



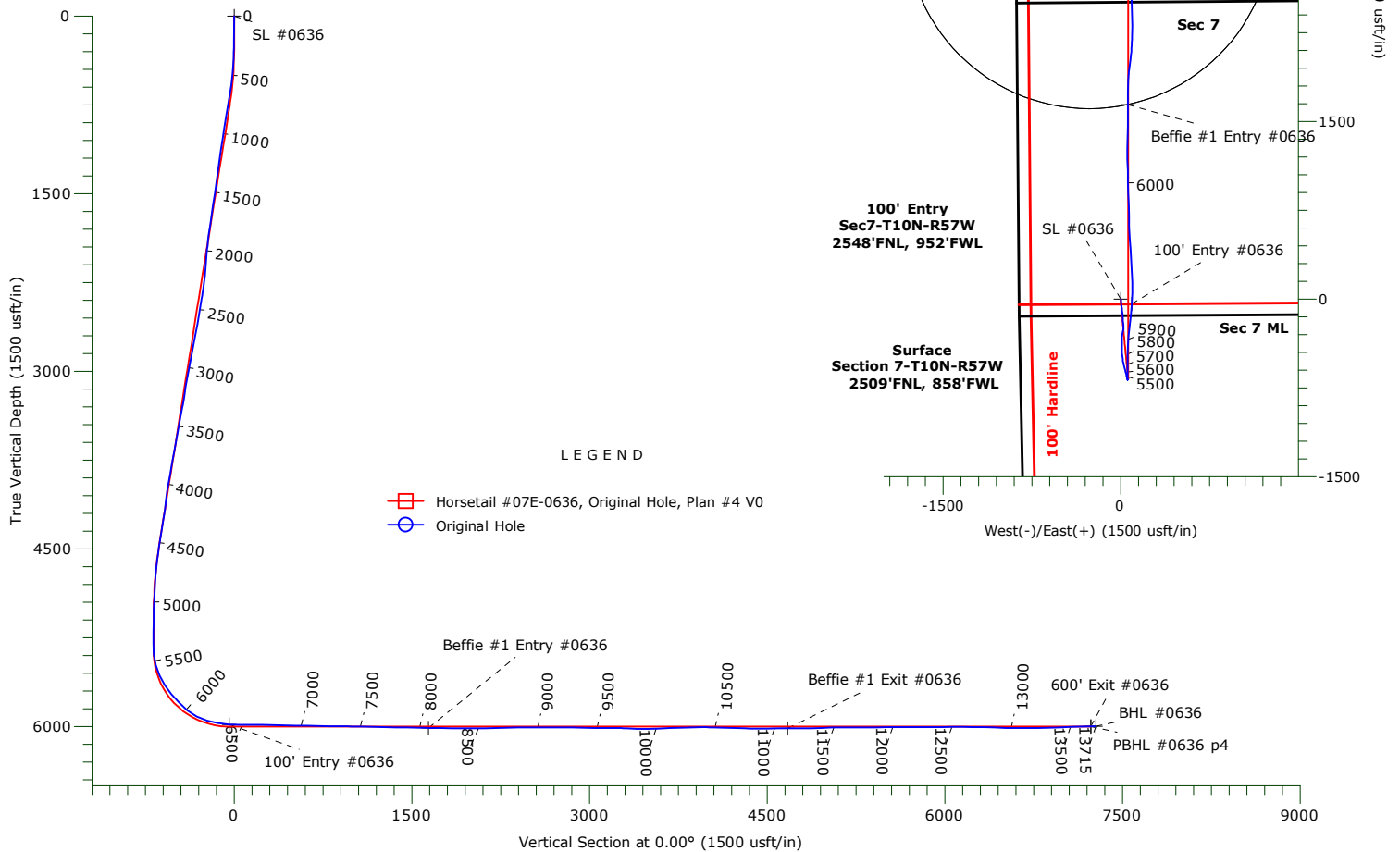
WHITING PETROLEUM CORP.

