



Extraction Oil & Gas

WELD COUNTY, CO

Kiteley 21-I Pad

Kiteley 6

Kiteley 6

Survey: Survey #1

Standard Survey Report

09 March, 2017



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Kiteley 6
Project:	WELD COUNTY, CO	TVD Reference:	New KB @ 5018.00ft (Cyclone 37)
Site:	Kiteley 21-I Pad	MD Reference:	New KB @ 5018.00ft (Cyclone 37)
Well:	Kiteley 6	North Reference:	True
Wellbore:	Kiteley 6	Survey Calculation Method:	Minimum Curvature
Design:	Kiteley 6	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: From:	Lat/Long	Northing:	1,319,048.75 usft	Latitude:	40° 12' 29.416 N
		Easting:	3,135,328.07 usft	Longitude:	105° 0' 55.688 W
		Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"

Well	Kiteley 6					
Well Position	+N/-S	0.00 ft	Northing:	1,318,951.53 usft	Latitude:	40° 12' 28.451 N
	+E/-W	0.00 ft	Easting:	3,135,406.81 usft	Longitude:	105° 0' 54.680 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,990.00 ft

Wellbore	Kiteley 6				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/31/17	8.37	66.67	52,307

Design	Kiteley 6				
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	91.41	

Survey Program	Date	02/21/17			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
160.00	11,842.00	Survey #1 (Kiteley 6)	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	
160.00	1.10	319.40	159.99	1.17	-1.00	-1.03	0.69	0.69	0.00	
256.00	1.80	311.50	255.96	2.86	-2.73	-2.80	0.76	0.73	-8.23	
351.00	1.50	245.20	350.93	3.33	-4.97	-5.06	1.92	-0.32	-69.79	
415.00	1.90	240.00	414.90	2.45	-6.65	-6.71	0.67	0.63	-8.13	
447.00	1.20	245.90	446.89	2.05	-7.42	-7.47	2.24	-2.19	18.44	
542.00	1.30	237.00	541.86	1.05	-9.23	-9.25	0.23	0.11	-9.37	
574.00	1.30	239.80	573.86	0.67	-9.85	-9.86	0.20	0.00	8.75	
606.00	1.70	241.00	605.85	0.26	-10.58	-10.58	1.25	1.25	3.75	
669.00	2.10	244.00	668.81	-0.70	-12.43	-12.41	0.65	0.63	4.76	
733.00	2.40	245.30	732.76	-1.77	-14.70	-14.66	0.48	0.47	2.03	
797.00	2.70	251.00	796.70	-2.82	-17.35	-17.27	0.61	0.47	8.91	
829.00	2.90	247.90	828.66	-3.37	-18.81	-18.72	0.78	0.63	-9.69	

