

DRILTECH MWD SURVEY REPORT



Company: EOG Resources, Inc
Well: Thor 21 701H
Location: Lea Co., NM
Rig: H&P 260

Job Number: 2015-060-EODT-NM
Vertical Section Plane: 359.60
WELL API #: 30-025-41667
Tie Into: Surface

Calculation Method Minimum Curvature

SEP 02 2015
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HOBBS OCF

Survey #	Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')
								N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)		
Tie In	Surf	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	MWD	160.00	0.20	253.00	160	160.00	-0.08	0.08 S	0.27 W	0.28	253.00	0.12	0.13
2	MWD	278.00	0.40	310.20	118	278.00	0.13	0.12 N	0.78 W	0.79	279.05	0.29	0.17
3	MWD	402.00	0.40	318.90	124	402.00	0.74	0.73 N	1.39 W	1.57	297.63	0.05	0.00
4	MWD	493.00	0.50	312.80	91	492.99	1.25	1.24 N	1.89 W	2.26	303.19	0.12	0.11
5	MWD	586.00	0.40	346.20	93	585.99	1.85	1.83 N	2.27 W	2.91	308.88	0.30	-0.11
6	MWD	678.00	0.70	337.60	92	677.99	2.68	2.66 N	2.56 W	3.69	316.11	0.34	0.33
7	MWD	773.00	0.70	338.80	95	772.98	3.76	3.74 N	2.99 W	4.79	321.34	0.02	0.00
8	MWD	867.00	0.70	356.20	94	866.97	4.87	4.85 N	3.24 W	5.83	326.27	0.23	0.00
9	MWD	957.00	1.10	3.20	90	956.96	6.28	6.26 N	3.22 W	7.04	332.74	0.46	0.44
10	MWD	1058.00	1.10	343.70	101	1057.94	8.18	8.16 N	3.44 W	8.85	337.12	0.37	0.00
11	MWD	1152.00	1.10	349.40	94	1151.92	9.94	9.91 N	3.86 W	10.64	338.71	0.12	0.00
12	MWD	1245.00	0.40	244.20	93	1244.92	10.68	10.65 N	4.32 W	11.49	337.92	1.36	-0.75
13	MWD	1338.00	1.40	201.90	93	1337.91	9.49	9.45 N	5.03 W	10.71	331.95	1.22	1.08
14	MWD	1432.00	1.20	193.10	94	1431.88	7.47	7.43 N	5.69 W	9.35	322.56	0.30	-0.21
15	MWD	1526.00	0.90	206.30	94	1525.87	5.85	5.81 N	6.24 W	8.52	312.95	0.41	-0.32
16	MWD	1619.00	1.10	213.00	93	1618.85	4.45	4.40 N	7.05 W	8.31	302.00	0.25	0.22
17	MWD	1713.00	1.20	216.60	94	1712.83	2.91	2.86 N	8.12 W	8.61	289.36	0.13	0.11
18	MWD	1806.00	1.20	214.40	93	1805.81	1.33	1.27 N	9.25 W	9.34	277.81	0.05	0.00
19	MWD	1899.00	1.60	217.00	93	1898.78	-0.50	0.57 S	10.59 W	10.60	266.91	0.44	0.43
20	MWD	1992.00	1.40	219.50	93	1991.75	-2.40	2.48 S	12.09 W	12.34	258.39	0.23	-0.22
21	MWD	2085.00	1.80	231.80	93	2084.72	-4.17	4.26 S	13.96 W	14.60	253.02	0.56	0.43
22	MWD	2180.00	1.40	220.20	95	2179.68	-5.96	6.07 S	15.88 W	17.00	249.07	0.54	-0.42
23	MWD	2274.00	1.40	230.40	94	2273.65	-7.56	7.68 S	17.51 W	19.12	246.31	0.26	0.00
24	MWD	2369.00	1.60	240.00	95	2368.62	-8.95	9.09 S	19.55 W	21.56	245.08	0.34	0.21
25	MWD	2463.00	1.80	234.00	94	2462.58	-10.46	10.61 S	21.88 W	24.32	244.13	0.28	0.21
26	MWD	2558.00	2.50	191.50	95	2557.52	-13.35	13.52 S	23.50 W	27.11	240.10	1.78	0.74
27	MWD	2747.00	2.50	191.20	189	2746.34	-21.42	21.60 S	25.12 W	33.13	229.32	0.01	0.00
28	MWD	2839.00	2.50	184.30	92	2838.25	-25.39	25.57 S	25.67 W	36.23	225.11	0.33	0.00
29	MWD	2933.00	2.60	184.30	94	2932.16	-29.56	29.74 S	25.98 W	39.49	221.14	0.11	0.11
30	MWD	3027.00	2.60	181.00	94	3026.06	-33.81	34.00 S	26.18 W	42.91	217.59	0.16	0.00
31	MWD	3121.00	2.60	178.10	94	3119.96	-38.08	38.26 S	26.14 W	46.34	214.34	0.14	0.00
32	MWD	3216.00	2.30	174.80	95	3214.88	-42.13	42.31 S	25.90 W	49.61	211.47	0.35	-0.32
33	MWD	3310.00	2.50	173.60	94	3308.79	-46.05	46.23 S	25.50 W	52.79	208.88	0.22	0.21
34	MWD	3404.00	2.60	179.70	94	3402.70	-50.22	50.40 S	25.26 W	56.37	206.62	0.31	0.11