Project: Weld County, CO
Site: Sec 7-T10N-R57W
Well: Horsetail #07E-0636
Wellbore: Original Hole
Design: Original Hole



Precision
Directional Services

ANNOTATIONS				
TVD	MD	+N/-S	+E/-W	Annotation
5984.5	6391.0	-40.7	95.0	100' Entry
6012.1	8075.5	1642.3	60.8	Beffie #1 Entry
6016.9	11112.0	4675.0	51.7	Beffie #1 Exit
5999.8	13673.0	7234.0	82.8	600' Exit



WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL #0636	0.0	0.0	0.0	1558397.29	3470009.46	40.853817°N	103.800939°W	Point
100' Entry #0636	5984.5	-40.7	95.0	1558358.38	3470105.17	40.853705°N	103.800596°W	Point
BHL #0636	5998.9	7276.0	81.7	1565673.52	3469951.78	40.873787°N	103.800643°W	Point
600' Exit #0636	5999.8	7234.0	82.8	1565631.57	3469953.66	40.873671°N	103.800639°W	Point
PBHL #0636 p4	6002.0	7234.3	63.8	1565631.48	3469934.60	40.873672°N	103.800708°W	Point
Beffie #1 Entry #0636	6012.1	1642.3	60.8	1560040.44	3470038.83	40.858324°N	103.800719°W	Point
Beffie #1 Exit #0636	6016.9	4675.0	51.7	1563072.40	3469971.58	40.866648°N	103.800752°W	Point
Beffie #1 #0636	6739.6	3157.9	-264.5	1561549.55	3469684.54	40.862484°N	103.801895°W	Circle (Radius: 1550.0)

WHITING PETROLEUM CORP.

Weld County, CO

Sec 7-T10N-R57W

Horsetail #07E-0636

Original Hole

Design: Original Hole

Standard Survey Report

02 March, 2016

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0636
Project:	Weld County, CO	TVD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0636	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-0636				
Well Position	+N-S	0.0 usft	Northing:	1,558,397.30 usft	Latitude:	40.853817°N
	+E-W	0.0 usft	Easting:	3,470,009.46 usft	Longitude:	103.800939°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	01/10/16	7.87	67.40	52,888

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	0.00	

Survey Program	Date	03/02/16			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
221.0	13,593.0	Survey #1 (Original Hole)	MWD+IFR+MS	MWD + IFR + Multi Station	
13,715.0	13,715.0	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
SL #0636									
221.0	0.62	128.72	221.0	-0.7	0.9	-0.7	0.28	0.28	0.00
313.0	1.91	166.38	313.0	-2.5	1.7	-2.5	1.60	1.40	40.93
405.0	3.38	166.67	404.9	-6.7	2.7	-6.7	1.60	1.60	0.32
496.0	5.41	180.55	495.6	-13.6	3.2	-13.6	2.50	2.23	15.25
588.0	7.24	175.83	587.0	-23.7	3.6	-23.7	2.07	1.99	-5.13
680.0	10.13	176.95	678.0	-37.6	4.5	-37.6	3.15	3.14	1.22
770.0	10.09	172.48	766.6	-53.3	5.9	-53.3	0.87	-0.04	-4.97
862.0	9.56	172.87	857.2	-68.9	7.9	-68.9	0.58	-0.58	0.42

