

WHITING PETROLEUM CORP.

Project: Weld County, CO
Site: Sec 25-T10N-R58W
Well: Razor #25N-2437
Vellbore: Original Hole
Design: Original Hole



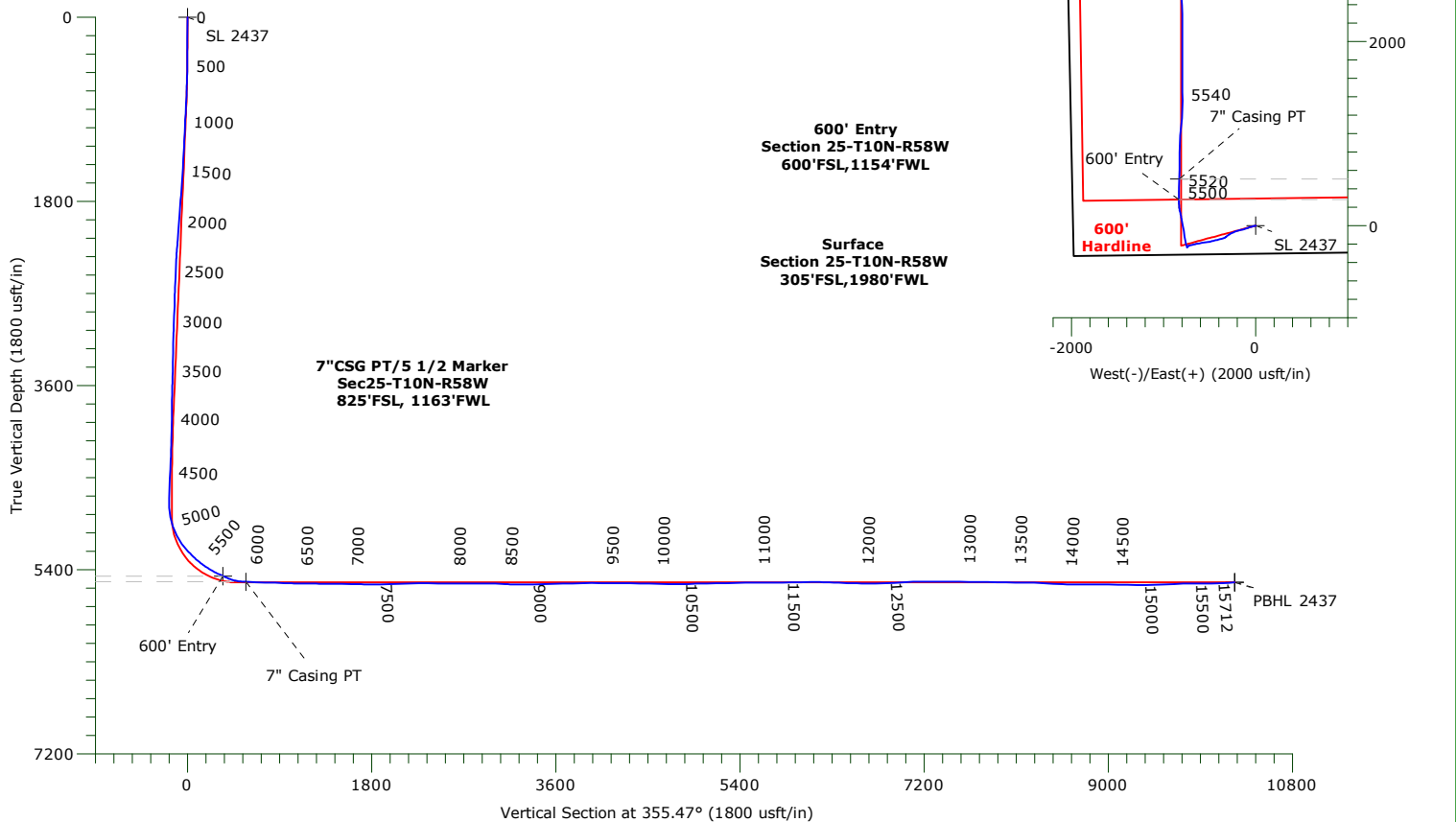
LEGEND

- Razor #25N-2437, Original Hole, Plan #1 V0
 Original Hole

ANNOTATIONS

TVD	MD	+N/-S	+E/-W	Annotation
5464.20	5776.00	284.14	-831.32	600' Entry
5520.59	6010.00	509.13	-829.19	7" Casing PT

