



WHITING PETROLEUM CORP.

Project: Weld County, CO
Site: Sec 8-T10N-R57W
Well: Horsetail #08D-1735
Wellbore: Original Hole
Design: Original Hole

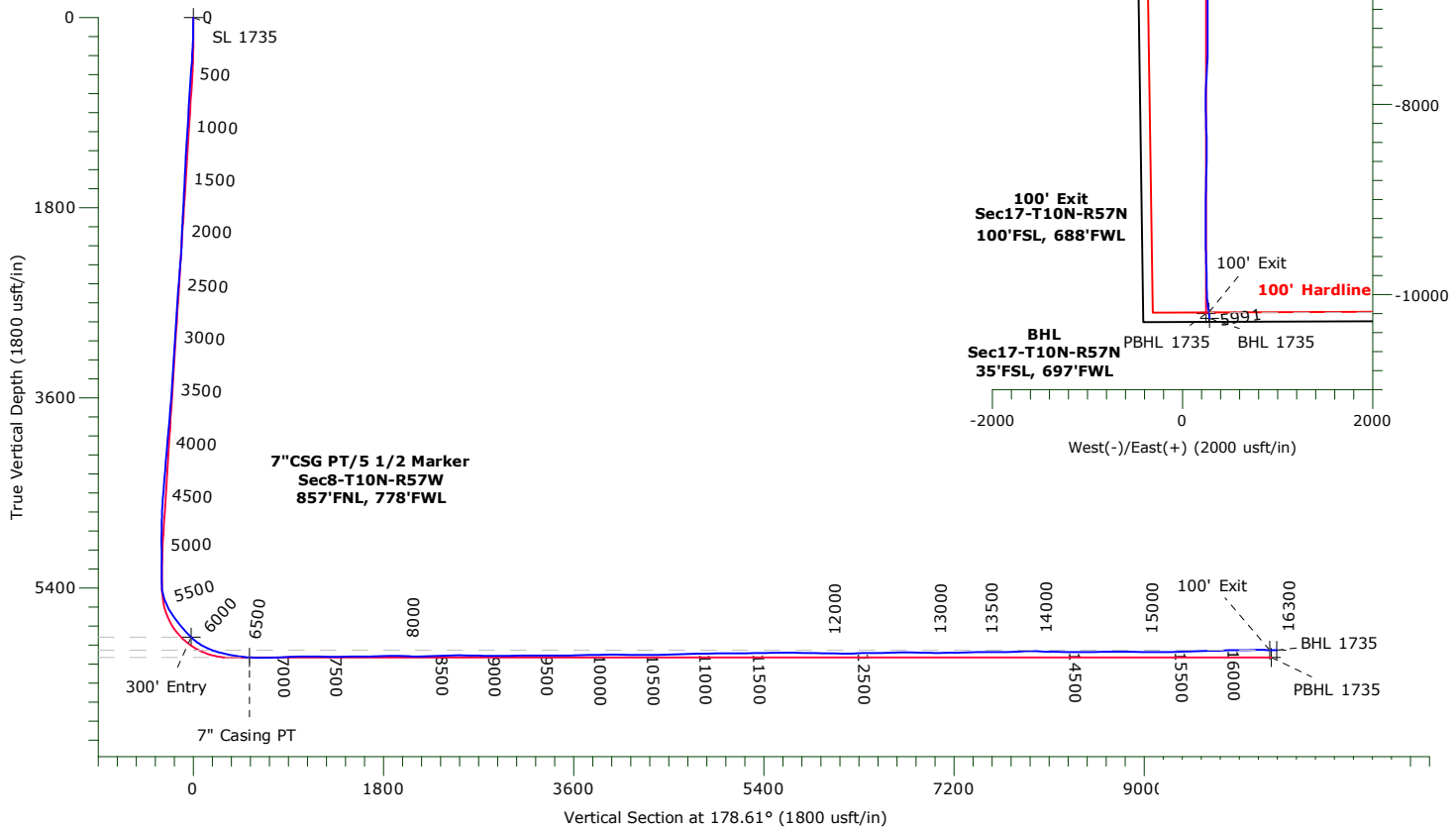


ANNOTATIONS

TVD	MD	+N/-S	+E/-W	Annotation
5866.72	5972.00	25.63	240.84	300' Entry
6059.09	6571.00	-528.63	224.29	7" Casing PT
5989.64	16233.00	-10185.37	276.02	100' Exit

