



Extraction Oil & Gas

WELD COUNTY, CO

Kiteley 21-I Pad

Kiteley 8

Kiteley 8

Survey: Survey #1

Standard Survey Report

09 March, 2017



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Kiteley 8
Project:	WELD COUNTY, CO	TVD Reference:	New KB @ 5016.00ft (Cyclone 37)
Site:	Kiteley 21-I Pad	MD Reference:	New KB @ 5016.00ft (Cyclone 37)
Well:	Kiteley 8	North Reference:	True
Wellbore:	Kiteley 8	Survey Calculation Method:	Minimum Curvature
Design:	Kiteley 8	Database:	EDM 5000.1 Single User Db

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		Kiteley 21-I Pad			
Site Position:		Northing:	1,319,048.75 usft	Latitude:	40° 12' 29.416 N
From:	Lat/Long	Easting:	3,135,328.07 usft	Longitude:	105° 0' 55.688 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"	Grid Convergence:	0.31 °

Well	Kiteley 8					
Well Position	+N/-S	0.00 ft	Northing:	1,318,912.73 usft	Latitude:	40° 12' 28.065 N
	+E/-W	0.00 ft	Easting:	3,135,438.02 usft	Longitude:	105° 0' 54.281 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,988.00 ft

Wellbore	Kiteley 8				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/31/17	8.37	66.67	52,307

Design	Kiteley 8				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)		+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00		0.00	0.00	97.69

Survey Program	Date	03/09/17			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
64.00	11,580.00	Survey #1 (Kiteley 8)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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	
64.00	0.20	29.50	64.00	0.10	0.06	0.04	0.31	0.31	0.00	
96.00	0.40	68.40	96.00	0.19	0.19	0.16	0.86	0.63	121.56	
128.00	0.40	62.50	128.00	0.28	0.39	0.35	0.13	0.00	-18.44	
159.00	0.30	46.80	159.00	0.39	0.54	0.49	0.44	-0.32	-50.65	
318.00	0.60	11.40	317.99	1.49	1.01	0.80	0.25	0.19	-22.26	
382.00	0.80	22.60	381.99	2.23	1.25	0.94	0.38	0.31	17.50	
414.00	0.60	35.60	413.99	2.57	1.43	1.08	0.79	-0.63	40.63	
445.00	0.40	21.40	444.98	2.80	1.57	1.18	0.75	-0.65	-45.81	
509.00	0.40	345.00	508.98	3.23	1.59	1.15	0.39	0.00	-56.88	
541.00	0.40	254.10	540.98	3.30	1.46	1.00	1.78	0.00	-284.06	
573.00	1.00	260.70	572.98	3.23	1.07	0.63	1.89	1.88	20.63	
605.00	1.40	240.60	604.97	2.99	0.46	0.05	1.80	1.25	-62.81	

