

SUB-SURFACE
DIRECTIONAL
SURVEY
REPORT

AMOCO PRODUCTION COMPANY
COMPANY

SHU NO. 129

WELL NAME

LEA COUNTY, NEW MEXICO
STATE AND COUNTY

CERTIFIED REPORT

BHL 3/8 + 1322/W

MEASURED DEPTH FEET	INCL. ANGLE DEGS.	HOLE DIRECTION	COURSE LENGTH FEET	VERTICAL DEPTH FEET	TRUE VERTICAL SECTION FEET	RED TANGULAR CORRELATION N/S	U L O S U R E	DIFFERENCE	SEVERITY
0.00	0.00	N 00.00 E	0.00	0.00	0.00	0.00	N 00.00 E	0.00	0.00
01.00	.50	S 15.00 W	94.00	94.00	-.02	.40 S	S 15.00 W	.40	.53
100.00	1.25	S 64.00 E	61.00	104.99	.50	1.10 S	S 64.00 E	1.20	2.06
216.00	1.75	S 62.00 E	61.00	215.98	1.70	1.70 S	S 62.00 E	0.00	1.07
277.00	.75	N 79.00 S	61.00	276.97	2.03	1.94 S	S 79.00 E	0.10	1.34
330.00	.50	N 42.00 E	61.00	330.96	3.34	1.64 S	S 42.00 E	3.47	.69
399.00	0.00	N 00.00 E	61.00	390.96	3.49	1.40 S	S 00.00 E	3.50	.82
400.00	.75	S 40.00 E	61.00	459.96	3.03	1.72 S	S 40.00 E	3.70	1.25
521.00	.75	S 62.00 E	61.00	520.96	4.57	2.10 S	S 62.00 E	4.70	.30
582.00	.50	S 77.00 E	61.00	581.95	5.22	2.41 S	S 77.00 E	5.39	.49
643.00	.50	S 10.00 W	61.00	642.95	5.57	2.82 S	S 10.00 E	5.81	1.13
764.00	1.00	S 45.00 W	61.00	703.94	5.30	3.52 S	S 45.00 E	5.90	1.05
785.00	1.00	S 21.00 W	61.00	764.94	5.02	4.42 S	S 21.00 E	6.08	.63
826.00	.25	S 30.00 E	61.00	825.93	5.25	5.05 S	S 30.00 E	6.61	1.47
887.00	1.00	S 01.00 E	61.00	886.93	5.60	5.66 S	S 01.00 E	7.27	1.34
948.00	.50	N 70.00 W	61.00	947.92	5.14	6.06 S	S 70.00 E	7.23	2.00
1009.00	1.00	S 23.00 W	61.00	1008.92	4.55	6.35 S	S 23.00 E	7.14	1.79
1070.00	.50	N 01.00 W	61.00	1069.91	4.00	6.71 S	S 01.00 E	7.26	1.65
1131.00	.75	S 08.00 E	61.00	1130.91	3.60	7.11 S	S 08.00 E	7.44	1.67
1192.00	1.00	S 43.00 W	61.00	1191.90	3.60	7.97 S	S 43.00 E	8.20	1.29
1253.00	1.25	S 30.00 W	61.00	1252.89	3.04	8.00 S	S 30.00 E	8.95	.44
1314.00	1.00	S 10.00 W	61.00	1313.88	2.80	9.96 S	S 10.00 E	9.98	.98
1375.00	.50	N 70.00 W	61.00	1374.87	2.20	10.31 S	S 70.00 E	10.31	1.76
1436.00	1.25	S 60.00 W	61.00	1435.86	1.42	10.39 S	S 60.00 E	10.42	1.65
1497.00	.75	N 61.00 W	61.00	1496.85	.43	10.40 S	S 61.00 E	10.56	1.77

MEASURED	INCL.	HOLE	DIRECTION	COURSE	LENGTH	VERTICAL	DEPTH	VERTICAL	SECTION	N/S	East	West	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET	FEET
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CLOSURE DISTANCE = 432.65 FEET.
CLOSURE DIRECTION = S 77.07 E

AMOCO PRODUCTION COMPANY

WELL #
SHU WELL NO. 120

LOCATION :
LEA COUNTY, NEW MEXICO

DATE :
10-25-83, 10-30-83, (EW) 11-4-83

JOB TYPE :
MAG. MULTISHOT, MAG. MULTISHOT, (EW) MAG.