LEGEND

- Horsetail #08D-1735, Original Hole, Plan #2 VO
- Original Hole



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 1735	0.00	0.00	0.00	1560706.80	3474820.79	40° 51' 35.639845 N	103° 47' 0.200000 W	Point
300' Entry 1735	5866.72	25.63	240.84	1560737.09	3475061.09	40° 51' 35.893076 N	103° 46' 57.065656 W	Point
100' Exit 1735	5989.64	-10185.37	276.02	1550528.69	3475293.92	40° 49' 55.000377 N	103° 46' 56.609311 W	Point
BHL 1735	5990.76	-10251.68	285.50	1550462.57	3475304.68	40° 49' 54.345178 N	103° 46' 56.485997 W	Point
7\"CSG PT1735	6059.09	-528.63	224.29	1560182.62	3475055.27	40° 51' 30.416580 N	103° 46' 57.281107 W	Point
PBHL 1735	6060.00	-10201.61	246.76	1550511.89	3475264.98	40° 49' 54.839961 N	103° 46' 56.990000 W	Point

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Weld County, CO

Sec 8-T10N-R57W

Horsetail #08D-1735

Original Hole

Design: Original Hole

Standard Survey Report

24 May, 2016

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08D-1735
Project:	Weld County, CO	TVD Reference:	KBE @ 4976.5usft (Original Well Elev)
Site:	Sec 8-T10N-R57W	MD Reference:	KBE @ 4976.5usft (Original Well Elev)
Well:	Horsetail #08D-1735	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 8-T10N-R57W		
Site Position:		Northing:	1,561,022.64 usft
From:	Lat/Long	Easting:	3,474,249.13 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13.20 in
		Latitude:	40° 51' 38.869200 N
		Longitude:	103° 47' 7.558800 W
		Grid Convergence:	1.11 °

Well	Horsetail #08D-1735		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	40° 51' 35.639845 N
		Longitude:	103° 47' 0.200000 W
		Ground Level:	4,958.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/6/2015	7.86	67.44	53,082

Design	Original Hole				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	178.61	

Survey Program	Date	5/9/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
223.0	16,236.0	Survey #1 (Original Hole)	MWD+IFR1+MS+sag	Fixed:v2:crustal dec & 3-axis correction + sag OWSG BLIND	
16,300.0	16,300.0	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)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
223.0	1.53	345.27	223.0	2.9	-0.8	-2.9	0.69	0.69	0.00	
313.0	3.75	28.48	312.9	6.6	0.3	-6.6	3.15	2.47	48.01	
405.0	5.38	38.96	404.6	12.6	4.5	-12.5	1.98	1.77	11.39	
497.0	5.32	38.54	496.2	19.3	9.9	-19.1	0.08	-0.07	-0.46	
587.0	5.25	35.98	585.8	25.9	14.9	-25.5	0.27	-0.08	-2.84	
678.0	4.99	40.26	676.4	32.3	19.9	-31.8	0.51	-0.29	4.70	
769.0	4.77	41.49	767.1	38.2	24.9	-37.5	0.27	-0.24	1.35	
860.0	4.62	39.95	857.8	43.8	29.8	-43.1	0.22	-0.16	-1.69	
951.0	4.51	42.87	948.5	49.2	34.6	-48.4	0.28	-0.12	3.21	