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Site:	Kiteley 21-I Pad	MD Reference:	New KB @ 5018.00ft (Cyclone 37)
Well:	Kiteley 6	North Reference:	True
Wellbore:	Kiteley 6	Survey Calculation Method:	Minimum Curvature
Design:	Kiteley 6	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)	
892.00	4.10	247.30	891.54	-4.84	-22.36	-22.24	1.91	1.90	-0.95	
956.00	5.10	253.90	955.33	-6.51	-27.21	-27.04	1.77	1.56	10.31	
1,020.00	6.20	258.80	1,019.02	-7.97	-33.33	-33.12	1.88	1.72	7.66	
1,051.00	6.20	259.10	1,049.84	-8.61	-36.62	-36.39	0.10	0.00	0.97	
1,115.00	7.60	257.80	1,113.38	-10.16	-44.15	-43.88	2.20	2.19	-2.03	
1,177.00	9.10	256.60	1,174.72	-12.16	-52.93	-52.61	2.44	2.42	-1.94	
1,240.00	8.80	257.30	1,236.95	-14.38	-62.47	-62.10	0.51	-0.48	1.11	
1,270.00	9.40	256.60	1,266.57	-15.45	-67.09	-66.69	2.03	2.00	-2.33	
1,302.00	10.30	256.90	1,298.10	-16.71	-72.42	-71.99	2.82	2.81	0.94	
1,398.00	9.70	256.90	1,392.64	-20.48	-88.66	-88.13	0.63	-0.63	0.00	
1,461.00	11.10	257.80	1,454.61	-22.97	-99.76	-99.16	2.24	2.22	1.43	
1,505.00	11.10	256.10	1,497.78	-24.88	-108.01	-107.36	0.74	0.00	-3.86	
1,570.00	10.91	253.96	1,561.59	-28.08	-119.99	-119.26	0.69	-0.29	-3.29	
1,665.00	14.98	263.08	1,654.16	-32.05	-140.83	-140.00	4.78	4.28	9.60	
1,759.00	16.39	260.39	1,744.66	-35.73	-165.97	-165.04	1.69	1.50	-2.86	
1,853.00	15.51	260.17	1,835.04	-40.09	-191.43	-190.38	0.94	-0.94	-0.23	
1,948.00	13.79	256.69	1,926.95	-44.86	-214.97	-213.79	2.03	-1.81	-3.66	
2,043.00	12.90	256.16	2,019.39	-50.01	-236.28	-234.98	0.95	-0.94	-0.56	
2,137.00	12.02	256.69	2,111.17	-54.77	-256.00	-254.57	0.94	-0.94	0.56	
2,232.00	11.09	257.26	2,204.24	-59.06	-274.53	-272.99	0.99	-0.98	0.60	
2,326.00	10.12	255.46	2,296.64	-63.13	-291.35	-289.70	1.09	-1.03	-1.91	
2,420.00	12.68	261.58	2,388.78	-66.71	-309.55	-307.81	3.01	2.72	6.51	
2,515.00	12.51	262.86	2,481.49	-69.52	-330.07	-328.26	0.34	-0.18	1.35	
2,610.00	11.09	264.18	2,574.48	-71.72	-349.37	-347.49	1.52	-1.49	1.39	
2,705.00	9.72	263.78	2,667.92	-73.52	-366.44	-364.51	1.44	-1.44	-0.42	
2,799.00	12.28	261.36	2,760.18	-75.88	-384.21	-382.22	2.77	2.72	-2.57	
2,894.00	13.08	261.76	2,852.87	-78.94	-404.84	-402.76	0.85	0.84	0.42	
2,988.00	11.62	258.67	2,944.69	-82.32	-424.65	-422.49	1.70	-1.55	-3.29	
3,083.00	10.12	257.09	3,037.98	-86.07	-442.16	-439.90	1.61	-1.58	-1.66	
3,178.00	11.89	253.47	3,131.23	-90.72	-459.68	-457.30	2.00	1.86	-3.81	
3,272.00	11.62	252.28	3,223.26	-96.36	-477.98	-475.46	0.39	-0.29	-1.27	
3,367.00	10.52	251.75	3,316.49	-101.98	-495.34	-492.67	1.16	-1.16	-0.56	
3,461.00	13.08	264.67	3,408.52	-105.66	-514.08	-511.32	3.90	2.72	13.74	
3,555.00	14.18	267.18	3,499.87	-107.21	-536.17	-533.36	1.33	1.17	2.67	
3,744.00	12.59	266.38	3,683.73	-109.65	-579.85	-576.97	0.85	-0.84	-0.42	
3,839.00	10.52	265.59	3,776.80	-110.97	-598.84	-595.91	2.19	-2.18	-0.83	
3,934.00	8.79	264.89	3,870.45	-112.29	-614.71	-611.75	1.83	-1.82	-0.74	
4,029.00	7.82	263.65	3,964.45	-113.65	-628.37	-625.37	1.04	-1.02	-1.31	
4,124.00	7.82	260.79	4,058.57	-115.40	-641.17	-638.13	0.41	0.00	-3.01	
4,219.00	7.29	258.98	4,152.74	-117.59	-653.47	-650.36	0.61	-0.56	-1.91	
4,314.00	6.32	258.45	4,247.07	-119.78	-664.51	-661.35	1.02	-1.02	-0.56	
4,408.00	6.98	253.08	4,340.44	-122.48	-675.04	-671.81	0.96	0.70	-5.71	
4,503.00	7.60	237.87	4,434.68	-127.50	-685.88	-682.53	2.13	0.65	-16.01	
4,598.00	6.98	236.68	4,528.91	-134.02	-696.03	-692.51	0.67	-0.65	-1.25	
4,692.00	4.82	208.48	4,622.43	-140.63	-702.68	-699.00	3.78	-2.30	-30.00	
4,787.00	2.61	174.77	4,717.23	-146.29	-704.39	-700.56	3.18	-2.33	-35.48	
4,882.00	2.12	176.75	4,812.15	-150.20	-704.09	-700.17	0.52	-0.52	2.08	
5,071.00	1.41	196.67	5,001.06	-155.92	-704.56	-700.50	0.49	-0.38	10.54	
5,165.00	1.50	222.98	5,095.03	-157.93	-705.73	-701.62	0.71	0.10	27.99	
5,354.00	0.62	287.58	5,284.00	-159.43	-708.40	-704.24	0.72	-0.47	34.18	
5,448.00	0.49	241.88	5,378.00	-159.46	-709.23	-705.08	0.48	-0.14	-48.62	
5,543.00	0.88	235.76	5,472.99	-160.06	-710.20	-706.03	0.42	0.41	-6.44	
5,638.00	0.80	214.96	5,567.98	-161.02	-711.18	-706.99	0.33	-0.08	-21.89	
5,732.00	0.71	243.69	5,661.98	-161.81	-712.08	-707.86	0.41	-0.10	30.56	

