



Scientific Drilling

SUR: 1196/N & 1823/E
BHL: 1158/N & 2106/E
B-30-18s-38e



ALTURA ENERGY LTD.

Field: Hobbs, Grayburg

Site: Lea County, NM

Well: NHU #30-713

Wellpath: VH - Job #32K0500185/180

Survey: 5/26/00-5/30/00

This survey is correct to the best of my knowledge
and is supported by actual field data.

[Signature] Company Representative

Notorized this date 27th of June, 2000.

[Signature]
Notary Signature

County of Midland
State of Texas



SCIENTIFIC DRILLING SURVEY REPORT

Company: ALTURA ENERGY LTD.
Field: Hobbs, Grayburg
Site: Lea County, NM
Well: NHU #30-713
Wellpath: VH - Job #32K0500185/180

Date: 6/27/2000 Time: 09:48:07 Page: 1
Co-ordinate(NE) Reference: Site: Lea County, NM, True North
Vertical (TVD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Slot (0.0E,0.0N,278.0Azi)
Survey Calculation Method: Minimum Curvature

Survey: 5/26/00-5/30/00
KSRG 0'-2275'/ST 2341'-4403'

Start Date: 6/14/2000

Company: SDI
Tool: Keeper

Engineer: Gary DeSpain

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS d/100ft	ClsA deg	ClsD ft
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0
100.0	0.98	124.21	100.0	-0.5	0.7	-0.8	0.98	124.21	0.9
200.0	1.13	144.59	200.0	-1.8	2.0	-2.2	0.40	131.64	2.7
300.0	1.12	144.73	300.0	-3.4	3.1	-3.6	0.01	137.17	4.6
400.0	0.90	145.24	399.9	-4.8	4.1	-4.8	0.22	139.33	6.3
500.0	0.86	150.13	499.9	-6.1	5.0	-5.8	0.09	140.94	7.9
600.0	0.80	141.35	599.9	-7.3	5.8	-6.7	0.14	141.71	9.3
700.0	0.78	142.92	699.9	-8.4	6.6	-7.7	0.03	141.76	10.7
800.0	0.76	141.45	799.9	-9.5	7.4	-8.7	0.03	141.81	12.0
900.0	0.85	167.47	899.9	-10.7	8.0	-9.4	0.37	143.17	13.4
1000.0	1.01	175.16	999.9	-12.3	8.2	-9.9	0.20	146.16	14.8
1100.0	0.82	175.64	1099.9	-13.9	8.4	-10.2	0.19	148.91	16.2
1200.0	0.91	178.24	1199.9	-15.4	8.5	-10.5	0.10	151.23	17.6
1300.0	0.71	174.04	1299.8	-16.8	8.5	-10.8	0.21	153.06	18.9
1400.0	0.72	185.14	1399.8	-18.0	8.5	-11.0	0.14	154.65	20.0
1500.0	0.78	192.33	1499.8	-19.3	8.3	-10.9	0.11	156.65	21.1
1600.0	0.78	216.12	1599.8	-20.6	7.8	-10.6	0.32	159.22	22.0
1700.0	0.86	215.44	1699.8	-21.7	7.0	-9.9	0.08	162.22	22.8
1800.0	0.94	213.43	1799.8	-23.0	6.1	-9.2	0.09	165.21	23.8
1900.0	0.74	219.50	1899.8	-24.2	5.2	-8.5	0.22	167.84	24.7
2000.0	0.35	229.77	1999.8	-24.9	4.6	-8.0	0.40	169.59	25.3
