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SCIENTIFIC DRILLING INTERNATIONAL
MIDLAND, TEXAS

LOG NUMBER: 132M188101\132M188107

DATE: 11/23/88

INRUN SURVEY

BY

THE RADIUS OF CURVATURE

PLAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
87.00	87.00	.00	.00	0- 0	N / A	.00 N .00 E	.00
146.00	146.00	-.05	.13	0-15 S	12- 0 E	.13 S .03 E	.42
204.00	204.00	-.25	.25	0-15 S	70- 0 W	.33 S .09 W	.57
263.00	263.00	-.63	.39	0-30 S	72- 0 W	.45 S .45 W	.42
322.00	321.99	-1.15	.64	0-45 N	70- 0 W	.44 S 1.08 W	.80
381.00	380.99	-1.71	.77	0-45 S	89- 0 W	.32 S 1.84 W	.46
440.00	439.98	-2.39	.90	1- 0 N	75- 0 W	.21 S 2.73 W	.59
499.00	498.98	-2.92	.90	0-45 N	66- 0 W	.09 N 3.58 W	.48
558.00	557.97	-3.25	.64	0-30 N	62- 0 W	.38 N 4.16 W	.43
617.00	616.97	-3.59	.51	0-30 N	89- 0 W	.50 N 4.65 W	.40
675.00	674.96	-4.02	.76	1- 0 N	50- 0 W	.76 N 5.35 W	1.19
734.00	733.96	-4.24	.90	0-45 N	46- 0 W	1.37 N 6.02 W	.44
793.00	792.95	-4.54	.64	0-30 N	78- 0 W	1.67 N 6.58 W	.71
852.00	851.95	-4.90	.51	0-30 N	77- 0 W	1.78 N 7.09 W	.01
911.00	910.95	-5.21	.51	0-30 N	64- 0 W	1.95 N 7.57 W	.19

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MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
970.00	969.95	-5.45	.51	0-30 N 60-	0 W	2.19 N 8.03 W	.06
1029.00	1028.94	-5.86	.64	0-45 N 88-	0 W	2.37 N 8.64 W	.66
1097.00	1086.94	-6.53	.76	0-45 S 75-	0 W	2.28 N 9.39 W	.38
1146.00	1145.93	-7.22	.77	0-45 S 90-	0 W	2.18 N 10.15 W	.33
1205.00	1204.93	-7.79	.64	0-30 S 78-	0 W	2.11 N 10.79 W	.48
1264.00	1263.93	-8.40	.64	0-45 S 75-	0 W	1.96 N 11.42 W	.43
1323.00	1322.92	-9.28	.90	1- 0 S 62-	0 W	1.63 N 12.26 W	.54
1382.00	1381.91	-10.30	1.03	1- 0 S 45-	0 W	1.02 N 13.08 W	.50
1441.00	1440.90	-11.19	.90	0-45 S 50-	0 W	.41 N 13.75 W	.44
1499.00	1498.90	-11.93	.76	0-45 S 35-	0 W	.14 S 14.26 W	.34
1558.00	1557.90	-12.46	.64	0-30 S 10-	0 W	.73 S 14.50 W	.62
1588.00	1587.89	-12.70	.33	0-45 S 16-	0 W	1.05 S 14.58 W	.86
1659.00	1658.89	-13.38	.93	0-45 S 10-	0 W	1.96 S 14.79 W	.11
1721.00	1720.88	-14.04	.95	1- 0 S 12-	0 W	2.89 S 14.97 W	.41
1783.00	1782.87	-14.77	1.08	1- 0 S 5-	0 W	3.96 S 15.13 W	.20

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HTAS, MFTTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
1845.00	1844.86	-15.35	.95	0-45 S	2- 0 W	4.90 S 15.18 W	.41
1909.00	1907.86	-15.83	.96	1- 0 S	9- 0 E	5.86 S 15.13 W	.48
1929.00	1969.85	-16.14	1.08	1- 0 S	25- 0 E	6.89 S 14.81 W	.45
2032.00	2031.84	-16.37	1.08	1- 0 S	19- 0 E	7.90 S 14.40 W	.17
2095.00	2094.83	-16.80	.96	0-45 S	5- 0 W	8.84 S 14.29 W	.70
2157.00	2156.83	-17.23	.81	0-45 S	8- 0 E	9.65 S 14.27 W	.27
2219.00	2218.82	-17.54	.81	0-45 S	15- 0 E	10.45 S 14.11 W	.15
2282.00	2281.81	-17.83	1.10	1-15 S	22- 0 E	11.49 S 13.76 W	.82
2344.00	2343.80	-17.89	1.35	1-15 S	40- 0 E	12.65 S 13.06 W	.63
2406.00	2405.78	-17.61	1.49	1-30 S	50- 0 E	13.70 S 12.01 W	.56
2468.00	2467.73	-16.65	2.30	2-45 S	67- 0 E	14.89 S 10.06 W	2.24
2531.00	2530.63	-14.47	3.57	3-45 S	76- 0 E	16.03 S 6.67 W	1.78
2593.00	2592.50	-11.39	4.06	3-45 N	89- 0 E	16.48 S 2.66 W	1.58
2655.00	2654.32	-7.00	4.73	5- 0 N	65- 0 E	15.43 S 1.92 E	3.53
2719.00	2717.08	-1.52	5.49	5- 0 N	54- 0 E	12.64 S 6.64 E	1.52

