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DRILTECH MWD SURVEY REPORT



Company: EOG Resources, Inc
Well: Dragon 36 State #9 H
Location: Lea Co., NM.
Rig: H&P 260

Job Number: 2014-501-EODT-NM
Vertical Section Plane: 359.61
WELL API #: 30-025-41465
Tie Into: Surface

HOBBS OCD

NOV 07 2016

Calculation Method Minimum Curvature
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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	177.00	0.50	328.00	177	177.00	0.66	0.65 N	0.41 W	0.77	328.00	0.28	0.28
2	MWD	358.00	0.70	298.80	181	357.99	1.87	1.86 N	1.80 W	2.58	315.95	0.20	0.11
3	MWD	510.00	0.50	267.90	152	509.98	2.30	2.28 N	3.27 W	3.99	304.86	0.25	-0.13
4	MWD	695.00	0.20	61.90	185	694.98	2.43	2.40 N	3.79 W	4.49	302.34	0.37	-0.16
5	MWD	879.00	0.70	20.80	184	878.97	3.63	3.60 N	3.11 W	4.76	319.19	0.31	0.27
6	MWD	1069.00	0.70	0.00	190	1068.96	5.87	5.85 N	2.70 W	6.44	335.22	0.13	0.00
7	MWD	1207.00	0.90	357.60	138	1206.94	7.79	7.78 N	2.75 W	8.25	340.55	0.15	0.14
8	MWD	1372.00	0.40	325.40	165	1371.93	9.57	9.55 N	3.13 W	10.04	341.86	0.36	-0.30
9	MWD	1561.00	1.80	203.20	189	1560.91	7.39	7.36 N	4.67 W	8.72	327.60	1.08	0.74
10	MWD	1751.00	1.90	201.80	190	1750.81	1.74	1.69 N	7.02 W	7.22	283.56	0.06	0.05
11	MWD	1940.00	2.30	195.70	189	1939.68	-4.80	4.87 S	9.21 W	10.41	242.13	0.24	0.21
12	MWD	2130.00	2.10	204.60	190	2129.54	-11.62	11.70 S	11.69 W	16.54	224.96	0.21	-0.11
13	MWD	2319.00	2.10	191.40	189	2318.41	-18.15	18.25 S	13.81 W	22.89	217.13	0.26	0.00
14	MWD	2509.00	2.60	158.00	190	2508.26	-25.57	25.65 S	12.89 W	28.71	206.67	0.75	0.26
15	MWD	2698.00	2.50	146.10	189	2697.08	-32.99	33.05 S	8.98 W	34.25	195.20	0.28	-0.05
16	MWD	2887.00	2.10	165.80	189	2885.93	-39.79	39.83 S	5.83 W	40.25	188.33	0.47	-0.21
17	MWD	3076.00	1.80	151.90	189	3074.82	-45.78	45.80 S	3.59 W	45.94	184.48	0.30	-0.16
18	MWD	3264.00	2.10	165.60	188	3262.71	-51.74	51.75 S	1.34 W	51.76	181.48	0.29	0.16
19	MWD	3452.00	1.90	158.80	188	3450.60	-57.99	57.99 S	0.65 E	57.99	179.36	0.16	-0.11
20	MWD	3641.00	2.10	161.00	189	3639.48	-64.20	64.18 S	2.91 E	64.25	177.41	0.11	0.11
21	MWD	3830.00	1.90	169.80	189	3828.37	-70.57	70.54 S	4.59 E	70.69	176.28	0.19	-0.11
22	MWD	4020.00	1.40	171.80	190	4018.29	-75.97	75.94 S	5.48 E	76.14	175.87	0.26	-0.26
23	MWD	4209.00	1.80	150.00	189	4207.21	-80.84	80.79 S	7.29 E	81.12	174.84	0.38	0.21
24	MWD	4398.00	1.90	138.40	189	4396.12	-85.78	85.71 S	10.85 E	86.39	172.78	0.20	0.05
25	MWD	4588.00	3.20	131.90	190	4585.92	-91.72	91.60 S	16.89 E	93.15	169.55	0.70	0.68
26	MWD	4777.00	3.00	157.50	189	4774.66	-99.85	99.70 S	22.71 E	102.25	167.17	0.73	-0.11
27	MWD	4967.00	3.30	150.50	190	4964.37	-109.23	109.05 S	27.31 E	112.42	165.94	0.26	0.16
28	MWD	5116.00	2.10	173.20	149	5113.21	-115.69	115.49 S	29.74 E	119.26	165.56	1.06	-0.81
29	MWD	5227.00	1.90	169.60	111	5224.14	-119.53	119.32 S	30.32 E	123.11	165.74	0.21	-0.18
30	MWD	5416.00	2.30	199.40	189	5413.02	-126.18	125.98 S	29.62 E	129.42	166.77	0.61	0.21
31	MWD	5606.00	2.80	192.70	190	5602.83	-134.29	134.11 S	27.34 E	136.86	168.48	0.31	0.26
32	MWD	5795.00	2.60	192.10	189	5791.62	-142.97	142.80 S	25.42 E	145.05	169.91	0.11	-0.11
33	MWD	5985.00	1.80	241.00	190	5981.49	-148.61	148.46 S	21.91 E	150.07	171.61	1.03	-0.42
34	MWD	6174.00	1.90	240.50	189	6170.39	-151.55	151.44 S	16.59 E	152.35	173.75	0.05	0.05



