



Survey Report

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3362)

OPERATOR: D.H.Arrington Oil & Gas
 WELL: John's Hopper #1
 LOCATION: Lea County, New Mexico

START: 9/28/01
 FINISH:
 JOB #: 211075

PROPOSED DIRECTION: 95.49
 MAGNETIC TO GRID: 7.67

STATION NUMBER	SURVEY DEPTH	INC	TRUE AZM	TVD	N-S	E-W	VERT. SECTION	DLS/100
30	10742	13.3	92.0	10711.6	-25.9	353.8	354.7	0.2
31	10805	13.3	92.7	10772.9	-26.4	368.3	369.1	0.3
32	10869	12.2	93.8	10835.3	-27.2	382.4	383.3	1.8
33	10931	13.3	92.0	10895.8	-27.9	396.1	396.9	1.9
34	10993	12.7	93.8	10956.2	-28.6	410.0	410.9	1.2
35	11056	12.8	95.6	11017.7	-29.8	423.9	424.8	0.7
36	11115	13.0	98.7	11075.2	-31.4	436.9	437.9	1.2
37	11176	13.5	98.7	11134.6	-33.5	450.7	451.9	0.8
38	11240	14.4	97.3	11196.7	-35.7	466.0	467.3	1.5
39	11303	15.6	94.8	11257.5	-37.4	482.2	483.6	2.2
40	11370	16.6	91.3	11321.9	-38.3	500.8	502.1	2.1
41	11432	15.2	90.3	11381.5	-38.6	517.8	519.1	2.3
42	11494	15.6	91.0	11441.3	-38.8	534.2	535.5	0.7
43	11547	15.9	94.8	11492.3	-39.5	548.6	549.8	2.0
44	11610	16.2	98.4	11552.9	-41.5	565.9	567.2	1.6
45	11673	16.1	97.0	11613.4	-43.9	583.2	584.8	0.6
46	11737	16.7	93.1	11674.8	-45.4	601.2	602.8	2.0
47	11798	16.6	93.4	11733.2	-46.4	618.7	620.3	0.2
48	11861	16.4	94.1	11793.6	-47.6	636.5	638.2	0.4
49	11924	16.1	93.4	11854.1	-48.7	654.1	655.8	0.6
50	11986	14.9	95.2	11913.8	-50.0	670.6	672.4	2.1
51	12050	14.0	96.3	11975.8	-51.6	686.5	688.3	1.5
52	12113	13.2	96.6	12037.0	-53.2	701.3	703.1	1.3
53	12176	13.4	95.2	12098.4	-54.7	715.7	717.6	0.6

BHI DIRECTIONAL DRILLER: NICK REDRICK