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MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
2790.00	2778.85	3.74	5.27	4-45 N 52-	0 E	9.47 S 10.85 E	.49
2842.00	2840.64	8.85	5.13	4-45 N 50-	0 E	6.24 S 14.84 E	.27
2905.00	2903.44	13.90	5.08	4-30 N 51-	0 E	3.01 S 18.76 E	.42
2967.00	2965.24	18.74	4.86	4-30 N 48-	0 E	.15 N 22.46 E	.38
3029.00	3027.04	23.67	5.00	4-45 N 46-	0 E	3.56 N 26.11 E	.48
3091.00	3088.84	28.61	5.00	4-30 N 48-	0 E	6.97 N 29.77 E	.48
3154.00	3151.65	33.51	4.94	4-30 N 49-	0 E	10.24 N 33.47 E	.12
3216.00	3213.45	38.33	4.86	4-30 N 48-	0 E	13.47 N 37.12 E	.13
3278.00	3275.26	43.14	4.86	4-30 N 48-	0 E	16.72 N 40.73 E	.00
3310.00	3307.17	45.62	2.51	4-30 N 46-	0 E	18.43 N 42.57 E	.49
3372.00	3368.97	50.42	4.86	4-30 N 47-	0 E	21.78 N 46.10 E	.13
3434.00	3430.78	55.22	4.86	4-30 N 47-	0 E	25.10 N 49.65 E	.00
3496.00	3492.60	59.86	4.73	4-15 N 43-	0 E	28.44 N 53.00 E	.64
3558.00	3555.43	64.39	4.67	4-15 N 42-	0 E	31.89 N 56.15 E	.12
3621.00	3617.28	68.55	4.32	3-45 N 38-	0 E	35.20 N 58.93 E	.92

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MEAS. DEPTH	VERT. DEPTH	VERT. SECT.	COURSE DEV.	INC D M	BEARING D M	COORDINATES LATITUDE DEPARTURE	D-LEG PER 100
3603.00	3679.15	72.39	4.06	3-45 N	36- 0 E	38.44 N 61.37 E	.21
3745.00	3742.02	76.12	3.98	3-30 N	36- 0 E	41.66 N 63.71 E	.40
7808.00	3803.90	79.66	3.79	3-30 N	35- 0 E	44.74 N 65.91 E	.10
10016.00	3865.79	83.15	3.79	3-30 N	32- 0 E	47.90 N 68.00 E	.30
11017.00	3928.67	86.63	3.85	3-30 N	30- 0 E	51.19 N 69.98 E	.19
13997.00	3990.56	89.88	3.65	3-15 N	28- 0 E	54.38 N 71.75 E	.45
1057.00	4052.46	92.99	3.52	3-15 N	29- 0 E	57.47 N 73.43 E	.09
1119.00	4114.36	96.10	3.52	3-15 N	28- 0 E	60.56 N 75.10 E	.09
1192.00	4177.26	99.24	3.57	3-15 N	27- 0 E	63.73 N 76.75 E	.09
1223.00	4239.16	102.29	3.52	3-15 N	26- 0 E	66.88 N 78.32 E	.09

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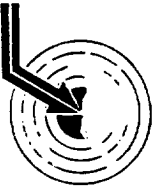
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INFO.	VERT.	VERT.	COURSE	INC	BEARING	COORDINATES	D-LEG
DEPTH	DEPTH	SECT.	DEV.	D	M	LATITUDE DEPARTURE	PER 100
4307.00	4302.06	105.38	3.57	3-15	N 26- 0 E	70.09 N 79.89 E	.00

THE HORIZONTAL DISPLACEMENT AT THE DEPTH OF

4307.00 FEET EQUALS 106.27 FEET AT N 48-44 E.



SCIENTIFIC DRILLING INTERNATIONAL

2024 Trade Dr., Midland, TX 79703
P.O. Box 9699 915/563-1339

SURVEY CERTIFICATION

COMPANY Amoco Production Company WELL NAME & NO. South Hobbs Unit #223
DATE of CERTIFICATION 12/06/88 LOCATION Lea County, New Mexico
TYPE of SURVEY Magnetic Multishot FROM 00 ft. TO 4307 ft.
JOB NUMBER 132M1188101/132M1188107 WORK ORDER NUMBER 23605 & 23611

THE ABOVE SURVEY WAS PERFORMED BY ME ON 11/23 & 11/30 1988
THE RESULTS OBTAINED FROM ACTUAL FIELD DATA CONFORM TO ESTABLISHED
STANDARDS AND ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Douglas Johnson
SURVEYOR

I HAVE EXAMINED THE ABOVE SURVEY AND FOUND THE DATA AND RESULTS
ACCEPTABLE ACCORDING TO CURRENT SCIENTIFIC DRILLING INTERNATIONAL
STANDARDS.

SURVEY CONFIRMATION BY: David Moody
SCIENTIFIC DRILLING INTERNATIONAL
REPRESENTATIVE