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Site:	Sec 8-T10N-R57W	MD Reference:	KBE @ 4976.5usft (Original Well Elev)
Well:	Horsetail #08D-1735	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)
1,043.0	4.16	37.99	1,040.3	54.5	39.1	-53.5	0.55	-0.38	-5.30
1,134.0	4.18	35.32	1,131.0	59.8	43.1	-58.8	0.21	0.02	-2.93
1,226.0	3.95	37.36	1,222.8	65.1	46.9	-63.9	0.30	-0.25	2.22
1,317.0	4.12	37.73	1,313.6	70.2	50.8	-68.9	0.19	0.19	0.41
1,409.0	4.01	40.19	1,405.3	75.2	54.9	-73.9	0.22	-0.12	2.67
1,500.0	4.19	43.03	1,496.1	80.1	59.2	-78.6	0.30	0.20	3.12
1,592.0	4.06	40.05	1,587.9	85.0	63.6	-83.5	0.27	-0.14	-3.24
1,684.0	4.64	47.49	1,679.6	90.0	68.5	-88.4	0.88	0.63	8.09
1,776.0	4.78	44.51	1,771.3	95.3	73.9	-93.5	0.31	0.15	-3.24
1,867.0	4.09	41.59	1,862.0	100.4	78.7	-98.5	0.80	-0.76	-3.21
1,955.0	2.90	37.57	1,949.8	104.5	82.2	-102.5	1.38	-1.35	-4.57
1,975.0	2.89	38.40	1,969.8	105.3	82.8	-103.3	0.22	-0.05	4.15
2,116.0	1.98	28.16	2,110.7	110.3	86.1	-108.1	0.71	-0.65	-7.26
2,211.0	4.59	15.36	2,205.5	115.4	87.9	-113.2	2.84	2.75	-13.47
2,305.0	4.57	12.23	2,299.2	122.7	89.7	-120.4	0.27	-0.02	-3.33
2,399.0	5.71	39.95	2,392.9	129.9	93.5	-127.6	2.87	1.21	29.49
2,493.0	5.86	37.48	2,486.4	137.3	99.4	-134.8	0.31	0.16	-2.63
2,588.0	5.46	36.99	2,580.9	144.8	105.1	-142.2	0.42	-0.42	-0.52
2,682.0	5.95	52.58	2,674.5	151.3	111.7	-148.5	1.72	0.52	16.59
2,776.0	5.91	50.03	2,768.0	157.4	119.2	-154.4	0.28	-0.04	-2.71
2,871.0	5.71	49.73	2,862.5	163.6	126.6	-160.4	0.21	-0.21	-0.32
2,965.0	5.80	48.72	2,956.0	169.7	133.7	-166.4	0.14	0.10	-1.07
3,059.0	5.52	47.74	3,049.5	175.9	140.6	-172.4	0.32	-0.30	-1.04
3,153.0	5.55	44.60	3,143.1	182.2	147.2	-178.5	0.32	0.03	-3.34
3,247.0	4.97	42.09	3,236.7	188.4	153.1	-184.7	0.66	-0.62	-2.67
3,342.0	4.52	38.14	3,331.4	194.4	158.2	-190.5	0.59	-0.47	-4.16
3,437.0	4.07	41.30	3,426.1	199.9	162.7	-195.9	0.54	-0.47	3.33
3,531.0	5.28	35.06	3,519.8	205.9	167.4	-201.8	1.39	1.29	-6.64
3,626.0	5.22	31.83	3,614.4	213.2	172.2	-209.0	0.32	-0.06	-3.40
3,720.0	5.39	28.50	3,708.0	220.7	176.5	-216.4	0.37	0.18	-3.54
3,814.0	7.10	35.85	3,801.4	229.3	182.0	-224.8	2.00	1.82	7.82
3,908.0	6.74	34.04	3,894.7	238.6	188.5	-233.9	0.45	-0.38	-1.93
4,003.0	5.95	36.30	3,989.2	247.2	194.6	-242.4	0.87	-0.83	2.38
4,121.0	5.46	34.30	4,106.6	256.7	201.4	-251.8	0.45	-0.42	-1.69
4,215.0	5.34	34.50	4,200.2	264.0	206.4	-258.9	0.13	-0.13	0.21
4,310.0	5.37	31.74	4,294.7	271.5	211.2	-266.3	0.27	0.03	-2.91
4,404.0	5.64	29.41	4,388.3	279.2	215.8	-273.9	0.37	0.29	-2.48
4,498.0	5.44	30.18	4,481.9	287.1	220.3	-281.7	0.23	-0.21	0.82
4,592.0	5.79	45.11	4,575.4	294.3	225.9	-288.7	1.59	0.37	15.88
4,686.0	3.64	41.42	4,669.1	299.9	231.2	-294.2	2.31	-2.29	-3.93
4,781.0	1.57	27.95	4,764.0	303.3	233.8	-297.5	2.26	-2.18	-14.18
4,874.0	1.71	29.33	4,857.0	305.6	235.1	-299.8	0.16	0.15	1.48
4,968.0	1.62	106.68	4,950.9	306.5	237.1	-300.6	2.21	-0.10	82.29

