



WHITING PETROLEUM CORP.

Project: Weld County, CO

Site: Sec 7-T10N-R57W

Well: Horsetail #07E-0634

Wellbore: Original Hole

Design: Original Hole



Precision
Directional Services

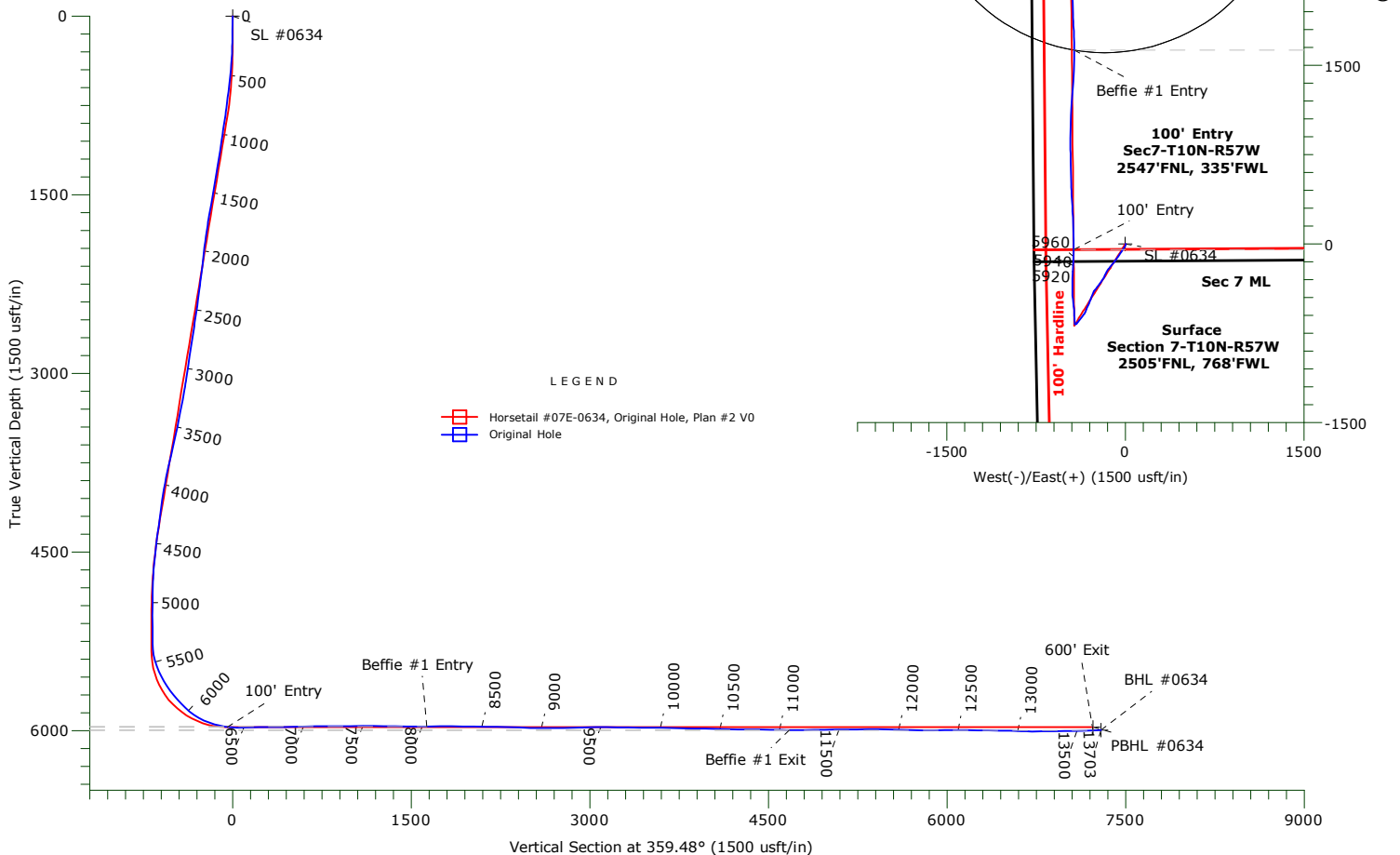
TVD	MD	+N/-S	+E/-W	Annotation
5969.6	6360.0	-47.1	-433.4	100' Entry
5964.6	8036.0	1627.1	-428.1	Beffie #1 Entry
5994.8	11084.5	4674.2	-485.0	Beffie #1 Exit
5997.4	13635.5	7224.2	-485.2	600' Exit

