



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

ARCO OIL AND GAS COMPANY
COMPANY

ATLANTIC STATE 30 WELL NO. 2 - A
WELL NAME

LEA COUNTY, NEW MEXICO 30-17-36
LOCATION

JOB NUMBER
430-0842

TYPE OF SURVEY
GYROSCOPIC MULTI-SHOT SURVEY

DATE
26/MAY/88
RECEIVED

JUN 15 1988

OCD
HOBBS OFFICE

OFFICE
MIDLAND BASE

SURVEY BY
TIM STEPHENS

EASTMAN CHRISTENSEN

RECORD OF SURVEY

FOR

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* * * * *
* OPERATOR : ARCO OIL AND GAS COMPANY
*
* WELL NAME : ATLANTIC STATE 30 NO. 2
*
* LOCATION : LEA COUNTY, NEW MEXICO
*
* JOB NUMBER :
*
* RIG : TMR/SHARP 24
*
* DECLINATION : 10.00 E
* * * * *
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EC DISTRICT : WEST TEXAS BASE



ARCO OIL AND GAS COMPANY
 ATLANTIC STATE 30 NO. 2
 LEA COUNTY, NEW MEXICO

DATE PRINTED : 26-MAY-88
 OUR REF. NO. : S01276.7AR

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	DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00 N 0.00 E	0.00
100.00	0 30	S 73 0 W	100.00	100.00	0.13 S 0.42 W	0.50
200.00	0 15	N 2 0 W	100.00	200.00	0.20 N 0.88 W	0.61
300.00	0 30	N 56 0 E	100.00	299.99	0.76 N 0.59 W	0.42
400.00	0 15	N 17 0 E	100.00	399.99	1.28 N 0.21 W	0.34
500.00	0 30	N 61 0 E	100.00	499.99	1.78 N 0.19 E	0.36
600.00	0 15	S 89 0 E	100.00	599.99	1.93 N 0.82 E	0.31
700.00	0 30	N 10 0 E	100.00	699.99	2.32 N 1.28 E	0.52
800.00	0 30	N 45 0 E	100.00	799.98	3.08 N 1.68 E	0.30
900.00	0 30	N 74 0 E	100.00	899.98	3.52 N 2.43 E	0.25
1000.00	0 30	N 68 0 E	100.00	999.97	3.80 N 3.25 E	0.05
1100.00	0 30	S 88 0 E	100.00	1099.97	3.95 N 4.10 E	0.21
1200.00	0 30	S 80 0 E	100.00	1199.97	3.86 N 4.97 E	0.07
1300.00	0 30	S 54 0 E	100.00	1299.96	3.52 N 5.77 E	0.22
1400.00	0 30	S 62 0 E	100.00	1399.96	3.06 N 6.51 E	0.07
1500.00	0 30	S 30 0 E	100.00	1499.96	2.46 N 7.13 E	0.28
1600.00	0 30	S 34 0 E	100.00	1599.95	1.72 N 7.59 E	0.03
1700.00	0 30	S 35 0 E	100.00	1699.95	1.00 N 8.08 E	0.01
1800.00	0 15	S 34 0 E	100.00	1799.95	0.46 N 8.45 E	0.25
1900.00	0 0	N 0 0 E	100.00	1899.95	0.28 N 8.58 E	0.25
2000.00	0 15	N 21 0 W	100.00	1999.94	0.32 N 8.36 E	0.25
2100.00	0 30	S 84 0 W	100.00	2099.94	0.33 N 7.71 E	0.27
2200.00	0 30	N 76 0 W	100.00	2199.94	0.39 N 6.84 E	0.17
2300.00	0 15	S 79 0 W	100.00	2299.94	0.41 N 6.19 E	0.29
2400.00	0 30	S 49 0 W	100.00	2399.93	0.13 N 5.61 E	0.31
2500.00	0 15	S 78 0 W	100.00	2499.93	0.16 S 5.03 E	0.31
2600.00	0 15	S 42 0 E	100.00	2599.93	0.51 S 4.92 E	0.43
2700.00	0 15	S 13 0 W	100.00	2699.93	0.91 S 5.02 E	0.23
2800.00	0 0	N 0 0 E	100.00	2799.93	1.12 S 4.97 E	0.25
2900.00	0 0	N 0 0 E	100.00	2899.93	1.12 S 4.97 E	0.00

