



DIRECTIONAL REPORT

30-015-38246

WELLNAME: BOYLES 24 #1H

FIELD: WILLOW LAKE SE

AFE NO.:

WELL ID NO.: 30-015-38246

API NO.: 30-015-38246

RECEIVED

JUN 24 2011

NMOCD ARTESIA

SURVEY TYPE: GMS-0

MD:

ANGLE: 0.00

AZIMUTH: 0.00

TVD:

N/S: 0.00

E/W: 0.00

VS: 0.00

TARGET: 359.50

MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
200	0.30	200.60	200	-0.49	-0.18	-0.49	0.15
300	0.50	210.80	300	-1.11	-0.50	-1.11	0.21
400	0.40	204.20	400	-1.80	-0.87	-1.80	0.11
500	0.30	194.40	500	-2.38	-1.07	-2.37	0.12
600	0.30	214.60	600	-2.84	-1.29	-2.83	0.10
700	0.90	219.50	700	-3.67	-1.94	-3.65	0.60
800	0.80	220.70	800	-4.80	-2.89	-4.78	0.10
900	0.90	225.10	900	-5.88	-3.90	-5.85	0.12
1,000	1.00	218.90	1,000	-7.12	-5.01	-7.07	0.14
1,100	0.70	210.90	1,100	-8.32	-5.87	-8.27	0.32
1,200	0.70	214.70	1,200	-9.35	-6.53	-9.29	0.05
1,300	0.40	200.30	1,300	-10.18	-7.00	-10.12	0.33
1,400	0.40	236.70	1,400	-10.70	-7.41	-10.63	0.25
1,500	0.50	247.90	1,500	-11.05	-8.11	-10.98	0.13
1,600	0.50	247.30	1,600	-11.38	-8.91	-11.31	0.01
1,700	0.30	248.30	1,700	-11.65	-9.56	-11.57	0.20
1,800	0.30	232.50	1,800	-11.91	-10.01	-11.82	0.08
1,900	0.90	91.70	1,900	-12.09	-9.43	-12.01	1.15
2,000	2.30	100.50	2,000	-12.48	-6.68	-12.42	1.42
2,100	2.40	110.40	2,100	-13.57	-2.74	-13.55	0.42
2,200	3.30	109.10	2,200	-15.24	1.94	-15.26	0.90
2,300	3.40	108.30	2,299	-17.12	7.48	-17.18	0.11
2,400	3.40	108.10	2,399	-18.97	13.11	-19.08	0.01
2,500	2.20	122.40	2,499	-20.92	17.55	-21.07	1.38
2,600	1.40	134.90	2,599	-22.81	20.04	-22.98	0.89
2,700	1.30	127.10	2,699	-24.36	21.81	-24.55	0.21
2,800	1.20	129.40	2,799	-25.71	23.52	-25.91	0.11
2,900	1.10	135.00	2,899	-27.05	25.01	-27.27	0.15
3,000	1.10	133.40	2,999	-28.39	26.38	-28.62	0.03
3,100	0.92	138.22	3,099	-29.65	27.62	-29.89	0.20
3,200	0.68	135.98	3,199	-30.67	28.56	-30.92	0.24
3,300	0.67	135.79	3,299	-31.52	29.38	-31.77	0.01
3,400	0.68	136.61	3,399	-32.37	30.20	-32.63	0.01
3,500	0.54	145.44	3,499	-33.19	30.87	-33.45	0.17
3,600	0.53	151.21	3,599	-33.98	31.36	-34.25	0.06
3,700	0.30	161.08	3,699	-34.63	31.67	-34.91	0.24
3,800	0.31	204.67	3,799	-35.13	31.64	-35.40	0.23
3,900	0.41	188.43	3,899	-35.73	31.48	-36.00	0.14
4,000	0.33	146.77	3,999	-36.32	31.58	-36.59	0.27
4,100	0.12	185.91	4,099	-36.67	31.73	-36.94	0.25
4,200	0.29	195.40	4,199	-37.01	31.65	-37.29	0.17
4,300	0.42	195.23	4,299	-37.61	31.49	-37.88	0.13
4,400	0.55	180.35	4,399	-38.45	31.39	-38.72	0.18
4,500	0.33	188.00	4,499	-39.21	31.35	-39.48	0.23
4,600	0.42	211.43	4,599	-39.81	31.12	-40.08	0.18
4,700	0.66	231.31	4,699	-40.48	30.48	-40.75	0.30
4,800	0.73	214.71	4,799	-41.37	29.66	-41.62	0.21
4,900	0.84	229.60	4,899	-42.36	28.74	-42.61	0.23
5,000	1.07	222.23	4,999	-43.53	27.56	-43.77	0.26
5,100	0.94	210.95	5,099	-44.92	26.51	-45.16	0.24
5,200	1.00	214.31	5,199	-46.35	25.59	-46.57	0.08
5,300	1.21	207.16	5,299	-48.01	24.62	-48.22	0.25
5,400	1.23	201.80	5,399	-49.95	23.74	-50.15	0.12
5,500	1.26	183.56	5,499	-52.04	23.27	-52.24	0.40
5,600	1.02	197.76	5,599	-53.98	22.93	-54.18	0.37
5,700	0.98	197.59	5,699	-55.65	22.40	-55.84	0.04
5,800	1.05	192.76	5,799	-57.36	21.94	-57.55	0.11
5,900	1.17	176.01	5,899	-59.27	21.81	-59.46	0.34
6,000	1.02	177.97	5,999	-61.18	21.91	-61.37	0.15
6,100	1.14	173.08	6,099	-63.05	22.06	-63.24	0.15
6,200	1.38	182.84	6,199	-65.24	22.12	-65.43	0.32
6,300	1.65	174.06	6,299	-67.88	22.21	-68.07	0.35
6,400	1.83	150.74	6,399	-70.70	23.14	-70.90	0.72
6,435	2.00	145.80	6,434	-71.70	23.76	-71.90	0.68
6,467	2.10	149.10	6,466	-72.66	24.37	-72.87	0.48
6,498	5.00	12.10	6,497	-71.83	24.95	-72.04	21.58
6,530	10.20	5.80	6,528	-67.64	25.53	-67.86	16.43
6,562	15.30	3.60	6,559	-60.60	26.08	-60.83	16.01
6,594	20.40	4.00	6,590	-50.82	26.73	-51.05	15.94
6,625	25.40	4.30	6,618	-38.79	27.61	-39.03	16.13
6,657	29.80	4.00	6,647	-24.01	28.68	-24.26	13.76
6,689	32.70	3.00	6,674	-7.44	29.69	-7.70	9.21



