



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

AMCO PRODUCTION COMPANY
COMPANY

SOUTH HOBBS UNIT COOP. NO. 10
WELL NAME

LEA COUNTY, NEW MEXICO BD2-128
LOCATION

JOB NUMBER

WT1084-S0066
WT1084-S0074
OD-MA-40105

TYPE OF SURVEY

MAGNETIC MULTI SHOT SURVEY
MAGNETIC MULTI SHOT SURVEY
MAGNETIC MULTI SHOT SURVEY

DATE

28-OCT-84
31-OCT-84
4-NOV-84

SURVEY BY
STEVE COVINGTON
TROY ONEY
THOMAS P. GALLEY

OFFICE
WEST TEXAS

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT COOP. NO. 10
LEA COUNTY, NEW MEXICO BD2-128
OCTOBER 28, 1984

EASTMAN WHIPSTOCK, INC.
MAGNETIC MULTI SHOT SURVEY
SURVEYOR: STEVE COVINGTON
MAGNETIC MULTI SHOT SURVEY
SURVEYOR: TROY ONEY

WT1084-S0066
(0'-1640')
WT1084-S0074
(1640'-3185')

SPERRY-SUN
MAGNETIC MULTI SHOT SURVEY
SURVEYOR: THOMAS P. GALLEY
OD-MA-40105
(3185'-4328')



VERTICAL SECTION CALCULATED IN PLANE OF PRODUCTION

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	R-E-C-T-A-N-G-U-L-A-R C-O-O-R-D-I-N-A-T-E-S FEET	D-O-G-L-E-G SEVERITY DG/100FT
0.	0 0	0	0.	0.00	0.00	0.00	0.00
50.	0 30	N 36 E	50.	50.00	-0.09	0.18 N	0.13 E
111.	1 0	S 13 W	61.	110.99	-0.65	0.06 S	0.65 E
171.	0 45	S 21 W	60.	170.99	-0.57	0.93 S	0.38 E
231.	0 45	S 52 W	60.	230.98	-0.26	1.56 S	0.08 W
292.	0 45	S 69 W	61.	291.98	0.33	1.95 S	0.77 W
352.	0 30	S 52 W	60.	351.97	0.82	2.27 S	1.34 W
412.	0 15	S 28 E	60.	411.97	0.81	2.63 S	1.42 W
473.	0 15	S 58 E	61.	472.97	0.60	2.82 S	1.24 W
533.	0 15	S 8	60.	532.97	0.41	3.03 S	1.10 W
593.	1 0	S 24	60.	592.97	0.36	6.67 S	1.19 W
654.	1 0	S 19	61.	653.97	0.38	7.71 S	1.23 W
714.	1 15	S 26 E	60.	713.97	0.49	5.80 S	0.78 W
774.	1 0	S 19 E	60.	773.93	1.17	6.89 S	0.33 W
835.	0 30	S 48 W	61.	834.93	-1.14	7.61 S	0.52 W
895.	0 45	S 33 E	60.	894.92	-1.20	8.21 S	0.60 W
955.	0 30	S 9 W	60.	954.92	-1.46	8.84 S	0.47 W
1016.	0 15	S 15 W	61.	1015.92	-1.47	9.23 S	0.55 W
1076.	0 15	S 30 W	60.	1075.92	-1.42	9.47 S	0.65 W
1136.	1 0	S 33 W	60.	1135.92	-1.21	10.03 S	0.99 W
1197.	1 30	S 11 W	61.	1196.90	-0.99	11.25 S	1.49 W
1257.	1 15	S 19 W	60.	1256.88	-0.93	12.64 S	1.86 W
1317.	1 0	S 20 W	60.	1316.87	-0.79	13.75 S	2.25 W
1378.	0 30	S 16 E	61.	1377.87	-0.93	14.54 S	2.28 W
1438.	1 0	S 17 E	60.	1437.86	-1.31	15.29 S	2.06 W
1498.	0 15	S 73 E	60.	1497.86	-1.84	15.73 S	1.61 W
1559.	1 0	S 3 E	61.	1558.85	-2.32	16.23 S	1.23 W
1619.	1 0	S 10 E	60.	1618.84	-2.66	17.27 S	1.11 W
1640.	1 15	S 36 E	21.	1639.84	-2.90	17.64 S	0.95 W
1733.	1 15	S 24 W	93.	1732.82	-3.52	19.57 S	0.75 W
							1.47
							1.55
							0.20
							2.67
							1.34

