



WHITING PETROLEUM CORP.

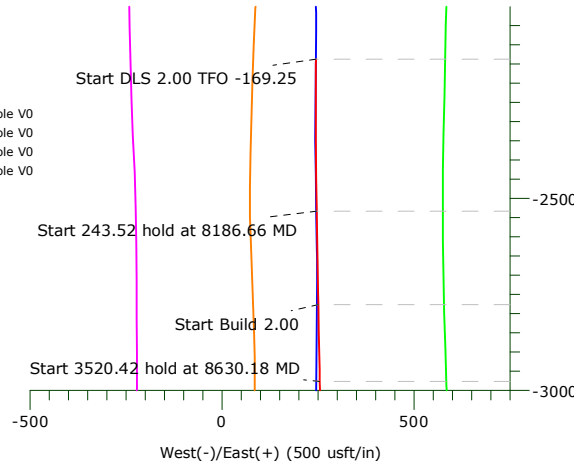
Project: Weld County, CO
Site: Sec 8-T10N-R57W
Well: Horsetail #08B-1711
Wellbore: Sidetrack #1
Design: Plan #1



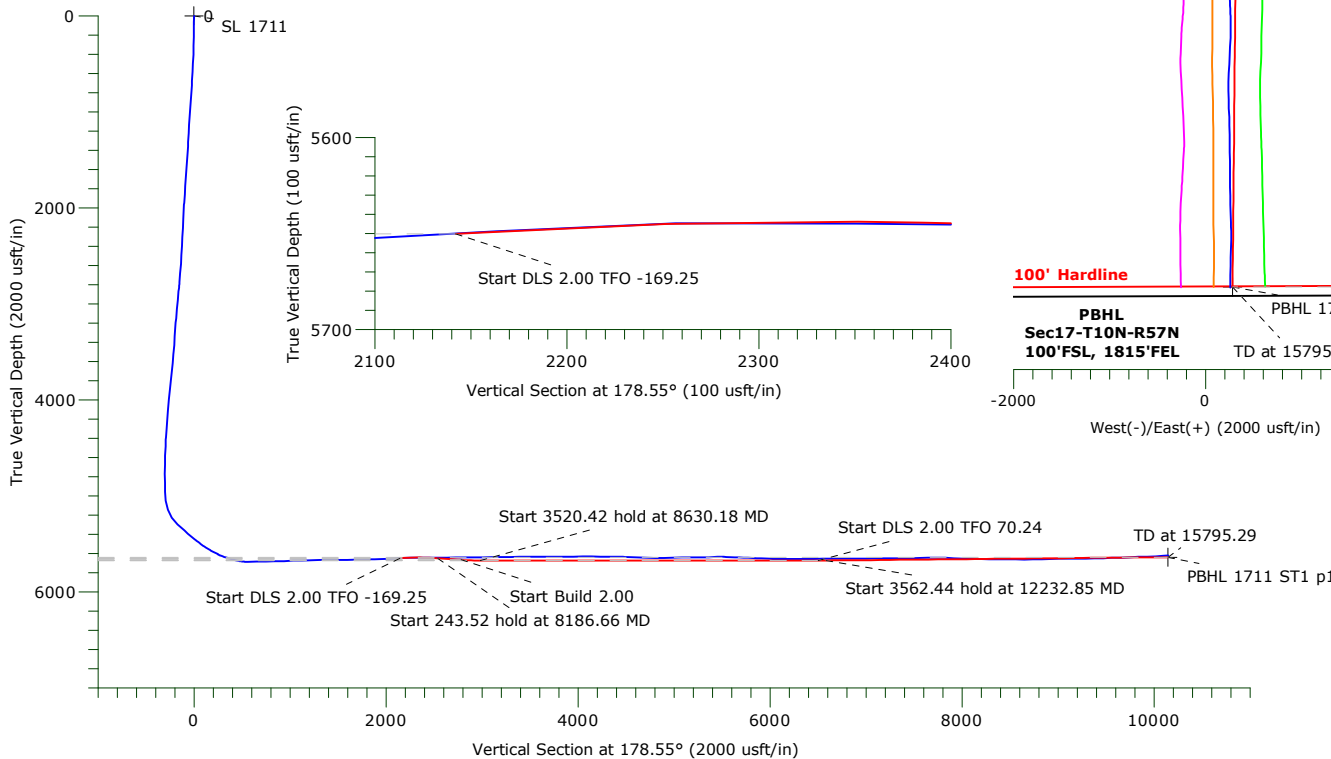
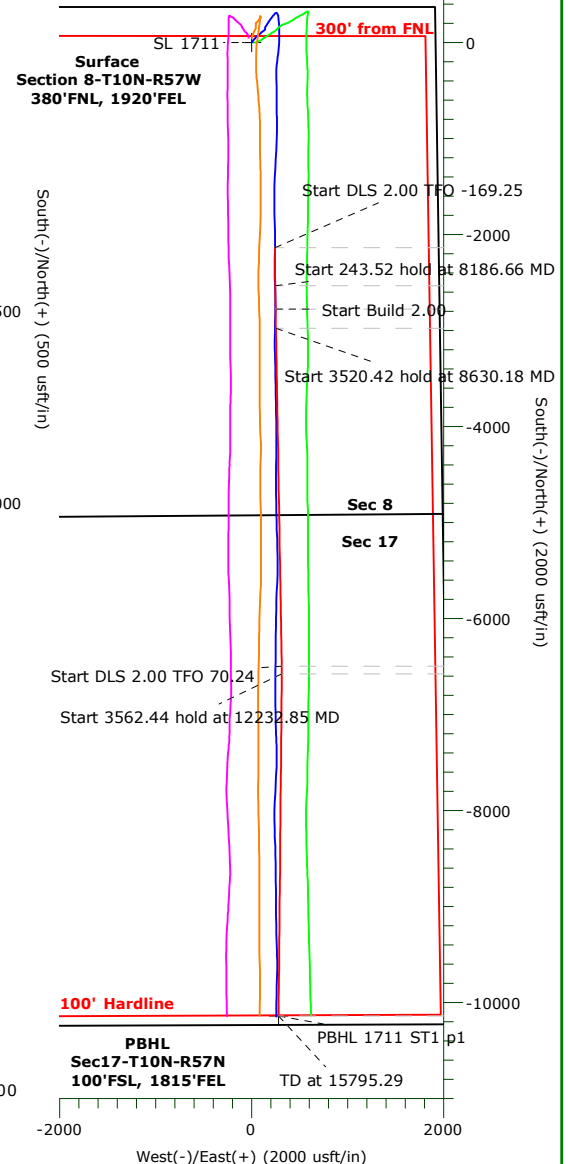
Precision
Directional Services

- LEGEND
- Horsetail #08B-1711, Original Hole, Original Hole V0
 - Horsetail #08B-1712, Original Hole, Original Hole V0
 - Horsetail #08B-1742, Original Hole, Original Hole V0
 - Horsetail #08B-1743, Original Hole, Original Hole V0
 - Plan #1

7"CSG PT/5 1/2 Marker
Sec8-T10N-R57W
710'FNL, 1663'FEL



MWD CORRECTION
WILL BE PROVIDED BY MAGVAR



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1711	0.00	0.00	0.00	1560719.00	3477638.01	40.859783°N	103.773206°W	Point
PBHL 1711 ST1 p1	5640.00	-10139.87	281.75	1550586.54	3478117.15	40.831953°N	103.772187°W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	7790.00	93.79	180.48	5650.29	-2136.60	244.54	0.00	0.00	2142.10	
2	8186.66	86.00	179.00	5651.00	-2532.94	246.34	2.00	-169.25	2538.36	
3	8430.18	86.00	179.00	5667.99	-2775.83	250.58	0.00	0.00	2781.28	
4	8630.18	90.00	179.00	5674.97	-2975.64	254.07	2.00	0.00	2981.11	
5	12150.60	90.00	179.00	5674.97	-6495.52	315.51	0.00	0.00	6501.42	
6	12232.85	90.56	180.55	5674.57	-6577.76	315.83	2.00	70.24	6583.65	
7	15795.29	90.56	180.55	5640.00	-10139.87	281.75	0.00	0.00	10143.75	PBHL 1711 ST1 p1

WHITING PETROLEUM CORP.

**Weld County, CO
Sec 8-T10N-R57W
Horsetail #08B-1711**

Sidetrack #1

Plan: Plan #1

Standard Planning Report

07 July, 2016

Precision Drilling Corporation

Planning Report

Database:	Local2	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Company:	WHITING PETROLEUM CORP.	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Project:	Weld County, CO	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site:	Sec 8-T10N-R57W	North Reference:	True
Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sidetrack #1		
Design:	Plan #1		

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

Site						Sec 8-T10N-R57W											
Site Position:						Northing:			1,561,022.64 usft			Latitude:			40.860797°N		
From:			Lat/Long			Easting:			3,474,249.13 usft			Longitude:			103.785433°W		
Position Uncertainty:			0.00 usft			Slot Radius:			13.20 in			Grid Convergence:			1.11		

Well	Horsetail #08B-1711					
Well Position	+N-S	-369.10 usft	Northing:	1,560,719.00 usft	Latitude:	40.859783°N
	+E-W	3,382.37 usft	Easting:	3,477,638.01 usft	Longitude:	103.773206°W
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,890.00 usft

Wellbore	Sidetrack #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/7/2016	7.80	67.40	52,837

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	7,790.00	
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	178.55	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
7,790.00	93.79	180.48	5,650.29	-2,136.60	244.54	0.00	0.00	0.00	0.00	
8,186.66	86.00	179.00	5,651.00	-2,532.94	246.34	2.00	-1.96	-0.37	-169.25	
8,430.18	86.00	179.00	5,667.99	-2,775.83	250.58	0.00	0.00	0.00	0.00	
8,630.18	90.00	179.00	5,674.97	-2,975.64	254.07	2.00	2.00	0.00	0.00	
12,150.60	90.00	179.00	5,674.97	-6,495.52	315.51	0.00	0.00	0.00	0.00	
12,232.85	90.56	180.55	5,674.57	-6,577.76	315.83	2.00	0.68	1.88	70.24	
15,795.29	90.56	180.55	5,640.00	-10,139.87	281.75	0.00	0.00	0.00	0.00	PBHL 1711 ST1 p1

Precision Drilling Corporation

Planning Report

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Company:	WHITING PETROLEUM CORP.	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Project:	Weld County, CO	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site:	Sec 8-T10N-R57W	North Reference:	True
Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sidetrack #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
131.00	1.28	30.70	130.99	1.26	0.75	-1.24	0.98	0.98	0.00
223.00	1.55	20.86	222.96	3.30	1.71	-3.26	0.39	0.29	-10.70
314.00	1.87	36.13	313.92	5.65	3.03	-5.58	0.61	0.35	16.78
405.00	1.64	35.45	404.88	7.91	4.66	-7.79	0.25	-0.25	-0.75
497.00	3.24	30.04	496.79	11.24	6.72	-11.06	1.76	1.74	-5.88
588.00	4.15	43.48	587.60	15.85	10.28	-15.59	1.37	1.00	14.77
680.00	4.36	45.79	679.35	20.71	15.07	-20.32	0.29	0.23	2.51
772.00	5.89	41.05	770.98	26.71	20.68	-26.17	1.72	1.66	-5.15
863.00	5.49	40.55	861.53	33.53	26.58	-32.85	0.44	-0.44	-0.55
955.00	5.13	40.46	953.14	40.01	32.11	-39.18	0.39	-0.39	-0.10
1,047.00	4.96	44.27	1,044.78	45.99	37.55	-45.02	0.41	-0.18	4.14
1,138.00	4.91	43.02	1,135.44	51.65	42.96	-50.55	0.13	-0.05	-1.37
1,230.00	4.84	45.39	1,227.11	57.25	48.41	-56.01	0.23	-0.08	2.58
1,321.00	4.91	47.52	1,317.78	62.58	54.01	-61.19	0.21	0.08	2.34
1,412.00	5.97	46.08	1,408.37	68.49	60.29	-66.94	1.17	1.16	-1.58
1,504.00	6.05	51.46	1,499.86	74.83	67.53	-73.10	0.62	0.09	5.85
1,594.00	6.32	49.98	1,589.34	80.97	75.03	-79.05	0.35	0.30	-1.64
1,686.00	6.50	50.00	1,680.77	87.58	82.90	-85.45	0.20	0.20	0.02
1,776.00	5.97	48.70	1,770.23	93.94	90.32	-91.62	0.61	-0.59	-1.44
1,868.00	5.65	44.00	1,861.76	100.35	97.06	-97.87	0.62	-0.35	-5.11
1,959.00	5.40	48.49	1,952.34	106.42	103.38	-103.77	0.55	-0.27	4.93
1,971.00	5.61	46.60	1,964.28	107.19	104.23	-104.52	2.31	1.75	-15.75
2,124.00	4.80	57.09	2,116.65	115.81	115.04	-112.86	0.81	-0.53	6.86
2,219.00	5.13	54.06	2,211.30	120.46	121.81	-117.34	0.44	0.35	-3.19
2,313.00	4.71	55.99	2,304.95	125.09	128.41	-121.80	0.48	-0.45	2.05
2,407.00	4.74	51.78	2,398.63	129.65	134.66	-126.20	0.37	0.03	-4.48
2,502.00	4.56	48.29	2,493.32	134.59	140.57	-130.99	0.35	-0.19	-3.67
2,596.00	4.41	0.78	2,587.06	140.69	143.41	-137.02	3.84	-0.16	-50.54
2,690.00	4.60	358.12	2,680.77	148.07	143.33	-144.40	0.30	0.20	-2.83
2,785.00	4.57	357.16	2,775.47	155.66	143.02	-151.99	0.09	-0.03	-1.01
2,879.00	6.77	32.85	2,869.03	164.06	145.84	-160.31	4.31	2.34	37.97
2,973.00	6.56	29.87	2,962.40	173.37	151.52	-169.48	0.43	-0.22	-3.17
3,067.00	6.30	29.16	3,055.80	182.53	156.71	-178.50	0.29	-0.28	-0.76
3,162.00	6.17	34.68	3,150.24	191.28	162.15	-187.11	0.65	-0.14	5.81
3,256.00	4.99	32.50	3,243.80	198.88	167.22	-194.59	1.28	-1.26	-2.32
3,351.00	4.43	33.00	3,338.47	205.44	171.44	-201.04	0.59	-0.59	0.53
3,445.00	4.32	34.41	3,432.20	211.41	175.42	-206.90	0.16	-0.12	1.50
3,539.00	7.27	37.36	3,525.71	219.06	181.03	-214.41	3.15	3.14	3.14
3,634.00	7.42	36.45	3,619.93	228.77	188.32	-223.93	0.20	0.16	-0.96
3,728.00	7.33	35.63	3,713.15	238.53	195.42	-233.50	0.15	-0.10	-0.87
3,823.00	7.18	36.98	3,807.39	248.19	202.52	-242.99	0.24	-0.16	1.42
3,917.00	6.73	33.79	3,900.70	257.47	209.12	-252.09	0.63	-0.48	-3.39
4,012.00	6.32	37.19	3,995.09	266.26	215.38	-260.72	0.59	-0.43	3.58
4,130.00	6.15	39.70	4,112.39	276.29	223.34	-270.55	0.27	-0.14	2.13
4,224.00	5.89	38.69	4,205.87	283.93	229.57	-278.03	0.30	-0.28	-1.07
4,319.00	6.01	39.69	4,300.36	291.56	235.79	-285.50	0.17	0.13	1.05
4,413.00	6.01	39.53	4,393.84	299.15	242.07	-292.93	0.02	0.00	-0.17
4,507.00	3.53	62.11	4,487.52	304.30	247.76	-297.93	3.26	-2.64	24.02
4,601.00	3.16	51.22	4,581.36	307.27	252.34	-300.79	0.78	-0.39	-11.59
4,696.00	2.69	49.14	4,676.23	310.37	256.06	-303.79	0.51	-0.49	-2.19
4,790.00	1.71	133.15	4,770.18	310.86	258.76	-304.21	3.23	-1.04	89.37
4,885.00	1.29	123.47	4,865.15	309.30	260.68	-302.60	0.51	-0.44	-10.19
4,979.00	1.05	122.16	4,959.13	308.25	262.29	-301.52	0.26	-0.26	-1.39

