



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: 10/31/01
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
61	12680	14.9	93.4	12588.0	-65.7	834.5	837.0	0.8
62	12742	16.6	93.4	12647.6	-66.7	851.3	853.8	2.7
63	12805	17.0	93.1	12707.9	-67.7	869.5	872.0	0.6
64	12868	16.7	93.4	12768.2	-68.7	887.7	890.2	0.5
65	12930	16.8	94.5	12827.6	-70.0	905.6	908.1	0.5
66	12991	17.2	93.1	12885.9	-71.1	923.3	925.9	0.9
67	13053	17.1	94.5	12945.2	-72.3	941.6	944.2	0.7
68	13117	17.1	95.6	13006.4	-74.0	960.3	963.0	0.5
TD	13180	17.1	96.7	13066.6	-76.0	978.7	981.5	0.5

Projection

BHI DIRECTIONAL DRILLER: NICK FREDRICK