MEASURED DEPTH FEET	DRIFT		DIRECTION D	COURSE LENGTH FEET	TRUE		VERTICAL SECTION FEET	RECTANGULAR COORDINATES		DOUGLASS SEVERITY DG/100FT
	ANGLE D M				VERTICAL DEPTH FEET			FEET		
1795.	1 15		S 29 W	62.	1794.80		-3.19	20.78 S	1.35 W	0.18
1858.	1 0		S 33 W	63.	1857.79		-2.80	21.84 S	1.99 W	0.42
1921.	1 0		S 18 W	63.	1920.78		-2.55	22.83 S	2.46 W	0.41
1983.	1 15		S 20 W	62.	1982.77		-2.42	23.98 S	2.86 W	0.41
2046.	0 30		S 78 W	63.	2045.76		-1.87	24.58 S	3.55 W	1.70
2108.	1 0		N 3 E	62.	2107.76		-1.25	24.13 S	4.09 W	1.98
2171.	1 0		N 4 E	63.	2170.75		-1.08	23.03 S	4.02 W	0.03
2233.	4 30		N 76 W	62.	2232.67		0.98	20.82 S	5.63 W	7.16
2296.	7 0		N 66 W	63.	2295.34		7.24	18.76 S	11.59 W	4.26
2359.	8 0		N 63 W	63.	2357.80		15.25	15.22 S	19.01 W	1.70
2421.	9 15		N 59 W	62.	2419.00		24.17	7.72 S	27.14 W	2.24
2484.	10 30		N 60 W	63.	2477.17		24.79	6.23 S	36.45 W	2.00
2546.	11 45		N 58 W	63.	2543.00		25.00	6.93 N	46.70 W	2.11
2609.	12 0		N 58 W	63.	2603.65		26.01	7.80 N	57.70 W	0.40
2672.	12 15		N 56 W	63.	2665.25		70.41	15.00 N	68.79 W	0.78
2734.	12 30		N 56 W	62.	2725.81		82.77	22.43 N	79.81 W	0.40
2797.	12 45		N 55 W	63.	2787.28		95.54	30.23 N	91.16 W	0.53
2859.	12 45		N 55 W	62.	2847.75		108.19	38.08 N	102.37 W	0.00
2922.	12 45		N 56 W	63.	2909.20		121.08	45.96 N	113.82 W	0.35
2984.	12 45		N 56 W	62.	2969.67		133.82	53.61 N	125.17 W	0.00
3047.	12 45		N 57 W	63.	3031.12		146.80	61.28 N	136.76 W	0.35
3110.	12 45		N 57 W	63.	3092.56		159.83	68.85 N	148.42 W	0.00
3141.	12 45		N 57 W	31.	3122.80		166.24	72.58 N	154.16 W	0.00
3185.	12 15		N 59 W	44.	3165.76		175.22	77.63 N	162.24 W	1.50
3221.	11 15		N 71 W	36.	3201.00		182.36	80.72 N	168.87 W	7.32
3281.	9 0		N 90 W	60.	3260.06		192.84	82.45 N	179.22 W	6.66
3342.	8 15		S 84 W	61.	3320.37		201.65	81.97 N	188.35 W	1.92
3403.	7 45		S 83 W	61.	3380.78		209.68	81.01 N	196.79 W	0.85