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Well:	Kiteley 8	North Reference:	True
Wellbore:	Kiteley 8	Survey Calculation Method:	Minimum Curvature
Design:	Kiteley 8	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
637.00	1.80	240.90	636.96	2.55	-0.32	-0.66	1.25	1.25	0.94	
668.00	1.90	239.90	667.94	2.06	-1.19	-1.46	0.34	0.32	-3.23	
700.00	2.60	233.00	699.92	1.36	-2.23	-2.39	2.34	2.19	-21.56	
764.00	3.40	228.30	763.83	-0.78	-4.81	-4.66	1.31	1.25	-7.34	
827.00	4.80	233.50	826.67	-3.59	-8.32	-7.77	2.30	2.22	8.25	
859.00	5.80	235.50	858.53	-5.30	-10.73	-9.93	3.18	3.13	6.25	
891.00	6.60	234.50	890.34	-7.29	-13.56	-12.46	2.52	2.50	-3.13	
955.00	8.20	235.20	953.81	-12.03	-20.30	-18.51	2.50	2.50	1.09	
1,019.00	9.10	230.10	1,017.08	-17.88	-27.93	-25.29	1.85	1.41	-7.97	
1,050.00	9.50	228.10	1,047.67	-21.16	-31.72	-28.60	1.66	1.29	-6.45	
1,082.00	10.20	227.60	1,079.20	-24.83	-35.78	-32.13	2.20	2.19	-1.56	
1,146.00	11.50	225.30	1,142.06	-33.14	-44.50	-39.66	2.14	2.03	-3.59	
1,176.00	12.00	226.20	1,171.43	-37.40	-48.87	-43.43	1.78	1.67	3.00	
1,208.00	12.40	227.00	1,202.71	-42.05	-53.79	-47.68	1.36	1.25	2.50	
1,301.00	12.30	227.00	1,293.55	-55.62	-68.33	-60.28	0.11	-0.11	0.00	
1,333.00	12.40	228.20	1,324.81	-60.23	-73.39	-64.67	0.86	0.31	3.75	
1,365.00	12.80	231.00	1,356.04	-64.75	-78.71	-69.33	2.28	1.25	8.75	
1,428.00	12.80	231.10	1,417.48	-73.53	-89.56	-78.92	0.04	0.00	0.16	
1,547.00	12.80	226.20	1,533.52	-90.93	-109.33	-96.19	0.91	0.00	-4.12	
1,665.00	11.89	224.26	1,648.79	-108.68	-127.25	-111.57	0.85	-0.77	-1.64	
1,759.00	11.18	223.37	1,740.90	-122.24	-140.27	-122.65	0.78	-0.76	-0.95	
1,854.00	12.02	225.05	1,833.95	-135.93	-153.59	-134.03	0.95	0.88	1.77	
1,948.00	13.61	230.69	1,925.61	-149.85	-169.08	-147.51	2.15	1.69	6.00	
2,043.00	13.70	230.38	2,017.93	-164.10	-186.39	-162.76	0.12	0.09	-0.33	
2,137.00	13.08	229.68	2,109.37	-178.08	-203.08	-177.43	0.68	-0.66	-0.74	
2,232.00	12.59	229.37	2,202.00	-191.78	-219.13	-191.50	0.52	-0.52	-0.33	
2,326.00	11.89	228.09	2,293.86	-204.92	-234.11	-204.59	0.80	-0.74	-1.36	
2,421.00	10.91	227.47	2,386.99	-217.54	-248.02	-216.69	1.04	-1.03	-0.65	
2,515.00	11.40	226.06	2,479.21	-230.00	-261.27	-228.15	0.60	0.52	-1.50	
2,610.00	12.99	234.17	2,572.07	-242.76	-276.69	-241.72	2.46	1.67	8.54	
2,705.00	12.81	237.65	2,664.67	-254.65	-294.24	-257.53	0.84	-0.19	3.66	
2,800.00	11.31	235.67	2,757.58	-265.54	-310.83	-272.51	1.64	-1.58	-2.08	
2,894.00	12.20	233.95	2,849.60	-276.58	-326.47	-286.54	1.02	0.95	-1.83	
2,989.00	11.89	232.98	2,942.51	-288.38	-342.40	-300.74	0.39	-0.33	-1.02	
3,083.00	11.62	224.65	3,034.55	-300.95	-356.79	-313.32	1.83	-0.29	-8.86	
3,178.00	13.52	225.67	3,127.27	-315.52	-371.46	-325.91	2.01	2.00	1.07	
3,273.00	12.81	223.15	3,219.77	-330.96	-386.60	-338.85	0.96	-0.75	-2.65	
3,367.00	11.49	222.67	3,311.66	-345.45	-400.08	-350.26	1.41	-1.40	-0.51	
3,461.00	9.72	227.08	3,404.05	-357.73	-412.24	-360.67	2.07	-1.88	4.69	
3,556.00	12.90	222.05	3,497.20	-371.07	-425.21	-371.75	3.50	3.35	-5.29	
3,650.00	13.79	221.57	3,588.66	-387.25	-439.68	-383.91	0.95	0.95	-0.51	
3,745.00	12.59	221.57	3,681.15	-403.46	-454.06	-396.00	1.26	-1.26	0.00	
3,840.00	12.11	223.86	3,773.95	-418.40	-467.83	-407.65	0.72	-0.51	2.41	
3,934.00	11.18	228.97	3,866.02	-431.49	-481.54	-419.48	1.48	-0.99	5.44	
4,029.00	12.02	229.06	3,959.08	-444.02	-495.96	-432.10	0.88	0.88	0.09	
4,124.00	14.18	226.59	4,051.60	-458.50	-511.89	-445.95	2.35	2.27	-2.60	
4,219.00	13.79	229.76	4,143.79	-473.81	-528.99	-460.84	0.90	-0.41	3.34	
4,314.00	12.11	228.88	4,236.37	-487.68	-545.14	-474.99	1.78	-1.77	-0.93	
4,408.00	13.21	226.46	4,328.08	-501.56	-560.35	-488.21	1.30	1.17	-2.57	
4,503.00	13.61	228.66	4,420.49	-516.42	-576.61	-502.34	0.68	0.42	2.32	
4,597.00	12.81	228.09	4,512.00	-530.69	-592.67	-516.34	0.86	-0.85	-0.61	
4,692.00	11.40	226.77	4,604.89	-544.15	-607.35	-529.09	1.51	-1.48	-1.39	
4,787.00	12.28	223.68	4,697.87	-557.89	-621.17	-540.94	1.14	0.93	-3.25	
4,882.00	11.89	230.69	4,790.77	-571.40	-635.72	-553.56	1.60	-0.41	7.38	

