Dennis Hoefer

of (3)

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JUN 28 1989
OIL CON. DIV
DIST. 3

DIRECTIONAL DRILLING REPORT

DATE 3-APRIL-1989

COMPANY UNION TEXAS PETROLEUM CORPORATION

WELL McCORD NO.2E SEC. 34 T 30 N R 13 W

LOCATION SAN JUAN COUTY, NEW MEXICO

MAGNETIC DECLINATION 'TRUE' 12 ~~DEGREES~~ DEGREES EASTERLY

WILSON™

DIRECTIONAL DRILLING DIVISION

Job No. D9-17031

UNION TEXAS PETROLEUM CORPORATION
McCORD WELL NO. 2E
SECTION 34 T 30 N - R 13 W
SAN JUAN COUNTY, NEW MEXICO
WILSON DOWNHOLE DIRECTIONAL DRILLING
WILSON SUPERVISOR ** OTTO SMITH
MAG. DEC. 'TRUE' 12 DEGREES EASTERLY
JOB NO. D9-17031 CONDUCTED MARCH, 1989

RECORD OF SURVEY

ALL CALCULATIONS PERFORMED BY DIGITAL ELECTRONIC COMPUTER

RADIUS OF CURVATURE METHOD

MEAS. DEPTH	DRIFT ANGLE D	DRIFT ANGLE M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	TOTAL COORDINATES		CLOSURES DISTANCE	CLOSURES ANGLE D	CLOSURES ANGLE M	CLOSURES ANGLE S	DOG LEG SEVERITY DEG/100FT
55	0	0	55.00	0.00	S 0 E	0.00 S	0.00 E	0.00 S 90	0	0	E	0.000
110	1	15	110.00	0.52	S 67 E	0.24 S	0.56 E	0.60 S 66	59	60	E	2.596
170	1	0	169.98	1.46	S 80 E	0.59 S	1.68 E	1.77 S 70	49	7	E	0.595
230	0	45	229.98	2.03	N 82 E	0.62 S	2.58 E	2.65 S 76	31	3	E	0.618
322	1	0	321.97	2.76	N 87 E	0.50 S	3.98 E	4.01 S 82	56	51	E	0.284
440	0	30	439.96	3.50	N 72 E	0.28 S	5.50 E	5.50 S 87	5	47	E	0.455
572	1	0	571.94	3.87	N 63 E	0.43 N	7.07 E	7.08 N 86	34	42	E	0.389
638	1	15	637.94	4.69	S 35 E	0.10 N	8.00 E	8.00 N 89	19	30	E	2.268
700	2	45	699.90	6.85	S 38 E	1.64 S	9.30 E	9.44 S 80	2	30	E	2.425
763	4	18	762.77	10.72	S 34 E	4.79 S	11.55 E	12.50 S 67	30	21	E	2.491
826	5	30	825.54	16.09	S 31 E	9.33 S	14.43 E	17.18 S 57	6	26	E	1.948
889	6	54	888.17	22.87	S 38 E	14.90 S	18.31 E	23.61 S 50	51	44	E	2.525
949	8	12	947.65	30.74	S 42 E	20.92 S	23.39 E	31.38 S 48	11	33	E	2.337
1006	9	12	1004.00	39.31	S 43 E	27.28 S	29.22 E	39.97 S 46	58	21	E	1.774
1069	10	6	1066.10	49.83	S 41 E	35.13 S	36.28 E	50.50 S 45	55	28	E	1.524

