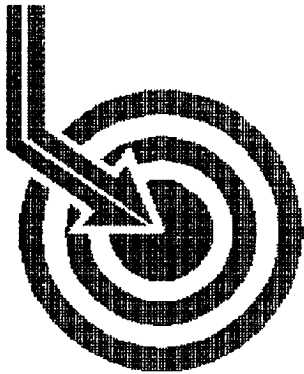




Scientific Drilling

SUR: H-33-18s-38e
2630/N4 318/E

BHL: I-33-18s-38e
30.025-34997



ALTURA ENERGY LTD.

Field: Hobbs, Grayburg

Site: Lea County, NM

Well: NHGSAU #33-543

Wellpath: DD - Job #32D0700273

Survey: 7/17/00-7/23/00

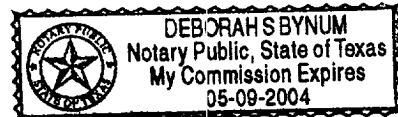
This survey is correct to the best of my knowledge
and is supported by actual field data.

David Hovey Company Representative

Notorized this date 23rd of August, 2000.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas





SCIENTIFIC DRILLING

SURVEY REPORT

Company: ALTURA ENERGY LTD.
Field: Hobbs, Grayburg
Site: Lea County, NM
Well: NHGSAU #33-543
Wellpath: VH - Job #32K0700278

Date: 8/17/2000 **Time:** 13:24:07 **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, 256.7Azi)
Survey Calculation Method: Minimum Curvature

Survey: 7/17/00
 KSRG 0'-1657'

Start Date: 8/17/2000

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
200.0	0.44	67.40	200.0	0.3	0.7	-0.8	0.22	67.40	0.8
300.0	0.59	83.31	300.0	0.5	1.6	-1.6	0.21	72.30	1.7
400.0	0.59	91.39	400.0	0.6	2.6	-2.7	0.08	78.06	2.7
500.0	0.64	101.46	500.0	0.4	3.7	-3.7	0.12	83.36	3.7
600.0	0.60	104.09	600.0	0.2	4.7	-4.6	0.05	87.72	4.7
700.0	0.64	119.30	700.0	-0.2	5.7	-5.5	0.17	92.13	5.7
800.0	0.51	131.98	800.0	-0.8	6.5	-6.2	0.18	96.84	6.6
900.0	0.60	135.11	900.0	-1.5	7.2	-6.7	0.09	101.35	7.4
1000.0	0.76	138.46	1000.0	-2.3	8.0	-7.3	0.16	106.09	8.4
1100.0	0.73	147.41	1099.9	-3.4	8.8	-7.8	0.12	110.81	9.4
1200.0	0.74	148.03	1199.9	-4.4	9.5	-8.2	0.01	115.02	10.5
1300.0	0.61	150.83	1299.9	-5.4	10.1	-8.6	0.13	118.33	11.5
1400.0	0.57	151.13	1399.9	-6.4	10.6	-8.9	0.04	120.90	12.4
1500.0	0.52	164.15	1499.9	-7.2	11.0	-9.0	0.13	123.35	13.1
1600.0	0.10	173.80	1599.9	-7.7	11.1	-9.0	0.42	124.89	13.5
1657.0	0.20	170.77	1656.9	-7.9	11.1	-9.0	0.18	125.35	13.6



SCIENTIFIC DRILLING

SURVEY REPORT

Company: ALTURA ENERGY LTD.
Field: Hobbs, Grayburg
Site: Lea County, NM
Well: NHGSAU #33-543
Wellpath: DD - Job #32D0700273

Date: 8/17/2000 **Time:** 14:03:29 **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,256.7Azi)
Survey Calculation Method: Minimum Curvature

Survey: 7/17/00-7/23/00
 S/T 1657'-4400'