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4,976.00	12.99	228.57	4,882.56	-584.52	-651.13	-567.08	1.27	1.17	-2.26	
5,070.00	11.71	227.96	4,974.38	-597.90	-666.14	-580.16	1.37	-1.36	-0.65	
5,165.00	9.59	228.97	5,067.74	-609.55	-679.27	-591.61	2.24	-2.23	1.06	
5,259.00	7.82	229.37	5,160.66	-618.86	-690.03	-601.03	1.88	-1.88	0.43	
5,354.00	6.58	224.39	5,254.91	-626.96	-698.74	-608.58	1.46	-1.31	-5.24	
5,448.00	6.01	228.35	5,348.34	-634.08	-706.19	-615.01	0.76	-0.61	4.21	
5,543.00	5.30	228.09	5,442.88	-640.31	-713.17	-621.09	0.75	-0.75	-0.27	
5,638.00	4.99	226.46	5,537.49	-646.09	-719.43	-626.52	0.36	-0.33	-1.72	
5,732.00	3.89	235.18	5,631.21	-650.73	-725.01	-631.43	1.37	-1.17	9.28	
5,826.00	1.90	283.88	5,725.10	-652.17	-729.14	-635.33	3.19	-2.12	51.81	
5,921.00	0.40	207.16	5,820.08	-652.09	-730.82	-637.01	1.95	-1.58	-80.76	
6,016.00	0.22	193.36	5,915.08	-652.56	-731.02	-637.14	0.20	-0.19	-14.53	
6,110.00	0.22	309.97	6,009.08	-652.62	-731.20	-637.31	0.40	0.00	124.05	
6,205.00	0.22	266.56	6,104.08	-652.52	-731.52	-637.64	0.17	0.00	-45.69	
6,301.00	4.99	101.66	6,199.96	-653.37	-727.61	-633.65	5.42	4.97	-171.77	
6,396.00	14.89	78.17	6,293.45	-651.70	-711.57	-617.98	11.05	10.42	-24.73	
6,490.00	18.78	63.19	6,383.44	-642.39	-686.23	-594.11	6.17	4.14	-15.94	
6,585.00	24.70	71.17	6,471.67	-629.07	-653.75	-563.71	6.95	6.23	8.40	
6,679.00	32.08	79.89	6,554.34	-618.33	-610.51	-522.30	8.99	7.85	9.28	
6,774.00	40.61	86.99	6,630.82	-612.27	-554.67	-467.77	10.00	8.98	7.47	
6,869.00	49.40	90.29	6,697.93	-610.82	-487.59	-401.49	9.57	9.25	3.47	
6,964.00	52.98	91.48	6,757.47	-611.99	-413.59	-328.00	3.89	3.77	1.25	
7,058.00	58.90	90.47	6,810.09	-613.29	-335.76	-250.69	6.36	6.30	-1.07	
7,153.00	64.52	90.29	6,855.10	-613.84	-252.14	-167.75	5.92	5.92	-0.19	
7,248.00	71.98	92.05	6,890.28	-615.67	-163.99	-80.15	8.04	7.85	1.85	
7,343.00	74.19	90.86	6,917.92	-617.97	-73.14	10.20	2.62	2.33	-1.25	
7,436.00	80.38	90.16	6,938.38	-618.78	17.53	100.16	6.70	6.66	-0.75	
7,531.00	85.90	89.98	6,949.72	-618.89	111.81	193.61	5.81	5.81	-0.19	
7,625.00	88.91	89.06	6,953.97	-618.10	205.70	286.55	3.35	3.20	-0.98	
7,719.00	92.00	89.98	6,953.23	-617.31	299.68	379.58	3.43	3.29	0.98	
7,814.00	89.31	90.56	6,952.14	-617.76	394.67	473.77	2.90	-2.83	0.61	
7,908.00	89.22	90.38	6,953.35	-618.53	488.66	567.02	0.21	-0.10	-0.19	
8,003.00	87.89	90.38	6,955.74	-619.16	583.62	661.21	1.40	-1.40	0.00	
8,098.00	87.89	90.07	6,959.24	-619.54	678.56	755.34	0.33	0.00	-0.33	
8,193.00	87.89	90.38	6,962.74	-619.91	773.49	849.47	0.33	0.00	0.33	
8,287.00	87.58	89.06	6,966.45	-619.45	867.41	942.49	1.44	-0.33	-1.40	
8,382.00	89.31	90.07	6,969.03	-618.73	962.37	1,036.50	2.11	1.82	1.06	
8,477.00	89.48	91.08	6,970.03	-619.68	1,057.36	1,130.76	1.08	0.18	1.06	
8,571.00	89.79	90.16	6,970.63	-620.70	1,151.35	1,224.04	1.03	0.33	-0.98	
8,666.00	89.88	90.47	6,970.91	-621.22	1,246.35	1,318.26	0.34	0.09	0.33	
8,761.00	90.01	90.56	6,971.00	-622.08	1,341.35	1,412.51	0.17	0.14	0.09	
8,855.00	88.69	89.37	6,972.06	-622.02	1,435.34	1,505.65	1.89	-1.40	-1.27	
8,950.00	89.62	88.88	6,973.47	-620.57	1,530.31	1,599.58	1.11	0.98	-0.52	
9,044.00	89.22	89.28	6,974.42	-619.06	1,624.30	1,692.52	0.60	-0.43	0.43	
9,139.00	87.32	90.86	6,977.28	-619.17	1,719.25	1,786.63	2.60	-2.00	1.66	
9,234.00	87.01	90.16	6,981.98	-620.02	1,814.13	1,880.77	0.81	-0.33	-0.74	
9,329.00	86.79	90.38	6,987.12	-620.47	1,908.98	1,974.83	0.33	-0.23	0.23	
9,424.00	87.50	92.19	6,991.85	-622.59	2,003.84	2,069.12	2.04	0.75	1.91	
9,518.00	85.29	91.48	6,997.76	-625.60	2,097.60	2,162.44	2.47	-2.35	-0.76	
9,613.00	85.68	90.38	7,005.24	-627.14	2,192.29	2,256.48	1.23	0.41	-1.16	
9,708.00	85.02	90.86	7,012.94	-628.16	2,286.97	2,350.45	0.86	-0.69	0.51	
9,803.00	87.32	91.79	7,019.29	-630.35	2,381.73	2,444.65	2.61	2.42	0.98	
9,897.00	83.69	91.26	7,026.65	-632.85	2,475.39	2,537.80	3.90	-3.86	-0.56	
9,992.00	82.68	90.86	7,037.93	-634.59	2,569.70	2,631.50	1.14	-1.06	-0.42	