JOB #
MS-1206, MS-1208, (EW) S0110

SURVEYOR :
LARRY MASSEY, ALAN HARBERT, (EW) GARY DES

DEPTHS :
0'-1819', 1819'-3212', (EW) 3212'-4316'

DECL. :
10 DEGREES EAST

ELEV. :
0'

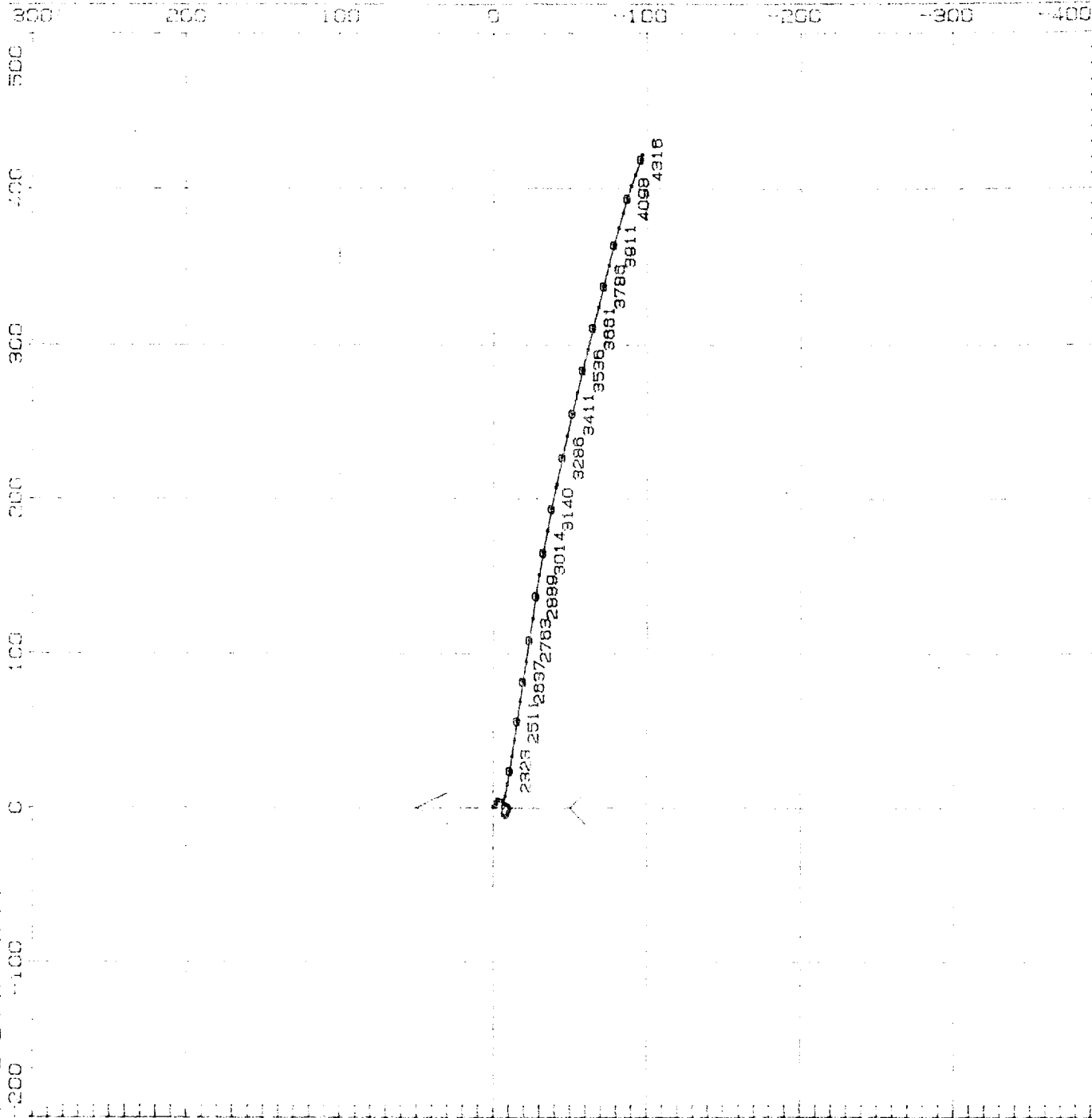
FILE # :
WT-E7CS FROM WT-E8S, D701

FINAL STATION DATA:

MD. 4345.00
TVD. 4299.97
N/S -96.84
E/W 421.67

CLOSURE DISTANCE
432.65 FEET
CLOSURE DIRECTION
S .77 E

1 IN. = 100 FT.



WEST - EAST

SURVEY CERTIFICATIONSTATE TEXASCOUNTY OF MIDLAND

I, LARRY MASSEY, in the employ of D.I.G., Inc., did on the days of 10-25, 1983 through 10-25, 1983 conduct or supervise the taking of a MAGNETIC MULTISHOT survey by the method of magnetic orientation from a depth of 0 feet to 1619 feet, with recordings of inclination being obtained at approximately intervals of 61 feet.

This survey was conducted at the request of AMOCO PRODUCTION COMPANY for their SHU NO. 129, LEA County, State of NEW MEXICO in the SOUTH HOBBS field.

The data for this survey were obtained by me according to standards and procedures as set forth by D.I.G., Inc., and is true and correct to the best of my knowledge.

Larry Massey
LARRY MASSEY

The data for this survey has been examined by me and conforms to the principles and procedures as set forth by D.I.G., Inc.

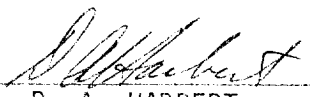
D. A. Harbert
D. A. HARBERT

SURVEY CERTIFICATIONSTATE TEXASCOUNTY OF MIDLAND

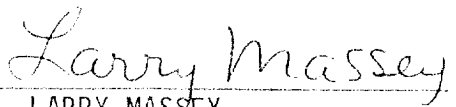