SEP 09 2015



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 Rig: H&P 260

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 WELL API #: 30-025-41667
 Tie Into: Surface

Calculation Method Minimum Curvature

Survey #	Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')
								N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)		
35	MWD	3499.00	1.90	163.60	95	3497.63	-53.89	54.06 S	24.80 W	59.48	204.65	0.99	-0.74
36	MWD	3594.00	2.80	123.70	95	3592.55	-56.70	56.86 S	22.43 W	61.12	201.53	1.91	0.95
37	MWD	3688.00	3.90	106.80	94	3686.39	-58.94	59.06 S	17.46 W	61.58	196.47	1.56	1.17
38	MWD	3783.00	2.50	109.80	95	3781.24	-60.61	60.69 S	12.41 W	61.95	191.56	1.48	-1.47
39	MWD	3877.00	3.30	90.80	94	3875.12	-61.37	61.43 S	7.78 W	61.92	187.22	1.32	0.85
40	MWD	3971.00	2.60	95.90	94	3969.00	-61.66	61.68 S	2.95 W	61.75	182.74	0.79	-0.74
41	MWD	4066.00	1.20	96.40	95	4063.94	-62.02	62.02 S	0.18 E	62.02	179.84	1.47	-1.47
42	MWD	4160.00	1.10	101.70	94	4157.92	-62.32	62.31 S	2.04 E	62.34	178.13	0.16	-0.11
43	MWD	4255.00	2.30	94.10	95	4252.88	-62.66	62.63 S	4.83 E	62.82	175.59	1.28	1.26
44	MWD	4348.00	3.50	115.90	93	4345.76	-64.07	64.00 S	9.25 E	64.67	171.78	1.73	1.29
45	MWD	4442.00	3.00	144.20	94	4439.62	-67.34	67.25 S	13.27 E	68.55	168.84	1.77	-0.53
46	MWD	4536.00	3.50	154.10	94	4533.47	-71.94	71.83 S	15.96 E	73.58	167.47	0.80	0.53
47	MWD	4630.00	5.30	149.80	94	4627.19	-78.30	78.16 S	19.40 E	80.53	166.06	1.95	1.91
48	MWD	4725.00	6.30	146.30	95	4721.70	-86.46	86.29 S	24.50 E	89.70	164.15	1.12	1.05
49	MWD	4914.00	1.90	156.20	189	4910.17	-98.01	97.79 S	31.52 E	102.74	162.13	2.35	-2.33
50	MWD	5008.00	1.40	161.80	94	5004.13	-100.53	100.31 S	32.51 E	105.44	162.04	0.56	-0.53
51	MWD	5103.00	1.40	162.50	95	5099.10	-102.75	102.52 S	33.22 E	107.76	162.05	0.02	0.00