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Wellbore:	Kiteley 8	Survey Calculation Method:	Minimum Curvature
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10,087.00	81.40	91.97	7,051.08	-636.91	2,663.75	2,725.01	1.78	-1.35	1.17
10,182.00	80.51	90.56	7,066.02	-638.99	2,757.54	2,818.24	1.74	-0.94	-1.48
10,276.00	80.91	88.48	7,081.20	-638.21	2,850.30	2,910.06	2.22	0.43	-2.21
10,371.00	85.20	87.87	7,092.68	-635.20	2,944.53	3,003.05	4.56	4.52	-0.64
10,466.00	85.51	88.09	7,100.37	-631.87	3,039.16	3,096.38	0.40	0.33	0.23
10,561.00	87.98	87.25	7,105.77	-628.01	3,133.92	3,189.77	2.75	2.60	-0.88
10,655.00	89.22	91.35	7,108.06	-626.86	3,227.87	3,282.71	4.56	1.32	4.36
10,750.00	88.91	91.08	7,109.61	-628.88	3,322.83	3,377.10	0.43	-0.33	-0.28
10,844.00	90.10	87.96	7,110.43	-628.09	3,416.81	3,470.13	3.55	1.27	-3.32
10,939.00	89.79	87.78	7,110.52	-624.56	3,511.75	3,563.73	0.38	-0.33	-0.19
11,033.00	91.91	85.18	7,109.12	-618.79	3,605.54	3,655.92	3.57	2.26	-2.77
11,128.00	91.52	84.87	7,106.28	-610.55	3,700.14	3,748.56	0.52	-0.41	-0.33
11,223.00	91.12	84.47	7,104.09	-601.73	3,794.71	3,841.10	0.60	-0.42	-0.42
11,318.00	90.99	83.99	7,102.34	-592.18	3,889.21	3,933.47	0.52	-0.14	-0.51
11,412.00	90.81	82.98	7,100.87	-581.52	3,982.59	4,024.59	1.09	-0.19	-1.07
Last Svy									
11,506.00	90.99	82.58	7,099.39	-569.71	4,075.83	4,115.41	0.47	0.19	-0.43
PROJ SVY									
11,580.00	90.99	82.58	7,098.11	-560.15	4,149.20	4,186.84	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Kiteley 8 Hard Line Inter	0.00	0.00	6,892.28	-615.89	-157.80	1,318,295.98	3,135,283.59	40° 12' 21.979 N	105° 0' 56.315 W
- survey hits target center									
- Point									

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,506.00	7,099.39	-569.71	4,075.83	Last Svy
11,580.00	7,098.11	-560.15	4,149.20	PROJ SVY

Checked By: _____	Approved By: _____	Date: _____
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