I, D. A. HARBERT, in the employ of D.I.G., Inc., did on the days of 10-30, 1983 through 10-30, 1983 conduct or supervise the taking of a MAGNETIC MULTISHOT survey by the method of magnetic orientation from a depth of 1619 feet to 3212 feet, with recordings of inclination being obtained at approximately intervals of 63 feet.

This survey was conducted at the request of AMOCO PRODUCTION COMPANY for their SHU NO. 129, LEA County, State of NEW MEXICO in the SOUTH HOBBS field.

The data for this survey were obtained by me according to standards and procedures as set forth by D.I.G., Inc., and is true and correct to the best of my knowledge.


D. A. HARBERT

The data for this survey has been examined by me and conforms to the principles and procedures as set forth by D.I.G., Inc.


LARRY MASSEY



P. O. Box 5577/Midland, Texas 79704/(915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Whipstock, Inc., did on the days of November 4, 19 83 thru November 4, 19 83 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 3212 feet to 4316 feet, with recordings of inclination and direction being obtained at approximate intervals of 62 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit #129, Lea County, State of New Mexico, in the field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.

Gary DeSpain
Directional Supervisor/ Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.

Tim Stephens

Before me, the undersigned authority, on this day personally appeared Gary DeSpain, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 11TH day of NOV., 19 83

Roy L. Henke
Notary Public in and for the
County of Midland, Texas
My commission expires 7/9/85