MWD CORRECTION
WILL BE PROVIDED BY MAGVAR



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 2437	0.00	0.00	0.00	1539910.47	3466390.91	40.803275°N	103.815286°W	Point
600' Entry 2437	5464.20	284.14	-831.32	1540178.77	3465554.35	40.804055°N	103.818289°W	Point
7" Casing PT 2437	5520.59	509.13	-829.19	1540403.76	3465552.20	40.804672°N	103.818281°W	Point
PBHL 2437	5525.00	10205.59	-807.92	1550098.87	3465389.26	40.831286°N	103.818206°W	Point
BHL 2437	5525.85	10203.71	-806.89	1550097.01	3465390.32	40.831281°N	103.818202°W	Point

WHITING PETROLEUM CORP.

Weld County, CO

Sec 25-T10N-R58W

Razor #25N-2437

Original Hole

Design: Original Hole

Standard Survey Report

22 August, 2016

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Razor #25N-2437
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Well:	Razor #25N-2437	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	COMPASS_ROCKIES

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 25-T10N-R58W		
Site Position:		Northing:	1,544,564.45 usft
From:	Lat/Long	Easting:	3,464,883.62 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	40.816125°N
		Longitude:	103.820411°W
		Grid Convergence:	1.09 °

Well	Razor #25N-2437		
Well Position	+N-S	0.00 usft	Northing: 1,539,910.48 usft
	+E-W	0.00 usft	Easting: 3,466,390.91 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	40.803275°N
		Longitude:	103.815286°W
		Ground Level:	4,701.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/13/2015	7.84	67.38	53,024

Design	Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.00	0.00	0.00	355.47	

Survey Program	Date 8/22/2016				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
223.00	15,650.00	Survey #1 (Original Hole)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag OWSG BLIND	
15,712.00	15,712.00	Survey #2 (Original Hole)	BLIND		

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	
223.00	0.65	122.82	223.00	-0.69	1.06	-0.77	0.29	0.29	0.00	
314.00	1.50	269.49	313.99	-0.98	0.31	-1.00	2.28	0.93	161.18	
405.00	3.50	266.47	404.90	-1.16	-3.66	-0.87	2.20	2.20	-3.32	
496.00	5.93	264.72	495.58	-1.76	-11.11	-0.88	2.67	2.67	-1.92	
588.00	7.80	250.90	586.92	-4.24	-21.75	-2.51	2.70	2.03	-15.02	
680.00	9.98	255.48	677.81	-8.28	-35.36	-5.46	2.49	2.37	4.98	
772.00	10.93	251.27	768.29	-13.08	-51.34	-8.99	1.32	1.03	-4.58	
846.00	10.60	250.89	840.98	-17.56	-64.42	-12.42	0.46	-0.45	-0.51	
955.00	10.15	250.38	948.20	-24.07	-82.94	-17.45	0.42	-0.41	-0.47	

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Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Well:	Razor #25N-2437	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	COMPASS_ROCKIES

