



Directional Survey

Survey Report

Well Name: POKER LAKE UNIT 23 DTD 907H

Survey does not go to
total depth of 24384'
provide survey to total
depth

API/UWI 3001542592	SAP Cost Center ID 1670801001	Permit Number	State/Province New Mexico	County Eddy
Surface Location T24S-R30E-S23	Spud Date 8/8/2018 08:00	Original KB Elevation (ft) 3,465.00	Gr Elev (ft) 3,433.00	KB-Ground Distance (ft) 32.00

Wellbore Name Original Hole	Actual Deviation Survey 8/6/2018 18:00, MWD	VS Dir (°) 0.01	Kick Off Depth (MD) (ft... 10,532.0	Kick Off Method Steerable Motor	Lat/Long Datum NAD 27	Latitude (°)	Longitude (°)
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Deviation Surveys

Date	Description				Declination (°)
8/6/2018	MWD				6.94
MD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	TVD Tie In (ftKB)	NSTie In (ft)	EW Tie In (ft)
0.00	0.0	0.0	0.00	0.00	0.00

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Bed Data?	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8/8/2018	208.00	1.40	39.00	Other	No	207.98	1.98	1.97	1.60	0.67
8/8/2018	298.00	1.70	51.00	Other	No	297.95	3.67	3.67	3.33	0.49
8/8/2018	393.00	0.80	52.00	Other	No	392.92	4.97	4.96	4.95	0.95
8/8/2018	581.00	1.40	82.00	Other	No	580.89	6.09	6.09	8.25	0.43
8/8/2018	785.00	1.80	71.40	Other	No	784.81	7.46	7.46	13.76	0.24
8/8/2018	878.00	1.70	72.80	Other	No	877.77	8.34	8.33	16.46	0.12
8/8/2018	972.00	1.50	47.20	Other	No	971.73	9.59	9.58	18.70	0.78
8/8/2018	1,067.00	1.50	31.00	Other	No	1,066.70	11.50	11.49	20.25	0.44
8/8/2018	1,161.00	1.20	34.50	Other	No	1,160.67	13.36	13.36	21.44	0.33
8/8/2018	1,255.00	0.70	25.20	Other	No	1,254.66	14.69	14.69	22.24	0.55
8/8/2018	1,349.00	0.50	7.20	Other	No	1,348.65	15.62	15.62	22.54	0.29
8/8/2018	1,444.00	0.40	40.10	Other	No	1,443.65	16.29	16.28	22.80	0.29
8/8/2018	1,538.00	0.30	338.80	Other	No	1,537.65	16.77	16.76	22.93	0.39
8/8/2018	1,632.00	0.30	333.10	Other	No	1,631.65	17.21	17.21	22.73	0.03
8/8/2018	1,820.00	0.50	239.20	Other	No	1,819.65	17.23	17.23	21.80	0.32
8/8/2018	1,914.00	0.50	326.20	Other	No	1,913.64	17.36	17.36	21.22	0.73
8/8/2018	2,009.00	1.60	5.80	Other	No	2,008.63	19.03	19.02	21.12	1.32
8/8/2018	2,103.00	2.10	7.60	Other	No	2,102.58	22.04	22.04	21.48	0.54
8/8/2018	2,198.00	3.60	13.20	Other	No	2,197.46	26.67	26.67	22.39	1.60
8/8/2018	2,292.00	5.70	17.60	Other	No	2,291.14	33.99	33.99	24.48	2.26
8/8/2018	2,387.00	6.60	17.40	Other	No	2,385.59	43.70	43.70	27.54	0.95
8/8/2018	2,481.00	6.50	17.10	Other	No	2,478.98	53.94	53.94	30.72	0.11
8/12/2018	2,575.00	5.50	24.00	Other	No	2,572.47	63.14	63.14	34.11	1.31
8/12/2018	2,669.00	5.20	24.50	Other	No	2,666.06	71.14	71.13	37.71	0.32
8/12/2018	2,764.00	5.10	22.50	Other	No	2,760.67	78.96	78.95	41.11	0.22
8/12/2018	2,859.00	5.10	22.20	Other	No	2,855.30	86.77	86.76	44.33	0.03
8/12/2018	2,953.00	5.20	22.80	Other	No	2,948.92	94.56	94.55	47.55	0.12
8/12/2018	3,048.00	5.70	17.90	Other	No	3,043.49	103.02	103.01	50.67	0.72
8/12/2018	3,142.00	4.70	15.60	Other	No	3,137.10	111.17	111.16	53.14	1.09
8/12/2018	3,236.00	3.70	15.00	Other	No	3,230.85	117.81	117.80	54.96	1.06
8/12/2018	3,330.00	2.10	21.80	Other	No	3,324.72	122.34	122.33	56.39	1.74
8/12/2018	3,424.00	1.60	46.80	Other	No	3,418.68	124.84	124.83	57.99	1.00
8/12/2018	3,518.00	2.00	67.20	Other	No	3,512.63	126.37	126.36	60.45	0.80
8/12/2018	3,612.00	0.60	114.60	Other	No	3,606.61	126.80	126.79	62.41	1.76
8/12/2018	3,706.00	1.00	152.90	Other	No	3,700.60	125.87	125.86	63.23	0.69
8/12/2018	3,800.00	1.60	171.80	Other	No	3,794.57	123.84	123.83	63.80	0.78
8/12/2018	3,894.00	1.60	142.30	Other	No	3,888.54	121.50	121.49	64.79	0.87
8/12/2018	3,988.00	1.30	129.00	Other	No	3,982.51	119.79	119.78	66.42	0.48
8/12/2018	4,083.00	1.30	151.90	Other	No	4,077.48	118.17	118.15	67.76	0.54
8/12/2018	4,177.00	0.80	163.30	Other	No	4,171.47	116.60	116.58	68.45	0.57
8/12/2018	4,271.00	0.70	162.10	Other	No	4,265.46	115.42	115.41	68.82	0.11
8/12/2018	4,366.00	0.30	180.10	Other	No	4,360.46	114.62	114.61	69.00	0.45
8/12/2018	4,460.00	0.30	161.20	Other	No	4,454.45	114.14	114.13	69.07	0.10
8/12/2018	4,555.00	0.40	188.00	Other	No	4,549.45	113.58	113.57	69.11	0.20
8/12/2018	4,619.00	0.40	189.90	Other	No	4,613.45	113.14	113.12	69.04	0.02
8/12/2018	4,744.00	0.30	182.80	Other	No	4,738.45	112.38	112.37	68.95	0.09
8/12/2018	4,839.00	0.50	184.90	Other	No	4,833.45	111.72	111.71	68.90	0.21



