



Scientific Drilling



ALTURA ENERGY LTD.

Field: Hobbs, Grayburg

Site: Lea County, NM

Well: North Hobbs Unit #33-524

Wellpath: DH - Job #32D0500158

Survey: 5/6/00-5/11/00

SUR: 108254 1673/6

BHL: 837/s #1320/6

N- 33-185-38e

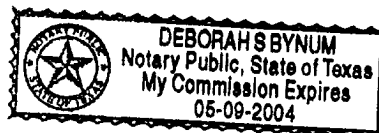
This survey is correct to the best of my knowledge
and is supported by actual field data.

Edharta.....Company Representative

Notorized this date 27th of June, 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: North Hobbs Unit #33-524
Wellpath: VH - Job #32K0500154

Date: 5/19/2000 Time: 09:20:35 Page: 1
Co-ordinate(N/E) Reference: Site: Lea County, NM, True North
Vertical (TYD) Reference: SITE 0.0 above Mean Sea Level
Section (VS) Reference: Slot (0.0E,0.0N,235.9Azi)
Survey Calculation Method: Minimum Curvature

Survey: 5/7/00
KSRG 0'-1830'

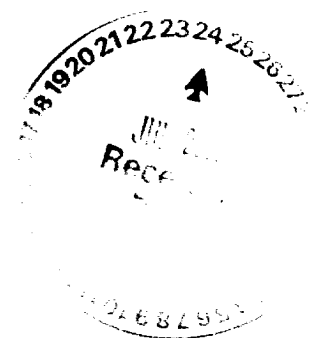
Start Date: 5/10/2000

Company: SDI
Tool: Keeper

Engineer: Jon Valenzuela

Survey

MD ft	Incl deg	Azim deg	TYD 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	1.10	95.63	100.0	-0.1	1.0	-0.7	1.10	95.63	1.0
200.0	0.66	141.51	200.0	-0.6	2.3	-1.5	0.80	105.73	2.4
300.0	0.73	147.85	300.0	-1.6	3.0	-1.5	0.10	118.78	3.4
400.0	0.71	127.73	400.0	-2.5	3.8	-1.7	0.25	123.87	4.6
500.0	0.40	173.91	500.0	-3.3	4.3	-1.7	0.52	127.14	5.4
600.0	0.52	147.33	600.0	-4.0	4.6	-1.6	0.24	131.00	6.1
700.0	0.60	160.79	700.0	-4.9	5.0	-1.4	0.15	134.18	7.0
800.0	0.31	208.30	800.0	-5.6	5.1	-1.0	0.45	137.93	7.6
900.0	0.54	217.49	899.9	-6.2	4.7	-0.4	0.24	143.23	7.8
1000.0	0.73	215.38	999.9	-7.1	4.0	0.7	0.19	150.69	8.2
1100.0	0.68	241.61	1099.9	-7.9	3.1	1.9	0.32	158.60	8.5
1200.0	0.57	256.59	1199.9	-8.3	2.1	2.9	0.20	165.84	8.6
1300.0	0.60	246.46	1299.9	-8.6	1.1	3.9	0.11	172.52	8.7
1400.0	0.83	224.48	1399.9	-9.4	0.1	5.1	0.35	179.10	9.4
1500.0	0.83	237.61	1499.9	-10.3	-1.0	6.6	0.19	185.41	10.3
1600.0	0.81	224.39	1599.9	-11.2	-2.1	8.0	0.19	190.54	11.4
1700.0	0.96	228.70	1699.9	-12.2	-3.2	9.5	0.16	194.68	12.6
1800.0	0.80	246.59	1799.9	-13.1	-4.5	11.0	0.32	198.91	13.8
1830.0	0.69	242.19	1829.9	-13.2	-4.8	11.4	0.41	200.05	14.1



SCIENTIFIC DRILLING SURVEY REPORT

Company: ALTURA ENERGY LTD.
Field: Hobbs, Grayburg
Site: Lea County, NM
Well: North Hobbs Unit #33-524
Wellpath: DH - Job #32D0500158

Date: 6/27/2000 Time: 14:01:47 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,235.9Azi)
Survey Calculation Method: Minimum Curvature

