

SUB-SURFACE
DIRECTIONAL
SURVEY
REPORT

AMOCO PRODUCTION COMPANY
COMPANY

SHU NO. 151
WELL NAME

LEA COUNTY, NEW MEXICO
STATE AND COUNTY

CERTIFIED REPORT

CUSTOMER LAMOCO PRODUCTION COMPANY

WELL # : SHU NO. 151

LOCATION : LEA COUNTY, NEW MEXICO

DATE : 10-17-83, 10-23-83, (EW)11-1-83

JOB TYPE : MAGNETIC MULTISHOT, MAGNETIC MULTISHOT, (EW)MAGNETIC MULTISHOT

JOB # : MS-1286, MS-1292, (EW)S0112

SURVEYOR : A. HARBERT, A. HARBERT, (EW)T. ONEY

DEPTHS : 0'-1591', 1591'-3196', (EW)3196'-4455'

DECL. : 10 DEGREES EAST

ELEV. : 0'

FILE # : WT-E4S

METHOD : RADIUS OF CURVATURE

SECTION : N29.44W

THIS SURVEY IS CORRECT TO THE
BEST OF MY KNOWLEDGE AND IS
SUPPORTED BY ACTUAL FIELD DATA.

DIG REPRESENTATIVE

FINAL STATION DATA

MEASURED #	INCL. #	HOLE #	COURSE #	VERTICAL #	TRUE #	C L O S U R E #	DUG-LEG #
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	FLET	COLOR IN A I E S	DISTANCE
FEET	DIGS.	DGS.	FEET	FEET	N/S	feet E/W	DEGS.
							FEET
							DG/100FT

4455.00 ± 24.00 N 41.00 W ± 29.00 ± 4293.38 ± 732.42 N 401.25 W ± 835.13at N 28.71 W ± 0.00



MEASURED INCL. HOLE COURSE VERTICAL RECTANGULAR C L O S U R E DOG-LEG
DEPTH ANGLE DEGS. DIRECTION LENGTH FEET DEPTH FEET N/S feet E/W FEET DISTANCE DIRECTION SEVERITY
FEET DEGS. DEGS. FEET FEET FEET DEGS. DOG/100FT

MEASURED	INCL.	HOLE	COURSE	TRUE	VERTICAL	RECTANGULAR	C L O S U R E	DOG-LEG
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	C O R D I N A T E S	D I S T A N C E	D I R E C T I O N	S E V E R I T Y
FEET	DEGS.	DEGS.	FEET	FEET	N/S	feet	DEGS.	OG/100FT
0.00	0.00	N 00.00 E	0.00	0.00	0.00 N	0.00at	N 00.00 E	0.00
98.00	.25	S 30.00 W	98.00	90.00	.19 S	.21at	S 30.00 W	.26
159.00	.25	S 00.00 W	61.00	159.00	.44 S	.48at	S 23.91 W	.16
220.00	.75	S 10.00 E	61.00	220.00	.96 S	.97at	S 08.69 W	.88
281.00	.50	S 30.00 E	61.00	280.99	1.57 S	1.57at	S 04.49 E	.46
342.00	.75	S 05.00 E	61.00	341.99	2.01 S	2.10at	S 16.77 E	.73
403.00	.75	S 74.00 E	61.00	402.98	2.29 S	2.66at	S 30.58 E	.19
464.00	.50	S 20.00 E	61.00	463.98	2.70 S	3.27at	S 34.53 E	.89
525.00	.75	S 34.00 E	61.00	524.98	3.27 S	3.94at	S 33.94 E	.42
586.00	1.00	S 30.00 E	61.00	585.97	4.06 S	4.87at	S 33.57 E	.42
647.00	1.00	S 30.00 E	61.00	646.96	4.98 S	5.93at	S 32.93 E	0.00
708.00	1.00	S 34.00 E	61.00	707.95	5.88 S	7.00at	S 32.78 E	.11
769.00	1.00	S 20.00 E	61.00	768.94	6.83 S	8.05at	S 32.02 E	.40
830.00	1.00	S 20.00 E	61.00	829.93	7.03 S	9.10at	S 30.62 E	0.00
890.00	.75	S 04.00 E	60.00	889.93	8.72 S	9.97at	S 28.95 E	.58
951.00	1.25	S 10.00 E	61.00	950.92	9.78 S	10.96at	S 26.82 E	.84
1012.00	1.75	S 02.00 W	61.00	1011.89	11.27 S	12.45at	S 24.01 E	.96
1073.00	.75	S 00.00 W	61.00	1072.88	12.69 S	13.62at	S 21.30 E	1.65
1134.00	1.00	S 00.00 E	61.00	1133.87	13.62 S	14.47at	S 19.72 E	.46
1195.00	2.00	S 14.00 W	61.00	1194.85	15.20 S	15.91at	S 17.14 E	1.73
1256.00	1.75	S 11.00 W	61.00	1255.82	17.15 S	17.67at	S 13.94 E	.44
1317.00	1.25	S 10.00 W	61.00	1316.80	18.72 S	19.14at	S 11.96 E	.82
1378.00	1.25	S 05.00 E	61.00	1377.78	20.05 S	20.42at	S 11.03 E	.53
1439.00	1.25	S 12.00 E	61.00	1438.77	21.36 S	21.75at	S 10.88 E	.25
1500.00	1.50	S 10.00 E	61.00	1499.75	22.80 S	23.22at	S 10.88 E	.42