3185' TO 4328' SURVEYED BY SPERRY-SUN

TIME DATE
09:14:14 03-DEC-84

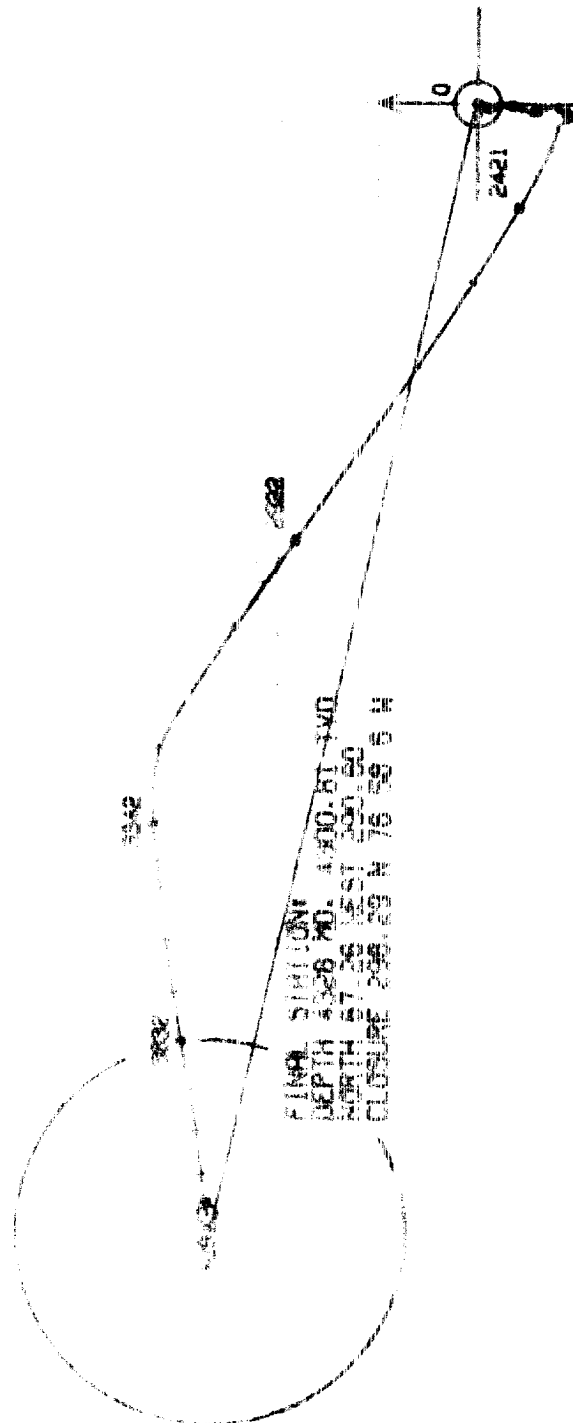
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	DOGLEG SEVERITY DG/100FT
3464.	7 15	S 84 W	61.	3441.26	217.21	80.11 N 204.70 W	0.85
3523.	7 0	S 84 W	59.	3499.80	224.14	79.35 N 211.98 W	0.42
3585.	6 45	S 83 W	62.	3561.36	231.16	78.51 N 219.35 W	0.45
3647.	6 15	S 81 W	62.	3622.96	237.73	77.53 N 226.30 W	0.89
3709.	6 15	S 81 W	62.	3684.59	244.01	76.47 N 232.97 W	0.00
3770.	6 0	S 80 W	61.	3745.24	250.05	75.40 N 239.39 W	0.45
3832.	6 0	S 80 W	62.	3806.90	256.03	74.27 N 245.77 W	0.00
3894.	5 30	S 80 W	62.	3868.59	261.77	73.20 N 251.89 W	0.81
3957.	5 30	S 80 W	63.	3931.30	267.35	72.15 N 257.83 W	0.00
4020.	5 15	S 81	63.	3993.22	272.82	71.17 N 263.65 W	0.42
4079.	5 15	S 82	59.	4052.17	277.85	69.37 N 268.99 W	0.16
4142.	5 0	S 82	63.	4114.68	282.83	67.59 N 274.57 W	0.40
4205.	5 0	S 82 W	62.	4176.66	287.80	65.83 N 280.00 W	0.00
4267.	5 0	S 82 W	62.	4240.65	293.33	64.08 N 285.35 W	0.00
4291.	5 0	S 81 W	24.	4263.96	295.28	62.77 N 287.42 W	0.36
4328.	5 0	S 81 W	37.	4300.81	298.28	61.26 N 290.61 W	0.00

FINAL CLOSURE - DIRECTION: N 76 DEGS 58 MINS W
DISTANCE: 298.29 FEET

RAYCO PRODUCTION COMPANY
 SOUTH HUBBS UNIT COOP. NO. 10
 LEA COUNTY, NEW MEXICO 802-128

EASTMAN KODAK COMPANY

HORIZONTAL PROJECTION
 SCALE 1 IN. = 50 FEET
 DEPTH INDICATOR NO





P.O. Box 8341/Midland, Texas 79711-0341/(915) 563-0511

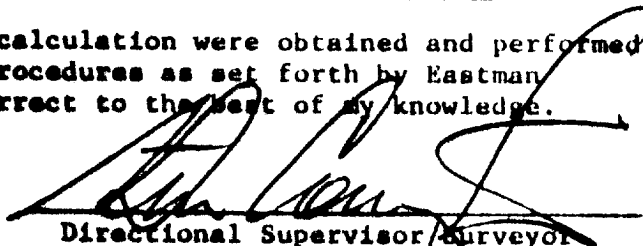
SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