Start Date: 8/17/2000

Company: SDI
Tool: S/T

Engineer: Charles Woolfolk

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS d/100ft	ClsA deg	ClsD ft
1657.0	0.20	170.77	1656.9	-7.9	11.1	-9.0	0.00	125.35	13.6
1723.0	0.18	325.31	1722.9	-7.9	11.1	-9.0	0.56	125.54	13.6
1783.0	1.32	291.20	1782.9	-7.6	10.4	-8.4	1.96	126.16	12.9
1844.0	2.43	261.91	1843.9	-7.5	8.5	-6.5	2.35	131.66	11.3
1909.0	3.70	269.28	1908.8	-7.7	5.0	-3.1	2.04	147.18	9.2
1971.0	4.99	265.49	1970.6	-8.0	0.3	1.5	2.13	177.82	8.0
2035.0	5.32	260.44	2034.3	-8.7	-5.4	7.3	0.88	211.84	10.2
2096.0	6.36	258.81	2095.0	-9.8	-11.5	13.5	1.73	229.51	15.1
2158.0	7.34	261.19	2156.6	-11.1	-18.8	20.8	1.65	239.44	21.8
2221.0	8.37	258.44	2219.0	-12.6	-27.3	29.4	1.74	245.14	30.0
2284.0	9.70	258.92	2281.2	-14.6	-37.0	39.3	2.11	248.49	39.7
2346.0	11.34	258.21	2342.2	-16.8	-48.0	50.6	2.65	250.71	50.9
2441.0	12.53	260.33	2435.1	-20.5	-67.3	70.3	1.33	253.11	70.4
2553.0	13.54	259.73	2544.2	-24.8	-92.2	95.5	0.91	254.93	95.5
2626.0	13.39	256.38	2615.2	-28.3	-108.9	112.5	1.09	255.40	112.5
2718.0	12.93	256.18	2704.8	-33.3	-129.2	133.4	0.50	255.54	133.4
2779.0	12.35	256.91	2764.3	-36.4	-142.2	146.7	0.99	255.63	146.8
2872.0	11.94	257.00	2855.2	-40.8	-161.2	166.3	0.44	255.79	166.3
2931.0	12.41	256.78	2912.9	-43.7	-173.4	178.8	0.80	255.86	178.8
3024.0	12.43	257.14	3003.7	-48.2	-192.8	198.8	0.09	255.97	198.8
3117.0	11.76	255.98	3094.7	-52.7	-211.8	218.2	0.77	256.03	218.3
3212.0	12.13	257.09	3187.6	-57.3	-230.9	237.9	0.46	256.07	237.9
3305.0	12.39	256.46	3278.5	-61.8	-250.1	257.7	0.31	256.12	257.7
3400.0	12.74	256.72	3371.2	-66.6	-270.2	278.3	0.37	256.16	278.3
3492.0	11.73	255.87	3461.1	-71.2	-289.2	297.8	1.12	256.17	297.8
3586.0	11.53	255.66	3553.2	-75.9	-307.6	316.8	0.22	256.15	316.8
3648.0	12.58	256.78	3613.8	-78.9	-320.1	329.7	1.73	256.15	329.7
3741.0	13.30	257.55	3704.5	-83.6	-340.4	350.5	0.80	256.21	350.5
3836.0	12.41	256.70	3797.1	-88.3	-361.0	371.7	0.96	256.26	371.7
3939.0	12.45	258.08	3897.7	-93.1	-382.7	393.8	0.29	256.33	393.8
4034.0	12.09	256.92	3990.5	-97.5	-402.4	414.0	0.46	256.38	414.0
4118.0	12.32	256.28	4072.6	-101.6	-419.7	431.8	0.32	256.39	431.8
4208.0	12.48	257.74	4160.5	-105.9	-438.5	451.1	0.39	256.42	451.1
4303.0	12.69	258.61	4253.2	-110.2	-458.8	471.8	0.30	256.50	471.8
4400.0	12.69	258.61	4347.9	-114.4	-479.6	493.1	0.00	256.59	493.1





Scientific
Drilling

ALTURA ENERGY LTD.