52	MWD	5197.00	1.40	160.00	94	5193.07	-104.92	104.69 S	33.96 E	110.06	162.03	0.06	0.00
53	MWD	5292.00	1.20	157.90	95	5288.05	-106.94	106.70 S	34.73 E	112.21	161.97	0.22	-0.21
54	MWD	5385.00	1.20	159.70	93	5381.03	-108.76	108.52 S	35.43 E	114.16	161.92	0.04	0.00
55	MWD	5479.00	1.20	168.10	94	5475.01	-110.65	110.40 S	35.98 E	116.12	161.95	0.19	0.00
56	MWD	5573.00	1.20	173.90	94	5568.99	-112.60	112.35 S	36.28 E	118.06	162.10	0.13	0.00
57	MWD	5668.00	1.20	172.00	95	5663.97	-114.57	114.32 S	36.53 E	120.01	162.28	0.04	0.00
58	MWD	5762.00	1.20	180.10	94	5757.95	-116.53	116.28 S	36.66 E	121.92	162.50	0.18	0.00
59	MWD	5856.00	1.10	175.00	94	5851.93	-118.42	118.16 S	36.74 E	123.74	162.73	0.15	-0.11
60	MWD	5951.00	1.10	178.80	95	5946.91	-120.24	119.98 S	36.84 E	125.51	162.93	0.08	0.00
61	MWD	6045.00	1.10	183.20	94	6040.89	-122.04	121.79 S	36.81 E	127.23	163.18	0.09	0.00
62	MWD	6140.00	1.10	187.30	95	6135.88	-123.85	123.60 S	36.64 E	128.92	163.49	0.08	0.00
63	MWD	6234.00	0.90	188.20	94	6229.86	-125.48	125.23 S	36.42 E	130.42	163.78	0.21	-0.21
64	MWD	6328.00	0.90	190.60	94	6323.85	-126.93	126.68 S	36.18 E	131.75	164.06	0.04	0.00
65	MWD	6422.00	0.90	194.80	94	6417.84	-128.37	128.12 S	35.86 E	133.04	164.37	0.07	0.00
66	MWD	6516.00	1.10	192.60	94	6511.82	-129.96	129.72 S	35.47 E	134.48	164.71	0.22	0.21
67	MWD	6610.00	1.10	188.70	94	6605.81	-131.73	131.49 S	35.14 E	136.10	165.04	0.08	0.00
68	MWD	6704.00	1.10	187.50	94	6699.79	-133.52	133.28 S	34.88 E	137.76	165.33	0.02	0.00
69	MWD	6798.00	0.90	204.30	94	6793.77	-135.08	134.84 S	34.46 E	139.18	165.66	0.38	-0.21
70	MWD	6892.00	0.90	200.65	94	6887.76	-136.44	136.21 S	33.90 E	140.36	166.02	0.06	0.00
71	MWD	6985.00	0.90	193.40	93	6980.75	-137.83	137.60 S	33.47 E	141.61	166.33	0.12	0.00
72	MWD	7079.00	1.10	189.40	94	7074.74	-139.44	139.21 S	33.15 E	143.10	166.60	0.23	0.21