MEASURED INCL. HOLE DIRECTION DEGS. DEPTH FEET COURSE LENGTH FEET TRUE VERTICAL DEPTH FEET RECORDING CLUSUR E DOG-LEG SEVERITY

FEET DEGS. DEGS. FEET E/W DEGS. DISTANCE FEET DEGS. DOG/100FT

1521.00 1.25 S 12.00 E 91.00 1590.72 24.94 S 4.80 E 25.40at S 10.89 E .28

(0'-1591' RESULTS OF D.I.G. SURVEY MS-1286)

(1591'-3196' RESULTS OF D.I.G. SURVEY MS-1292)

1695.00 .75 S 19.00 W 104.00 1694.71 26.73 S 4.69 E 27.14at S 09.95 E .69

1757.00 .25 S 76.00 W 62.00 1756.71 27.08 S 4.31 E 27.42at S 09.04 E 1.05

1819.00 4.00 N 20.00 W 62.00 1818.65 26.10 S 2.46 E 26.21at S 05.38 E 6.42

1881.00 6.25 N 15.00 W 62.00 1880.40 20.82 S .79 E 20.83at S 02.18 E 3.70

1942.00 7.00 N 14.00 W 61.00 1940.99 14.00 S .97 W 14.04at S 03.95 W 1.24

2004.00 8.00 N 14.00 W 62.00 2002.46 6.15 S 2.93 W 6.81at S 25.44 W 1.61

2066.00 9.25 N 11.00 W 62.00 2063.76 2.92 N 4.94 W 5.74at N 59.36 W 2.14

2128.00 10.50 N 11.00 W 62.00 2124.84 13.36 N 6.97 W 15.07at N 27.53 W 2.02

