5,594.00	87.79	87.98	90.00	5,788.71	316.84	660.62	484.91	175.71	3.760	
11,400.00	5,594.00	11,451.49	5,594.00	89.23	89.42	90.00	5,888.71	316.84	660.61	482.02	178.59	3.699	
11,500.00	5,594.00	11,551.49	5,594.00	90.67	90.87	90.00	5,988.71	316.83	660.60	479.13	181.47	3.640	
11,600.00	5,594.00	11,651.49	5,594.00	92.11	92.31	90.00	6,088.71	316.83	660.60	476.24	184.36	3.583	
11,700.00	5,594.00	11,751.49	5,594.00	93.56	93.75	90.00	6,188.71	316.83	660.59	473.34	187.25	3.528	
11,800.00	5,594.00	11,851.49	5,594.00	95.00	95.20	90.00	6,288.71	316.82	660.58	470.45	190.14	3.474	
11,900.00	5,594.00	11,951.49	5,594.00	96.44	96.64	90.00	6,388.71	316.82	660.58	467.55	193.03	3.422	
12,000.00	5,594.00	12,051.49	5,594.00	97.89	98.09	90.00	6,488.71	316.82	660.57	464.65	195.92	3.372	
12,100.00	5,594.00	12,151.49	5,594.00	99.34	99.53	90.00	6,588.71	316.82	660.56	461.75	198.81	3.323	
12,200.00	5,594.00	12,251.49	5,594.00	100.78	100.98	90.00	6,688.71	316.81	660.56	458.85	201.71	3.275	
12,300.00	5,594.00	12,351.49	5,594.00	102.23	102.43	90.00	6,788.71	316.81	660.55	455.94	204.61	3.228	
12,400.00	5,594.00	12,451.49	5,594.00	103.68	103.88	90.00	6,888.71	316.81	660.54	453.04	207.50	3.183	
12,500.00	5,594.00	12,551.49	5,594.00	105.13	105.33	90.00	6,988.71	316.80	660.54	450.13	210.40	3.139	
12,600.00	5,594.00	12,651.49	5,594.00	106.58	106.78	90.00	7,088.71	316.80	660.53	447.23	213.30	3.097	
12,700.00	5,594.00	12,751.49	5,594.00	108.03	108.23	90.00	7,188.71	316.80	660.52	444.32	216.21	3.055	
12,800.00	5,594.00	12,851.49	5,594.00	109.48	109.68	90.00	7,288.71	316.80	660.52	441.41	219.11	3.015	
12,900.00	5,594.00	12,951.49	5,594.00	110.93	111.13	90.00	7,388.71	316.79	660.51	438.50	222.01	2.975	
13,000.00	5,594.00	13,051.49	5,594.00	112.38	112.59	90.00	7,488.71	316.79	660.50	435.59	224.92	2.937	
13,100.00	5,594.00	13,151.49	5,594.00	113.83	114.04	90.00	7,588.71	316.79	660.50	432.68	227.82	2.899	
13,200.00	5,594.00	13,251.49	5,594.00	115.29	115.49	90.00	7,688.71	316.78	660.49	429.76	230.73	2.863	
13,300.00	5,594.00	13,351.49	5,594.00	116.74	116.95	90.00	7,788.71	316.78	660.48	426.85	233.64	2.827	
13,400.00	5,594.00	13,451.49	5,594.00	118.19	118.40	90.00	7,888.71	316.78	660.48	423.93	236.55	2.792	
13,500.00	5,594.00	13,551.49	5,594.00	119.65	119.86	90.00	7,988.71	316.78	660.47	421.02	239.45	2.758	
13,600.00	5,594.00	13,651.49	5,594.00	121.10	121.31	90.00	8,088.71	316.77	660.46	418.10	242.36	2.725	
13,700.00	5,594.00	13,751.49	5,594.00	122.56	122.77	90.00	8,188.71	316.77	660.46	415.18	245.28	2.693	
13,800.00	5,594.00	13,851.49	5,594.00	124.01	124.22	90.00	8,288.71	316.77	660.45	412.26	248.19	2.661	
13,900.00	5,594.00	13,951.49	5,594.00	125.47	125.68	90.00	8,388.71	316.76	660.44	409.34	251.10	2.630	
14,000.00	5,594.00	14,051.49	5,594.00	126.92	127.14	90.00	8,488.71	316.76	660.44	406.42	254.01	2.600	
14,100.00	5,594.00	14,151.49	5,594.00	128.38	128.59	90.00	8,588.71	316.76	660.43	403.50	256.93	2.571	
14,200.00	5,594.00	14,251.49	5,594.00	129.84	130.05	90.00	8,688.71	316.75	660.43	400.58	259.84	2.542	
14,300.00	5,594.00	14,351.49	5,594.00	131.29	131.51	90.00	8,788.71	316.75	660.42	397.66	262.76	2.513	
14,400.00	5,594.00	14,451.49	5,594.00	132.75	132.97	90.00	8,888.71	316.75	660.41	394.74	265.67	2.486	
14,500.00	5,594.00	14,551.49	5,594.00	134.21	134.42	90.00	8,988.71	316.75	660.41	391.82	268.59	2.459	
14,600.00	5,594.00	14,651.49	5,594.00	135.67	135.88	90.00	9,088.71	316.74	660.40	388.89	271.51	2.432	
14,700.00	5,594.00	14,751.49	5,594.00	137.13	137.34	90.00	9,188.71	316.74	660.39	385.97	274.42	2.406	
14,800.00	5,594.00	14,851.49	5,594.00	138.58	138.80	90.00	9,288.71	316.74	660.39	383.04	277.34	2.381	
14,900.00	5,594.00	14,951.49	5,594.00	140.04	140.26	90.00	9,388.71	316.73	660.38	380.12	280.26	2.356	
15,000.00	5,594.00	15,051.49	5,594.00	141.50	141.72	90.00	9,488.71	316.73	660.37	377.19	283.18	2.332	
15,100.00	5,594.00	15,151.49	5,594.00	142.96	143.18	90.00	9,588.71	316.73	660.37	374.27	286.10	2.308	
15,200.00	5,594.00	15,251.49	5,594.00	144.42	144.64	90.00	9,688.71	316.73	660.36	371.34	289.02	2.285	
15,300.00	5,594.00	15,351.49	5,594.00	145.88	146.10	90.00	9,788.71	316.72	660.35	368.41	291.94	2.262	
15,400.00	5,594.00	15,451.49	5,594.00	147.34	147.56	90.00	9,888.71	316.72	660.35	365.48	294.86	2.240	
15,500.00	5,594.00	15,551.49	5,594.00	148.80	149.02	90.00	9,988.71	316.72	660.34	362.56	297.78	2.218	

