



Company: CHISHOLM ENERGY OPERATING
 Well Name: LEA SOUTH 25 FEDERAL COM #7H
 Field: BONE SPRINGS
 Location: SEC 25, T 20S, R 34E
 API: 30-025-43029
 County: LEA, NEW MEXICO
 Rig: LATSHAW #7

Job Number: NM17220CL
 Magnetic Dip Angle: 60.480 °
 Mag Field Strength: 48278 nT
 Magnetic Declination: 6.750 °
 Grid Correction: 0.44 °
 Total Correction: 6.31 °
 Well Head Latitude: 32.5377570

Calculation Method: Minimum Curvature
 Vert. Section Azi: 358.26
 North Reference: GRID
 Elevation: 3769.00 MSL
 Elevation Reference: RKB
 Tie-in provided by: Gyro
 Longitude: -103.511593

No.	Tool Type	Survey Depth (ft)	Inclination (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (°/100')	Build (°/100')	Walk (°/100')
								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
0	Tie in	1700	2.38	338.51	0	1773.78	53.79	53.43 N	12.74 W	54.93	346.59	0	0	0
1	MWD	1775	2.65	327.64	75	1848.71	56.75	56.34 N	14.24 W	58.11	345.82	0.73	0.4	-14.5
2	MWD	2267	4.90	352.80	492	2339.64	87.46	86.80 N	22.96 W	89.79	345.18	0.56	0.5	5.1
3	MWD	2739	1.60	271.70	472	2810.97	107.94	107.01 N	32.08 W	111.72	343.31	1.04	-0.7	-17.2
4	MWD	3223	0.20	97.00	484	3294.92	108.21	107.11 N	38.00 W	113.65	340.47	0.37	-0.3	-36.1
5	MWD	3695	3.20	44.40	472	3766.66	117.22	116.42 N	27.96 W	119.73	346.50	0.65	0.6	-11.1
6	MWD	4073	1.80	31.00	378	4144.30	129.52	129.05 N	17.52 W	130.23	352.27	0.40	-0.4	-3.5
7	MWD	4452	2.30	53.10	379	4523.06	138.91	138.72 N	8.37 W	138.97	356.55	0.24	0.1	5.8
8	MWD	4924	0.60	31.10	472	4994.89	146.44	146.52 N	0.48 E	146.52	0.19	0.37	-0.4	-4.7
9	MWD	5395	0.80	58.80	471	5465.86	150.13	150.34 N	4.57 E	150.41	1.74	0.08	0.0	5.9
10	MWD	5772	0.30	65.20	377	5842.84	151.81	152.11 N	7.71 E	152.31	2.90	0.13	-0.1	1.7
11	MWD	5951	0.40	33.50	179	6021.84	152.50	152.83 N	8.48 E	153.07	3.18	0.12	0.1	-17.7
12	MWD	6045	1.10	221.50	94	6115.83	152.11	152.43 N	8.07 E	152.64	3.03	1.59	0.7	-183.0
13	MWD	6423	1.10	224.60	378	6493.76	146.97	147.13 N	3.11 E	147.16	1.21	0.02	0.0	0.0
14	MWD	6894	1.30	232.80	471	6964.66	140.75	140.68 N	4.32 W	140.75	358.24	0.06	0.0	1.0
15	MWD	7364	1.70	237.30	470	7434.50	134.07	133.69 N	14.43 W	134.47	353.84	0.09	0.1	1.0
16	MWD	7458	0.00	310.70	94	7528.48	133.35	132.94 N	15.60 W	133.85	353.31	1.81	-1.8	78.5
17	MWD	7835	0.10	271.80	377	7905.48	133.37	132.95 N	15.93 W	133.90	353.17	0.03	0.0	-10.9
18	MWD	8306	0.30	184.90	471	8376.48	132.17	131.73 N	16.45 W	132.75	352.88	0.07	0.0	-18.5
19	MWD	8777	0.40	231.70	471	8847.47	129.97	129.48 N	17.84 W	130.71	352.15	0.06	0.0	9.9
20	MWD	9248	1.80	241.60	471	9318.37	125.67	124.95 N	25.64 W	127.55	348.40	0.30	0.3	2.1
21	MWD	9531	1.00	64.60	283	9601.34	124.66	123.89 N	27.32 W	126.87	347.56	0.99	-0.3	-62.5
22	MWD	10003	1.10	132.10	472	10073.28	123.18	122.62 N	20.24 W	124.28	350.63	0.25	0.0	14.3
23	MWD	10474	0.30	144.40	471	10544.24	119.02	118.59 N	16.16 W	119.68	352.24	0.17	-0.2	2.6
24	MWD	10669	0.80	182.20	195	10739.23	117.24	116.81 N	15.92 W	117.89	352.24	0.30	0.3	19.4
25	MWD	10690	1.30	156.70	21	10760.22	116.87	116.45 N	15.83 W	117.52	352.26	3.20	2.4	-121.4
26	MWD	10753	4.60	354.10	63	10823.17	118.73	118.30 N	15.81 W	119.36	352.39	9.29	5.2	-258.1
27	MWD	10784	9.50	352.30	31	10853.93	122.52	122.08 N	16.28 W	123.16	352.40	15.82	15.8	-5.8