2190.00 11.50 N 12.00 W 62.00 2185.70 24.95 N 9.33 W 26.64at N 20.49 W 1.64

2252.00 13.00 N 10.00 W 62.00 2246.29 37.87 N 11.84 W 39.67at N 17.35 W 2.51

2313.00 14.50 N 10.00 W 61.00 2305.54 52.14 N 14.35 W 54.08at N 15.39 W 2.46

2375.00 16.00 N 09.00 W 62.00 2365.35 68.23 N 17.05 W 70.33at N 14.02 W 2.46

2437.00 17.50 N 10.00 W 62.00 2424.72 85.85 N 19.99 W 88.15at N 13.11 W 2.46

2499.00 18.75 N 10.00 W 62.00 2483.64 104.85 N 23.34 W 107.41at N 12.55 W 2.02

2561.00 20.25 N 10.00 W 62.00 2542.00 125.23 N 26.94 W 128.09at N 12.13 W 2.42

2623.00 21.00 N 23.00 W 62.00 2600.11 146.12 N 33.13 W 149.83at N 12.77 W 7.47

2684.00 21.00 N 22.00 W 61.00 2657.06 166.32 N 41.49 W 171.41at N 14.00 W .59

2746.00 21.25 N 30.00 W 62.00 2714.89 186.38 N 51.28 W 193.31at N 15.38 W 4.66

2808.00 20.00 N 28.00 W 62.00 2772.92 205.48 N 61.87 W 214.60at N 16.75 W 2.31

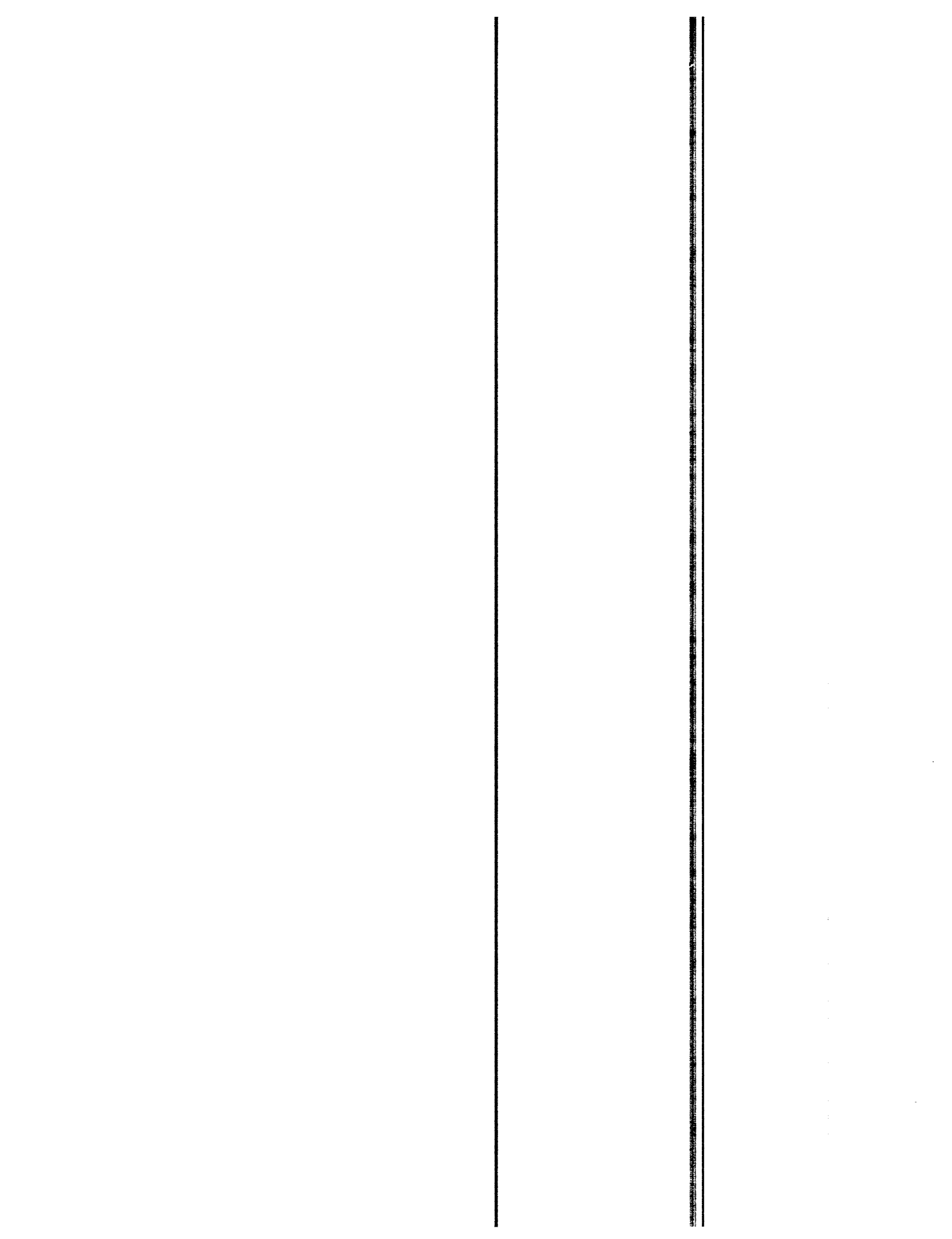
2870.00 20.50 N 28.00 W 62.00 2831.08 224.43 N 71.94 W 235.68at N 17.77 W .81

