



Structure:

Oxy Cedar Canyon 23 Federal Com 6H

1500 JUL 27 2017

NS (ft) Scale = 1:300.00(ft)

EW (t)	Scale = 1.3000(t)
-550	0
550	550
1100	1100
1650	1650
2200	2200
2750	2750
3300	3300
3850	3850
4400	4400
4950	4950
5500	5500
6050	6050
6600	6600
7150	7150
7700	7700
8250	8250
8800	8800
9350	9350

TVD (ft) Scale = 1:400.00(ft)

3000

4500

6000

7500

9000

Vertical Section (ft) Azim = 91.228° Scale = 1:400.00(ft) Origin = 0N/-S, 0E/-W

Provide Signature Page for
Directional Survey *and*

Complete Survey to
Total Depth

Grid North
01 Corr (M→G 6.928°)
Mag Dec (7.123°)
Grid Conv (0.195°)

CONTROLLED

2 THE SIGN OFF AUTHOR

W Live Manager

Surveys for OXY - H&P 617 - Oxy Cedar Canyon 23 Federal Com 6H

MD	INCL	AZIM	TVD	VSEC	ND	ED	DLS	CLOSURE	ATAZIM	COURSE
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	90.00	-999.25
26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	0	90.00	26.50
75.30	0.48	94.28	75.30	0.20	-0.02	0.20	0.98	0.2	94.28	48.80
164.10	0.89	82.58	164.09	1.26	0.05	1.26	0.49	1.26	87.90	88.80
254.20	1.02	84.78	254.18	2.75	0.21	2.75	0.15	2.76	85.65	90.10
343.90	1.44	55.95	343.86	4.46	0.91	4.48	0.82	4.57	78.48	89.70
432.60	1.56	59.76	432.53	6.40	2.15	6.45	0.18	6.79	71.59	88.70
521.70	1.50	59.31	521.60	8.42	3.35	8.50	0.07	9.13	68.48	89.10
612.50	1.03	59.53	612.38	10.13	4.37	10.22	0.52	11.12	66.85	90.80
704.00	0.05	348.59	703.87	10.82	4.83	10.92	1.11	11.94	66.16	91.50
796.20	0.06	266.37	796.07	10.76	4.86	10.87	0.08	11.91	65.89	92.20
888.20	0.06	265.11	888.07	10.66	4.86	10.77	0.00	11.82	65.73	92.00
978.70	0.06	273.33	978.57	10.57	4.86	10.68	0.01	11.73	65.54	90.50
1070.20	0.05	271.23	1070.07	10.48	4.86	10.59	0.01	11.65	65.35	91.50
1161.10	0.05	270.79	1160.97	10.40	4.86	10.51	0.00	11.58	65.18	90.90
1255.50	0.05	264.01	1255.37	10.32	4.86	10.43	0.01	11.5	65.02	94.40
1349.60	0.05	253.47	1349.47	10.24	4.84	10.35	0.01	11.42	64.93	94.10
1444.00	0.05	247.06	1443.87	10.16	4.81	10.27	0.01	11.34	64.89	94.40
1538.00	0.04	257.07	1537.87	10.10	4.79	10.20	0.01	11.27	64.85	94.00
1632.20	0.05	251.21	1632.07	10.02	4.77	10.13	0.01	11.2	64.79	94.20
1726.50	0.05	252.04	1726.37	9.95	4.74	10.05	0.00	11.11	64.74	94.30
1820.70	0.05	253.92	1820.57	9.87	4.72	9.97	0.00	11.03	64.67	94.20
1914.80	0.04	267.01	1914.67	9.80	4.71	9.90	0.02	10.96	64.58	94.10
2009.10	0.04	255.46	2008.97	9.73	4.70	9.84	0.01	10.9	64.48	94.30
2103.40	0.04	257.64	2103.27	9.67	4.68	9.77	0.00	10.83	64.40	94.30
2197.70	0.04	253.01	2197.57	9.61	4.66	9.71	0.00	10.77	64.34	94.30
2292.20	0.05	238.29	2292.07	9.54	4.63	9.64	0.02	10.7	64.33	94.50
2386.80	0.05	234.23	2386.67	9.47	4.59	9.57	0.00	10.62	64.40	94.60
2481.40	0.05	225.94	2481.27	9.41	4.53	9.51	0.01	10.54	64.51	94.60
2575.80	0.06	224.61	2575.67	9.35	4.47	9.45	0.01	10.45	64.67	94.40
2670.30	0.07	233.04	2670.17	9.27	4.40	9.36	0.01	10.35	64.83	94.50
2764.70	0.07	227.03	2764.57	9.18	4.33	9.28	0.01	10.24	64.99	94.40
2859.10	0.08	219.95	2858.97	9.10	4.24	9.19	0.01	10.12	65.25	94.40
2953.50	0.08	215.06	2953.37	9.02	4.13	9.11	0.01	10	65.60	94.40
3047.80	0.15	212.44	3047.67	8.92	3.97	9.01	0.07	9.85	66.19	94.30
3142.30	0.10	215.69	3142.17	8.81	3.80	8.89	0.05	9.67	66.85	94.50
3237.00	0.07	219.79	3236.87	8.73	3.69	8.81	0.03	9.55	67.26	94.70
3331.50	0.06	218.38	3331.37	8.66	3.61	8.74	0.01	9.46	67.57	94.50
3425.70	0.06	220.08	3425.57	8.60	3.53	8.68	0.00	9.37	67.85	94.20
3520.00	0.06	217.95	3519.87	8.54	3.46	8.62	0.00	9.28	68.15	94.30
3614.20	0.07	219.75	3614.07	8.47	3.37	8.55	0.01	9.19	68.47	94.20
3708.50	0.06	214.95	3708.37	8.41	3.29	8.48	0.01	9.1	68.82	94.30
3802.80	0.06	215.71	3802.67	8.36	3.21	8.43	0.00	9.02	69.17	94.30
3897.10	0.06	220.99	3896.97	8.30	3.13	8.36	0.01	8.93	69.49	94.30
3991.30	0.05	219.27	3991.17	8.24	3.06	8.31	0.01	8.85	69.78	94.20
4085.40	0.05	224.44	4085.27	8.19	3.00	8.25	0.00	8.78	70.03	94.10
4179.70	0.06	216.51	4179.57	8.13	2.93	8.19	0.01	8.7	70.32	94.30
4273.70	0.06	217.73	4273.57	8.07	2.85	8.13	0.00	8.62	70.68	94.00