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Vertical Section Plane: 359.61
WELL API #: 30-025-41465
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	6364.00	0.70	322.40	190	6360.35	-152.16	152.08 S	13.14 E	152.64	175.06	1.02	-0.63
36	MWD	6553.00	1.20	326.10	189	6549.32	-149.59	149.52 S	11.33 E	149.95	175.67	0.27	0.26
37	MWD	6742.00	0.70	326.30	189	6738.30	-146.98	146.91 S	9.58 E	147.23	176.27	0.26	-0.26
38	MWD	6932.00	0.50	193.60	190	6928.29	-146.81	146.76 S	8.74 E	147.02	176.59	0.58	-0.11
39	MWD	7122.00	0.50	145.70	190	7118.29	-148.30	148.25 S	9.02 E	148.52	176.52	0.21	0.00
40	MWD	7311.00	0.40	162.30	189	7307.28	-149.62	149.56 S	9.68 E	149.87	176.30	0.09	-0.05
41	MWD	7501.00	0.50	157.70	190	7497.28	-151.02	150.95 S	10.20 E	151.30	176.14	0.06	0.05
42	MWD	7690.00	1.20	178.30	189	7686.25	-153.76	153.70 S	10.57 E	154.06	176.07	0.40	0.37
43	MWD	7880.00	0.90	170.50	190	7876.22	-157.23	157.16 S	10.87 E	157.53	176.04	0.17	-0.16
44	MWD	8070.00	1.20	187.20	190	8066.19	-160.67	160.60 S	10.87 E	160.97	176.13	0.22	0.16
45	MWD	8259.00	0.90	178.60	189	8255.16	-164.12	164.05 S	10.66 E	164.39	176.28	0.18	-0.16
46	MWD	8449.00	0.90	189.50	190	8445.13	-167.08	167.01 S	10.45 E	167.34	176.42	0.09	0.00
47	MWD	8638.00	1.40	197.40	189	8634.10	-170.74	170.68 S	9.51 E	170.94	176.81	0.28	0.26
48	MWD	8828.00	0.40	254.90	190	8824.07	-173.12	173.07 S	8.18 E	173.26	177.29	0.65	-0.53
49	MWD	8928.00	0.50	311.00	100	8924.07	-172.92	172.87 S	7.51 E	173.04	177.51	0.43	0.10
50	MWD	8976.00	7.20	0.20	48	8971.94	-169.77	169.72 S	7.37 E	169.88	177.51	14.34	13.96
51	MWD	9023.00	14.60	2.00	47	9018.06	-160.89	160.85 S	7.58 E	161.02	177.30	15.76	15.74
52	MWD	9071.00	21.80	6.20	48	9063.63	-145.97	145.92 S	8.76 E	146.18	176.56	15.24	15.00
53	MWD	9118.00	20.60	3.40	47	9107.45	-129.05	128.99 S	10.19 E	129.39	175.48	3.34	-2.55
54	MWD	9166.00	26.20	0.40	48	9151.48	-110.02	109.95 S	10.77 E	110.47	174.41	11.92	11.67
55	MWD	9213.00	32.40	358.80	47	9192.45	-87.03	86.96 S	10.58 E	87.60	173.07	13.30	13.19
56	MWD	9260.00	39.60	358.40	47	9230.45	-59.43	59.36 S	9.89 E	60.18	170.54	15.33	15.32
57	MWD	9307.00	44.90	2.10	47	9265.23	-27.85	27.78 S	10.08 E	29.55	160.05	12.45	11.28
58	MWD	9354.00	46.30	3.50	47	9298.12	5.68	5.76 N	11.73 E	13.06	63.86	3.66	2.98
59	MWD	9402.00	51.00	6.20	48	9329.82	41.54	41.64 N	14.80 E	44.19	19.57	10.66	9.79
60	MWD	9449.00	54.70	7.90	47	9358.20	78.67	78.81 N	19.41 E	81.16	13.84	8.38	7.87
61	MWD	9497.00	59.50	5.30	48	9384.27	118.66	118.83 N	24.02 E	121.23	11.43	10.98	10.00
62	MWD	9544.00	65.30	2.30	47	9406.04	160.18	160.37 N	26.75 E	162.58	9.47	13.57	12.34
63	MWD	9592.00	72.00	0.40	48	9423.51	204.84	205.03 N	27.78 E	206.91	7.72	14.44	13.96
64	MWD	9639.00	79.50	359.80	47	9435.07	250.36	250.55 N	27.86 E	252.10	6.34	16.01	15.96
65	MWD	9686.00	82.20	0.40	47	9442.54	296.75	296.95 N	27.94 E	298.26	5.38	5.88	5.74
66	MWD	9733.00	83.00	0.40	47	9448.60	343.36	343.56 N	28.27 E	344.72	4.70	1.70	1.70
67	MWD	9781.00	85.90	359.30	48	9453.24	391.13	391.33 N	28.14 E	392.34	4.11	6.46	6.04
68	MWD	9811.00	87.40	356.90	30	9454.99	421.06	421.26 N	27.15 E	422.13	3.69	9.42	5.00
69	MWD	9874.00	88.00	356.90	63	9457.52	483.94	484.11 N	23.74 E	484.69	2.81	0.95	0.95
70	MWD	9969.00	90.60	357.40	95	9458.68	578.84	578.98 N	19.02 E	579.29	1.88	2.79	2.74
71	MWD	10063.00	89.60	354.70	94	9458.52	672.65	672.75 N	12.55 E	672.86	1.07	3.06	-1.06
72	MWD	10158.00	90.40	356.70	95	9458.52	767.42	767.47 N	5.42 E	767.49	0.40	2.27	0.84