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



WOG
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2408 - HZ - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	
15,600.00	5,594.00	15,651.49	5,594.00	150.26	150.48	90.00	10,088.71	316.71	660.33	359.63	300.71	2.196	
15,668.31	5,594.00	15,719.80	5,594.00	151.26	151.48	90.00	10,157.02	316.71	660.33	357.63	302.70	2.181 SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-149.34	-50.60	-29.99	58.82					
100.00	100.00	100.00	100.00	0.13	0.13	-149.34	-50.60	-29.99	58.82	58.56	0.27	220.851		
200.00	200.00	200.00	200.00	0.47	0.47	-149.34	-50.60	-29.99	58.82	57.88	0.94	62.535		
300.00	300.00	300.00	300.00	0.81	0.81	-149.34	-50.60	-29.99	58.82	57.21	1.61	36.424		
400.00	399.98	398.68	398.66	1.12	1.12	-39.15	-50.90	-31.67	58.60	56.35	2.24	26.127		
500.00	499.84	497.35	497.20	1.44	1.44	-38.58	-51.78	-36.68	57.92	55.06	2.86	20.261		
597.76	597.30	593.80	593.29	1.76	1.76	-37.10	-53.22	-44.82	57.50	54.01	3.48	16.502		
600.00	599.49	596.02	595.49	1.77	1.77	-37.31	-53.26	-45.04	57.15	53.65	3.50	16.335	CC, ES	
700.00	699.11	694.56	693.31	2.10	2.11	-33.86	-55.31	-56.71	58.49	54.34	4.16	14.076		
800.00	798.73	792.75	790.32	2.45	2.48	-28.59	-57.94	-71.62	62.69	57.87	4.82	13.005		
900.00	898.35	891.20	887.07	2.80	2.87	-22.58	-61.11	-89.57	69.98	64.49	5.49	12.749		
1,000.00	997.97	990.63	984.67	3.16	3.28	-17.50	-64.40	-108.25	78.42	72.27	6.15	12.747		
1,100.00	1,097.59	1,090.05	1,082.27	3.52	3.70	-13.43	-67.70	-126.94	87.36	80.54	6.81	12.819		
1,200.00	1,197.21	1,189.48	1,179.87	3.88	4.12	-10.12	-70.99	-145.62	96.65	89.17	7.48	12.923		
1,300.00	1,296.83	1,288.91	1,277.47	4.24	4.55	-7.40	-74.28	-164.30	106.20	98.06	8.15	13.039		
1,400.00	1,396.45	1,388.33	1,375.07	4.60	4.98	-5.13	-77.58	-182.99	115.96	107.14	8.81	13.156		
1,500.00	1,496.07	1,487.76	1,472.67	4.96	5.41	-3.21	-80.87	-201.67	125.86	116.38	9.49	13.269		
1,600.00	1,595.69	1,587.19	1,570.27	5.32	5.84	-1.58	-84.17	-220.35	135.89	125.73	10.16	13.377		
1,700.00	1,695.31	1,686.61	1,667.87	5.68	6.27	-0.17	-87.46	-239.04	146.00	135.17	10.83	13.476		
1,800.00	1,794.93	1,786.04	1,765.47	6.04	6.71	1.06	-90.76	-257.72	156.20	144.69	11.51	13.568		
1,900.00	1,894.55	1,885.47	1,863.07	6.40	7.14	2.13	-94.05	-276.40	166.46	154.27	12.19	13.654		
2,000.00	1,994.17	1,984.89	1,960.67	6.77	7.58	3.08	-97.35	-295.09	176.77	163.89	12.87	13.733		
2,100.00	2,093.78	2,084.32	2,058.27	7.13	8.01	3.93	-100.64	-313.77	187.12	173.56	13.55	13.806		
2,200.00	2,193.40	2,183.75	2,155.87	7.49	8.45	4.68	-103.93	-332.45	197.51	183.27	14.24	13.873		
2,300.00	2,293.02	2,283.18	2,253.47	7.85	8.89	5.36	-107.23	-351.14	207.92	193.00	14.92	13.935		
2,400.00	2,392.64	2,382.60	2,351.07	8.22	9.32	5.98	-110.52	-369.82	218.37	202.76	15.61	13.993		
2,500.00	2,492.26	2,482.03	2,448.67	8.58	9.76	6.54	-113.82	-388.50	228.84	212.55	16.29	14.047		
2,600.00	2,591.88	2,581.46	2,546.27	8.94	10.20	7.05	-117.11	-407.19	239.32	222.35	16.98	14.097		
2,700.00	2,691.50	2,680.88	2,643.87	9.31	10.64	7.52	-120.41	-425.87	249.83	232.16	17.66	14.143		
2,800.00	2,791.12	2,780.31	2,741.47	9.67	11.08	7.95	-123.70	-444.55	260.35	242.00	18.35	14.186		
2,900.00	2,890.74	2,879.74	2,839.07	10.03	11.51	8.35	-126.99	-463.24	270.88	251.84	19.04	14.227		
3,000.00	2,990.36	2,979.16	2,936.67	10.40	11.95	8.71	-130.29	-481.92	281.42	261.70	19.73	14.265		
3,100.00	3,089.98	3,078.59	3,034.27	10.76	12.39	9.05	-133.58	-500.60	291.98	271.56	20.42	14.301		
3,200.00	3,189.60	3,178.02	3,131.87	11.12	12.83	9.37	-136.88	-519.29	302.54	281.44	21.11	14.334		
3,300.00	3,289.22	3,277.44	3,229.47	11.49	13.27	9.67	-140.17	-537.97	313.12	291.32	21.80	14.366		
3,400.00	3,388.84	3,376.87	3,327.07	11.85	13.71	9.94	-143.47	-556.65	323.70	301.21	22.49	14.395		
3,500.00	3,488.46	3,476.30	3,424.67	12.21	14.15	10.20	-146.76	-575.34	334.29	311.11	23.18	14.424		
3,600.00	3,588.08	3,575.73	3,522.27	12.58	14.58	10.44	-150.05	-594.02	344.88	321.01	23.87	14.450		
3,700.00	3,687.70	3,675.15	3,619.87	12.94	15.02	10.67	-153.35	-612.70	355.48	330.92	24.56	14.475		
3,800.00	3,787.32	3,774.58	3,717.47	13.31	15.46	10.89	-156.64	-631.39	366.09	340.84	25.25	14.499		
3,900.00	3,886.94	3,874.01	3,815.07	13.67	15.90	11.09	-159.94	-650.07	376.70	350.76	25.94	14.522		
4,000.00	3,986.55	3,973.43	3,912.67	14.03	16.34	11.28	-163.23	-668.75	387.31	360.68	26.63	14.543		
4,100.00	4,086.17	4,072.86	4,010.27	14.40	16.78	11.46	-166.53	-687.44	397.93	370.61	27.32	14.564		
4,200.00	4,185.79	4,172.29	4,107.87	14.76	17.22	11.63	-169.82	-706.12	408.55	380.54	28.02	14.583		
4,300.00	4,285.41	4,271.71	4,205.47	15.12	17.66	11.80	-173.12	-724.80	419.18	390.47	28.71	14.602		
4,400.00	4,385.03	4,371.14	4,303.07	15.49	18.10	11.95	-176.41	-743.49	429.81	400.41	29.40	14.620		
4,500.00	4,484.65	4,470.57	4,400.67	15.85	18.54	12.10	-179.70	-762.17	440.44	410.35	30.09	14.637		
4,600.00	4,584.40	4,569.80	4,498.08	16.16	18.98	12.25	-182.99	-780.82	452.77	422.07	30.70	14.747		
4,700.00	4,684.34	4,668.92	4,608.35	16.40	19.41	12.31	-186.51	-800.75	467.50	436.24	31.25	14.958		
4,800.00	4,784.33	4,800.60	4,725.83	16.67	19.75	-97.73	-189.44	-817.37	481.28	449.47	31.82	15.125		
4,900.00	4,884.33	4,920.43	4,845.03	16.95	20.06	-97.78	-191.54	-829.27	491.37	458.95	32.41	15.159		
5,000.00	4,984.33	5,041.06	4,965.44	17.23	20.34	-97.82	-192.77	-836.29	497.27	464.26	33.01	15.063		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,084.33	5,159.98	5,084.33	17.51	20.61	-97.84	-193.13	-838.32	499.00	465.39	33.61	14.847		
5,200.00	5,183.49	5,259.14	5,183.49	17.78	20.86	-98.96	-193.13	-838.32	500.73	466.66	34.06	14.700		
5,300.00	5,278.59	5,374.77	5,298.48	18.04	21.14	-101.43	-183.18	-838.32	504.78	470.33	34.45	14.652		
5,400.00	5,366.15	5,499.92	5,417.15	18.27	21.42	-103.55	-144.39	-838.32	508.86	474.07	34.79	14.628		
5,500.00	5,442.93	5,631.28	5,527.99	18.47	21.66	-105.08	-74.55	-838.32	512.15	477.05	35.10	14.591		
5,600.00	5,506.13	5,766.94	5,620.43	18.62	21.85	-105.87	24.22	-838.32	513.95	478.47	35.48	14.486		
5,700.00	5,553.42	5,904.06	5,684.83	18.72	21.99	-105.84	144.83	-838.31	513.87	477.83	36.04	14.260		
5,800.00	5,583.06	6,039.46	5,715.46	18.84	22.14	-104.98	276.33	-838.31	511.92	475.05	36.87	13.884		
5,900.00	5,593.96	6,151.93	5,718.00	19.27	22.33	-104.09	388.71	-838.30	509.66	471.84	37.82	13.476		
5,940.91	5,594.39	6,192.83	5,718.00	19.49	22.44	-104.04	429.61	-838.30	509.55	471.32	38.23	13.329		
6,000.00	5,594.00	6,251.93	5,718.00	19.82	22.62	-104.08	488.71	-838.30	509.64	470.79	38.85	13.118		
6,100.00	5,594.00	6,351.93	5,718.00	20.46	23.04	-104.08	588.71	-838.29	509.64	469.57	40.07	12.719		
6,200.00	5,594.00	6,451.93	5,718.00	21.18	23.59	-104.08	688.71	-838.29	509.64	468.19	41.45	12.294		
6,300.00	5,594.00	6,551.93	5,718.00	21.98	24.26	-104.08	788.71	-838.28	509.64	466.66	42.98	11.857		
6,400.00	5,594.00	6,651.93	5,718.00	22.84	25.02	-104.08	888.71	-838.28	509.64	465.00	44.64	11.416		
6,500.00	5,594.00	6,751.93	5,718.00	23.76	25.86	-104.08	988.71	-838.28	509.64	463.22	46.42	10.978		
6,600.00	5,594.00	6,851.93	5,718.00	24.73	26.76	-104.08	1,088.71	-838.27	509.64	461.33	48.31	10.550		
6,700.00	5,594.00	6,951.93	5,718.00	25.75	27.72	-104.08	1,188.71	-838.27	509.64	459.35	50.29	10.135		
6,800.00	5,594.00	7,051.93	5,718.00	26.81	28.73	-104.08	1,288.71	-838.26	509.64	457.29	52.35	9.736		
6,900.00	5,594.00	7,151.93	5,718.00	27.91	29.78	-104.08	1,388.71	-838.26	509.64	455.16	54.48	9.355		
7,000.00	5,594.00	7,251.93	5,718.00	29.04	30.87	-104.08	1,488.71	-838.26	509.64	452.96	56.68	8.992		
7,100.00	5,594.00	7,351.93	5,718.00	30.20	31.99	-104.08	1,588.71	-838.25	509.64	450.70	58.93	8.648		
7,200.00	5,594.00	7,451.93	5,718.00	31.39	33.13	-104.08	1,688.71	-838.25	509.64	448.40	61.24	8.322		
7,300.00	5,594.00	7,551.93	5,718.00	32.60	34.31	-104.08	1,788.71	-838.24	509.64	446.04	63.60	8.014		
7,400.00	5,594.00	7,651.93	5,718.00	33.83	35.50	-104.08	1,888.71	-838.24	509.64	443.65	65.99	7.723		
7,500.00	5,594.00	7,751.93	5,718.00	35.08	36.72	-104.08	1,988.71	-838.24	509.64	441.22	68.42	7.449		
7,600.00	5,594.00	7,851.93	5,718.00	36.34	37.95	-104.08	2,088.71	-838.23	509.64	438.75	70.88	7.190		
7,700.00	5,594.00	7,951.93	5,718.00	37.62	39.20	-104.08	2,188.71	-838.23	509.64	436.26	73.38	6.946		
7,800.00	5,594.00	8,051.93	5,718.00	38.92	40.47	-104.08	2,288.71	-838.22	509.64	433.74	75.89	6.715		
7,900.00	5,594.00	8,151.93	5,718.00	40.22	41.74	-104.08	2,388.71	-838.22	509.64	431.20	78.44	6.497		
8,000.00	5,594.00	8,251.93	5,718.00	41.54	43.04	-104.08	2,488.71	-838.22	509.63	428.63	81.00	6.292		
8,100.00	5,594.00	8,351.93	5,718.00	42.87	44.34	-104.08	2,588.71	-838.21	509.63	426.05	83.59	6.097		
8,200.00	5,594.00	8,451.93	5,718.00	44.20	45.65	-104.08	2,688.71	-838.21	509.63	423.44	86.19	5.913		
8,300.00	5,594.00	8,551.93	5,718.00	45.55	46.97	-104.08	2,788.71	-838.20	509.63	420.82	88.81	5.739		
8,400.00	5,594.00	8,651.93	5,718.00	46.90	48.30	-104.08	2,888.71	-838.20	509.63	418.19	91.44	5.573		
8,500.00	5,594.00	8,751.93	5,718.00	48.26	49.64	-104.08	2,988.71	-838.19	509.63	415.54	94.09	5.416		
8,600.00	5,594.00	8,851.93	5,718.00	49.62	50.99	-104.08	3,088.71	-838.19	509.63	412.88	96.75	5.267		
8,700.00	5,594.00	8,951.93	5,718.00	50.99	52.34	-104.08	3,188.71	-838.19	509.63	410.21	99.42	5.126		
8,800.00	5,594.00	9,051.93	5,718.00	52.37	53.70	-104.08	3,288.71	-838.18	509.63	407.53	102.11	4.991		
8,900.00	5,594.00	9,151.93	5,718.00	53.75	55.06	-104.08	3,388.71	-838.18	509.63	404.83	104.80	4.863		
9,000.00	5,594.00	9,251.93	5,718.00	55.14	56.43	-104.08	3,488.71	-838.17	509.63	402.13	107.50	4.741		
9,100.00	5,594.00	9,351.93	5,718.00	56.53	57.81	-104.08	3,588.71	-838.17	509.63	399.42	110.21	4.624		
9,200.00	5,594.00	9,451.93	5,718.00	57.92	59.19	-104.08	3,688.71	-838.17	509.63	396.70	112.93	4.513		
9,300.00	5,594.00	9,551.93	5,718.00	59.32	60.57	-104.08	3,788.71	-838.16	509.63	393.98	115.65	4.407		
9,400.00	5,594.00	9,651.93	5,718.00	60.72	61.96	-104.08	3,888.71	-838.16	509.63	391.24	118.38	4.305		
9,500.00	5,594.00	9,751.93	5,718.00	62.13	63.35	-104.08	3,988.71	-838.15	509.63	388.51	121.12	4.208		
9,600.00	5,594.00	9,851.93	5,718.00	63.54	64.75	-104.08	4,088.71	-838.15	509.63	385.76	123.87	4.114		
9,700.00	5,594.00	9,951.93	5,718.00	64.95	66.14	-104.08	4,188.71	-838.15	509.63	383.01	126.62	4.025		
9,800.00	5,594.00	10,051.93	5,718.00	66.36	67.55	-104.08	4,288.71	-838.14	509.63	380.26	129.37	3.939		
9,900.00	5,594.00	10,151.93	5,718.00	67.78	68.95	-104.08	4,388.71	-838.14	509.63	377.50	132.13	3.857		
10,000.00	5,594.00	10,251.93	5,718.00	69.19	70.36	-104.08	4,488.71	-838.13	509.63	374.73	134.90	3.778		
10,100.00	5,594.00	10,351.93	5,718.00	70.61	71.77	-104.08	4,588.71	-838.13	509.63	371.96	137.66	3.702		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
10,200.00	5,594.00	10,451.93	5,718.00	72.04	73.18	-104.08	4,688.71	-838.13	509.63	369.19	140.44	3.629		
10,300.00	5,594.00	10,551.93	5,718.00	73.46	74.59	-104.08	4,788.71	-838.12	509.63	366.41	143.21	3.559		
