



Survey Report

Page 1 of 1

INTEQ

MIN. CURVATURE CALCULATIONS (SPE-3382)

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: 7.87

STATION NUMBER	SURVEY DEPTH	INC	TRUE AZM	TVD	N-S	E-W	VERT. SECTION	DLS/ 100
15	9794	9.4	92.5	9787.7	-13.6	143.6	144.3	0.5
16	9857	9.9	91.9	9849.8	-14.0	154.2	154.8	0.8
17	9919	10.6	90.4	9910.8	-14.3	165.2	165.8	1.2
18	9981	11.4	94.2	9971.6	-14.7	177.0	177.6	1.7
19	10044	11.7	94.3	10033.4	-15.7	189.6	190.2	0.5
20	10106	12.3	95.4	10094.0	-16.8	202.4	203.1	1.0
21	10169	12.5	93.5	10155.5	-17.8	215.9	216.6	0.7
22	10232	13.2	94.5	10217.0	-18.8	229.9	230.6	1.2
23	10295	14.6	94.5	10278.1	-20.0	245.0	245.8	2.2
24	10358	14.2	95.9	10339.1	-21.4	260.6	261.4	0.8
25	10419	14.7	92.6	10398.2	-22.5	275.8	276.7	1.6
26	10482	14.4	94.2	10459.2	-23.5	291.6	292.5	0.8
27	10545	14.2	92.4	10520.2	-24.4	307.1	308.0	0.8
28	10615	14.0	91.3	10588.1	-24.9	324.1	325.0	0.5
29	10678	13.4	92.0	10649.3	-25.3	339.1	339.9	1.0
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	410.8	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

BHI DIRECTIONAL DRILLER: NICK FREDRICK

