



EASTMAN WHIPSTOCK, INC.

P. O. BOX 5577

MIDLAND, TEXAS 79701

February 13, 1974

THE STATE OF TEXAS

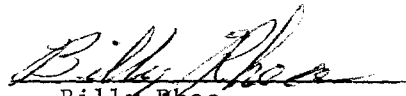
COUNTY OF MIDLAND

Billy Rhea, being duly sworn deposes, and says that; He is employed by Eastman Whipstock, Inc., as well bore surveyor, in charge of the following described survey; and that a Single Shot Survey was run from surface to 4368 feet, measured depth.

Said well more particularly described by operator, as follows:

HANNIFIN AND COOK, INC.
MERLAND WELL NO. 1
EDDY COUNTY, NEW MEXICO

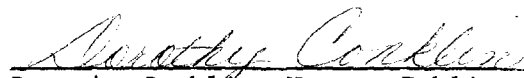
That the attached documents, namely title sheet, computation sheet, and one plan, showing the True Vertical Depth of 4366.16 feet, the well being 109.24 feet, in a direction of North 36 degrees. 24 minutes. 22 seconds East. This is a full, true and correct representation of the above survey to the best of his knowledge.


Billy Rhea

Subscribed and sworn to,

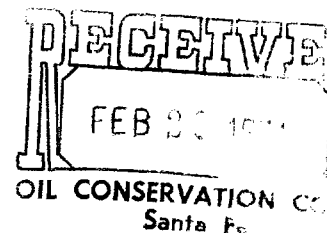
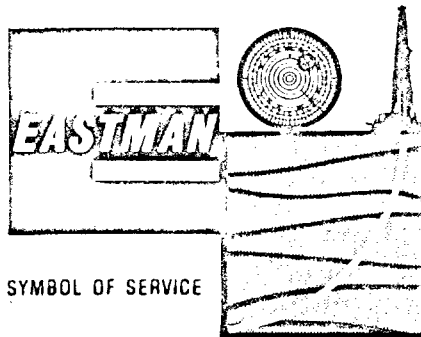
before me this 14 day of

February, 1974.


Dorothy Conklin, Notary Public

in and for the County of Midland,

State of Texas.



REPORT of SUB-SURFACE DIRECTIONAL SURVEY

Hannifin and Cook, Inc.
COMPANY

Merland Well No. 1
WELL NAME

Eddy County, New Mexico
LOCATION

JOB NUMBER

WT 1974 D-14

TYPE OF SURVEY

Single Shot

DATE

February 13, 1974

SURVEY BY
Billy Rhea

OFFICE
Midland, Texas

HANNIFIN AND COOK
 EDDY CO NEW MEXICO
 MERLAND
 WELL NO1
 SINGLE SHOT SURVEY

FEBRUARY 12 1974

PAGE 1

 * SUBMITTED BY *
 * EASTMAN-WHIPSTOCK *
 * INC. *
 *

RECORD OF SURVEY

MEAS. DEPTH	TRUE VERT. DEPTH	ANGLE OF INCLIN D M	COURSE DIRECTION D M	DOG LEG DEG PER 100	RECTANGULAR COORDINATES
0	.00	0 0	N 0 0 E	.00	.00 .00
400	400.00	0 15	N 25 0 E	.06	1.58 N .74 E
600	539.99	0 15	N 67 0 E	.09	1.92 N 1.54 E
800	799.96	1 0	N 7 0 E	.45	5.39 N 1.97 E
1000	999.92	1 15	N 0 0 E	.14	9.75 N 1.97 E
1200	1199.79	2 0	N 0 0 E	.38	16.74 N 1.97 E
1390	1389.61	2 30	N 25 0 E	.57	24.25 N 5.47 E
1453	1452.55	2 30	N 21 0 E	.28	26.82 N 6.46 E
1640	1639.38	2 30	N 36 0 E	.35	33.42 N 11.26 E
1740	1739.31	2 0	N 41 0 E	.54	36.05 N 13.55 E
1860	1859.24	2 0	N 36 0 E	.15	79.44 N 16.01 E
1970	1969.17	2 0	N 32 0 E	.13	42.70 N 18.05 E
2130	2129.02	2 30	N 47 0 E	.43	47.46 N 23.16 E
2306	2304.91	2 0	N 31 0 E	.45	52.72 N 26.32 E
2490	2488.80	2 0	N 33 0 E	.04	58.11 N 29.82 E
2674	2672.69	2 0	N 49 0 E	.30	67.72 N 34.67 E
2866	2864.57	2 0	N 52 0 E	.05	66.45 N 39.35 E
3046	3044.49	1 45	N 57 0 E	.17	69.44 N 44.57 E
3230	3228.40	1 45	N 35 0 E	.36	74.04 N 47.79 E
3415	3413.36	1 15	N 37 0 E	.27	77.27 N 50.22 E
3600	3598.30	1 30	N 47 0 E	.13	80.57 N 53.77 E
3800	3798.26	1 0	N 31 0 E	.30	87.56 N 55.57 E
3999	3997.23	1 0	N 60 0 E	.25	85.30 N 58.58 E
4183	4181.19	1 15	N 22 0 E	.42	89.02 N 60.08 E
4368	4366.16	1 0	N 90 0 E	.69	89.02 N 63.31 E

BOTTOM HOLE CLOSURE 109.24 FEET AT N 35 24 22 E

(METHOD OF COMPUTATION--TANGENTIAL)

QFIN

WT 1974 D-19