10,400.00	5,594.00	10,651.93	5,718.00	74.89	76.01	-104.08	4,888.71	-838.12	509.62	363.63	145.99	3.491		
10,500.00	5,594.00	10,751.93	5,718.00	76.31	77.43	-104.08	4,988.71	-838.11	509.62	360.85	148.78	3.425		
10,600.00	5,594.00	10,851.93	5,718.00	77.74	78.85	-104.08	5,088.71	-838.11	509.62	358.06	151.56	3.362		
10,700.00	5,594.00	10,951.93	5,718.00	79.18	80.27	-104.08	5,188.71	-838.11	509.62	355.27	154.35	3.302		
10,800.00	5,594.00	11,051.93	5,718.00	80.61	81.69	-104.08	5,288.71	-838.10	509.62	352.48	157.14	3.243		
10,900.00	5,594.00	11,151.93	5,718.00	82.04	83.12	-104.08	5,388.71	-838.10	509.62	349.68	159.94	3.186		
11,000.00	5,594.00	11,251.93	5,718.00	83.48	84.55	-104.08	5,488.71	-838.09	509.62	346.89	162.74	3.132		
11,100.00	5,594.00	11,351.93	5,718.00	84.91	85.98	-104.08	5,588.71	-838.09	509.62	344.09	165.54	3.079		
11,200.00	5,594.00	11,451.93	5,718.00	86.35	87.41	-104.08	5,688.71	-838.08	509.62	341.28	168.34	3.027		
11,300.00	5,594.00	11,551.93	5,718.00	87.79	88.84	-104.08	5,788.71	-838.08	509.62	338.48	171.14	2.978		
11,400.00	5,594.00	11,651.93	5,718.00	89.23	90.27	-104.08	5,888.71	-838.08	509.62	335.67	173.95	2.930		
11,500.00	5,594.00	11,751.93	5,718.00	90.67	91.71	-104.08	5,988.71	-838.07	509.62	332.86	176.76	2.883		
11,600.00	5,594.00	11,851.93	5,718.00	92.11	93.14	-104.08	6,088.71	-838.07	509.62	330.05	179.57	2.838		
11,700.00	5,594.00	11,951.93	5,718.00	93.56	94.58	-104.08	6,188.71	-838.06	509.62	327.24	182.38	2.794		
11,800.00	5,594.00	12,051.93	5,718.00	95.00	96.01	-104.08	6,288.71	-838.06	509.62	324.42	185.19	2.752		
11,900.00	5,594.00	12,151.93	5,718.00	96.44	97.45	-104.08	6,388.71	-838.06	509.62	321.61	188.01	2.711		
12,000.00	5,594.00	12,251.93	5,718.00	97.89	98.89	-104.08	6,488.71	-838.05	509.62	318.79	190.83	2.671		
12,100.00	5,594.00	12,351.93	5,718.00	99.34	100.33	-104.08	6,588.71	-838.05	509.62	315.97	193.65	2.632		
12,200.00	5,594.00	12,451.93	5,718.00	100.78	101.77	-104.08	6,688.71	-838.04	509.62	313.15	196.47	2.594		
12,300.00	5,594.00	12,551.93	5,718.00	102.23	103.22	-104.08	6,788.71	-838.04	509.62	310.33	199.29	2.557		
12,400.00	5,594.00	12,651.93	5,718.00	103.68	104.66	-104.08	6,888.71	-838.04	509.62	307.51	202.11	2.521		
12,500.00	5,594.00	12,751.93	5,718.00	105.13	106.10	-104.08	6,988.71	-838.03	509.62	304.68	204.93	2.487		
12,600.00	5,594.00	12,851.93	5,718.00	106.58	107.55	-104.08	7,088.71	-838.03	509.62	301.86	207.76	2.453		
12,700.00	5,594.00	12,951.93	5,718.00	108.03	108.99	-104.08	7,188.71	-838.02	509.61	299.03	210.59	2.420		
12,800.00	5,594.00	13,051.93	5,718.00	109.48	110.44	-104.08	7,288.71	-838.02	509.61	296.20	213.41	2.388		
12,900.00	5,594.00	13,151.93	5,718.00	110.93	111.88	-104.08	7,388.71	-838.02	509.61	293.37	216.24	2.357		
13,000.00	5,594.00	13,251.93	5,718.00	112.38	113.33	-104.08	7,488.71	-838.01	509.61	290.54	219.07	2.326		
13,100.00	5,594.00	13,351.93	5,718.00	113.83	114.78	-104.08	7,588.71	-838.01	509.61	287.71	221.90	2.297		
13,200.00	5,594.00	13,451.93	5,718.00	115.29	116.23	-104.08	7,688.71	-838.00	509.61	284.88	224.73	2.268		
13,300.00	5,594.00	13,551.93	5,718.00	116.74	117.68	-104.08	7,788.71	-838.00	509.61	282.05	227.57	2.239		
13,400.00	5,594.00	13,651.93	5,718.00	118.19	119.13	-104.08	7,888.71	-837.99	509.61	279.21	230.40	2.212		
13,500.00	5,594.00	13,751.93	5,718.00	119.65	120.58	-104.08	7,988.71	-837.99	509.61	276.38	233.23	2.185		
13,600.00	5,594.00	13,851.93	5,718.00	121.10	122.03	-104.08	8,088.71	-837.99	509.61	273.54	236.07	2.159		
13,700.00	5,594.00	13,951.93	5,718.00	122.56	123.48	-104.08	8,188.71	-837.98	509.61	270.71	238.91	2.133		
13,800.00	5,594.00	14,051.93	5,718.00	124.01	124.93	-104.08	8,288.71	-837.98	509.61	267.87	241.74	2.108		
13,900.00	5,594.00	14,151.93	5,718.00	125.47	126.38	-104.08	8,388.71	-837.97	509.61	265.03	244.58	2.084		
14,000.00	5,594.00	14,251.93	5,718.00	126.92	127.83	-104.08	8,488.71	-837.97	509.61	262.19	247.42	2.060		
14,100.00	5,594.00	14,351.93	5,718.00	128.38	129.29	-104.08	8,588.71	-837.97	509.61	259.35	250.26	2.036		
14,200.00	5,594.00	14,451.93	5,718.00	129.84	130.74	-104.08	8,688.71	-837.96	509.61	256.51	253.10	2.013		
14,300.00	5,594.00	14,551.93	5,718.00	131.29	132.19	-104.08	8,788.71	-837.96	509.61	253.67	255.94	1.991		
14,400.00	5,594.00	14,651.93	5,718.00	132.75	133.65	-104.08	8,888.71	-837.95	509.61	250.83	258.78	1.969		
14,500.00	5,594.00	14,751.93	5,718.00	134.21	135.10	-104.08	8,988.71	-837.95	509.61	247.99	261.62	1.948		
14,600.00	5,594.00	14,851.93	5,718.00	135.67	136.56	-104.08	9,088.71	-837.95	509.61	245.15	264.46	1.927		
14,700.00	5,594.00	14,951.93	5,718.00	137.13	138.01	-104.08	9,188.71	-837.94	509.61	242.30	267.30	1.906		
14,800.00	5,594.00	15,051.93	5,718.00	138.58	139.47	-104.08	9,288.71	-837.94	509.61	239.46	270.15	1.886		
14,900.00	5,594.00	15,151.93	5,718.00	140.04	140.92	-104.08	9,388.71	-837.93	509.61	236.62	272.99	1.867		
15,000.00	5,594.00	15,251.93	5,718.00	141.50	142.38	-104.08	9,488.71	-837.93	509.61	233.77	275.83	1.848		
15,100.00	5,594.00	15,351.93	5,718.00	142.96	143.84	-104.08	9,588.71	-837.93	509.60	230.93	278.68	1.829		
15,200.00	5,594.00	15,451.93	5,718.00	144.42	145.29	-104.08	9,688.71	-837.92	509.60	228.08	281.52	1.810		
15,300.00	5,594.00	15,551.93	5,718.00	145.88	146.75	-104.08	9,788.71	-837.92	509.60	225.23	284.37	1.792		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2437 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	
15,400.00	5,594.00	15,651.93	5,718.00	147.34	148.21	-104.08	9,888.71	-837.91	509.60	222.39	287.22	1.774	
15,500.00	5,594.00	15,751.93	5,718.00	148.80	149.66	-104.08	9,988.71	-837.91	509.60	219.54	290.06	1.757	
15,600.00	5,594.00	15,851.93	5,718.00	150.26	151.12	-104.08	10,088.71	-837.91	509.60	216.69	292.91	1.740	
15,649.88	5,594.00	15,901.81	5,718.00	150.99	151.85	-104.08	10,138.59	-837.90	509.60	215.27	294.33	1.731	
15,668.31	5,594.00	15,918.20	5,718.00	151.26	152.09	-104.08	10,154.98	-837.90	509.61	214.78	294.82	1.729 SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-50.60	0.00	50.60					
100.00	100.00	100.00	100.00	0.13	0.13	180.00	-50.60	0.00	50.60	50.34	0.27	189.986		
200.00	200.00	200.00	200.00	0.47	0.47	180.00	-50.60	0.00	50.60	49.66	0.94	53.795		
300.00	300.00	300.00	300.00	0.81	0.81	180.00	-50.60	0.00	50.60	48.99	1.61	31.334		
400.00	399.98	399.40	399.38	1.12	1.12	-70.01	-51.19	-1.62	50.60	48.36	2.24	22.590		
500.00	499.84	498.80	498.64	1.44	1.44	-70.04	-52.96	-6.48	50.59	47.73	2.86	17.709 CC		
533.23	532.98	531.83	531.58	1.55	1.54	-69.96	-53.81	-8.81	50.62	47.54	3.07	16.463		
600.00	599.49	598.20	597.66	1.77	1.76	-69.64	-55.91	-14.57	50.72	47.21	3.51	14.441 ES		
700.00	699.11	697.82	696.59	2.10	2.11	-66.52	-59.90	-25.54	51.85	47.65	4.19	12.365		
800.00	798.73	797.76	795.79	2.45	2.47	-63.08	-64.06	-36.99	53.34	48.45	4.88	10.920		
900.00	898.35	897.70	894.98	2.80	2.84	-59.84	-68.23	-48.43	55.00	49.43	5.58	9.862		
1,000.00	997.97	997.64	994.18	3.16	3.21	-56.80	-72.40	-59.88	56.84	50.57	6.27	9.066		
1,100.00	1,097.59	1,097.58	1,093.37	3.52	3.59	-53.95	-76.56	-71.32	58.82	51.86	6.96	8.452		
1,200.00	1,197.21	1,197.52	1,192.56	3.88	3.97	-51.30	-80.73	-82.77	60.94	53.30	7.65	7.970		
1,300.00	1,296.83	1,297.45	1,291.76	4.24	4.34	-48.83	-84.89	-94.21	63.18	54.85	8.33	7.584		
1,400.00	1,396.45	1,397.39	1,390.95	4.60	4.72	-46.53	-89.06	-105.66	65.54	56.52	9.01	7.272		
1,500.00	1,496.07	1,497.33	1,490.15	4.96	5.11	-44.40	-93.22	-117.10	67.98	58.29	9.69	7.015		
1,600.00	1,595.69	1,597.27	1,589.34	5.32	5.49	-42.42	-97.39	-128.55	70.52	60.15	10.37	6.801		
1,700.00	1,695.31	1,697.21	1,688.53	5.68	5.87	-40.57	-101.56	-139.99	73.14	62.09	11.04	6.622		
1,800.00	1,794.93	1,797.15	1,787.73	6.04	6.25	-38.86	-105.72	-151.44	75.82	64.10	11.72	6.470		
1,900.00	1,894.55	1,897.09	1,886.92	6.40	6.64	-37.26	-109.89	-162.88	78.57	66.18	12.39	6.340		
2,000.00	1,994.17	1,997.03	1,986.12	6.77	7.02	-35.77	-114.05	-174.33	81.38	68.31	13.06	6.229		
2,100.00	2,093.78	2,096.97	2,085.31	7.13	7.40	-34.39	-118.22	-185.77	84.23	70.50	13.74	6.132		
2,200.00	2,193.40	2,196.91	2,184.51	7.49	7.79	-33.09	-122.38	-197.22	87.14	72.73	14.41	6.048		
2,300.00	2,293.02	2,296.85	2,283.70	7.85	8.17	-31.88	-126.55	-208.66	90.08	75.00	15.08	5.974		
2,400.00	2,392.64	2,396.78	2,382.89	8.22	8.55	-30.74	-130.71	-220.11	93.06	77.31	15.75	5.909		
2,500.00	2,492.26	2,496.72	2,482.09	8.58	8.94	-29.68	-134.88	-231.55	96.08	79.66	16.42	5.851		
2,600.00	2,591.88	2,596.66	2,581.28	8.94	9.32	-28.68	-139.05	-243.00	99.13	82.03	17.09	5.800		
2,700.00	2,691.50	2,696.60	2,680.48	9.31	9.71	-27.74	-143.21	-254.44	102.20	84.44	17.76	5.754		
2,800.00	2,791.12	2,796.54	2,779.67	9.67	10.09	-26.86	-147.38	-265.89	105.30	86.87	18.43	5.712		
2,900.00	2,890.74	2,896.48	2,878.86	10.03	10.48	-26.02	-151.54	-277.33	108.43	89.32	19.11	5.675		
3,000.00	2,990.36	2,996.42	2,978.06	10.40	10.86	-25.24	-155.71	-288.78	111.58	91.80	19.78	5.642		
3,100.00	3,089.98	3,096.36	3,077.25	10.76	11.25	-24.50	-159.87	-300.22	114.74	94.29	20.45	5.611		
3,200.00	3,189.60	3,196.30	3,176.45	11.12	11.63	-23.79	-164.04	-311.67	117.93	96.81	21.12	5.583		
3,300.00	3,289.22	3,296.24	3,275.64	11.49	12.02	-23.13	-168.21	-323.11	121.13	99.34	21.79	5.558		
3,400.00	3,388.84	3,396.18	3,374.84	11.85	12.40	-22.49	-172.37	-334.56	124.35	101.88	22.47	5.535		
3,500.00	3,488.46	3,496.11	3,474.03	12.21	12.79	-21.90	-176.54	-346.00	127.58	104.44	23.14	5.514		
3,600.00	3,588.08	3,596.05	3,573.22	12.58	13.17	-21.33	-180.70	-357.45	130.82	107.01	23.81	5.494		
3,700.00	3,687.70	3,695.99	3,672.42	12.94	13.56	-20.78	-184.87	-368.89	134.08	109.60	24.48	5.476		
3,800.00	3,787.32	3,795.93	3,771.61	13.31	13.94	-20.27	-189.03	-380.34	137.35	112.19	25.16	5.459		
3,900.00	3,886.94	3,895.87	3,870.81	13.67	14.33	-19.77	-193.20	-391.78	140.63	114.80	25.83	5.444		
4,000.00	3,986.55	3,995.81	3,970.00	14.03	14.71	-19.30	-197.37	-403.23	143.92	117.41	26.51	5.430		
4,100.00	4,086.17	4,095.75	4,069.19	14.40	15.10	-18.86	-201.53	-414.67	147.22	120.04	27.18	5.416		
4,200.00	4,185.79	4,195.69	4,168.39	14.76	15.48	-18.43	-205.70	-426.12	150.52	122.67	27.85	5.404		
4,300.00	4,285.41	4,295.63	4,267.58	15.12	15.87	-18.01	-209.86	-437.56	153.84	125.31	28.53	5.392		
4,400.00	4,385.03	4,395.57	4,366.78	15.49	16.25	-17.62	-214.03	-449.01	157.16	127.96	29.20	5.381		
4,500.00	4,484.65	4,495.50	4,465.97	15.85	16.64	-17.24	-218.19	-460.45	160.49	130.61	29.88	5.371		
4,600.00	4,584.40	4,595.36	4,565.08	16.16	17.03	-16.74	-222.36	-471.89	165.50	135.00	30.50	5.427		
4,700.00	4,684.34	4,694.98	4,663.96	16.40	17.41	-15.96	-226.51	-483.30	173.86	142.81	31.05	5.599		
4,800.00	4,784.33	4,798.22	4,766.51	16.67	17.77	-125.00	-230.57	-494.47	184.56	152.94	31.63	5.836		
4,900.00	4,884.33	4,904.67	4,872.60	16.95	18.04	-124.33	-233.54	-502.61	192.45	160.26	32.19	5.979		
