



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

CONOCO INC.
COMPANY

MCA WELL NO. 154
WELL NAME

H-29-17-32

LEA COUNTY, NEW MEXICO
LOCATION

JOB NUMBER

TYPE OF SURVEY

DATE

430-0710

MAGNETIC MULTI SHOT SURVEY

12-1-87

SURVEY BY
TIM STEPHENS

OFFICE
WEST TEXAS BASE

EASTMAN CHRISTENSEN

RECORD OF SURVEY

FOR

* * * * *

* OPERATOR : CONOCO INC.

* WELL NAME : MCA WELL NO.154

* LOCATION : LEA COUNTY, NEW MEXICO

* JOB NUMBER :

* RIG :

* DECLINATION : 10.00 E

* * * * *

EC DISTRICT : WEST TEXAS BASE



CONOCO INC.
MCA WELL NO.154
LEA COUNTY, NEW MEXICO

DATE PRINTED : 15-FEB-88
OUR REF. NO. : S01242.400

PAGE NO. 2

DECLINATION : 10.00 JOB NUMBER :

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	C L O S U R E D I S T A N C E	D I R E C T I O N D M	D O G L E G S E V E R I T Y
3703.00	0 0	N 0	0.00	3703.00	0.00 E	0.00	S 90 0 E	0.00
3710.00	2 0	S 43	7.00	3710.00	0.09 S	0.12	S 43 0 W	28.57
3725.00	1 45	S 59	15.00	3724.99	0.40 S	0.61	S 49 24 W	3.85
3750.00	1 45	S 65	25.00	3749.98	0.76 S	1.37	S 56 24 W	0.73
3800.00	1 45	S 52	50.00	3799.96	1.55 S	2.89	S 57 31 W	0.79
3825.00	2 0	S 54	25.00	3824.94	2.04 S	3.70	S 56 31 W	1.03
3850.00	1 45	S 42	25.00	3849.93	2.59 S	4.51	S 54 59 W	1.86
3875.00	1 15	S 55	25.00	3874.92	3.02 S	5.16	S 54 10 W	2.41
3900.00	1 15	S 61	25.00	3899.91	3.31 S	5.71	S 54 32 W	0.52
3925.00	1 0	S 62	25.00	3924.91	3.55 S	6.19	S 55 5 W	1.00
3950.00	0 45	S 53	25.00	3949.91	3.75 S	6.58	S 55 13 W	1.14
3975.00	0 45	S 45	25.00	3974.90	3.97 S	6.90	S 54 56 W	0.42
4000.00	0 45	S 44	25.00	3999.90	4.20 S	7.22	S 54 27 W	0.05
4065.00	0 45	S 30	65.00	4064.90	4.88 S	8.04	S 52 38 W	0.28

CLOSURE - DISTANCE : 8.04
DIRECTION : S 52 38 W

REPORT UNITS : Feet
SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION
=====





2103 Market, Midland, Texas 79703, Phone: (915) 694-9517, (915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, TIM STEPHENS, in the employ of Eastman Christensen, Inc. did on the days of DECEMBER 1, 1987 thru DECEMBER 1, 1987 conduct or supervise the taking of a MAGNETIC MULTI-SHOT survey by the method of magnetic orientation from a depth of 3703 feet to 4065 feet, with recordings of inclination and direction being obtained at approximate intervals of 25 feet.

This survey was conducted at the request of CONOCO for their MCA UNIT 154, 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 Christensen, Inc. and is true and correct to the best of my knowledge.

Tim Stephens
Directional Supervisor/Surveyor

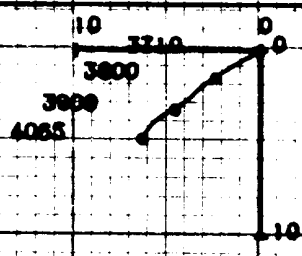
The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Christensen, Inc.

[Signature]

Before me, the undersigned authority, on this day personally appeared TIM STEPHENS, 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 _____ day of _____, 19____

Notary Public in and for the
County of Midland, Texas
My commission expires _____



SCALE 1"=10FT.
 NOTE: COORDINATES RELATIVE
 TO SLOT

3500
 3800
 3700
 175
 3600
 3900
 4000
 4100

3710
 3800
 3900
 4055

100 0 100
 V. SECTION PLANE
 SURVEY: 801242.400
 N0°00'E

SCALE 1"=100FT.

CONOCO INC.
 NCA WELL NO. 154
 LEA COUNTY, NEW MEXICO
 WELL: NCA 154 SLOT: 1