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Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Bad Data?	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8/12/2018	4,933.00	0.40	191.10	Other	No	4,927.44	110.99	110.98	68.80	0.12
8/12/2018	5,027.00	0.30	179.70	Other	No	5,021.44	110.42	110.41	68.74	0.13
8/12/2018	5,121.00	0.20	186.20	Other	No	5,115.44	110.01	110.00	68.72	0.11
8/12/2018	5,310.00	0.10	149.70	Other	No	5,304.44	109.54	109.53	68.77	0.07
8/12/2018	5,404.00	0.10	209.50	Other	No	5,398.44	109.40	109.39	68.77	0.11
8/12/2018	5,498.00	0.10	248.00	Other	No	5,492.44	109.30	109.28	68.66	0.07
8/12/2018	5,592.00	0.00	307.50	Other	No	5,586.44	109.27	109.25	68.58	0.11
8/12/2018	5,687.00	0.10	272.00	Other	No	5,681.44	109.27	109.26	68.50	0.11
8/12/2018	5,781.00	0.00	242.30	Other	No	5,775.44	109.27	109.26	68.42	0.11
8/12/2018	5,876.00	0.10	187.40	Other	No	5,870.44	109.19	109.18	68.40	0.11
8/12/2018	5,979.00	0.30	179.70	Other	No	5,973.44	108.83	108.82	68.39	0.20
8/12/2018	6,065.00	0.30	191.90	Other	No	6,059.44	108.38	108.37	68.35	0.07
8/12/2018	6,159.00	0.40	173.00	Other	No	6,153.44	107.82	107.81	68.34	0.16
8/12/2018	6,253.00	0.40	175.40	Other	No	6,247.43	107.17	107.15	68.40	0.02
8/12/2018	6,347.00	0.50	162.50	Other	No	6,341.43	106.45	106.44	68.55	0.15
8/12/2018	6,442.00	0.50	164.80	Other	No	6,436.43	105.65	105.64	68.79	0.02
8/12/2018	6,536.00	0.40	184.90	Other	No	6,530.42	104.93	104.92	68.87	0.20
8/12/2018	6,630.00	0.40	222.00	Other	No	6,624.42	104.36	104.35	68.62	0.27
8/12/2018	6,725.00	0.40	244.40	Other	No	6,719.42	103.97	103.96	68.10	0.16
8/12/2018	6,819.00	0.30	257.00	Other	No	6,813.42	103.77	103.76	67.56	0.13
8/12/2018	6,913.00	0.30	243.20	Other	No	6,907.42	103.61	103.59	67.10	0.08
8/12/2018	7,007.00	0.30	228.80	Other	No	7,001.42	103.33	103.32	66.70	0.08
8/12/2018	7,102.00	0.30	235.60	Other	No	7,096.41	103.03	103.02	66.31	0.04
8/15/2018	7,197.00	0.30	208.20	Other	No	7,191.41	102.67	102.66	65.98	0.15
8/15/2018	7,291.00	0.30	212.60	Other	No	7,285.41	102.24	102.23	65.73	0.02
8/15/2018	7,385.00	0.40	214.70	Other	No	7,379.41	101.77	101.76	65.42	0.11
8/15/2018	7,479.00	0.40	214.90	Other	No	7,473.41	101.23	101.22	65.04	0.00
8/15/2018	7,574.00	0.70	219.90	Other	No	7,568.40	100.51	100.50	64.48	0.32
8/15/2018	7,668.00	0.60	204.20	Other	No	7,662.40	99.62	99.61	63.91	0.22
8/15/2018	7,762.00	0.60	194.60	Other	No	7,756.39	98.70	98.68	63.58	0.11
8/15/2018	7,857.00	0.70	197.60	Other	No	7,851.39	97.66	97.65	63.28	0.11
8/16/2018	7,951.00	0.60	205.30	Other	No	7,945.38	96.67	96.66	62.90	0.14
8/16/2018	8,045.00	0.50	208.80	Other	No	8,039.38	95.86	95.85	62.49	0.11
8/16/2018	8,247.00	0.50	161.30	Other	No	8,241.37	94.26	94.25	62.35	0.20
8/16/2018	8,341.00	1.50	333.50	Other	No	8,335.36	94.97	94.96	61.93	2.12
8/16/2018	8,435.00	1.50	309.70	Other	No	8,429.33	96.86	96.85	60.44	0.66
8/16/2018	8,529.00	0.20	344.50	Other	No	8,523.32	97.80	97.79	59.44	1.43
8/16/2018	8,623.00	0.70	289.10	Other	No	8,617.31	98.15	98.14	58.86	0.65
8/16/2018	8,717.00	0.40	358.80	Other	No	8,711.31	98.66	98.65	58.31	0.72
8/16/2018	8,811.00	0.50	300.80	Other	No	8,805.31	99.20	99.19	57.95	0.47
8/16/2018	8,905.00	0.90	252.00	Other	No	8,899.30	99.18	99.17	56.90	0.73
8/16/2018	8,999.00	0.30	72.70	Other	No	8,993.30	99.03	99.02	56.43	1.28
8/20/2018	9,092.00	0.40	70.40	Other	No	9,086.30	99.21	99.20	56.97	0.11
8/20/2018	9,187.00	0.30	14.00	Other	No	9,181.30	99.56	99.55	57.34	0.36
8/20/2018	9,281.00	0.30	53.10	Other	No	9,275.29	99.95	99.94	57.60	0.21
8/20/2018	9,373.00	0.40	103.60	Other	No	9,367.29	100.02	100.01	58.10	0.34
8/20/2018	9,467.00	0.40	150.00	Other	No	9,461.29	99.65	99.64	58.58	0.34
8/20/2018	9,561.00	3.70	50.70	Other	Yes					
8/20/2018	9,647.00	0.90	187.60	Other	No	9,641.28	97.71	97.70	58.71	0.35
8/20/2018	9,656.00	8.10	49.80	Other	Yes					
8/20/2018	9,741.00	1.60	187.30	Other	No	9,735.26	95.68	95.67	58.45	0.74
8/20/2018	9,835.00	1.10	179.40	Other	No	9,829.23	93.47	93.46	58.29	0.57
8/20/2018	9,930.00	0.50	227.00	Other	No	9,924.22	92.28	92.27	57.99	0.89
8/20/2018	10,024.00	0.70	206.60	Other	No	10,018.22	91.48	91.47	57.44	0.31