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MEAS. DEPTH	DRIFT ANGLE D	DRIFT ANGLE M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	TOTAL COORDINATES		CLOSURES DISTANCE	CLOSURES ANGLE D	CLOSURES ANGLE M	CLOSURES ANGLE S	DOG LEG SEVERITY DEG/100FT
55	0	0	55.00	0.00	S 0 E	0.00 S	0.00 E	0.00	S 90	0	0 E	0.000
110	1	15	110.00	0.52	S 67 E	0.24 S	0.56 E	0.60	S 66	59	60 E	2.596
170	1	0	169.98	1.46	S 80 E	0.59 S	1.68 E	1.77	S 70	49	7 E	0.595
230	0	45	229.98	2.03	N 82 E	0.62 S	2.58 E	2.65	S 76	31	3 E	0.618
322	1	0	321.97	2.76	N 87 E	0.50 S	3.98 E	4.01	S 82	56	51 E	0.284
440	0	30	439.96	3.50	N 72 E	0.28 S	5.50 E	5.50	S 87	5	47 E	0.455
572	1	0	571.94	3.87	N 63 E	0.43 N	7.07 E	7.08	N 86	34	42 E	0.389
638	1	15	637.94	4.69	S 35 E	0.10 N	8.00 E	8.00	N 89	19	30 E	2.268
700	2	45	699.90	6.85	S 38 E	1.64 S	9.30 E	9.44	S 80	2	30 E	2.425
763	4	18	762.77	10.72	S 34 E	4.79 S	11.55 E	12.50	S 67	30	21 E	2.491
826	5	30	825.54	16.09	S 31 E	9.33 S	14.43 E	17.18	S 57	6	26 E	1.948
889	6	54	888.17	22.87	S 38 E	14.90 S	18.31 E	23.61	S 50	51	44 E	2.525
949	8	12	947.65	30.74	S 42 E	20.92 S	23.39 E	31.38	S 48	11	33 E	2.337
1006	9	12	1004.00	39.31	S 43 E	27.28 S	29.22 E	39.97	S 46	58	21 E	1.774
1069	10	6	1066.10	49.83	S 41 E	35.13 S	36.28 E	50.50	S 45	55	28 E	1.524

MEAS. DEPTH	DRIFT ANGLE D	DRIFT ANGLE M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	TOTAL COORDINATES		CLOSURES DISTANCE	CLOSURES ANGLE D	CLOSURES ANGLE M	CLOSURES ANGLE S	DOG LEG SEVERITY DEG/100FT
1132	10	42	1128.07	61.18	S 39 E	43.84 S	43.59 E	61.82 S	44	49	52 E	1.111
1193	11	18	1187.95	72.81	S 39 E	52.89 S	50.91 E	73.41 S	43	54	29 E	0.984
1256	11	42	1249.68	85.35	S 40 E	62.58 S	58.90 E	85.94 S	43	15	57 E	0.709
1319	12	12	1311.32	98.36	S 41 E	72.50 S	67.37 E	98.97 S	42	54	10 E	0.859
1381	12	42	1371.86	111.65	S 44 E	82.34 S	76.41 E	112.33 S	42	51	30 E	1.318
1443	14	6	1432.17	125.88	S 45 E	92.59 S	86.48 E	126.69 S	43	2	50 E	2.289