Precision Drilling Corporation

Planning Report

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Company:	WHITING PETROLEUM CORP.	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Project:	Weld County, CO	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site:	Sec 8-T10N-R57W	North Reference:	True
Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sidetrack #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,074.00	9.74	148.72	5,053.62	300.91	267.21	-294.05	9.28	9.15	27.96
5,168.00	18.70	161.46	5,144.67	279.78	276.15	-272.70	10.04	9.53	13.55
5,262.00	33.51	174.88	5,228.92	239.39	283.31	-232.14	16.87	15.76	14.28
5,356.00	48.57	178.86	5,299.62	177.95	286.34	-170.65	16.25	16.02	4.23
5,451.00	48.05	178.48	5,362.81	107.03	287.99	-99.71	0.62	-0.55	-0.40
5,498.00	48.70	178.15	5,394.03	71.91	289.02	-64.57	1.48	1.38	-0.70
5,545.00	50.92	181.11	5,424.36	36.02	289.24	-28.69	6.74	4.72	6.30
5,592.00	50.83	181.65	5,454.02	-0.43	288.36	7.73	0.91	-0.19	1.15
5,639.00	51.92	186.09	5,483.37	-37.05	285.87	44.27	7.74	2.32	9.45
5,734.00	57.48	187.71	5,538.24	-113.98	276.52	120.95	6.02	5.85	1.71
5,781.00	58.00	187.62	5,563.33	-153.37	271.22	160.19	1.12	1.11	-0.19
5,828.00	62.90	185.68	5,586.50	-193.97	266.51	200.65	11.03	10.43	-4.13
5,875.00	62.83	186.00	5,607.94	-235.58	262.25	242.14	0.62	-0.15	0.68
5,923.00	69.33	181.63	5,627.40	-279.33	259.37	285.80	15.89	13.54	-9.10
6,017.00	73.92	178.73	5,657.03	-368.50	259.12	374.94	5.69	4.88	-3.09
6,112.00	78.48	179.34	5,679.68	-460.72	260.67	467.17	4.84	4.80	0.64
6,207.00	90.05	179.91	5,689.16	-555.08	261.29	561.51	12.19	12.18	0.60
6,301.00	91.67	179.44	5,687.75	-649.06	261.82	655.48	1.79	1.72	-0.50
6,396.00	91.51	178.17	5,685.11	-744.01	263.80	750.44	1.35	-0.17	-1.34
6,490.00	91.14	180.64	5,682.94	-837.97	264.78	844.40	2.66	-0.39	2.63
6,584.00	91.94	180.16	5,680.41	-931.93	264.12	938.32	0.99	0.85	-0.51
6,678.00	91.11	182.42	5,677.91	-1,025.87	262.00	1,032.17	2.56	-0.88	2.40
6,773.00	93.18	183.16	5,674.36	-1,120.68	257.38	1,126.84	2.31	2.18	0.78
6,867.00	92.12	182.08	5,670.01	-1,214.48	253.09	1,220.50	1.61	-1.13	-1.15
6,962.00	89.32	183.57	5,668.82	-1,309.35	248.41	1,315.21	3.34	-2.95	1.57
7,057.00	89.60	183.02	5,669.71	-1,404.18	242.95	1,409.88	0.65	0.29	-0.58
7,151.00	90.21	182.26	5,669.87	-1,498.08	238.62	1,503.64	1.04	0.65	-0.81
7,245.00	91.11	179.97	5,668.78	-1,592.05	236.79	1,597.53	2.62	0.96	-2.44
7,339.00	91.95	179.49	5,666.28	-1,686.02	237.23	1,691.48	1.03	0.89	-0.51
7,433.00	91.11	178.86	5,663.77	-1,779.97	238.59	1,785.44	1.12	-0.89	-0.67
7,528.00	91.45	177.97	5,661.64	-1,874.91	241.21	1,880.41	1.00	0.36	-0.94
7,622.00	92.56	178.53	5,658.35	-1,968.81	244.08	1,974.35	1.32	1.18	0.60
7,716.00	92.40	180.30	5,654.29	-2,062.71	245.04	2,068.25	1.89	-0.17	1.88
7,790.00	93.79	180.48	5,650.29	-2,136.60	244.54	2,142.10	1.90	1.88	0.24
7,800.00	93.60	180.44	5,649.64	-2,146.58	244.46	2,152.08	2.00	-1.96	-0.37
7,900.00	91.63	180.07	5,645.08	-2,246.47	244.01	2,251.92	2.00	-1.96	-0.37
8,000.00	89.67	179.70	5,643.95	-2,346.46	244.22	2,351.88	2.00	-1.97	-0.37
8,100.00	87.70	179.32	5,646.24	-2,446.42	245.07	2,451.84	2.00	-1.97	-0.37
8,186.66	86.00	179.00	5,651.00	-2,532.94	246.34	2,538.36	2.00	-1.96	-0.37
8,200.00	86.00	179.00	5,651.93	-2,546.24	246.57	2,551.67	0.00	0.00	0.00
8,300.00	86.00	179.00	5,658.91	-2,645.98	248.31	2,651.42	0.00	0.00	0.00
8,400.00	86.00	179.00	5,665.88	-2,745.72	250.05	2,751.17	0.00	0.00	0.00
8,430.18	86.00	179.00	5,667.99	-2,775.83	250.58	2,781.28	0.00	0.00	0.00
8,500.00	87.40	179.00	5,672.01	-2,845.52	251.80	2,850.98	2.00	2.00	0.00
8,600.00	89.40	179.00	5,674.81	-2,945.46	253.54	2,950.93	2.00	2.00	0.00
8,630.18	90.00	179.00	5,674.97	-2,975.64	254.07	2,981.11	2.00	2.00	0.00
8,700.00	90.00	179.00	5,674.97	-3,045.44	255.29	3,050.93	0.00	0.00	0.00
8,800.00	90.00	179.00	5,674.97	-3,145.43	257.03	3,150.92	0.00	0.00	0.00
8,900.00	90.00	179.00	5,674.97	-3,245.41	258.78	3,250.92	0.00	0.00	0.00
9,000.00	90.00	179.00	5,674.97	-3,345.40	260.52	3,350.92	0.00	0.00	0.00
9,100.00	90.00	179.00	5,674.97	-3,445.38	262.27	3,450.92	0.00	0.00	0.00
9,200.00	90.00	179.00	5,674.97	-3,545.37	264.01	3,550.91	0.00	0.00	0.00
9,300.00	90.00	179.00	5,674.97	-3,645.35	265.76	3,650.91	0.00	0.00	0.00
9,400.00	90.00	179.00	5,674.97	-3,745.34	267.50	3,750.91	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

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Company:	WHITING PETROLEUM CORP.	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Project:	Weld County, CO	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site:	Sec 8-T10N-R57W	North Reference:	True
Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sidetrack #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,500.00	90.00	179.00	5,674.97	-3,845.32	269.25	3,850.90	0.00	0.00	0.00
9,600.00	90.00	179.00	5,674.97	-3,945.31	270.99	3,950.90	0.00	0.00	0.00
9,700.00	90.00	179.00	5,674.97	-4,045.29	272.74	4,050.90	0.00	0.00	0.00
9,800.00	90.00	179.00	5,674.97	-4,145.28	274.48	4,150.89	0.00	0.00	0.00
9,900.00	90.00	179.00	5,674.97	-4,245.26	276.23	4,250.89	0.00	0.00	0.00
10,000.00	90.00	179.00	5,674.97	-4,345.25	277.97	4,350.89	0.00	0.00	0.00
10,100.00	90.00	179.00	5,674.97	-4,445.23	279.72	4,450.88	0.00	0.00	0.00
10,200.00	90.00	179.00	5,674.97	-4,545.21	281.46	4,550.88	0.00	0.00	0.00
10,300.00	90.00	179.00	5,674.97	-4,645.20	283.21	4,650.88	0.00	0.00	0.00
10,400.00	90.00	179.00	5,674.97	-4,745.18	284.96	4,750.88	0.00	0.00	0.00
10,500.00	90.00	179.00	5,674.97	-4,845.17	286.70	4,850.87	0.00	0.00	0.00
10,600.00	90.00	179.00	5,674.97	-4,945.15	288.45	4,950.87	0.00	0.00	0.00
10,700.00	90.00	179.00	5,674.97	-5,045.14	290.19	5,050.87	0.00	0.00	0.00
10,800.00	90.00	179.00	5,674.97	-5,145.12	291.94	5,150.86	0.00	0.00	0.00
10,900.00	90.00	179.00	5,674.97	-5,245.11	293.68	5,250.86	0.00	0.00	0.00
11,000.00	90.00	179.00	5,674.97	-5,345.09	295.43	5,350.86	0.00	0.00	0.00
11,100.00	90.00	179.00	5,674.97	-5,445.08	297.17	5,450.85	0.00	0.00	0.00
11,200.00	90.00	179.00	5,674.97	-5,545.06	298.92	5,550.85	0.00	0.00	0.00
11,300.00	90.00	179.00	5,674.97	-5,645.05	300.66	5,650.85	0.00	0.00	0.00
11,400.00	90.00	179.00	5,674.97	-5,745.03	302.41	5,750.84	0.00	0.00	0.00
11,500.00	90.00	179.00	5,674.97	-5,845.02	304.15	5,850.84	0.00	0.00	0.00
11,600.00	90.00	179.00	5,674.97	-5,945.00	305.90	5,950.84	0.00	0.00	0.00
11,700.00	90.00	179.00	5,674.97	-6,044.99	307.64	6,050.84	0.00	0.00	0.00
11,800.00	90.00	179.00	5,674.97	-6,144.97	309.39	6,150.83	0.00	0.00	0.00
11,900.00	90.00	179.00	5,674.97	-6,244.96	311.13	6,250.83	0.00	0.00	0.00
12,000.00	90.00	179.00	5,674.97	-6,344.94	312.88	6,350.83	0.00	0.00	0.00
12,100.00	90.00	179.00	5,674.97	-6,444.93	314.62	6,450.82	0.00	0.00	0.00
12,150.60	90.00	179.00	5,674.97	-6,495.52	315.51	6,501.42	0.00	0.00	0.00
12,200.00	90.33	179.93	5,674.82	-6,544.91	315.97	6,550.81	2.00	0.68	1.88
12,232.85	90.56	180.55	5,674.57	-6,577.76	315.83	6,583.65	2.00	0.68	1.88
12,300.00	90.56	180.55	5,673.92	-6,644.91	315.19	6,650.75	0.00	0.00	0.00
12,400.00	90.56	180.55	5,672.94	-6,744.90	314.23	6,750.69	0.00	0.00	0.00
12,500.00	90.56	180.55	5,671.97	-6,844.89	313.28	6,850.62	0.00	0.00	0.00
12,600.00	90.56	180.55	5,671.00	-6,944.88	312.32	6,950.56	0.00	0.00	0.00
12,700.00	90.56	180.55	5,670.03	-7,044.87	311.36	7,050.49	0.00	0.00	0.00
12,800.00	90.56	180.55	5,669.06	-7,144.86	310.41	7,150.43	0.00	0.00	0.00
12,900.00	90.56	180.55	5,668.09	-7,244.85	309.45	7,250.36	0.00	0.00	0.00
13,000.00	90.56	180.55	5,667.12	-7,344.84	308.49	7,350.30	0.00	0.00	0.00
13,100.00	90.56	180.55	5,666.15	-7,444.83	307.54	7,450.23	0.00	0.00	0.00
13,200.00	90.56	180.55	5,665.18	-7,544.82	306.58	7,550.17	0.00	0.00	0.00
13,300.00	90.56	180.55	5,664.21	-7,644.81	305.62	7,650.10	0.00	0.00	0.00
13,400.00	90.56	180.55	5,663.24	-7,744.80	304.67	7,750.03	0.00	0.00	0.00
13,500.00	90.56	180.55	5,662.27	-7,844.80	303.71	7,849.97	0.00	0.00	0.00
13,600.00	90.56	180.55	5,661.30	-7,944.79	302.75	7,949.90	0.00	0.00	0.00
13,700.00	90.56	180.55	5,660.33	-8,044.78	301.80	8,049.84	0.00	0.00	0.00
13,800.00	90.56	180.55	5,659.36	-8,144.77	300.84	8,149.77	0.00	0.00	0.00
13,900.00	90.56	180.55	5,658.39	-8,244.76	299.88	8,249.71	0.00	0.00	0.00
14,000.00	90.56	180.55	5,657.42	-8,344.75	298.93	8,349.64	0.00	0.00	0.00
14,100.00	90.56	180.55	5,656.45	-8,444.74	297.97	8,449.58	0.00	0.00	0.00
14,200.00	90.56	180.55	5,655.48	-8,544.73	297.01	8,549.51	0.00	0.00	0.00
14,300.00	90.56	180.55	5,654.51	-8,644.72	296.06	8,649.44	0.00	0.00	0.00
14,400.00	90.56	180.55	5,653.54	-8,744.71	295.10	8,749.38	0.00	0.00	0.00
14,500.00	90.56	180.55	5,652.57	-8,844.70	294.14	8,849.31	0.00	0.00	0.00
14,600.00	90.56	180.55	5,651.60	-8,944.69	293.19	8,949.25	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Local2	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Company:	WHITING PETROLEUM CORP.	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Project:	Weld County, CO	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site:	Sec 8-T10N-R57W	North Reference:	True
Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Wellbore:	Sidetrack #1		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,700.00	90.56	180.55	5,650.63	-9,044.68	292.23	9,049.18	0.00	0.00	0.00	
14,800.00	90.56	180.55	5,649.66	-9,144.67	291.27	9,149.12	0.00	0.00	0.00	
14,900.00	90.56	180.55	5,648.69	-9,244.67	290.32	9,249.05	0.00	0.00	0.00	
15,000.00	90.56	180.55	5,647.72	-9,344.66	289.36	9,348.99	0.00	0.00	0.00	
15,100.00	90.56	180.55	5,646.75	-9,444.65	288.40	9,448.92	0.00	0.00	0.00	
15,200.00	90.56	180.55	5,645.78	-9,544.64	287.45	9,548.86	0.00	0.00	0.00	
15,300.00	90.56	180.55	5,644.81	-9,644.63	286.49	9,648.79	0.00	0.00	0.00	
15,400.00	90.56	180.55	5,643.84	-9,744.62	285.53	9,748.72	0.00	0.00	0.00	
15,500.00	90.56	180.55	5,642.87	-9,844.61	284.58	9,848.66	0.00	0.00	0.00	
15,600.00	90.56	180.55	5,641.90	-9,944.60	283.62	9,948.59	0.00	0.00	0.00	
15,700.00	90.56	180.55	5,640.92	-10,044.59	282.66	10,048.53	0.00	0.00	0.00	
15,795.29	90.56	180.55	5,640.00	-10,139.87	281.75	10,143.75	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
SL 1711	0.00	0.00	0.00	0.00	0.00	1,560,719.00	3,477,638.01	40.859783°N	103.773206°W	
- plan hits target center										
- Point										
PBHL 1711 ST1 p1	0.00	0.00	5,640.00	-10,139.87	281.75	1,550,586.54	3,478,117.15	40.831953°N	103.772188°W	
- plan hits target center										
- Point										

WHITING PETROLEUM CORP.