2932.00 20.75 N 26.00 W 62.00 2889.11 243.89 N 81.86 W 257.26at N 18.55 W 1.21

2994.00 20.25 N 26.00 W 62.00 2947.18 263.41 N 91.37 W 278.80at N 19.13 W .81

3055.00 20.50 N 26.00 W 61.00 3004.37 282.49 N 100.68 W 299.90at N 19.61 W .41

3117.00 20.25 N 26.00 W 62.00 3062.49 301.90 N 110.15 W 321.36at N 20.04 W .40



MEASURED	INCL.	HOLE	COURSE	VERTICAL	TRUE	RECTANGULAR	CLOSURE	DUG-LEG
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH		CORDINATES	DISTANCE	SLOPE
FEET	DEGS.	DEGS.	FEET	FEET		N/S	FEET	DEGS.
3179.00	19.75	N 26.00 W	62.00	3120.75		320.95 N	119.44 W	342.46at N 20.41 W
3196.00	19.75	N 25.00 W	17.00	3136.75		326.14 N	121.92 W	348.10at N 20.49 W
(1591'-3196' RESULT OF O.I.G. SURVEY MS-1292)								
(3196'-4455' RESULT OF EASTMAN WHIPSTOCK SURVEY 50112)								
3263.00	20.50	N 26.00 W	67.00	3199.66		346.95 N	131.84 W	371.15at N 20.80 W
3324.00	21.00	N 26.00 W	61.00	3256.70		366.37 N	141.31 W	392.60at N 21.09 W
3384.00	22.00	N 27.00 W	60.00	3312.52		386.05 N	151.13 W	414.58at N 21.37 W
3444.00	23.00	N 25.00 W	60.00	3367.96		406.69 N	161.19 W	437.46at N 21.62 W
3505.00	24.25	N 27.00 W	61.00	3423.84		428.66 N	171.91 W	461.84at N 21.85 W
3565.00	24.75	N 27.00 W	60.00	3478.44		450.83 N	183.20 W	486.63at N 22.11 W
3626.00	25.00	N 28.00 W	61.00	3533.78		473.58 N	195.05 W	512.18at N 22.30 W
3686.00	25.75	N 28.00 W	60.00	3587.99		496.29 N	207.12 W	537.77at N 22.65 W
3746.00	24.25	N 33.00 W	60.00	3642.37		518.13 N	219.99 W	562.89at N 23.00 W
3807.00	23.50	N 40.00 W	61.00	3698.15		537.96 N	234.66 W	586.92at N 23.56 W
3867.00	23.50	N 40.00 W	60.00	3753.17		556.29 N	250.04 W	609.90at N 24.20 W
3928.00	23.25	N 40.00 W	61.00	3809.17		574.83 N	265.60 W	633.22at N 24.79 W
3988.00	22.75	N 40.00 W	60.00	3864.40		592.79 N	280.67 W	655.87at N 25.33 W
4048.00	22.75	N 40.00 W	60.00	3919.73		610.56 N	295.58 W	678.35at N 25.83 W
4109.00	22.75	N 40.00 W	61.00	3975.98		628.63 N	310.74 W	701.24at N 26.30 W
4169.00	23.00	N 41.00 W	60.00	4031.26		646.37 N	325.89 W	723.88at N 26.75 W
4230.00	23.00	N 41.00 W	61.00	4087.41		664.36 N	341.53 W	747.00at N 27.20 W
4290.00	23.75	N 42.00 W	60.00	4142.49		682.18 N	357.30 W	770.09at N 27.64 W
4350.00	23.75	N 41.00 W	60.00	4197.41		700.28 N	373.31 W	793.57at N 28.06 W
4411.00	24.00	N 41.00 W	61.00	4253.19		718.92 N	389.51 W	817.65at N 28.44 W
4426.00	24.00	N 41.00 W	15.00	4266.89		723.52 N	393.51 W	823.61at N 28.54 W
(3196'-4455' RESULT OF EASTMAN WHIPSTOCK SURVEY 50112)								
(MD 4455 IS AN EASTMAN WHIPSTOCK PROJECTION BASED ON MULTISHOT SURVEY)								
4455.00	24.00	N 41.00 W	29.00	4293.38		732.42 N	401.25 W	835.13at N 28.71 W