4367.90	0.03	328.98	4367.77	8.03	2.83	8.09	0.08	8.57	70.70	94.20
4462.20	0.03	339.58	4462.07	8.01	2.88	8.07	0.01	8.57	70.37	94.30
4556.70	0.03	336.76	4556.57	7.99	2.92	8.05	0.00	8.57	70.04	94.50
4651.00	0.03	343.47	4650.87	7.97	2.97	8.03	0.00	8.57	69.71	94.30
4745.20	0.03	344.28	4745.07	7.95	3.02	8.02	0.00	8.57	69.38	94.20
4839.50	0.03	338.96	4839.37	7.94	3.06	8.01	0.00	8.57	69.05	94.30
4933.80	0.04	344.11	4933.67	7.92	3.12	7.99	0.01	8.58	68.67	94.30
5028.00	0.03	1.73	5027.87	7.91	3.18	7.98	0.02	8.59	68.30	94.20
5122.40	0.04	345.06	5122.27	7.90	3.23	7.97	0.02	8.6	67.93	94.40
5216.80	0.04	289.99	5216.67	7.86	3.28	7.93	0.04	8.58	67.57	94.40
5311.10	0.04	295.99	5310.97	7.80	3.30	7.87	0.00	8.54	67.25	94.30
5405.40	0.05	287.04	5405.27	7.73	3.33	7.80	0.01	8.48	66.91	94.30
5499.70	0.04	292.27	5499.57	7.66	3.35	7.73	0.01	8.43	66.57	94.30
5593.90	0.05	284.66	5593.77	7.59	3.37	7.66	0.01	8.37	66.23	94.20
5688.20	0.02	111.16	5688.07	7.56	3.38	7.64	0.07	8.35	66.14	94.30
5782.50	0.02	111.15	5782.37	7.60	3.37	7.67	0.00	8.38	66.30	94.30
5877.10	0.03	125.40	5876.97	7.63	3.35	7.70	0.01	8.4	66.52	94.60
5971.30	0.03	114.05	5971.17	7.67	3.32	7.75	0.01	8.43	66.79	94.20
6065.60	0.03	102.21	6065.47	7.72	3.31	7.79	0.01	8.47	67.01	94.30
6160.00	0.03	126.37	6159.87	7.77	3.29	7.84	0.01	8.5	67.25	94.40
6254.20	0.04	120.95	6254.07	7.81	3.26	7.89	0.01	8.53	67.57	94.20
6348.60	0.03	109.62	6348.47	7.87	3.23	7.94	0.01	8.57	67.85	94.40
6443.00	0.04	118.35	6442.87	7.92	3.21	7.99	0.01	8.61	68.13	94.40
6537.40	0.04	97.03	6537.27	7.98	3.19	8.05	0.02	8.66	68.41	94.40
6632.00	0.05	56.29	6631.87	8.05	3.21	8.12	0.03	8.73	68.45	94.60
6726.40	0.43	190.17	6726.27	8.03	2.88	8.09	0.49	8.59	70.41	94.40
6820.80	4.45	193.87	6820.56	7.17	-1.03	7.15	4.26	7.22	98.16	94.40
6915.10	8.20	196.35	6914.27	4.61	-11.03	4.38	3.99	11.87	158.36	94.30
7009.20	7.97	193.25	7007.44	1.51	-23.82	0.99	0.52	23.84	177.61	94.10
7103.40	4.48	156.07	7101.10	1.71	-33.55	0.99	5.48	33.56	178.31	94.20
7197.80	4.30	129.45	7195.23	6.06	-39.17	5.22	2.15	39.51	172.41	94.40
7292.00	5.87	120.35	7289.06	13.04	-43.85	12.10	1.87	45.49	164.57	94.20
7386.30	7.45	114.91	7382.72	22.85	-48.86	21.81	1.80	53.51	155.95	94.30
7480.70	8.00	106.48	7476.27	34.80	-53.30	33.66	1.33	63.04	147.73	94.40
7575.20	9.17	95.75	7569.72	48.65	-55.92	47.46	2.09	73.34	139.68	94.50
7669.40	11.35	95.60	7662.40	65.38	-57.58	64.15	2.31	86.2	131.91	94.20
7763.70	13.44	95.46	7754.50	85.56	-59.53	84.30	2.22	103.2	125.23	94.30
7858.10	16.00	94.65	7845.79	109.49	-61.62	108.19	2.72	124.51	119.66	94.40
7952.50	15.67	92.72	7936.61	135.22	-63.28	133.89	0.66	148.1	115.30	94.40
8046.90	13.96	88.38	8027.87	159.34	-63.57	158.01	2.16	170.32	111.91	94.40
8141.20	13.81	85.86	8119.42	181.91	-62.43	180.61	0.66	191.1	109.07	94.30
8192.80	14.56	83.40	8169.45	194.47	-61.24	193.19	1.86	202.67	107.59	51.60
8259.00	13.43	77.68	8233.68	210.18	-58.65	208.97	2.70	217.05	105.68	66.20
8458.00	14.95	109.79	8426.90	257.05	-62.41	255.77	3.98	263.28	103.71	199.00
8552.00	23.83	104.81	8515.49	287.06	-71.39	285.60	9.60	294.38	104.03	94.00
8647.00	29.12	96.07	8600.53	328.79	-78.74	327.18	6.90	336.52	103.53	95.00
8742.00	41.21	95.90	8678.05	383.22	-84.43	381.49	12.73	390.72	102.48	95.00
8836.00	51.37	94.76	8742.92	450.90	-90.67	449.06	10.84	458.12	101.42	94.00
8931.00	64.74	93.25	8793.08	531.24	-96.22	529.29	14.14	537.97	100.30	95.00
9025.00	77.17	95.89	8823.69	619.75	-103.36	617.68	13.48	626.27	99.50	94.00
9120.00	86.46	98.47	8837.21	713.17	-115.12	710.86	10.14	720.12	99.20	95.00
9228.00	86.70	97.85	8843.66	820.18	-130.42	817.57	0.61	827.91	99.06	108.00
9322.00	87.80	96.85	8848.17	913.54	-142.43	910.69	1.59	921.76	98.89	94.00