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								N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)				
73	MWD	7173.00	1.10	186.80	94	7168.72	-141.22	140.99	S	32.90	E	144.78	166.87	0.05	0.00
74	MWD	7267.00	1.20	186.80	94	7262.70	-143.09	142.87	S	32.67	E	146.56	167.12	0.11	0.11
75	MWD	7361.00	1.20	189.40	94	7356.68	-145.04	144.82	S	32.40	E	148.40	167.39	0.06	0.00
76	MWD	7549.00	1.40	182.40	188	7544.63	-149.27	149.05	S	31.98	E	152.45	167.89	0.14	0.11
77	MWD	7644.00	1.40	185.50	95	7639.60	-151.59	151.37	S	31.82	E	154.68	168.13	0.08	0.00
78	MWD	7833.00	1.40	180.30	189	7828.55	-156.19	155.98	S	31.59	E	159.14	168.55	0.07	0.00
79	MWD	7926.00	1.60	176.70	93	7921.52	-158.62	158.41	S	31.65	E	161.54	168.70	0.24	0.22
80	MWD	8021.00	1.40	174.60	95	8016.48	-161.11	160.89	S	31.84	E	164.01	168.81	0.22	-0.21
81	MWD	8115.00	1.20	169.70	94	8110.46	-163.22	163.00	S	32.12	E	166.13	168.85	0.24	-0.21
82	MWD	8210.00	1.20	182.40	95	8205.44	-165.19	164.97	S	32.26	E	168.10	168.94	0.28	0.00
83	MWD	8304.00	1.20	184.80	94	8299.42	-167.16	166.94	S	32.14	E	170.00	169.10	0.05	0.00
84	MWD	8399.00	0.90	168.10	95	8394.40	-168.88	168.66	S	32.21	E	171.70	169.19	0.45	-0.32
85	MWD	8488.00	1.10	167.10	89	8483.39	-170.40	170.17	S	32.54	E	173.26	169.17	0.23	0.22
86	MWD	8582.00	1.10	182.20	94	8577.37	-172.18	171.95	S	32.71	E	175.04	169.23	0.31	0.00
87	MWD	8677.00	1.20	183.20	95	8672.35	-174.08	173.86	S	32.62	E	176.89	169.37	0.11	0.11
88	MWD	8771.00	1.20	181.80	94	8766.33	-176.05	175.83	S	32.53	E	178.81	169.52	0.03	0.00
89	MWD	8960.00	1.20	197.30	189	8955.29	-179.91	179.69	S	31.88	E	182.50	169.94	0.17	0.00
90	MWD	9054.00	0.90	189.40	94	9049.27	-181.58	181.36	S	31.47	E	184.07	170.16	0.35	-0.32
91	MWD	9148.00	0.70	180.60	94	9143.26	-182.88	182.66	S	31.34	E	185.33	170.26	0.25	-0.21
92	MWD	9243.00	0.50	214.40	95	9238.26	-183.80	183.59	S	31.10	E	186.20	170.38	0.42	-0.21
93	MWD	9337.00	0.50	224.20	94	9332.26	-184.43	184.22	S	30.58	E	186.74	170.57	0.09	0.00
94	MWD	9432.00	0.70	215.60	95	9427.25	-185.19	184.99	S	29.96	E	187.40	170.80	0.23	0.21
95	MWD	9526.00	0.50	256.00	94	9521.25	-185.75	185.55	S	29.23	E	187.84	171.05	0.48	-0.21
96	MWD	9621.00	0.40	339.70	95	9616.24	-185.54	185.34	S	28.71	E	187.55	171.20	0.64	-0.11
97	MWD	9715.00	0.70	317.90	94	9710.24	-184.80	184.61	S	28.21	E	186.75	171.31	0.38	0.32
98	MWD	9810.00	0.70	349.50	95	9805.23	-183.80	183.61	S	27.71	E	185.69	171.42	0.40	0.00
99	MWD	9904.00	1.20	357.30	94	9899.22	-182.25	182.06	S	27.56	E	184.13	171.39	0.55	0.53
100	MWD	9998.00	1.10	353.40	94	9993.20	-180.37	180.18	S	27.41	E	182.25	171.35	0.14	-0.11
101	MWD	10092.00	1.10	5.40	94	10087.18	-178.57	178.39	S	27.39	E	180.48	171.27	0.24	0.00
102	MWD	10187.00	1.20	353.80	95	10182.16	-176.68	176.49	S	27.37	E	178.60	171.18	0.27	0.11
103	MWD	10282.00	1.20	351.60	95	10277.14	-174.70	174.52	S	27.12	E	176.61	171.17	0.05	0.00
104	MWD	10375.00	0.90	66.20	93	10370.13	-173.45	173.26	S	27.65	E	175.45	170.93	1.39	-0.32
105	MWD	10469.00	1.10	95.20	94	10464.12	-173.24	173.04	S	29.22	E	175.49	170.42	0.57	0.21
106	MWD	10564.00	1.90	88.50	95	10559.08	-173.30	173.08	S	31.70	E	175.96	169.62	0.86	0.84
107	MWD	10658.00	2.30	95.20	94	10653.02	-173.45	173.21	S	35.14	E	176.74	168.53	0.50	0.43
108	MWD	10753.00	2.30	91.10	95	10747.94	-173.69	173.42	S	38.94	E	177.74	167.34	0.17	0.00
109	MWD	10867.00	1.80	89.00	114	10861.87	-173.73	173.44	S	43.02	E	178.69	166.07	0.44	-0.44
110	MWD	11055.00	2.30	238.10	188	11049.82	-175.67	175.38	S	42.77	E	180.52	166.29	2.10	0.27