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Survey

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5,063.0	1.40	98.05	5,045.9	305.9	239.5	-300.0	0.33	-0.23	-9.08
5,157.0	1.88	96.38	5,139.9	305.6	242.2	-299.6	0.51	0.51	-1.78
5,251.0	1.69	97.10	5,233.8	305.2	245.1	-299.2	0.20	-0.20	0.77
5,345.0	1.66	88.33	5,327.8	305.1	247.8	-299.0	0.27	-0.03	-9.33
5,439.0	5.78	154.88	5,421.6	300.9	251.2	-294.7	5.68	4.38	70.80
5,534.0	20.82	178.62	5,513.8	279.5	253.6	-273.3	16.52	15.83	24.99
5,628.0	30.90	180.77	5,598.3	238.6	253.7	-232.4	10.77	10.72	2.29
5,723.0	34.43	184.14	5,678.3	187.4	251.5	-181.2	4.18	3.72	3.55
5,817.0	39.76	183.62	5,753.2	130.8	247.6	-124.8	5.68	5.67	-0.55
5,911.0	43.34	184.40	5,823.6	68.7	243.3	-62.7	3.85	3.81	0.83
6,006.0	48.40	180.92	5,889.7	0.6	240.2	5.3	5.94	5.33	-3.66
6,100.0	60.66	181.88	5,944.1	-75.8	238.3	81.6	13.07	13.04	1.02
6,195.0	68.54	181.49	5,984.9	-161.5	235.8	167.2	8.30	8.29	-0.41
6,289.0	75.32	181.35	6,014.0	-250.8	233.5	256.4	7.21	7.21	-0.15
6,383.0	80.27	181.27	6,033.9	-342.6	231.4	348.1	5.27	5.27	-0.09
6,477.0	80.68	182.26	6,049.4	-435.3	228.6	440.7	1.13	0.44	1.05
6,571.0	87.50	183.01	6,059.1	-528.6	224.3	533.9	7.30	7.26	0.80
6,666.0	89.92	181.15	6,061.2	-623.5	220.8	628.7	3.21	2.55	-1.96
6,760.0	90.67	180.92	6,060.7	-717.5	219.1	722.6	0.83	0.80	-0.24
6,854.0	92.22	177.92	6,058.4	-811.5	220.1	816.6	3.59	1.65	-3.19
6,949.0	93.37	177.08	6,053.7	-906.3	224.2	911.4	1.50	1.21	-0.88
7,043.0	90.39	179.42	6,050.7	-1,000.2	227.1	1,005.4	4.03	-3.17	2.49
7,137.0	89.83	180.40	6,050.5	-1,094.1	227.2	1,099.3	1.20	-0.60	1.04
7,232.0	89.38	179.87	6,051.1	-1,189.1	227.0	1,194.3	0.73	-0.47	-0.56
7,326.0	89.57	180.09	6,052.0	-1,283.1	227.1	1,288.3	0.31	0.20	0.23
7,420.0	90.49	180.70	6,051.9	-1,377.1	226.4	1,382.2	1.17	0.98	0.65
7,515.0	90.58	179.91	6,051.1	-1,472.1	225.9	1,477.2	0.84	0.09	-0.83
7,609.0	90.19	179.33	6,050.4	-1,566.1	226.5	1,571.2	0.74	-0.41	-0.62
7,703.0	91.05	178.84	6,049.4	-1,660.1	228.0	1,665.2	1.05	0.91	-0.52
7,798.0	92.02	179.20	6,046.9	-1,755.1	229.7	1,760.1	1.09	1.02	0.38
7,892.0	90.67	177.64	6,044.7	-1,849.0	232.2	1,854.1	2.19	-1.44	-1.66
7,987.0	88.59	177.17	6,045.3	-1,943.9	236.5	1,949.1	2.24	-2.19	-0.49
8,081.0	88.35	177.32	6,047.8	-2,037.7	241.1	2,043.0	0.30	-0.26	0.16
8,175.0	90.47	179.44	6,048.7	-2,131.7	243.7	2,137.0	3.19	2.26	2.26
8,270.0	91.71	178.48	6,046.9	-2,226.7	245.4	2,232.0	1.65	1.31	-1.01
8,364.0	92.35	178.10	6,043.6	-2,320.6	248.2	2,325.9	0.79	0.68	-0.40
8,459.0	92.04	179.42	6,040.0	-2,415.5	250.3	2,420.8	1.43	-0.33	1.39
8,553.0	89.70	179.90	6,038.5	-2,509.4	250.9	2,514.8	2.54	-2.49	0.51
8,648.0	88.86	179.53	6,039.7	-2,604.4	251.3	2,609.8	0.97	-0.88	-0.39
8,742.0	87.84	178.66	6,042.4	-2,698.4	252.8	2,703.7	1.43	-1.09	-0.93
8,837.0	89.11	179.27	6,045.0	-2,793.3	254.5	2,798.7	1.48	1.34	0.64
8,931.0	90.31	178.41	6,045.4	-2,887.3	256.4	2,892.7	1.57	1.28	-0.91
9,025.0	91.26	179.95	6,044.2	-2,981.3	257.8	2,986.7	1.92	1.01	1.64