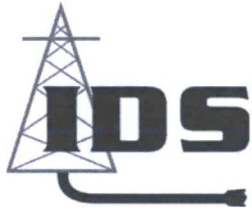


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28	MWD	10816	14.70	353.50	32	10885.20	129.19	128.73 N	17.09 W	129.86	352.44	16.27	16.3	3.7
29	MWD	10847	18.20	356.20	31	10914.93	137.95	137.47 N	17.86 W	138.63	352.60	11.55	11.3	8.7
30	MWD	10879	18.60	357.00	32	10945.30	148.05	147.56 N	18.46 W	148.71	352.87	1.48	1.3	2.5
31	MWD	10910	20.30	359.10	31	10974.53	158.37	157.87 N	18.80 W	158.99	353.21	5.93	5.5	6.8
32	MWD	10941	23.00	0.80	31	11003.34	169.80	169.31 N	18.80 W	170.35	353.66	8.94	8.7	5.5
33	MWD	10973	25.20	2.30	32	11032.55	182.84	182.37 N	18.44 W	183.30	354.23	7.14	6.9	4.7
34	MWD	11004	27.80	3.20	31	11060.29	196.63	196.18 N	17.77 W	196.98	354.82	8.49	8.4	2.9
35	MWD	11035	29.30	3.80	31	11087.52	211.38	210.97 N	16.87 W	211.64	355.43	4.93	4.8	1.9
36	MWD	11067	30.50	4.10	32	11115.26	227.26	226.88 N	15.77 W	227.43	356.02	3.78	3.8	0.9
37	MWD	11094	32.80	3.60	27	11138.24	241.36	241.02 N	14.82 W	241.47	356.48	8.57	8.5	-1.9
38	MWD	11125	34.90	3.80	31	11163.98	258.54	258.25 N	13.70 W	258.61	356.96	6.78	6.8	0.6
39	MWD	11156	37.70	2.60	31	11188.96	276.83	276.57 N	12.68 W	276.86	357.37	9.32	9.0	-3.9
40	MWD	11188	41.40	0.70	32	11213.64	297.16	296.93 N	12.11 W	297.18	357.66	12.16	11.6	-5.9
41	MWD	11219	45.50	0.40	31	11236.14	318.46	318.25 N	11.91 W	318.47	357.86	13.24	13.2	-1.0
42	MWD	11251	49.00	0.90	32	11257.85	341.93	341.74 N	11.64 W	341.94	358.05	11.00	10.9	1.6
43	MWD	11282	50.50	1.60	31	11277.88	365.56	365.39 N	11.12 W	365.56	358.26	5.14	4.8	2.3
44	MWD	11314	51.80	1.90	32	11297.96	390.44	390.30 N	10.36 W	390.44	358.48	4.13	4.1	0.9
45	MWD	11345	53.40	1.70	31	11316.78	415.01	414.91 N	9.59 W	415.03	358.68	5.19	5.2	-0.6
46	MWD	11377	55.40	1.60	32	11335.41	440.99	440.92 N	8.84 W	441.01	358.85	6.26	6.3	-0.3
47	MWD	11408	57.60	1.40	31	11352.52	466.79	466.76 N	8.16 W	466.83	359.00	7.12	7.1	-0.6
48	MWD	11440	60.40	1.80	32	11369.00	494.17	494.18 N	7.39 W	494.23	359.14	8.82	8.7	1.3
49	MWD	11471	63.40	1.60	31	11383.60	521.47	521.51 N	6.58 W	521.55	359.28	9.69	9.7	-0.6
50	MWD	11502	65.60	0.20	31	11396.95	549.42	549.48 N	6.15 W	549.52	359.36	8.18	7.1	-4.5
51	MWD	11534	67.60	358.80	32	11409.65	578.77	578.85 N	6.41 W	578.88	359.37	7.43	6.3	-4.4
52	MWD	11565	69.10	357.90	31	11421.09	607.59	607.65 N	7.24 W	607.69	359.32	5.54	4.8	-2.9
53	MWD	11596	71.30	357.60	31	11431.59	636.75	636.79 N	8.38 W	636.85	359.25	7.15	7.1	-1.0
54	MWD	11627	74.70	356.60	31	11440.65	666.39	666.39 N	9.88 W	666.47	359.15	11.39	11.0	-3.2

