



Survey Report

SUR: B - 31-15s-35e, 991/N & 2312/E
BHL: C-31-15s-35e, 803/N & 2943/E
API # 30-025-28233

INTEQ

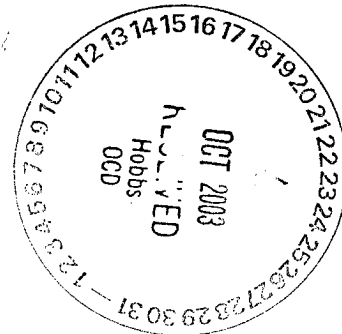
MIN. CURVATURE CALCULATIONS (SPE-3362)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100
Tie in	9200	1.37	149.66	9199.00	-58.05	69.88	-84.03	0.00
1	9248	0.90	208.50	9246.99	-58.88	69.99	-84.38	2.47
2	9280	1.80	272.10	9278.98	-59.08	69.37	-83.85	5.05
3	9311	2.10	273.10	9309.97	-59.03	68.31	-82.83	0.97
4	9340	3.12	283.00	9338.94	-58.82	67.01	-81.53	3.83
5	9371	4.00	285.50	9369.88	-58.35	65.15	-79.60	2.88
6	9401	4.80	289.70	9399.79	-57.64	62.96	-77.30	2.87
7	9439	5.60	291.40	9437.63	-56.43	59.74	-73.87	2.14
8	9470	5.90	294.20	9468.47	-55.23	56.88	-70.78	1.32
9	9499	6.70	292.50	9497.30	-53.97	53.95	-67.61	2.83
10	9531	7.60	293.90	9529.05	-52.40	50.29	-63.65	2.86
11	9564	8.40	293.50	9561.73	-50.55	46.09	-59.08	2.43
12	9595	9.20	293.90	9592.36	-48.64	41.75	-54.37	2.59
13	9626	10.30	293.50	9622.92	-46.53	36.94	-49.15	3.56
14	9657	11.40	292.10	9653.36	-44.28	31.56	-43.34	3.65
15	9689	12.10	292.50	9684.69	-41.80	25.53	-36.85	2.20
16	9720	12.90	292.50	9714.95	-39.23	19.33	-30.17	2.58
17	9752	14.00	293.50	9746.08	-36.32	12.48	-22.76	3.51
18	9783	14.70	293.50	9776.11	-33.26	5.43	-15.12	2.26
19	9814	15.50	294.20	9806.04	-29.99	-1.95	-7.10	2.65
20	9845	16.40	294.20	9835.85	-26.50	-9.72	1.36	2.90
21	9877	17.10	294.90	9866.49	-22.67	-18.11	10.51	2.28
22	9939	16.90	294.20	9925.78	-15.14	-34.60	28.49	0.46
Proj	10005	16.90	294.20	9988.93	-7.27	-52.10	47.55	0.00





Survey Report

INTEQ

BM CURVATURE CALCULATIONS (SPE-3362)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 485517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100
16	9720	12.90	292.50	9714.95	-39.23	19.33	-30.17	2.68
17	9752	14.00	293.50	9746.08	-38.32	12.48	-22.78	3.51
18	9783	14.70	293.50	9776.11	-33.26	5.43	-15.12	2.26
19	9814	15.50	294.20	9806.04	-29.99	-1.95	-7.10	2.65
20	9845	16.40	294.20	9835.85	-26.50	-9.72	1.36	2.90
21	9877	17.10	294.90	9866.49	-22.67	-18.11	10.51	2.28
22	9939	16.90	294.20	9925.78	-15.14	-34.60	28.49	0.46
23	10066	16.90	295.30	10047.29	0.32	-68.12	65.11	0.25
24	10129	17.20	293.50	10107.53	7.95	-84.94	83.44	0.96
25	10159	17.20	292.80	10136.18	11.43	-93.10	92.27	0.69
26	10221	17.50	289.70	10195.36	18.13	-110.33	110.71	1.57
27	10283	17.50	290.00	10254.49	24.46	-127.86	129.33	0.15
28	10353	17.60	287.20	10321.24	31.19	-147.86	150.43	1.21
29	10415	17.00	283.30	10380.43	36.05	-165.64	168.84	2.11
30	10454	16.90	283.30	10417.74	38.66	-176.70	180.19	0.26
31	10479	16.90	283.70	10441.66	40.36	-183.77	187.44	0.47
32	10541	17.10	284.70	10500.95	44.80	-201.34	205.53	0.57
Proj.	10624	17.10	285.00	10580.28	51.06	-224.93	229.92	0.11