1506	15	0	1493.15	141.54	S 45 E	103.78 S	97.67 E	142.51 S	43	15	51 E	1.429
1569	15	30	1553.93	157.93	S 45 E	115.49 S	109.39 E	159.07 S	43	26	42 E	0.794
1629	16	6	1611.66	174.11	S 44 E	127.15 S	120.84 E	175.41 S	43	32	33 E	1.098
1692	18	0	1671.89	192.50	S 39 E	141.00 S	133.03 E	193.85 S	43	20	6 E	3.809
1755	21	18	1731.22	213.63	S 42 E	157.07 S	146.82 E	215.00 S	43	4	4 E	5.477
1818	23	24	1789.48	237.51	S 40 E	175.16 S	162.52 E	238.94 S	42	51	22 E	3.545
1880	25	54	1845.82	263.32	S 40 E	194.96 S	179.14 E	264.76 S	42	34	39 E	4.032
1943	28	30	1901.84	292.06	S 40 E	217.02 S	197.64 E	293.53 S	42	19	29 E	4.127
2002	30	24	1953.21	320.97	S 42 E	238.90 S	216.68 E	322.52 S	42	12	30 E	3.626
2065	32	24	2006.99	353.58	S 44 E	262.89 S	239.08 E	355.34 S	42	17	2 E	3.580
2095	33	42	2032.13	369.81	S 44 E	274.66 S	250.44 E	371.69 S	42	21	34 E	4.333
2183	34	15	2105.11	418.57	S 44 E	310.03 S	284.60 E	420.85 S	42	33	4 E	0.625
2274	34	45	2180.10	469.69	S 44 E	347.11 S	320.41 E	472.38 S	42	42	33 E	0.549
2368	34	30	2257.45	522.65	S 44 E	385.53 S	357.51 E	525.78 S	42	50	25 E	0.266
2490	34	0	2358.30	590.88	S 42 E	435.73 S	404.34 E	594.43 S	42	51	34 E	1.010
2615	33	45	2462.08	660.24	S 42 E	487.51 S	450.96 E	664.10 S	42	46	10 E	0.200
2739	34	0	2565.03	729.05	S 42 E	538.87 S	497.20 E	733.21 S	42	41	49 E	0.202
2862	33	45	2667.16	797.35	S 41 E	590.22 S	542.63 E	801.75 S	42	35	41 E	0.497
3017	34	0	2795.84	883.49	S 41 E	655.42 S	599.31 E	888.11 S	42	26	22 E	0.161
3173	35	0	2924.41	971.64	S 40 E	722.61 S	656.69 E	976.42 S	42	15	49 E	0.737
3298	35	45	3026.33	1043.78	S 42 E	777.21 S	704.16 E	1048.76 S	42	10	37 E	1.104
3360	35	15	3076.81	1079.69	S 39 E	804.58 S	727.55 E	1084.74 S	42	7	18 E	2.923
3518	36	30	3204.84	1172.16	S 40 E	876.01 S	786.45 E	1177.24 S	41	54	58 E	0.874
3643	37	30	3304.67	1247.21	S 41 E	933.21 S	835.31 E	1252.44 S	41	49	53 E	0.934