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Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Bad Data?	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8/20/2018	10,118.00	0.80	233.50	Other	No	10,112.21	90.58	90.57	56.65	0.39
8/20/2018	10,213.00	1.10	238.90	Other	No	10,207.20	89.71	89.70	55.34	0.33
8/22/2018	10,307.00	1.20	208.40	Other	No	10,301.18	88.38	88.37	54.10	0.65
8/22/2018	10,401.00	0.90	184.30	Other	No	10,395.16	86.78	86.77	53.57	0.56
8/22/2018	10,476.00	0.80	196.40	Other	No	10,470.15	85.69	85.68	53.38	0.27
8/23/2018	10,502.00	0.70	194.50	Other	No	10,496.15	85.36	85.35	53.29	0.40
8/23/2018	10,565.00	0.70	29.80	Other	No	10,559.15	85.32	85.31	53.39	2.20
8/23/2018	10,597.00	4.00	20.30	Other	No	10,591.12	86.54	86.53	53.87	10.35
8/23/2018	10,644.00	9.70	5.20	Other	No	10,637.77	92.03	92.02	54.80	12.62
8/23/2018	10,691.00	14.20	351.10	Other	No	10,683.75	101.67	101.66	54.27	11.35
8/23/2018	10,738.00	17.50	344.60	Other	No	10,728.96	114.18	114.18	51.50	7.96
8/23/2018	10,785.00	20.10	352.50	Other	No	10,773.45	129.01	129.00	48.57	7.73
8/23/2018	10,832.00	22.60	356.70	Other	No	10,817.23	146.03	146.03	46.99	6.23
8/23/2018	10,879.00	27.20	1.70	Other	No	10,859.85	165.80	165.79	46.79	10.76
8/23/2018	10,926.00	33.30	2.30	Other	No	10,900.43	189.45	189.44	47.63	12.99
8/23/2018	10,974.00	37.80	3.40	Other	No	10,939.48	217.32	217.31	49.03	9.47
8/23/2018	11,021.00	41.70	4.70	Other	No	10,975.60	247.29	247.28	51.16	8.48
8/23/2018	11,068.00	45.10	4.90	Other	No	11,009.75	279.46	279.45	53.87	7.24
8/23/2018	11,115.00	51.20	3.30	Other	No	11,041.09	314.37	314.36	56.35	13.22
8/23/2018	11,162.00	56.00	1.80	Other	No	11,068.98	352.15	352.14	58.01	10.53
8/24/2018	11,209.00	60.70	1.20	Other	No	11,093.63	392.13	392.12	59.06	10.06
8/24/2018	11,256.00	64.00	0.60	Other	No	11,115.44	433.75	433.74	59.71	7.11
8/24/2018	11,303.00	67.90	2.20	Other	No	11,134.59	476.65	476.64	60.76	8.86
8/24/2018	11,351.00	72.20	2.80	Other	No	11,150.97	521.72	521.71	62.73	9.04
8/24/2018	11,398.00	74.80	3.40	Other	No	11,164.31	566.71	566.70	65.17	5.67
8/24/2018	11,445.00	77.50	2.70	Other	No	11,175.56	612.28	612.26	67.60	5.92
