

30-015-43765

**BAKER
HUGHES**
a GE company

Company: Baker Hughes, a GE Company
 Customer/Operator: Chisholm Energy
 Date Range: 12/10/2017 - 12/24/2017
 Rig Name: Nabors M55
 Rig Elv/Dat: 22.00 (ft) / GL
 Well: Cottonwood 29-32 Fed Com WCB No. 4H
 Wellbore: Cottonwood 29-32 Fed Com WCB No. 4H

Long: 104° 18' 37.541" W
 Lat: 32° 1' 12.822" N
 Ref North: Grid
 Mag Declination: 7.32 (deg) E
 True to Grid Conv: 0.01 (deg) E
 TAC: 7.31 (deg)
 Ver.Sec.Az: 179.70 (deg)

**NM OIL CONSERVATION
ARTESIA DISTRICT****MAR 15 2018****RECEIVED**

Scribeline (deg)

Run2: NA

Run3: 258.17

Run5: NA

Tie/ Proj	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	Temperature (degF)	True Vertical Depth (ft)	Northing (ft)	Easting (ft)	DLS (deg/100ft)	Vertical Section (ft)
	0.00	0.00	347.00						
	22.00	0.00	347.00		22.00	0.00	0.00	0.00	0.00
	129.00	1.00	347.00		128.99	0.91	-0.21	0.93	-0.91
	221.00	0.90	321.90		220.98	2.26	-0.84	0.46	-2.26
	309.00	0.50	319.20		308.98	3.10	-1.51	0.46	-3.10
	381.00	1.00	317.40		380.97	3.80	-2.14	0.70	-3.81
	461.00	0.60	318.30		460.96	4.62	-2.90	0.50	-4.64
	550.00	0.80	324.00		549.95	5.47	-3.57	0.24	-5.49
	639.00	0.70	312.50		638.95	6.34	-4.34	0.20	-6.37
	766.00	0.90	306.00		765.93	7.45	-5.72	0.17	-7.48
	861.00	0.80	308.50		860.92	8.30	-6.84	0.11	-8.34
	956.00	0.70	297.60		955.92	8.99	-7.87	0.18	-9.03
	1051.00	0.80	302.70		1050.91	9.61	-8.94	0.13	-9.66
	1146.00	0.80	306.50		1145.90	10.37	-10.04	0.06	-10.42
	1240.00	0.80	299.60		1239.89	11.08	-11.13	0.10	-11.14
	1335.00	0.50	311.00		1334.88	11.68	-12.02	0.34	-11.74
	1430.00	0.20	338.30		1429.88	12.11	-12.40	0.35	-12.17
	1524.00	0.40	29.40		1523.88	12.54	-12.30	0.34	-12.61
	1619.00	0.40	339.00		1618.88	13.14	-12.25	0.36	-13.21
	1715.00	0.40	330.50		1714.88	13.75	-12.54	0.06	-13.81
	1810.00	0.40	326.90		1809.87	14.31	-12.88	0.03	-14.38
	1905.00	0.40	173.40		1904.87	14.26	-13.02	0.82	-14.33
	2000.00	0.20	338.20		1999.87	14.09	-13.05	0.63	-14.15
	2095.00	0.30	302.00		2094.87	14.37	-13.32	0.19	-14.44
	2190.00	0.40	315.40		2189.87	14.74	-13.76	0.14	-14.81
	2285.00	0.40	306.10		2284.87	15.17	-14.27	0.07	-15.25
	2379.00	0.40	293.70		2378.86	15.50	-14.83	0.09	-15.57
	2474.00	0.40	301.20		2473.86	15.80	-15.42	0.06	-15.88
	2568.00	0.40	261.30		2567.86	15.92	-16.02	0.29	-16.01
	2663.00	0.50	287.00		2662.86	15.99	-16.75	0.23	-16.08
	2758.00	0.40	256.50		2757.85	16.04	-17.47	0.27	-16.13
	2853.00	0.40	249.50		2852.85	15.84	-18.10	0.05	-15.94
	2948.00	0.50	276.40		2947.85	15.77	-18.82	0.24	-15.87
	3043.00	0.70	252.10		3042.84	15.64	-19.79	0.34	-15.74
	3137.00	0.80	252.40		3136.84	15.27	-20.96	0.11	-15.38
	3232.00	0.70	239.60		3231.83	14.77	-22.09	0.20	-14.89
	3327.00	0.80	230.20		3326.82	14.05	-23.10	0.17	-14.18
	3422.00	1.10	236.30		3421.81	13.12	-24.37	0.33	-13.25
	3517.00	0.70	239.20		3516.80	12.32	-25.63	0.42	-12.45
	3612.00	0.80	218.10		3611.79	11.50	-26.53	0.31	-11.64
	3707.00	0.90	221.30		3706.78	10.42	-27.44	0.12	-10.56
	3802.00	1.00	229.40		3801.76	9.32	-28.56	0.18	-9.47
	3897.00	1.20	220.00		3896.75	8.02	-29.83	0.28	-8.17
	3992.00	0.60	234.50		3991.73	6.97	-30.87	0.67	-7.13
	4087.00	0.60	251.60		4086.73	6.52	-31.75	0.19	-6.69
	4182.00	0.60	245.10		4181.72	6.15	-32.67	0.07	-6.33
	4277.00	0.40	228.20		4276.72	5.72	-33.37	0.26	-5.90
	4371.00	0.60	222.70		4370.72	5.14	-33.95	0.22	-5.32
	4467.00	0.70	220.30		4466.71	4.33	-34.67	0.11	-4.51
	4562.00	0.70	227.50		4561.70	3.49	-35.47	0.09	-3.68
	4656.00	0.90	216.80		4655.69	2.51	-36.34	0.26	-2.70
	4751.00	1.10	231.20		4750.68	1.34	-37.49	0.34	-1.54
	4846.00	1.10	241.10		4845.66	0.33	-39.00	0.20	-0.54