ALBUQUERQUE AIRPORT
N 20.72 W

AMOCO PRODUCTION COMPANY

WELL #
SHU NO. 151

LOCATION
LEA COUNTY, NEW MEXICO

DATE
10-17-83, 10-23-83, (EW) 11-1-83

JOB TYPE
MAGNETIC MULTISHOT, MAGNETIC MULTISHOT,

JOB #
MS-1288, MS-1292, (EW) S0112

SURVEYOR
A. HARBERT, A. HARBERT, (EW) T. ONEY

DEPTHS
0'-1591', 1591'-3198', (EW) 3198'-4455'

DECL.
10 DEGREES EAST

ELEV.
0'

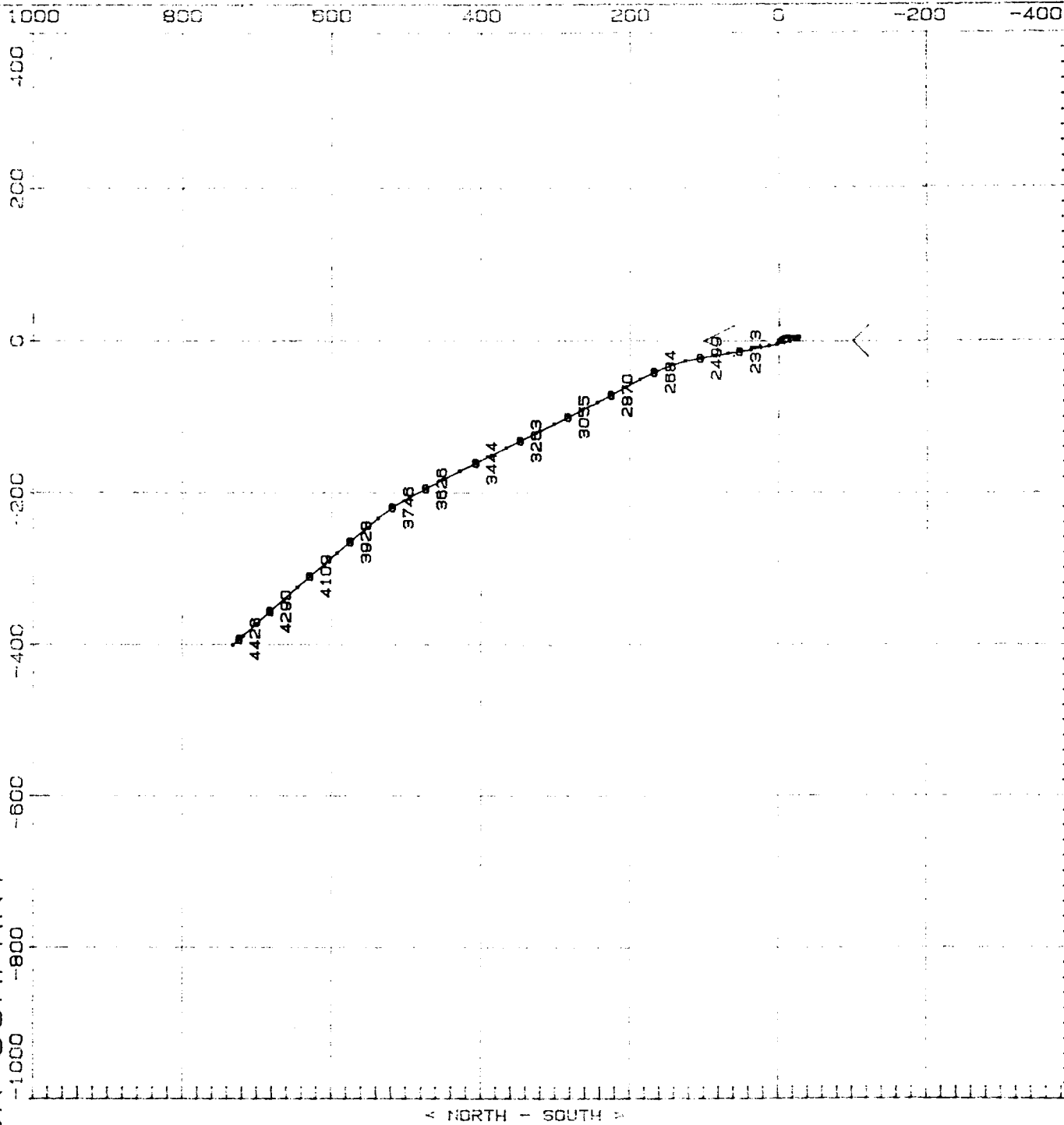
FILE #
WT-E4S

FINAL STATION DATA:

MD. 4455.00
TVD. 4293.38
N/S 732.42
E/W -401.25

CLOSURE DISTANCE
835.13 FEET
CLOSURE DIRECTION
N 28.72 W

1 IN. = 200 FT.



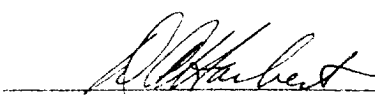
在 2008 年 12 月 15 日，中国银监会、证监会、保监会联合发布《关于规范金融机构资产管理业务的指导意见（征求意见稿）》，对资管业务进行了全面规范。《意见》指出，资管业务是指金融机构接受投资者委托，按照合同约定对投资者所交付的资金财产进行受托投资管理或者管理和处分，并按约定方法支付投资收益，在合同约定条件成熟后交付本金和收益的行为。《意见》对资管业务的分类、业务规则、信息披露、投资者适当性管理、风险隔离、监督管理等方面进行了详细规定。《意见》的发布，标志着中国资管业务进入了规范化、透明化的发展新阶段。

SURVEY CERTIFICATIONSTATE TEXASCOUNTY OF MIDLAND

I, D. A. HARBERT, in the employ of D.I.G., Inc., did on the days of 10-17, 1983 through 10-17, 1983 conduct or supervise the taking of a MAGNETIC MULTISHOT survey by the method of magnetic orientation from a depth of 0 feet to 1591 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. 151, 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.

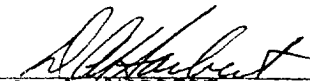
LARRY MASSEY

SURVEY CERTIFICATIONSTATE TEXASCOUNTY OF MIDLAND

I, D. A. HARBERT, in the employ of D.I.G., Inc., did on the days of 10-23, 1983 through 10-23, 1983 conduct or supervise the taking of a MAGNETIC MULTISHOT survey by the method of magnetic orientation from a depth of 1591 feet to 3196 feet, with recordings of inclination being obtained at approximately intervals of 62 feet.

This survey was conducted at the request of AMOCO PRODUCTION COMPANY for their SHU NO. 151, LEA County, State of NEW MEXICO in the SOUTH HOBBS field.

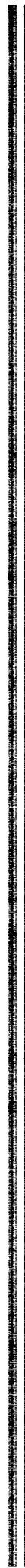
The data for this survey were obtained by me according to standards and procedures as set forth by D.I.G., Inc., and is true and correct to the best of my knowledge.



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, Troy Oney, in the employ of Eastman Whipstock, Inc., did on the days of 11-1, 1983 thru 11-1, 1983 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 3196 feet to 4426 feet, with recordings of inclination and direction being obtained at approximate intervals of 61 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit Well No. 151 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.

[Signature]
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.

Before me, the undersigned authority, on this day personally appeared Troy Oney, 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., 1983

[Signature]
Notary Public in and for the
County of Midland, Texas
My commission expires 7/9/85