8/24/2018	11,492.00	78.70	359.90	Other	No	11,185.26	658.25	658.24	68.64	6.36
8/24/2018	11,540.00	81.00	358.90	Other	No	11,193.71	705.49	705.48	68.14	5.21
8/24/2018	11,587.00	85.10	358.90	Other	No	11,199.40	752.13	752.12	67.25	8.72
8/24/2018	11,633.00	88.60	359.00	Other	No	11,201.93	798.04	798.03	66.41	7.61
8/24/2018	11,726.00	89.90	359.80	Other	No	11,203.15	891.03	891.02	65.43	1.64
8/24/2018	11,821.00	89.30	357.20	Other	No	11,203.81	985.98	985.97	62.95	2.81
8/24/2018	11,915.00	90.30	355.40	Other	No	11,204.14	1,079.78	1,079.77	56.88	2.19
8/24/2018	12,009.00	89.70	353.20	Other	No	11,204.14	1,173.31	1,173.30	47.55	2.43
8/24/2018	12,104.00	90.10	356.30	Other	No	11,204.30	1,267.90	1,267.89	38.85	3.29
8/24/2018	12,198.00	91.00	1.00	Other	No	11,203.40	1,361.84	1,361.83	36.64	5.09
8/24/2018	12,292.00	92.40	1.50	Other	No	11,200.61	1,455.77	1,455.76	38.69	1.58
8/24/2018	12,387.00	91.60	2.40	Other	No	11,197.30	1,550.66	1,550.65	41.92	1.27
8/24/2018	12,481.00	92.60	2.70	Other	No	11,193.85	1,644.50	1,644.49	46.10	1.11
8/24/2018	12,574.00	90.90	2.70	Other	No	11,191.01	1,737.35	1,737.34	50.48	1.83
8/24/2018	12,668.00	88.90	2.90	Other	No	11,191.18	1,831.23	1,831.23	55.07	2.14
8/24/2018	12,762.00	87.70	2.60	Other	No	11,193.96	1,925.08	1,925.07	59.58	1.32
8/26/2018	12,889.00	88.79	346.98	Other	Yes					
8/26/2018	12,889.00	88.79	1.16	Other	No	11,197.85	2,051.95	2,051.94	63.74	1.42
8/26/2018	12,983.00	90.95	2.83	Other	No	11,198.07	2,145.89	2,145.87	67.01	2.90
8/26/2018	13,077.00	88.57	2.21	Other	No	11,198.46	2,239.79	2,239.78	71.15	2.62
8/26/2018	13,171.00	89.10	1.25	Other	No	11,200.37	2,333.72	2,333.71	73.98	1.17
8/26/2018	13,265.00	89.93	0.46	Other	No	11,201.17	2,427.71	2,427.70	75.39	1.22
8/26/2018	13,359.00	90.73	359.23	Other	No	11,200.63	2,521.71	2,521.69	75.13	1.56
8/26/2018	13,453.00	91.78	358.87	Other	No	11,198.57	2,615.67	2,615.66	73.57	1.18
8/26/2018	13,550.00	91.08	358.08	Other	No	11,196.15	2,712.60	2,712.59	70.99	1.09
8/27/2018	13,644.00	90.90	358.08	Other	No	11,194.52	2,806.53	2,806.52	67.84	0.19
8/27/2018	13,738.00	89.19	1.77	Other	No	11,194.45	2,900.51	2,900.50	67.72	4.33
8/27/2018	13,832.00	90.37	1.42	Other	No	11,194.81	2,994.48	2,994.46	70.34	1.31