Beffie #1 Entry @ 8036'MD

Beffie #1 Exit @ 11084.5'MD

LEGEND

- Horsetail #07E-0634, Original Hole, Plan #2 V0
- Original Hole



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL #0634	0.0	0.0	0.0	1558397.60	3469919.53	40.853822°N	103.801264°W	Point
PBHL #0634	5971.0	7224.2	-500.1	1565610.88	3469281.12	40.873650°N	103.803072°W	Point
BHL #0634	5994.6	7291.6	-484.5	1565678.62	3469295.40	40.873835°N	103.803016°W	Point
Beffie #1 #0634	6735.7	3155.9	-174.6	1561549.56	3469684.54	40.862484°N	103.801895°W	Circle (Radius: 1550.0)

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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 7-T10N-R57W				
Site Position:		Northing:	1,558,398.04 usft	Latitude:	40.853825°N	
From:	Lat/Long	Easting:	3,469,889.54 usft	Longitude:	103.801372°W	
Position Uncertainty:		0.0 usft	Slot Radius:	13.20 in	Grid Convergence:	1.10 °

Well	Horsetail #07E-0634					
Well Position	+N-S	0.0 usft	Northing:	1,558,397.60 usft	Latitude:	40.853822°N
	+E-W	0.0 usft	Easting:	3,469,919.53 usft	Longitude:	103.801264°W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,925.6 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/07/15	7.88	67.40	52,898

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	359.48	

Survey Program	Date	12/29/15			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
223.0	13,639.0	Survey #1 (Original Hole)	MWD+IFR+MS	MWD + IFR + Multi Station	
13,703.0	13,703.0	Survey #2 (Original Hole)	BLIND	OWSG 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	1.38	120.88	223.0	-1.4	2.3	-1.4	0.62	0.62	0.00
314.0	3.18	185.55	313.9	-4.5	3.0	-4.5	3.16	1.98	71.07
406.0	5.07	202.28	405.7	-10.8	1.2	-10.8	2.41	2.05	18.18
498.0	6.44	208.67	497.2	-19.0	-2.8	-19.0	1.64	1.49	6.95
589.0	7.89	209.49	587.5	-29.0	-8.3	-28.9	1.60	1.59	0.90
681.0	9.15	214.64	678.5	-40.5	-15.6	-40.3	1.60	1.37	5.60
772.0	8.14	215.10	768.4	-51.7	-23.4	-51.5	1.11	-1.11	0.51
863.0	10.59	213.55	858.2	-63.9	-31.7	-63.7	2.71	2.69	-1.70
955.0	9.79	213.09	948.8	-77.5	-40.7	-77.2	0.87	-0.87	-0.50