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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)
9,120.0	92.36	180.83	6,041.2	-3,076.2	257.1	3,081.6	1.48	1.16	0.93
9,214.0	89.84	180.09	6,039.4	-3,170.2	256.4	3,175.5	2.79	-2.68	-0.79
9,308.0	89.75	180.36	6,039.7	-3,264.2	256.0	3,269.4	0.30	-0.10	0.29
9,403.0	90.03	181.34	6,039.9	-3,359.2	254.6	3,364.4	1.07	0.29	1.03
9,497.0	90.34	181.41	6,039.6	-3,453.2	252.3	3,458.3	0.34	0.33	0.07
9,591.0	90.27	180.57	6,039.1	-3,547.1	250.7	3,552.2	0.90	-0.07	-0.89
9,686.0	91.05	179.86	6,038.0	-3,642.1	250.4	3,647.1	1.11	0.82	-0.75
9,780.0	91.55	179.66	6,035.8	-3,736.1	250.8	3,741.1	0.57	0.53	-0.21
9,875.0	90.79	179.83	6,033.9	-3,831.1	251.2	3,836.1	0.82	-0.80	0.18
9,969.0	91.12	180.61	6,032.3	-3,925.1	250.8	3,930.0	0.90	0.35	0.83
10,063.0	89.03	181.15	6,032.2	-4,019.1	249.4	4,023.9	2.30	-2.22	0.57
10,157.0	89.26	180.88	6,033.6	-4,113.0	247.7	4,117.8	0.38	0.24	-0.29
10,252.0	89.24	180.11	6,034.9	-4,208.0	246.9	4,212.8	0.81	-0.02	-0.81
10,346.0	90.55	179.18	6,035.0	-4,302.0	247.5	4,306.8	1.71	1.39	-0.99
10,440.0	91.09	178.73	6,033.7	-4,396.0	249.2	4,400.7	0.75	0.57	-0.48
10,535.0	91.20	178.33	6,031.8	-4,490.9	251.6	4,495.7	0.44	0.12	-0.42
10,629.0	92.02	179.95	6,029.1	-4,584.9	253.0	4,589.7	1.93	0.87	1.72
10,723.0	92.38	179.48	6,025.5	-4,678.8	253.5	4,683.6	0.63	0.38	-0.50
10,816.0	91.25	181.72	6,022.6	-4,771.8	252.5	4,776.5	2.70	-1.22	2.41
10,908.0	90.29	181.29	6,021.4	-4,863.7	250.1	4,868.4	1.14	-1.04	-0.47
10,998.0	90.59	181.09	6,020.7	-4,953.7	248.2	4,958.3	0.40	0.33	-0.22
11,090.0	90.72	181.02	6,019.6	-5,045.7	246.5	5,050.2	0.16	0.14	-0.08
11,182.0	89.73	181.04	6,019.3	-5,137.7	244.9	5,142.1	1.08	-1.08	0.02
11,271.0	90.00	180.05	6,019.5	-5,226.6	244.0	5,231.0	1.15	0.30	-1.11
11,363.0	90.89	179.06	6,018.7	-5,318.6	244.8	5,323.0	1.45	0.97	-1.08
11,454.0	91.12	179.27	6,017.2	-5,409.6	246.1	5,414.0	0.34	0.25	0.23
11,545.0	92.35	179.97	6,014.4	-5,500.6	246.7	5,504.9	1.56	1.35	0.77
11,635.0	90.20	178.26	6,012.4	-5,590.5	248.1	5,594.9	3.05	-2.39	-1.90
11,728.0	87.98	178.53	6,013.9	-5,683.5	250.7	5,687.9	2.40	-2.39	0.29
11,819.0	88.34	177.79	6,016.8	-5,774.4	253.6	5,778.8	0.90	0.40	-0.81
11,911.0	88.80	179.48	6,019.1	-5,866.3	255.8	5,870.8	1.90	0.50	1.84
12,003.0	89.58	179.44	6,020.4	-5,958.3	256.7	5,962.8	0.85	0.85	-0.04
12,093.0	89.69	178.97	6,021.0	-6,048.3	257.9	6,052.8	0.54	0.12	-0.52
12,185.0	89.68	179.38	6,021.5	-6,140.3	259.2	6,144.8	0.45	-0.01	0.45
12,276.0	90.71	178.92	6,021.2	-6,231.3	260.6	6,235.8	1.24	1.13	-0.51
12,368.0	91.82	178.32	6,019.1	-6,323.2	262.8	6,327.7	1.37	1.21	-0.65
12,460.0	90.48	180.29	6,017.3	-6,415.2	263.9	6,419.7	2.59	-1.46	2.14
12,551.0	91.30	180.78	6,015.9	-6,506.2	263.1	6,510.6	1.05	0.90	0.54
12,643.0	92.06	180.13	6,013.2	-6,598.1	262.3	6,602.6	1.09	0.83	-0.71
12,735.0	90.55	180.96	6,011.1	-6,690.1	261.5	6,694.5	1.87	-1.64	0.90
12,826.0	89.27	179.79	6,011.2	-6,781.1	260.9	6,785.4	1.91	-1.41	-1.29
12,917.0	88.34	178.12	6,013.1	-6,872.1	262.5	6,876.4	2.10	-1.02	-1.84
13,010.0	89.10	180.37	6,015.2	-6,965.0	263.7	6,969.4	2.55	0.82	2.42
13,102.0	90.14	179.56	6,015.8	-7,057.0	263.8	7,061.3	1.43	1.13	-0.88