Weld County, CO

Sec 8-T10N-R57W

Horsetail #08B-1711

Sidetrack #1

Plan #1

Anticollision Report

07 July, 2016

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
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 1,000.00 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.79 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	7/7/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
131.00	7,790.00	Survey #1 (Original Hole)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag	
7,790.00	15,794.96	Plan #1 (Sidetrack #1)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec 8-T10N-R57W						
Horsetail #08B-1711 - Original Hole - Original Hole	7,800.00	7,800.00	0.03	-0.05	0.408	Level 1, CC
Horsetail #08B-1711 - Original Hole - Original Hole	15,273.08	15,275.06	20.03	-151.59	0.117	Level 1, SF
Horsetail #08B-1711 - Original Hole - Original Hole	15,300.00	15,301.73	20.20	-152.02	0.117	Level 1, ES
Horsetail #08B-1712 - Original Hole - Original Hole	0.00	0.00	29.97			
Horsetail #08B-1712 - Original Hole - Original Hole	100.00	99.59	30.21	29.95	116.751	ES
Horsetail #08B-1712 - Original Hole - Original Hole	15,795.29	15,978.37	344.76	82.11	1.313	Level 3, SF
Horsetail #08B-1742 - Original Hole - Original Hole	0.00	0.00	58.81			
Horsetail #08B-1742 - Original Hole - Original Hole	15,795.29	15,991.00	573.77	319.43	2.256	SF
Horsetail #08B-1743 - Original Hole - Original Hole	300.00	298.70	47.63	46.22	33.879	CC
Horsetail #08B-1743 - Original Hole - Original Hole	900.00	896.47	49.92	44.95	10.034	ES
Horsetail #08B-1743 - Original Hole - Original Hole	15,795.29	16,130.75	376.20	192.90	2.052	SF

Sec 8-T10N-R57W - Horsetail #08B-1711 - Original Hole - Original Hole												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15804-BLIND												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
7,790.00	5,650.32	7,790.00	5,650.29	0.00	0.00	81.75	-2,136.60	244.54	0.24				
7,800.00	5,649.64	7,800.00	5,649.61	0.10	0.11	9.07	-2,146.57	244.45	0.03	-0.05	0.08	0.408	Level 1, CC
7,900.00	5,645.08	7,900.02	5,644.79	0.47	1.17	65.70	-2,246.45	243.37	0.71	-0.81	1.52	0.466	Level 1
8,000.00	5,643.95	8,000.01	5,644.88	0.90	2.16	124.91	-2,346.44	242.88	1.64	-0.97	2.61	0.628	Level 1
8,093.44	5,645.98	8,093.46	5,645.99	1.34	3.19	90.34	-2,439.88	243.58	1.42	-3.11	4.53	0.313	Level 1
8,100.00	5,646.24	8,100.02	5,646.03	1.37	3.27	81.53	-2,446.44	243.66	1.43	-3.16	4.59	0.312	Level 1
8,200.00	5,651.93	8,199.78	5,645.69	1.89	4.46	14.04	-2,546.19	245.02	6.43	3.70	2.73	2.357	
8,300.00	5,658.91	8,299.29	5,643.60	2.38	5.66	5.01	-2,645.66	246.97	15.37	12.45	2.92	5.262	
8,400.00	5,665.88	8,399.21	5,642.73	2.93	6.79	6.89	-2,745.57	247.26	23.32	19.68	3.64	6.415	
8,500.00	5,672.01	8,498.70	5,641.04	3.51	7.91	10.29	-2,845.04	246.17	31.48	26.94	4.54	6.936	
8,600.00	5,674.81	8,599.27	5,641.39	4.15	9.02	13.01	-2,945.60	245.82	34.30	28.77	5.53	6.198	
8,700.00	5,674.97	8,698.20	5,640.73	4.82	10.14	17.56	-3,044.51	244.43	35.93	29.02	6.90	5.204	
8,800.00	5,674.97	8,798.75	5,638.18	5.53	11.30	22.23	-3,145.00	241.99	39.75	31.18	8.57	4.640	
8,900.00	5,674.97	8,899.62	5,638.67	6.28	12.45	21.74	-3,245.83	244.31	39.08	29.64	9.44	4.138	
8,915.55	5,674.97	8,915.00	5,638.67	6.40	12.63	21.63	-3,261.21	244.66	39.05	29.47	9.57	4.079	
9,000.00	5,674.97	8,999.21	5,638.15	7.06	13.60	21.36	-3,345.41	246.12	39.53	29.20	10.33	3.826	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15804-BLIND												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	
9,100.00	5,674.97	9,099.24	5,637.49	7.87	14.74	20.83	-3,445.41	248.01	40.09	28.90	11.19	3.582	
9,200.00	5,674.97	9,199.29	5,636.57	8.71	15.93	18.99	-3,545.42	250.80	40.61	28.87	11.73	3.460	
9,300.00	5,674.97	9,299.85	5,636.38	9.58	17.10	17.70	-3,645.94	253.45	40.51	28.13	12.38	3.272	
9,400.00	5,674.97	9,399.67	5,637.49	10.48	18.28	18.89	-3,745.74	254.68	39.61	25.94	13.68	2.897	
9,430.90	5,674.97	9,430.39	5,637.63	10.76	18.66	19.17	-3,776.46	255.06	39.53	25.46	14.07	2.810	
9,500.00	5,674.97	9,498.98	5,637.34	11.40	19.51	19.72	-3,845.05	255.76	39.97	25.03	14.94	2.676	
9,600.00	5,674.97	9,597.44	5,634.56	12.35	20.74	19.75	-3,943.46	256.45	42.98	27.02	15.96	2.693	
9,700.00	5,674.97	9,698.88	5,631.54	13.31	21.93	20.15	-4,044.85	256.79	46.27	29.09	17.18	2.694	
9,800.00	5,674.97	9,800.06	5,632.12	14.30	23.07	22.97	-4,146.02	256.33	46.54	27.21	19.33	2.408	
9,900.00	5,674.97	9,900.68	5,634.85	15.31	24.22	26.02	-4,246.60	256.67	44.65	22.90	21.75	2.053	
9,987.51	5,674.97	9,987.22	5,636.75	16.21	25.25	28.96	-4,333.12	256.61	43.68	19.54	24.14	1.810	
10,000.00	5,674.97	9,999.60	5,636.90	16.33	25.40	29.41	-4,345.50	256.52	43.70	19.19	24.50	1.783	
10,100.00	5,674.97	10,099.56	5,637.16	17.38	26.63	32.40	-4,445.45	255.72	44.78	17.50	27.28	1.642	
10,200.00	5,674.97	10,200.97	5,640.75	18.43	27.84	37.39	-4,546.79	255.34	43.08	11.88	31.20	1.381 Level 3	
10,300.00	5,674.97	10,300.72	5,645.12	19.51	29.06	42.91	-4,646.45	255.48	40.76	5.20	35.56	1.146 Level 2	
10,400.00	5,674.97	10,400.54	5,648.29	20.59	30.32	47.25	-4,746.21	256.12	39.29	-0.18	39.48	0.995 Level 1	
10,496.31	5,674.97	10,496.34	5,650.08	21.65	31.54	49.45	-4,841.98	257.56	38.28	-4.07	42.35	0.904 Level 1	
10,500.00	5,674.97	10,499.99	5,650.08	21.69	31.59	49.45	-4,845.63	257.62	38.28	-4.14	42.42	0.902 Level 1	
10,600.00	5,674.97	10,599.22	5,648.09	22.80	32.86	47.27	-4,944.82	259.34	39.62	-3.53	43.15	0.918 Level 1	
10,700.00	5,674.97	10,699.45	5,643.92	23.93	34.11	42.19	-5,044.92	262.05	41.90	-0.14	42.04	0.997 Level 1	
10,800.00	5,674.97	10,800.95	5,641.93	25.06	35.30	38.40	-5,146.33	265.77	42.16	0.82	41.34	1.020 Level 2	
10,900.00	5,674.97	10,900.37	5,642.94	26.20	36.48	37.47	-5,245.68	269.14	40.36	-1.97	42.32	0.954 Level 1	
10,910.55	5,674.97	10,910.78	5,642.89	26.33	36.61	37.33	-5,256.09	269.41	40.34	-2.05	42.39	0.952 Level 1	
11,000.00	5,674.97	10,999.36	5,640.98	27.36	37.73	34.63	-5,344.61	271.94	41.31	-0.61	41.92	0.985 Level 1	
11,100.00	5,674.97	11,098.73	5,637.66	28.52	38.96	32.53	-5,443.90	273.35	44.28	2.38	41.90	1.057 Level 2	
11,200.00	5,674.97	11,200.13	5,638.34	29.69	40.14	37.58	-5,545.24	270.73	46.21	-1.02	47.24	0.978 Level 1	
11,300.00	5,674.97	11,299.97	5,641.68	30.87	41.35	45.26	-5,644.97	267.06	47.29	-7.31	54.60	0.866 Level 1	
11,400.00	5,674.97	11,399.69	5,646.06	32.06	42.56	53.94	-5,744.49	262.69	49.13	-13.28	62.41	0.787 Level 1	
11,500.00	5,674.97	11,499.78	5,649.62	33.26	43.77	60.92	-5,844.43	258.57	52.15	-16.50	68.66	0.760 Level 1	
11,600.00	5,674.97	11,600.72	5,654.85	34.46	45.00	68.08	-5,945.20	255.90	53.90	-20.58	74.47	0.724 Level 1	
11,700.00	5,674.97	11,700.48	5,659.27	35.67	46.24	73.47	-6,044.85	254.75	55.17	-23.77	78.94	0.699 Level 1	
11,800.00	5,674.97	11,800.07	5,659.47	36.88	47.51	74.40	-6,144.43	253.88	57.63	-24.02	81.65	0.706 Level 1	
11,900.00	5,674.97	11,899.76	5,658.15	38.10	48.75	73.83	-6,244.10	253.11	60.42	-23.40	83.82	0.721 Level 1	
12,000.00	5,674.97	12,000.86	5,658.51	39.33	49.96	74.84	-6,345.19	252.15	62.92	-23.65	86.56	0.727 Level 1	
12,100.00	5,674.97	12,098.66	5,658.24	40.56	51.14	75.17	-6,442.99	251.42	65.41	-23.52	88.93	0.736 Level 1	
12,200.00	5,674.82	12,197.62	5,655.65	41.77	52.33	74.18	-6,541.86	248.24	70.46	-20.38	90.83	0.776 Level 1	
12,300.00	5,673.92	12,301.44	5,655.37	42.94	53.57	74.83	-6,645.65	246.86	70.80	-22.76	93.56	0.757 Level 1	
12,400.00	5,672.94	12,401.23	5,656.53	44.18	54.79	76.22	-6,745.43	247.34	68.88	-27.59	96.46	0.714 Level 1	
12,500.00	5,671.97	12,501.59	5,656.51	45.42	56.06	76.54	-6,845.78	248.71	66.40	-32.64	99.04	0.670 Level 1	
12,600.00	5,671.00	12,601.21	5,654.65	46.67	57.31	75.29	-6,945.38	250.04	64.39	-36.61	101.00	0.638 Level 1	
12,700.00	5,670.03	12,701.71	5,653.99	47.92	58.54	75.04	-7,045.86	251.39	62.09	-41.22	103.31	0.601 Level 1	
12,800.00	5,669.06	12,801.87	5,653.47	49.17	59.78	74.68	-7,145.99	253.52	59.00	-46.57	105.57	0.559 Level 1	
12,900.00	5,668.09	12,903.47	5,653.18	50.43	61.02	74.27	-7,247.54	256.60	54.98	-52.77	107.75	0.510 Level 1	
13,000.00	5,667.12	13,001.56	5,652.97	51.69	62.23	73.45	-7,345.52	260.89	49.67	-60.15	109.81	0.452 Level 1	
13,100.00	5,666.15	13,101.35	5,651.00	52.96	63.47	71.54	-7,445.29	262.16	47.84	-63.38	111.22	0.430 Level 1	
13,142.64	5,665.74	13,142.96	5,650.18	53.50	63.98	70.78	-7,486.89	262.51	47.25	-64.50	111.76	0.423 Level 1	
13,200.00	5,665.18	13,198.45	5,649.23	54.23	64.65	70.71	-7,542.34	260.98	48.37	-64.49	112.86	0.429 Level 1	
13,300.00	5,664.21	13,297.57	5,647.38	55.50	65.85	71.48	-7,641.29	255.30	53.19	-62.35	115.54	0.460 Level 1	
13,400.00	5,663.24	13,398.47	5,646.15	56.78	67.05	72.76	-7,742.01	249.55	57.77	-61.01	118.77	0.486 Level 1	
13,500.00	5,662.27	13,499.68	5,648.18	58.05	68.24	76.45	-7,843.10	245.18	60.23	-62.90	123.13	0.489 Level 1	
13,600.00	5,661.30	13,599.88	5,651.76	59.33	69.44	81.10	-7,943.18	241.81	61.70	-65.61	127.31	0.485 Level 1	
13,700.00	5,660.33	13,701.04	5,655.84	60.61	70.66	85.92	-8,044.21	238.88	63.08	-67.87	130.94	0.482 Level 1	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15804-BLIND												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
13,800.00	5,659.36	13,803.09	5,658.57	61.90	71.94	89.27	-8,146.22	240.00	60.86	-72.96	133.82	0.455	Level 1
13,900.00	5,658.39	13,903.51	5,660.15	63.19	73.24	91.80	-8,246.57	242.93	57.01	-79.34	136.35	0.418	Level 1
14,000.00	5,657.42	14,003.87	5,660.51	64.48	74.54	93.41	-8,346.87	246.51	52.55	-86.21	138.77	0.379	Level 1
14,100.00	5,656.45	14,102.60	5,660.84	65.77	75.78	95.21	-8,445.54	249.75	48.42	-92.65	141.08	0.343	Level 1
14,200.00	5,655.48	14,202.32	5,663.03	67.06	77.02	99.37	-8,545.23	251.15	46.49	-96.01	142.49	0.326	Level 1
14,300.00	5,654.51	14,302.34	5,664.04	68.36	78.30	102.34	-8,645.23	252.45	44.64	-99.20	143.83	0.310	Level 1
14,400.00	5,653.54	14,402.38	5,663.38	69.65	79.58	103.34	-8,745.26	253.54	42.71	-103.16	145.87	0.293	Level 1
14,500.00	5,652.57	14,502.31	5,660.40	70.95	80.85	101.09	-8,845.14	254.16	40.75	-108.70	149.45	0.273	Level 1
14,600.00	5,651.60	14,602.25	5,658.29	72.25	82.09	99.86	-8,945.06	254.64	39.12	-113.33	152.45	0.257	Level 1
14,700.00	5,650.63	14,702.30	5,656.25	73.56	83.33	98.72	-9,045.08	255.54	37.11	-118.27	155.39	0.239	Level 1
14,800.00	5,649.66	14,802.21	5,656.49	74.86	84.57	101.08	-9,144.99	256.32	35.61	-121.35	156.96	0.227	Level 1
14,900.00	5,648.69	14,902.64	5,656.19	76.17	85.86	103.00	-9,245.40	257.77	33.41	-125.15	158.55	0.211	Level 1
15,000.00	5,647.72	15,002.93	5,654.52	77.47	87.17	103.22	-9,345.65	260.32	29.84	-131.12	160.96	0.185	Level 1
15,100.00	5,646.75	15,103.06	5,651.46	78.78	88.48	100.73	-9,445.68	263.47	25.40	-139.37	164.76	0.154	Level 1
15,200.00	5,645.78	15,202.60	5,647.59	80.09	89.74	94.91	-9,545.10	266.29	21.24	-148.08	169.32	0.125	Level 1
15,273.08	5,645.07	15,275.06	5,645.36	81.05	90.62	90.84	-9,617.52	266.72	20.03	-151.59	171.62	0.117	Level 1, SF
15,300.00	5,644.81	15,301.73	5,644.46	81.40	90.94	89.01	-9,644.18	266.30	20.20	-152.02	172.22	0.117	Level 1, ES
15,400.00	5,643.84	15,401.82	5,640.29	82.72	92.20	80.47	-9,744.16	264.40	21.43	-151.27	172.70	0.124	Level 1
15,500.00	5,642.87	15,501.95	5,637.05	84.03	93.44	74.79	-9,844.22	263.18	22.17	-149.82	171.99	0.129	Level 1
15,600.00	5,641.90	15,601.58	5,633.90	85.34	94.66	70.14	-9,943.79	261.47	23.56	-147.02	170.58	0.138	Level 1
15,700.00	5,640.92	15,701.08	5,628.53	86.66	95.92	62.27	-10,043.11	259.07	26.69	-137.57	164.26	0.162	Level 1
15,795.29	5,640.00	15,795.83	5,620.88	87.90	110.96	52.95	-10,137.52	256.42	31.83	-132.58	164.40	0.194	Level 1