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
1,047.0	11.05	214.33	1,039.3	-91.4	-49.9	-90.9	1.39	1.37	1.35
1,138.0	10.70	214.46	1,128.6	-105.5	-59.6	-105.0	0.39	-0.38	0.14
1,289.0	11.05	217.55	1,276.9	-128.6	-76.4	-127.9	0.45	0.23	2.05
1,322.0	10.83	218.34	1,309.3	-133.5	-80.2	-132.8	0.81	-0.67	2.39
1,415.0	12.54	216.23	1,400.4	-148.5	-91.6	-147.7	1.89	1.84	-2.27
1,507.0	12.99	217.80	1,490.1	-164.7	-103.9	-163.8	0.62	0.49	1.71
1,599.0	12.82	219.57	1,579.8	-180.8	-116.7	-179.7	0.47	-0.18	1.92
1,690.0	12.87	219.99	1,668.5	-196.3	-129.6	-195.1	0.12	0.05	0.46
1,781.0	11.03	215.59	1,757.5	-211.2	-141.2	-209.9	2.25	-2.02	-4.84
1,873.0	9.70	216.38	1,848.0	-224.6	-150.9	-223.2	1.45	-1.45	0.86
1,964.0	8.09	210.89	1,937.9	-236.2	-158.8	-234.8	2.00	-1.77	-6.03
2,037.0	7.68	204.89	2,010.2	-245.1	-163.5	-243.6	1.26	-0.56	-8.22
2,132.0	7.45	202.32	2,104.4	-256.5	-168.5	-255.0	0.43	-0.24	-2.71
2,227.0	7.34	198.01	2,198.6	-268.0	-172.7	-266.4	0.60	-0.12	-4.54
2,321.0	8.64	213.88	2,291.7	-279.6	-178.5	-277.9	2.71	1.38	16.88
2,417.0	8.58	211.94	2,386.6	-291.6	-186.3	-289.9	0.31	-0.06	-2.02
2,512.0	10.29	212.71	2,480.4	-304.8	-194.6	-303.0	1.80	1.80	0.81
2,607.0	9.44	211.33	2,573.9	-318.6	-203.3	-316.7	0.93	-0.89	-1.45
2,702.0	11.66	217.97	2,667.3	-332.8	-213.2	-330.9	2.66	2.34	6.99
2,797.0	11.50	218.12	2,760.4	-347.8	-225.0	-345.8	0.17	-0.17	0.16
2,892.0	11.12	217.16	2,853.6	-362.6	-236.4	-360.4	0.45	-0.40	-1.01
2,987.0	10.65	218.86	2,946.9	-376.7	-247.4	-374.4	0.60	-0.49	1.79
3,083.0	10.11	219.69	3,041.3	-390.1	-258.3	-387.7	0.58	-0.56	0.86
3,178.0	11.86	203.85	3,134.6	-405.4	-267.6	-403.0	3.66	1.84	-16.67
3,271.0	10.86	200.60	3,225.7	-422.4	-274.6	-419.9	1.28	-1.08	-3.49
3,367.0	11.61	202.01	3,319.9	-439.8	-281.4	-437.2	0.83	0.78	1.47
3,462.0	11.54	200.25	3,413.0	-457.6	-288.2	-455.0	0.38	-0.07	-1.85
3,557.0	14.29	204.95	3,505.6	-477.1	-296.5	-474.4	3.10	2.89	4.95
3,651.0	13.99	202.85	3,596.7	-498.1	-305.8	-495.3	0.63	-0.32	-2.23
3,747.0	13.94	203.89	3,689.9	-519.4	-315.0	-516.5	0.27	-0.05	1.08
3,842.0	13.56	202.44	3,782.1	-540.2	-323.9	-537.2	0.54	-0.40	-1.53
3,938.0	12.56	201.44	3,875.7	-560.3	-332.0	-557.2	1.07	-1.04	-1.04
4,034.0	10.92	203.03	3,969.7	-578.4	-339.3	-575.3	1.74	-1.71	1.66
4,129.0	10.49	221.02	4,063.0	-593.2	-348.5	-590.0	3.53	-0.45	18.94
4,248.0	10.36	218.86	4,180.1	-609.7	-362.4	-606.4	0.35	-0.11	-1.82
4,343.0	9.79	218.46	4,273.6	-622.6	-372.7	-619.2	0.60	-0.60	-0.42
4,439.0	9.29	216.79	4,368.3	-635.2	-382.5	-631.7	0.60	-0.52	-1.74
4,534.0	8.57	217.13	4,462.1	-647.0	-391.3	-643.4	0.76	-0.76	0.36
4,630.0	7.71	222.54	4,557.1	-657.5	-400.0	-653.8	1.20	-0.90	5.64
4,725.0	6.37	220.56	4,651.4	-666.2	-407.7	-662.4	1.43	-1.41	-2.08
4,821.0	2.83	238.36	4,747.1	-671.5	-413.2	-667.7	3.93	-3.69	18.54
4,916.0	2.24	239.73	4,842.0	-673.6	-416.8	-669.8	0.62	-0.62	1.44
5,011.0	2.21	243.62	4,936.9	-675.4	-420.1	-671.5	0.16	-0.03	4.09