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111	MWD	11148.00	2.50	249.30	93	11142.74	-177.35	177.08 S	39.29 E	181.39	167.49	0.55	0.22
112	MWD	11241.00	3.00	256.40	93	11235.64	-178.61	178.37 S	35.03 E	181.78	168.89	0.65	0.54
113	MWD	11334.00	3.30	263.80	93	11328.49	-179.44	179.23 S	30.00 E	181.73	170.50	0.54	0.32
114	MWD	11427.00	2.80	267.80	93	11421.36	-179.78	179.61 S	25.07 E	181.35	172.05	0.58	-0.54
115	MWD	11521.00	2.50	273.90	94	11515.26	-179.70	179.56 S	20.73 E	180.75	173.41	0.44	-0.32
116	MWD	11614.00	1.80	275.00	93	11608.20	-179.41	179.29 S	17.25 E	180.12	174.50	0.75	-0.75
117	MWD	11707.00	1.40	272.90	93	11701.16	-179.20	179.11 S	14.66 E	179.71	175.32	0.43	-0.43
118	MWD	11769.00	1.60	271.70	62	11763.14	-179.13	179.04 S	13.04 E	179.52	175.83	0.33	0.32
119	MWD	11800.00	1.40	267.60	31	11794.13	-179.13	179.05 S	12.23 E	179.46	176.09	0.73	-0.65
120	MWD	11848.00	2.50	331.30	48	11842.10	-178.23	178.15 S	11.14 E	178.50	176.42	4.71	2.29
121	MWD	11894.00	7.40	352.90	46	11887.92	-174.40	174.33 S	10.29 E	174.63	176.62	11.21	10.65
122	MWD	11941.00	13.00	355.20	47	11934.16	-166.11	166.05 S	9.47 E	166.32	176.73	11.94	11.91
123	MWD	11987.00	17.80	352.30	46	11978.50	-153.97	153.92 S	8.10 E	154.13	176.99	10.57	10.43
124	MWD	12034.00	22.50	349.90	47	12022.61	-137.97	137.94 S	5.56 E	138.05	177.69	10.15	10.00
125	MWD	12080.00	26.60	353.90	46	12064.44	-119.04	119.02 S	2.92 E	119.06	178.60	9.61	8.91
126	MWD	12127.00	30.40	358.80	47	12105.75	-96.67	96.66 S	1.55 E	96.67	179.08	9.49	8.09
127	MWD	12174.00	35.40	0.30	47	12145.20	-71.15	71.14 S	1.37 E	71.16	178.90	10.78	10.64
128	MWD	12222.00	42.10	1.80	48	12182.61	-41.14	41.12 S	1.95 E	41.17	177.28	14.09	13.96
129	MWD	12268.00	46.60	3.20	46	12215.50	-9.03	9.01 S	3.37 E	9.62	159.50	10.01	9.78
130	MWD	12315.00	50.30	2.40	47	12246.67	26.08	26.12 N	5.08 E	26.61	11.01	7.97	7.87
131	MWD	12362.00	55.60	1.00	47	12274.97	63.55	63.60 N	6.18 E	63.90	5.55	11.52	11.28
132	MWD	12410.00	59.50	0.60	48	12300.72	104.04	104.09 N	6.74 E	104.31	3.70	8.16	8.13
133	MWD	12457.00	62.10	0.30	47	12323.65	145.06	145.11 N	7.06 E	145.29	2.78	5.56	5.53
134	MWD	12504.00	61.90	0.30	47	12345.72	186.56	186.61 N	7.28 E	186.75	2.23	0.43	-0.43
135	MWD	12551.00	66.90	359.40	47	12366.02	228.93	228.98 N	7.16 E	229.10	1.79	10.78	10.64
136	MWD	12598.00	72.50	359.90	47	12382.32	272.99	273.05 N	6.89 E	273.13	1.45	11.96	11.91
137	MWD	12645.00	76.20	0.80	47	12395.00	318.24	318.29 N	7.17 E	318.37	1.29	8.09	7.87
138	MWD	12693.00	79.20	0.80	48	12405.22	365.12	365.18 N	7.83 E	365.27	1.23	6.25	6.25
139	MWD	12740.00	81.80	0.80	47	12412.98	411.46	411.53 N	8.47 E	411.62	1.18	5.53	5.53
140	MWD	12787.00	84.80	0.40	47	12418.46	458.13	458.20 N	8.96 E	458.29	1.12	6.44	6.38
141	MWD	12836.00	91.70	357.80	49	12419.96	507.07	507.14 N	8.19 E	507.20	0.93	15.05	14.08
142	MWD	12867.00	92.20	358.10	31	12418.90	538.04	538.10 N	7.08 E	538.15	0.75	1.88	1.61
143	MWD	12962.00	90.30	2.00	95	12416.83	632.99	633.05 N	7.17 E	633.09	0.65	4.57	-2.00
144	MWD	12994.00	90.60	4.80	32	12416.58	664.91	664.99 N	9.06 E	665.06	0.78	8.80	0.94
145	MWD	13025.00	90.40	6.20	31	12416.31	695.75	695.85 N	12.04 E	695.95	0.99	4.56	-0.65
146	MWD	13057.00	87.30	6.40	32	12416.95	727.52	727.65 N	15.55 E	727.81	1.22	9.71	-9.69
147	MWD	13088.00	83.90	5.90	31	12419.33	758.22	758.37 N	18.86 E	758.61	1.42	11.08	-10.97
148	MWD	13151.00	80.80	0.80	63	12427.72	820.50	820.67 N	22.51 E	820.98	1.57	9.41	-4.92