MEAS. DEPTH	DRIFT ANGLE D	DRIFT ANGLE M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	TOTAL COORDINATES	CLOSURES DISTANCE	CLOSURES ANGLE D	CLOSURES ANGLE M	CLOSURES ANGLE S	DOG LEG SEVERITY DEG/100FT
3738	38	0	3379.78	1305.15	S 42 E	976.77 S 873.85 E	1310.60	S 41	49	1 E	0.832
3861	36	15	3477.86	1379.19	S 39 E	1033.17 S 922.07 E	1384.80	S 41	44	52 E	2.047
3985	34	45	3578.82	1451.16	S 35 E	1090.62 S 965.42 E	1456.54	S 41	30	55 E	2.230
4111	33	45	3682.98	1522.06	S 38 E	1147.63 S 1007.57 E	1527.17	S 41	16	55 E	1.557
4205	33	0	3761.47	1573.75	S 38 E	1188.37 S 1039.41 E	1578.80	S 41	10	28 E	0.798
4300	31	45	3841.70	1624.59	S 39 E	1228.19 S 1071.07 E	1629.61	S 41	5	27 E	1.431
4421	31	15	3944.88	1687.78	S 37 E	1278.00 S 1109.99 E	1692.74	S 40	58	32 E	0.957
4546	32	15	4051.18	1753.53	S 34 E	1331.54 S 1148.16 E	1758.20	S 40	46	13 E	1.495
4671	33	45	4156.01	1821.58	S 37 E	1386.93 S 1187.71 E	1825.99	S 40	34	31 E	1.774
4794	35	0	4257.53	1891.01	S 35 E	1443.12 S 1228.51 E	1895.21	S 40	24	26 E	1.370
4918	36	0	4358.48	1962.99	S 35 E	1502.10 S 1269.81 E	1966.91	S 40	12	35 E	0.806
5044	36	45	4459.93	2037.68	S 35 E	1563.31 S 1312.67 E	2041.33	S 40	1	9 E	0.595
5137	36	0	4534.81	2092.77	S 33 E	1609.03 S 1343.52 E	2096.19	S 39	51	41 E	1.509
5260	35	0	4634.95	2163.96	S 31 E	1669.58 S 1381.37 E	2166.96	S 39	36	13 E	1.246
5353	33	45	4711.71	2216.12	S 29 E	1715.04 S 1407.64 E	2218.74	S 39	22	40 E	1.811
5447	32	15	4790.53	2266.86	S 29 E	1759.82 S 1432.46 E	2269.11	S 39	8	41 E	1.596
5571	30	0	4896.68	2330.46	S 30 E	1815.61 S 1464.00 E	2332.32	S 38	52	50 E	1.862
5695	28	0	5005.13	2390.31	S 33 E	1866.87 S 1495.36 E	2391.92	S 38	41	40 E	1.994
5821	26	15	5117.27	2447.52	S 30 E	1915.82 S 1525.40 E	2448.92	S 38	31	38 E	1.763
5945	24	0	5229.54	2499.70	S 28 E	1961.84 S 1550.95 E	2500.85	S 38	19	43 E	1.939
6071	22	15	5345.41	2548.69	S 29 E	2005.33 S 1574.55 E	2549.62	S 38	8	18 E	1.423
6191	20	30	5457.15	2591.99	S 28 E	2043.76 S 1595.43 E	2592.75	S 37	58	37 E	1.490
6253	20	30	5515.22	2613.43	S 27 E	2063.02 S 1605.46 E	2614.10	S 37	53	25 E	0.565
6316	20	0	5574.33	2634.93	S 27 E	2082.44 S 1615.36 E	2635.52	S 37	48	3 E	0.794
6435	19	0	5686.50	2673.90	S 24 E	2118.27 S 1632.48 E	2674.33	S 37	37	12 E	1.189
6560	19	30	5804.51	2714.12	S 24 E	2155.92 S 1649.24 E	2714.40	S 37	24	55 E	0.400
6682	19	45	5919.43	2754.25	S 26 E	2193.05 S 1666.56 E	2754.43	S 37	13	56 E	0.587
6811	21	0	6040.35	2798.40	S 26 E	2233.42 S 1686.24 E	2798.49	S 37	3	11 E	0.969
6968	21	15	6186.80	2854.02	S 26 E	2284.27 S 1711.05 E	2854.05	S 36	50	7 E	0.159
7125	23	15	6332.10	2912.23	S 24 E	2338.16 S 1736.13 E	2912.24	S 36	35	40 E	1.362