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)
1,045.00	12.66	255.07	1,036.42	-29.28	-99.94	-21.29	2.97	2.79	5.21
1,135.00	13.28	254.73	1,124.12	-34.54	-119.44	-25.00	0.69	0.69	-0.38
1,226.00	13.68	254.05	1,212.62	-40.25	-139.87	-29.08	0.47	0.44	-0.75
1,317.00	14.74	254.55	1,300.83	-46.29	-161.38	-33.40	1.17	1.16	0.55
1,407.00	15.69	254.53	1,387.67	-52.59	-184.14	-37.88	1.06	1.06	-0.02
1,500.00	14.85	251.45	1,477.39	-59.73	-207.56	-43.15	1.26	-0.90	-3.31
1,591.00	13.75	249.04	1,565.57	-67.31	-228.71	-49.04	1.37	-1.21	-2.65
1,683.00	12.21	243.59	1,655.22	-75.55	-247.64	-55.76	2.14	-1.67	-5.92
1,775.00	11.18	244.07	1,745.31	-83.78	-264.37	-62.64	1.12	-1.12	0.52
1,867.00	9.85	238.74	1,835.77	-91.76	-279.12	-69.43	1.79	-1.45	-5.79
1,959.00	8.27	238.06	1,926.62	-99.35	-291.47	-76.02	1.72	-1.72	-0.74
2,120.00	8.02	233.23	2,085.99	-112.20	-310.29	-87.34	0.45	-0.16	-3.00
2,214.00	7.47	224.15	2,179.14	-120.51	-319.80	-94.87	1.43	-0.59	-9.66
2,308.00	10.36	239.66	2,272.01	-129.16	-331.35	-102.59	3.97	3.07	16.50
2,403.00	12.89	255.22	2,365.07	-136.18	-348.98	-108.19	4.22	2.66	16.38
2,497.00	12.92	256.32	2,456.70	-141.34	-369.33	-111.73	0.26	0.03	1.17
2,592.00	12.37	253.56	2,549.40	-146.73	-389.41	-115.52	0.86	-0.58	-2.91
2,686.00	11.98	251.44	2,641.28	-152.69	-408.31	-119.96	0.63	-0.41	-2.26
2,781.00	14.27	260.29	2,733.80	-157.80	-429.20	-123.41	3.20	2.41	9.32
2,875.00	13.36	258.16	2,825.08	-161.99	-451.25	-125.84	1.11	-0.97	-2.27
2,969.00	11.83	254.53	2,916.82	-166.78	-471.17	-129.05	1.83	-1.63	-3.86
3,064.00	11.65	253.86	3,009.83	-172.05	-489.77	-132.83	0.24	-0.19	-0.71
3,159.00	15.14	262.55	3,102.24	-176.33	-511.29	-135.39	4.23	3.67	9.15
3,253.00	15.29	261.60	3,192.95	-179.73	-535.73	-136.85	0.31	0.16	-1.01
3,347.00	15.34	260.11	3,283.61	-183.67	-560.24	-138.85	0.42	0.05	-1.59
3,441.00	15.16	261.21	3,374.30	-187.69	-584.63	-140.93	0.36	-0.19	1.17
3,535.00	15.07	260.35	3,465.05	-191.61	-608.83	-142.93	0.26	-0.10	-0.91
3,630.00	14.07	259.96	3,556.99	-195.70	-632.37	-145.14	1.06	-1.05	-0.41
3,724.00	10.18	255.71	3,648.88	-199.74	-651.68	-147.65	4.24	-4.14	-4.52
3,818.00	8.49	257.88	3,741.63	-203.25	-666.52	-149.97	1.84	-1.80	2.31
3,913.00	7.65	257.70	3,835.69	-206.07	-679.55	-151.75	0.88	-0.88	-0.19
4,006.00	7.51	261.69	3,927.88	-208.27	-691.61	-152.99	0.59	-0.15	4.29
4,124.00	7.29	256.15	4,044.90	-211.17	-706.51	-154.71	0.63	-0.19	-4.69
4,218.00	6.83	252.91	4,138.18	-214.24	-717.64	-156.89	0.65	-0.49	-3.45
4,312.00	5.42	245.63	4,231.65	-217.72	-727.03	-159.62	1.71	-1.50	-7.74
4,406.00	3.30	222.69	4,325.38	-221.54	-732.91	-162.96	2.88	-2.26	-24.40
4,501.00	3.09	199.10	4,420.23	-225.97	-735.60	-167.16	1.39	-0.22	-24.83
4,595.00	3.10	215.77	4,514.10	-230.42	-737.92	-171.42	0.95	0.01	17.73
4,689.00	2.57	214.58	4,607.98	-234.22	-740.60	-175.00	0.57	-0.56	-1.27
4,784.00	2.23	210.21	4,702.90	-237.57	-742.74	-178.17	0.41	-0.36	-4.60
4,878.00	2.02	38.44	4,796.88	-237.86	-742.63	-178.46	4.51	-0.22	-182.73
4,972.00	12.71	342.59	4,890.02	-226.65	-744.70	-167.13	12.44	11.37	-59.41
5,066.00	19.99	342.63	4,980.16	-201.42	-752.60	-141.35	7.74	7.74	0.04