Precision Drilling Corporation

Survey Report

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Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0636	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)
954.0	8.94	170.98	948.0	-83.5	10.0	-83.5	0.75	-0.67	-2.05
1,045.0	8.41	169.81	1,038.0	-97.0	12.3	-97.0	0.61	-0.58	-1.29
1,137.0	8.27	172.38	1,129.0	-110.2	14.4	-110.2	0.43	-0.15	2.79
1,229.0	7.93	174.44	1,220.1	-123.1	15.8	-123.1	0.49	-0.37	2.24
1,321.0	7.77	174.70	1,311.2	-135.6	17.0	-135.6	0.18	-0.17	0.28
1,413.0	8.02	176.05	1,402.4	-148.2	18.1	-148.2	0.34	0.27	1.47
1,505.0	8.60	176.26	1,493.4	-161.5	18.9	-161.5	0.63	0.63	0.23
1,597.0	8.46	177.00	1,584.4	-175.1	19.7	-175.1	0.19	-0.15	0.80
1,689.0	8.84	177.00	1,675.3	-188.9	20.5	-188.9	0.41	0.41	0.00
1,780.0	8.12	177.39	1,765.3	-202.3	21.1	-202.3	0.79	-0.79	0.43
1,872.0	7.35	173.83	1,856.5	-214.6	22.1	-214.6	0.99	-0.84	-3.87
1,963.0	5.64	172.67	1,946.9	-224.9	23.3	-224.9	1.88	-1.88	-1.27
1,982.0	5.44	175.65	1,965.8	-226.7	23.4	-226.7	1.84	-1.05	15.68
2,119.0	4.07	179.11	2,102.4	-238.0	24.0	-238.0	1.02	-1.00	2.53
2,214.0	6.89	186.99	2,196.9	-247.0	23.4	-247.0	3.07	2.97	8.29
2,308.0	6.89	185.57	2,290.2	-258.3	22.1	-258.3	0.18	0.00	-1.51
2,402.0	9.79	191.41	2,383.2	-271.7	20.0	-271.7	3.21	3.09	6.21
2,497.0	9.09	190.35	2,476.9	-287.0	17.1	-287.0	0.76	-0.74	-1.12
2,686.0	11.52	184.74	2,662.9	-320.5	12.8	-320.5	1.39	1.29	-2.97
2,780.0	11.12	181.92	2,755.1	-338.9	11.7	-338.9	0.73	-0.43	-3.00
2,874.0	10.82	181.02	2,847.3	-356.8	11.3	-356.8	0.37	-0.32	-0.96
2,968.0	10.50	180.59	2,939.7	-374.2	11.0	-374.2	0.35	-0.34	-0.46
3,063.0	9.94	180.32	3,033.2	-391.0	10.9	-391.0	0.59	-0.59	-0.28
3,157.0	9.35	180.00	3,125.9	-406.8	10.9	-406.8	0.63	-0.63	-0.34
3,250.0	8.45	177.57	3,217.8	-421.2	11.1	-421.2	1.05	-0.97	-2.61
3,345.0	11.04	177.65	3,311.4	-437.2	11.8	-437.2	2.73	2.73	0.08
3,439.0	10.29	178.58	3,403.8	-454.6	12.4	-454.6	0.82	-0.80	0.99
3,638.0	10.59	172.09	3,599.5	-490.5	15.3	-490.5	0.61	0.15	-3.26
3,722.0	10.75	171.45	3,682.0	-505.9	17.6	-505.9	0.24	0.19	-0.76
3,816.0	10.68	169.80	3,774.4	-523.1	20.4	-523.1	0.33	-0.07	-1.76
3,910.0	10.08	169.52	3,866.8	-539.8	23.5	-539.8	0.64	-0.64	-0.30
4,005.0	9.19	165.56	3,960.5	-555.3	26.9	-555.3	1.17	-0.94	-4.17
4,122.0	8.09	164.82	4,076.2	-572.3	31.3	-572.3	0.94	-0.94	-0.63
4,216.0	7.89	165.22	4,169.3	-584.9	34.7	-584.9	0.22	-0.21	0.43
4,310.0	9.68	167.56	4,262.1	-598.9	38.1	-598.9	1.94	1.90	2.49
4,404.0	9.34	167.47	4,354.9	-614.1	41.4	-614.1	0.36	-0.36	-0.10
4,499.0	8.81	167.23	4,448.7	-628.7	44.7	-628.7	0.56	-0.56	-0.25
4,593.0	7.81	167.83	4,541.7	-641.9	47.6	-641.9	1.07	-1.06	0.64
4,687.0	6.16	165.80	4,635.0	-653.1	50.2	-653.1	1.77	-1.76	-2.16
4,782.0	4.93	164.07	4,729.5	-661.9	52.6	-661.9	1.31	-1.29	-1.82
4,876.0	3.69	158.10	4,823.3	-668.6	54.8	-668.6	1.40	-1.32	-6.35
4,970.0	2.77	157.06	4,917.1	-673.5	56.9	-673.5	0.98	-0.98	-1.11
5,065.0	1.83	155.47	5,012.0	-677.0	58.4	-677.0	0.99	-0.99	-1.67