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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	DOGLEG SEVERITY
3000.00	0 30	S 13 0 W	100.00	2999.93	1.55 S 4.87 E	0.50
3100.00	0 45	N 38 0 E	100.00	3099.92	1.89 S 5.59 E	1.22
3200.00	0 45	N 48 0 E	100.00	3199.91	0.93 S 6.48 E	0.13
3300.00	0 45	N 43 0 E	100.00	3299.91	0.02 S 7.41 E	0.07
3400.00	0 45	N 31 0 E	100.00	3399.90	1.03 N 8.20 E	0.16
3500.00	0 30	N 16 0 E	100.00	3499.89	2.03 N 8.63 E	0.30
3600.00	0 45	N 11 0 E	100.00	3599.88	3.09 N 8.89 E	0.26
3700.00	0 45	N 9 0 W	100.00	3699.88	4.39 N 8.91 E	0.26
3800.00	1 0	N 25 0 W	100.00	3799.86	5.85 N 8.46 E	0.35
3900.00	1 0	N 23 0 W	100.00	3899.85	7.44 N 7.75 E	0.03
4000.00	1 0	N 37 0 W	100.00	3999.83	8.95 N 6.88 E	0.24
4100.00	1 0	N 37 0 W	100.00	4099.82	10.34 N 5.83 E	0.00
4200.00	1 30	N 41 0 W	100.00	4199.79	12.04 N 4.46 E	0.51
4300.00	1 30	N 44 0 W	100.00	4299.76	13.97 N 2.69 E	0.08
4400.00	1 30	N 43 0 W	100.00	4399.73	15.86 N 0.89 E	0.03
4500.00	1 30	N 49 0 W	100.00	4499.69	17.68 N 0.99 W	0.16
4600.00	1 30	N 49 0 W	100.00	4599.66	19.40 N 2.97 W	0.00
4700.00	1 30	N 48 0 W	100.00	4699.62	21.13 N 4.93 W	0.03
4800.00	1 30	N 53 0 W	100.00	4799.59	22.80 N 6.95 W	0.13
4900.00	1 30	N 60 0 W	100.00	4899.56	24.24 N 9.13 W	0.18
5000.00	1 30	N 55 0 W	100.00	4999.52	25.65 N 11.33 W	0.13
5100.00	1 30	N 63 0 W	100.00	5099.49	27.00 N 13.58 W	0.21
5200.00	1 30	N 63 0 W	100.00	5199.45	28.18 N 15.91 W	0.00
5300.00	1 30	N 66 0 W	100.00	5299.42	29.31 N 18.27 W	0.08
5400.00	1 30	N 65 0 W	100.00	5399.38	30.40 N 20.65 W	0.03
5500.00	1 30	N 63 0 W	100.00	5499.35	31.54 N 23.01 W	0.05
5600.00	1 30	N 65 0 W	100.00	5599.32	32.69 N 25.36 W	0.05
5700.00	1 45	N 61 0 W	100.00	5699.28	33.98 N 27.89 W	0.27
5800.00	2 0	N 59 0 W	100.00	5799.22	35.61 N 30.72 W	0.26
5900.00	1 45	N 61 0 W	100.00	5899.17	37.25 N 33.55 W	0.26

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ARCO OIL AND GAS COMPANY
 ATLANTIC STATE 30 NO. 2
 LEA COUNTY, NEW MEXICO