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Survey Report

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5,161.00	26.72	347.78	5,067.33	-165.00	-761.98	-104.30	7.40	7.08	5.42	
5,256.00	36.77	351.18	5,148.02	-115.90	-770.89	-54.65	10.74	10.58	3.58	
5,350.00	42.83	351.62	5,220.21	-56.43	-779.86	5.34	6.45	6.45	0.47	
5,445.00	47.58	349.17	5,287.13	10.00	-791.17	72.46	5.32	5.00	-2.58	
5,539.00	53.08	349.05	5,347.11	81.02	-804.83	144.34	5.85	5.85	-0.13	
5,633.00	59.35	347.65	5,399.36	157.49	-820.64	221.82	6.78	6.67	-1.49	
5,727.00	64.68	358.43	5,443.55	239.71	-830.48	304.55	11.60	5.67	11.47	
5,822.00	66.22	0.28	5,483.03	326.11	-831.44	390.76	2.40	1.62	1.95	
5,916.00	79.74	359.98	5,510.48	415.78	-831.25	480.14	14.39	14.38	-0.32	
6,010.00	87.90	2.52	5,520.59	509.13	-829.19	573.03	9.09	8.68	2.70	
6,105.00	88.26	1.39	5,523.77	604.02	-825.96	667.36	1.25	0.38	-1.19	
6,199.00	88.49	1.18	5,526.44	697.95	-823.85	760.84	0.33	0.24	-0.22	
6,294.00	88.21	1.00	5,529.17	792.90	-822.04	855.35	0.35	-0.29	-0.19	
6,388.00	87.81	0.07	5,532.44	886.83	-821.16	948.92	1.08	-0.43	-0.99	
6,482.00	88.92	2.90	5,535.12	980.75	-818.73	1,042.35	3.23	1.18	3.01	
6,576.00	89.96	8.56	5,536.04	1,074.24	-809.35	1,134.81	6.12	1.11	6.02	
6,671.00	88.22	4.88	5,537.55	1,168.56	-798.23	1,227.95	4.28	-1.83	-3.87	
6,765.00	89.79	2.59	5,539.18	1,262.33	-792.11	1,320.95	2.95	1.67	-2.44	
6,859.00	89.81	358.71	5,539.51	1,356.31	-791.05	1,414.55	4.13	0.02	-4.13	
6,953.00	89.28	359.30	5,540.26	1,450.29	-792.68	1,508.37	0.84	-0.56	0.63	
7,048.00	89.46	1.16	5,541.30	1,545.28	-792.30	1,603.03	1.97	0.19	1.96	
7,142.00	88.14	358.82	5,543.27	1,639.25	-792.31	1,696.71	2.86	-1.40	-2.49	
7,236.00	90.35	359.27	5,544.51	1,733.22	-793.88	1,790.51	2.40	2.35	0.48	
7,330.00	89.85	359.98	5,544.34	1,827.22	-794.50	1,884.26	0.92	-0.53	0.76	
7,424.00	91.90	0.89	5,542.91	1,921.20	-793.78	1,977.89	2.39	2.18	0.97	
7,518.00	93.01	0.70	5,538.88	2,015.10	-792.48	2,071.40	1.20	1.18	-0.20	
7,613.00	90.31	359.13	5,536.13	2,110.05	-792.62	2,166.06	3.29	-2.84	-1.65	
7,707.00	91.19	0.35	5,534.90	2,204.04	-793.05	2,259.79	1.60	0.94	1.30	
7,801.00	89.09	357.19	5,534.67	2,298.00	-795.06	2,353.62	4.04	-2.23	-3.36	
7,896.00	88.85	357.20	5,536.38	2,392.87	-799.71	2,448.56	0.25	-0.25	0.01	
7,990.00	89.61	357.68	5,537.64	2,486.77	-803.91	2,542.49	0.96	0.81	0.51	
8,084.00	90.28	358.65	5,537.73	2,580.72	-806.92	2,636.39	1.25	0.71	1.03	
8,178.00	89.73	358.73	5,537.72	2,674.69	-809.07	2,730.24	0.59	-0.59	0.09	
8,272.00	90.43	359.15	5,537.59	2,768.68	-810.81	2,824.07	0.87	0.74	0.45	
8,367.00	90.93	359.88	5,536.46	2,863.67	-811.61	2,918.82	0.93	0.53	0.77	
8,461.00	87.56	357.03	5,537.70	2,957.60	-814.15	3,012.66	4.69	-3.59	-3.03	
8,555.00	86.75	356.79	5,542.37	3,051.35	-819.21	3,106.52	0.90	-0.86	-0.26	
8,650.00	89.73	358.03	5,545.29	3,146.19	-823.50	3,201.41	3.40	3.14	1.31	
8,744.00	89.93	356.60	5,545.57	3,240.09	-827.90	3,295.35	1.54	0.21	-1.52	
8,839.00	89.86	358.48	5,545.74	3,334.99	-831.98	3,390.29	1.98	-0.07	1.98	
8,932.00	92.83	1.24	5,543.56	3,427.95	-832.21	3,482.97	4.36	3.19	2.97	
9,027.00	91.66	0.50	5,539.83	3,522.86	-830.76	3,577.47	1.46	-1.23	-0.78	
9,121.00	91.11	2.44	5,537.56	3,616.80	-828.35	3,670.93	2.14	-0.59	2.06	