9417.00	89.38	93.04	8850.51	1008.29	-150.62	1005.29	4.33	1016.51	98.52	95.00
9511.00	89.69	92.64	8851.27	1102.25	-155.28	1099.17	0.54	1110.08	98.04	94.00
9606.00	89.45	93.16	8851.98	1197.21	-160.08	1194.05	0.60	1204.73	97.64	95.00
9700.00	89.72	96.49	8852.66	1291.01	-167.98	1287.70	3.56	1298.61	97.43	94.00
9795.00	89.62	96.20	8853.20	1385.63	-178.48	1382.11	0.32	1393.59	97.36	95.00
9889.00	89.66	96.72	8853.79	1479.23	-189.06	1475.51	0.55	1487.58	97.30	94.00
9984.00	89.76	96.43	8854.28	1573.82	-199.94	1569.89	0.33	1582.57	97.26	95.00
10079.00	89.42	96.22	8854.96	1668.44	-210.40	1664.31	0.42	1677.55	97.21	95.00
10173.00	89.76	95.62	8855.64	1762.12	-220.10	1757.80	0.73	1771.53	97.14	94.00
10285.00	89.69	89.39	8856.18	1874.04	-225.00	1869.64	5.56	1883.13	96.86	112.00
10362.00	89.83	88.56	8856.50	1950.98	-223.62	1946.62	1.10	1959.43	96.55	77.00
10456.00	89.97	88.79	8856.67	2044.88	-221.44	2040.60	0.28	2052.58	96.19	94.00
10551.00	89.17	88.06	8857.39	2139.76	-218.83	2135.56	1.13	2146.74	95.85	95.00
10645.00	89.62	88.57	8858.37	2233.64	-216.07	2229.51	0.72	2239.96	95.54	94.00
10740.00	87.21	85.47	8861.00	2328.33	-211.14	2324.33	4.13	2333.9	95.19	95.00
10834.00	89.04	87.30	8864.07	2421.93	-205.22	2418.08	2.74	2426.78	94.85	94.00
10929.00	89.62	88.10	8865.19	2516.75	-201.41	2513.00	1.04	2521.06	94.58	95.00
11024.00	89.72	91.53	8865.73	2611.70	-201.11	2607.98	3.61	2615.73	94.41	95.00
11119.00	89.17	93.06	8866.64	2706.68	-204.91	2702.90	1.71	2710.66	94.34	95.00
11225.00	88.62	93.22	8868.68	2812.60	-210.72	2808.72	0.54	2816.61	94.29	106.00
11308.00	86.35	93.82	8872.31	2895.45	-215.81	2891.48	2.83	2899.52	94.27	83.00
11403.00	87.66	95.13	8877.27	2990.16	-223.21	2986.06	1.94	2994.39	94.27	95.00
11497.00	87.56	92.77	8881.19	3083.97	-229.68	3079.75	2.50	3088.3	94.27	94.00
11592.00	87.73	92.01	8885.10	3178.87	-233.64	3174.58	0.82	3183.17	94.21	95.00
11687.00	87.52	91.55	8889.04	3273.78	-236.59	3269.45	0.53	3278	94.14	95.00
11781.00	88.87	93.50	8892.00	3367.70	-240.73	3363.31	2.51	3371.91	94.09	94.00
11876.00	89.93	92.56	8892.99	3462.65	-245.75	3458.17	1.50	3466.89	94.06	95.00