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Well Name: POKER LAKE UNIT 23 DTD 907H

API/UWI 3001542592	SAP Cost Center ID 1670801001	Permit Number	State/Province New Mexico	County Eddy
Surface Location T24S-R30E-S23	Spud Date 8/8/2018 08:00	Original KB Elevation (ft) 3,465.00	Gr Elev (ft) 3,433.00	KB-Ground Distance (ft) 32.00

Survey Data										
Date	MD (ft)	Incl (°)	Azm (°)	Survey Company	Bad Data?	TVD (ft)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8/27/2018	13,926.00	91.82	1.33	Other	No	11,193.01	3,088.43	3,088.42	72.59	1.55
8/27/2018	14,021.00	90.15	1.77	Other	No	11,191.38	3,183.38	3,183.36	75.16	1.82
8/27/2018	14,115.00	88.14	1.86	Other	No	11,192.78	3,277.32	3,277.30	78.14	2.14
8/27/2018	14,209.00	89.36	1.42	Other	No	11,194.83	3,371.25	3,371.24	80.83	1.38
8/27/2018	14,304.00	90.37	0.90	Other	No	11,195.06	3,466.23	3,466.22	82.75	1.20
8/27/2018	14,398.00	89.14	359.84	Other	No	11,195.46	3,560.23	3,560.21	83.36	1.73
8/28/2018	14,492.00	88.57	358.43	Other	No	11,197.34	3,654.19	3,654.18	81.94	1.62
8/28/2018	14,586.00	89.89	359.14	Other	No	11,198.60	3,748.16	3,748.15	79.95	1.59
8/28/2018	14,680.00	90.59	357.03	Other	No	11,198.21	3,842.10	3,842.09	76.81	2.36
8/28/2018	14,774.00	89.49	358.87	Other	No	11,198.14	3,936.04	3,936.02	73.44	2.28
8/28/2018	14,868.00	90.95	1.25	Other	No	11,197.78	4,030.03	4,030.01	73.54	2.97
8/28/2018	14,962.00	88.75	1.77	Other	No	11,198.03	4,123.99	4,123.97	76.02	2.40
8/28/2018	15,056.00	87.16	0.19	Other	No	11,201.38	4,217.91	4,217.89	77.63	2.38
8/28/2018	15,091.00	90.90	1.60	Other	No	11,201.97	4,252.89	4,252.88	78.17	11.42
8/28/2018	15,150.00	87.74	0.10	Other	No	11,202.67	4,311.87	4,311.86	79.05	5.93
8/28/2018	15,244.00	88.79	359.67	Other	No	11,205.52	4,405.83	4,405.81	78.86	1.21
8/28/2018	15,338.00	89.49	359.07	Other	No	11,206.93	4,499.81	4,499.80	77.83	0.98
8/28/2018	15,432.00	87.47	358.96	Other	No	11,209.42	4,593.76	4,593.74	76.21	2.15
8/28/2018	15,526.00	88.13	358.17	Other	No	11,213.03	4,687.66	4,687.64	73.86	1.09
8/28/2018	15,620.00	89.14	358.17	Other	No	11,215.27	4,781.58	4,781.57	70.86	1.07
8/28/2018	15,715.00	90.68	357.82	Other	No	11,215.42	4,876.52	4,876.51	67.53	1.66
8/28/2018	15,808.00	91.43	0.90	Other	No	11,213.71	4,969.48	4,969.47	66.49	3.41
8/28/2018	15,903.00	89.14	1.25	Other	No	11,213.24	5,064.46	5,064.45	68.28	2.44
8/28/2018	15,996.00	89.71	1.51	Other	No	11,214.17	5,157.43	5,157.42	70.52	0.67