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15992-BLIND												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
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	29.97	29.97				
100.00	100.00	99.59	99.59	0.18	0.18	61.26	-0.31	30.63	30.21	29.95	0.26	116.751 ES	
200.00	199.97	199.18	199.15	0.43	0.42	74.10	-1.13	32.55	31.32	30.51	0.81	38.829	
300.00	299.93	298.21	298.11	0.71	0.72	67.25	-1.52	36.30	34.27	32.75	1.52	22.609	
400.00	399.88	397.30	396.95	0.99	1.04	66.33	-0.34	43.08	39.46	37.28	2.18	18.127	
500.00	499.79	495.88	495.07	1.27	1.36	70.85	1.93	52.33	46.73	43.86	2.88	16.250	
600.00	599.57	595.64	594.08	1.58	1.68	56.26	6.88	63.47	53.74	50.32	3.43	15.687	
700.00	699.29	693.76	691.04	1.89	2.00	52.26	14.23	76.48	61.32	57.17	4.15	14.788	
800.00	798.84	793.73	789.67	2.20	2.32	54.21	22.15	90.82	69.22	64.53	4.68	14.774	
900.00	898.37	894.36	889.09	2.50	2.63	53.87	29.86	104.28	76.26	71.07	5.19	14.701	
1,000.00	997.96	994.66	988.32	2.80	2.95	51.13	37.59	116.68	82.68	76.95	5.73	14.425	
1,100.00	1,097.58	1,094.36	1,086.90	3.10	3.28	48.15	46.15	128.84	88.82	82.50	6.32	14.060	
1,200.00	1,197.22	1,194.25	1,185.69	3.41	3.62	45.72	54.39	141.13	95.23	88.33	6.90	13.803	
1,300.00	1,296.86	1,294.08	1,284.45	3.72	3.96	41.95	62.62	153.18	101.26	93.77	7.49	13.523	
1,400.00	1,396.43	1,392.92	1,382.18	4.03	4.30	41.69	70.78	165.50	107.10	99.00	8.10	13.216	
1,500.00	1,495.89	1,492.84	1,480.89	4.35	4.64	36.11	79.10	178.62	112.51	103.81	8.70	12.925	
1,600.00	1,595.30	1,592.43	1,579.27	4.67	4.99	36.68	87.46	191.61	117.33	108.02	9.31	12.606	
1,700.00	1,694.68	1,692.07	1,677.66	5.00	5.34	36.41	95.79	204.91	122.21	112.29	9.92	12.321	
1,800.00	1,794.10	1,793.37	1,777.78	5.31	5.68	38.39	103.86	218.02	127.18	116.67	10.51	12.104	
1,900.00	1,893.61	1,895.71	1,879.17	5.62	6.02	40.28	111.52	229.66	131.51	120.42	11.08	11.865	
2,000.00	1,993.15	1,997.29	1,980.02	5.93	6.35	37.43	118.46	239.56	134.25	122.58	11.67	11.504	
2,100.00	2,092.74	2,097.20	2,079.28	6.24	6.67	30.25	125.05	248.89	136.61	124.34	12.27	11.138	
2,200.00	2,192.37	2,198.64	2,180.08	6.55	6.99	29.99	132.09	257.92	138.60	125.75	12.85	10.786	
2,300.00	2,292.00	2,299.55	2,280.39	6.86	7.31	27.93	139.66	265.81	139.60	126.17	13.43	10.393	
2,400.00	2,391.66	2,391.58	2,371.56	7.16	7.62	30.06	148.07	274.93	143.38	129.36	14.02	10.229	
2,500.00	2,491.33	2,492.06	2,470.60	7.47	7.97	31.73	159.49	287.51	150.60	136.01	14.60	10.318	
2,600.00	2,591.05	2,590.19	2,567.37	7.77	8.32	78.16	170.17	299.75	160.79	145.61	15.18	10.589	
2,700.00	2,690.74	2,689.66	2,665.46	8.07	8.67	80.71	180.65	312.52	174.02	158.23	15.79	11.019	
2,800.00	2,790.42	2,787.91	2,762.52	8.37	9.01	75.06	187.59	325.94	187.55	171.15	16.40	11.434	
2,900.00	2,889.89	2,887.79	2,861.28	8.68	9.35	49.54	192.23	340.11	196.79	179.76	17.03	11.556	
3,000.00	2,989.22	2,988.29	2,960.71	9.00	9.69	53.79	197.06	353.96	204.01	186.35	17.67	11.547	
3,100.00	3,088.61	3,089.12	3,060.52	9.32	10.03	53.94	202.06	367.34	211.35	193.04	18.31	11.542	
3,200.00	3,188.04	3,187.84	3,158.29	9.63	10.37	52.17	207.46	379.85	217.91	198.98	18.94	11.508	
3,300.00	3,287.64	3,284.03	3,253.25	9.94	10.70	53.75	213.96	393.75	227.45	207.92	19.53	11.645	
3,400.00	3,387.33	3,385.53	3,353.41	10.25	11.06	52.63	221.78	408.21	237.51	217.35	20.15	11.786	
3,500.00	3,486.97	3,486.34	3,452.96	10.56	11.42	49.61	230.00	421.80	246.29	225.52	20.77	11.859	
3,600.00	3,586.21	3,586.21	3,551.57	10.88	11.78	49.62	238.60	435.02	252.05	230.65	21.40	11.778	
3,700.00	3,685.38	3,685.80	3,649.88	11.21	12.13	50.87	247.60	448.25	257.66	235.62	22.03	11.694	
3,800.00	3,784.57	3,780.33	3,743.10	11.54	12.46	50.47	255.97	461.46	264.14	241.51	22.63	11.672	
3,900.00	3,883.82	3,880.27	3,841.38	11.86	12.82	53.04	264.73	477.30	272.78	249.51	23.27	11.725	
4,000.00	3,983.16	3,984.54	3,944.15	12.18	13.19	50.89	274.19	492.26	280.55	256.63	23.93	11.725	
4,100.00	4,082.56	4,083.31	4,041.64	12.50	13.54	48.71	282.44	505.70	287.46	262.92	24.54	11.712	
4,200.00	4,182.00	4,182.80	4,139.89	12.82	13.88	49.12	289.26	519.80	294.89	269.72	25.17	11.717	
4,300.00	4,281.46	4,284.62	4,240.49	13.14	14.24	48.86	296.23	533.84	302.17	276.36	25.81	11.709	
4,400.00	4,380.91	4,386.63	4,341.39	13.46	14.59	49.04	303.33	547.11	308.50	282.05	26.45	11.665	
4,500.00	4,480.53	4,489.13	4,442.82	13.77	14.95	29.12	311.05	559.65	314.62	287.56	27.07	11.624	
4,600.00	4,580.36	4,603.46	4,556.40	14.07	15.32	36.69	317.59	570.71	319.48	291.78	27.70	11.535	
4,700.00	4,680.23	4,712.50	4,665.22	14.36	15.64	37.41	320.59	576.97	321.27	292.98	28.29	11.356	
4,800.00	4,780.18	4,812.59	4,765.19	14.65	15.93	-44.47	322.76	581.37	322.97	294.12	28.85	11.195	
4,900.00	4,880.15	4,910.54	4,863.01	14.93	16.20	-35.79	323.49	586.35	326.16	296.77	29.39	11.096	
5,000.00	4,980.12	5,018.70	4,971.05	15.20	16.50	-54.25	323.79	591.32	329.05	299.12	29.93	10.994	
5,100.00	5,079.15	5,125.32	5,077.65	15.46	16.78	-68.99	322.14	592.48	323.94	293.58	30.37	10.668	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15992-BLIND												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	5,174.51	5,234.77	5,186.94	15.68	17.05	-87.77	317.06	592.00	316.82	286.25	30.58	10.362	
5,263.11	5,229.86	5,303.91	5,255.35	15.78	17.19	-98.41	307.52	589.62	314.72	284.18	30.55	10.303	
5,300.00	5,259.43	5,343.26	5,293.88	15.84	17.27	-103.32	299.72	587.79	315.89	285.41	30.48	10.364	
5,400.00	5,328.81	5,460.66	5,403.92	15.95	17.45	-113.30	260.17	581.99	325.41	295.58	29.82	10.911	
5,500.00	5,395.35	5,600.77	5,515.27	16.03	17.60	-117.98	176.30	576.42	328.89	300.27	28.62	11.493	
5,600.00	5,459.06	5,736.91	5,597.61	16.13	17.68	-120.00	68.33	572.80	325.34	297.22	28.12	11.568	
5,669.09	5,501.08	5,808.70	5,633.50	16.23	17.71	-120.39	6.19	571.25	323.24	294.50	28.75	11.244	
5,700.00	5,519.47	5,836.71	5,646.79	16.30	17.73	-120.25	-18.46	570.96	324.50	295.30	29.20	11.114	
5,800.00	5,573.12	5,922.47	5,687.36	16.58	17.80	-117.83	-93.99	572.85	333.13	302.60	30.53	10.913	
5,900.00	5,618.70	6,028.74	5,733.02	16.91	17.98	-114.15	-189.76	578.37	344.77	313.39	31.39	10.985	
6,000.00	5,652.20	6,160.62	5,775.93	17.32	18.41	-111.43	-314.15	584.89	350.81	318.89	31.93	10.988	
6,100.00	5,677.23	6,313.54	5,793.36	17.82	19.11	-108.88	-465.44	580.14	340.46	307.55	32.91	10.345	
6,187.65	5,688.12	6,387.00	5,792.75	18.33	19.48	-108.17	-538.86	579.30	334.84	300.57	34.27	9.771	
6,200.00	5,689.12	6,387.00	5,792.75	18.40	19.48	-108.07	-538.86	579.30	334.61	300.12	34.49	9.701	
6,300.00	5,687.78	6,484.25	5,790.15	19.04	20.05	-107.62	-636.00	583.09	337.41	301.63	35.78	9.431	
6,400.00	5,685.01	6,581.76	5,787.57	19.69	20.65	-107.52	-733.36	587.98	340.21	303.22	37.00	9.195	
6,500.00	5,682.73	6,684.84	5,787.61	20.34	21.27	-107.71	-836.34	592.22	344.13	306.04	38.08	9.036	
6,600.00	5,679.89	6,793.68	5,788.80	21.09	22.01	-108.21	-945.15	594.33	347.81	308.56	39.25	8.861	
6,700.00	5,677.39	6,899.31	5,788.91	21.88	22.81	-108.48	-1,050.78	593.74	350.90	310.27	40.63	8.637	
6,800.00	5,672.93	6,997.64	5,788.40	22.69	23.59	-108.77	-1,149.10	593.37	356.61	314.51	42.10	8.470	
6,900.00	5,669.07	7,095.53	5,788.03	23.49	24.38	-109.18	-1,246.99	593.18	361.56	317.98	43.59	8.295	
7,000.00	5,669.23	7,194.87	5,787.38	24.29	25.23	-108.83	-1,346.33	593.87	367.28	321.94	45.33	8.101	
7,100.00	5,669.91	7,304.28	5,785.66	25.20	26.22	-108.17	-1,455.72	593.62	371.41	324.22	47.19	7.871	
7,200.00	5,669.49	7,409.74	5,781.22	26.18	27.24	-107.51	-1,561.06	591.41	371.68	322.45	49.23	7.549	
7,300.00	5,667.48	7,506.68	5,776.07	27.22	28.18	-107.17	-1,657.85	589.49	369.04	317.68	51.36	7.186	
7,400.00	5,664.49	7,605.68	5,770.29	28.24	29.17	-106.86	-1,756.67	588.43	366.18	312.73	53.45	6.851	
7,500.00	5,662.33	7,707.70	5,764.67	29.24	30.18	-106.54	-1,858.52	587.03	361.72	306.24	55.48	6.520	
7,600.00	5,659.29	7,810.54	5,759.25	30.30	31.21	-106.49	-1,961.19	584.66	355.80	298.32	57.48	6.190	
7,700.00	5,654.96	7,907.35	5,754.29	31.36	32.18	-106.46	-2,057.85	582.60	352.01	292.49	59.52	5.914	
7,800.00	5,649.64	8,010.37	5,748.51	32.40	33.23	-106.48	-2,160.68	580.33	350.40	288.93	61.48	5.700	
7,900.00	5,645.08	8,108.76	5,742.62	32.77	34.24	-106.32	-2,258.87	578.09	348.24	285.33	62.91	5.536	
8,000.00	5,643.95	8,204.36	5,738.61	33.19	35.18	-105.90	-2,354.37	576.28	345.38	280.90	64.48	5.356	
8,100.00	5,646.24	8,299.55	5,736.92	33.66	36.16	-105.30	-2,449.53	575.28	342.44	276.24	66.20	5.173	
8,200.00	5,651.93	8,398.57	5,734.36	34.18	37.25	-103.96	-2,548.52	575.31	338.92	270.71	68.20	4.969	
8,300.00	5,658.91	8,497.39	5,729.17	34.67	38.37	-102.01	-2,647.20	575.67	334.81	264.41	70.40	4.756	
8,400.00	5,665.88	8,590.73	5,726.42	35.21	39.39	-100.47	-2,740.49	576.75	332.30	259.78	72.52	4.582	
8,452.43	5,669.20	8,639.34	5,726.22	35.52	39.91	-99.91	-2,789.08	577.85	331.93	258.37	73.57	4.512	
8,500.00	5,672.01	8,685.69	5,726.52	35.80	40.42	-99.47	-2,835.41	579.18	332.04	257.56	74.49	4.458	
8,600.00	5,674.81	8,784.87	5,726.42	36.43	41.57	-98.92	-2,934.54	582.40	333.07	256.67	76.40	4.360	
8,700.00	5,674.97	8,885.92	5,724.03	37.10	42.75	-98.43	-3,035.49	586.07	334.55	256.22	78.33	4.271	
8,800.00	5,674.97	8,990.61	5,722.33	37.80	43.94	-98.12	-3,140.13	588.87	335.24	255.05	80.19	4.181	
8,900.00	5,674.97	9,101.12	5,719.62	38.55	45.20	-97.69	-3,250.60	589.47	333.73	251.71	82.02	4.069	
9,000.00	5,674.97	9,208.88	5,717.91	39.33	46.40	-97.51	-3,358.30	586.60	329.15	245.36	83.79	3.928	
9,100.00	5,674.97	9,309.87	5,717.57	40.14	47.55	-97.59	-3,459.20	582.43	323.28	237.58	85.70	3.772	
9,200.00	5,674.97	9,411.05	5,714.93	40.98	48.75	-97.26	-3,560.26	578.12	316.99	229.22	87.77	3.612	
9,300.00	5,674.97	9,507.11	5,711.19	41.84	49.87	-96.69	-3,656.17	574.64	311.18	221.17	90.02	3.457	
9,400.00	5,674.97	9,604.24	5,710.70	42.74	50.96	-96.70	-3,753.25	571.79	306.48	214.37	92.10	3.328	
9,500.00	5,674.97	9,703.31	5,711.07	43.66	52.10	-96.87	-3,852.29	569.19	302.18	208.01	94.17	3.209	
9,600.00	5,674.97	9,796.81	5,712.04	44.60	53.20	-97.12	-3,945.77	567.68	299.00	202.64	96.36	3.103	
9,641.09	5,674.97	9,832.27	5,712.79	45.00	53.61	-97.28	-3,981.22	567.87	298.61	201.33	97.28	3.070	
9,700.00	5,674.97	9,884.05	5,714.10	45.57	54.21	-97.51	-4,032.96	569.30	299.39	200.85	98.54	3.038	
9,800.00	5,674.97	9,981.33	5,716.36	46.55	55.39	-97.87	-4,130.12	573.61	302.36	201.71	100.65	3.004	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15992-BLIND												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	
9,900.00	5,674.97	10,083.87	5,718.62	47.56	56.62	-98.23	-4,232.55	577.85	305.03	202.29	102.74	2.969	
10,000.00	5,674.97	10,184.52	5,720.36	48.58	57.84	-98.48	-4,333.09	582.21	307.84	202.96	104.89	2.935	
10,100.00	5,674.97	10,295.71	5,722.85	49.62	59.16	-98.94	-4,444.22	584.03	308.05	201.20	106.86	2.883	
10,200.00	5,674.97	10,402.65	5,724.98	50.67	60.43	-99.43	-4,551.13	582.73	305.44	196.64	108.80	2.807	
10,300.00	5,674.97	10,498.77	5,724.49	51.75	61.58	-99.45	-4,647.23	580.95	301.83	190.70	111.14	2.716	
10,371.30	5,674.97	10,562.85	5,724.54	52.52	62.35	-99.48	-4,711.31	581.24	300.94	188.08	112.86	2.667	
10,400.00	5,674.97	10,588.36	5,724.62	52.83	62.66	-99.49	-4,736.81	581.81	301.10	187.56	113.54	2.652	
10,500.00	5,674.97	10,688.19	5,725.59	53.93	63.85	-99.62	-4,836.57	585.33	303.01	187.24	115.77	2.617	
10,600.00	5,674.97	10,790.32	5,729.31	55.04	65.06	-100.32	-4,938.62	586.89	303.42	185.65	117.77	2.576	
10,700.00	5,674.97	10,889.27	5,734.55	56.16	66.24	-101.30	-5,037.42	588.26	304.06	184.36	119.70	2.540	
10,800.00	5,674.97	10,995.30	5,738.47	57.29	67.55	-102.05	-5,143.37	589.37	304.14	182.49	121.66	2.500	
10,900.00	5,674.97	11,099.93	5,738.88	58.44	68.83	-102.22	-5,247.98	588.95	302.12	178.29	123.84	2.440	
11,000.00	5,674.97	11,195.86	5,737.80	59.59	70.00	-102.08	-5,343.91	588.95	300.18	173.88	126.30	2.377	
11,100.00	5,674.97	11,294.08	5,736.60	60.75	71.19	-101.89	-5,442.11	589.96	299.22	170.47	128.76	2.324	
11,200.00	5,674.97	11,393.98	5,736.10	61.92	72.40	-101.82	-5,542.01	591.07	298.50	167.36	131.13	2.276	
11,297.24	5,674.97	11,489.18	5,736.03	63.07	73.56	-101.82	-5,637.19	592.26	298.01	164.56	133.45	2.233	
11,300.00	5,674.97	11,491.80	5,736.05	63.10	73.59	-101.83	-5,639.82	592.30	298.01	164.50	133.51	2.232	
11,400.00	5,674.97	11,587.24	5,738.08	64.29	74.74	-102.19	-5,735.21	594.38	298.87	163.13	135.74	2.202	
11,500.00	5,674.97	11,687.67	5,742.50	65.48	75.95	-102.98	-5,835.50	597.12	300.80	163.09	137.70	2.184	
11,600.00	5,674.97	11,794.33	5,744.97	66.68	77.27	-103.44	-5,942.12	598.84	301.20	161.42	139.78	2.155	
11,700.00	5,674.97	11,896.63	5,744.74	67.89	78.54	-103.46	-6,044.41	599.26	299.85	157.71	142.14	2.110	
11,800.00	5,674.97	12,001.04	5,742.88	69.10	79.82	-103.19	-6,148.80	599.25	297.74	153.16	144.58	2.059	
11,900.00	5,674.97	12,099.00	5,742.28	70.32	81.00	-103.19	-6,246.76	598.49	295.14	148.14	147.00	2.008	
12,000.00	5,674.97	12,194.18	5,742.19	71.55	82.16	-103.23	-6,341.93	598.86	293.79	144.33	149.46	1.966	
12,100.00	5,674.97	12,294.07	5,742.56	72.78	83.38	-103.32	-6,441.81	600.02	293.31	141.50	151.81	1.932	
12,200.00	5,674.82	12,401.82	5,742.46	73.99	84.69	-103.42	-6,549.56	599.59	291.61	137.64	153.97	1.894	
12,300.00	5,673.92	12,504.52	5,741.84	75.15	85.94	-103.54	-6,652.24	597.38	290.34	134.19	156.15	1.859	
12,400.00	5,672.94	12,605.83	5,740.07	76.39	87.20	-103.45	-6,753.50	595.03	288.84	130.25	158.59	1.821	
12,500.00	5,671.97	12,701.38	5,737.92	77.63	88.38	-103.27	-6,849.00	592.90	287.33	126.06	161.27	1.782	
12,509.07	5,671.89	12,709.65	5,737.88	77.75	88.48	-103.28	-6,857.27	592.80	287.31	125.81	161.50	1.779	
12,600.00	5,671.00	12,798.08	5,738.55	78.88	89.57	-103.56	-6,945.69	592.29	288.00	124.41	163.59	1.761	
12,700.00	5,670.03	12,897.78	5,738.62	80.13	90.81	-103.73	-7,045.39	592.00	288.90	122.97	165.93	1.741	
12,800.00	5,669.06	12,999.86	5,737.42	81.38	92.07	-103.65	-7,147.46	591.83	289.62	121.25	168.37	1.720	
12,900.00	5,668.09	13,101.40	5,738.22	82.64	93.27	-104.02	-7,248.99	590.39	289.59	119.11	170.48	1.699	
13,000.00	5,667.12	13,203.46	5,739.91	83.90	94.49	-104.60	-7,351.01	588.05	288.94	116.53	172.41	1.676	
13,100.00	5,666.15	13,303.45	5,742.05	85.17	95.68	-105.29	-7,450.93	585.24	287.96	113.64	174.31	1.652	
13,200.00	5,665.18	13,402.58	5,743.44	86.44	96.90	-105.82	-7,550.03	582.87	287.21	110.85	176.36	1.629	
13,300.00	5,664.21	13,502.62	5,743.07	87.71	98.16	-105.98	-7,650.05	581.09	286.58	107.89	178.69	1.604	
13,400.00	5,663.24	13,611.78	5,740.09	88.98	99.53	-105.67	-7,759.14	578.98	285.23	104.19	181.04	1.576	
13,500.00	5,662.27	13,714.92	5,735.01	90.26	100.79	-105.12	-7,861.99	573.38	279.84	96.10	183.73	1.523	
13,600.00	5,661.30	13,809.32	5,733.86	91.53	101.93	-105.28	-7,956.26	568.62	275.83	89.52	186.31	1.481 Level 3	
13,686.55	5,660.46	13,887.65	5,732.95	92.64	102.88	-105.32	-8,034.56	566.54	274.38	85.71	188.67	1.454 Level 3	
13,700.00	5,660.33	13,899.60	5,732.92	92.82	103.03	-105.34	-8,046.51	566.43	274.42	85.39	189.02	1.452 Level 3	
13,800.00	5,659.36	13,992.42	5,733.68	94.10	104.17	-105.58	-8,139.31	567.10	276.49	85.13	191.36	1.445 Level 3	
13,900.00	5,658.39	14,089.19	5,734.99	95.39	105.37	-105.85	-8,236.05	569.40	280.33	86.74	193.59	1.448 Level 3	
14,000.00	5,657.42	14,191.25	5,735.10	96.67	106.66	-105.84	-8,338.06	572.43	284.40	88.33	196.07	1.451 Level 3	
14,100.00	5,656.45	14,293.09	5,734.01	97.96	107.95	-105.64	-8,439.86	574.85	287.58	88.86	198.71	1.447 Level 3	
14,200.00	5,655.48	14,391.19	5,731.98	99.26	109.20	-105.25	-8,537.91	577.42	290.73	89.19	201.54	1.443 Level 3	
14,300.00	5,654.51	14,486.96	5,728.78	100.55	110.43	-104.57	-8,633.55	581.46	295.12	90.52	204.59	1.442 Level 3	
14,400.00	5,653.54	14,591.60	5,726.68	101.85	111.73	-104.13	-8,738.08	585.28	299.33	91.90	207.43	1.443 Level 3	
14,500.00	5,652.57	14,694.13	5,724.60	103.15	113.00	-103.79	-8,840.57	587.34	301.95	91.77	210.18	1.437 Level 3	
14,600.00	5,651.60	14,791.72	5,721.51	104.45	114.23	-103.24	-8,938.08	589.92	304.93	91.81	213.12	1.431 Level 3	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 8-T10N-R57W - Horsetail #08B-1712 - Original Hole - Original Hole												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 15992-BLIND												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
14,700.00	5,650.63	14,892.40	5,720.27	105.75	115.48	-103.04	-9,038.71	592.52	308.32	92.56	215.76	1.429	Level 3
14,800.00	5,649.66	14,993.46	5,718.48	107.05	116.74	-102.77	-9,139.74	594.64	311.11	92.64	218.47	1.424	Level 3
14,900.00	5,648.69	15,094.15	5,715.20	108.36	118.00	-102.23	-9,240.35	596.93	313.78	92.39	221.39	1.417	Level 3
15,000.00	5,647.72	15,193.84	5,712.05	109.66	119.25	-101.73	-9,339.97	599.01	316.30	92.03	224.27	1.410	Level 3
15,100.00	5,646.75	15,290.92	5,708.28	110.97	120.47	-101.10	-9,436.93	601.66	319.33	92.09	227.25	1.405	Level 3
15,200.00	5,645.78	15,388.30	5,706.46	112.28	121.66	-100.81	-9,534.24	604.82	323.29	93.36	229.93	1.406	Level 3
15,300.00	5,644.81	15,490.64	5,706.19	113.59	122.93	-100.80	-9,636.53	607.91	327.33	94.87	232.46	1.408	Level 3
15,400.00	5,643.84	15,594.95	5,705.03	114.90	124.24	-100.68	-9,740.82	609.74	329.95	94.88	235.07	1.404	Level 3
15,500.00	5,642.87	15,691.50	5,703.19	116.22	125.45	-100.43	-9,837.32	611.84	332.86	95.08	237.78	1.400	Level 3
15,600.00	5,641.90	15,791.63	5,701.30	117.53	126.70	-100.16	-9,937.40	614.46	336.21	95.72	240.48	1.398	Level 3
15,700.00	5,640.92	15,887.83	5,697.80	118.85	127.91	-99.63	-10,033.49	617.29	339.61	96.24	243.37	1.395	Level 3
15,795.29	5,640.00	15,978.37	5,692.42	120.08	145.57	-98.73	-10,123.75	622.12	344.76	82.11	262.66	1.313	Level 3, SF