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								N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)		
73	MWD	10253.00	90.30	356.90	95	9457.94	862.30	862.32 N	0.12 E	862.32	0.01	0.24	-0.11
74	MWD	10348.00	89.90	355.80	95	9457.77	957.15	957.13 N	5.93 W	957.15	359.65	1.23	-0.42
75	MWD	10443.00	89.90	358.40	95	9457.94	1052.05	1052.00 N	10.73 W	1052.05	359.42	2.74	0.00
76	MWD	10537.00	88.30	357.60	94	9459.41	1145.99	1145.93 N	14.01 W	1146.01	359.30	1.90	-1.70
77	MWD	10632.00	90.30	0.40	95	9460.57	1240.97	1240.89 N	15.67 W	1240.99	359.28	3.62	2.11
78	MWD	10727.00	92.90	1.10	95	9457.92	1335.90	1335.84 N	14.43 W	1335.91	359.38	2.83	2.74
79	MWD	10821.00	91.70	1.40	94	9454.15	1429.79	1429.74 N	12.38 W	1429.79	359.50	1.32	-1.28
80	MWD	10916.00	91.80	0.90	95	9451.25	1524.71	1524.67 N	10.47 W	1524.71	359.61	0.54	0.11
81	MWD	11011.00	88.90	0.20	95	9450.67	1619.68	1619.66 N	9.56 W	1619.68	359.66	3.14	-3.05
82	MWD	11106.00	89.90	359.10	95	9451.66	1714.68	1714.65 N	10.14 W	1714.68	359.66	1.56	1.05
83	MWD	11200.00	90.80	1.40	94	9451.09	1808.66	1808.64 N	9.73 W	1808.66	359.69	2.63	0.96
84	MWD	11295.00	91.10	0.90	95	9449.51	1903.61	1903.60 N	7.82 W	1903.62	359.76	0.61	0.32
85	MWD	11390.00	91.50	1.30	95	9447.36	1998.56	1998.56 N	6.00 W	1998.57	359.83	0.60	0.42
86	MWD	11485.00	91.30	0.50	95	9445.04	2093.50	2093.52 N	4.51 W	2093.53	359.88	0.87	-0.21
87	MWD	11580.00	90.10	359.80	95	9443.87	2188.49	2188.51 N	4.26 W	2188.51	359.89	1.46	-1.26
88	MWD	11674.00	90.40	0.70	94	9443.46	2282.48	2282.51 N	3.85 W	2282.51	359.90	1.01	0.32
89	MWD	11769.00	90.10	358.80	95	9443.05	2377.48	2377.50 N	4.27 W	2377.51	359.90	2.02	-0.32
90	MWD	11864.00	89.60	356.70	95	9443.30	2472.42	2472.42 N	7.99 W	2472.44	359.81	2.27	-0.53
91	MWD	11959.00	90.10	357.90	95	9443.55	2567.34	2567.31 N	12.47 W	2567.34	359.72	1.37	0.53