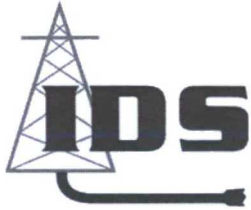


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55	MWD	11659	78.30	355.60	32	11448.12	697.47	697.43 N	12.00 W	697.53	359.01	11.65	11.3	-3.1
56	MWD	11690	81.50	355.10	31	11453.56	727.95	727.85 N	14.48 W	727.99	358.86	10.44	10.3	-1.6
57	MWD	11722	84.50	356.10	32	11457.46	759.67	759.51 N	16.91 W	759.70	358.72	9.87	9.4	3.1
58	MWD	11753	87.20	357.30	31	11459.70	790.58	790.37 N	18.69 W	790.59	358.65	9.53	8.7	3.9
59	MWD	11784	90.50	358.50	31	11460.32	821.57	821.34 N	19.83 W	821.58	358.62	11.33	10.6	3.9
60	MWD	11816	91.20	358.70	32	11459.85	853.56	853.33 N	20.61 W	853.58	358.62	2.28	2.2	0.6
61	MWD	11845	91.00	359.10	29	11459.29	882.55	882.32 N	21.17 W	882.57	358.63	1.54	-0.7	1.4
62	MWD	11940	93.60	358.40	95	11455.48	977.46	977.21 N	23.24 W	977.49	358.64	2.83	2.7	-0.7
63	MWD	12034	93.40	357.70	94	11449.74	1071.29	1070.98 N	26.43 W	1071.31	358.59	0.77	-0.2	-0.7
64	MWD	12128	93.90	357.90	94	11443.76	1165.09	1164.72 N	30.03 W	1165.11	358.52	0.57	0.5	0.2
65	MWD	12222	94.90	357.30	94	11436.55	1258.81	1258.36 N	33.95 W	1258.82	358.45	1.24	1.1	-0.6
66	MWD	12317	95.00	356.50	95	11428.35	1353.43	1352.87 N	39.07 W	1353.43	358.35	0.85	0.1	-0.8
67	MWD	12411	95.60	356.90	94	11419.67	1446.99	1446.31 N	44.46 W	1446.99	358.24	0.77	0.6	0.4
68	MWD	12506	95.90	357.00	95	11410.15	1541.49	1540.70 N	49.49 W	1541.49	358.16	0.33	0.3	0.1
69	MWD	12601	96.20	356.90	95	11400.13	1635.93	1635.03 N	54.52 W	1635.94	358.09	0.33	0.3	-0.1
70	MWD	12695	93.70	358.00	94	11392.02	1729.56	1728.58 N	58.68 W	1729.58	358.06	2.90	-2.7	1.2
71	MWD	12790	90.10	359.20	95	11388.87	1824.49	1823.48 N	61.00 W	1824.50	358.08	3.99	-3.8	1.3
72	MWD	12884	90.60	359.50	94	11388.30	1918.47	1917.47 N	62.06 W	1918.48	358.15	0.62	0.5	0.3
73	MWD	12978	90.40	0.10	94	11387.48	2012.44	2011.47 N	62.39 W	2012.44	358.22	0.67	-0.2	0.6
74	MWD	13072	90.70	359.70	94	11386.58	2106.39	2105.46 N	62.56 W	2106.39	358.30	0.53	0.3	-0.4
75	MWD	13167	90.90	359.80	95	11385.25	2201.35	2200.45 N	62.97 W	2201.36	358.36	0.24	0.2	0.1
76	MWD	13262	90.90	0.10	95	11383.76	2296.30	2295.44 N	63.05 W	2296.31	358.43	0.32	0.0	0.3
77	MWD	13356	91.20	0.20	94	11382.04	2390.23	2389.43 N	62.81 W	2390.25	358.49	0.34	0.3	0.1
78	MWD	13450	91.50	0.50	94	11379.82	2484.14	2483.40 N	62.23 W	2484.18	358.56	0.45	0.3	0.3
79	MWD	13544	90.70	359.10	94	11378.02	2578.09	2577.38 N	62.56 W	2578.14	358.61	1.72	-0.9	-1.5
80	MWD	13638	91.50	359.10	94	11376.21	2672.06	2671.35 N	64.04 W	2672.11	358.63	0.85	0.9	0.0
81	MWD	13733	92.10	359.50	95	11373.23	2767.00	2766.29 N	65.20 W	2767.06	358.65	0.76	0.6	0.4