DATE PRINTED : 26-MAY-88
 OUR REF. NO. : 801276.7AR

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	DOGLEG SEVERITY
6000.00	1 45	N 59 0 W	100.00	5999.12	38.78 N 36.20 W	0.06
6100.00	1 30	N 64 0 W	100.00	6099.08	40.13 N 38.69 W	0.29
6200.00	1 30	N 69 0 W	100.00	6199.05	41.17 N 41.09 W	0.13
6300.00	1 30	N 57 0 W	100.00	6299.01	42.36 N 43.42 W	0.31
6400.00	1 30	N 52 0 W	100.00	6398.98	43.88 N 45.55 W	0.13
6500.00	1 30	N 47 0 W	100.00	6498.94	45.58 N 47.54 W	0.13
6600.00	1 30	N 46 0 W	100.00	6598.91	47.38 N 49.43 W	0.03
6700.00	1 30	N 40 0 W	100.00	6698.88	49.29 N 51.22 W	0.16
6800.00	1 30	N 27 0 W	100.00	6798.84	51.47 N 52.66 W	0.34
6900.00	1 30	N 31 0 W	100.00	6898.81	53.76 N 53.93 W	0.10
7000.00	1 30	N 29 0 W	100.00	6998.77	56.03 N 55.24 W	0.05
7100.00	1 30	N 23 0 W	100.00	7098.74	58.38 N 56.39 W	0.16
7200.00	1 30	N 13 0 W	100.00	7198.71	60.87 N 57.19 W	0.26
7300.00	1 30	N 11 0 W	100.00	7298.67	63.43 N 57.74 W	0.05
7400.00	1 30	N 22 0 W	100.00	7398.64	65.93 N 58.48 W	0.29
7600.00	2 0	N 25 0 W	200.00	7598.54	71.53 N 60.91 W	0.25
7700.00	2 30	N 21 0 W	100.00	7698.47	75.15 N 62.45 W	0.52
7800.00	2 30	N 17 0 W	100.00	7798.37	79.27 N 63.87 W	0.17
7900.00	2 15	N 28 0 W	100.00	7898.28	83.09 N 65.45 W	0.52
8000.00	2 45	N 23 0 W	100.00	7998.19	87.03 N 67.33 W	0.55
8100.00	3 0	N 24 0 W	100.00	8098.06	91.63 N 69.33 W	0.25
8200.00	3 0	N 22 0 W	100.00	8197.93	96.45 N 71.37 W	0.10
8300.00	3 0	N 22 0 W	100.00	8297.79	101.30 N 73.33 W	0.00
8400.00	3 15	N 18 0 W	100.00	8397.64	106.42 N 75.20 W	0.33
8500.00	3 30	N 20 0 W	100.00	8497.47	111.99 N 77.12 W	0.28
8600.00	3 45	N 21 0 W	100.00	8597.27	117.91 N 79.33 W	0.26
8700.00	4 0	N 22 0 W	100.00	8697.04	124.20 N 81.81 W	0.26
8800.00	4 15	N 21 0 W	100.00	8796.78	130.89 N 84.44 W	0.26
8900.00	4 30	N 24 0 W	100.00	8896.49	137.94 N 87.36 W	0.34
9000.00	4 30	N 26 0 W	100.00	8996.18	145.05 N 90.68 W	0.16

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ARCO OIL AND GAS COMPANY
 ATLANTIC STATE 30 NO. 2
 -EA COUNTY, NEW MEXICO

DATE PRINTED : 26-MAY-88
 OUR REF. NO. : S01276.7AR

PAGE NO. 5

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	DOGLEG SEVERITY
9100.00	4 30	N 27 0 W	100.00	9095.87	152.07 N 94.18 W	0.08
9200.00	4 45	N 28 0 W	100.00	9195.55	159.22 N 97.90 W	0.26
9300.00	4 30	N 29 0 W	100.00	9295.22	166.31 N 101.75 W	0.26
9350.00	4 30	N 30 0 W	50.00	9345.07	169.72 N 103.68 W	0.16