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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)
9,216.00	91.59	2.45	5,535.32	3,711.69	-824.30	3,765.20	0.51	0.51	0.01
9,310.00	92.15	1.61	5,532.26	3,805.58	-820.97	3,858.53	1.07	0.60	-0.89
9,404.00	89.00	1.84	5,531.31	3,899.52	-818.14	3,951.95	3.36	-3.35	0.24
9,499.00	89.11	1.48	5,532.88	3,994.46	-815.39	4,046.39	0.40	0.12	-0.38
9,593.00	89.37	0.61	5,534.13	4,088.44	-813.68	4,139.93	0.97	0.28	-0.93
9,688.00	91.25	2.34	5,533.61	4,183.40	-811.23	4,234.40	2.69	1.98	1.82
9,782.00	88.68	1.27	5,533.67	4,277.34	-808.27	4,327.82	2.96	-2.73	-1.14
9,876.00	88.96	1.10	5,535.61	4,371.30	-806.33	4,421.33	0.35	0.30	-0.18
9,971.00	88.88	0.47	5,537.40	4,466.28	-805.03	4,515.91	0.67	-0.08	-0.66
10,065.00	88.96	359.97	5,539.17	4,560.26	-804.67	4,609.57	0.54	0.09	-0.53
10,159.00	88.46	359.96	5,541.29	4,654.23	-804.72	4,703.25	0.53	-0.53	-0.01
10,253.00	90.31	0.09	5,542.29	4,748.23	-804.68	4,796.95	1.97	1.97	0.14
10,347.00	91.53	0.86	5,540.78	4,842.21	-803.90	4,890.57	1.53	1.30	0.82
10,441.00	92.23	0.24	5,537.70	4,936.15	-803.00	4,984.15	0.99	0.74	-0.66
10,536.00	90.28	359.97	5,535.62	5,031.12	-802.83	5,078.82	2.07	-2.05	-0.28
10,630.00	91.06	0.41	5,534.52	5,125.12	-802.52	5,172.49	0.95	0.83	0.47
10,725.00	91.83	359.88	5,532.13	5,220.08	-802.28	5,267.14	0.98	0.81	-0.56
10,819.00	90.70	0.03	5,530.05	5,314.06	-802.35	5,360.83	1.21	-1.20	0.16
10,911.00	91.77	359.83	5,528.07	5,406.04	-802.46	5,452.53	1.18	1.16	-0.22
11,003.00	89.76	359.17	5,526.84	5,498.02	-803.27	5,544.29	2.30	-2.18	-0.72
11,093.00	90.01	359.01	5,527.02	5,588.01	-804.70	5,634.11	0.33	0.28	-0.18