DRILTECH MWD SURVEY REPORT

Company: EOG Resources, Inc
 Well: Thor 21 701H
 Location: Lea Co., NM
 Rig: H&P 260

Job Number: 2015-060-EODT-NM
 Vertical Section Plane: 359.60
 WELL API #: 30-025-41667
 Tie Into: Surface

Calculation Method Minimum Curvature

Survey #	Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates			Closure		Dogleg Severity (d/100')	Build Rate (d/100')
								N/S (ft)	E/W (ft)		Distance (ft)	Angle (deg)		
149	MWD	13182.00	81.60	357.30	31	12432.46	851.13	851.30 N	22.01 E		851.58	1.48	11.45	2.58
150	MWD	13214.00	83.80	353.90	32	12436.53	882.78	882.94 N	19.57 E		883.16	1.27	12.58	6.88
151	MWD	13246.00	87.40	351.60	32	12438.98	914.45	914.58 N	15.54 E		914.72	0.97	13.34	11.25
152	MWD	13277.00	91.50	348.30	31	12439.28	945.00	945.10 N	10.13 E		945.15	0.61	16.98	13.23
153	MWD	13309.00	95.00	348.00	32	12437.47	976.31	976.36 N	3.57 E		976.36	0.21	10.98	10.94
154	MWD	13340.00	95.50	349.70	31	12434.63	1006.64	1006.64 N	2.40 W		1006.65	359.86	5.69	1.61
155	MWD	13372.00	96.60	352.90	32	12431.26	1038.12	1038.10 N	7.21 W		1038.12	359.60	10.52	3.44
156	MWD	13403.00	96.40	354.60	31	12427.75	1068.76	1068.71 N	10.56 W		1068.76	359.43	5.49	-0.65
157	MWD	13435.00	96.20	356.90	32	12424.23	1100.49	1100.43 N	12.92 W		1100.50	359.33	7.17	-0.63
158	MWD	13466.00	94.50	359.70	31	12421.34	1131.34	1131.28 N	13.83 W		1131.36	359.30	10.53	-5.48
159	MWD	13498.00	91.80	1.50	32	12419.58	1163.29	1163.22 N	13.50 W		1163.30	359.34	10.14	-8.44
160	MWD	13530.00	88.30	2.20	32	12419.56	1195.26	1195.20 N	12.47 W		1195.26	359.40	11.15	-10.94
161	MWD	13561.00	88.00	2.00	31	12420.56	1226.21	1226.16 N	11.33 W		1226.21	359.47	1.16	-0.97
162	MWD	13592.00	88.70	0.30	31	12421.45	1257.19	1257.14 N	10.71 W		1257.19	359.51	5.93	2.26
163	MWD	13623.00	89.40	359.60	31	12421.96	1288.18	1288.14 N	10.74 W		1288.18	359.52	3.19	2.26
164	MWD	13654.00	90.60	359.70	31	12421.96	1319.18	1319.14 N	10.92 W		1319.18	359.53	3.88	3.87
165	MWD	13685.00	90.80	0.10	31	12421.59	1350.18	1350.13 N	10.98 W		1350.18	359.53	1.44	0.65