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
5,107.0	1.75	264.91	5,032.9	-676.3	-423.2	-672.5	0.90	-0.48	22.18
5,202.0	0.89	2.14	5,127.9	-675.7	-424.6	-671.8	2.17	-0.91	102.35
5,297.0	0.98	45.46	5,222.9	-674.4	-424.0	-670.5	0.73	0.09	45.60
5,344.0	0.85	25.69	5,269.9	-673.8	-423.6	-670.0	0.72	-0.28	-42.06
5,391.0	4.52	0.04	5,316.8	-671.7	-423.4	-667.8	8.02	7.81	-54.57
5,438.0	10.16	350.49	5,363.4	-665.7	-424.1	-661.8	12.24	12.00	-20.32
5,487.0	15.21	352.88	5,411.2	-655.1	-425.6	-651.2	10.36	10.31	4.88
5,534.0	20.01	357.72	5,456.0	-640.9	-426.7	-637.0	10.67	10.21	10.30
5,583.0	23.60	359.35	5,501.5	-622.7	-427.1	-618.8	7.43	7.33	3.33
5,630.0	29.28	358.62	5,543.5	-601.8	-427.5	-597.9	12.10	12.09	-1.55
5,677.0	29.76	357.61	5,584.4	-578.6	-428.3	-574.7	1.47	1.02	-2.15
5,724.0	33.96	352.75	5,624.3	-554.0	-430.4	-550.0	10.47	8.94	-10.34
5,773.0	35.02	353.05	5,664.7	-526.4	-433.8	-522.5	2.19	2.16	0.61
5,820.0	40.45	354.91	5,701.9	-497.8	-436.8	-493.8	11.80	11.55	3.96
5,868.0	41.26	353.81	5,738.2	-466.6	-439.9	-462.6	2.26	1.69	-2.29
5,915.0	45.09	356.78	5,772.5	-434.5	-442.5	-430.5	9.22	8.15	6.32
5,964.0	45.35	357.49	5,807.0	-399.8	-444.3	-395.8	1.16	0.53	1.45
6,011.0	50.14	359.50	5,838.6	-365.0	-445.2	-361.0	10.67	10.19	4.28
6,059.0	54.50	1.17	5,867.9	-327.1	-444.9	-323.0	9.49	9.08	3.48
6,106.0	60.46	2.73	5,893.2	-287.5	-443.5	-283.4	12.99	12.68	3.32
6,154.0	65.70	2.42	5,914.9	-244.7	-441.6	-240.7	10.93	10.92	-0.65
6,250.0	74.35	2.90	5,947.7	-154.7	-437.4	-150.7	9.02	9.01	0.50
6,345.0	81.42	1.66	5,967.6	-61.9	-433.8	-58.0	7.55	7.44	-1.31
6,360.0	82.91	1.04	5,969.6	-47.1	-433.4	-43.2	10.73	9.93	-4.10
100' Entry									
6,441.0	90.96	357.77	5,974.0	33.7	-434.3	37.6	10.73	9.94	-4.04
6,535.0	91.27	358.04	5,972.1	127.6	-437.7	131.6	0.44	0.33	0.29
6,631.0	90.47	358.18	5,970.7	223.6	-440.9	227.6	0.85	-0.83	0.15
6,727.0	89.87	356.57	5,970.4	319.5	-445.2	323.5	1.79	-0.63	-1.68
6,821.0	91.23	356.78	5,969.5	413.3	-450.7	417.4	1.46	1.45	0.22
6,915.0	91.57	358.85	5,967.2	507.2	-454.3	511.3	2.23	0.36	2.20
7,011.0	91.34	359.03	5,964.7	603.1	-456.1	607.3	0.30	-0.24	0.19
7,106.0	91.04	358.74	5,962.8	698.1	-457.9	702.2	0.44	-0.32	-0.31
7,201.0	89.94	356.89	5,962.0	793.0	-461.5	797.2	2.27	-1.16	-1.95
7,296.0	90.57	2.44	5,961.5	888.0	-462.1	892.1	5.88	0.66	5.84
7,391.0	90.06	1.14	5,961.0	982.9	-459.1	987.1	1.47	-0.54	-1.37
7,487.0	90.17	2.55	5,960.8	1,078.9	-456.0	1,083.0	1.47	0.11	1.47
7,581.0	89.72	4.08	5,960.9	1,172.7	-450.6	1,176.8	1.70	-0.48	1.63
7,676.0	89.22	3.95	5,961.8	1,267.5	-443.9	1,271.5	0.54	-0.53	-0.14
7,772.0	88.90	3.19	5,963.4	1,363.3	-438.0	1,367.2	0.86	-0.33	-0.79
7,867.0	89.71	2.61	5,964.5	1,458.2	-433.2	1,462.0	1.05	0.85	-0.61
7,961.0	89.89	2.12	5,964.8	1,552.1	-429.3	1,555.9	0.56	0.19	-0.52
8,036.0	90.50	359.64	5,964.6	1,627.1	-428.1	1,630.9	3.41	0.82	-3.31
Beffie #1 Entry									