8/28/2018	16,091.00	90.90	1.60	Other	No	11,213.66	5,252.39	5,252.38	73.09	1.26
8/28/2018	16,186.00	92.18	0.10	Other	No	11,211.11	5,347.34	5,347.33	74.50	2.08
8/28/2018	16,280.00	90.64	359.23	Other	No	11,208.80	5,441.31	5,441.30	73.95	1.88
8/28/2018	16,374.00	87.69	358.35	Other	No	11,210.17	5,535.27	5,535.25	71.97	3.27
8/28/2018	16,469.00	88.13	358.08	Other	No	11,213.63	5,630.16	5,630.14	69.01	0.54
8/28/2018	16,563.00	89.14	358.61	Other	No	11,215.87	5,724.09	5,724.08	66.30	1.21
8/28/2018	16,657.00	90.29	357.29	Other	No	11,216.34	5,818.02	5,818.01	62.94	1.86
8/28/2018	16,751.00	90.68	0.72	Other	No	11,215.54	5,911.99	5,911.98	61.30	3.67
8/28/2018	16,845.00	91.91	0.10	Other	No	11,213.42	6,005.96	6,005.95	61.98	1.47
8/28/2018	16,939.00	90.64	2.04	Other	No	11,211.33	6,099.92	6,099.90	63.73	2.47
8/28/2018	17,033.00	91.16	0.90	Other	No	11,209.85	6,193.87	6,193.86	66.14	1.33
8/28/2018	17,127.00	89.85	0.81	Other	No	11,209.02	6,287.86	6,287.84	67.55	1.40
8/28/2018	17,221.00	90.51	0.46	Other	No	11,208.73	6,381.85	6,381.84	68.59	0.79
8/28/2018	17,315.00	91.34	1.33	Other	No	11,207.21	6,475.82	6,475.81	70.06	1.28
8/28/2018	17,409.00	90.29	359.75	Other	No	11,205.87	6,569.81	6,569.79	70.94	2.02
8/28/2018	17,503.00	91.69	359.75	Other	No	11,204.25	6,663.79	6,663.78	70.53	1.49
8/28/2018	17,692.00	89.45	1.25	Other	No	11,202.37	6,852.76	6,852.74	72.18	1.43
8/28/2018	17,786.00	90.11	0.54	Other	No	11,202.73	6,946.74	6,946.73	73.65	1.03
8/28/2018	17,876.00	91.21	359.93	Other	No	11,201.69	7,036.73	7,036.72	74.02	1.40
8/28/2018	17,974.00	89.98	0.72	Other	No	11,200.67	7,134.72	7,134.71	74.57	1.49
8/28/2018	18,068.00	89.58	359.05	Other	No	11,201.03	7,228.72	7,228.71	74.38	1.83
8/28/2018	18,162.00	89.76	359.23	Other	No	11,201.58	7,322.71	7,322.69	72.97	0.27
8/28/2018	18,257.00	88.79	358.08	Other	No	11,202.78	7,417.67	7,417.66	70.74	1.58
8/28/2018	18,351.00	89.54	357.64	Other	No	11,204.15	7,511.59	7,511.58	67.23	0.93
8/28/2018	18,446.00	89.49	358.61	Other	No	11,204.95	7,606.54	7,606.53	64.13	1.02
8/28/2018	18,540.00	90.81	358.79	Other	No	11,204.71	7,700.51	7,700.50	61.99	1.42
8/28/2018	18,685.00	88.97	358.79	Other	No	11,204.98	7,845.47	7,845.46	58.93	1.27
8/28/2018	18,728.00	89.23	359.05	Other	No	11,205.66	7,888.46	7,888.45	58.12	0.86
8/28/2018	18,820.00	90.51	358.08	Other	No	11,205.87	7,980.43	7,980.42	55.82	1.75
8/28/2018	18,914.00	91.60	357.38	Other	No	11,204.14	8,074.33	8,074.32	52.10	1.38