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 190-MWD+IFR1+MS+sag, 15991-BLIND												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
0.00	0.00	0.00	0.00	0.00	0.00	-30.63	50.60	-29.97	58.81				
100.00	100.00	98.98	98.97	0.18	0.21	-61.65	51.55	-30.05	59.27	58.99	0.28	209.176	
200.00	199.97	197.83	197.78	0.43	0.42	-54.54	54.41	-30.29	60.70	59.97	0.73	82.987	
300.00	299.93	296.14	295.94	0.71	0.68	-65.95	59.73	-31.12	64.25	62.82	1.44	44.694	
400.00	399.88	395.75	395.31	0.99	0.96	-68.09	66.29	-32.96	69.65	67.66	1.99	34.981	
500.00	499.79	495.65	495.00	1.27	1.22	-65.44	72.22	-35.78	74.42	71.88	2.54	29.354	
600.00	599.57	595.72	594.87	1.58	1.50	-82.18	78.06	-38.30	78.95	75.85	3.10	25.455	
700.00	699.29	695.11	694.06	1.89	1.80	-86.71	83.86	-40.65	84.30	80.60	3.70	22.760	
800.00	798.84	793.34	792.03	2.20	2.10	-88.20	89.79	-44.47	90.84	86.50	4.34	20.951	
900.00	898.37	893.15	891.58	2.50	2.40	-92.83	95.55	-49.06	98.19	93.28	4.91	20.013	
1,000.00	997.96	993.07	991.26	2.80	2.69	-98.83	100.59	-53.56	105.64	100.16	5.48	19.292	
1,100.00	1,097.58	1,092.71	1,090.70	3.10	2.99	-103.67	105.19	-57.98	113.64	107.58	6.06	18.750	
1,200.00	1,197.22	1,192.16	1,189.95	3.41	3.28	-107.80	109.71	-62.31	121.90	115.25	6.65	18.324	
1,300.00	1,296.86	1,291.67	1,289.26	3.72	3.58	-112.85	114.14	-66.74	130.79	123.54	7.25	18.045	
1,400.00	1,396.43	1,390.60	1,387.99	4.03	3.88	-114.38	118.82	-71.04	140.38	132.53	7.85	17.882	
1,500.00	1,495.89	1,490.93	1,488.10	4.35	4.18	-121.70	123.96	-75.27	150.99	142.54	8.45	17.859	
1,600.00	1,595.30	1,589.88	1,586.85	4.67	4.48	-122.40	129.05	-78.92	161.86	152.80	9.06	17.866	
1,700.00	1,694.68	1,689.01	1,685.75	5.00	4.79	-123.91	134.70	-82.64	173.23	163.56	9.67	17.917	
1,800.00	1,794.10	1,788.88	1,785.39	5.31	5.09	-123.01	140.54	-86.21	184.16	173.89	10.27	17.935	
1,900.00	1,893.61	1,889.58	1,885.86	5.62	5.39	-122.13	146.45	-89.32	193.77	182.91	10.87	17.833	
2,000.00	1,993.15	1,990.13	1,986.24	5.93	5.70	-125.94	151.66	-91.86	202.78	191.32	11.47	17.685	
2,100.00	2,092.74	2,088.98	2,084.98	6.24	5.99	-133.88	155.52	-94.60	212.06	200.00	12.06	17.588	
2,200.00	2,192.37	2,189.58	2,185.49	6.55	6.29	-134.20	158.73	-97.58	221.63	208.98	12.65	17.517	
2,300.00	2,292.00	2,286.46	2,282.22	6.86	6.58	-135.83	163.15	-100.21	231.20	217.96	13.24	17.467	
2,400.00	2,391.66	2,384.87	2,380.32	7.16	6.88	-132.04	170.31	-103.54	241.53	227.70	13.83	17.467	
2,500.00	2,491.33	2,485.52	2,480.65	7.47	7.18	-128.25	177.52	-106.89	251.28	236.85	14.43	17.412	
2,600.00	2,591.05	2,583.65	2,578.49	7.77	7.48	-80.79	184.30	-110.21	257.59	242.57	15.02	17.148	
2,700.00	2,690.74	2,681.00	2,675.54	8.07	7.78	-78.70	190.19	-114.93	261.96	246.35	15.61	16.784	
2,800.00	2,790.42	2,776.00	2,770.22	8.37	8.07	-86.18	195.10	-121.06	267.61	251.43	16.18	16.541	
2,900.00	2,889.89	2,877.88	2,871.76	8.68	8.39	-114.57	200.28	-127.60	277.48	260.67	16.80	16.515	
3,000.00	2,989.22	2,978.28	2,971.89	9.00	8.69	-113.43	204.87	-133.39	288.40	270.98	17.42	16.559	
3,100.00	3,088.61	3,078.06	3,071.42	9.32	9.00	-116.13	208.84	-138.98	298.89	280.87	18.02	16.584	
3,200.00	3,188.04	3,180.38	3,173.54	9.63	9.30	-120.18	212.71	-144.12	309.36	290.72	18.64	16.596	
3,300.00	3,287.64	3,282.80	3,275.83	9.94	9.61	-119.92	216.21	-148.09	317.86	298.60	19.25	16.509	
3,400.00	3,387.33	3,383.48	3,376.40	10.25	9.91	-121.63	219.34	-151.60	325.47	305.61	19.86	16.392	
3,500.00	3,486.97	3,479.42	3,472.22	10.56	10.20	-124.86	222.76	-154.79	333.51	313.07	20.43	16.321	
3,600.00	3,586.21	3,572.18	3,564.73	10.88	10.48	-125.83	227.30	-159.96	346.34	325.35	21.00	16.495	
3,700.00	3,685.38	3,672.29	3,664.53	11.21	10.79	-125.89	231.94	-166.17	360.12	338.51	21.61	16.665	
3,800.00	3,784.57	3,775.50	3,767.50	11.54	11.10	-127.60	236.58	-171.57	372.88	350.63	22.24	16.765	
3,900.00	3,883.82	3,874.73	3,866.52	11.86	11.40	-126.13	241.22	-176.03	384.69	361.84	22.85	16.838	
4,000.00	3,983.16	3,978.13	3,969.69	12.18	11.71	-129.14	246.26	-180.61	395.87	372.39	23.47	16.865	
4,100.00	4,082.56	4,081.41	4,072.82	12.50	12.03	-132.02	250.84	-183.73	405.79	381.70	24.10	16.839	
4,200.00	4,182.00	4,177.52	4,168.81	12.82	12.31	-132.42	254.82	-186.38	415.50	390.81	24.68	16.833	
4,300.00	4,281.46	4,275.69	4,266.84	13.14	12.61	-133.42	258.61	-190.18	426.12	400.84	25.27	16.859	
4,400.00	4,380.91	4,375.32	4,366.36	13.46	12.91	-134.05	261.60	-193.69	436.66	410.79	25.87	16.878	
4,500.00	4,480.53	4,468.05	4,459.01	13.77	13.18	-154.64	262.63	-197.39	447.22	420.80	26.42	16.929	
4,600.00	4,580.36	4,562.09	4,552.88	14.07	13.46	-146.63	264.05	-202.76	457.93	430.97	26.96	16.986	
4,700.00	4,680.23	4,660.98	4,651.49	14.36	13.76	-145.88	267.72	-209.24	468.28	440.74	27.54	17.003	
4,800.00	4,780.18	4,760.91	4,751.19	14.65	14.06	-132.68	270.23	-215.57	477.14	449.01	28.13	16.964	
4,900.00	4,880.15	4,865.36	4,855.43	14.93	14.37	-142.34	272.65	-221.71	484.68	455.94	28.74	16.867	
5,000.00	4,980.12	4,964.63	4,954.50	15.20	14.67	-124.63	275.78	-227.00	491.50	462.19	29.31	16.772	
5,100.00	5,079.15	5,077.57	5,067.32	15.46	15.01	-113.11	278.40	-231.32	501.34	471.40	29.94	16.745	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 190-MWD+IFR1+MS+sag, 15991-BLIND												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	5,174.51	5,173.09	5,162.80	15.68	15.29	101.88	280.00	-233.55	512.95	482.52	30.44	16.853	
5,300.00	5,259.43	5,265.85	5,255.21	15.84	15.55	96.97	273.20	-235.74	523.72	492.88	30.85	16.977	
5,400.00	5,328.81	5,377.46	5,362.28	15.95	15.82	100.61	242.81	-238.34	535.45	504.30	31.15	17.190	
5,500.00	5,395.35	5,512.37	5,480.38	16.03	16.09	105.54	178.07	-236.93	543.60	512.38	31.22	17.410	
5,600.00	5,459.06	5,611.66	5,559.17	16.13	16.27	105.04	117.81	-236.10	548.03	516.57	31.46	17.419	
5,700.00	5,519.47	5,701.03	5,622.79	16.30	16.42	103.47	55.19	-239.55	548.37	516.51	31.86	17.214	
5,800.00	5,573.12	5,806.25	5,692.82	16.58	16.63	105.40	-23.02	-246.62	549.40	517.20	32.19	17.065	
5,900.00	5,618.70	5,950.22	5,786.90	16.91	17.12	110.31	-131.85	-250.21	552.18	519.93	32.25	17.124	
6,000.00	5,652.20	6,141.12	5,869.96	17.32	17.95	113.95	-302.24	-247.98	553.87	521.47	32.41	17.091	
6,100.00	5,677.23	6,280.09	5,884.56	17.82	18.66	112.02	-440.04	-248.91	550.08	516.31	33.78	16.286	
6,200.00	5,689.12	6,391.93	5,881.70	18.40	19.25	110.62	-551.82	-250.50	546.82	511.63	35.19	15.538	
6,300.00	5,687.78	6,500.91	5,879.19	19.04	19.88	110.54	-660.77	-249.35	545.97	509.56	36.41	14.995	
6,313.53	5,687.39	6,513.56	5,878.91	19.13	19.96	110.55	-673.41	-249.15	545.94	509.38	36.56	14.932	
6,400.00	5,685.01	6,594.48	5,878.08	19.69	20.43	110.63	-754.32	-248.04	547.19	509.67	37.52	14.584	
6,500.00	5,682.73	6,691.18	5,879.50	20.34	21.00	111.06	-851.00	-246.81	548.03	509.44	38.59	14.200	
6,600.00	5,679.89	6,797.00	5,882.61	21.09	21.75	111.78	-956.74	-244.30	547.33	507.47	39.85	13.734	
6,700.00	5,677.39	6,894.36	5,885.73	21.88	22.52	112.63	-1,054.00	-241.23	543.80	502.66	41.14	13.218	
6,800.00	5,672.93	6,985.46	5,885.24	22.69	23.28	113.22	-1,145.09	-241.28	540.68	498.20	42.48	12.729	
6,900.00	5,669.07	7,081.20	5,883.17	23.49	24.10	113.43	-1,240.79	-243.02	539.15	495.22	43.93	12.274	
7,000.00	5,669.23	7,179.02	5,883.02	24.29	24.95	113.53	-1,338.59	-244.80	535.51	490.07	45.44	11.785	
7,100.00	5,669.91	7,281.67	5,884.15	25.20	25.89	113.77	-1,441.22	-245.82	531.74	484.63	47.12	11.286	
7,200.00	5,669.49	7,384.01	5,885.71	26.18	26.90	114.11	-1,543.56	-246.11	529.49	480.60	48.88	10.831	
7,222.63	5,669.18	7,407.14	5,886.09	26.42	27.13	114.19	-1,566.69	-246.10	529.42	480.13	49.29	10.740	
7,300.00	5,667.48	7,487.79	5,887.56	27.22	27.96	114.50	-1,647.32	-245.69	530.45	479.74	50.71	10.460	
7,400.00	5,664.49	7,588.12	5,889.75	28.24	28.98	115.01	-1,747.62	-244.45	532.44	480.01	52.43	10.155	
7,500.00	5,662.33	7,693.15	5,891.22	29.24	30.03	115.31	-1,852.63	-243.24	535.00	480.77	54.22	9.866	
7,600.00	5,659.29	7,791.43	5,891.25	30.30	31.00	115.48	-1,950.90	-242.12	538.18	482.15	56.04	9.604	
7,700.00	5,654.96	7,896.72	5,891.55	31.36	32.07	115.99	-2,056.18	-240.59	540.31	482.49	57.82	9.345	
7,800.00	5,649.64	7,999.24	5,891.02	32.40	33.19	116.60	-2,158.67	-238.63	540.17	480.61	59.57	9.069	
7,900.00	5,645.08	8,108.51	5,889.73	32.77	34.42	117.08	-2,267.89	-235.51	538.76	477.98	60.78	8.865	
8,000.00	5,643.95	8,213.25	5,888.55	33.19	35.60	117.24	-2,372.51	-230.51	534.67	472.56	62.11	8.608	
8,100.00	5,646.24	8,307.73	5,887.10	33.66	36.63	116.96	-2,466.89	-226.62	530.03	466.43	63.60	8.334	
8,200.00	5,651.93	8,398.82	5,885.71	34.18	37.59	116.33	-2,557.93	-223.99	525.57	460.31	65.26	8.054	
8,300.00	5,658.91	8,487.00	5,885.75	34.67	38.51	115.70	-2,646.11	-223.06	523.12	456.22	66.89	7.820	
8,400.00	5,665.88	8,583.57	5,887.12	35.21	39.53	115.10	-2,742.67	-222.86	522.12	453.49	68.63	7.608	
8,500.00	5,672.01	8,685.50	5,889.14	35.80	40.69	114.63	-2,844.57	-222.38	521.53	451.07	70.46	7.402	
8,513.27	5,672.58	8,699.12	5,889.42	35.88	40.85	114.59	-2,858.20	-222.28	521.52	450.82	70.70	7.377	
8,600.00	5,674.81	8,784.68	5,891.04	36.43	41.86	114.48	-2,943.73	-221.59	522.02	449.84	72.18	7.233	
8,700.00	5,674.97	8,881.24	5,891.66	37.10	42.98	114.42	-3,040.29	-222.11	524.30	450.45	73.85	7.099	
8,800.00	5,674.97	8,986.63	5,891.16	37.80	44.21	114.24	-3,145.67	-223.22	526.67	450.94	75.73	6.954	
8,900.00	5,674.97	9,097.01	5,889.48	38.55	45.51	114.01	-3,256.03	-222.66	527.18	449.45	77.73	6.782	
9,000.00	5,674.97	9,209.14	5,888.42	39.33	46.86	113.97	-3,368.11	-219.30	525.65	445.98	79.68	6.597	
9,100.00	5,674.97	9,304.37	5,886.48	40.14	48.00	113.84	-3,463.26	-216.05	523.31	441.73	81.58	6.415	
9,200.00	5,674.97	9,397.57	5,883.36	40.98	49.09	113.52	-3,556.40	-214.61	522.14	438.57	83.57	6.248	
9,221.40	5,674.97	9,416.32	5,882.70	41.16	49.31	113.45	-3,575.13	-214.51	522.07	438.09	83.98	6.216	
9,300.00	5,674.97	9,483.50	5,880.77	41.84	50.06	113.18	-3,642.28	-214.97	522.94	437.47	85.47	6.118	
9,400.00	5,674.97	9,563.77	5,879.60	42.74	50.94	112.90	-3,722.49	-217.53	526.93	439.71	87.21	6.042	
9,500.00	5,674.97	9,671.61	5,880.08	43.66	52.17	112.65	-3,830.21	-222.53	533.05	443.66	89.39	5.963	
9,600.00	5,674.97	9,785.12	5,881.31	44.60	53.54	112.64	-3,943.70	-223.83	536.12	444.54	91.59	5.854	
9,700.00	5,674.97	9,893.55	5,881.45	45.57	54.85	112.61	-4,052.13	-223.07	537.13	443.41	93.73	5.731	
9,800.00	5,674.97	9,994.86	5,878.09	46.55	56.08	112.21	-4,153.38	-222.89	537.31	441.28	96.02	5.596	
9,900.00	5,674.97	10,090.32	5,873.34	47.56	57.24	111.66	-4,248.72	-223.40	537.59	439.21	98.38	5.464	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 190-MWD+IFR1+MS+sag, 15991-BLIND												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	
10,000.00	5,674.97	10,177.61	5,868.92	48.58	58.27	111.07	-4,335.86	-225.72	539.82	439.18	100.64	5.364	
10,100.00	5,674.97	10,269.90	5,863.85	49.62	59.36	110.34	-4,427.90	-230.22	544.07	441.04	103.03	5.281	
10,200.00	5,674.97	10,372.94	5,861.51	50.67	60.59	109.90	-4,530.82	-234.32	548.67	443.20	105.47	5.202	
10,300.00	5,674.97	10,478.14	5,861.63	51.75	61.87	109.76	-4,635.99	-236.68	552.46	444.66	107.79	5.125	
10,400.00	5,674.97	10,584.43	5,862.75	52.83	63.18	109.77	-4,742.27	-237.56	555.24	445.17	110.07	5.045	
10,500.00	5,674.97	10,683.98	5,863.87	53.93	64.38	109.82	-4,841.81	-237.45	557.16	444.94	112.22	4.965	
10,600.00	5,674.97	10,784.42	5,866.19	55.04	65.57	109.99	-4,942.23	-237.46	559.60	445.29	114.31	4.896	
10,700.00	5,674.97	10,876.11	5,867.42	56.16	66.67	110.03	-5,033.91	-237.85	562.13	445.76	116.37	4.830	
10,800.00	5,674.97	10,980.72	5,866.45	57.29	67.94	109.78	-5,138.47	-240.63	565.98	447.16	118.82	4.763	
10,900.00	5,674.97	11,081.42	5,863.93	58.44	69.17	109.42	-5,239.12	-242.47	568.51	447.20	121.31	4.686	
11,000.00	5,674.97	11,192.72	5,860.66	59.59	70.54	109.00	-5,350.36	-243.80	570.33	446.35	123.98	4.600	
11,100.00	5,674.97	11,308.16	5,856.05	60.75	71.98	108.52	-5,465.70	-243.01	570.10	443.42	126.68	4.500	
11,200.00	5,674.97	11,422.96	5,853.13	61.92	73.42	108.36	-5,580.32	-237.29	566.13	437.00	129.13	4.384	
11,300.00	5,674.97	11,512.91	5,851.73	63.10	74.52	108.34	-5,670.11	-232.35	562.12	430.67	131.45	4.276	
11,400.00	5,674.97	11,597.56	5,852.77	64.29	75.51	108.49	-5,754.70	-229.25	560.68	427.14	133.54	4.199	
11,402.50	5,674.97	11,599.67	5,852.83	64.32	75.54	108.50	-5,756.81	-229.19	560.68	427.09	133.59	4.197	
11,500.00	5,674.97	11,688.50	5,856.34	65.48	76.59	108.84	-5,845.55	-227.47	561.71	426.22	135.49	4.146	
11,600.00	5,674.97	11,787.01	5,859.71	66.68	77.79	109.14	-5,943.99	-226.40	563.45	425.87	137.58	4.095	
11,700.00	5,674.97	11,895.61	5,861.35	67.89	79.15	109.27	-6,052.58	-225.48	564.82	424.90	139.92	4.037	
11,800.00	5,674.97	12,000.31	5,861.87	69.10	80.46	109.33	-6,157.25	-223.19	564.55	422.30	142.26	3.969	
11,900.00	5,674.97	12,114.69	5,861.57	70.32	81.89	109.39	-6,271.54	-218.75	562.41	417.78	144.63	3.889	
12,000.00	5,674.97	12,202.77	5,861.87	71.55	82.95	109.49	-6,359.54	-215.14	560.31	413.47	146.84	3.816	
12,030.96	5,674.97	12,228.35	5,862.05	71.93	83.26	109.51	-6,385.11	-214.50	560.16	412.67	147.50	3.798	
12,100.00	5,674.97	12,285.78	5,862.44	72.78	83.93	109.53	-6,442.54	-214.01	560.90	411.95	148.95	3.766	
12,200.00	5,674.82	12,378.70	5,862.26	73.99	85.06	109.43	-6,535.45	-215.37	563.51	412.28	151.23	3.726	
12,300.00	5,673.92	12,511.74	5,860.15	75.15	86.73	109.43	-6,668.43	-213.75	561.26	407.39	153.87	3.648	
12,400.00	5,672.94	12,593.79	5,858.91	76.39	87.75	109.52	-6,750.41	-210.72	556.95	400.91	156.04	3.569	
12,423.10	5,672.72	12,608.15	5,858.61	76.68	87.92	109.50	-6,764.77	-210.80	556.77	400.29	156.48	3.558	
12,500.00	5,671.97	12,662.27	5,857.13	77.63	88.58	109.35	-6,818.81	-213.18	558.68	400.73	157.95	3.537	
12,600.00	5,671.00	12,761.20	5,854.20	78.88	89.76	108.99	-6,917.51	-219.24	562.91	402.37	160.54	3.506	
12,700.00	5,670.03	12,866.86	5,851.20	80.13	91.05	108.63	-7,022.95	-225.39	566.93	403.60	163.33	3.471	
12,800.00	5,669.06	12,981.25	5,850.84	81.38	92.47	108.63	-7,137.28	-228.68	568.96	402.95	166.01	3.427	
12,900.00	5,668.09	13,067.28	5,851.12	82.64	93.53	108.71	-7,223.29	-230.24	570.28	402.25	168.04	3.394	
13,000.00	5,667.12	13,144.86	5,851.43	83.90	94.46	108.69	-7,300.73	-234.88	575.47	405.69	169.78	3.390	
13,100.00	5,666.15	13,243.41	5,852.10	85.17	95.63	108.58	-7,398.86	-243.85	583.71	411.54	172.17	3.390	
13,200.00	5,665.18	13,368.49	5,851.40	86.44	97.17	108.43	-7,523.70	-251.47	588.68	413.28	175.40	3.356	
13,300.00	5,664.21	13,478.54	5,847.56	87.71	98.53	108.08	-7,633.59	-255.68	590.60	412.29	178.31	3.312	
13,400.00	5,663.24	13,575.56	5,844.47	88.98	99.71	107.81	-7,730.51	-259.14	592.39	411.52	180.87	3.275	
13,500.00	5,662.27	13,718.71	5,841.17	90.26	101.48	107.65	-7,873.58	-259.87	591.99	408.19	183.80	3.221	
13,600.00	5,661.30	13,828.35	5,839.55	91.53	102.85	107.83	-7,982.98	-252.96	584.85	398.83	186.02	3.144	
13,700.00	5,660.33	13,925.00	5,838.58	92.82	104.04	108.05	-8,079.42	-246.55	577.63	389.36	188.26	3.068	
13,800.00	5,659.36	14,017.69	5,837.28	94.10	105.20	108.20	-8,171.95	-241.37	571.31	380.72	190.58	2.998	
13,900.00	5,658.39	14,117.76	5,834.72	95.39	106.46	108.21	-8,271.90	-237.27	566.01	373.00	193.01	2.933	
14,000.00	5,657.42	14,223.22	5,831.48	96.67	107.79	108.20	-8,377.18	-232.01	559.68	364.24	195.44	2.864	
14,100.00	5,656.45	14,311.07	5,830.06	97.96	108.86	108.29	-8,464.93	-228.14	554.38	356.59	197.79	2.803	
14,200.00	5,655.48	14,400.19	5,831.28	99.26	109.93	108.62	-8,553.99	-225.24	551.12	351.31	199.82	2.758	
14,299.20	5,654.52	14,486.71	5,833.82	100.54	110.97	109.03	-8,640.46	-223.70	549.83	348.20	201.63	2.727	
14,300.00	5,654.51	14,487.30	5,833.83	100.55	110.98	109.04	-8,641.05	-223.70	549.83	348.19	201.64	2.727	
14,400.00	5,653.54	14,567.00	5,836.02	101.85	111.93	109.29	-8,720.69	-225.59	552.26	348.93	203.33	2.716	
14,500.00	5,652.57	14,660.89	5,838.57	103.15	113.08	109.50	-8,814.42	-230.20	557.17	351.84	205.33	2.714	
14,600.00	5,651.60	14,761.08	5,840.36	104.45	114.32	109.63	-8,914.48	-235.12	561.83	354.21	207.61	2.706	
14,700.00	5,650.63	14,850.12	5,840.83	105.75	115.41	109.58	-9,003.31	-241.21	567.84	358.15	209.70	2.708	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 8-T10N-R57W - Horsetail #08B-1742 - Original Hole - Original Hole												Offset Site Error:	0.00 usft
Survey Program: 190-MWD+IFR1+MS+sag, 15991-BLIND												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
14,800.00	5,649.66	14,961.72	5,840.41	107.05	116.78	109.45	-9,114.70	-247.96	572.76	360.11	212.64	2.694	
14,900.00	5,648.69	15,060.04	5,839.49	108.36	117.98	109.26	-9,212.79	-254.63	578.26	363.06	215.21	2.687	
15,000.00	5,647.72	15,175.19	5,836.74	109.66	119.40	108.96	-9,327.76	-260.27	581.47	363.10	218.37	2.663	
15,100.00	5,646.75	15,280.21	5,835.11	110.97	120.71	108.83	-9,432.71	-263.54	583.32	362.27	221.06	2.639	
15,200.00	5,645.78	15,391.39	5,836.69	112.28	122.10	109.09	-9,543.87	-264.36	583.90	360.50	223.40	2.614	
15,300.00	5,644.81	15,493.61	5,838.47	113.59	123.40	109.40	-9,646.07	-263.60	583.18	357.67	225.52	2.586	
15,400.00	5,643.84	15,593.00	5,839.96	114.90	124.65	109.68	-9,745.45	-263.14	582.67	355.04	227.63	2.560	
15,500.00	5,642.87	15,701.64	5,840.62	116.22	126.00	109.92	-9,854.07	-261.47	580.83	350.99	229.84	2.527	
15,600.00	5,641.90	15,800.89	5,841.12	117.53	127.24	110.15	-9,953.31	-259.73	578.79	346.80	231.99	2.495	
15,700.00	5,640.92	15,904.84	5,842.98	118.85	128.54	110.54	-10,057.20	-257.10	576.47	342.53	233.95	2.464	
15,795.29	5,640.00	15,991.00	5,844.99	120.08	149.34	110.94	-10,143.29	-254.14	573.77	319.43	254.34	2.256 SF	