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
8,055.0	90.66	359.01	5,964.4	1,646.1	-428.4	1,649.9	3.41	0.82	-3.31
8,149.0	90.26	357.78	5,963.6	1,740.0	-431.0	1,743.9	1.38	-0.43	-1.31
8,245.0	89.72	356.32	5,963.7	1,835.9	-435.9	1,839.8	1.62	-0.56	-1.52
8,340.0	89.86	358.93	5,964.0	1,930.8	-439.9	1,934.7	2.75	0.15	2.75
8,436.0	89.47	359.11	5,964.6	2,026.8	-441.5	2,030.7	0.45	-0.41	0.19
8,532.0	89.24	357.43	5,965.6	2,122.7	-444.4	2,126.7	1.77	-0.24	-1.75
8,625.0	88.96	359.42	5,967.1	2,215.7	-447.0	2,219.6	2.16	-0.30	2.14
8,721.0	88.43	359.46	5,969.3	2,311.6	-447.9	2,315.6	0.55	-0.55	0.04
8,816.0	87.55	358.92	5,972.6	2,406.6	-449.2	2,410.6	1.09	-0.93	-0.57
8,908.0	88.24	359.47	5,976.0	2,498.5	-450.5	2,502.5	0.96	0.75	0.60
8,999.0	89.29	359.48	5,978.0	2,589.5	-451.4	2,593.5	1.15	1.15	0.01
9,090.0	90.31	359.76	5,978.3	2,680.5	-452.0	2,684.5	1.16	1.12	0.31
9,182.0	91.41	358.39	5,976.9	2,772.4	-453.4	2,776.5	1.91	1.20	-1.49
9,274.0	91.10	357.54	5,974.9	2,864.4	-456.7	2,868.4	0.98	-0.34	-0.92
9,365.0	91.71	359.66	5,972.7	2,955.3	-458.9	2,959.4	2.42	0.67	2.33
9,457.0	89.86	358.76	5,971.4	3,047.3	-460.2	3,051.3	2.24	-2.01	-0.98
9,548.0	90.25	358.93	5,971.3	3,138.3	-462.0	3,142.3	0.47	0.43	0.19
9,639.0	89.46	358.03	5,971.5	3,229.2	-464.5	3,233.3	1.32	-0.87	-0.99
9,731.0	88.99	357.95	5,972.8	3,321.2	-467.7	3,325.3	0.52	-0.51	-0.09
9,823.0	89.52	357.53	5,974.0	3,413.1	-471.3	3,417.2	0.74	0.58	-0.46
9,914.0	89.66	357.93	5,974.6	3,504.0	-474.9	3,508.2	0.47	0.15	0.44
10,006.0	89.20	359.83	5,975.5	3,596.0	-476.7	3,600.2	2.12	-0.50	2.07
10,099.0	88.87	359.40	5,977.1	3,689.0	-477.3	3,693.2	0.58	-0.35	-0.46
10,191.0	88.53	359.74	5,979.2	3,780.9	-478.0	3,785.1	0.52	-0.37	0.37
10,283.0	89.49	1.49	5,980.8	3,872.9	-477.0	3,877.1	2.17	1.04	1.90
10,375.0	88.74	359.72	5,982.2	3,964.9	-476.1	3,969.1	2.09	-0.82	-1.92
10,466.0	88.50	0.46	5,984.4	4,055.9	-475.9	4,060.0	0.85	-0.26	0.81
10,557.0	88.79	0.28	5,986.6	4,146.8	-475.3	4,151.0	0.38	0.32	-0.20
10,649.0	89.02	359.75	5,988.3	4,238.8	-475.3	4,243.0	0.63	0.25	-0.58
10,741.0	89.15	358.90	5,989.8	4,330.8	-476.4	4,335.0	0.93	0.14	-0.92
10,831.0	89.38	358.81	5,990.9	4,420.8	-478.2	4,424.9	0.27	0.26	-0.10
10,923.0	89.16	358.36	5,992.1	4,512.7	-480.5	4,516.9	0.54	-0.24	-0.49
11,014.0	88.67	358.20	5,993.8	4,603.7	-483.2	4,607.9	0.57	-0.54	-0.18
11,084.5	89.76	358.90	5,994.8	4,674.2	-485.0	4,678.4	1.84	1.55	0.99
Beffie #1 Exit									
11,105.0	90.08	359.10	5,994.8	4,694.7	-485.3	4,698.9	1.84	1.55	0.99
11,197.0	90.88	358.36	5,994.1	4,786.6	-487.4	4,790.9	1.18	0.87	-0.80
11,289.0	90.85	358.16	5,992.7	4,878.6	-490.2	4,882.8	0.22	-0.03	-0.22
11,380.0	90.99	357.89	5,991.2	4,969.5	-493.3	4,973.8	0.33	0.15	-0.30
11,473.0	90.89	358.78	5,989.7	5,062.5	-496.0	5,066.8	0.96	-0.11	0.96
11,564.0	90.54	359.44	5,988.5	5,153.4	-497.4	5,157.7	0.82	-0.38	0.73
11,656.0	90.13	359.00	5,988.0	5,245.4	-498.7	5,249.7	0.65	-0.45	-0.48
11,748.0	90.70	359.79	5,987.3	5,337.4	-499.6	5,341.7	1.06	0.62	0.86