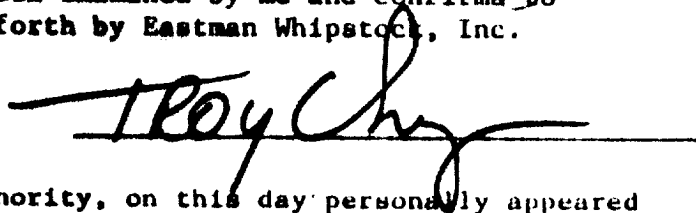
I, Steve Covington, in the employ of Eastman Whipstock, Inc., did on the days of 10-27, 19 84 thru 10-28, 19 84 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 0 feet to 1640 feet, with recordings of inclination and direction being obtained at approximate intervals of 62 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit Coop. Well No. 10 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.


Directional Supervisor/Surveyor

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



Before me, the undersigned authority, on this day personally appeared Steve Covington, 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 information is a true statement of facts therein recited.

Subscribed and sworn to before me on this 28TH day of NOV., 19 84.


Notary Public in and for the
County of Midland, Texas



ROY L. STENKE
Notary Public, State of Texas
My Commission Expires July 6, 1985



P.O. Box 6341/Midland, Texas 79711-0341/(915) 563-0511

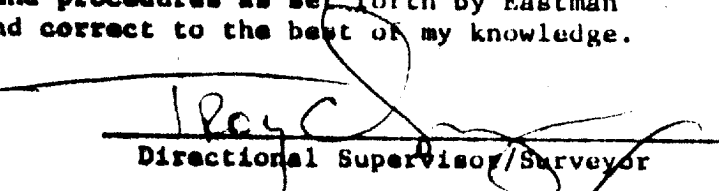
SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

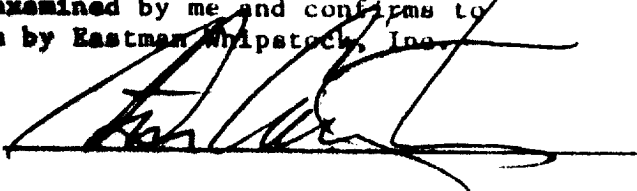
I, Troy Oney, in the employ of Eastman Whipstock, Inc., did on the days of 10-31, 19 84 thru 10-31, 19 84 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 1640 feet to 3185 feet, with recordings of inclination and direction being obtained at approximate intervals of 62 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit Coop. Well No. 10 Lea County, State of New Mexico in the field.

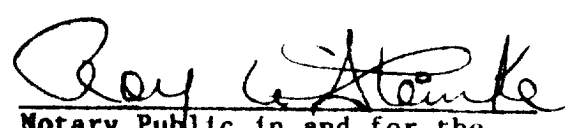
This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.


Directional Supervisor/Surveyor

The data for this survey has been examined by me and confirms 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 information is a true statement of facts therein recited.

Subscribed and sworn to before me on this 28TH day of NOV., 19 84.


Notary Public in and for the
County of Midland, Texas



ROY L. STENKE
Notary Public, State of Texas
My Commission Expires July 6, 1985

STATE OF New Mexico
COUNTY/PARISH OF Lea

I/We, Pete Trafas

Tom Galley

James Ray

_____ in the employ of the Directional Surveying Department of
Sperry-Sun Well Surveying Company, did on the 4 day of November 1984
and the _____ day of _____ 19____
and the _____ day of _____ 19____
and the _____ day of _____ 19____

respectively conduct or supervise the taking of a Multi-shot/Single Shot Directional survey by method in-
dicated:

from a depth of 3185 feet to 4328 feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey

with records of inclination and direction of inclination being taken at approximately every 62 feet.

This survey was conducted at the request of Amoco Production Company

for their Co-op Well No. 10

Magnetic Multishot Survey, Lea County/Parish,

State of New Mexico, in the South Hobbs Unit Field.

I/We certify that this is a true and correct report of such survey and that it affords a true and correct repre-
sentation of our findings as to the nature and conditions of the well at the time the survey was/surveys were
made.

James Ray

STATE OF Texas
COUNTY/PARISH OF Ector

Before me the undersigned authority/authorities, on this day personally appeared James Ray

known to me to be the person/persons whose name is/names are subscribed to this instrument, who after being
by me duly sworn on oath, states that he has/they have knowledge of all the facts stated above and that the same
is a true and correct statement of the facts therein recited.

Subscribed and sworn to before me this the 27 day of Nov. 1984

Sue Fogerson
Exp. 4-8-85
Notary Public in and for Texas