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08D-1735
Project:	Weld County, CO	TVD Reference:	KBE @ 4976.5usft (Original Well Elev)
Site:	Sec 8-T10N-R57W	MD Reference:	KBE @ 4976.5usft (Original Well Elev)
Well:	Horsetail #08D-1735	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)
13,192.0	90.75	180.41	6,015.1	-7,147.0	263.8	7,151.3	1.16	0.68	0.94
13,284.0	91.43	180.45	6,013.4	-7,239.0	263.1	7,243.2	0.74	0.74	0.04
13,375.0	92.15	179.12	6,010.5	-7,329.9	263.5	7,334.2	1.66	0.79	-1.46
13,467.0	89.91	179.89	6,008.9	-7,421.9	264.3	7,426.1	2.57	-2.43	0.84
13,558.0	89.86	181.93	6,009.0	-7,512.9	262.8	7,517.1	2.24	-0.05	2.24
13,650.0	90.81	183.65	6,008.5	-7,604.8	258.4	7,608.8	2.14	1.03	1.87
13,742.0	91.39	183.25	6,006.7	-7,696.6	252.8	7,700.5	0.77	0.63	-0.43
13,834.0	91.80	182.37	6,004.2	-7,788.5	248.3	7,792.2	1.05	0.45	-0.96
13,926.0	92.12	181.47	6,001.0	-7,880.3	245.2	7,884.0	1.04	0.35	-0.98
14,018.0	88.75	180.09	6,000.3	-7,972.3	244.0	7,975.9	3.96	-3.66	-1.50
14,109.0	87.35	179.23	6,003.4	-8,063.3	244.5	8,066.8	1.81	-1.54	-0.95
14,200.0	89.05	178.67	6,006.3	-8,154.2	246.2	8,157.8	1.97	1.87	-0.62
14,291.0	89.55	177.88	6,007.4	-8,245.2	248.9	8,248.8	1.03	0.55	-0.87
14,382.0	89.78	177.79	6,007.9	-8,336.1	252.4	8,339.8	0.27	0.25	-0.10
14,474.0	90.25	179.78	6,007.9	-8,428.1	254.3	8,431.7	2.22	0.51	2.16
14,565.0	90.79	181.15	6,007.1	-8,519.1	253.6	8,522.7	1.62	0.59	1.51
14,656.0	91.26	180.02	6,005.5	-8,610.0	252.6	8,613.6	1.34	0.52	-1.24
14,746.0	89.94	181.67	6,004.5	-8,700.0	251.3	8,703.5	2.35	-1.47	1.83
14,837.0	90.08	181.39	6,004.5	-8,791.0	248.9	8,794.4	0.34	0.15	-0.31
14,928.0	88.37	181.16	6,005.7	-8,881.9	246.9	8,885.3	1.90	-1.88	-0.25
15,019.0	88.90	180.80	6,007.9	-8,972.9	245.3	8,976.2	0.70	0.58	-0.40
15,111.0	89.70	180.95	6,009.0	-9,064.9	243.9	9,068.1	0.88	0.87	0.16
15,202.0	90.21	180.71	6,009.1	-9,155.9	242.6	9,159.1	0.62	0.56	-0.26
15,294.0	91.22	179.86	6,007.9	-9,247.9	242.1	9,251.0	1.43	1.10	-0.92
15,385.0	91.98	179.78	6,005.4	-9,338.8	242.4	9,342.0	0.84	0.84	-0.09
15,477.0	91.54	179.02	6,002.6	-9,430.8	243.4	9,433.9	0.95	-0.48	-0.83
15,568.0	91.62	178.66	6,000.1	-9,521.7	245.2	9,524.9	0.41	0.09	-0.40
15,659.0	92.24	177.50	5,997.0	-9,612.6	248.3	9,615.8	1.44	0.68	-1.27
15,750.0	91.23	178.98	5,994.2	-9,703.5	251.1	9,706.8	1.97	-1.11	1.63
15,842.0	91.87	179.80	5,991.8	-9,795.5	252.0	9,798.7	1.13	0.70	0.89
15,933.0	90.45	178.62	5,989.9	-9,886.5	253.3	9,889.7	2.03	-1.56	-1.30
16,025.0	90.92	177.52	5,988.8	-9,978.4	256.4	9,981.7	1.30	0.51	-1.20
16,116.0	89.97	174.91	5,988.1	-10,069.2	262.4	10,072.6	3.05	-1.04	-2.87
16,210.0	88.72	172.30	5,989.2	-10,162.6	272.9	10,166.2	3.08	-1.33	-2.78
16,236.0	89.04	171.86	5,989.7	-10,188.3	276.4	10,192.0	2.09	1.23	-1.69
16,300.0	89.04	171.86	5,990.8	-10,251.7	285.5	10,255.6	0.00	0.00	0.00