92	MWD	12053.00	89.70	356.00	94	9443.71	2661.23	2661.18 N	17.47 W	2661.23	359.62	2.07	-0.43
93	MWD	12148.00	91.70	357.40	95	9442.55	2756.10	2756.00 N	22.94 W	2756.10	359.52	2.57	2.11
94	MWD	12243.00	92.90	357.90	95	9438.74	2850.96	2850.85 N	26.83 W	2850.97	359.46	1.37	1.26
95	MWD	12338.00	92.60	0.20	95	9434.18	2945.84	2945.72 N	28.40 W	2945.85	359.45	2.44	-0.32
96	MWD	12433.00	91.10	0.70	95	9431.11	3040.78	3040.66 N	27.66 W	3040.79	359.48	1.66	-1.58
97	MWD	12527.00	89.20	2.00	94	9430.87	3134.73	3134.63 N	25.44 W	3134.73	359.53	2.45	-2.02
98	MWD	12622.00	89.00	1.80	95	9432.36	3229.64	3229.57 N	22.29 W	3229.64	359.60	0.30	-0.21
99	MWD	12717.00	88.90	2.00	95	9434.10	3324.55	3324.50 N	19.15 W	3324.55	359.67	0.24	-0.11
100	MWD	12812.00	89.20	1.60	95	9435.68	3419.47	3419.44 N	16.16 W	3419.47	359.73	0.53	0.32
101	MWD	12906.00	90.10	2.00	94	9436.25	3513.40	3513.39 N	13.21 W	3513.41	359.78	1.05	0.96
102	MWD	13001.00	89.40	0.20	95	9436.66	3608.36	3608.36 N	11.39 W	3608.38	359.82	2.03	-0.74
103	MWD	13096.00	89.20	358.80	95	9437.82	3703.35	3703.35 N	12.21 W	3703.37	359.81	1.49	-0.21
104	MWD	13191.00	89.00	359.50	95	9439.32	3798.33	3798.33 N	13.62 W	3798.35	359.79	0.77	-0.21
105	MWD	13286.00	90.30	359.70	95	9439.90	3893.33	3893.32 N	14.29 W	3893.35	359.79	1.38	1.37
106	MWD	13381.00	89.60	359.30	95	9439.98	3988.33	3988.32 N	15.12 W	3988.35	359.78	0.85	-0.74
107	MWD	13475.00	90.30	0.70	94	9440.06	4082.32	4082.32 N	15.12 W	4082.34	359.79	1.67	0.74
108	MWD	13570.00	89.90	0.50	95	9439.90	4177.31	4177.31 N	14.12 W	4177.33	359.81	0.47	-0.42
109	MWD	13665.00	89.20	358.30	95	9440.64	4272.30	4272.29 N	15.12 W	4272.32	359.80	2.43	-0.74
110	MWD	13760.00	89.00	358.30	95	9442.13	4367.26	4367.24 N	17.93 W	4367.28	359.76	0.21	-0.21