BOTTOM HOLE CLOSURE 2912.24 FEET AT S 36 35 40 E

UNION TEXAS PETROLEUM CORPORATION
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WILSON SUPERVISOR ** OTTO SMITH
MAG. DEC. 'TRUE' 12 DEGREES EASTERLY
JOB NO. D9-17031 CONDUCTED MARCH, 1989

WILSON SUPERVISOR: Otto Smith

WE CERTIFY THAT THIS IS A TRUE AND CORRECT REPORT OF OUR SURVEY AND THAT IT AFFORDS A TRUE AND CORRECT REPRESENTATION OF OUR EARNINGS AS TO THE NATURE AND CONDITIONS OF THE WELL AT THE TIME THE SURVEY WAS MADE.

Jim Wilson

WILSON INDUSTRIES INC.
Directional Drilling Division
1-713-237-3976

UNION TEXAS PETROLEUM CORP.

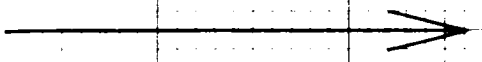
McCORD WELL NO. 2E

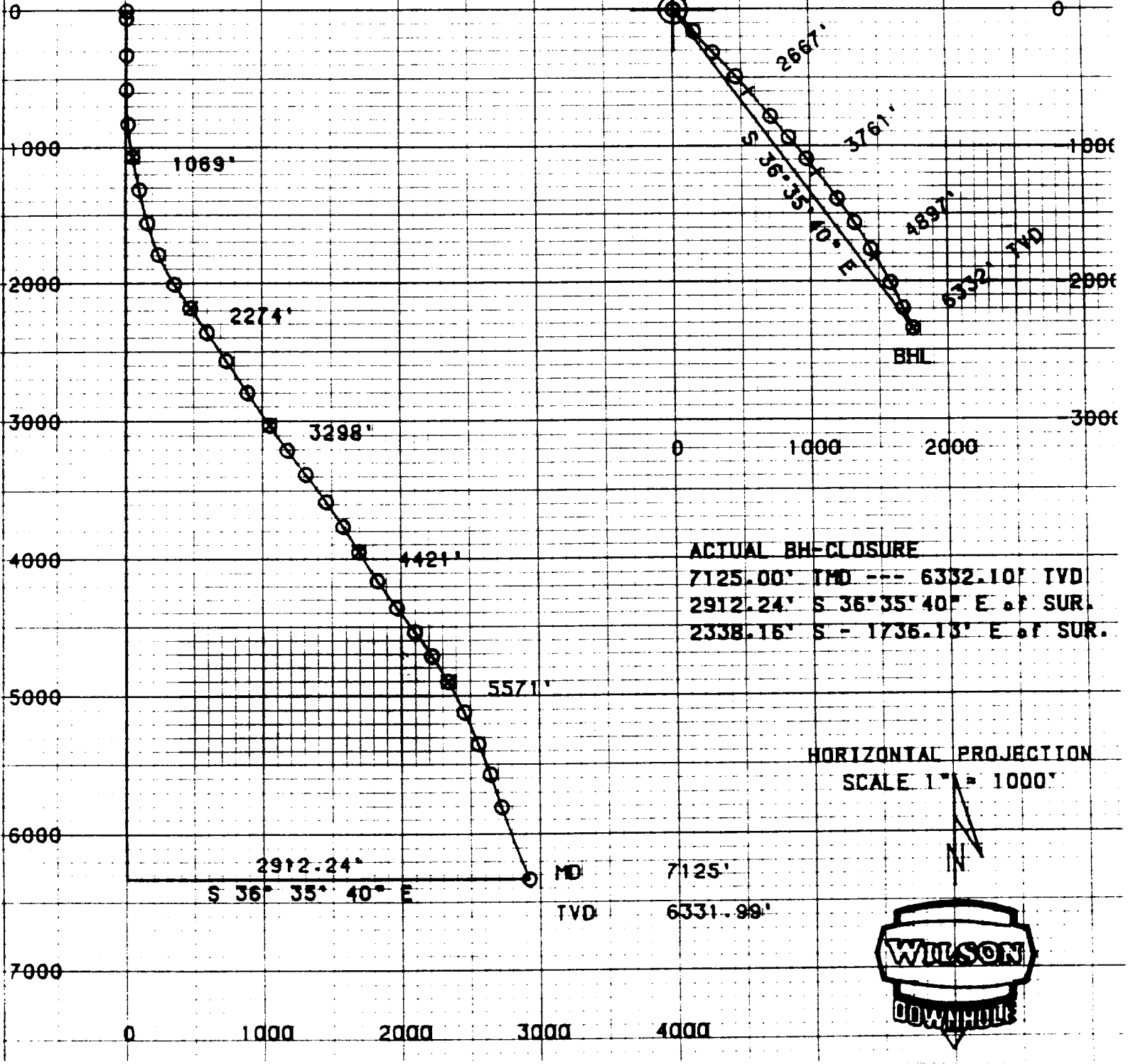
SEC. 34 T 30 N - R 13 W

SAN JUAN COUNTY, NEW MEXICO

MAG. DEC. 'TRUE' 12° 00' EAST

VERTICAL PROJECTION
SCALE 1" = 1000'





ACTUAL BH-CLOSURE
7125.00' TMD --- 6332.10' TVD
2912.24' S 36°35'40" E of SUR.
2338.16' S - 1736.13' E of SUR.

HORIZONTAL PROJECTION
SCALE 1" = 1000'

WILSON DOWNHOLE SERVICES P.O. BOX 1492 HOUSTON, TEXAS 77001/713-237-3946
A DIVISION OF WILSON INDUSTRIES INC.