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #08D-1735
Project:	Weld County, CO	TVD Reference:	KBE @ 4976.5usft (Original Well Elev)
Site:	Sec 8-T10N-R57W	MD Reference:	KBE @ 4976.5usft (Original Well Elev)
Well:	Horsetail #08D-1735	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	COMPASS_ROCKIES

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SL 1735	0.00	0.00	0.0	0.0	0.0	1,560,706.81	3,474,820.79	40° 51' 35.639845 N	103° 47' 0.200000 W
- actual wellpath hits target center									
- Point									
300' Entry 1735	0.00	0.00	5,866.7	25.6	240.8	1,560,737.10	3,475,061.09	40° 51' 35.893076 N	103° 46' 57.065656 W
- actual wellpath hits target center									
- Point									
100' Exit 1735	0.00	0.00	5,989.6	-10,185.4	276.0	1,550,528.69	3,475,293.92	40° 49' 55.000377 N	103° 46' 56.609311 W
- actual wellpath hits target center									
- Point									
BHL 1735	0.00	0.00	5,990.8	-10,251.7	285.5	1,550,462.58	3,475,304.68	40° 49' 54.345178 N	103° 46' 56.485997 W
- actual wellpath hits target center									
- Point									
7"CSG PT1735	0.00	0.00	6,059.1	-528.6	224.3	1,560,182.62	3,475,055.27	40° 51' 30.416580 N	103° 46' 57.281108 W
- actual wellpath hits target center									
- Point									
PBHL 1735	0.00	0.00	6,060.0	-10,201.6	246.8	1,550,511.89	3,475,264.97	40° 49' 54.839961 N	103° 46' 56.990000 W
- actual wellpath misses target center by 77.5usft at 16236.0usft MD (5989.7 TVD, -10188.3 N, 276.4 E)									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
6,571.0	6,059.1	5 1/2"	5.50	6.00	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,972.0	5,866.7	25.6	240.8	300' Entry	
6,571.0	6,059.1	-528.6	224.3	7" Casing PT	
16,233.0	5,989.6	-10,185.4	276.0	100' Exit	

Checked By: _____ Approved By: _____ Date: _____