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**Provide Signature Page for
Directional Survey**



4941.00	1.10	246.10		4940.65	-0.48	-40.63	0.10	0.26
5035.00	1.20	233.00		5034.63	-1.44	-42.25	0.30	1.21
5128.00	1.50	238.90		5127.60	-2.65	-44.07	0.36	2.42
5223.00	1.40	232.40		5222.57	-4.00	-46.05	0.20	3.76
5318.00	1.50	231.90		5317.54	-5.48	-47.95	0.11	5.22
5412.00	1.50	227.60		5411.51	-7.06	-49.82	0.12	6.80
5506.00	1.40	230.80		5505.48	-8.62	-51.62	0.14	8.35
5601.00	2.00	231.60		5600.44	-10.38	-53.82	0.63	10.10
5696.00	2.30	235.10		5695.37	-12.50	-56.68	0.34	12.21
5791.00	2.30	231.10		5790.29	-14.79	-59.73	0.17	14.48
5886.00	2.30	228.90		5885.22	-17.24	-62.65	0.09	16.91
5981.00	2.50	236.00		5980.13	-19.65	-65.81	0.38	19.31
6076.00	2.90	235.20		6075.03	-22.18	-69.50	0.42	21.82
6170.00	2.20	251.70		6168.93	-24.11	-73.16	1.07	23.72
6265.00	2.30	248.70		6263.86	-25.37	-76.67	0.16	24.97
6360.00	2.50	247.40		6358.78	-26.86	-80.36	0.22	26.44
6454.00	2.10	243.20		6452.70	-28.43	-83.79	0.46	27.99
6549.00	2.70	241.80		6547.62	-30.27	-87.31	0.63	29.81
6644.00	3.00	246.50		6642.50	-32.32	-91.57	0.40	31.84
6727.00	2.20	239.50		6725.41	-33.99	-94.93	1.04	33.49
6822.00	1.30	208.90		6820.37	-35.86	-97.02	1.33	35.35
6917.00	1.50	204.90		6915.34	-37.93	-98.07	0.23	37.42
7012.00	1.60	192.40		7010.31	-40.35	-98.87	0.37	39.84
7107.00	1.70	193.20		7105.27	-43.02	-99.48	0.11	42.50
7202.00	0.70	194.60		7200.25	-44.95	-99.95	1.05	44.43
7295.00	1.00	237.20		7293.24	-45.94	-100.77	0.73	45.42
7390.00	1.50	217.00		7388.21	-47.39	-102.22	0.69	46.85
7465.00	2.00	224.90		7463.18	-49.10	-103.73	0.74	48.55
7544.00	1.67	210.72	120.28	7542.14	-51.06	-105.30	0.71	50.51
7639.00	1.32	203.89	122.98	7637.11	-53.25	-106.45	0.41	52.70
7733.00	1.25	334.30	125.69	7731.10	-53.32	-107.33	2.48	52.76
7828.00	1.81	189.04	131.09	7826.08	-53.87	-108.01	3.08	53.30
7923.00	0.28	302.20	133.80	7921.07	-55.23	-108.45	2.04	54.66
8017.00	2.36	98.50	139.20	8015.04	-55.39	-106.73	2.79	54.83
8112.00	1.18	240.12	139.20	8110.02	-56.17	-105.64	3.54	55.61
8207.00	0.90	223.62	139.20	8205.00	-57.19	-107.00	0.43	56.63
8302.00	1.27	81.76	141.91	8300.00	-57.58	-106.48	2.16	57.03
8338.00	2.95	74.12	144.61	8335.97	-57.27	-105.19	4.72	56.72
8369.00	4.69	70.47	150.02	8366.90	-56.63	-103.23	5.66	56.09
8395.00	6.07	68.95	150.02	8392.79	-55.78	-100.94	5.34	55.25
8430.00	8.14	66.76	150.02	8427.52	-54.14	-96.94	5.96	53.63
8461.00	10.03	65.44	155.42	8458.13	-52.15	-92.47	6.13	51.67
8489.00	11.37	65.26	152.72	8485.64	-49.98	-87.74	4.79	49.52
8516.00	12.82	66.66	144.61	8512.04	-47.68	-82.57	5.48	47.25
8547.00	16.69	67.08	190.56	8542.01	-44.58	-75.31	12.49	44.19
8579.00	20.71	67.63	150.02	8572.31	-40.64	-65.84	12.57	40.29
8610.00	23.62	69.03	150.02	8601.02	-36.33	-54.97	9.54	36.04
8642.00	27.58	70.58	152.72	8629.87	-31.57	-42.00	12.55	31.35
8673.00	29.82	72.04	152.72	8657.06	-26.81	-27.89	7.57	26.66
8705.00	33.19	72.64	152.72	8684.34	-21.74	-11.96	10.58	21.68
8735.00	37.26	71.27	152.72	8708.84	-16.37	4.48	13.82	16.39
8765.00	40.64	72.36	152.72	8732.17	-10.49	22.40	11.50	10.61
8794.00	43.85	74.30	152.72	8753.64	-4.91	41.08	11.95	5.13
8825.00	47.29	78.12	155.42	8775.34	0.34	62.57	14.16	-0.02
8855.00	50.44	81.37	155.42	8795.08	4.35	84.80	13.30	-3.90
8885.00	53.48	82.33	158.12	8813.56	7.69	108.18	10.44	-7.13
8915.00	56.16	83.77	271.66	8830.84	10.66	132.52	9.76	-9.96
8946.00	56.76	88.28	160.83	8847.98	12.44	158.29	12.28	-11.61
8976.00	57.28	91.16	160.83	8864.31	12.56	183.45	8.24	-11.60
9006.00	56.07	94.45	160.83	8880.80	11.34	208.48	10.01	-10.25
9037.00	54.60	98.83	163.53	8898.43	8.40	233.80	12.55	-7.18
9061.00	54.51	100.66	328.42	8912.35	5.09	253.06	6.22	-3.77
9098.00	54.11	105.29	163.53	8933.95	-1.65	282.34	10.22	3.12
9129.00	54.53	108.03	166.23	8952.03	-8.87	306.45	7.31	10.47
9161.00	54.41	109.79	166.23	8970.63	-17.31	331.09	4.49	19.04
9192.00	54.07	109.55	168.94	8988.74	-25.77	354.78	1.26	27.63
9224.00	53.97	110.42	325.72	9007.54	-34.62	379.11	2.22	36.61
9255.00	54.64	112.80	168.94	9025.63	-43.90	402.52	6.60	46.00
9287.00	55.17	113.75	171.64	9044.03	-54.24	426.57	2.94	56.47
9319.00	56.22	114.06	271.66	9062.06	-64.95	450.73	3.38	67.31
9350.00	55.87	117.38	174.34	9079.38	-76.11	473.89	8.95	78.59
9382.00	56.07	120.06	174.34	9097.29	-88.85	497.15	6.97	91.45