11,185.00	89.78	358.02	5,527.19	5,679.98	-807.08	5,725.98	1.10	-0.25	-1.08
11,276.00	90.80	359.69	5,526.73	5,770.95	-808.90	5,816.81	2.15	1.12	1.84
11,368.00	92.03	1.15	5,524.46	5,862.92	-808.22	5,908.44	2.07	1.34	1.59
11,460.00	90.41	0.61	5,522.50	5,954.88	-806.81	6,000.00	1.86	-1.76	-0.59
11,552.00	90.36	359.32	5,521.88	6,046.88	-806.87	6,091.72	1.40	-0.05	-1.40
11,643.00	89.12	356.64	5,522.29	6,137.81	-810.07	6,182.62	3.24	-1.36	-2.95
11,735.00	86.88	357.22	5,525.50	6,229.62	-815.00	6,274.53	2.51	-2.43	0.63
11,824.00	87.96	358.44	5,529.51	6,318.46	-818.36	6,363.36	1.83	1.21	1.37
11,915.00	88.76	0.08	5,532.11	6,409.41	-819.54	6,454.12	2.00	0.88	1.80
12,006.00	88.45	357.53	5,534.33	6,500.36	-821.44	6,544.93	2.82	-0.34	-2.80
12,097.00	89.80	358.99	5,535.72	6,591.30	-824.20	6,635.81	2.18	1.48	1.60
12,187.00	90.61	358.42	5,535.40	6,681.27	-826.23	6,725.66	1.10	0.90	-0.63
12,279.00	91.28	0.57	5,533.88	6,773.25	-827.04	6,817.41	2.45	0.73	2.34
12,373.00	92.74	359.82	5,530.58	6,867.19	-826.72	6,911.03	1.75	1.55	-0.80
12,464.00	94.30	359.85	5,525.00	6,958.02	-826.99	7,001.60	1.71	1.71	0.03
12,555.00	92.23	0.86	5,519.81	7,048.86	-826.42	7,092.11	2.53	-2.27	1.11
12,647.00	90.78	1.07	5,517.40	7,140.81	-824.87	7,183.66	1.59	-1.58	0.23
12,740.00	88.89	2.10	5,517.66	7,233.77	-822.30	7,276.12	2.31	-2.03	1.11
12,831.00	89.54	2.22	5,518.91	7,324.70	-818.87	7,366.49	0.73	0.71	0.13
12,923.00	90.41	3.15	5,518.95	7,416.60	-814.56	7,457.76	1.38	0.95	1.01
13,014.00	88.61	2.17	5,519.73	7,507.49	-810.34	7,548.04	2.25	-1.98	-1.08
13,106.00	89.14	1.99	5,521.54	7,599.41	-807.00	7,639.41	0.61	0.58	-0.20
13,197.00	90.51	2.25	5,521.81	7,690.35	-803.63	7,729.79	1.53	1.51	0.29

