

DIRECTIONAL DRILLING REPORT

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

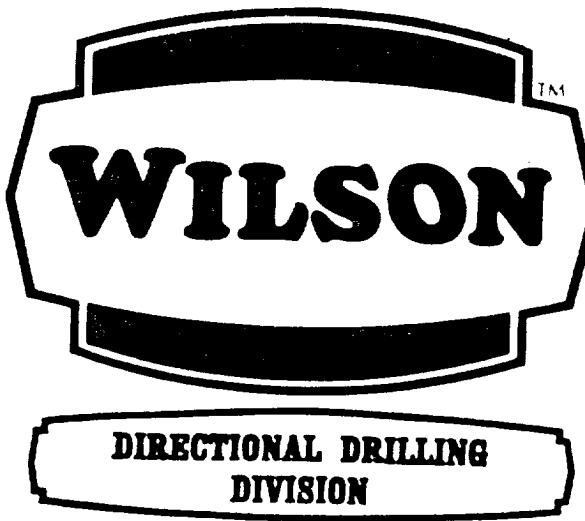
DATE NOVEMBER 21, 1984

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	D N	TRUE DRIFT ANGLE	VERTICAL DEPTH	SECTION	DRIFT DIRIG DEG	PAGE TOTAL COORDINATES	CLOSURE ANGLE			DOG LEG SEVERITY ME6/100FT
							D	M	S	
1455	0 45	1454.92	-12.89	S 76 E	5.73	5 11.55 E	12.89	S 63	36 50 E	0.000
1573	0 45	1572.91	-13.97	N 50 E	5.43	5 12.90 E	13.99	S 67	11 39 E	0.577
1657	0 15	1656.91	-14.02	N 68 W	5.00	5 13.15 E	14.07	S 69	10 36 E	1.181
1720	1 45	1719.90	-12.32	N 70 W	4.62	5 12.12 E	12.97	S 69	7 41 E	2.382
COORDINATES AT 1455' FROM SPERRY SUN N. S., SURVEY						3.71 S	9.29 E	10.00 S	68 15 37 E	3.234
1782	3 45	1781.82	-9.97	N 73 W	2.14 S	2 1.49 N	4.68 E	5.15 S	65 25 59 E	2.449
1844	5 15	1843.63	-5.14	N 70 W	0.49 N	1.54 W	1.61 N	72	26 19 W	3.343
1906	7 15	1905.26	1.59	N 65 W	4.45 N	9.80 W	10.78 N	65	37 18 W	4.039
1968	9 45	1966.57	10.76	N 64 W	9.85 N	21.16 W	23.34 N	65	2 11 W	2.190
2037	11 15	2034.41	23.33	N 65 W	20.81 N	44.65 W	49.26 N	65	1 2 W	0.992
2163	12 30	2157.71	49.26	N 65 W						
2320	13 45	2310.61	94.95	N 60 W	37.32 N	/6.21 W	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	102.01 W	62	28 34 W	1.011
2536	15 15	2519.66	138.77	N 56 W	66.44 N	122.08 W	138.98 N	61	26 30 W	0.605
2656	15 45	2635.29	170.39	N 54 W	84.84 N	148.34 W	170.88 N	60	13 57 W	0.610
2780	16 15	2754.49	203.86	N 52 W	105.42 N					0.600

MEAS.	TRUE DEPTH	VERTICAL DEPTH	SECTION	D	M	DRIFT ANGLE	DIRREC DEG	PAGE	2	COORDINATES	CLOSURES			DOG LEG SEVERITY DEG/100FT
											D	N	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	33 W	0.000
3338	15	45	3290.69	353.80	N 52 W	203.14	N	295.16	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 73 W	235.04	N	381.54	W	448.12 N	58	21	35 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	238.36	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 76 W	245.31	N	434.01	W	498.54 N	60	31	28 W	3.516
3904	24	30	3831.97	512.55	N 75 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	54	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	701.62 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



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

DATE NOVEMBER 21, 1984

PAGE 4 of 7

MEASURED DEPTH	COURSE LENGTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DIRECTION OF DEVIATION	TOTAL COORDINATES	
						NORTH	SOUTH
						EAST	WEST

CLOSURE: Distance 766.87' Direction N 64° 34' 29" W

WILSON SUPERVISOR: THOMAS WRIGHT

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

**BEFORE ME THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED
Thomas Wright, known to me to be the person whose name is subscribed to this instrument, who after being duly sworn on oath, states that the same is a true and correct statement of the facts therein recited.**

SUBSCRIBED AND SWEARN TO BEFORE ME THIS THE Twenty-First DAY
November 84
of

WILSON INDUSTRIES INC.
Directional Drilling Division