Survey Report

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3362)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 486517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
28	10353	17.80	287.20	10321.24	31.19	-147.86	150.43	1.21	12.72
29	10415	17.00	283.30	10380.43	36.05	-165.64	168.84	2.11	11.06
30	10454	16.90	283.30	10417.74	38.66	-176.70	180.19	0.26	9.63
31	10479	16.90	283.70	10441.66	40.36	-183.77	187.44	0.47	8.74
32	10541	17.10	284.70	10500.95	44.80	-201.34	205.53	0.57	6.76
33	10603	17.30	285.50	10560.18	49.58	-219.04	223.85	0.50	5.04
34	10666	17.10	283.30	10620.36	54.22	-237.08	242.45	1.08	3.07
35	10730	16.80	282.60	10681.58	58.40	-255.27	261.06	0.57	0.63
36	10790	16.90	281.20	10738.01	61.98	-272.28	278.37	0.70	-1.97
37	10832	16.50	281.60	10779.23	64.37	-284.12	290.37	0.99	-3.87
Bit	10879	16.00	283.80	10824.36	67.26	-296.94	303.48	1.69	-5.66

**BAKER
HUGHES**

Survey Report

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3363)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
40	10927	15.60	287.90	10870.48	71.54	-309.53	316.77	1.29	-6.05
41	10959	15.60	288.30	10901.30	74.21	-317.71	326.37	0.34	-6.40
42	10989	15.50	289.00	10930.21	76.79	-325.33	333.41	0.71	-6.66
43	11020	15.60	291.10	10960.07	79.63	-333.14	341.71	1.84	-6.72
44	11051	16.00	293.20	10989.90	82.82	-340.95	350.12	2.25	-6.47
45	11082	15.80	294.20	11019.72	86.23	-348.73	358.57	1.09	-5.99
46	11146	16.10	290.70	11081.25	92.94	-364.98	376.08	1.57	-5.39
47	11211	15.30	290.40	11143.83	99.11	-381.45	393.64	1.24	-5.36
48	11242	15.60	291.40	11173.71	102.06	-389.16	401.88	1.29	-5.30
49	11285	15.40	292.80	11215.14	106.38	-399.81	413.33	0.99	-4.97
Bit	11332	15.40	292.80	11260.46	111.22	-411.31	425.76	0.00	-4.46
EOH	11810	15.80	291.00	11720.85	159.14	-530.58	553.89	0.13	-1.28
Target	12533	0.00	291.00	12434.72	194.64	-623.05	652.75	2.19	-0.36
TD EOB/T	13199	0.00	291.00	13100.72	194.64	-623.05	652.75	0.00	-0.36



Survey Report

MIN. CURVATURE CALCULATIONS (SPE-3362)

OPERATOR: EOG Resources
WELL: Dave Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
44	11051	18.00	293.20	10989.90	82.82	-340.95	350.12	2.25	-8.47
45	11082	15.80	294.20	11019.72	86.23	-348.73	358.57	1.09	-5.99
46	11146	16.10	290.70	11081.25	92.94	-364.98	376.08	1.57	-5.39
47	11211	15.30	290.40	11143.83	99.11	-381.45	393.64	1.24	-5.36
48	11242	15.60	291.40	11173.71	102.06	-389.16	401.88	1.29	-5.30
49	11285	15.40	292.80	11215.14	106.38	-399.81	413.33	0.99	-4.97
50	11354	14.90	292.50	11281.75	113.33	-416.45	431.29	0.73	-4.28
51	11415	14.50	293.50	11340.75	119.38	-430.70	446.69	0.78	-3.80
52	11479	14.70	291.70	11402.68	125.57	-445.59	462.76	0.77	-3.00
53	11544	14.20	290.70	11465.63	131.44	-460.71	478.94	0.86	-2.79
Proj	11605	14.20	291.00	11524.76	136.77	-474.70	493.88	0.12	-2.69
EOH	11805	15.00	292.00	11718.30	155.25	-521.59	544.16	0.42	-1.77
Target	12529	0.00	292.00	12434.06	190.55	-608.96	638.08	2.07	0.74