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

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)
11,839.0	88.84	0.02	5,987.7	5,428.4	-499.8	5,432.7	2.06	-2.04	0.25
11,931.0	88.29	359.28	5,990.0	5,520.4	-500.4	5,524.7	1.00	-0.60	-0.80
12,023.0	88.19	359.33	5,992.8	5,612.3	-501.5	5,616.7	0.12	-0.11	0.05
12,114.0	89.09	0.26	5,995.0	5,703.3	-501.8	5,707.6	1.42	0.99	1.02
12,206.0	89.07	359.25	5,996.5	5,795.3	-502.2	5,799.6	1.10	-0.02	-1.10
12,298.0	90.79	359.64	5,996.6	5,887.3	-503.1	5,891.6	1.92	1.87	0.42
12,389.0	91.31	0.56	5,994.9	5,978.3	-502.9	5,982.6	1.16	0.57	1.01
12,480.0	89.59	2.73	5,994.2	6,069.2	-500.3	6,073.5	3.04	-1.89	2.38
12,572.0	89.44	2.25	5,995.0	6,161.1	-496.3	6,165.4	0.55	-0.16	-0.52
12,664.0	89.29	1.67	5,996.0	6,253.1	-493.2	6,257.3	0.65	-0.16	-0.63
12,756.0	88.95	1.67	5,997.4	6,345.0	-490.5	6,349.2	0.37	-0.37	0.00
12,847.0	88.90	1.10	5,999.1	6,436.0	-488.3	6,440.1	0.63	-0.05	-0.63
12,938.0	88.41	1.10	6,001.3	6,526.9	-486.5	6,531.1	0.54	-0.54	0.00
13,030.0	88.03	0.69	6,004.1	6,618.9	-485.1	6,623.0	0.61	-0.41	-0.45
13,121.0	89.49	1.16	6,006.1	6,709.8	-483.6	6,714.0	1.69	1.60	0.52
13,212.0	91.19	0.06	6,005.5	6,800.8	-482.7	6,804.9	2.23	1.87	-1.21
13,304.0	90.85	359.25	6,003.9	6,892.8	-483.2	6,896.9	0.95	-0.37	-0.88
13,395.0	90.62	359.07	6,002.7	6,983.8	-484.6	6,987.9	0.32	-0.25	-0.20
13,486.0	90.48	359.22	6,001.9	7,074.8	-485.9	7,078.9	0.23	-0.15	0.16
13,577.0	92.22	0.81	5,999.7	7,165.7	-485.9	7,169.9	2.59	1.91	1.75
13,635.5	92.36	0.56	5,997.4	7,224.2	-485.2	7,228.3	0.48	0.24	-0.42
600' Exit									
13,639.0	92.37	0.55	5,997.2	7,227.7	-485.2	7,231.8	0.48	0.24	-0.42
13,703.0	92.37	0.55	5,994.6	7,291.6	-484.5	7,295.7	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
SL #0634	0.00	0.00	0.0	0.0	0.0	1,558,397.60	3,469,919.53	40.853822°N	103.801264°W
- hit/miss target									
- actual wellpath hits target center									
- Point									
BHL #0634	0.00	0.00	5,994.6	7,291.6	-484.5	1,565,678.62	3,469,295.40	40.873835°N	103.803016°W
- hit/miss target									
- actual wellpath hits target center									
- Point									

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0634
Project:	Weld County, CO	TVD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'GL+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0634	North Reference:	True
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	Compass_US

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,360.0	5,969.6	-47.1	-433.4	100' Entry
8,036.0	5,964.6	1,627.1	-428.1	Beffie #1 Entry
11,084.5	5,994.8	4,674.2	-485.0	Beffie #1 Exit
13,635.5	5,997.4	7,224.2	-485.2	600' Exit