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Razor #25N-2437
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Well:	Razor #25N-2437	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	COMPASS_ROCKIES

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)
13,289.00	89.26	1.01	5,522.00	7,782.30	-801.02	7,821.26	1.91	-1.36	-1.35
13,380.00	89.66	359.81	5,522.86	7,873.30	-800.37	7,911.91	1.39	0.44	-1.32
13,472.00	88.67	0.46	5,524.20	7,965.28	-800.15	8,003.60	1.29	-1.08	0.71
13,563.00	88.72	0.83	5,526.27	8,056.26	-799.12	8,094.20	0.41	0.05	0.41
13,655.00	89.57	0.82	5,527.64	8,148.23	-797.80	8,185.79	0.92	0.92	-0.01
13,747.00	88.17	0.40	5,529.46	8,240.21	-796.82	8,277.40	1.59	-1.52	-0.46
13,839.00	86.79	359.36	5,533.50	8,332.12	-797.01	8,369.04	1.88	-1.50	-1.13
13,931.00	86.75	359.39	5,538.69	8,423.96	-798.02	8,460.68	0.05	-0.04	0.03
14,022.00	87.24	358.81	5,543.46	8,514.83	-799.44	8,551.37	0.83	0.54	-0.64
14,112.00	88.81	359.28	5,546.56	8,604.76	-800.94	8,641.14	1.82	1.74	0.52
14,203.00	89.96	359.58	5,547.53	8,695.75	-801.85	8,731.91	1.31	1.26	0.33
14,294.00	91.06	359.33	5,546.72	8,786.74	-802.71	8,822.69	1.24	1.21	-0.27
14,385.00	89.67	0.17	5,546.14	8,877.73	-803.11	8,913.43	1.78	-1.53	0.92
14,477.00	89.58	356.94	5,546.75	8,969.69	-805.43	9,005.28	3.51	-0.10	-3.51
14,568.00	89.27	356.04	5,547.66	9,060.51	-811.00	9,096.26	1.05	-0.34	-0.99
14,660.00	88.93	358.98	5,549.11	9,152.40	-815.00	9,188.18	3.22	-0.37	3.20
14,752.00	89.83	0.56	5,550.10	9,244.39	-815.37	9,279.91	1.98	0.98	1.72
14,843.00	90.34	0.06	5,549.97	9,335.39	-814.87	9,370.59	0.78	0.56	-0.55
14,935.00	91.72	0.71	5,548.31	9,427.37	-814.25	9,462.23	1.66	1.50	0.71
15,027.00	92.30	0.59	5,545.09	9,519.31	-813.21	9,553.80	0.64	0.63	-0.13
15,118.00	92.97	359.93	5,540.90	9,610.21	-812.80	9,644.39	1.03	0.74	-0.73
15,210.00	91.88	359.96	5,537.01	9,702.13	-812.89	9,736.02	1.19	-1.18	0.03
15,300.00	88.81	0.31	5,536.47	9,792.11	-812.68	9,825.71	3.43	-3.41	0.39
15,392.00	89.24	359.91	5,538.03	9,884.10	-812.50	9,917.40	0.64	0.47	-0.43
15,483.00	91.26	1.21	5,537.64	9,975.09	-811.61	10,008.03	2.64	2.22	1.43
15,575.00	92.70	1.28	5,534.46	10,067.01	-809.61	10,099.51	1.57	1.57	0.08
15,650.00	93.94	1.09	5,530.11	10,141.87	-808.06	10,174.01	1.67	1.65	-0.25
15,712.00	93.94	1.09	5,525.85	10,203.71	-806.89	10,235.56	0.00	0.00	0.00

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Razor #25N-2437
Project:	Weld County, CO	TVD Reference:	KBE @ 4722.00usft (Original Well Elev)
Site:	Sec 25-T10N-R58W	MD Reference:	KBE @ 4722.00usft (Original Well Elev)
Well:	Razor #25N-2437	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	COMPASS_ROCKIES

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
SL 2437	0.00	0.00	0.00	0.00	0.00	1,539,910.48	3,466,390.91	40.803275°N	103.815286°W
- actual wellpath hits target center									
- Point									
600' Entry 2437	0.00	0.00	5,464.20	284.14	-831.32	1,540,178.77	3,465,554.34	40.804055°N	103.818289°W
- actual wellpath misses target center by 0.01usft at 5776.00usft MD (5464.20 TVD, 284.14 N, -831.32 E)									
- Point									
7" Casing PT 2437	0.00	0.00	5,520.59	509.13	-829.19	1,540,403.76	3,465,552.20	40.804672°N	103.818281°W
- actual wellpath hits target center									
- Point									
PBHL 2437	0.00	0.00	5,525.00	10,205.59	-807.92	1,550,098.87	3,465,389.25	40.831286°N	103.818206°W
- actual wellpath misses target center by 2.31usft at 15712.00usft MD (5525.85 TVD, 10203.71 N, -806.89 E)									
- Point									
BHL 2437	0.00	0.00	5,525.85	10,203.71	-806.89	1,550,097.02	3,465,390.32	40.831281°N	103.818202°W
- actual wellpath misses target center by 0.01usft at 15712.00usft MD (5525.85 TVD, 10203.71 N, -806.89 E)									
- Point									

Design Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
5,776.00	5,464.20	284.14	-831.32	600' Entry
6,010.00	5,520.59	509.13	-829.19	7" Casing PT

Checked By: _____ Approved By: _____ Date: _____