5,000.00	4,984.33	5,011.63	4,979.45	17.23	18.30	-123.99	-235.16	-507.06	196.74	163.98	32.76	6.006		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,084.33	5,116.52	5,084.33	17.51	18.57	-123.95	-235.48	-507.94	197.66	164.33	33.32	5.932		
5,200.00	5,183.49	5,215.68	5,183.49	17.78	18.83	-126.05	-235.48	-507.94	204.43	170.86	33.57	6.090		
5,300.00	5,278.59	5,310.78	5,278.59	18.04	19.08	-130.53	-235.48	-507.94	223.92	190.46	33.46	6.692		
5,400.00	5,366.15	5,438.17	5,405.26	18.27	19.41	-137.50	-224.76	-507.95	253.83	220.99	32.85	7.728		
5,500.00	5,442.93	5,596.89	5,553.47	18.47	19.77	-143.09	-169.72	-507.95	280.23	248.53	31.70	8.840		
5,600.00	5,506.13	5,777.53	5,693.08	18.62	20.06	-146.30	-56.51	-507.95	297.14	266.82	30.32	9.800		
5,700.00	5,553.42	5,970.30	5,790.14	18.72	20.21	-146.88	108.76	-507.95	300.34	271.09	29.25	10.269		
5,800.00	5,583.06	6,154.54	5,821.00	18.84	20.35	-144.86	289.44	-507.95	288.97	259.85	29.13	9.921		
5,900.00	5,593.96	6,253.79	5,821.00	19.27	20.68	-144.16	388.69	-507.96	280.07	250.74	29.33	9.550		
5,940.67	5,594.39	6,294.46	5,821.00	19.49	20.88	-144.11	429.36	-507.96	279.72	250.16	29.56	9.462		
6,000.00	5,594.00	6,353.79	5,821.00	19.82	21.23	-144.15	488.69	-507.96	280.03	250.13	29.91	9.364		
6,100.00	5,594.00	6,453.79	5,821.00	20.46	21.89	-144.15	588.69	-507.96	280.04	249.44	30.60	9.151		
6,200.00	5,594.00	6,553.79	5,821.00	21.18	22.63	-144.15	688.69	-507.96	280.04	248.64	31.40	8.918		
6,300.00	5,594.00	6,653.79	5,821.00	21.98	23.44	-144.15	788.69	-507.96	280.04	247.74	32.30	8.670		
6,400.00	5,594.00	6,753.79	5,821.00	22.84	24.31	-144.15	888.69	-507.96	280.05	246.76	33.28	8.414		
6,500.00	5,594.00	6,853.79	5,821.00	23.76	25.24	-144.15	988.69	-507.97	280.05	245.70	34.35	8.152		
6,600.00	5,594.00	6,953.79	5,821.00	24.73	26.22	-144.15	1,088.69	-507.97	280.05	244.56	35.49	7.891		
6,700.00	5,594.00	7,053.79	5,821.00	25.75	27.24	-144.15	1,188.69	-507.97	280.06	243.36	36.70	7.631		
6,800.00	5,594.00	7,153.79	5,821.00	26.81	28.29	-144.15	1,288.69	-507.97	280.06	242.09	37.97	7.376		
6,900.00	5,594.00	7,253.79	5,821.00	27.91	29.39	-144.15	1,388.69	-507.97	280.06	240.77	39.29	7.128		
7,000.00	5,594.00	7,353.79	5,821.00	29.04	30.51	-144.15	1,488.69	-507.97	280.07	239.40	40.66	6.888		
7,100.00	5,594.00	7,453.79	5,821.00	30.20	31.67	-144.14	1,588.69	-507.98	280.07	237.99	42.08	6.656		
7,200.00	5,594.00	7,553.79	5,821.00	31.39	32.85	-144.14	1,688.69	-507.98	280.07	236.54	43.54	6.433		
7,300.00	5,594.00	7,653.79	5,821.00	32.60	34.05	-144.14	1,788.69	-507.98	280.08	235.05	45.03	6.220		
7,400.00	5,594.00	7,753.79	5,821.00	33.83	35.27	-144.14	1,888.69	-507.98	280.08	233.52	46.55	6.016		
7,500.00	5,594.00	7,853.79	5,821.00	35.08	36.51	-144.14	1,988.69	-507.98	280.08	231.97	48.11	5.822		
7,600.00	5,594.00	7,953.79	5,821.00	36.34	37.76	-144.14	2,088.69	-507.98	280.08	230.39	49.69	5.636		
7,700.00	5,594.00	8,053.79	5,821.00	37.62	39.03	-144.14	2,188.69	-507.99	280.09	228.79	51.30	5.460		
7,800.00	5,594.00	8,153.79	5,821.00	38.92	40.32	-144.14	2,288.69	-507.99	280.09	227.16	52.93	5.292		
7,900.00	5,594.00	8,253.79	5,821.00	40.22	41.61	-144.14	2,388.69	-507.99	280.09	225.52	54.58	5.132		
8,000.00	5,594.00	8,353.79	5,821.00	41.54	42.92	-144.14	2,488.69	-507.99	280.10	223.85	56.25	4.980		
8,100.00	5,594.00	8,453.79	5,821.00	42.87	44.24	-144.14	2,588.69	-507.99	280.10	222.17	57.93	4.835		
8,200.00	5,594.00	8,553.79	5,821.00	44.20	45.57	-144.14	2,688.69	-507.99	280.10	220.47	59.63	4.697		
8,300.00	5,594.00	8,653.79	5,821.00	45.55	46.90	-144.13	2,788.69	-508.00	280.11	218.76	61.34	4.566		
8,400.00	5,594.00	8,753.79	5,821.00	46.90	48.25	-144.13	2,888.69	-508.00	280.11	217.04	63.07	4.441		
8,500.00	5,594.00	8,853.79	5,821.00	48.26	49.60	-144.13	2,988.69	-508.00	280.11	215.30	64.81	4.322		
8,600.00	5,594.00	8,953.79	5,821.00	49.62	50.96	-144.13	3,088.69	-508.00	280.12	213.56	66.56	4.208		
8,700.00	5,594.00	9,053.79	5,821.00	50.99	52.32	-144.13	3,188.69	-508.00	280.12	211.80	68.32	4.100		
8,800.00	5,594.00	9,153.79	5,821.00	52.37	53.69	-144.13	3,288.69	-508.01	280.12	210.03	70.09	3.997		
8,900.00	5,594.00	9,253.79	5,821.00	53.75	55.06	-144.13	3,388.69	-508.01	280.13	208.26	71.87	3.898		
9,000.00	5,594.00	9,353.79	5,821.00	55.14	56.44	-144.13	3,488.69	-508.01	280.13	206.47	73.66	3.803		
9,100.00	5,594.00	9,453.79	5,821.00	56.53	57.83	-144.13	3,588.69	-508.01	280.13	204.68	75.45	3.713		
9,200.00	5,594.00	9,553.79	5,821.00	57.92	59.22	-144.13	3,688.69	-508.01	280.13	202.88	77.25	3.626		
9,300.00	5,594.00	9,653.79	5,821.00	59.32	60.61	-144.13	3,788.69	-508.01	280.14	201.08	79.06	3.543		
9,400.00	5,594.00	9,753.79	5,821.00	60.72	62.00	-144.12	3,888.69	-508.02	280.14	199.27	80.87	3.464		
9,500.00	5,594.00	9,853.79	5,821.00	62.13	63.40	-144.12	3,988.69	-508.02	280.14	197.45	82.69	3.388		
9,600.00	5,594.00	9,953.79	5,821.00	63.54	64.81	-144.12	4,088.69	-508.02	280.15	195.63	84.52	3.315		
9,700.00	5,594.00	10,053.79	5,821.00	64.95	66.21	-144.12	4,188.69	-508.02	280.15	193.80	86.35	3.244		
9,800.00	5,594.00	10,153.79	5,821.00	66.36	67.62	-144.12	4,288.69	-508.02	280.15	191.97	88.18	3.177		
9,900.00	5,594.00	10,253.79	5,821.00	67.78	69.03	-144.12	4,388.69	-508.02	280.16	190.14	90.02	3.112		
10,000.00	5,594.00	10,353.79	5,821.00	69.19	70.44	-144.12	4,488.69	-508.03	280.16	188.30	91.86	3.050		
10,100.00	5,594.00	10,453.79	5,821.00	70.61	71.86	-144.12	4,588.69	-508.03	280.16	186.45	93.71	2.990		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
10,200.00	5,594.00	10,553.79	5,821.00	72.04	73.28	-144.12	4,688.69	-508.03	280.17	184.60	95.56	2.932		
10,300.00	5,594.00	10,653.79	5,821.00	73.46	74.70	-144.12	4,788.69	-508.03	280.17	182.75	97.42	2.876		
10,400.00	5,594.00	10,753.79	5,821.00	74.89	76.12	-144.12	4,888.69	-508.03	280.17	180.90	99.27	2.822		
10,500.00	5,594.00	10,853.79	5,821.00	76.31	77.54	-144.11	4,988.69	-508.03	280.18	179.04	101.13	2.770		
10,600.00	5,594.00	10,953.79	5,821.00	77.74	78.97	-144.11	5,088.69	-508.04	280.18	177.18	103.00	2.720		
10,700.00	5,594.00	11,053.79	5,821.00	79.18	80.39	-144.11	5,188.69	-508.04	280.18	175.32	104.86	2.672		
10,800.00	5,594.00	11,153.79	5,821.00	80.61	81.82	-144.11	5,288.69	-508.04	280.18	173.45	106.73	2.625		
10,900.00	5,594.00	11,253.79	5,821.00	82.04	83.25	-144.11	5,388.69	-508.04	280.19	171.58	108.60	2.580		
11,000.00	5,594.00	11,353.79	5,821.00	83.48	84.68	-144.11	5,488.69	-508.04	280.19	169.71	110.48	2.536		
11,100.00	5,594.00	11,453.79	5,821.00	84.91	86.12	-144.11	5,588.69	-508.04	280.19	167.84	112.36	2.494		
11,200.00	5,594.00	11,553.79	5,821.00	86.35	87.55	-144.11	5,688.69	-508.05	280.20	165.96	114.23	2.453		
11,300.00	5,594.00	11,653.79	5,821.00	87.79	88.99	-144.11	5,788.69	-508.05	280.20	164.09	116.11	2.413		
11,400.00	5,594.00	11,753.79	5,821.00	89.23	90.42	-144.11	5,888.69	-508.05	280.20	162.21	118.00	2.375		
11,500.00	5,594.00	11,853.79	5,821.00	90.67	91.86	-144.11	5,988.69	-508.05	280.21	160.33	119.88	2.337		
11,600.00	5,594.00	11,953.79	5,821.00	92.11	93.30	-144.10	6,088.69	-508.05	280.21	158.44	121.77	2.301		
11,700.00	5,594.00	12,053.79	5,821.00	93.56	94.74	-144.10	6,188.69	-508.05	280.21	156.56	123.65	2.266		
11,800.00	5,594.00	12,153.79	5,821.00	95.00	96.18	-144.10	6,288.69	-508.06	280.22	154.67	125.54	2.232		
11,900.00	5,594.00	12,253.79	5,821.00	96.44	97.62	-144.10	6,388.69	-508.06	280.22	152.78	127.44	2.199		
12,000.00	5,594.00	12,353.79	5,821.00	97.89	99.06	-144.10	6,488.69	-508.06	280.22	150.89	129.33	2.167		
12,100.00	5,594.00	12,453.79	5,821.00	99.34	100.51	-144.10	6,588.69	-508.06	280.23	149.00	131.22	2.136		
12,200.00	5,594.00	12,553.79	5,821.00	100.78	101.95	-144.10	6,688.69	-508.06	280.23	147.11	133.12	2.105		
12,300.00	5,594.00	12,653.79	5,821.00	102.23	103.40	-144.10	6,788.69	-508.06	280.23	145.22	135.01	2.076		
12,400.00	5,594.00	12,753.79	5,821.00	103.68	104.84	-144.10	6,888.69	-508.07	280.24	143.32	136.91	2.047		
12,500.00	5,594.00	12,853.79	5,821.00	105.13	106.29	-144.10	6,988.69	-508.07	280.24	141.43	138.81	2.019		
12,600.00	5,594.00	12,953.79	5,821.00	106.58	107.74	-144.10	7,088.69	-508.07	280.24	139.53	140.71	1.992		
12,700.00	5,594.00	13,053.79	5,821.00	108.03	109.18	-144.10	7,188.69	-508.07	280.24	137.63	142.61	1.965		
12,800.00	5,594.00	13,153.79	5,821.00	109.48	110.63	-144.09	7,288.69	-508.07	280.25	135.73	144.52	1.939		
12,900.00	5,594.00	13,253.79	5,821.00	110.93	112.08	-144.09	7,388.69	-508.08	280.25	133.83	146.42	1.914		
13,000.00	5,594.00	13,353.79	5,821.00	112.38	113.53	-144.09	7,488.69	-508.08	280.25	131.93	148.32	1.889		
13,100.00	5,594.00	13,453.79	5,821.00	113.83	114.98	-144.09	7,588.69	-508.08	280.26	130.03	150.23	1.866		
13,200.00	5,594.00	13,553.79	5,821.00	115.29	116.43	-144.09	7,688.69	-508.08	280.26	128.12	152.14	1.842		
13,300.00	5,594.00	13,653.79	5,821.00	116.74	117.88	-144.09	7,788.69	-508.08	280.26	126.22	154.04	1.819		
13,400.00	5,594.00	13,753.79	5,821.00	118.19	119.33	-144.09	7,888.69	-508.08	280.27	124.32	155.95	1.797		
13,500.00	5,594.00	13,853.79	5,821.00	119.65	120.79	-144.09	7,988.69	-508.09	280.27	122.41	157.86	1.775		
13,600.00	5,594.00	13,953.79	5,821.00	121.10	122.24	-144.09	8,088.69	-508.09	280.27	120.50	159.77	1.754		
13,700.00	5,594.00	14,053.79	5,821.00	122.56	123.69	-144.09	8,188.69	-508.09	280.28	118.59	161.68	1.734		
13,800.00	5,594.00	14,153.79	5,821.00	124.01	125.15	-144.09	8,288.69	-508.09	280.28	116.69	163.59	1.713		
13,900.00	5,594.00	14,253.79	5,821.00	125.47	126.60	-144.08	8,388.69	-508.09	280.28	114.78	165.50	1.693		
14,000.00	5,594.00	14,353.79	5,821.00	126.92	128.05	-144.08	8,488.69	-508.09	280.29	112.87	167.42	1.674		
14,100.00	5,594.00	14,453.79	5,821.00	128.38	129.51	-144.08	8,588.69	-508.10	280.29	110.96	169.33	1.655		
14,200.00	5,594.00	14,553.79	5,821.00	129.84	130.96	-144.08	8,688.69	-508.10	280.29	109.05	171.25	1.637		
14,300.00	5,594.00	14,653.79	5,821.00	131.29	132.42	-144.08	8,788.69	-508.10	280.29	107.13	173.16	1.619		
14,400.00	5,594.00	14,753.79	5,821.00	132.75	133.88	-144.08	8,888.69	-508.10	280.30	105.22	175.08	1.601		
14,500.00	5,594.00	14,853.79	5,821.00	134.21	135.33	-144.08	8,988.69	-508.10	280.30	103.31	176.99	1.584		
14,600.00	5,594.00	14,953.79	5,821.00	135.67	136.79	-144.08	9,088.69	-508.10	280.30	101.39	178.91	1.567		
14,700.00	5,594.00	15,053.79	5,821.00	137.13	138.24	-144.08	9,188.69	-508.11	280.31	99.48	180.83	1.550		
14,800.00	5,594.00	15,153.79	5,821.00	138.58	139.70	-144.08	9,288.69	-508.11	280.31	97.57	182.75	1.534		
14,900.00	5,594.00	15,253.79	5,821.00	140.04	141.16	-144.08	9,388.69	-508.11	280.31	95.65	184.66	1.518		
15,000.00	5,594.00	15,353.79	5,821.00	141.50	142.62	-144.07	9,488.69	-508.11	280.32	93.73	186.58	1.502		
15,100.00	5,594.00	15,453.79	5,821.00	142.96	144.07	-144.07	9,588.69	-508.11	280.32	91.82	188.50	1.487 Level 3		
15,200.00	5,594.00	15,553.79	5,821.00	144.42	145.53	-144.07	9,688.69	-508.11	280.32	89.90	190.42	1.472 Level 3		
15,300.00	5,594.00	15,653.79	5,821.00	145.88	146.99	-144.07	9,788.69	-508.12	280.33	87.98	192.34	1.457 Level 3		