Precision Drilling Corporation

Survey Report

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Project:	Weld County, CO	TVD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0636	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)
5,159.0	0.88	169.96	5,106.0	-679.1	59.1	-679.1	1.07	-1.01	15.41
5,253.0	0.89	207.27	5,200.0	-680.5	58.9	-680.5	0.60	0.01	39.69
5,348.0	0.74	235.65	5,295.0	-681.5	58.1	-681.5	0.45	-0.16	29.87
5,442.0	5.57	11.76	5,388.9	-677.3	58.5	-677.3	6.52	5.14	144.80
5,537.0	14.14	0.22	5,482.4	-661.2	59.5	-661.2	9.21	9.02	-12.15
5,632.0	25.13	359.14	5,571.7	-629.3	59.2	-629.3	11.57	11.57	-1.14
5,726.0	33.75	359.38	5,653.5	-583.2	58.6	-583.2	9.17	9.17	0.26
5,820.0	38.80	359.33	5,729.3	-527.6	58.0	-527.6	5.37	5.37	-0.05
5,915.0	44.65	0.96	5,800.1	-464.4	58.2	-464.4	6.26	6.16	1.72
6,009.0	51.49	2.54	5,862.9	-394.5	60.4	-394.5	7.38	7.28	1.68
6,103.0	61.43	5.41	5,914.8	-316.5	66.0	-316.5	10.87	10.57	3.05
6,198.0	73.16	6.36	5,951.4	-229.5	75.0	-229.5	12.38	12.35	1.00
6,292.0	81.05	6.72	5,972.4	-138.5	85.4	-138.5	8.40	8.39	0.38
6,386.0	84.66	4.58	5,984.0	-45.7	94.6	-45.7	4.46	3.84	-2.28
6,391.0	85.03	4.39	5,984.5	-40.7	95.0	-40.7	8.26	7.35	-3.79
100' Entry - 100' Entry #0636									
6,481.0	91.65	1.00	5,987.1	49.1	99.2	49.1	8.26	7.36	-3.77
6,575.0	90.58	358.03	5,985.3	143.0	98.4	143.0	3.36	-1.14	-3.16
6,670.0	88.35	356.67	5,986.2	237.9	94.0	237.9	2.75	-2.35	-1.43
6,764.0	88.75	356.12	5,988.5	331.7	88.1	331.7	0.72	0.43	-0.59
6,858.0	88.49	356.91	5,990.8	425.5	82.4	425.5	0.88	-0.28	0.84
6,953.0	89.32	356.52	5,992.6	520.3	76.9	520.3	0.97	0.87	-0.41
7,047.0	88.50	358.68	5,994.4	614.2	73.0	614.2	2.46	-0.87	2.30
7,140.0	88.57	358.73	5,996.8	707.2	70.9	707.2	0.09	0.08	0.05
7,234.0	89.36	358.12	5,998.5	801.1	68.3	801.1	1.06	0.84	-0.65
7,329.0	90.07	357.64	5,999.0	896.0	64.8	896.0	0.90	0.75	-0.51
7,424.0	88.36	358.77	6,000.3	991.0	61.8	991.0	2.16	-1.80	1.19
7,518.0	88.66	358.93	6,002.7	1,084.9	59.9	1,084.9	0.36	0.32	0.17
7,612.0	89.30	358.63	6,004.4	1,178.9	57.9	1,178.9	0.75	0.68	-0.32
7,706.0	88.38	0.63	6,006.3	1,272.9	57.3	1,272.9	2.34	-0.98	2.13
7,801.0	88.74	1.00	6,008.7	1,367.8	58.7	1,367.8	0.54	0.38	0.39
7,895.0	89.29	0.78	6,010.3	1,461.8	60.1	1,461.8	0.63	0.59	-0.23
7,989.0	89.84	359.74	6,011.0	1,555.8	60.6	1,555.8	1.25	0.59	-1.11
8,075.5	88.67	0.64	6,012.1	1,642.3	60.8	1,642.3	1.71	-1.35	1.04
Beffie #1 Entry - Beffie #1 Entry #0636									
8,083.0	88.57	0.72	6,012.3	1,649.8	60.9	1,649.8	1.71	-1.35	1.04
8,177.0	89.10	1.12	6,014.2	1,743.8	62.4	1,743.8	0.71	0.56	0.43
8,272.0	89.82	1.40	6,015.1	1,838.7	64.5	1,838.7	0.81	0.76	0.29
8,366.0	89.46	6.83	6,015.7	1,932.4	71.3	1,932.4	5.79	-0.38	5.78
8,460.0	89.85	7.17	6,016.3	2,025.7	82.7	2,025.7	0.55	0.41	0.36
8,555.0	91.04	4.49	6,015.5	2,120.2	92.4	2,120.2	3.09	1.25	-2.82
8,649.0	91.79	0.88	6,013.2	2,214.1	96.8	2,214.1	3.92	0.80	-3.84
8,742.0	90.28	359.49	6,011.5	2,307.1	97.1	2,307.1	2.21	-1.62	-1.49
8,834.0	91.20	358.83	6,010.3	2,399.1	95.7	2,399.1	1.23	1.00	-0.72