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 16131-BLIND													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	0.00	50.60	0.00	50.60					
100.00	100.00	99.83	99.83	0.18	0.15	-30.71	50.77	0.43	50.04	49.75	0.29	174.775		
200.00	199.97	199.58	199.57	0.43	0.40	-22.87	51.33	1.58	48.59	47.80	0.79	61.613		
299.04	298.97	297.75	297.71	0.71	0.70	-33.58	52.87	3.25	47.67	46.27	1.40	34.063		
300.00	299.93	298.70	298.66	0.71	0.70	-33.53	52.89	3.27	47.63	46.22	1.41	33.879 CC		
400.00	399.88	397.38	397.24	0.99	1.01	-34.42	56.79	5.46	49.07	47.00	2.07	23.739		
500.00	499.79	497.22	496.90	1.27	1.32	-29.70	62.37	7.57	51.08	48.43	2.65	19.269		
600.00	599.57	597.43	596.95	1.58	1.60	-45.06	67.76	9.68	51.35	48.14	3.21	15.987		
653.92	653.34	651.31	650.74	1.75	1.74	-47.45	70.54	10.71	51.29	47.77	3.52	14.574		
700.00	699.29	697.39	696.75	1.89	1.87	-49.67	72.92	11.49	51.38	47.60	3.78	13.582		
800.00	798.84	797.16	796.38	2.20	2.16	-51.90	77.88	12.94	50.02	45.65	4.37	11.440		
849.17	847.76	845.83	844.97	2.35	2.30	-54.51	80.69	13.78	49.71	45.03	4.67	10.641		
900.00	898.37	896.47	895.49	2.50	2.46	-56.74	84.01	14.80	49.92	44.95	4.98	10.034 ES		
1,000.00	997.96	996.57	995.35	2.80	2.76	-62.65	90.56	16.97	50.84	45.28	5.56	9.146		
1,100.00	1,097.58	1,096.75	1,095.32	3.10	3.06	-67.72	96.62	19.34	52.00	45.85	6.15	8.455		
1,200.00	1,197.22	1,196.59	1,194.94	3.41	3.37	-71.95	102.63	22.08	53.22	46.46	6.76	7.876		
1,300.00	1,296.86	1,296.53	1,294.65	3.72	3.67	-77.34	108.92	24.73	55.22	47.85	7.37	7.493		
1,400.00	1,396.43	1,396.54	1,394.42	4.03	3.98	-79.86	115.16	27.63	57.20	49.21	7.99	7.157		
1,500.00	1,495.89	1,496.48	1,494.10	4.35	4.29	-88.68	121.58	30.96	59.38	50.75	8.63	6.882		
1,600.00	1,595.30	1,596.24	1,593.57	4.67	4.60	-90.91	128.30	34.61	62.28	53.01	9.26	6.723		
1,700.00	1,694.68	1,696.10	1,693.11	5.00	4.91	-94.04	135.30	38.36	65.39	55.49	9.90	6.607		
1,800.00	1,794.10	1,795.99	1,792.75	5.31	5.21	-95.12	141.68	41.45	68.54	58.03	10.51	6.521		
1,900.00	1,893.61	1,896.03	1,892.62	5.62	5.50	-96.70	146.97	43.88	70.98	59.88	11.11	6.392		
2,000.00	1,993.15	1,994.88	1,991.33	5.93	5.78	-103.06	151.80	45.48	74.33	62.63	11.70	6.354		
2,100.00	2,092.74	2,094.36	2,090.69	6.24	6.08	-113.24	156.78	45.42	79.94	67.64	12.30	6.501		
2,200.00	2,192.37	2,193.97	2,190.16	6.55	6.38	-114.79	162.04	45.65	86.08	73.19	12.90	6.675		
2,300.00	2,292.00	2,293.60	2,289.63	6.86	6.67	-117.76	167.52	45.72	92.47	78.97	13.50	6.852		
2,400.00	2,391.66	2,393.78	2,389.67	7.16	6.97	-115.61	172.97	45.90	98.54	84.44	14.09	6.992		
2,500.00	2,491.33	2,493.14	2,488.89	7.47	7.27	-113.40	178.14	46.00	104.08	89.40	14.68	7.089		
2,600.00	2,591.05	2,592.84	2,588.46	7.77	7.56	-67.16	183.40	45.75	106.50	91.23	15.27	6.974		
2,700.00	2,690.74	2,692.61	2,688.08	8.07	7.86	-65.82	188.78	45.33	105.83	89.96	15.86	6.671		
2,800.00	2,790.42	2,792.95	2,788.28	8.37	8.15	-73.99	194.06	44.78	105.08	88.62	16.46	6.383		
2,810.24	2,800.62	2,803.43	2,798.75	8.40	8.19	-77.90	194.58	44.76	105.07	88.54	16.53	6.358		
2,900.00	2,889.89	2,895.16	2,890.38	8.68	8.45	-104.39	198.67	45.54	106.70	89.64	17.07	6.251		
3,000.00	2,989.22	2,996.29	2,991.40	9.00	8.75	-105.63	202.31	48.22	108.09	90.42	17.67	6.118		
3,100.00	3,088.61	3,095.54	3,090.57	9.32	9.05	-110.44	205.80	50.85	109.55	91.30	18.25	6.002		
3,200.00	3,188.04	3,195.51	3,190.44	9.63	9.34	-116.25	209.43	53.34	112.04	93.20	18.84	5.947		
3,300.00	3,287.64	3,296.92	3,291.74	9.94	9.64	-117.33	212.80	56.45	113.37	93.94	19.43	5.835		
3,400.00	3,387.33	3,398.20	3,392.79	10.25	9.95	-119.33	217.42	61.39	112.60	92.57	20.02	5.623		
3,473.61	3,460.66	3,471.53	3,465.94	10.48	10.17	-122.42	220.86	65.22	112.29	91.83	20.46	5.488		
3,500.00	3,486.97	3,497.65	3,492.00	10.56	10.25	-123.15	222.12	66.50	112.12	91.50	20.62	5.438		
3,600.00	3,586.21	3,597.14	3,591.27	10.88	10.55	-125.92	227.03	71.00	114.83	93.63	21.20	5.416		
3,700.00	3,685.38	3,696.81	3,690.72	11.21	10.84	-127.76	231.82	75.42	118.09	96.31	21.78	5.422		
3,800.00	3,784.57	3,793.95	3,787.68	11.54	11.13	-130.96	236.50	78.82	122.38	100.03	22.35	5.476		
3,900.00	3,883.82	3,894.09	3,887.69	11.86	11.43	-130.79	241.46	80.83	128.03	105.10	22.93	5.584		
4,000.00	3,983.16	3,994.88	3,988.33	12.18	11.73	-135.20	245.75	83.86	132.26	108.75	23.51	5.625		
4,100.00	4,082.56	4,095.52	4,088.85	12.50	12.03	-139.48	249.25	87.62	136.05	111.97	24.09	5.648		
4,200.00	4,182.00	4,194.52	4,187.71	12.82	12.33	-141.09	252.66	91.48	139.77	115.11	24.66	5.668		
4,300.00	4,281.46	4,292.93	4,286.01	13.14	12.62	-142.97	256.33	94.30	144.29	119.07	25.23	5.720		
4,400.00	4,380.91	4,393.14	4,386.12	13.46	12.92	-144.20	260.23	96.64	149.53	123.72	25.81	5.794		
4,500.00	4,480.53	4,487.10	4,480.00	13.77	13.19	-164.51	263.62	97.51	155.24	128.90	26.34	5.894		
4,600.00	4,580.36	4,585.28	4,578.11	14.07	13.48	-155.75	266.86	95.58	161.85	134.94	26.91	6.014		