Field: Hobbs, Grayburg

Site: Lea County, NM

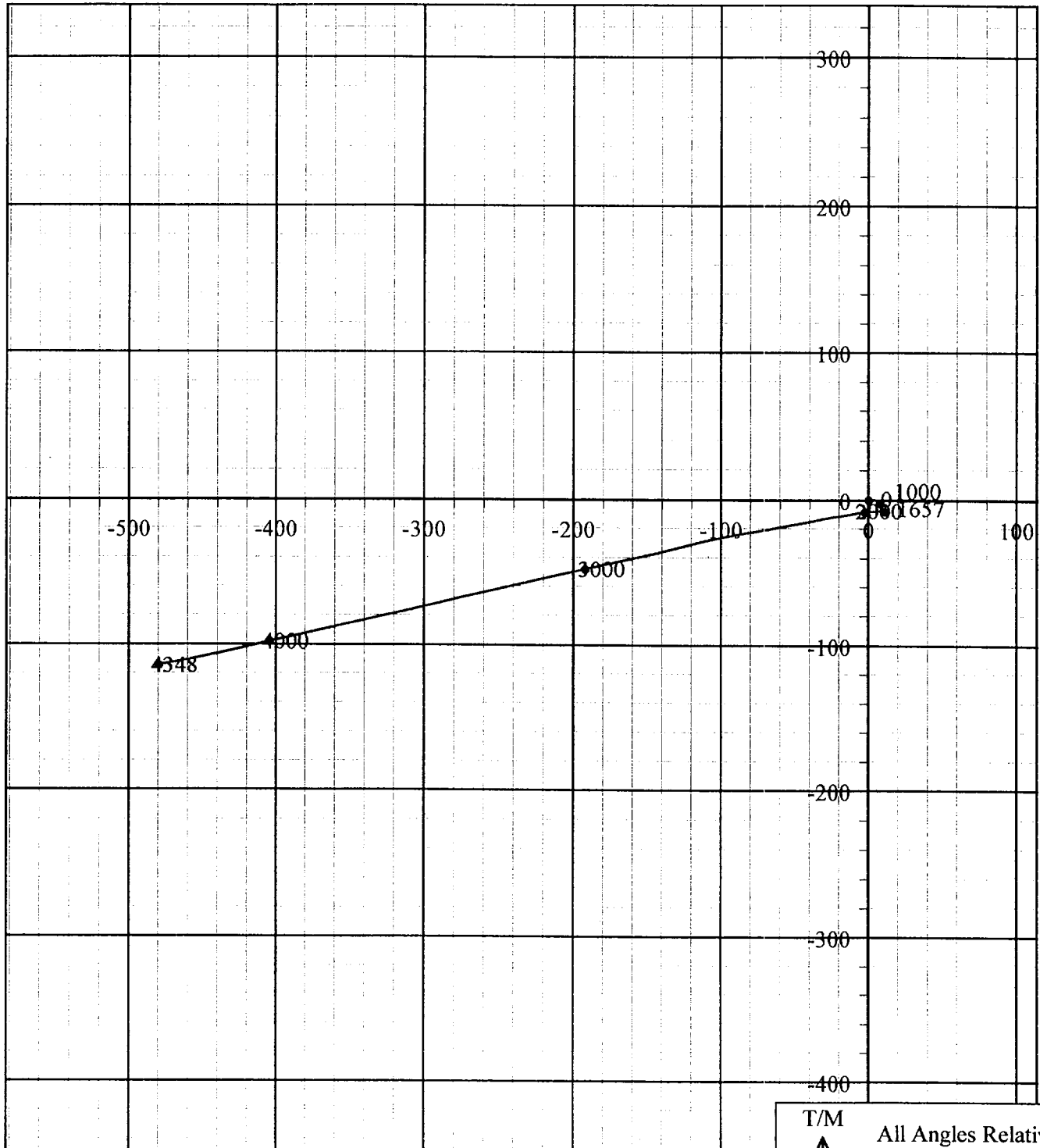
Well: NHGSAU #33-543

Wellpath: DD - Job #32D0700273

Survey: 7/17/00-7/23/00

Altura
ENERGY LTD.

South(-)/North(+) [100ft/in]



West(-)/East(+) [100ft/in]

T/M



All Angles Relative
To Local North

True North: 0.00
Magnetic North: 0.00