11971.00	88.73	90.38	8894.11	3557.63	-248.18	3553.12	2.62	3561.78	94.00	95.00
12065.00	88.49	90.11	8896.39	3651.59	-248.58	3647.10	0.38	3655.56	93.90	94.00
12174.00	86.90	87.54	8900.78	3760.39	-246.34	3755.97	2.77	3764.04	93.75	109.00
12259.00	88.35	87.34	8904.30	3845.13	-242.55	3840.81	1.72	3848.46	93.61	85.00
12349.00	89.21	85.33	8906.22	3934.78	-236.80	3930.60	2.43	3937.73	93.45	90.00
12444.00	89.07	85.33	8907.65	4029.27	-229.07	4025.28	0.14	4031.79	93.26	95.00
12539.00	89.31	85.50	8908.98	4123.77	-221.47	4119.96	0.31	4125.91	93.08	95.00
12633.00	90.17	87.51	8909.41	4217.44	-215.75	4213.78	2.33	4219.3	92.93	94.00
12728.00	89.21	85.30	8909.92	4312.10	-209.79	4308.58	2.54	4313.69	92.79	95.00
12832.00	89.00	88.74	8911.54	4415.79	-204.38	4412.42	3.32	4417.15	92.65	104.00
12917.00	87.73	87.60	8913.97	4500.63	-201.67	4497.33	2.01	4501.85	92.57	85.00
13012.00	88.04	88.70	8917.48	4595.42	-198.61	4592.22	1.20	4596.51	92.48	95.00
13106.00	89.17	89.38	8919.76	4689.33	-197.03	4686.18	1.41	4690.32	92.41	94.00
13201.00	89.14	89.42	8921.16	4784.27	-196.04	4781.16	0.05	4785.18	92.35	95.00
13296.00	88.04	88.67	8923.50	4879.17	-194.45	4876.12	1.40	4879.99	92.28	95.00
13390.00	89.48	88.58	8925.53	4973.04	-192.19	4970.06	1.54	4973.78	92.21	94.00
13485.00	89.52	88.43	8926.35	5067.93	-189.70	5065.03	0.16	5068.58	92.14	95.00
13579.00	90.14	88.96	8926.64	5161.84	-187.56	5159.00	0.87	5162.41	92.08	94.00
13674.00	89.62	88.32	8926.84	5256.74	-185.31	5253.98	0.87	5257.24	92.02	95.00
13777.00	89.52	88.31	8927.61	5359.61	-182.29	5356.93	0.10	5360.03	91.95	103.00
13863.00	89.69	88.33	8928.20	5445.49	-179.77	5442.89	0.20	5445.86	91.89	86.00
13958.00	89.62	88.36	8928.77	5540.37	-177.02	5537.85	0.08	5540.68	91.83	95.00
14052.00	88.97	92.03	8929.93	5634.33	-177.34	5631.82	3.97	5634.61	91.80	94.00
14147.00	87.35	91.51	8932.98	5729.28	-180.27	5726.73	1.79	5729.56	91.80	95.00
14242.00	89.24	92.48	8935.81	5824.22	-183.57	5821.62	2.24	5824.51	91.81	95.00
14336.00	88.83	91.94	8937.39	5918.19	-187.19	5915.54	0.72	5918.5	91.81	94.00