166	MWD	13716.00	90.80	0.10	31	12421.15	1381.17	1381.13 N	10.92 W		1381.17	359.55	0.00	0.00
167	MWD	13778.00	90.10	359.40	62	12420.67	1443.17	1443.13 N	11.20 W		1443.17	359.56	1.60	-1.13
168	MWD	13810.00	89.40	358.70	32	12420.81	1475.17	1475.12 N	11.73 W		1475.17	359.54	3.09	-2.19
169	MWD	13903.00	91.50	358.80	93	12420.08	1568.15	1568.09 N	13.75 W		1568.15	359.50	2.26	2.26
170	MWD	13996.00	90.40	359.20	93	12418.53	1661.13	1661.06 N	15.38 W		1661.13	359.47	1.26	-1.18
171	MWD	14091.00	91.50	358.70	95	12416.96	1756.11	1756.03 N	17.12 W		1756.12	359.44	1.27	1.16
172	MWD	14185.00	88.90	356.00	94	12416.63	1850.02	1849.92 N	21.46 W		1850.04	359.34	3.99	-2.77
173	MWD	14217.00	89.20	355.90	32	12417.16	1881.95	1881.83 N	23.72 W		1881.98	359.28	0.99	0.94
174	MWD	14248.00	91.80	357.80	31	12416.89	1912.91	1912.78 N	25.43 W		1912.95	359.24	10.39	8.39
175	MWD	14280.00	94.30	358.50	32	12415.19	1944.85	1944.71 N	26.46 W		1944.89	359.22	8.11	7.81
176	MWD	14373.00	95.00	359.60	93	12407.65	2037.54	2037.39 N	27.99 W		2037.59	359.21	1.40	0.75
177	MWD	14468.00	93.60	1.10	95	12400.52	2132.26	2132.12 N	27.42 W		2132.30	359.26	2.16	-1.47
178	MWD	14562.00	89.40	1.10	94	12398.06	2226.17	2226.05 N	25.61 W		2226.20	359.34	4.47	-4.47
179	MWD	14657.00	89.40	0.30	95	12399.06	2321.15	2321.04 N	24.45 W		2321.16	359.40	0.84	0.00
180	MWD	14751.00	92.20	359.20	94	12397.75	2415.13	2415.01 N	24.86 W		2415.14	359.41	3.20	2.98
181	MWD	14845.00	92.90	359.00	94	12393.57	2509.03	2508.91 N	26.34 W		2509.05	359.40	0.77	0.74
182	MWD	14940.00	92.70	358.10	95	12388.92	2603.90	2603.76 N	28.74 W		2603.92	359.37	0.97	-0.21
183	MWD	15034.00	92.60	357.10	94	12384.58	2697.74	2697.58 N	32.67 W		2697.78	359.31	1.07	-0.11
184	MWD	15129.00	91.50	358.50	95	12381.18	2792.63	2792.45 N	36.31 W		2792.68	359.25	1.87	-1.16
185	MWD	15223.00	91.80	359.00	94	12378.47	2886.58	2886.38 N	38.36 W		2886.64	359.24	0.62	0.32
186	MWD	15318.00	92.40	1.50	95	12374.99	2981.50	2981.31 N	37.95 W		2981.55	359.27	2.70	0.63

DRILTECH MWD SURVEY REPORT

Company:	EOG Resources, Inc
Well:	Thor 21 701H
Location:	Lea Co., NM
Rig:	H&P 260