2100.0	0.23	71.64	2099.8	-25.0	4.5	-8.0	0.57	169.74	25.4
2200.0	0.87	66.64	2199.8	-24.7	5.4	-8.8	0.64	167.61	25.2
2275.0	1.17	90.29	2274.8	-24.4	6.7	-10.0	0.68	164.66	25.3
2341.0	0.71	43.43	2340.8	-24.1	7.7	-10.9	1.30	162.40	25.3
2404.0	0.67	342.53	2403.8	-23.5	7.8	-11.0	1.11	161.61	24.8
2466.0	1.72	310.76	2465.7	-22.6	7.0	-10.1	1.94	162.75	23.6
2528.0	2.36	302.08	2527.7	-21.3	5.2	-8.1	1.14	166.22	21.9
2592.0	3.26	293.01	2591.6	-19.9	2.4	-5.2	1.56	173.04	20.0
2655.0	4.25	289.47	2654.5	-18.4	-1.4	-1.1	1.61	184.43	18.4
2716.0	5.20	287.41	2715.3	-16.8	-6.2	3.8	1.58	200.24	17.9
2778.0	5.62	287.61	2777.0	-15.0	-11.8	9.6	0.68	218.04	19.1
2839.0	6.85	283.29	2837.6	-13.3	-18.2	16.1	2.16	233.77	22.5
2903.0	7.38	280.53	2901.1	-11.7	-25.9	24.0	0.99	245.75	28.4
2964.0	8.08	278.85	2961.6	-10.3	-34.0	32.2	1.21	253.15	35.5
3026.0	8.64	280.22	3022.9	-8.8	-42.9	41.3	0.96	258.40	43.8
3088.0	9.83	281.66	3084.1	-6.9	-52.7	51.2	1.96	262.53	53.1
3149.0	10.45	279.75	3144.2	-4.9	-63.2	61.9	1.16	265.55	63.4
3210.0	10.22	280.22	3204.2	-3.0	-74.0	72.9	0.40	267.66	74.0
3273.0	10.27	280.12	3266.2	-1.0	-85.0	84.0	0.08	269.30	85.0
3399.0	9.73	280.47	3390.3	2.9	-106.5	105.9	0.43	271.54	106.6
3462.0	10.00	281.21	3452.3	4.9	-117.1	116.7	0.47	272.40	117.2
3523.0	10.08	282.48	3512.4	7.1	-127.5	127.3	0.39	273.18	127.7
3585.0	10.19	282.26	3573.4	9.4	-138.2	138.2	0.19	273.90	138.5
3646.0	10.79	281.40	3633.4	11.7	-149.1	149.3	1.02	274.49	149.5
3708.0	10.49	282.81	3694.3	14.1	-160.3	160.7	0.64	275.03	160.9
3801.0	9.98	281.41	3785.9	17.6	-176.4	177.2	0.61	275.69	177.3
3864.0	10.25	282.36	3847.9	19.8	-187.2	188.2	0.50	276.05	188.3

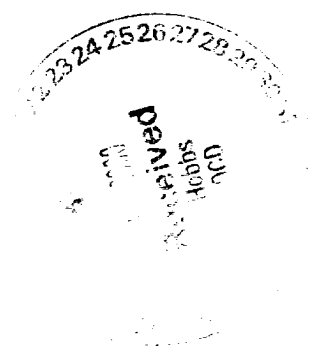
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3926.0	10.67	280.83	3908.9	22.1	-198.3	199.4	0.81	276.36	199.5
3989.0	10.45	279.50	3970.8	24.1	-209.6	211.0	0.52	276.57	211.0
4051.0	10.24	280.43	4031.8	26.1	-220.6	222.1	0.43	276.74	222.1
4110.0	10.37	281.28	4089.8	28.1	-231.0	232.6	0.34	276.93	232.7
4207.0	10.44	283.66	4185.2	31.8	-248.1	250.1	0.45	277.31	250.1
4301.0	10.32	280.08	4277.7	35.3	-264.6	267.0	0.70	277.60	267.0
4393.0	10.32	280.08	4368.2	38.2	-280.9	283.4	0.00	277.75	283.5
4403.0	10.32	280.08	4378.0	38.5	-282.6	285.2	0.00	277.76	285.2





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