14431.00	88.49	92.30	8939.61	6013.15	-190.71	6010.45	0.52	6013.47	91.82	95.00
14525.00	89.97	92.82	8940.88	6107.12	-194.91	6104.34	1.67	6107.45	91.83	94.00
14620.00	89.83	92.16	8941.05	6202.09	-199.04	6199.25	0.71	6202.44	91.84	95.00
14715.00	89.62	92.63	8941.51	6297.07	-203.01	6294.16	0.54	6297.44	91.85	95.00
14904.00	89.55	92.06	8942.87	6486.03	-210.75	6483.00	0.31	6486.43	91.86	189.00
14998.00	90.03	92.26	8943.21	6580.02	-214.29	6576.93	0.55	6580.42	91.87	94.00
15093.00	89.35	91.15	8943.72	6675.01	-217.11	6671.89	1.37	6675.42	91.86	95.00
15187.00	89.55	92.07	8944.62	6769.00	-219.75	6765.85	1.00	6769.41	91.86	94.00
15282.00	89.55	88.34	8945.37	6863.97	-220.08	6860.83	3.92	6864.35	91.84	95.00
15377.00	89.52	88.19	8946.14	6958.84	-217.20	6955.78	0.16	6959.17	91.79	95.00
15471.00	88.69	88.22	8947.60	7052.69	-214.25	7049.72	0.88	7052.97	91.74	94.00
15566.00	88.97	88.11	8949.54	7147.54	-211.21	7144.65	0.31	7147.77	91.69	95.00
15660.00	88.97	88.22	8951.23	7241.39	-208.20	7238.59	0.11	7241.58	91.65	94.00
15755.00	88.38	88.17	8953.43	7336.23	-205.21	7333.51	0.62	7336.39	91.60	95.00
15849.00	89.41	87.92	8955.24	7430.07	-202.01	7427.44	1.13	7430.19	91.56	94.00
15944.00	87.66	87.35	8957.66	7524.84	-198.09	7522.33	1.94	7524.93	91.51	95.00
16039.00	88.11	88.05	8961.17	7619.60	-194.28	7617.18	0.87	7619.66	91.46	95.00
16133.00	89.11	88.55	8963.45	7713.45	-191.50	7711.11	1.19	7713.49	91.42	94.00
16228.00	89.48	87.90	8964.62	7808.31	-188.55	7806.06	0.80	7808.34	91.38	95.00
16417.00	89.97	88.51	8965.53	7997.04	-182.63	7994.96	0.41	7997.05	91.31	189.00
16512.00	89.72	87.81	8965.79	8091.90	-179.58	8089.91	0.77	8091.91	91.27	95.00
16607.00	89.42	88.93	8966.50	8186.78	-176.88	8184.87	1.22	8186.78	91.24	95.00
16701.00	89.62	88.09	8967.29	8280.67	-174.44	8278.83	0.93	8280.67	91.21	94.00
16796.00	90.10	87.97	8967.52	8375.52	-171.17	8373.78	0.52	8375.53	91.17	95.00
16890.00	89.62	88.21	8967.74	8469.38	-168.04	8467.73	0.57	8469.39	91.14	94.00
16985.00	88.31	88.31	8969.46	8564.24	-165.16	8562.66	1.38	8564.26	91.10	95.00
17080.00	88.87	88.02	8971.79	8659.07	-162.12	8657.59	0.66	8659.1	91.07	95.00
17174.00	89.62	87.94	8973.03	8752.91	-158.81	8751.52	0.81	8752.96	91.04	94.00
17269.00	89.55	88.00	8973.72	8847.76	-155.45	8846.46	0.09	8847.82	91.01	95.00
17310.00	89.62	88.19	8974.01	8888.69	-154.08	8887.43	0.51	8888.77	90.99	41.00