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MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
6,721	35.70	3.00	6,701	10.52	30.63	10.25	9.38
6,753	38.10	3.00	6,726	29.70	31.64	29.43	7.50
6,784	39.60	3.10	6,750	49.12	32.67	48.83	4.84
6,816	42.40	2.00	6,775	70.09	33.60	69.80	9.04
6,848	45.50	1.10	6,798	92.29	34.19	91.99	9.88
6,880	49.30	359.40	6,819	115.84	34.29	115.53	12.50
6,911	51.30	359.20	6,839	139.69	33.99	139.38	6.47
6,943	54.10	359.20	6,858	165.14	33.64	164.84	8.75
6,975	57.30	359.20	6,876	191.57	33.27	191.27	10.00
7,007	59.80	0.20	6,893	218.86	33.13	218.56	8.26
7,038	62.00	0.50	6,908	245.95	33.30	245.65	7.15
7,069	63.90	359.90	6,922	273.55	33.39	273.25	6.37
7,101	66.70	359.70	6,936	302.62	33.29	302.32	8.77
7,133	69.00	359.60	6,948	332.26	33.11	331.96	7.19
7,165	71.60	359.10	6,959	362.38	32.77	362.08	8.26
7,197	74.20	359.30	6,968	392.96	32.34	392.66	8.15
7,228	77.00	0.10	6,976	422.98	32.18	422.69	9.37
7,260	78.90	359.70	6,982	454.28	32.13	453.98	6.06
7,292	80.00	359.40	6,988	485.74	31.88	485.44	3.56
7,323	81.70	359.10	6,993	516.34	31.48	516.04	5.57
7,355	83.90	359.00	6,997	548.08	30.95	547.79	6.88
7,387	83.30	358.60	7,001	579.87	30.29	579.59	2.25
7,419	82.60	358.50	7,005	611.62	29.48	611.34	2.21
7,450	83.90	358.60	7,008	642.39	28.70	642.12	4.21
7,482	87.20	359.40	7,011	674.29	28.15	674.02	10.61
7,514	88.80	359.80	7,012	706.27	27.93	706.00	5.15
7,546	88.80	359.50	7,013	738.26	27.73	737.99	0.94
7,577	89.70	359.40	7,013	769.25	27.43	768.99	2.92
7,641	90.70	359.10	7,013	833.25	26.59	832.98	1.63
7,704	91.30	359.40	7,012	896.23	25.77	895.97	1.06
7,768	91.60	359.20	7,010	960.21	24.99	959.95	0.56
7,832	90.60	358.80	7,009	1024.18	23.87	1023.94	1.68
7,927	90.50	359.00	7,008	1119.16	22.05	1118.93	0.23
8,022	88.40	359.50	7,009	1214.14	20.80	1213.92	2.27
8,086	89.00	359.50	7,010	1278.13	20.25	1277.90	0.94
8,149	89.20	359.40	7,011	1341.11	19.64	1340.89	0.35
8,213	89.30	358.90	7,012	1405.10	18.69	1404.88	0.80
8,276	89.60	359.30	7,013	1468.09	17.70	1467.88	0.79
8,340	89.00	358.70	7,013	1532.08	16.59	1531.87	1.33
8,403	89.70	359.10	7,014	1595.06	15.38	1594.87	1.28