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



WOG
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2438 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	
15,400.00	5,594.00	15,753.79	5,821.00	147.34	148.45	-144.07	9,888.69	-508.12	280.33	86.06	194.26	1.443 Level 3	
15,500.00	5,594.00	15,853.79	5,821.00	148.80	149.91	-144.07	9,988.69	-508.12	280.33	84.15	196.19	1.429 Level 3	
15,600.00	5,594.00	15,953.79	5,821.00	150.26	151.37	-144.07	10,088.69	-508.12	280.34	82.23	198.11	1.415 Level 3	
15,668.31	5,594.00	16,022.10	5,821.00	151.26	152.37	-144.07	10,156.99	-508.12	280.34	80.92	199.42	1.406 Level 3, SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	148.84	-49.59	29.99	57.96					
100.00	100.00	100.00	100.00	0.13	0.13	148.84	-49.59	29.99	57.96	57.69	0.27	217.603		
200.00	200.00	200.00	200.00	0.47	0.47	148.84	-49.59	29.99	57.96	57.02	0.94	61.615		
300.00	300.00	300.00	300.00	0.81	0.81	148.84	-49.59	29.99	57.96	56.34	1.61	35.889 CC		
400.00	399.98	400.04	400.02	1.12	1.12	-101.12	-50.47	28.48	58.26	56.02	2.24	26.038		
500.00	499.84	500.05	499.92	1.44	1.43	-101.43	-52.87	24.32	59.18	56.33	2.85	20.755		
600.00	599.49	600.00	599.72	1.77	1.74	-104.15	-55.48	19.79	60.76	57.26	3.50	17.347		
700.00	699.11	699.93	699.52	2.10	2.07	-107.11	-58.10	15.26	62.60	58.42	4.17	14.998		
800.00	798.73	799.86	799.32	2.45	2.41	-109.90	-60.71	10.74	64.59	59.74	4.86	13.304		
900.00	898.35	899.80	899.11	2.80	2.75	-112.51	-63.33	6.21	66.73	61.19	5.54	12.039		
1,000.00	997.97	999.73	998.91	3.16	3.09	-114.96	-65.94	1.68	69.00	62.77	6.23	11.068		
1,100.00	1,097.59	1,099.66	1,098.70	3.52	3.43	-117.25	-68.56	-2.85	71.39	64.46	6.93	10.305		
1,200.00	1,197.21	1,199.59	1,198.50	3.88	3.77	-119.39	-71.17	-7.38	73.89	66.26	7.62	9.694		
1,300.00	1,296.83	1,299.52	1,298.29	4.24	4.12	-121.39	-73.79	-11.91	76.48	68.16	8.32	9.195		
1,400.00	1,396.45	1,399.46	1,398.09	4.60	4.46	-123.25	-76.40	-16.44	79.15	70.14	9.01	8.784		
1,500.00	1,496.07	1,499.39	1,497.88	4.96	4.81	-124.99	-79.02	-20.97	81.91	72.20	9.71	8.439		
1,600.00	1,595.69	1,599.32	1,597.68	5.32	5.15	-126.61	-81.63	-25.50	84.73	74.33	10.40	8.148		
1,700.00	1,695.31	1,699.25	1,697.47	5.68	5.50	-128.13	-84.25	-30.03	87.62	76.53	11.09	7.899		
1,800.00	1,794.93	1,799.18	1,797.27	6.04	5.85	-129.55	-86.86	-34.56	90.57	78.79	11.79	7.685		
1,900.00	1,894.55	1,899.12	1,897.06	6.40	6.19	-130.88	-89.48	-39.09	93.57	81.09	12.48	7.499		
2,000.00	1,994.17	1,999.05	1,996.86	6.77	6.54	-132.13	-92.09	-43.62	96.62	83.45	13.17	7.336		
2,100.00	2,093.78	2,098.98	2,096.65	7.13	6.89	-133.30	-94.71	-48.15	99.71	85.85	13.86	7.193		
2,200.00	2,193.40	2,198.91	2,196.45	7.49	7.24	-134.40	-97.32	-52.68	102.84	88.28	14.55	7.067		
2,300.00	2,293.02	2,298.85	2,296.24	7.85	7.58	-135.43	-99.94	-57.21	106.00	90.76	15.24	6.954		
2,400.00	2,392.64	2,398.78	2,396.04	8.22	7.93	-136.41	-102.55	-61.73	109.20	93.27	15.93	6.854		
2,500.00	2,492.26	2,498.71	2,495.83	8.58	8.28	-137.33	-105.17	-66.26	112.42	95.80	16.62	6.764		
2,600.00	2,591.88	2,598.64	2,595.63	8.94	8.63	-138.19	-107.78	-70.79	115.68	98.37	17.31	6.683		
2,700.00	2,691.50	2,698.57	2,695.42	9.31	8.98	-139.01	-110.40	-75.32	118.96	100.96	18.00	6.609		
2,800.00	2,791.12	2,798.51	2,795.22	9.67	9.32	-139.79	-113.01	-79.85	122.26	103.57	18.69	6.542		
2,900.00	2,890.74	2,898.44	2,895.01	10.03	9.67	-140.52	-115.63	-84.38	125.58	106.21	19.38	6.482		
3,000.00	2,990.36	2,998.37	2,994.81	10.40	10.02	-141.22	-118.24	-88.91	128.92	108.86	20.06	6.426		
3,100.00	3,089.98	3,098.30	3,094.60	10.76	10.37	-141.88	-120.86	-93.44	132.29	111.54	20.75	6.375		
3,200.00	3,189.60	3,198.23	3,194.40	11.12	10.72	-142.51	-123.47	-97.97	135.66	114.23	21.44	6.328		
3,300.00	3,289.22	3,298.17	3,294.20	11.49	11.06	-143.11	-126.09	-102.50	139.06	116.93	22.12	6.285		
3,400.00	3,388.84	3,398.10	3,393.99	11.85	11.41	-143.68	-128.70	-107.03	142.46	119.65	22.81	6.245		
3,500.00	3,488.46	3,498.03	3,493.79	12.21	11.76	-144.22	-131.32	-111.56	145.88	122.39	23.50	6.208		
3,600.00	3,588.08	3,597.96	3,593.58	12.58	12.11	-144.74	-133.93	-116.09	149.32	125.13	24.18	6.174		
3,700.00	3,687.70	3,697.90	3,693.38	12.94	12.46	-145.23	-136.55	-120.62	152.76	127.89	24.87	6.142		
3,800.00	3,787.32	3,797.83	3,793.17	13.31	12.81	-145.71	-139.16	-125.15	156.22	130.66	25.56	6.113		
3,900.00	3,886.94	3,897.76	3,892.97	13.67	13.16	-146.16	-141.78	-129.67	159.68	133.44	26.24	6.085		
4,000.00	3,986.55	3,997.69	3,992.76	14.03	13.50	-146.59	-144.39	-134.20	163.16	136.23	26.93	6.059		
4,100.00	4,086.17	4,097.62	4,092.56	14.40	13.85	-147.01	-147.01	-138.73	166.64	139.03	27.61	6.035		
4,200.00	4,185.79	4,197.56	4,192.35	14.76	14.20	-147.40	-149.62	-143.26	170.14	141.84	28.30	6.012		
4,300.00	4,285.41	4,297.49	4,292.15	15.12	14.55	-147.78	-152.24	-147.79	173.64	144.65	28.99	5.991		
4,400.00	4,385.03	4,397.42	4,391.94	15.49	14.90	-148.15	-154.85	-152.32	177.15	147.47	29.67	5.970		
4,500.00	4,484.65	4,497.35	4,491.74	15.85	15.25	-148.50	-157.47	-156.85	180.66	150.30	30.36	5.951		
4,600.00	4,584.40	4,597.33	4,591.57	16.16	15.60	-148.58	-160.08	-161.38	182.69	151.69	31.00	5.893		
4,700.00	4,684.34	4,697.30	4,691.41	16.40	15.94	-148.05	-162.70	-165.91	181.75	150.16	31.59	5.753		
4,800.00	4,784.33	4,797.19	4,791.16	16.67	16.29	103.01	-165.31	-170.44	178.26	146.02	32.23	5.530		
4,900.00	4,884.33	4,897.05	4,890.89	16.95	16.64	104.19	-167.93	-174.97	174.46	141.58	32.89	5.305		
5,000.00	4,984.33	4,992.99	4,986.75	17.23	16.93	105.00	-169.68	-178.01	171.86	138.38	33.47	5.134		
5,069.09	5,053.42	5,059.66	5,053.42	17.42	17.10	105.30	-169.97	-178.50	171.57	137.72	33.85	5.069		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,084.33	5,090.57	5,084.33	17.51	17.18	105.17	-169.97	-178.50	171.47	137.46	34.01	5.041		
5,200.00	5,183.49	5,189.73	5,183.49	17.78	17.45	108.48	-169.97	-178.50	174.90	140.27	34.63	5.050		
5,300.00	5,278.59	5,300.04	5,293.25	18.04	17.75	115.09	-161.02	-178.50	183.56	148.45	35.11	5.228		
5,400.00	5,366.15	5,418.40	5,406.11	18.27	18.06	120.61	-126.21	-178.50	193.15	157.98	35.17	5.491		
5,500.00	5,442.93	5,542.93	5,513.15	18.47	18.35	124.71	-63.15	-178.50	201.94	167.08	34.86	5.793		
5,600.00	5,506.13	5,672.62	5,605.44	18.62	18.61	127.34	27.49	-178.50	208.41	174.01	34.40	6.058		
5,700.00	5,553.42	5,805.59	5,673.87	18.72	18.89	128.49	141.07	-178.50	211.43	177.27	34.17	6.189		
5,800.00	5,583.06	5,939.28	5,711.52	18.84	19.40	128.14	268.98	-178.49	210.49	175.98	34.51	6.099		
5,900.00	5,593.96	6,059.33	5,718.00	19.27	19.99	126.85	388.69	-178.49	206.81	171.33	35.48	5.829		
5,940.95	5,594.39	6,100.28	5,718.00	19.50	20.21	126.76	429.63	-178.49	206.55	170.70	35.85	5.761		
6,000.00	5,594.00	6,159.33	5,718.00	19.82	20.58	126.85	488.69	-178.49	206.78	170.40	36.38	5.683		
6,100.00	5,594.00	6,259.33	5,718.00	20.46	21.26	126.85	588.69	-178.49	206.78	169.36	37.42	5.526		
6,200.00	5,594.00	6,359.33	5,718.00	21.18	22.02	126.85	688.69	-178.49	206.78	168.20	38.58	5.360		
6,300.00	5,594.00	6,459.33	5,718.00	21.98	22.84	126.85	788.69	-178.49	206.78	166.92	39.86	5.188		
6,400.00	5,594.00	6,559.33	5,718.00	22.84	23.73	126.85	888.69	-178.48	206.78	165.54	41.24	5.014		
6,500.00	5,594.00	6,659.33	5,718.00	23.76	24.67	126.85	988.69	-178.48	206.77	164.06	42.71	4.841		
6,600.00	5,594.00	6,759.33	5,718.00	24.73	25.67	126.85	1,088.69	-178.48	206.77	162.50	44.28	4.670		
6,700.00	5,594.00	6,859.33	5,718.00	25.75	26.70	126.85	1,188.69	-178.48	206.77	160.86	45.91	4.504		
6,800.00	5,594.00	6,959.33	5,718.00	26.81	27.78	126.85	1,288.69	-178.48	206.77	159.15	47.62	4.342		
6,900.00	5,594.00	7,059.33	5,718.00	27.91	28.89	126.85	1,388.69	-178.48	206.77	157.38	49.39	4.187		
7,000.00	5,594.00	7,159.33	5,718.00	29.04	30.03	126.85	1,488.69	-178.48	206.77	155.56	51.21	4.038		
7,100.00	5,594.00	7,259.33	5,718.00	30.20	31.20	126.85	1,588.69	-178.47	206.76	153.68	53.08	3.895		
7,200.00	5,594.00	7,359.33	5,718.00	31.39	32.40	126.85	1,688.69	-178.47	206.76	151.76	55.00	3.759		
7,300.00	5,594.00	7,459.33	5,718.00	32.60	33.61	126.85	1,788.69	-178.47	206.76	149.81	56.96	3.630		
7,400.00	5,594.00	7,559.33	5,718.00	33.83	34.85	126.85	1,888.69	-178.47	206.76	147.81	58.95	3.507		
7,500.00	5,594.00	7,659.33	5,718.00	35.08	36.10	126.85	1,988.69	-178.47	206.76	145.78	60.97	3.391		
7,600.00	5,594.00	7,759.33	5,718.00	36.34	37.37	126.85	2,088.69	-178.47	206.76	143.73	63.03	3.280		