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 16131-BLIND												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	
4,700.00	4,680.23	4,686.27	4,679.04	14.36	13.77	-154.73	269.93	93.66	167.54	140.01	27.52	6.087	
4,800.00	4,780.18	4,787.00	4,779.73	14.65	14.06	124.61	272.23	92.63	170.72	142.60	28.13	6.070	
4,900.00	4,880.15	4,886.15	4,878.88	14.93	14.35	134.78	273.44	91.82	172.86	144.15	28.71	6.021	
5,000.00	4,980.12	4,986.40	4,979.12	15.20	14.64	117.39	274.08	90.99	175.07	145.78	29.29	5.977	
5,100.00	5,079.15	5,086.24	5,078.95	15.46	14.93	108.59	274.82	90.58	180.29	150.38	29.91	6.028	
5,200.00	5,174.51	5,181.14	5,173.85	15.68	15.20	103.16	275.86	90.37	188.91	158.39	30.52	6.189	
5,300.00	5,259.43	5,265.91	5,258.62	15.84	15.44	105.63	276.17	89.93	203.82	172.75	31.07	6.560	
5,400.00	5,328.81	5,341.59	5,334.26	15.95	15.66	115.54	274.17	89.59	236.00	204.54	31.46	7.502	
5,500.00	5,395.35	5,435.38	5,427.45	16.03	15.90	128.75	264.19	89.16	280.26	248.68	31.58	8.874	
5,600.00	5,459.06	5,551.65	5,539.75	16.13	16.18	134.78	234.67	87.41	324.09	292.96	31.13	10.411	
5,700.00	5,519.47	5,687.29	5,661.78	16.30	16.46	137.36	176.39	80.53	359.03	329.11	29.92	11.999	
5,800.00	5,573.12	5,820.69	5,770.22	16.58	16.74	141.94	99.48	70.64	388.12	359.56	28.56	13.591	
5,900.00	5,618.70	6,226.55	5,963.63	16.91	17.96	145.98	-240.65	46.96	405.98	385.97	20.01	20.285	
6,000.00	5,652.20	6,346.42	5,968.76	17.32	18.49	145.67	-360.22	53.12	377.62	356.35	21.26	17.759	
6,100.00	5,677.23	6,448.59	5,970.37	17.82	18.96	145.07	-462.00	62.01	354.28	331.77	22.51	15.742	
6,200.00	5,689.12	6,549.47	5,972.28	18.40	19.44	146.16	-562.39	71.57	341.14	317.99	23.15	14.739	
6,300.00	5,687.78	6,653.94	5,971.45	19.04	20.08	147.27	-666.56	79.45	337.74	314.19	23.55	14.344	
6,400.00	5,685.01	6,749.28	5,969.42	19.69	20.74	147.80	-761.71	85.11	336.23	312.08	24.15	13.924	
6,500.00	5,682.73	6,840.36	5,967.52	20.34	21.32	148.05	-852.75	86.94	335.73	310.84	24.89	13.488	
6,504.15	5,682.64	6,844.12	5,967.48	20.37	21.34	148.06	-856.51	86.97	335.73	310.81	24.92	13.472	
6,600.00	5,679.89	6,938.79	5,966.90	21.09	21.97	148.44	-951.17	87.71	336.86	311.20	25.66	13.128	
6,700.00	5,677.39	7,039.41	5,966.15	21.88	22.73	149.21	-1,051.78	88.52	336.39	310.04	26.35	12.767	
6,795.24	5,673.73	7,136.76	5,964.97	22.66	23.53	150.26	-1,149.12	89.40	335.85	308.98	26.86	12.502	
6,800.00	5,672.93	7,141.58	5,964.92	22.69	23.57	150.42	-1,153.94	89.49	336.18	309.35	26.83	12.531	
6,900.00	5,669.07	7,242.92	5,963.74	23.49	24.44	151.65	-1,255.23	92.11	335.22	307.98	27.24	12.304	
7,000.00	5,669.23	7,331.00	5,964.33	24.29	25.19	152.73	-1,343.29	94.01	332.02	304.49	27.53	12.060	
7,091.42	5,669.81	7,418.49	5,966.88	25.12	25.92	153.81	-1,430.73	95.34	331.07	303.20	27.86	11.882	
7,100.00	5,669.91	7,426.84	5,967.18	25.20	25.99	153.91	-1,439.08	95.49	330.99	303.10	27.89	11.867	
7,200.00	5,669.49	7,527.62	5,969.93	26.18	26.91	154.76	-1,539.82	95.68	332.18	303.62	28.57	11.629	
7,300.00	5,667.48	7,633.20	5,971.32	27.22	27.97	155.02	-1,645.39	95.46	335.17	305.49	29.68	11.293	
7,400.00	5,664.49	7,735.50	5,971.52	28.24	29.04	155.15	-1,747.68	95.85	338.34	307.49	30.84	10.970	
7,500.00	5,662.33	7,836.91	5,970.24	29.24	30.09	154.51	-1,849.05	93.56	341.09	308.60	32.49	10.498	
7,600.00	5,659.29	7,942.79	5,966.04	30.30	31.21	153.17	-1,954.73	88.59	343.74	309.03	34.72	9.902	
7,700.00	5,654.96	8,037.50	5,961.61	31.36	32.20	152.37	-2,049.25	84.63	346.10	309.59	36.51	9.479	
7,800.00	5,649.64	8,129.97	5,960.61	32.40	33.13	152.19	-2,141.63	80.91	351.39	313.61	37.78	9.301	
7,900.00	5,645.08	8,233.50	5,960.23	32.77	34.21	152.18	-2,245.12	77.79	356.30	317.65	38.66	9.217	
8,000.00	5,643.95	8,344.11	5,957.22	33.19	35.45	151.51	-2,355.62	74.26	356.53	316.38	40.15	8.881	
8,100.00	5,646.24	8,449.89	5,951.93	33.66	36.68	150.47	-2,461.25	72.52	351.34	309.46	41.88	8.390	
8,200.00	5,651.93	8,539.85	5,948.94	34.18	37.68	149.59	-2,551.15	72.80	344.14	300.73	43.41	7.928	
8,300.00	5,658.91	8,639.61	5,949.48	34.67	38.78	149.25	-2,650.85	75.96	337.88	293.24	44.64	7.569	
8,400.00	5,665.88	8,743.20	5,949.35	35.21	39.97	148.90	-2,754.37	79.81	330.78	284.82	45.96	7.198	
8,500.00	5,672.01	8,845.74	5,947.82	35.80	41.20	148.50	-2,856.84	83.35	323.38	275.97	47.41	6.820	
8,600.00	5,674.81	8,947.60	5,944.39	36.43	42.41	147.96	-2,958.62	85.10	318.15	269.11	49.04	6.488	
8,700.00	5,674.97	9,049.89	5,938.74	37.10	43.61	147.17	-3,060.75	85.31	314.17	263.27	50.91	6.172	
8,800.00	5,674.97	9,147.25	5,933.72	37.80	44.71	146.36	-3,157.98	85.07	310.94	258.18	52.76	5.894	
8,900.00	5,674.97	9,245.52	5,928.94	38.55	45.81	145.69	-3,256.12	85.60	307.58	253.03	54.55	5.638	
8,961.13	5,674.97	9,299.43	5,927.47	39.02	46.42	145.39	-3,310.02	85.66	306.78	251.28	55.50	5.528	
9,000.00	5,674.97	9,335.07	5,927.11	39.33	46.81	145.23	-3,345.66	85.48	306.95	250.87	56.08	5.474	
9,100.00	5,674.97	9,429.00	5,927.72	40.14	47.82	144.93	-3,439.58	84.70	308.95	251.44	57.51	5.372	
9,200.00	5,674.97	9,525.37	5,930.37	40.98	48.88	144.91	-3,535.91	84.36	312.41	253.66	58.74	5.318	
9,300.00	5,674.97	9,622.68	5,934.96	41.84	49.98	145.21	-3,633.11	84.86	316.97	257.28	59.69	5.310	
9,400.00	5,674.97	9,723.87	5,939.90	42.74	51.17	145.50	-3,734.18	85.23	321.77	261.03	60.74	5.297	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 16131-BLIND												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	
9,500.00	5,674.97	9,831.46	5,943.77	43.66	52.49	145.73	-3,841.70	85.98	325.36	263.36	62.00	5.248	
9,600.00	5,674.97	9,939.59	5,944.32	44.60	53.82	145.72	-3,949.81	87.46	325.97	262.46	63.50	5.133	
9,700.00	5,674.97	10,045.78	5,944.09	45.57	55.13	146.02	-4,055.92	91.48	324.64	260.00	64.64	5.022	
9,800.00	5,674.97	10,147.46	5,942.58	46.55	56.38	146.26	-4,157.49	95.91	321.96	256.17	65.79	4.894	
9,878.12	5,674.97	10,216.50	5,941.37	47.34	57.20	146.17	-4,226.50	97.34	320.70	253.81	66.88	4.795	
9,900.00	5,674.97	10,235.42	5,941.22	47.56	57.42	146.10	-4,245.42	97.28	320.80	253.57	67.23	4.772	
10,000.00	5,674.97	10,324.22	5,941.96	48.58	58.42	145.69	-4,334.19	95.57	323.54	254.62	68.92	4.695	
10,100.00	5,674.97	10,421.73	5,945.22	49.62	59.54	145.43	-4,431.62	93.24	328.63	258.03	70.59	4.655	
10,200.00	5,674.97	10,536.28	5,946.93	50.67	60.92	145.01	-4,546.12	91.10	331.97	259.16	72.81	4.559	
10,300.00	5,674.97	10,641.78	5,945.45	51.75	62.22	144.65	-4,651.61	91.43	331.64	256.82	74.82	4.433	
10,348.94	5,674.97	10,687.66	5,945.14	52.28	62.77	144.61	-4,697.48	92.16	331.41	255.85	75.56	4.386	
10,400.00	5,674.97	10,736.52	5,945.27	52.83	63.35	144.59	-4,746.33	92.81	331.64	255.32	76.32	4.346	
10,500.00	5,674.97	10,837.93	5,946.04	53.93	64.55	144.72	-4,847.71	94.95	332.05	254.38	77.67	4.275	
10,600.00	5,674.97	10,934.66	5,947.32	55.04	65.72	145.02	-4,944.39	97.82	332.44	253.69	78.75	4.221	
10,700.00	5,674.97	11,027.75	5,949.96	56.16	66.82	145.17	-5,037.44	98.70	335.19	255.25	79.94	4.193	
10,800.00	5,674.97	11,132.63	5,951.26	57.29	68.09	144.94	-5,142.31	97.95	337.60	255.75	81.86	4.124	
10,900.00	5,674.97	11,234.31	5,951.91	58.44	69.34	144.75	-5,243.98	97.93	339.14	255.45	83.69	4.052	
11,000.00	5,674.97	11,333.06	5,952.93	59.59	70.55	144.73	-5,342.72	98.73	340.53	255.27	85.26	3.994	
11,100.00	5,674.97	11,432.93	5,954.81	60.75	71.76	144.83	-5,442.57	99.91	342.39	255.72	86.67	3.951	
11,200.00	5,674.97	11,532.74	5,955.22	61.92	72.97	144.55	-5,542.37	99.29	344.10	255.46	88.64	3.882	
11,300.00	5,674.97	11,631.44	5,954.48	63.10	74.16	143.89	-5,641.03	96.66	346.07	254.90	91.17	3.796	
11,400.00	5,674.97	11,729.00	5,953.42	64.29	75.31	143.04	-5,738.51	92.77	348.61	254.63	93.98	3.709	
11,500.00	5,674.97	11,825.19	5,953.22	65.48	76.42	142.27	-5,834.61	88.68	352.08	255.40	96.68	3.642	
11,600.00	5,674.97	11,929.25	5,953.47	66.68	77.67	141.62	-5,938.61	85.14	355.44	256.03	99.41	3.575	
11,700.00	5,674.97	12,030.57	5,954.12	67.89	78.92	141.18	-6,039.90	82.92	358.41	256.61	101.80	3.521	
11,800.00	5,674.97	12,139.14	5,952.23	69.10	80.26	140.47	-6,148.43	80.58	359.50	254.75	104.75	3.432	
11,900.00	5,674.97	12,240.76	5,948.84	70.32	81.53	139.67	-6,249.97	78.66	359.27	251.50	107.77	3.334	
11,959.08	5,674.97	12,298.93	5,947.13	71.05	82.24	139.27	-6,308.11	77.83	359.17	249.74	109.43	3.282	
12,000.00	5,674.97	12,338.63	5,946.27	71.55	82.72	139.04	-6,347.80	77.42	359.24	248.75	110.49	3.251	
12,100.00	5,674.97	12,432.20	5,945.29	72.78	83.84	138.63	-6,441.35	76.42	360.32	247.50	112.82	3.194	
12,200.00	5,674.82	12,529.07	5,945.35	73.99	85.00	138.19	-6,538.20	74.04	362.99	247.81	115.18	3.151	
12,300.00	5,673.92	12,624.59	5,946.42	75.15	86.15	138.22	-6,633.69	71.93	365.46	248.74	116.72	3.131	
12,400.00	5,672.94	12,729.71	5,948.37	76.39	87.42	138.41	-6,738.77	69.86	368.26	249.93	118.32	3.112	
12,500.00	5,671.97	12,828.00	5,950.04	77.63	88.63	138.69	-6,837.04	69.04	370.18	250.60	119.58	3.096	
12,600.00	5,671.00	12,936.57	5,951.06	78.88	89.97	139.02	-6,945.60	69.00	370.99	250.00	120.99	3.066	
12,609.55	5,670.91	12,945.79	5,951.08	79.00	90.09	139.05	-6,954.82	69.05	370.99	249.88	121.11	3.063	
12,700.00	5,670.03	13,036.94	5,951.84	80.13	91.22	139.39	-7,045.96	69.66	371.26	249.13	122.13	3.040	
12,800.00	5,669.06	13,142.67	5,950.96	81.38	92.52	139.72	-7,151.68	71.36	369.67	246.27	123.40	2.996	
12,900.00	5,668.09	13,239.13	5,949.89	82.64	93.70	139.88	-7,248.12	71.93	368.56	243.76	124.80	2.953	
13,000.00	5,667.12	13,337.30	5,949.68	83.90	94.89	140.16	-7,346.30	72.70	368.02	242.02	126.00	2.921	
13,044.15	5,666.69	13,380.49	5,949.75	84.46	95.41	140.29	-7,389.48	72.97	367.96	241.46	126.50	2.909	
13,100.00	5,666.15	13,435.03	5,950.00	85.17	96.07	140.46	-7,444.02	73.23	368.06	240.94	127.12	2.895	
13,200.00	5,665.18	13,531.15	5,950.79	86.44	97.22	140.74	-7,540.14	73.18	368.88	240.64	128.23	2.877	
13,300.00	5,664.21	13,628.09	5,951.73	87.71	98.39	140.85	-7,637.06	71.64	370.77	241.10	129.67	2.859	
13,400.00	5,663.24	13,735.23	5,952.09	88.98	99.70	140.87	-7,744.18	69.70	372.35	240.82	131.53	2.831	
13,500.00	5,662.27	13,845.56	5,950.25	90.26	101.08	140.93	-7,854.48	69.78	371.15	237.80	133.35	2.783	
13,600.00	5,661.30	13,944.47	5,948.65	91.53	102.32	141.24	-7,953.36	71.87	368.72	234.24	134.47	2.742	
13,700.00	5,660.33	14,039.75	5,948.59	92.82	103.50	141.72	-8,048.61	74.21	367.29	232.15	135.15	2.718	
13,800.00	5,659.36	14,137.89	5,949.41	94.10	104.70	142.30	-8,146.71	76.60	366.63	231.02	135.61	2.704	
13,839.07	5,658.98	14,175.71	5,949.88	94.60	105.17	142.53	-8,184.52	77.43	366.56	230.79	135.77	2.700	
13,900.00	5,658.39	14,234.13	5,950.80	95.39	105.88	142.87	-8,242.93	78.53	366.75	230.74	136.01	2.696	
14,000.00	5,657.42	14,330.02	5,952.85	96.67	107.05	143.38	-8,338.79	79.46	368.08	231.58	136.49	2.697	

