

CHESAPEAKE OPERATING, INC.
 JESS - 19 , Well #1
 LEA COUNTY, NEW MEXICO
 RIG: PATTERSON#45
 JOB NUMBER: 777052 5/29/97 T.JALLAD
 DECLINATION: 8.8 DEGREES EAST TO (TRUE)

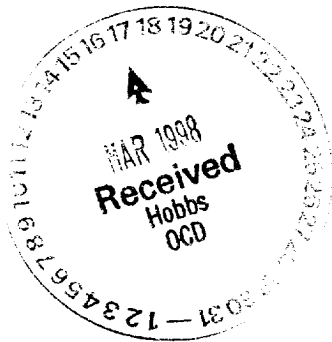
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MULTI-SHOT, INC.

Report of Survey

Minimum Curvature Method

MEASURED DEPTH	INCL.	DIRECTION	VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DLS Deg/100'
4850.00	1.00	104.00	4449.31	12.75 S 17.79 E	
TIE INTO SINGLE SHOT SURVEY					
5200.00	.94	125.60	4799.26	15.16 S 23.09 E	.10
5400.00	.89	135.67	4999.23	17.23 S 25.51 E	.08
5600.00	.81	142.16	5199.21	19.45 S 27.46 E	.06
5800.00	.88	134.05	5399.19	21.64 S 29.43 E	.07
6000.00	.71	138.83	5599.17	23.64 S 31.35 E	.09
6200.00	1.19	116.37	5799.14	25.49 S 34.03 E	.30
6400.00	.68	114.23	5999.12	26.90 S 36.97 E	.26
6600.00	.99	135.56	6199.10	28.62 S 39.26 E	.22
6800.00	1.20	103.32	6399.06	30.34 S 42.51 E	.32
7000.00	.79	77.48	6599.03	30.52 S 45.89 E	.30
7200.00	.52	122.57	6799.02	30.71 S 48.00 E	.28
7400.00	.59	113.07	6999.01	31.61 S 49.72 E	.06
7600.00	1.43	94.95	7198.98	32.22 S 53.15 E	.44
7800.00	.89	86.73	7398.93	32.35 S 57.19 E	.28
8000.00	.65	147.53	7598.92	33.22 S 59.35 E	.40
8200.00	.55	110.44	7798.91	34.51 S 60.86 E	.20
8400.00	.45	225.51	7998.91	35.40 S 61.19 E	.42
8600.00	.56	250.00	8198.90	36.28 S 59.72 E	.12
8800.00	1.10	302.42	8398.88	35.59 S 57.18 E	.44
9000.00	1.36	304.86	8598.83	33.20 S 53.61 E	.13
9200.00	1.52	305.52	8798.77	30.30 S 49.50 E	.08
9400.00	.89	321.11	8998.72	27.55 S 46.37 E	.35
9430.00	1.57	307.86	9028.72	27.12 S 45.90 E	2.44
9460.00	2.42	302.04	9058.70	26.53 S 45.04 E	2.91
9490.00	5.22	291.81	9088.63	25.69 S 43.23 E	9.57
9520.00	7.62	295.48	9118.44	24.33 S 40.17 E	8.11
9550.00	11.75	292.85	9148.00	22.28 S 35.56 E	13.84
9580.00	13.90	292.55	9177.25	19.71 S 29.41 E	7.17
9610.00	13.69	292.31	9206.39	16.99 S 22.80 E	.73



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MEASURED DEPTH	INCL.	DIRECTION	VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S		Page 2 DLS Deg/100'
9640.00	12.95	292.08	9235.58	14.37 S	16.40 E	2.47
9670.00	12.30	291.38	9264.86	11.95 S	10.31 E	2.23
9700.00	10.45	295.24	9294.27	9.62 S	4.87 E	6.66
9730.00	9.58	302.40	9323.81	7.12 S	.31 E	5.06
9760.00	9.21	314.71	9353.41	4.09 S	3.51 W	6.80
9790.00	8.98	325.63	9383.03	.47 S	6.54 W	5.79
9820.00	9.52	325.05	9412.64	3.49 N	9.28 W	1.83
9850.00	10.47	322.69	9442.19	7.69 N	12.35 W	3.45

Final location: 14.55 feet at 301.91 degrees