7,700.00	5,594.00	7,859.33	5,718.00	37.62	38.65	126.85	2,188.69	-178.46	206.75	141.65	65.11	3.176		
7,800.00	5,594.00	7,959.33	5,718.00	38.92	39.95	126.85	2,288.69	-178.46	206.75	139.54	67.21	3.076		
7,900.00	5,594.00	8,059.33	5,718.00	40.22	41.26	126.85	2,388.69	-178.46	206.75	137.41	69.34	2.982		
8,000.00	5,594.00	8,159.33	5,718.00	41.54	42.58	126.85	2,488.69	-178.46	206.75	135.26	71.48	2.892		
8,100.00	5,594.00	8,259.33	5,718.00	42.87	43.91	126.85	2,588.69	-178.46	206.75	133.10	73.65	2.807		
8,200.00	5,594.00	8,359.33	5,718.00	44.20	45.25	126.85	2,688.69	-178.46	206.75	130.92	75.83	2.726		
8,300.00	5,594.00	8,459.33	5,718.00	45.55	46.59	126.85	2,788.69	-178.46	206.74	128.72	78.03	2.650		
8,400.00	5,594.00	8,559.33	5,718.00	46.90	47.94	126.85	2,888.69	-178.45	206.74	126.51	80.24	2.577		
8,500.00	5,594.00	8,659.33	5,718.00	48.26	49.30	126.85	2,988.69	-178.45	206.74	124.28	82.46	2.507		
8,600.00	5,594.00	8,759.33	5,718.00	49.62	50.67	126.85	3,088.69	-178.45	206.74	122.04	84.69	2.441		
8,700.00	5,594.00	8,859.33	5,718.00	50.99	52.04	126.86	3,188.69	-178.45	206.74	119.80	86.94	2.378		
8,800.00	5,594.00	8,959.33	5,718.00	52.37	53.42	126.86	3,288.69	-178.45	206.74	117.54	89.20	2.318		
8,900.00	5,594.00	9,059.33	5,718.00	53.75	54.80	126.86	3,388.69	-178.45	206.73	115.27	91.46	2.260		
9,000.00	5,594.00	9,159.33	5,718.00	55.14	56.19	126.86	3,488.69	-178.44	206.73	113.00	93.73	2.205		
9,100.00	5,594.00	9,259.33	5,718.00	56.53	57.58	126.86	3,588.69	-178.44	206.73	110.71	96.02	2.153		
9,200.00	5,594.00	9,359.33	5,718.00	57.92	58.97	126.86	3,688.69	-178.44	206.73	108.42	98.31	2.103		
9,300.00	5,594.00	9,459.33	5,718.00	59.32	60.37	126.86	3,788.69	-178.44	206.73	106.12	100.60	2.055		
9,400.00	5,594.00	9,559.33	5,718.00	60.72	61.77	126.86	3,888.69	-178.44	206.73	103.82	102.90	2.009		
9,500.00	5,594.00	9,659.33	5,718.00	62.13	63.18	126.86	3,988.69	-178.44	206.72	101.51	105.21	1.965		
9,600.00	5,594.00	9,759.33	5,718.00	63.54	64.59	126.86	4,088.69	-178.44	206.72	99.19	107.53	1.922		
9,700.00	5,594.00	9,859.33	5,718.00	64.95	66.00	126.86	4,188.69	-178.43	206.72	96.87	109.85	1.882		
9,800.00	5,594.00	9,959.33	5,718.00	66.36	67.41	126.86	4,288.69	-178.43	206.72	94.55	112.17	1.843		
9,900.00	5,594.00	10,059.33	5,718.00	67.78	68.83	126.86	4,388.69	-178.43	206.72	92.21	114.50	1.805		
10,000.00	5,594.00	10,159.33	5,718.00	69.19	70.25	126.86	4,488.69	-178.43	206.72	89.88	116.84	1.769		
10,100.00	5,594.00	10,259.33	5,718.00	70.61	71.67	126.86	4,588.69	-178.43	206.71	87.54	119.17	1.735		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
10,200.00	5,594.00	10,359.33	5,718.00	72.04	73.09	126.86	4,688.69	-178.43	206.71	85.20	121.52	1.701		
10,300.00	5,594.00	10,459.33	5,718.00	73.46	74.51	126.86	4,788.69	-178.42	206.71	82.85	123.86	1.669		
10,400.00	5,594.00	10,559.33	5,718.00	74.89	75.94	126.86	4,888.69	-178.42	206.71	80.50	126.21	1.638		
10,500.00	5,594.00	10,659.33	5,718.00	76.31	77.37	126.86	4,988.69	-178.42	206.71	78.14	128.56	1.608		
10,600.00	5,594.00	10,759.33	5,718.00	77.74	78.80	126.86	5,088.69	-178.42	206.71	75.79	130.92	1.579		
10,700.00	5,594.00	10,859.33	5,718.00	79.18	80.23	126.86	5,188.69	-178.42	206.70	73.43	133.28	1.551		
10,800.00	5,594.00	10,959.33	5,718.00	80.61	81.66	126.86	5,288.69	-178.42	206.70	71.06	135.64	1.524		
10,900.00	5,594.00	11,059.33	5,718.00	82.04	83.09	126.86	5,388.69	-178.42	206.70	68.70	138.00	1.498	Level 3	
11,000.00	5,594.00	11,159.33	5,718.00	83.48	84.53	126.86	5,488.69	-178.41	206.70	66.33	140.37	1.473	Level 3	
11,100.00	5,594.00	11,259.33	5,718.00	84.91	85.96	126.86	5,588.69	-178.41	206.70	63.96	142.74	1.448	Level 3	
11,200.00	5,594.00	11,359.33	5,718.00	86.35	87.40	126.86	5,688.69	-178.41	206.70	61.59	145.11	1.424	Level 3	
11,300.00	5,594.00	11,459.33	5,718.00	87.79	88.84	126.86	5,788.69	-178.41	206.69	59.21	147.48	1.402	Level 3	
11,400.00	5,594.00	11,559.33	5,718.00	89.23	90.28	126.86	5,888.69	-178.41	206.69	56.84	149.85	1.379	Level 3	
11,500.00	5,594.00	11,659.33	5,718.00	90.67	91.72	126.87	5,988.69	-178.41	206.69	54.46	152.23	1.358	Level 3	
11,600.00	5,594.00	11,759.33	5,718.00	92.11	93.16	126.87	6,088.69	-178.40	206.69	52.08	154.61	1.337	Level 3	
11,700.00	5,594.00	11,859.33	5,718.00	93.56	94.60	126.87	6,188.69	-178.40	206.69	49.70	156.99	1.317	Level 3	
11,800.00	5,594.00	11,959.33	5,718.00	95.00	96.05	126.87	6,288.69	-178.40	206.68	47.31	159.37	1.297	Level 3	
11,900.00	5,594.00	12,059.33	5,718.00	96.44	97.49	126.87	6,388.69	-178.40	206.68	44.93	161.76	1.278	Level 3	
12,000.00	5,594.00	12,159.33	5,718.00	97.89	98.94	126.87	6,488.69	-178.40	206.68	42.54	164.14	1.259	Level 3	
12,100.00	5,594.00	12,259.33	5,718.00	99.34	100.38	126.87	6,588.69	-178.40	206.68	40.15	166.53	1.241	Level 2	
12,200.00	5,594.00	12,359.33	5,718.00	100.78	101.83	126.87	6,688.69	-178.40	206.68	37.76	168.92	1.224	Level 2	
12,300.00	5,594.00	12,459.33	5,718.00	102.23	103.28	126.87	6,788.69	-178.39	206.68	35.37	171.31	1.206	Level 2	
12,400.00	5,594.00	12,559.33	5,718.00	103.68	104.72	126.87	6,888.69	-178.39	206.67	32.98	173.70	1.190	Level 2	
12,500.00	5,594.00	12,659.33	5,718.00	105.13	106.17	126.87	6,988.69	-178.39	206.67	30.58	176.09	1.174	Level 2	
12,600.00	5,594.00	12,759.33	5,718.00	106.58	107.62	126.87	7,088.69	-178.39	206.67	28.19	178.48	1.158	Level 2	
12,700.00	5,594.00	12,859.33	5,718.00	108.03	109.07	126.87	7,188.69	-178.39	206.67	25.79	180.88	1.143	Level 2	
12,800.00	5,594.00	12,959.33	5,718.00	109.48	110.52	126.87	7,288.69	-178.39	206.67	23.39	183.27	1.128	Level 2	
12,900.00	5,594.00	13,059.33	5,718.00	110.93	111.97	126.87	7,388.69	-178.38	206.67	20.99	185.67	1.113	Level 2	
13,000.00	5,594.00	13,159.33	5,718.00	112.38	113.43	126.87	7,488.69	-178.38	206.66	18.60	188.07	1.099	Level 2	
13,100.00	5,594.00	13,259.33	5,718.00	113.83	114.88	126.87	7,588.69	-178.38	206.66	16.19	190.47	1.085	Level 2	
13,200.00	5,594.00	13,359.33	5,718.00	115.29	116.33	126.87	7,688.69	-178.38	206.66	13.79	192.87	1.072	Level 2	
13,300.00	5,594.00	13,459.33	5,718.00	116.74	117.78	126.87	7,788.69	-178.38	206.66	11.39	195.27	1.058	Level 2	
13,400.00	5,594.00	13,559.33	5,718.00	118.19	119.24	126.87	7,888.69	-178.38	206.66	8.99	197.67	1.045	Level 2	
13,500.00	5,594.00	13,659.33	5,718.00	119.65	120.69	126.87	7,988.69	-178.38	206.66	6.58	200.07	1.033	Level 2	
13,600.00	5,594.00	13,759.33	5,718.00	121.10	122.14	126.87	8,088.69	-178.37	206.65	4.18	202.48	1.021	Level 2	
13,700.00	5,594.00	13,859.33	5,718.00	122.56	123.60	126.87	8,188.69	-178.37	206.65	1.77	204.88	1.009	Level 2	
13,800.00	5,594.00	13,959.33	5,718.00	124.01	125.05	126.87	8,288.69	-178.37	206.65	-0.63	207.28	0.997	Level 1	
13,900.00	5,594.00	14,059.33	5,718.00	125.47	126.51	126.87	8,388.69	-178.37	206.65	-3.04	209.69	0.986	Level 1	
14,000.00	5,594.00	14,159.33	5,718.00	126.92	127.97	126.87	8,488.69	-178.37	206.65	-5.45	212.10	0.974	Level 1	
14,100.00	5,594.00	14,259.33	5,718.00	128.38	129.42	126.87	8,588.69	-178.37	206.65	-7.86	214.50	0.963	Level 1	
14,200.00	5,594.00	14,359.33	5,718.00	129.84	130.88	126.87	8,688.69	-178.37	206.64	-10.27	216.91	0.953	Level 1	
14,300.00	5,594.00	14,459.33	5,718.00	131.29	132.34	126.87	8,788.69	-178.36	206.64	-12.67	219.32	0.942	Level 1	
14,400.00	5,594.00	14,559.33	5,718.00	132.75	133.79	126.88	8,888.69	-178.36	206.64	-15.09	221.73	0.932	Level 1	
14,500.00	5,594.00	14,659.33	5,718.00	134.21	135.25	126.88	8,988.69	-178.36	206.64	-17.50	224.14	0.922	Level 1	
14,600.00	5,594.00	14,759.33	5,718.00	135.67	136.71	126.88	9,088.69	-178.36	206.64	-19.91	226.55	0.912	Level 1	
14,700.00	5,594.00	14,859.33	5,718.00	137.13	138.17	126.88	9,188.69	-178.36	206.64	-22.32	228.96	0.903	Level 1	
14,800.00	5,594.00	14,959.33	5,718.00	138.58	139.63	126.88	9,288.69	-178.36	206.63	-24.73	231.37	0.893	Level 1	
14,900.00	5,594.00	15,059.33	5,718.00	140.04	141.08	126.88	9,388.69	-178.35	206.63	-27.15	233.78	0.884	Level 1	
15,000.00	5,594.00	15,159.33	5,718.00	141.50	142.54	126.88	9,488.69	-178.35	206.63	-29.56	236.19	0.875	Level 1	
15,100.00	5,594.00	15,259.33	5,718.00	142.96	144.00	126.88	9,588.69	-178.35	206.63	-31.97	238.60	0.866	Level 1	
15,200.00	5,594.00	15,359.33	5,718.00	144.42	145.46	126.88	9,688.69	-178.35	206.63	-34.39	241.02	0.857	Level 1	
15,300.00	5,594.00	15,459.33	5,718.00	145.88	146.92	126.88	9,788.69	-178.35	206.63	-36.80	243.43	0.849	Level 1	