Precision Drilling Corporation

Survey Report

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Well:	Horsetail #07E-0636	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)
8,925.0	89.92	357.99	6,009.4	2,490.0	93.2	2,490.0	1.68	-1.41	-0.92
9,016.0	89.97	357.88	6,009.5	2,580.9	89.9	2,580.9	0.13	0.05	-0.12
9,108.0	90.87	358.34	6,008.9	2,672.9	86.9	2,672.9	1.10	0.98	0.50
9,200.0	89.85	358.15	6,008.3	2,764.8	84.1	2,764.8	1.13	-1.11	-0.21
9,291.0	88.67	357.42	6,009.5	2,855.8	80.6	2,855.8	1.52	-1.30	-0.80
9,383.0	88.65	357.09	6,011.6	2,947.6	76.2	2,947.6	0.36	-0.02	-0.36
9,474.0	89.14	356.70	6,013.4	3,038.5	71.2	3,038.5	0.69	0.54	-0.43
9,565.0	90.61	356.42	6,013.6	3,129.3	65.8	3,129.3	1.64	1.62	-0.31
9,612.4	90.06	356.55	6,013.3	3,176.6	62.9	3,176.6	1.19	-1.15	0.28
Beffie #1 #0636									
9,657.0	89.55	356.68	6,013.4	3,221.2	60.2	3,221.2	1.19	-1.15	0.28
9,749.0	86.96	358.52	6,016.2	3,313.0	56.4	3,313.0	3.45	-2.82	2.00
9,840.0	87.80	0.03	6,020.4	3,403.9	55.2	3,403.9	1.90	0.92	1.66
9,932.0	91.47	2.16	6,021.0	3,495.9	57.0	3,495.9	4.61	3.99	2.32
10,024.0	91.88	1.28	6,018.3	3,587.8	59.7	3,587.8	1.05	0.45	-0.96
10,117.0	92.92	1.91	6,014.4	3,680.7	62.3	3,680.7	1.31	1.12	0.68
10,209.0	91.45	1.47	6,010.9	3,772.6	65.0	3,772.6	1.67	-1.60	-0.48
10,301.0	91.33	1.42	6,008.7	3,864.5	67.4	3,864.5	0.14	-0.13	-0.05
10,392.0	90.41	0.34	6,007.3	3,955.5	68.8	3,955.5	1.56	-1.01	-1.19
10,483.0	88.48	359.32	6,008.2	4,046.5	68.5	4,046.5	2.40	-2.12	-1.12
