



Scientific Drilling

OCCIDENTAL PERMIAN LTD.

Field: North Hobbs
Site: Lea County, NM
Well: NHU #33-535
Wellpath: DH - Job #32D0102009
Survey: 1/7/02-1/17/02

SUR @ K-33-18s-38e, 2188/S & 2510/W
BHL @ O-34-18s-38e, 1259/S & 3327/E
API # 30-025-35758

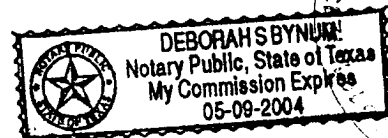
This survey is correct to the best of my knowledge
and is supported by actual field data.

[Signature] Company Representative

Notorized this date 19th of February, 2002.

Deborah Sue Bynum

Notary Signature
County of Midland
State of Texas



Scientific Drilling International

Survey Report

Company: OCCIDENTAL PERMIAN LTD.	Date: 2/19/2002	Time: 14:53:08	Page: 1
Field: North Hobbs	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0 above Mean Sea Level	
Well: NHU #33-535	Section (VS) Reference:	Well (0.0E, 0.0N, 138.6Azi)	
Wellpath: V# Job #32K0102010	Survey Calculation Method:	Minimum Curvature	

Survey: 1/9/02 KSRG 0'-1615'	Start Date: 2/19/2002
Company: Scientific Drilling Internatio	Engineer: Angel Guebara
Tool: Keeper	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft
0.0	0.00	359.38	0.0	0.0	0.0	0.0	0.0	0.00	0.00
100.0	1.35	359.32	100.0	-0.9	1.2	0.0	1.2	359.32	1.35
200.0	1.26	1.33	200.0	-2.6	3.5	0.0	3.5	359.96	0.10
300.0	0.99	13.47	299.9	-3.9	5.4	0.2	5.4	2.38	0.36
400.0	1.18	11.91	399.9	-5.0	7.2	0.6	7.3	5.03	0.19
500.0	0.77	21.99	499.9	-5.9	8.9	1.1	8.9	7.08	0.44
600.0	0.44	43.01	599.9	-6.3	9.8	1.6	9.9	9.38	0.39
700.0	0.55	72.36	699.9	-6.1	10.2	2.3	10.5	12.89	0.27
800.0	0.09	130.98	799.9	-5.8	10.3	2.9	10.7	15.48	0.51
900.0	0.49	272.62	899.9	-6.1	10.3	2.5	10.6	13.60	0.56
1000.0	0.72	266.79	999.9	-6.7	10.2	1.4	10.3	7.94	0.24
1100.0	0.62	270.27	1099.9	-7.5	10.2	0.3	10.2	1.46	0.11
1200.0	0.15	262.55	1199.9	-7.9	10.2	-0.4	10.2	357.70	0.47
1300.0	0.71	144.61	1299.9	-7.4	9.7	-0.2	9.7	358.93	0.79
1400.0	1.67	144.53	1399.9	-5.3	8.0	1.0	8.1	7.30	0.96
1500.0	1.63	143.65	1499.8	-2.4	5.7	2.7	6.3	25.62	0.05
1600.0	1.64	156.91	1599.8	0.3	3.2	4.1	5.2	52.19	0.38
1615.0	1.40	157.56	1614.8	0.7	2.8	4.3	5.1	56.50	1.60



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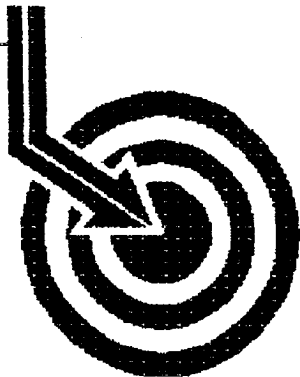
Survey Report

Company: OCCIDENTAL PERMIAN LTD.	Date: 2/19/2002	Time: 16:18:27	Page: 1
Field: North Hobbs	Co-ordinate(NE) Reference:	Site: Lea County, NM, True North	
Site: Lea County, NM	Vertical (TVD) Reference:	SITE 0.0 above Mean Sea Level	
Well: NHU #33-535	Section (VS) Reference:	Well (0.0E,0.0N,13861.0Azi)	
Wellpath: DH - Job #32D0102009	Survey Calculation Method:	Minimum Curvature	

Survey: 1/7/02-1/17/02 MWD 1689'-4192'	Start Date: 2/19/2002
Company: SDI w/MWD Services	Engineer: R.D. Brusenhan
Tool: MWD	