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2439 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	
15,400.00	5,594.00	15,559.33	5,718.00	147.34	148.38	126.88	9,888.69	-178.35	206.62	-39.22	245.84	0.840 Level 1	
15,500.00	5,594.00	15,659.33	5,718.00	148.80	149.84	126.88	9,988.69	-178.35	206.62	-41.63	248.26	0.832 Level 1	
15,600.00	5,594.00	15,759.33	5,718.00	150.26	151.30	126.88	10,088.69	-178.34	206.62	-44.05	250.67	0.824 Level 1	
15,668.31	5,594.00	15,827.64	5,718.00	151.26	152.30	126.88	10,156.99	-178.34	206.62	-45.70	252.32	0.819 Level 1, ES, SF	



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	129.58	-49.59	59.98	77.83					
100.00	100.00	100.00	100.00	0.13	0.13	129.58	-49.59	59.98	77.83	77.56	0.27	292.209		
200.00	200.00	200.00	200.00	0.47	0.47	129.58	-49.59	59.98	77.83	76.89	0.94	82.740		
300.00	300.00	300.00	300.00	0.81	0.81	129.58	-49.59	59.98	77.83	76.21	1.61	48.193 CC, ES		
400.00	399.98	397.54	397.52	1.12	1.10	-120.92	-51.10	60.69	80.25	78.03	2.23	36.033		
500.00	499.84	494.71	494.56	1.44	1.40	-122.24	-55.59	62.78	87.55	84.71	2.84	30.822		
600.00	599.49	593.93	593.54	1.77	1.71	-124.37	-61.85	65.70	98.23	94.75	3.48	28.204		
700.00	699.11	693.25	692.62	2.10	2.02	-126.33	-68.13	68.63	109.29	105.16	4.13	26.457		
800.00	798.73	792.58	791.70	2.45	2.36	-127.94	-74.41	71.56	120.45	115.66	4.79	25.136		
900.00	898.35	891.90	890.78	2.80	2.70	-129.27	-80.69	74.49	131.69	126.23	5.46	24.107		
1,000.00	997.97	991.22	989.87	3.16	3.04	-130.39	-86.97	77.42	142.99	136.85	6.14	23.288		
1,100.00	1,097.59	1,090.55	1,088.95	3.52	3.39	-131.35	-93.25	80.34	154.33	147.51	6.82	22.623		
1,200.00	1,197.21	1,189.87	1,188.03	3.88	3.74	-132.18	-99.53	83.27	165.71	158.21	7.51	22.075		
1,300.00	1,296.83	1,289.20	1,287.11	4.24	4.09	-132.90	-105.81	86.20	177.12	168.93	8.19	21.616		
1,400.00	1,396.45	1,388.52	1,386.19	4.60	4.44	-133.53	-112.09	89.13	188.56	179.67	8.88	21.225		
1,500.00	1,496.07	1,487.84	1,485.27	4.96	4.79	-134.09	-118.37	92.06	200.01	190.44	9.57	20.890		
1,600.00	1,595.69	1,587.17	1,584.36	5.32	5.14	-134.59	-124.65	94.98	211.49	201.22	10.27	20.599		
1,700.00	1,695.31	1,686.49	1,683.44	5.68	5.49	-135.04	-130.93	97.91	222.97	212.01	10.96	20.345		
1,800.00	1,794.93	1,785.81	1,782.52	6.04	5.84	-135.44	-137.21	100.84	234.47	222.82	11.65	20.120		
1,900.00	1,894.55	1,885.14	1,881.60	6.40	6.20	-135.81	-143.48	103.77	245.98	233.63	12.35	19.921		
2,000.00	1,994.17	1,984.46	1,980.68	6.77	6.55	-136.14	-149.76	106.70	257.50	244.45	13.04	19.742		
2,100.00	2,093.78	2,083.79	2,079.77	7.13	6.90	-136.45	-156.04	109.63	269.02	255.28	13.74	19.582		
2,200.00	2,193.40	2,183.11	2,178.85	7.49	7.25	-136.73	-162.32	112.55	280.55	266.12	14.43	19.437		
2,300.00	2,293.02	2,282.43	2,277.93	7.85	7.61	-136.99	-168.60	115.48	292.09	276.96	15.13	19.305		
2,400.00	2,392.64	2,381.76	2,377.01	8.22	7.96	-137.22	-174.88	118.41	303.64	287.81	15.83	19.185		
2,500.00	2,492.26	2,481.08	2,476.09	8.58	8.32	-137.44	-181.16	121.34	315.19	298.66	16.52	19.074		
2,600.00	2,591.88	2,580.41	2,575.18	8.94	8.67	-137.65	-187.44	124.27	326.74	309.52	17.22	18.973		
2,700.00	2,691.50	2,679.73	2,674.26	9.31	9.02	-137.84	-193.72	127.19	338.30	320.38	17.92	18.880		
2,800.00	2,791.12	2,779.05	2,773.34	9.67	9.38	-138.02	-200.00	130.12	349.86	331.24	18.62	18.793		
2,900.00	2,890.74	2,878.38	2,872.42	10.03	9.73	-138.19	-206.28	133.05	361.42	342.11	19.31	18.713		
3,000.00	2,990.36	2,977.70	2,971.50	10.40	10.09	-138.34	-212.56	135.98	372.99	352.98	20.01	18.639		
3,100.00	3,089.98	3,077.02	3,070.58	10.76	10.44	-138.49	-218.84	138.91	384.56	363.85	20.71	18.569		
3,200.00	3,189.60	3,176.35	3,169.67	11.12	10.80	-138.63	-225.12	141.83	396.13	374.72	21.41	18.504		
3,300.00	3,289.22	3,275.67	3,268.75	11.49	11.15	-138.76	-231.40	144.76	407.70	385.60	22.11	18.443		
3,400.00	3,388.84	3,375.00	3,367.83	11.85	11.50	-138.88	-237.67	147.69	419.28	396.47	22.80	18.386		
3,500.00	3,488.46	3,480.27	3,472.88	12.21	11.85	-139.06	-243.85	150.57	430.51	407.02	23.50	18.323		
3,600.00	3,588.08	3,591.92	3,584.47	12.58	12.14	-139.58	-246.99	152.03	439.34	415.21	24.14	18.201		
3,700.00	3,687.70	3,695.15	3,687.70	12.94	12.43	-140.31	-247.16	152.11	446.15	421.36	24.78	18.001		
3,800.00	3,787.32	3,794.77	3,787.32	13.31	12.69	-141.01	-247.16	152.11	452.90	427.50	25.39	17.834		
3,900.00	3,886.94	3,894.39	3,886.94	13.67	12.95	-141.70	-247.16	152.11	459.72	433.71	26.01	17.677		
4,000.00	3,986.55	3,994.00	3,986.55	14.03	13.22	-142.36	-247.16	152.11	466.60	439.98	26.62	17.528		
4,100.00	4,086.17	4,093.62	4,086.17	14.40	13.48	-143.00	-247.16	152.11	473.54	446.30	27.24	17.386		
4,200.00	4,185.79	4,193.24	4,185.79	14.76	13.75	-143.63	-247.16	152.11	480.54	452.68	27.86	17.251		
4,300.00	4,285.41	4,292.86	4,285.41	15.12	14.02	-144.23	-247.16	152.11	487.59	459.11	28.48	17.123		
4,400.00	4,385.03	4,392.48	4,385.03	15.49	14.30	-144.82	-247.16	152.11	494.70	465.60	29.10	17.000		
4,500.00	4,484.65	4,492.10	4,484.65	15.85	14.58	-145.39	-247.16	152.11	501.85	472.13	29.72	16.884		
4,600.00	4,584.40	4,591.85	4,584.40	16.16	14.86	-145.91	-247.16	152.11	507.62	477.30	30.32	16.742		
4,700.00	4,684.34	4,691.79	4,684.34	16.40	15.14	-146.16	-247.16	152.11	510.51	479.66	30.86	16.545		
4,800.00	4,784.33	4,791.78	4,784.33	16.67	15.43	-146.81	-247.16	152.11	510.88	479.46	31.42	16.260		
4,900.00	4,884.33	4,891.78	4,884.33	16.95	15.71	-147.81	-247.16	152.11	510.88	478.89	31.99	15.971		
5,000.00	4,984.33	4,991.78	4,984.33	17.23	16.00	-148.81	-247.16	152.11	510.88	478.32	32.56	15.691		
5,062.46	5,046.80	5,054.25	5,046.80	17.40	16.19	-149.81	-247.16	152.11	510.98	478.06	32.92	15.522		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,084.33	5,091.78	5,084.33	17.51	16.30	103.82	-247.16	152.11	510.90	477.77	33.14	15.419		
5,200.00	5,183.49	5,190.94	5,183.49	17.78	16.59	104.76	-247.16	152.11	513.83	480.14	33.69	15.252		
5,300.00	5,278.59	5,286.04	5,278.59	18.04	16.87	106.91	-247.16	152.11	522.57	488.43	34.14	15.308		
5,400.00	5,366.15	5,417.34	5,409.08	18.27	17.24	110.96	-235.64	152.11	536.87	502.37	34.50	15.562		
5,500.00	5,442.93	5,582.62	5,562.57	18.47	17.65	114.81	-176.21	152.11	549.98	515.32	34.66	15.867		
5,600.00	5,506.13	5,770.14	5,704.24	18.62	18.07	117.13	-54.92	152.10	557.94	523.15	34.78	16.041		
5,700.00	5,553.42	5,967.19	5,797.05	18.72	18.62	117.14	117.57	152.09	557.94	522.67	35.27	15.819		
5,800.00	5,583.06	6,141.52	5,821.00	18.84	19.32	115.15	289.47	152.08	550.17	513.84	36.33	15.145		
5,900.00	5,593.96	6,240.77	5,821.00	19.27	19.84	114.59	388.72	152.07	545.54	508.29	37.25	14.647		
5,941.77	5,594.40	6,282.54	5,821.00	19.50	20.08	114.55	430.49	152.07	545.35	507.68	37.67	14.476		
6,000.00	5,594.00	6,340.77	5,821.00	19.82	20.45	114.59	488.72	152.07	545.51	507.22	38.28	14.249		
6,100.00	5,594.00	6,440.77	5,821.00	20.46	21.14	114.59	588.72	152.06	545.50	506.02	39.48	13.818		
6,200.00	5,594.00	6,540.77	5,821.00	21.18	21.91	114.59	688.72	152.05	545.49	504.67	40.82	13.364		
6,300.00	5,594.00	6,640.77	5,821.00	21.98	22.75	114.59	788.72	152.05	545.48	503.19	42.29	12.898		
6,400.00	5,594.00	6,740.77	5,821.00	22.84	23.65	114.59	888.72	152.04	545.47	501.59	43.88	12.431		
6,500.00	5,594.00	6,840.77	5,821.00	23.76	24.61	114.59	988.72	152.03	545.46	499.88	45.58	11.968		
6,600.00	5,594.00	6,940.77	5,821.00	24.73	25.61	114.59	1,088.72	152.03	545.45	498.08	47.37	11.515		
6,700.00	5,594.00	7,040.77	5,821.00	25.75	26.66	114.59	1,188.72	152.02	545.44	496.20	49.24	11.077		
6,800.00	5,594.00	7,140.77	5,821.00	26.81	27.75	114.59	1,288.72	152.01	545.43	494.24	51.19	10.655		
6,900.00	5,594.00	7,240.77	5,821.00	27.91	28.87	114.59	1,388.72	152.01	545.42	492.22	53.21	10.251		
7,000.00	5,594.00	7,340.77	5,821.00	29.04	30.02	114.59	1,488.72	152.00	545.41	490.13	55.28	9.866		
7,100.00	5,594.00	7,440.77	5,821.00	30.20	31.20	114.59	1,588.72	151.99	545.41	487.99	57.41	9.500		
7,200.00	5,594.00	7,540.77	5,821.00	31.39	32.41	114.60	1,688.72	151.99	545.40	485.81	59.59	9.153		
7,300.00	5,594.00	7,640.77	5,821.00	32.60	33.63	114.60	1,788.72	151.98	545.39	483.58	61.81	8.824		
7,400.00	5,594.00	7,740.77	5,821.00	33.83	34.87	114.60	1,888.72	151.98	545.38	481.31	64.06	8.513		
7,500.00	5,594.00	7,840.77	5,821.00	35.08	36.13	114.60	1,988.72	151.97	545.37	479.01	66.35	8.219		
7,600.00	5,594.00	7,940.77	5,821.00	36.34	37.41	114.60	2,088.72	151.96	545.36	476.68	68.67	7.941		
7,700.00	5,594.00	8,040.77	5,821.00	37.62	38.70	114.60	2,188.72	151.96	545.35	474.33	71.02	7.678		
7,800.00	5,594.00	8,140.77	5,821.00	38.92	40.00	114.60	2,288.72	151.95	545.34	471.94	73.40	7.430		
7,900.00	5,594.00	8,240.77	5,821.00	40.22	41.32	114.60	2,388.72	151.94	545.33	469.54	75.79	7.195		
8,000.00	5,594.00	8,340.77	5,821.00	41.54	42.64	114.60	2,488.72	151.94	545.32	467.11	78.21	6.973		
8,100.00	5,594.00	8,440.77	5,821.00	42.87	43.97	114.60	2,588.72	151.93	545.31	464.67	80.64	6.762		
8,200.00	5,594.00	8,540.77	5,821.00	44.20	45.31	114.60	2,688.72	151.92	545.30	462.21	83.10	6.562		
8,300.00	5,594.00	8,640.77	5,821.00	45.55	46.66	114.60	2,788.72	151.92	545.29	459.73	85.57	6.373		
8,400.00	5,594.00	8,740.77	5,821.00	46.90	48.02	114.60	2,888.72	151.91	545.29	457.24	88.05	6.193		
8,500.00	5,594.00	8,840.77	5,821.00	48.26	49.38	114.60	2,988.72	151.90	545.28	454.73	90.54	6.022		
8,600.00	5,594.00	8,940.77	5,821.00	49.62	50.75	114.60	3,088.72	151.90	545.27	452.22	93.05	5.860		
8,700.00	5,594.00	9,040.77	5,821.00	50.99	52.13	114.60	3,188.72	151.89	545.26	449.69	95.57	5.705		
8,800.00	5,594.00	9,140.77	5,821.00	52.37	53.51	114.60	3,288.72	151.88	545.25	447.15	98.10	5.558		
8,900.00	5,594.00	9,240.77	5,821.00	53.75	54.90	114.60	3,388.72	151.88	545.24	444.60	100.64	5.418		
9,000.00	5,594.00	9,340.77	5,821.00	55.14	56.28	114.60	3,488.72	151.87	545.23	442.05	103.18	5.284		
9,100.00	5,594.00	9,440.77	5,821.00	56.53	57.68	114.60	3,588.72	151.86	545.22	439.48	105.74	5.156		
9,200.00	5,594.00	9,540.77	5,821.00	57.92	59.08	114.60	3,688.72	151.86	545.21	436.91	108.30	5.034		
9,300.00	5,594.00	9,640.77	5,821.00	59.32	60.48	114.60	3,788.72	151.85	545.20	434.33	110.87	4.918		
9,400.00	5,594.00	9,740.77	5,821.00	60.72	61.88	114.60	3,888.72	151.85	545.19	431.75	113.44	4.806		
9,500.00	5,594.00	9,840.77	5,821.00	62.13	63.29	114.61	3,988.72	151.84	545.18	429.16	116.03	4.699		
9,600.00	5,594.00	9,940.77	5,821.00	63.54	64.70	114.61	4,088.72	151.83	545.17	426.56	118.61	4.596		
9,700.00	5,594.00	10,040.77	5,821.00	64.95	66.11	114.61	4,188.72	151.83	545.17	423.96	121.21	4.498		
9,800.00	5,594.00	10,140.77	5,821.00	66.36	67.53	114.61	4,288.72	151.82	545.16	421.35	123.81	4.403		
9,900.00	5,594.00	10,240.77	5,821.00	67.78	68.94	114.61	4,388.72	151.81	545.15	418.74	126.41	4.313		
10,000.00	5,594.00	10,340.77	5,821.00	69.19	70.36	114.61	4,488.72	151.81	545.14	416.12	129.02	4.225		
10,100.00	5,594.00	10,440.77	5,821.00	70.61	71.79	114.61	4,588.72	151.80	545.13	413.50	131.63	4.141		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	HZ	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag													Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor		
10,200.00	5,594.00	10,540.77	5,821.00	72.04	73.21	114.61	4,688.72	151.79	545.12	410.88	134.24	4.061		
10,300.00	5,594.00	10,640.77	5,821.00	73.46	74.64	114.61	4,788.72	151.79	545.11	408.25	136.86	3.983		
10,400.00	5,594.00	10,740.77	5,821.00	74.89	76.06	114.61	4,888.72	151.78	545.10	405.62	139.48	3.908		
10,500.00	5,594.00	10,840.77	5,821.00	76.31	77.49	114.61	4,988.72	151.77	545.09	402.98	142.11	3.836		
10,600.00	5,594.00	10,940.77	5,821.00	77.74	78.92	114.61	5,088.72	151.77	545.08	400.34	144.74	3.766		
10,700.00	5,594.00	11,040.77	5,821.00	79.18	80.35	114.61	5,188.72	151.76	545.07	397.70	147.37	3.699		
10,800.00	5,594.00	11,140.77	5,821.00	80.61	81.79	114.61	5,288.72	151.75	545.06	395.06	150.01	3.634		
10,900.00	5,594.00	11,240.77	5,821.00	82.04	83.22	114.61	5,388.72	151.75	545.05	392.41	152.64	3.571		
11,000.00	5,594.00	11,340.77	5,821.00	83.48	84.66	114.61	5,488.72	151.74	545.05	389.76	155.28	3.510		
11,100.00	5,594.00	11,440.77	5,821.00	84.91	86.10	114.61	5,588.72	151.73	545.04	387.11	157.92	3.451		
11,200.00	5,594.00	11,540.77	5,821.00	86.35	87.54	114.61	5,688.72	151.73	545.03	384.46	160.57	3.394		
11,300.00	5,594.00	11,640.77	5,821.00	87.79	88.98	114.61	5,788.72	151.72	545.02	381.80	163.22	3.339		
11,400.00	5,594.00	11,740.77	5,821.00	89.23	90.42	114.61	5,888.72	151.72	545.01	379.15	165.86	3.286		
11,500.00	5,594.00	11,840.77	5,821.00	90.67	91.86	114.61	5,988.72	151.71	545.00	376.49	168.51	3.234		
11,600.00	5,594.00	11,940.77	5,821.00	92.11	93.30	114.61	6,088.72	151.70	544.99	373.82	171.17	3.184		
11,700.00	5,594.00	12,040.77	5,821.00	93.56	94.74	114.62	6,188.72	151.70	544.98	371.16	173.82	3.135		
11,800.00	5,594.00	12,140.77	5,821.00	95.00	96.19	114.62	6,288.72	151.69	544.97	368.50	176.48	3.088		
11,900.00	5,594.00	12,240.77	5,821.00	96.44	97.63	114.62	6,388.72	151.68	544.96	365.83	179.13	3.042		
12,000.00	5,594.00	12,340.77	5,821.00	97.89	99.08	114.62	6,488.72	151.68	544.95	363.16	181.79	2.998		
12,100.00	5,594.00	12,440.77	5,821.00	99.34	100.53	114.62	6,588.72	151.67	544.94	360.49	184.45	2.954		
12,200.00	5,594.00	12,540.77	5,821.00	100.78	101.97	114.62	6,688.72	151.66	544.94	357.82	187.11	2.912		
12,300.00	5,594.00	12,640.77	5,821.00	102.23	103.42	114.62	6,788.72	151.66	544.93	355.15	189.78	2.871		
12,400.00	5,594.00	12,740.77	5,821.00	103.68	104.87	114.62	6,888.72	151.65	544.92	352.48	192.44	2.832		
12,500.00	5,594.00	12,840.77	5,821.00	105.13	106.32	114.62	6,988.72	151.64	544.91	349.80	195.11	2.793		
12,600.00	5,594.00	12,940.77	5,821.00	106.58	107.77	114.62	7,088.72	151.64	544.90	347.12	197.77	2.755		
12,700.00	5,594.00	13,040.77	5,821.00	108.03	109.22	114.62	7,188.72	151.63	544.89	344.45	200.44	2.718		
12,800.00	5,594.00	13,140.77	5,821.00	109.48	110.67	114.62	7,288.72	151.62	544.88	341.77	203.11	2.683		
12,900.00	5,594.00	13,240.77	5,821.00	110.93	112.12	114.62	7,388.72	151.62	544.87	339.09	205.78	2.648		
13,000.00	5,594.00	13,340.77	5,821.00	112.38	113.58	114.62	7,488.72	151.61	544.86	336.41	208.45	2.614		
13,100.00	5,594.00	13,440.77	5,821.00	113.83	115.03	114.62	7,588.72	151.60	544.85	333.73	211.12	2.581		
13,200.00	5,594.00	13,540.77	5,821.00	115.29	116.48	114.62	7,688.72	151.60	544.84	331.05	213.80	2.548		
13,300.00	5,594.00	13,640.77	5,821.00	116.74	117.93	114.62	7,788.72	151.59	544.83	328.36	216.47	2.517		
13,400.00	5,594.00	13,740.77	5,821.00	118.19	119.39	114.62	7,888.72	151.58	544.82	325.68	219.15	2.486		
13,500.00	5,594.00	13,840.77	5,821.00	119.65	120.84	114.62	7,988.72	151.58	544.82	322.99	221.82	2.456		
13,600.00	5,594.00	13,940.77	5,821.00	121.10	122.30	114.62	8,088.72	151.57	544.81	320.31	224.50	2.427		
13,700.00	5,594.00	14,040.77	5,821.00	122.56	123.75	114.62	8,188.72	151.57	544.80	317.62	227.17	2.398		
13,800.00	5,594.00	14,140.77	5,821.00	124.01	125.21	114.62	8,288.72	151.56	544.79	314.94	229.85	2.370		
13,900.00	5,594.00	14,240.77	5,821.00	125.47	126.67	114.62	8,388.72	151.55	544.78	312.25	232.53	2.343		
14,000.00	5,594.00	14,340.77	5,821.00	126.92	128.12	114.63	8,488.72	151.55	544.77	309.56	235.21	2.316		
14,100.00	5,594.00	14,440.77	5,821.00	128.38	129.58	114.63	8,588.72	151.54	544.76	306.87	237.89	2.290		
14,200.00	5,594.00	14,540.77	5,821.00	129.84	131.04	114.63	8,688.72	151.53	544.75	304.18	240.57	2.264		
14,300.00	5,594.00	14,640.77	5,821.00	131.29	132.49	114.63	8,788.72	151.53	544.74	301.49	243.25	2.239		
14,400.00	5,594.00	14,740.77	5,821.00	132.75	133.95	114.63	8,888.72	151.52	544.73	298.80	245.93	2.215		
14,500.00	5,594.00	14,840.77	5,821.00	134.21	135.41	114.63	8,988.72	151.51	544.72	296.11	248.62	2.191		
14,600.00	5,594.00	14,940.77	5,821.00	135.67	136.87	114.63	9,088.72	151.51	544.71	293.41	251.30	2.168		
14,700.00	5,594.00	15,040.77	5,821.00	137.13	138.33	114.63	9,188.72	151.50	544.70	290.72	253.98	2.145		
14,800.00	5,594.00	15,140.77	5,821.00	138.58	139.78	114.63	9,288.72	151.49	544.70	288.03	256.67	2.122		
14,900.00	5,594.00	15,240.77	5,821.00	140.04	141.24	114.63	9,388.72	151.49	544.69	285.33	259.35	2.100		
15,000.00	5,594.00	15,340.77	5,821.00	141.50	142.70	114.63	9,488.72	151.48	544.68	282.64	262.04	2.079		
15,100.00	5,594.00	15,440.77	5,821.00	142.96	144.16	114.63	9,588.72	151.47	544.67	279.95	264.72	2.058		
15,200.00	5,594.00	15,540.77	5,821.00	144.42	145.62	114.63	9,688.72	151.47	544.66	277.25	267.41	2.037		
15,300.00	5,594.00	15,640.77	5,821.00	145.88	147.08	114.63	9,788.72	151.46	544.65	274.55	270.09	2.017		