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5,827.00	0.80	251.58	5,756.97	-162.28	-713.23	-709.01	0.14	0.09	8.31	
5,921.00	1.02	241.27	5,850.96	-162.89	-714.59	-710.35	0.29	0.23	-10.97	
6,111.00	0.71	2.76	6,040.94	-162.53	-716.02	-711.78	0.80	-0.16	63.94	
6,206.00	0.49	347.47	6,135.94	-161.55	-716.08	-711.87	0.28	-0.23	-16.09	
6,301.00	0.62	287.58	6,230.94	-160.99	-716.65	-712.46	0.60	0.14	-63.04	
6,396.00	0.80	285.95	6,325.93	-160.66	-717.78	-713.60	0.19	0.19	-1.72	
6,491.00	0.71	264.58	6,420.92	-160.53	-719.01	-714.82	0.31	-0.09	-22.49	
6,604.00	3.58	85.66	6,533.86	-160.33	-716.18	-712.01	3.80	2.54	-158.34	
6,699.00	12.59	80.07	6,627.82	-158.32	-703.00	-698.88	9.51	9.48	-5.88	
6,793.00	17.72	50.45	6,718.65	-147.42	-681.83	-677.99	9.72	5.46	-31.51	
6,888.00	25.59	67.38	6,806.96	-130.28	-651.67	-648.26	10.50	8.28	17.82	
6,983.00	34.69	79.89	6,889.11	-117.60	-605.98	-602.89	11.59	9.58	13.17	
7,078.00	45.91	93.86	6,961.60	-115.14	-545.01	-542.00	15.11	11.81	14.71	
7,172.00	58.51	93.86	7,019.08	-120.13	-471.04	-467.93	13.40	13.40	0.00	
7,267.00	72.60	97.87	7,058.31	-129.11	-385.26	-381.96	15.32	14.83	4.22	
7,362.00	76.58	97.25	7,083.55	-141.15	-294.49	-290.92	4.24	4.19	-0.65	
7,456.00	76.32	92.89	7,105.58	-149.23	-203.49	-199.75	4.52	-0.28	-4.64	
7,550.00	80.91	90.38	7,124.13	-151.84	-111.41	-107.63	5.54	4.88	-2.67	
7,645.00	83.92	90.29	7,136.67	-152.39	-17.26	-13.49	3.17	3.17	-0.09	
7,739.00	87.32	89.98	7,143.85	-152.61	76.46	80.20	3.63	3.62	-0.33	
7,833.00	88.69	90.47	7,147.12	-152.98	170.40	174.12	1.55	1.46	0.52	
7,928.00	88.29	89.19	7,149.63	-152.70	265.36	269.05	1.41	-0.42	-1.35	
8,022.00	89.31	89.06	7,151.59	-151.26	359.33	362.95	1.09	1.09	-0.14	
8,117.00	86.61	89.19	7,154.98	-149.81	454.25	457.81	2.85	-2.84	0.14	
8,212.00	87.10	87.96	7,160.19	-147.46	549.07	552.55	1.39	0.52	-1.29	
8,307.00	89.40	90.69	7,163.09	-146.34	644.01	647.42	3.76	2.42	2.87	
8,401.00	86.61	88.18	7,166.36	-145.41	737.93	741.29	3.99	-2.97	-2.67	
8,496.00	87.10	89.06	7,171.57	-143.13	832.76	836.04	1.06	0.52	0.93	
8,591.00	88.29	89.06	7,175.39	-141.57	927.66	930.88	1.25	1.25	0.00	
8,685.00	88.91	88.97	7,177.69	-139.96	1,021.62	1,024.77	0.67	0.66	-0.10	
8,780.00	89.31	88.88	7,179.17	-138.17	1,116.59	1,119.67	0.43	0.42	-0.09	
8,874.00	87.01	89.59	7,182.19	-136.92	1,210.53	1,213.54	2.56	-2.45	0.76	
8,969.00	88.51	89.28	7,185.90	-135.98	1,305.45	1,308.41	1.61	1.58	-0.33	
9,064.00	82.81	88.35	7,193.08	-134.03	1,400.12	1,403.00	6.08	-6.00	-0.98	
9,158.00	86.70	89.37	7,201.68	-132.17	1,493.69	1,496.49	4.28	4.14	1.09	
9,253.00	87.50	90.38	7,206.48	-131.96	1,588.56	1,591.34	1.36	0.84	1.06	
9,348.00	88.29	89.37	7,209.97	-131.75	1,683.50	1,686.24	1.35	0.83	-1.06	
9,443.00	87.98	89.28	7,213.06	-130.64	1,778.44	1,781.12	0.34	-0.33	-0.09	
9,538.00	87.98	90.29	7,216.41	-130.28	1,873.38	1,876.02	1.06	0.00	1.06	
9,633.00	88.91	90.56	7,218.99	-130.98	1,968.34	1,970.97	1.02	0.98	0.28	
9,727.00	86.70	88.57	7,222.59	-130.27	2,062.26	2,064.84	3.16	-2.35	-2.12	
9,822.00	84.18	87.96	7,230.14	-127.41	2,156.90	2,159.39	2.73	-2.65	-0.64	
9,917.00	84.71	86.99	7,239.34	-123.24	2,251.37	2,253.72	1.16	0.56	-1.02	
10,012.00	86.79	89.67	7,246.38	-120.48	2,346.05	2,348.31	3.56	2.19	2.82	
10,107.00	87.89	89.76	7,250.79	-120.01	2,440.94	2,443.16	1.16	1.16	0.09	
10,296.00	86.21	88.88	7,260.52	-117.77	2,629.67	2,631.78	1.00	-0.89	-0.47	
10,390.00	86.48	89.06	7,266.51	-116.09	2,723.47	2,725.50	0.34	0.29	0.19	
10,485.00	87.41	90.47	7,271.57	-115.70	2,818.33	2,820.32	1.78	0.98	1.48	
10,580.00	87.80	91.08	7,275.54	-116.98	2,913.23	2,915.23	0.76	0.41	0.64	
10,674.00	89.09	89.76	7,278.09	-117.67	3,007.19	3,009.18	1.96	1.37	-1.40	
10,864.00	87.01	88.00	7,284.56	-113.96	3,197.03	3,198.87	1.43	-1.09	-0.93	
10,958.00	87.32	91.08	7,289.21	-113.21	3,290.90	3,292.69	3.29	0.33	3.28	
11,053.00	87.98	89.76	7,293.10	-113.90	3,385.81	3,387.59	1.55	0.69	-1.39	
11,148.00	88.60	91.57	7,295.94	-115.00	3,480.76	3,482.54	2.01	0.65	1.91	

