

DIRECTIONAL DRILLING REPORT

ALL CALCULATIONS ARE PERFORMED BY DIGITAL ELECTRONIC
COMPUTER USING THE RADIUS OF CURVATURE METHOD

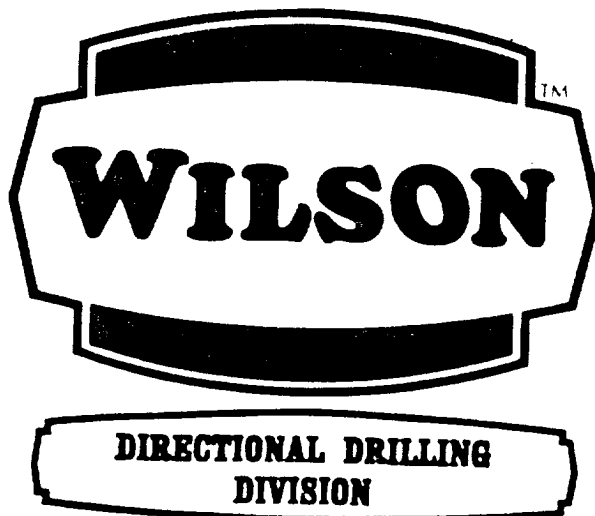
DATE NOVEMBER 21, 1984

COMPANY AMOCO PRODUCTION COMPANY

WELL SOUTH HOBBS UNIT WELL #180

LOCATION LEA COUNTY, NEW MEXICO

MAGNETIC DECLINATION TRUE 10° EASTERLY



JOB NO. D4-66425

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT WELL #180
LEA COUNTY, NEW MEXICO

WILSON DOWNHOLE DIRECTIONAL DRILLING
TRUE 10 DEGREES EASTERLY
11-21-84 JOB NO. D4-66425

RECORD OF SURVEY

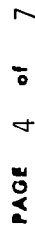
ALL CALCULATIONS PERFORMED BY DIGITAL ELECTRONIC COMPUTER

RADIUS OF CURVATURE METHOD

MEAS. DEPTH	DRIFT ANGLE D M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	PAGE 1 TOTAL COORDINATES	C L O S U R E S		DOG LEG SEVERITY DEG/100FT
						DISTANCE	ANGLE D M S	
1455	0 45	1454.92	-12.89	S 76 E	5.73 S	12.89 S	63 36 50 E	0.000
1573	0 45	1572.91	-13.97	N 50 E	5.43 S	13.99 S	67 11 39 E	0.577
1657	0 15	1656.91	-14.02	N 68 W	5.00 S	14.07 S	69 10 36 E	1.181
1720	1 45	1719.90	-12.92	N 70 W	4.62 S	12.97 S	69 7 41 E	2.382
COORDINATES AT 1455' FROM SPERRY SUN M.S. SURVEY								
1782	3 45	1781.82	-9.97	N 73 W	3.71 S	10.00 S	68 15 37 E	3.234
1844	5 15	1843.63	-5.14	N 70 W	2.14 S	5.15 S	65 25 59 E	2.449
1906	7 15	1905.26	1.59	N 65 W	0.49 N	1.61 N	72 26 19 W	3.343
1968	9 45	1966.57	10.76	N 64 W	4.45 N	10.76 N	65 37 18 W	4.039
2037	11 15	2034.41	23.33	N 65 W	9.85 N	23.34 N	65 2 11 W	2.190
2163	12 30	2157.71	49.26	N 65 W	20.81 N	49.26 N	65 1 2 W	0.992
2320	13 45	2310.61	84.85	N 60 W	37.32 N	84.86 N	63 54 42 W	1.075
2443	14 45	2429.83	114.94	N 57 W	53.16 N	115.02 N	62 28 34 W	1.011
2536	15 15	2519.66	138.77	N 56 W	66.44 N	138.98 N	61 26 30 W	0.605
2656	15 45	2635.29	170.39	N 54 W	84.84 N	170.88 N	60 13 57 W	0.610
2780	16 15	2754.49	203.86	N 52 W	105.42 N	204.83 N	59 1 35 W	0.600