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



WOG

Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Offset Design Sec 25-T10N-R58W - Razor #25N-2440 - Hz - APD												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+MS+sag												Offset Well Error:	0.00 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)	Minimum Separation (usft)	Separation Factor	
15,400.00	5,594.00	15,740.77	5,821.00	147.34	148.54	114.63	9,888.72	151.45	544.64	271.86	272.78	1.997	
15,500.00	5,594.00	15,840.77	5,821.00	148.80	150.00	114.63	9,988.72	151.45	544.63	269.16	275.47	1.977	
15,600.00	5,594.00	15,940.77	5,821.00	150.26	151.46	114.63	10,088.72	151.44	544.62	266.46	278.16	1.958	
15,668.31	5,594.00	16,009.08	5,821.00	151.26	152.46	114.63	10,157.03	151.44	544.62	264.62	279.99	1.945 SF	



WOG

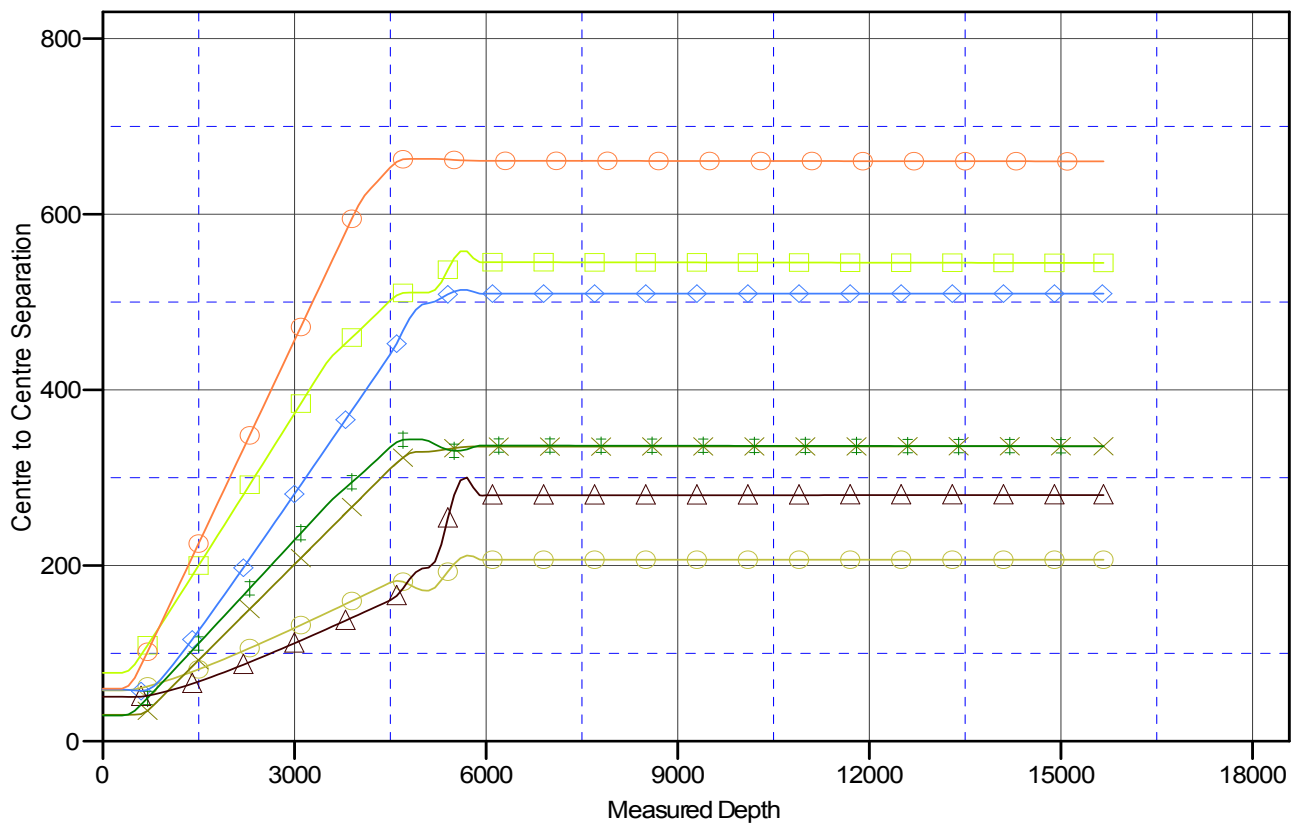
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 4722.00usft (Original Well Ele)
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Razor #25N-2406
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.09°

Ladder Plot



LEGEND

- Razor #25N-2439, Hz, APDV0
- Razor #25N-2440, Hz, APDV0
- ◇ Razor #25N-2437, Hz, APDV0
- ✕ Razor #25N-2405, Hz, APDV0
- Razor #25N-2408, Hz, APDV0
- ✕ Razor #25N-2407, Hz, APDV0
- △ Razor #25N-2438, Hz, APDV0



WOG

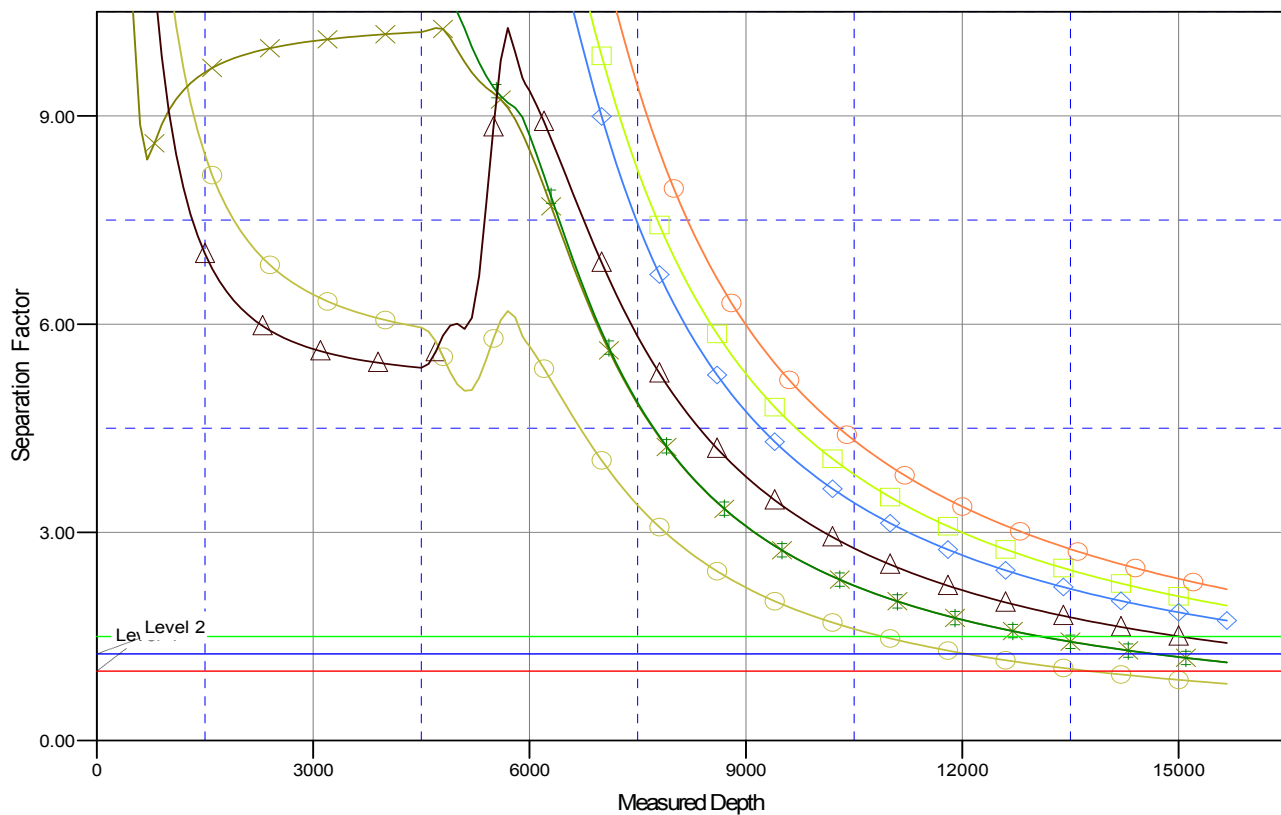
Anticollision Report

Company:	Whiting Petroleum Corp.	Local Co-ordinate Reference:	Well Razor #25N-2406
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Reference Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Razor #25N-2406	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	3.00 sigma
Reference Wellbore	Hz	Database:	LandmarkEDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 4722.00usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Razor #25N-2406
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 1.09°

Separation Factor Plot



LEGEND

- Razor #25N-2439, Hz, APD V0
- Razor #25N-2440, Hz, APD V0
- Razor #25N-2437, Hz, APD V0
- Razor #25N-2405, Hz, APD V0
- Razor #25N-2408, Hz, APD V0
- Razor #25N-2407, Hz, APD V0
- Razor #25N-2438, Hz, APD V0