9414.00	56.94	123.18	174.34	9114.96	-102.84	519.86	8.57	105.56
9445.00	58.26	126.87	177.05	9131.57	-117.86	541.29	10.91	120.70
9477.00	59.74	130.10	177.05	9148.05	-134.94	562.75	9.81	137.88
9508.00	59.65	131.36	177.05	9163.70	-152.40	583.03	3.52	155.45
9540.00	61.34	133.36	174.34	9179.46	-171.16	603.61	7.58	174.32
9571.00	64.57	136.52	174.34	9193.55	-190.67	623.14	13.82	193.93
9603.00	68.41	139.43	174.34	9206.32	-212.47	642.77	14.61	215.83
9635.00	70.12	144.02	177.05	9217.65	-235.96	661.29	14.44	239.42
9667.00	71.33	147.17	174.34	9228.22	-260.88	678.35	10.03	264.42
9698.00	72.67	150.32	179.75	9237.80	-286.08	693.65	10.59	289.70
9730.00	74.17	152.78	128.39	9246.93	-313.04	708.25	8.73	316.74
9761.00	75.96	155.96	179.75	9254.92	-340.04	721.20	11.47	343.81
9793.00	78.02	158.22	179.75	9262.13	-368.76	733.34	9.42	372.59
9825.00	80.40	160.70	179.75	9268.12	-398.19	744.36	10.64	402.08
9856.00	83.79	162.99	182.45	9272.38	-427.36	753.92	13.16	431.30
9888.00	85.86	164.99	336.53	9275.27	-457.99	762.71	8.98	461.98
9919.00	85.68	167.56	187.86	9277.56	-488.02	770.05	8.29	492.05
9951.00	86.36	170.07	185.16	9279.78	-519.34	776.24	8.11	523.39
9983.00	87.13	172.02	185.16	9281.59	-550.89	781.21	6.54	554.98
10014.00	88.21	173.88	187.86	9282.85	-581.63	785.01	6.93	585.74
10032.00	88.71	175.07		9283.34	-599.54	786.74	7.17	603.65
10085.00	88.77	174.64	152.72	9284.50	-652.32	791.50	0.82	656.45
10179.00	86.89	173.76	158.12	9288.06	-745.76	800.99	2.21	749.95
10274.00	86.76	174.84	166.23	9293.33	-840.15	810.41	1.14	844.38
10369.00	89.45	176.70	168.94	9296.47	-934.82	817.41	3.44	939.09
10464.00	92.47	179.54	168.94	9294.87	-1029.74	820.53	4.36	1034.02
10558.00	95.56	182.06	171.64	9288.29	-1123.48	819.22	4.24	1127.75
10653.00	94.57	180.04	171.64	9279.90	-1218.09	817.49	2.36	1222.35
10747.00	92.25	179.15	171.64	9274.31	-1311.91	818.15	2.64	1316.18
10842.00	95.06	181.99	174.34	9268.26	-1406.69	817.21	4.20	1410.95
10937.00	95.03	181.26	177.05	9259.90	-1501.29	814.53	0.77	1505.53
11032.00	94.72	184.73	177.05	9251.83	-1595.80	809.58	3.65	1600.02
11127.00	95.15	185.53	177.05	9243.65	-1690.07	801.12	0.95	1694.24
11222.00	94.93	184.44	174.34	9235.31	-1784.34	792.90	1.17	1788.47
11317.00	95.00	181.78	177.05	9227.09	-1878.83	787.76	2.79	1882.93
11411.00	94.72	179.15	179.75	9219.12	-1972.49	787.00	2.80	1976.58
11505.00	92.13	176.14	179.75	9213.50	-2066.22	790.86	4.22	2070.33