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

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 8-T10N-R57W - Horsetail #08B-1743 - Original Hole - Original Hole												Offset Site Error:	0.00 usft
Survey Program: 131-MWD+IFR1+MS+sag, 16131-BLIND												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
14,100.00	5,656.45	14,427.42	5,955.52	97.96	108.24	143.87	-8,436.16	79.80	370.29	233.26	137.02	2.702	
14,200.00	5,655.48	14,528.42	5,958.84	99.26	109.49	144.44	-8,537.09	80.27	372.91	235.45	137.46	2.713	
14,300.00	5,654.51	14,635.67	5,960.80	100.55	110.82	144.90	-8,644.32	80.77	374.38	236.12	138.26	2.708	
14,400.00	5,653.54	14,737.49	5,961.10	101.85	112.08	145.27	-8,746.13	81.82	374.28	235.18	139.10	2.691	
14,425.16	5,653.29	14,762.18	5,961.17	102.17	112.39	145.35	-8,770.83	82.06	374.26	234.95	139.31	2.687	
14,500.00	5,652.57	14,834.36	5,961.65	103.15	113.27	145.62	-8,843.00	82.64	374.52	234.66	139.86	2.678	
14,600.00	5,651.60	14,935.54	5,962.24	104.45	114.52	145.91	-8,944.18	82.92	375.12	234.28	140.83	2.664	
14,700.00	5,650.63	15,033.04	5,962.69	105.75	115.72	146.13	-9,041.68	82.79	375.83	233.95	141.88	2.649	
14,800.00	5,649.66	15,131.29	5,963.81	107.05	116.93	146.34	-9,139.92	82.15	377.42	234.47	142.95	2.640	
14,900.00	5,648.69	15,240.40	5,963.36	108.36	118.29	146.52	-9,249.02	82.14	377.32	233.00	144.32	2.615	
15,000.00	5,647.72	15,339.59	5,962.71	109.66	119.53	146.79	-9,348.21	83.09	376.54	231.27	145.27	2.592	
15,100.00	5,646.75	15,438.48	5,962.07	110.97	120.75	147.00	-9,447.10	83.54	376.03	229.69	146.35	2.569	
15,167.49	5,646.09	15,504.64	5,962.08	111.86	121.57	147.22	-9,513.25	84.21	375.88	229.03	146.85	2.560	
15,200.00	5,645.78	15,535.93	5,962.38	112.28	121.97	147.37	-9,544.54	84.75	375.93	228.98	146.95	2.558	
15,300.00	5,644.81	15,633.66	5,964.17	113.59	123.18	147.98	-9,642.23	86.82	376.65	229.72	146.93	2.563	
15,400.00	5,643.84	15,739.85	5,964.68	114.90	124.50	148.32	-9,748.41	87.43	377.09	229.32	147.77	2.552	
15,500.00	5,642.87	15,840.82	5,962.86	116.22	125.75	148.32	-9,849.36	86.98	376.11	226.75	149.37	2.518	
15,600.00	5,641.90	15,939.00	5,961.48	117.53	126.97	148.33	-9,947.53	86.40	375.55	224.67	150.88	2.489	
15,621.00	5,641.69	15,958.30	5,961.30	117.81	127.21	148.33	-9,966.83	86.26	375.53	224.36	151.17	2.484	
15,700.00	5,640.92	16,035.47	5,960.94	118.85	130.77	148.40	-10,043.99	85.77	375.74	221.90	153.84	2.442	
15,795.29	5,640.00	16,130.75	5,960.79	120.08	177.26	148.51	-10,139.28	85.23	376.20	192.90	183.30	2.052 SF	

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

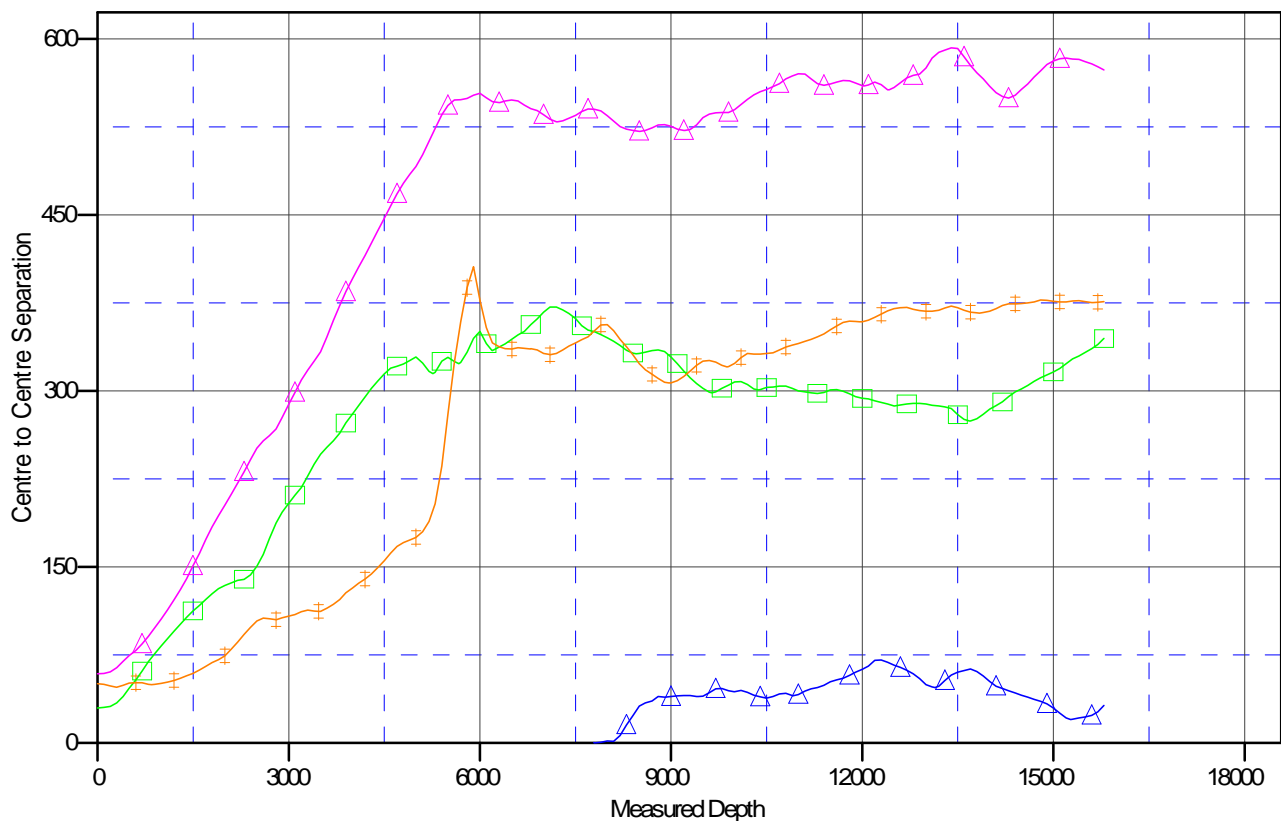
Reference Depths are relative to 4890'GL+21'KB @ 4911.00usft (Unit 409) Coordinates are relative to: Horsetail #08B-1711

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 1.12°

Ladder Plot



LEGEND

Horsetail #08B-1711, Original Hole, Original Hole V0 ▲ Horsetail #08B-1742, Original Hole, Original Hole V0
 Horsetail #08B-1712, Original Hole, Original Hole V0 ■ Horsetail #08B-1743, Original Hole, Original Hole V0

Precision Drilling Corporation

Anticollision Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08B-1711
Project:	Weld County, CO	TVD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Reference Site:	Sec 8-T10N-R57W	MD Reference:	4890'GL+21'KB @ 4911.00usft (Unit 409)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	Horsetail #08B-1711	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.79 sigma
Reference Wellbore	Sidetrack #1	Database:	Local2
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 4890'GL+21'KB @ 4911.00usft (Unit 409) Coordinates are relative to: Horsetail #08B-1711
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105.500000°W Grid Convergence at Surface is: 1.12°