Survey Report

Well Name: POKER LAKE UNIT 23 DTD 907H

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Surface Location T24S-R30E-S23	Spud Date 8/8/2018 08:00	Original KB Elevation (ft) 3,465.00	Gr Elev (ft) 3,433.00	KB-Ground Distance (ft) 32.00

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Bad Data?	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
8/28/2018	19,009.00	91.82	357.29	Other	No	11,201.30	8,169.19	8,169.18	47.68	0.25
8/28/2018	19,104.00	91.34	0.07	Other	No	11,198.68	8,264.12	8,264.11	45.49	2.97
8/28/2018	19,198.00	89.32	4.06	Other	No	11,198.14	8,358.03	8,358.02	48.88	4.76
8/28/2018	19,293.00	90.02	4.94	Other	No	11,198.69	8,452.74	8,452.73	56.34	1.18
8/28/2018	19,387.00	89.67	4.15	Other	No	11,198.94	8,546.44	8,546.43	63.79	0.92
8/28/2018	19,481.00	90.46	4.32	Other	No	11,198.84	8,640.18	8,640.17	70.73	0.86
8/28/2018	19,576.00	90.59	3.88	Other	No	11,197.97	8,734.94	8,734.92	77.52	0.48
8/28/2018	19,670.00	92.00	3.18	Other	No	11,195.84	8,828.73	8,828.72	83.30	1.67
8/28/2018	19,765.00	91.25	1.86	Other	No	11,193.15	8,923.60	8,923.59	87.48	1.60
8/28/2018	19,859.00	89.67	1.69	Other	No	11,192.39	9,017.55	9,017.53	90.39	1.69
8/28/2018	19,953.00	89.41	1.77	Other	No	11,193.15	9,111.50	9,111.49	93.23	0.29
8/28/2018	20,047.00	91.47	2.48	Other	No	11,192.43	9,205.43	9,205.42	96.71	2.32
8/28/2018	20,136.00	90.90	2.39	Other	No	11,190.58	9,294.33	9,294.32	100.49	0.65
8/28/2018	20,236.00	88.40	1.16	Other	No	11,191.20	9,394.27	9,394.26	103.59	2.79
8/28/2018	20,331.00	86.59	359.84	Other	No	11,195.35	9,489.17	9,489.16	104.42	2.36
8/28/2018	20,426.00	86.55	357.64	Other	No	11,201.03	9,583.97	9,583.96	102.34	2.31
8/28/2018	20,520.00	86.55	357.56	Other	No	11,206.69	9,677.72	9,677.70	98.41	0.08
8/28/2018	20,615.00	88.09	356.94	Other	No	11,211.13	9,772.50	9,772.49	93.85	1.75
8/28/2018	20,710.00	88.75	357.38	Other	No	11,213.75	9,867.35	9,867.33	89.15	0.83
8/28/2018	20,803.00	90.86	356.94	Other	No	11,214.07	9,960.23	9,960.21	84.54	2.32
8/28/2018	20,898.00	90.73	359.59	Other	No	11,212.75	10,055.17	10,055.15	81.66	2.79
8/28/2018	20,993.00	92.53	357.56	Other	No	11,210.05	10,150.09	10,150.08	79.30	2.86
8/28/2018	21,087.00	90.64	358.43	Other	No	11,207.45	10,243.99	10,243.98	76.02	2.21
8/28/2018	21,182.00	91.47	359.31	Other	No	11,205.70	10,338.95	10,338.94	74.14	1.27
8/28/2018	21,276.00	92.35	359.58	Other	No	11,202.56	10,432.90	10,432.88	73.23	0.98
9/12/2018	21,371.00	93.05	358.35	Other	No	11,198.09	10,527.77	10,527.76	71.52	1.49
9/12/2018	21,465.00	91.08	0.54	Other	No	11,194.70	10,621.70	10,621.68	70.61	3.13
9/12/2018	21,559.00	89.10	2.39	Other	No	11,194.55	10,715.66	10,715.64	73.01	2.88