8,466	90.30	359.20	7,014	1658.05	14.44	1657.86	0.97
8,530	90.90	358.80	7,013	1722.04	13.32	1721.86	1.13
8,593	90.80	358.60	7,013	1785.02	11.90	1784.84	0.35
8,657	90.60	358.50	7,012	1848.99	10.28	1848.83	0.35
8,720	90.30	358.60	7,011	1911.97	8.68	1911.82	0.50
8,815	91.10	358.80	7,010	2006.93	6.53	2006.80	0.87
8,879	90.60	359.00	7,009	2070.92	5.30	2070.79	0.84
8,942	90.30	358.30	7,009	2133.90	3.81	2133.78	1.21
9,006	89.80	357.90	7,009	2197.86	1.69	2197.76	1.00
9,101	90.40	358.10	7,008	2292.80	-1.62	2292.73	0.67
9,165	89.50	357.80	7,008	2356.76	-3.91	2356.70	1.48
9,260	89.50	358.00	7,009	2451.69	-7.39	2451.66	0.21
9,356	90.10	358.30	7,010	2547.64	-10.49	2547.64	0.70
9,451	90.00	358.00	7,010	2642.59	-13.56	2642.61	0.33
9,547	90.00	358.00	7,010	2738.53	-16.91	2738.58	0.00
9,642	90.70	358.00	7,009	2833.47	-20.23	2833.54	0.74
9,737	90.70	358.80	7,008	2928.43	-22.88	2928.52	0.84
9,800	90.20	359.10	7,007	2991.42	-24.03	2991.51	0.93
9,895	89.80	358.40	7,007	3086.39	-26.10	3086.50	0.85
9,990	90.80	357.90	7,007	3181.34	-29.17	3181.47	1.18
10,086	92.00	358.10	7,004	3277.25	-32.52	3277.41	1.27
10,181	91.80	358.60	7,001	3372.16	-35.25	3372.34	0.57
10,276	91.00	358.50	6,999	3467.10	-37.66	3467.30	0.85
10,340	90.80	358.60	6,998	3531.07	-39.28	3531.28	0.35
10,403	89.80	358.20	6,998	3594.05	-41.04	3594.27	1.71
10,467	89.60	358.00	6,998	3658.01	-43.16	3658.25	0.44
10,562	89.90	357.80	6,998	3752.94	-46.64	3753.21	0.38
10,658	90.80	357.70	6,998	3848.87	-50.41	3849.16	0.94
10,753	90.60	358.60	6,997	3943.81	-53.47	3944.13	0.97
10,848	89.60	358.60	6,997	4038.78	-55.80	4039.11	1.05
10,944	89.60	358.10	6,997	4134.74	-58.56	4135.09	0.52
11,039	89.80	357.60	6,998	4229.67	-62.12	4230.05	0.57



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MEASURED DEPTH	INCLINATION ANGLE	AZIMUTH ANGLE	TVD	+NORTH -SOUTH	+EAST -WEST	VERTICAL SECTION	DOGLEG SEVERITY
11,134	90.50	356.60	6,997	4324.55	-66.93	4324.97	1.28
11,230	89.60	356.00	6,997	4420.34	-73.12	4420.81	1.13
11,325	90.50	355.10	6,997	4515.06	-80.50	4515.59	1.34
11,393	90.90	355.10	6,996	4582.80	-86.30	4583.38	0.59
11,445	90.90	355.10	6,996	4634.60	-90.74	4635.22	0.00