MEAS. DEPTH	DRIFT ANGLE D M	TRUE VERTICAL DEPTH	VERTICAL SECTION	DRIFT DIREC DEG	PAGE 2		COORDINATES	C L O S U R E S		000 LEG SEVERITY DEG/100FT
					TOTAL			DISTANCE	ANGLE D M S	
2904	16 15	2873.54	237.73	N 52 W	126.78	N	202.97 W	239.31	N 58 0 36 W	0.000
3059	16 15	3022.34	279.98	N 51 W	153.78	N	236.91 W	282.44	N 57 0 45 W	0.181
3214	15 45	3171.34	321.32	N 49 W	181.23	N	269.64 W	324.88	N 56 5 41 W	0.480
3307	15 45	3260.85	345.64	N 49 W	197.79	N	288.69 W	349.95	N 55 35 3 W	0.000
3338	15 45	3290.69	353.80	N 52 W	203.14	N	295.18 W	358.33	N 55 27 54 W	2.627
3370	14 30	3321.58	362.01	N 57 W	208.00	N	301.96 W	366.67	N 55 26 26 W	5.646
3400	13 0	3350.72	369.11	N 63 W	211.57	N	308.12 W	373.77	N 55 31 28 W	6.898
3431	12 15	3380.97	375.87	N 69 W	214.34	N	314.30 W	380.42	N 55 42 29 W	4.872
3462	12 30	3411.25	382.45	N 75 W	216.38	N	320.61 W	386.80	N 55 59 4 W	4.224
3494	12 45	3442.48	389.36	N 72 W	218.37	N	327.31 W	393.47	N 56 17 26 W	2.193
3523	13 30	3470.72	395.90	N 70 W	220.52	N	333.54 W	399.84	N 56 31 47 W	3.023
3555	14 30	3501.77	403.63	N 66 W	223.42	N	340.71 W	407.43	N 56 44 41 W	4.348
3586	15 0	3531.75	411.50	N 70 W	226.38	N	348.02 W	415.17	N 56 57 28 W	3.659
3628	16 15	3572.20	422.69	N 75 W	229.76	N	358.81 W	426.06	N 57 22 3 W	4.374
3689	17 0	3630.65	439.76	N 78 W	233.82	N	375.77 W	442.58	N 58 6 33 W	1.868
3709	17 15	3649.76	445.49	N 78 W	235.04	N	381.54 W	448.12	N 58 21 55 W	1.250
3739	18 30	3678.31	454.38	N 81 W	236.71	N	390.59 W	456.72	N 58 46 57 W	5.175
3770	19 30	3707.62	464.08	N 80 W	238.38	N	400.54 W	466.11	N 59 14 29 W	3.392
3801	20 30	3736.76	474.35	N 78 W	240.41	N	410.95 W	476.10	N 59 40 20 W	3.908
3865	22 45	3796.24	497.29	N 78 W	245.31	N	434.01 W	498.54	N 60 31 28 W	3.516
3904	24 30	3831.97	512.55	N 76 W	248.83	N	449.24 W	513.55	N 61 1 4 W	4.935
3956	25 45	3879.05	534.30	N 73 W	254.75	N	470.50 W	535.04	N 61 34 3 W	3.432
3995	27 30	3913.92	551.64	N 70 W	260.30	N	487.07 W	552.26	N 61 52 44 W	5.658
4058	28 45	3969.48	581.15	N 72 W	269.96	N	515.15 W	581.59	N 62 20 37 W	2.485
4121	28 45	4024.71	611.20	N 72 W	279.32	N	543.96 W	611.49	N 62 49 11 W	0.000
4215	29 0	4107.02	656.21	N 72 W	293.35	N	587.14 W	656.34	N 63 27 7 W	0.266
4309	29 15	4189.14	701.62	N 71 W	307.87	N	630.52 W	701.67	N 63 58 30 W	0.582
4400	29 45	4268.34	746.15	N 71 W	322.46	N	672.89 W	746.16	N 64 23 45 W	0.549
4442	29 45	4304.80	766.86	N 71 W	329.24	N	692.60 W	766.87	N 64 34 29 W	0.000

BOTTOM HOLE CLOSURE 766.87 FEET AT N 64 34 29 W



NOTARY PUBLIC IN AND FOR HARRIS COUNTY, TEXAS