9/12/2018	21,654.00	89.36	2.21	Other	No	11,195.83	10,810.57	10,810.56	76.83	0.33
9/12/2018	21,748.00	90.68	1.77	Other	No	11,195.80	10,904.51	10,904.50	80.09	1.48
9/12/2018	21,843.00	91.91	1.16	Other	No	11,193.65	10,999.46	10,999.44	82.52	1.45
9/13/2018	21,935.00	91.03	0.28	Other	No	11,191.29	11,091.42	11,091.40	83.67	1.35
9/13/2018	22,031.00	91.12	0.48	Other	No	11,189.49	11,187.40	11,187.38	84.31	0.23
9/15/2018	22,125.00	91.08	0.90	Other	No	11,187.68	11,281.37	11,281.36	85.44	0.45
9/15/2018	22,218.00	90.20	1.07	Other	No	11,186.65	11,374.35	11,374.34	87.04	0.96
9/15/2018	22,312.00	91.30	0.98	Other	No	11,185.42	11,468.33	11,468.31	88.72	1.17
9/15/2018	22,406.00	90.42	1.16	Other	No	11,184.00	11,562.30	11,562.29	90.48	0.96
9/16/2018	22,501.00	88.40	0.98	Other	No	11,184.98	11,657.28	11,657.26	92.25	2.13
9/16/2018	22,596.00	88.57	0.54	Other	No	11,187.49	11,752.23	11,752.22	93.51	0.50
9/16/2018	22,690.00	90.77	0.19	Other	No	11,188.04	11,846.23	11,846.21	94.11	2.37
9/19/2018	22,782.00	90.18	359.89	Weatherford	No	11,187.27	11,938.22	11,938.21	94.17	0.72
9/19/2018	22,876.00	88.59	358.65	Weatherford	No	11,188.28	12,032.20	12,032.19	92.98	2.14
9/19/2018	22,970.00	88.68	357.42	Weatherford	No	11,190.52	12,126.12	12,126.10	89.76	1.31
9/19/2018	23,065.00	87.47	356.69	Weatherford	No	11,193.71	12,220.94	12,220.92	84.88	1.49
9/19/2018	23,160.00	88.52	356.54	Weatherford	No	11,197.04	12,315.71	12,315.70	79.27	1.12
9/19/2018	23,254.00	88.59	356.01	Weatherford	No	11,199.41	12,409.48	12,409.47	73.17	0.57
9/19/2018	23,348.00	89.63	356.80	Weatherford	No	11,200.87	12,503.28	12,503.27	67.27	1.39
9/19/2018	23,629.00	89.94	0.66	Weatherford	No	11,201.92	12,784.16	12,784.15	61.05	1.38
9/20/2018	23,723.00	89.63	1.85	Weatherford	No	11,202.27	12,878.13	12,878.12	63.11	1.31
9/20/2018	23,816.00	89.82	2.66	Weatherford	No	11,202.72	12,971.06	12,971.05	66.76	0.89
9/20/2018	23,910.00	89.63	1.83	Weatherford	No	11,203.17	13,064.98	13,064.97	70.45	0.91
9/20/2018	24,005.00	90.31	0.86	Weatherford	No	11,203.22	13,159.96	13,159.94	72.68	1.25
9/20/2018	24,099.00	90.09	0.42	Weatherford	No	11,202.89	13,253.95	13,253.94	73.73	0.52
9/20/2018	24,193.00	90.25	0.13	Weatherford	No	11,202.61	13,347.95	13,347.94	74.18	0.35



Survey Report

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Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Survey Company	Bad Data?	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)
9/20/2018	24,287.00	90.44	1.47	Weatherford	No	11,202.05	13,441.94	13,441.92	75.49	1.44
9/20/2018	24,355.00	90.35	1.65	Weatherford	No	11,201.58	13,509.91	13,509.90	77.34	0.30