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ClsD ft	ClsA deg	DLS deg/100ft
1615.0	1.40	157.56	1614.8	-2.9	2.8	4.3	5.1	56.50	0.00
1689.0	2.10	180.60	1688.7	-0.7	0.6	4.6	4.6	82.13	1.32
1779.0	3.10	178.00	1778.6	3.4	-3.4	4.7	5.8	126.42	1.12
1873.0	4.90	161.60	1872.4	9.7	-9.8	6.0	11.5	148.41	2.25
1966.0	7.10	150.10	1964.9	18.4	-18.5	10.1	21.1	151.32	2.68
2060.0	9.50	142.20	2057.9	29.4	-29.7	17.8	34.6	149.08	2.82
2151.0	11.80	138.10	2147.3	42.1	-42.6	28.6	51.3	146.10	2.66
2245.0	14.60	136.70	2238.9	57.6	-58.4	43.2	72.6	143.51	3.00
2336.0	17.20	136.70	2326.4	75.4	-76.5	60.3	97.4	141.77	2.86
2430.0	19.50	139.20	2415.6	97.1	-98.5	80.0	126.9	140.90	2.59
2522.0	21.60	138.80	2501.7	121.1	-122.9	101.2	159.2	140.51	2.29
2616.0	23.70	138.70	2588.5	147.9	-150.1	125.1	195.4	140.19	2.23
2710.0	25.70	139.50	2673.9	177.1	-179.8	150.8	234.6	140.01	2.16
2803.0	27.20	137.70	2757.1	207.7	-210.8	178.2	276.1	139.79	1.83
2895.0	28.80	137.50	2838.4	239.1	-242.7	207.3	319.2	139.50	1.74
2990.0	30.90	138.50	2920.7	273.7	-277.9	239.0	366.5	139.30	2.27
3079.0	33.00	137.30	2996.3	308.0	-312.8	270.5	413.6	139.14	2.46
3171.0	33.00	136.60	3073.4	344.0	-349.4	304.8	463.6	138.91	0.41
3260.0	32.70	136.10	3148.2	378.4	-384.3	338.1	511.9	138.66	0.45
3353.0	32.00	135.40	3226.8	413.4	-420.0	372.8	561.6	138.41	0.85
3446.0	31.10	137.80	3306.0	448.2	-455.3	406.2	610.2	138.26	1.66
3539.0	30.30	138.00	3386.0	482.8	-490.6	438.1	657.7	138.24	0.87
3603.0	29.50	139.00	3441.5	506.4	-514.4	459.2	689.6	138.25	1.47
3697.0	29.60	138.70	3523.2	540.7	-549.4	489.7	735.9	138.29	0.19
3789.0	31.20	139.30	3602.6	575.3	-584.5	520.2	782.5	138.33	1.77
3882.0	31.10	139.70	3682.2	611.4	-621.1	551.5	830.6	138.40	0.25
3974.0	31.30	140.30	3760.9	647.3	-657.6	582.1	878.2	138.48	0.40
4036.0	32.70	139.50	3813.4	672.1	-682.7	603.3	911.1	138.53	2.36
4129.0	33.90	139.50	3891.2	710.3	-721.5	636.5	962.1	138.59	1.29
4192.0	33.90	139.50	3943.5	736.6	-748.3	659.3	997.3	138.62	0.00

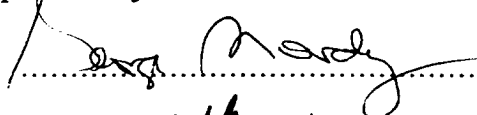


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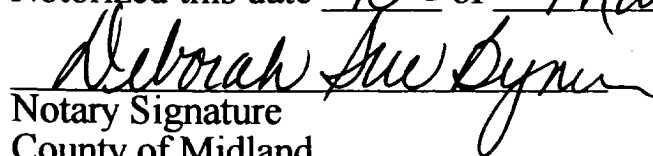
OCCIDENTAL PERMIAN LTD.

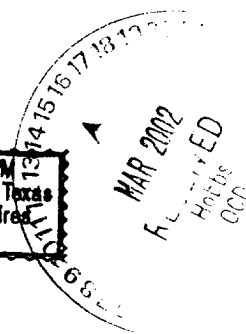
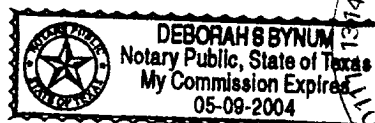
Field: North Hobbs
Site: Lea County, NM
Well: NHU #33-535
Wellpath: DH - Job #32D0102009/042
Survey: 1/7/02-1/17/02 & 1/31/02

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

.....Company Representative

Notorized this date 13th of March, 2002.


Notary Signature
County of Midland
State of Texas



Scientific Drilling International

Survey Report

Company: OCCIDENTAL PERMAN LTD. Field: North Hobbs Site: Lea County, NM Well: NHU #33-535 Wellpath: DH Job #32D0102009/042	Date: 3/13/2002 Co-ordinate(N/E) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 11:03:07 Site: Lea County, NM, True North SITE 0.0 above Mean Sea Level Well (0.0E,0.0N,138.6Azi) Minimum Curvature	Page: 1
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Survey: 1/7/02-1/17/02 & 1/31/02
MWD 1689'-4192' & KSRG 4200'-4590'

Start Date: 2/19/2002

Company: SDI w/MWD Services
Tool: MWD

Engineer: R.D. Brusenhan

Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	ChD ft	ChA deg	DLS deg/100ft
4200.0	33.72	137.96	3950.1	1001.7	-751.6	662.2	1001.7	138.62	0.00
4300.0	33.42	138.79	4033.4	1057.0	-792.9	698.9	1057.0	138.61	0.55
4400.0	31.89	138.79	4117.6	1111.0	-833.5	734.5	1111.0	138.61	1.53
4500.0	30.95	139.23	4203.0	1163.1	-872.9	768.7	1163.1	138.63	0.97
4590.0	30.34	139.40	4280.4	1209.0	-907.7	798.6	1209.0	138.66	0.68