CLOSURE - DISTANCE : 198.88
 DIRECTION : N 31 25 W

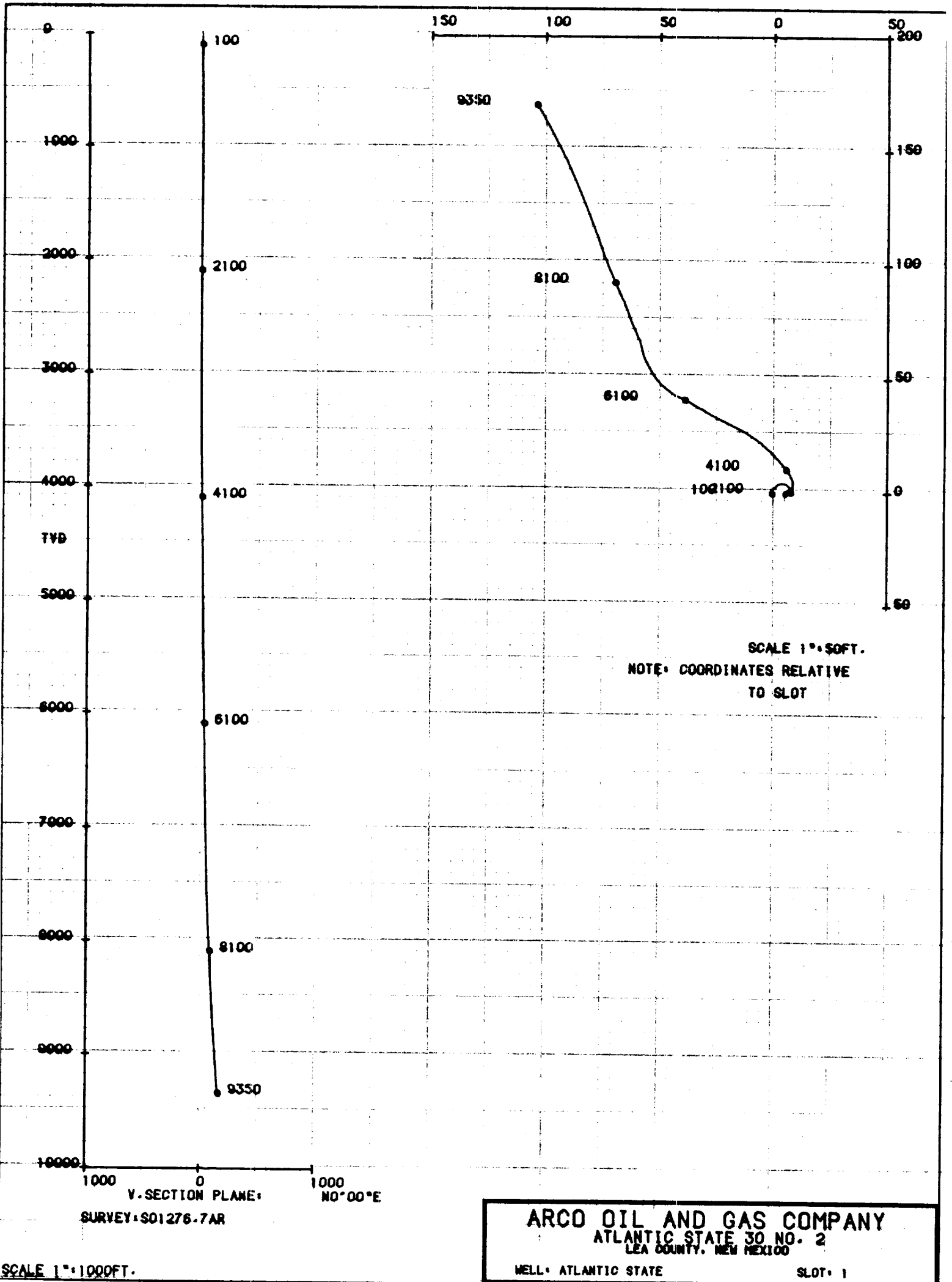
REPORT UNITS : Feet
 SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

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GYROSCOPIC MULTI-SHOT SURVEY 430-0842
 SURVEYOR: TIM STEPHENS (0'-9350')







EASTMAN CHRISTENSEN

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 MAY 25, 1988 thru MAY 26, 1988 conduct or supervise the taking of a GYROSCOPIC MULTI-SHOT survey by the method of magnetic orientation from a depth of 0 feet to 9350 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of ARCO OIL AND GAS COMPANY for their ATLANTIC STATE 30NO. 2, 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 _____, 1988

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