10,575.0	88.09	359.18	6,010.9	4,138.4	67.3	4,138.4	0.45	-0.42	-0.15
10,666.0	88.01	359.16	6,014.0	4,229.4	66.0	4,229.4	0.09	-0.09	-0.02
10,757.0	87.84	359.02	6,017.3	4,320.3	64.5	4,320.3	0.24	-0.19	-0.15
10,849.0	90.18	359.12	6,018.9	4,412.3	63.0	4,412.3	2.55	2.54	0.11
10,940.0	90.68	357.84	6,018.2	4,503.2	60.6	4,503.2	1.51	0.55	-1.41
11,031.0	90.49	356.38	6,017.3	4,594.1	56.0	4,594.1	1.62	-0.21	-1.60
11,112.0	90.10	357.49	6,016.9	4,675.0	51.7	4,675.0	1.45	-0.48	1.37
Beffie #1 Exit - Beffie #1 Exit #0636									
11,123.0	90.05	357.64	6,016.8	4,686.0	51.2	4,686.0	1.45	-0.48	1.37
11,214.0	90.48	359.10	6,016.4	4,776.9	48.6	4,776.9	1.67	0.47	1.60
11,306.0	90.80	359.38	6,015.4	4,868.9	47.4	4,868.9	0.46	0.35	0.30
11,397.0	92.27	0.06	6,013.0	4,959.9	47.0	4,959.9	1.78	1.62	0.75
11,489.0	90.88	1.05	6,010.4	5,051.8	47.9	5,051.8	1.85	-1.51	1.08
11,581.0	90.27	0.90	6,009.5	5,143.8	49.4	5,143.8	0.68	-0.66	-0.16
11,673.0	90.26	0.70	6,009.1	5,235.8	50.7	5,235.8	0.22	-0.01	-0.22
11,764.0	90.66	0.32	6,008.3	5,326.8	51.5	5,326.8	0.61	0.44	-0.42
11,856.0	90.12	0.35	6,007.7	5,418.8	52.1	5,418.8	0.59	-0.59	0.03
11,948.0	90.35	359.74	6,007.3	5,510.8	52.1	5,510.8	0.71	0.25	-0.66
12,039.0	91.31	358.38	6,006.0	5,601.8	50.6	5,601.8	1.83	1.05	-1.49
12,131.0	89.24	358.68	6,005.6	5,693.7	48.3	5,693.7	2.27	-2.25	0.33
12,223.0	89.73	358.44	6,006.4	5,785.7	46.0	5,785.7	0.59	0.53	-0.26
12,314.0	90.20	0.88	6,006.5	5,876.7	45.4	5,876.7	2.73	0.52	2.68
12,405.0	91.52	0.47	6,005.1	5,967.7	46.5	5,967.7	1.52	1.45	-0.45