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Wellbore:	Kiteley 6	Survey Calculation Method:	Minimum Curvature
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11,243.00	89.22	90.38	7,297.75	-116.62	3,575.73	3,577.52	1.41	0.65	-1.25	
11,337.00	86.48	90.38	7,301.27	-117.24	3,669.65	3,671.43	2.91	-2.91	0.00	
11,432.00	87.05	91.08	7,306.63	-118.45	3,764.49	3,766.27	0.95	0.60	0.74	
11,526.00	87.58	90.95	7,311.04	-120.12	3,858.37	3,860.16	0.58	0.56	-0.14	
11,621.00	88.20	90.56	7,314.53	-121.37	3,953.30	3,955.09	0.77	0.65	-0.41	
11,716.00	88.29	89.85	7,317.44	-121.71	4,048.25	4,050.02	0.75	0.09	-0.75	
Last Svy										
11,777.00	87.80	87.78	7,319.52	-120.45	4,109.20	4,110.92	3.49	-0.80	-3.39	
Proj Svy										
11,842.00	87.80	87.78	7,322.02	-117.93	4,174.10	4,175.74	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 6 Hard Line Inte	0.00	0.00	7,121.02	-151.64	-129.90	1,318,799.19	3,135,277.74	40° 12' 26.952 N	105° 0' 56.355 W	
- survey misses target center by 0.01ft at 7531.26ft MD (7121.02 TVD, -151.64 N, -129.89 E)										
- Point										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
11,777.00	7,319.52	-120.45	4,109.20	Last Svy	
11,842.00	7,322.02	-117.93	4,174.10	Proj Svy	

Checked By: _____ Approved By: _____ Date: _____