11600.00	88.74	173.02	179.75	9212.78	-2160.77	799.83	4.85	2164.92
11694.00	87.41	173.51	179.75	9215.94	-2254.06	810.85	1.51	2258.28
11788.00	90.89	177.51	179.75	9217.33	-2347.73	818.21	5.64	2351.98
11883.00	94.57	182.26	179.75	9212.81	-2442.58	818.40	6.32	2446.83
11977.00	93.45	179.53	179.75	9206.23	-2536.33	816.94	3.13	2540.57
12072.00	93.48	179.47	182.45	9200.49	-2631.15	817.77	0.07	2635.40
12166.00	92.87	176.50	182.45	9195.28	-2724.94	821.07	3.22	2729.20
12261.00	94.60	175.61	182.45	9189.10	-2819.51	827.59	2.05	2823.80
12356.00	94.63	177.66	185.16	9181.45	-2914.03	833.15	2.15	2918.35
12451.00	93.85	181.56	185.16	9174.42	-3008.75	833.79	4.18	3013.07
12546.00	94.04	180.79	185.16	9167.89	-3103.50	831.85	0.83	3107.81
12641.00	94.07	180.14	185.16	9161.17	-3198.26	831.08	0.68	3202.57
12736.00	93.76	180.30	185.16	9154.68	-3293.04	830.71	0.37	3297.34
12831.00	93.79	182.76	185.16	9148.43	-3387.79	828.18	2.58	3392.08
12926.00	91.48	181.16	182.45	9144.06	-3482.62	824.94	2.96	3486.90
13021.00	88.37	179.31	185.16	9144.19	-3577.61	824.55	3.81	3581.88
13116.00	90.80	179.53	185.16	9144.87	-3672.59	825.51	2.57	3676.87
13210.00	91.39	179.54	185.16	9143.08	-3766.57	826.27	0.63	3770.85
13306.00	91.57	180.60	185.16	9140.60	-3862.54	826.15	1.12	3866.81
13401.00	91.17	182.03	185.16	9138.33	-3957.48	823.98	1.56	3961.74
13496.00	91.60	180.33	185.16	9136.03	-4052.43	822.02	1.85	4056.68
13590.00	91.57	179.86	185.16	9133.43	-4146.40	821.86	0.50	4150.64
13685.00	91.73	180.49	187.86	9130.69	-4241.36	821.57	0.68	4245.60
13779.00	91.48	178.76	187.86	9128.06	-4335.31	822.19	1.86	4339.56
13874.00	92.25	178.85	187.86	9124.97	-4430.24	824.17	0.82	4434.50
13969.00	92.34	178.63	187.86	9121.17	-4525.14	826.26	0.25	4529.41
14064.00	92.16	177.96	190.56	9117.44	-4620.03	829.08	0.73	4624.30
14158.00	92.25	177.62	190.56	9113.82	-4713.89	832.70	0.37	4718.18
14253.00	92.47	178.27	190.56	9109.91	-4808.75	836.11	0.72	4813.06
14348.00	90.86	176.12	190.56	9107.15	-4903.58	840.75	2.83	4907.92
14442.00	92.28	177.95	190.56	9104.57	-4997.42	845.61	2.46	5001.77
14536.00	92.31	180.09	190.56	9100.81	-5091.32	847.22	2.27	5095.69
14631.00	91.36	181.58	193.27	9097.76	-5186.26	845.84	1.86	5190.62
14726.00	90.62	181.19	193.27	9096.12	-5281.22	843.54	0.88	5285.56
14820.00	88.95	180.35	193.27	9096.48	-5375.20	842.28	1.99	5379.54