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82	MWD	13827	91.00	357.90	94	11370.69	2860.96	2860.23 N	67.33 W	2861.02	358.65	2.07	-1.2	-1.7
83	MWD	13921	91.00	357.80	94	11369.05	2954.94	2954.15 N	70.86 W	2955.00	358.63	0.11	0.0	-0.1
84	MWD	14016	91.10	358.00	95	11367.30	3049.92	3049.07 N	74.34 W	3049.98	358.60	0.24	0.1	0.2
85	MWD	14111	91.20	358.00	95	11365.40	3144.90	3143.99 N	77.65 W	3144.95	358.59	0.11	0.1	0.0
86	MWD	14204	91.20	357.70	93	11363.45	3237.88	3236.91 N	81.14 W	3237.92	358.56	0.32	0.0	-0.3
87	MWD	14299	91.30	357.90	95	11361.38	3332.85	3331.81 N	84.79 W	3332.89	358.54	0.24	0.1	0.2
88	MWD	14393	91.30	358.40	94	11359.25	3426.83	3425.74 N	87.82 W	3426.87	358.53	0.53	0.0	0.5
89	MWD	14487	91.30	357.90	94	11357.11	3520.80	3519.67 N	90.85 W	3520.84	358.52	0.53	0.0	-0.5
90	MWD	14582	92.20	357.20	95	11354.21	3615.75	3614.53 N	94.91 W	3615.78	358.50	1.20	0.9	-0.7
91	MWD	14676	92.40	357.00	94	11350.44	3709.65	3708.34 N	99.66 W	3709.68	358.46	0.30	0.2	-0.2
92	MWD	14770	92.60	357.20	94	11346.34	3803.55	3802.13 N	104.42 W	3803.56	358.43	0.30	0.2	0.2
93	MWD	14864	92.90	357.30	94	11341.83	3897.42	3895.91 N	108.92 W	3897.43	358.40	0.34	0.3	0.1
94	MWD	14959	92.90	357.40	95	11337.02	3992.29	3990.69 N	113.31 W	3992.30	358.37	0.11	0.0	0.1
95	MWD	15054	93.10	357.20	95	11332.05	4087.15	4085.45 N	117.78 W	4087.15	358.35	0.30	0.2	-0.2
96	MWD	15148	93.40	357.30	94	11326.72	4180.98	4179.19 N	122.28 W	4180.98	358.32	0.34	0.3	0.1
97	MWD	15242	93.50	357.90	94	11321.06	4274.80	4272.94 N	126.21 W	4274.80	358.31	0.65	0.1	0.6
98	MWD	15337	93.80	357.70	95	11315.02	4369.61	4367.68 N	129.85 W	4369.61	358.30	0.38	0.3	-0.2
99	MWD	15431	93.90	357.80	94	11308.71	4463.39	4461.39 N	133.53 W	4463.39	358.29	0.15	0.1	0.1
100	MWD	15526	94.40	357.60	95	11301.83	4558.14	4556.07 N	137.33 W	4558.14	358.27	0.57	0.5	-0.2
101	PBHL	15579	94.40	357.60	53	11297.76	4610.98	4608.86 N	139.54 W	4610.98	358.27	0.00	0.0	0.0

102 MWD

103 MWD

104 MWD

105 MWD

106 MWD

107 MWD

108 MWD