Survey Report

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3382)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
47	11211	15.30	290.40	11143.83	99.11	-381.45	393.64	1.24	-5.38
48	11242	15.60	291.40	11173.71	102.06	-389.16	401.88	1.29	-5.30
49	11285	15.40	292.80	11215.14	106.38	-399.81	413.33	0.99	-4.97
50	11354	14.90	292.50	11281.75	113.33	-416.45	431.29	0.73	-4.28
51	11415	14.50	293.50	11340.75	119.38	-430.70	446.69	0.78	-3.60
52	11479	14.70	291.70	11402.68	125.57	-445.59	462.76	0.77	-3.00
53	11544	14.20	290.70	11465.63	131.44	-460.71	478.94	0.86	-2.79
54	11608	14.00	290.40	11527.70	136.91	-475.31	494.51	0.33	-2.77
55	11671	13.50	290.40	11588.89	142.13	-489.35	509.46	0.79	-2.79
56	11735	14.00	291.40	11651.06	147.56	-503.56	524.64	0.87	-2.67
57	11799	13.70	292.50	11713.20	153.29	-517.76	539.91	0.62	-2.28
Proj	11846	14.00	292.50	11758.83	157.59	-528.16	551.12	0.64	-1.88
EOH	12000	14.00	292.50	11908.26	171.85	-562.58	588.23	0.00	-0.56
Target	12531	0.00	292.50	12433.99	196.55	-622.22	652.52	2.64	1.73
TD EOB/T	13197	0.00	292.50	13099.99	196.55	-622.22	652.52	0.00	1.73



Survey Report

INTEQ

MIL. CURVATURE CALCULATIONS (SPE-3382)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 485517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
55	11671	13.50	290.40	11588.89	142.13	-489.35	509.48	0.79	-2.79
56	11735	14.00	291.40	11651.06	147.56	-503.56	524.64	0.87	-2.67
57	11799	13.70	292.50	11713.20	153.29	-517.76	539.91	0.82	-2.28
58	11845	13.90	290.00	11757.87	157.26	-527.99	550.66	1.37	-2.13
59	11925	12.90	290.40	11835.69	163.68	-545.39	569.38	1.26	-2.22
60	11993	12.70	292.10	11902.00	169.12	-559.43	584.41	0.63	-2.02
61	12057	11.90	290.00	11964.53	174.02	-572.15	598.01	1.43	-1.87
Bit	12104	10.90	290.00	12010.60	177.20	-580.88	607.29	2.13	-1.95
Proj	12200	8.70	290.00	12105.20	182.79	-596.23	623.61	2.29	-2.08
Proj	12300	6.70	290.00	12204.29	187.37	-608.82	636.99	2.00	-2.19
Proj	12400	4.70	290.00	12303.79	190.77	-618.15	646.92	2.00	-2.27
Target	12531	2.10	290.00	12434.55	193.42	-625.45	654.68	1.98	-2.34
Proj	12650	0.00	290.00	12553.52	194.17	-627.50	656.85	1.76	-2.35
TD EOB/T	13197	0.00	290.00	13100.52	194.17	-627.50	656.85	0.00	-2.35



Survey Report

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3382)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
60	11993	12.70	292.10	11902.00	169.12	-559.43	584.41	0.63	-2.02
61	12057	11.90	290.00	11964.53	174.02	-572.15	598.01	1.43	-1.87
62	12089	11.00	289.00	11995.89	176.14	-578.14	604.36	2.88	-1.98
63	12121	9.90	285.80	12027.36	177.89	-583.67	610.16	3.89	-2.28
64	12154	9.10	287.80	12059.91	179.46	-588.88	615.60	2.62	-2.63
65	12169	9.10	286.20	12074.72	180.15	-591.15	617.98	1.69	-2.78
66	12203	9.10	286.20	12108.29	181.65	-596.32	623.35	0.00	-3.18
67	12235	8.30	287.20	12139.93	183.04	-600.95	628.19	2.54	-3.50
68	12267	7.50	285.50	12171.62	184.28	-605.17	632.59	2.60	-3.81
Proj	12299	6.70	285.50	12203.38	185.34	-608.98	636.54	2.50	-4.15
Proj	12330	5.90	285.50	12234.19	186.25	-612.26	639.94	2.58	-4.45
Proj	12361	5.10	285.50	12265.05	187.04	-615.12	642.91	2.58	-4.71
Proj	12392	4.30	285.50	12295.94	187.72	-617.57	645.45	2.58	-4.93
Proj	12424	3.50	285.50	12327.87	188.30	-619.67	647.63	2.50	-5.12
Proj	12455	2.70	285.50	12358.82	188.75	-621.28	649.30	2.58	-5.26
Proj	12486	1.90	285.50	12389.80	189.08	-622.48	650.54	2.58	-5.37
Proj	12517	1.10	285.50	12420.79	189.30	-623.27	651.36	2.58	-5.44
Target	12531	0.88	285.50	12434.78	189.36	-623.50	651.60	1.57	-5.46
Proj	12650	0.00	285.50	12553.78	189.61	-624.38	652.51	0.74	-5.54
TD EOB/T	13197	0.00	285.50	13100.78	189.61	-624.38	652.51	0.00	-5.54

INTEQ

Survey Report

MIN. CURVATURE CALCULATIONS (RPE-3382)

OPERATOR: EOG Resources
WELL: Daves Hopper 31 #1
LOCATION: Lea co., NM.