	14915.00	90.31	182.57	195.97	9097.09	-5470.16	839.86	2.74	5474.48
	15009.00	89.60	184.32	195.97	9097.16	-5563.99	834.21	2.01	5568.28
	15103.00	90.12	181.01	195.97	9097.39	-5657.87	829.84	3.56	5662.14
	15198.00	91.11	175.24	195.97	9096.37	-5752.77	832.95	6.16	5757.06
	15293.00	89.57	168.96	195.97	9095.81	-5846.82	846.00	6.81	5851.17
	15388.00	89.60	173.32	195.97	9096.50	-5940.66	860.62	4.59	5945.09
	15483.00	89.41	175.08	195.97	9097.32	-6035.17	870.22	1.86	6039.64
	15578.00	89.20	178.85	198.67	9098.47	-6130.01	875.25	3.97	6134.51
	15672.00	89.63	181.96	198.67	9099.43	-6223.99	874.59	3.34	6228.49
	15767.00	89.85	183.71	198.67	9099.86	-6318.87	869.89	1.86	6323.34
	15862.00	91.33	180.92	201.37	9098.88	-6413.78	866.05	3.32	6418.22
	15956.00	91.97	181.00	193.27	9096.18	-6507.72	864.48	0.69	6512.16
	16050.00	91.85	180.35	198.67	9093.04	-6601.66	863.37	0.70	6606.09
	16145.00	91.88	181.71	201.37	9089.95	-6696.60	861.66	1.43	6701.02
	16240.00	91.17	183.58	201.37	9087.42	-6791.46	857.28	2.10	6795.85
	16340.00	91.79	183.83	204.08	9084.84	-6891.21	850.82	0.67	6895.57
Proj	16412.00	91.79	183.83		9082.59	-6963.02	846.02	0.00	6967.35