Precision Drilling Corporation

Survey Report

Company:	WHITING PETROLEUM CORP.	Local Co-ordinate Reference:	Well Horsetail #07E-0636
Project:	Weld County, CO	TVD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0636	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)
12,497.0	90.53	359.82	6,003.5	6,059.7	46.7	6,059.7	1.29	-1.08	-0.71
12,589.0	88.96	0.79	6,003.9	6,151.7	47.2	6,151.7	2.01	-1.71	1.05
12,681.0	89.37	0.34	6,005.2	6,243.6	48.1	6,243.6	0.66	0.45	-0.49
12,772.0	88.33	1.05	6,007.0	6,334.6	49.2	6,334.6	1.38	-1.14	0.78
12,863.0	88.30	2.72	6,009.7	6,425.5	52.2	6,425.5	1.83	-0.03	1.84
12,955.0	87.93	3.08	6,012.7	6,517.3	56.9	6,517.3	0.56	-0.40	0.39
13,046.0	89.92	2.67	6,014.4	6,608.2	61.4	6,608.2	2.23	2.19	-0.45
13,137.0	89.94	4.56	6,014.6	6,699.0	67.2	6,699.0	2.08	0.02	2.08
13,229.0	90.74	5.08	6,014.0	6,790.7	74.9	6,790.7	1.04	0.87	0.57
13,320.0	92.06	4.27	6,011.8	6,881.4	82.3	6,881.4	1.70	1.45	-0.89
13,411.0	92.29	0.36	6,008.3	6,972.2	86.0	6,972.2	4.30	0.25	-4.30
13,502.0	92.68	359.82	6,004.4	7,063.1	86.1	7,063.1	0.73	0.43	-0.59
13,593.0	91.14	358.54	6,001.3	7,154.1	84.8	7,154.1	2.20	-1.69	-1.41
13,673.0	91.14	358.54	5,999.8	7,234.0	82.8	7,234.0	0.00	0.00	0.00
600' Exit - 600' Exit #0636 - PBHL #0636 p4									
13,715.0	91.14	358.54	5,998.9	7,276.0	81.7	7,276.0	0.00	0.00	0.00
BHL #0636									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL #0636 - actual wellpath hits target center - Point	0.00	0.00	0.0	0.0	0.0	1,558,397.30	3,470,009.46	40.853817°N	103.800939°W
100' Entry #0636 - actual wellpath hits target center - Point	0.00	0.00	5,984.5	-40.7	94.9	1,558,358.38	3,470,105.17	40.853705°N	103.800596°W
BHL #0636 - actual wellpath hits target center - Point	0.00	0.00	5,998.9	7,276.0	81.7	1,565,673.53	3,469,951.78	40.873787°N	103.800644°W
600' Exit #0636 - actual wellpath hits target center - Point	0.00	0.00	5,999.8	7,234.0	82.8	1,565,631.57	3,469,953.65	40.873672°N	103.800640°W
PBHL #0636 p4 - actual wellpath misses target center by 19.2usft at 13673.0usft MD (5999.8 TVD, 7234.0 N, 82.8 E) - Point	0.00	0.00	6,002.0	7,234.3	63.8	1,565,631.49	3,469,934.60	40.873672°N	103.800709°W
Beffie #1 Entry #0636 - actual wellpath hits target center - Point	0.00	0.00	6,012.1	1,642.3	60.8	1,560,040.45	3,470,038.82	40.858324°N	103.800719°W
Beffie #1 Exit #0636 - actual wellpath hits target center - Point	0.00	0.00	6,016.9	4,675.0	51.7	1,563,072.41	3,469,971.58	40.866648°N	103.800752°W
Beffie #1 #0636 - actual wellpath misses target center by 796.9usft at 9615.5usft MD (6013.3 TVD, 3179.7 N, 62.7 E) - Circle (radius 1,550.0)	0.00	0.00	6,739.6	3,157.9	-264.5	1,561,549.56	3,469,684.53	40.862484°N	103.801895°W

Precision Drilling Corporation

Survey Report

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Project:	Weld County, CO	TVD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Site:	Sec 7-T10N-R57W	MD Reference:	4925.6'+21'KB @ 4946.6usft (Unit 409)
Well:	Horsetail #07E-0636	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)	
6,391.0	5,984.5	-40.7	95.0	100' Entry
8,075.5	6,012.1	1,642.3	60.8	Beffie #1 Entry
11,112.0	6,016.9	4,675.0	51.7	Beffie #1 Exit
13,673.0	5,999.8	7,234.0	82.8	600' Exit