START: 4/12/2003
FINISH:
JOB #: 465517

PROPOSED DIRECTION: 287.38
MAG TO GRID 8.07

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
65	12169	9.10	286.20	12074.71	180.43	-591.16	618.07	1.69	-2.82
66	12203	9.10	286.20	12108.28	181.93	-598.33	623.44	0.00	-2.92
67	12235	8.30	287.20	12139.91	183.32	-600.96	628.28	2.54	-3.24
68	12267	7.50	285.50	12171.61	184.56	-605.18	632.68	2.60	-3.55
69	12300	6.80	285.10	12204.35	185.64	-609.14	636.79	2.13	-3.92
70	12332	6.10	284.80	12236.15	186.57	-612.62	640.38	2.19	-4.27
71	12364	5.30	283.30	12267.99	187.35	-615.70	643.55	2.54	-4.62
72	12396	4.50	283.30	12299.87	187.97	-618.36	646.28	2.50	-4.96
73	12428	4.00	280.90	12331.78	188.47	-620.68	648.64	1.66	-5.31
74	12460	3.40	280.20	12363.72	188.85	-622.71	650.69	1.68	-5.66
75	12492	2.60	280.20	12395.67	189.15	-624.35	652.35	2.50	-5.96
76	12525	2.20	276.70	12428.64	189.36	-625.72	653.72	1.29	-6.25
77	12557	1.80	274.60	12460.62	189.47	-626.83	654.81	1.27	-6.53
78	12626	0.90	275.30	12529.60	189.61	-628.45	656.40	1.30	-6.97
79	12690	0.50	250.30	12593.60	189.56	-629.21	657.11	0.77	-7.28
TD EOB/T	13197	0.00	274.60	13100.59	188.81	-631.30	656.87	0.10	-8.71

	Survey Report
MIN. CURVATURE CALCULATIONS (SPE-3362)	

OPERATOR: WELL: LOCATION:	EOG Resources Dave Hopper 31 #1 Lea co., NM.	START: 4/12/2003 FINISH: JOB #: 465517	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">PROPOSED DIRECTION:</td> <td style="text-align: right; padding: 2px;">287.38</td> </tr> <tr> <td style="padding: 2px;">MAG TO GRID</td> <td style="text-align: right; padding: 2px;">8.07</td> </tr> </table>	PROPOSED DIRECTION:	287.38	MAG TO GRID	8.07
PROPOSED DIRECTION:	287.38						
MAG TO GRID	8.07						

STATION NUMBER	SURVEY DEPTH	INC	AZMTH	TVD	N-S	E-W	VERT. SECTION	DLS/ 100	R-L
71	12364	5.30	283.30	12267.99	187.35	-815.70	643.55	2.54	-4.62
72	12366	4.50	283.30	12299.87	187.97	-818.36	646.28	2.50	-4.96
73	12428	4.00	280.90	12331.78	188.47	-820.88	648.64	1.66	-5.31
74	12480	3.40	280.20	12363.72	188.85	-822.71	650.69	1.88	-5.66
75	12482	2.60	280.20	12395.67	189.15	-824.35	652.35	2.50	-5.96
76	12525	2.20	276.70	12428.64	189.36	-825.72	653.72	1.29	-6.25
77	12557	1.80	274.60	12460.62	189.47	-826.83	654.81	1.27	-6.53
78	12628	0.90	275.30	12529.60	189.61	-828.45	656.40	1.30	-6.97
79	12690	0.50	250.30	12593.60	189.56	-829.21	657.11	0.77	-7.28
80	12786	0.70	216.50	12699.59	188.94	-829.98	657.64	0.41	-8.12
81	12873	0.70	213.00	12776.59	188.07	-830.56	657.95	0.06	-8.15
TD EOB/T	12920	0.70	210.00	12823.58	187.58	-830.88	658.09	0.06	-8.71