Survey: 5/6/00-5/11/00
S/T 1907-4386

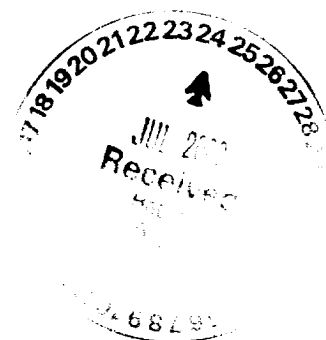
Start Date: 5/19/2000

Company: SDI
Tool: S/T

Engineer: Charles Woolfolk

Survey

MD ft	Incl deg	Azin deg	TVD ft	N/S ft	E/W ft	VS ft	DLS d/100ft	ClsA deg	ClsD ft
1830.0	0.69	242.19	1829.9	-13.2	-4.8	11.4	0.00	200.05	14.1
1907.0	1.50	216.40	1906.9	-14.2	-5.8	12.8	1.21	202.26	15.4
1965.0	3.27	224.73	1964.8	-16.0	-7.4	15.2	3.10	204.91	17.7
2028.0	4.51	222.52	2027.7	-19.1	-10.4	19.3	1.98	208.49	21.8
2088.0	5.67	229.03	2087.4	-22.8	-14.2	24.6	2.16	211.93	26.9
2152.0	7.65	233.95	2151.0	-27.4	-20.0	32.0	3.22	216.20	34.0
2215.0	9.36	233.50	2213.3	-32.9	-27.6	41.3	2.72	219.94	42.9
2308.0	10.84	235.60	2304.8	-42.4	-40.9	57.6	1.64	223.97	58.8
2401.0	10.69	238.47	2396.2	-51.8	-55.4	74.9	0.60	226.93	75.9
2463.0	10.57	239.56	2457.1	-57.7	-65.2	86.4	0.38	228.51	87.1
2526.0	11.32	234.02	2519.0	-64.3	-75.2	98.3	2.05	229.49	98.9
2591.0	11.47	234.91	2582.7	-71.7	-85.7	111.1	0.36	230.06	111.7
2651.0	11.23	237.79	2641.5	-78.3	-95.5	122.9	1.03	230.66	123.5
2715.0	11.14	238.21	2704.3	-84.8	-106.0	135.4	0.19	231.33	135.8
2777.0	10.61	240.03	2765.2	-90.8	-116.1	147.0	1.02	231.95	147.4
2869.0	10.86	238.43	2855.6	-99.6	-130.8	164.1	0.42	232.70	164.4
2931.0	10.81	233.18	2916.5	-106.2	-140.4	175.8	1.59	232.91	176.0
2995.0	10.10	229.00	2979.4	-113.4	-149.4	187.3	1.62	232.80	187.6
3057.0	9.83	230.28	3040.5	-120.4	-157.6	198.0	0.56	232.63	198.3
3120.0	9.33	233.65	3102.6	-126.8	-165.9	208.5	1.19	232.59	208.8
3181.0	9.90	231.94	3162.8	-133.0	-174.0	218.6	1.05	232.60	219.0
3244.0	9.91	235.63	3224.8	-139.4	-182.7	229.5	1.01	232.66	229.8
3305.0	9.83	235.89	3284.9	-145.3	-191.4	239.9	0.15	232.79	240.3
3368.0	8.93	235.48	3347.1	-151.1	-199.8	250.2	1.43	232.91	250.5
3431.0	9.11	241.71	3409.3	-156.2	-208.3	260.0	1.58	233.13	260.3
3524.0	10.18	241.30	3501.0	-163.7	-222.0	275.5	1.15	233.60	275.8
3587.0	10.39	240.35	3563.0	-169.1	-231.8	286.8	0.43	233.88	286.9
3648.0	10.03	242.51	3623.0	-174.3	-241.3	297.5	0.86	234.15	297.6
3711.0	10.54	238.83	3685.0	-179.8	-251.1	308.7	1.32	234.39	308.8
3773.0	10.22	239.14	3746.0	-185.6	-260.6	319.9	0.52	234.55	320.0
3836.0	9.80	241.61	3808.0	-191.0	-270.2	330.8	0.95	234.74	330.9
3931.0	10.32	234.78	3901.6	-199.7	-284.2	347.3	1.37	234.90	347.4
4024.0	9.86	236.53	3993.1	-208.9	-297.7	363.6	0.59	234.93	363.7
4116.0	10.37	236.16	4083.7	-217.9	-311.1	379.8	0.56	234.99	379.8
4210.0	10.65	236.55	4176.1	-227.4	-325.4	396.9	0.31	235.05	397.0
4305.0	10.79	237.76	4269.5	-237.0	-340.2	414.6	0.28	235.14	414.6
4386.0	10.79	237.76	4349.0	-245.1	-353.1	429.8	0.00	235.23	429.8





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Field: Hobbs, Grayburg

Site: Lea County, NM

Well: North Hobbs Unit #33-524

Wellpath: VH - Job #32K0500154/158

Survey: 5/7/00-5/11/00

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