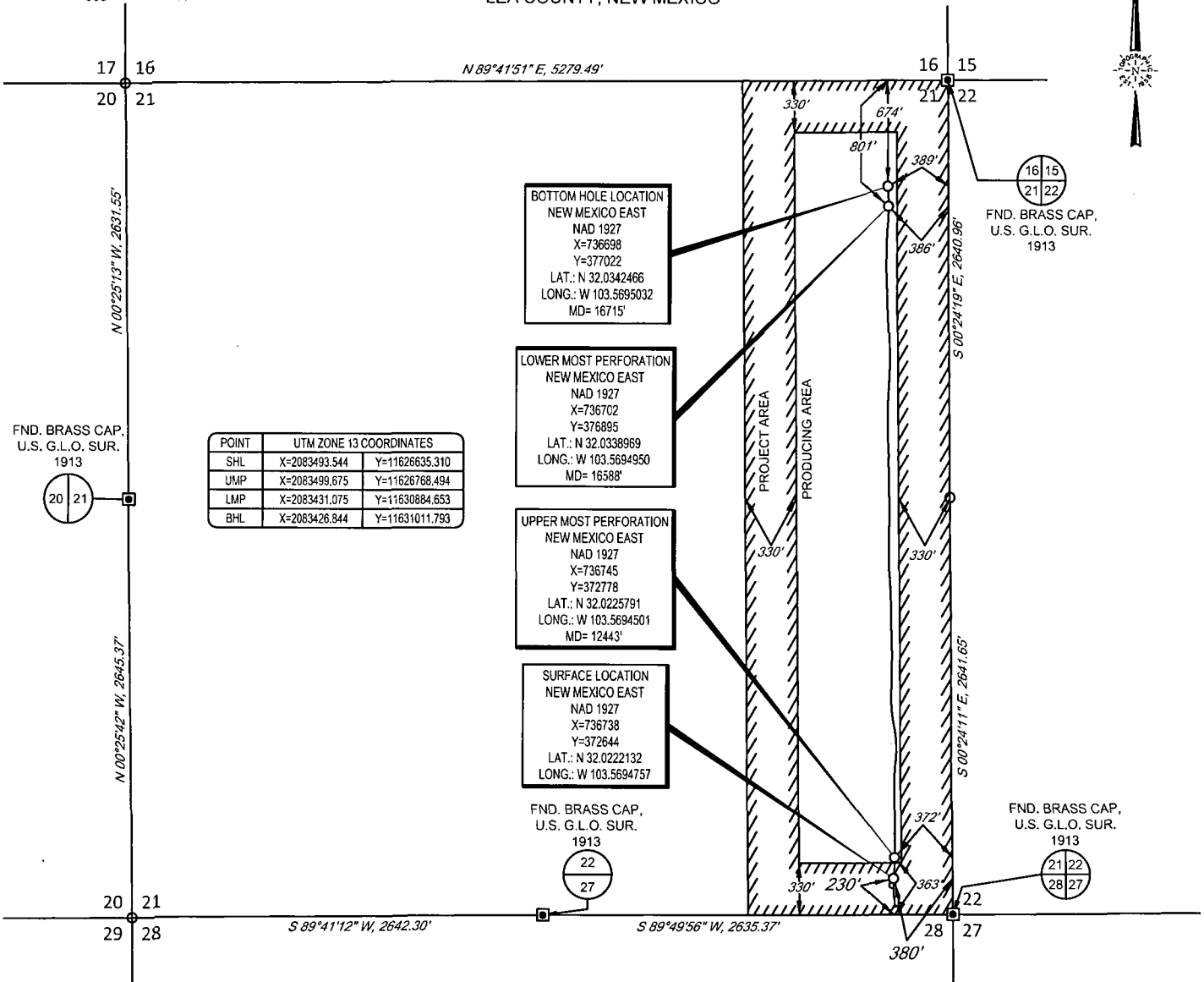
Job Number:	2015-060-EODT-NM
Vertical Section Plane:	359.60
WELL API #:	30-025-41667
Tie Into:	Surface

Calculation Method Minimum Curvature

[illegible]

SCALE: 1" = 1000'

SECTION 21, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

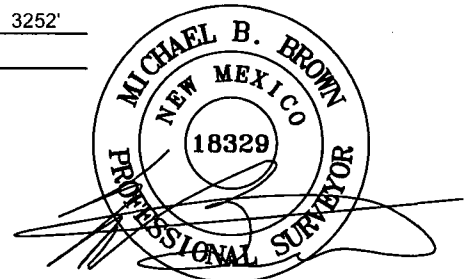


LEASE NAME & WELL NO.: THOR 21 #701H
 SECTION 21 TWP 26-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3252'
 DESCRIPTION 230' FSL & 380' FEL



TOPOGRAPHIC
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 WWW.TOPOGRAPHIC.COM



Michael Blake Brown, P.S. No. 18329
 JULY 21, 2015



THOR 21 #701H AS-COMPLETED	REVISION:	
	INT	DATE
DATE: 07/21/15		
FILE: AD_THOR21_701H		
DRAWN BY: S.V.		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.