



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

RECEIVED

MAR 17 1988

**OCD
HOBBS OFFICE**

H.L. BROWN
COMPANY

FEDERAL 28 COM. NO. 1-14 28-7-37
WELL NAME

ROOSEVELT COUNTY, NEW MEXICO
LOCATION

JOB NUMBER

430-0764

TYPE OF SURVEY

GYROSCOPIC MULTI SHOT SURVEY

DATE

2-11-88

SURVEY BY
GARY DESPAIN

OFFICE
WEST TEXAS BASE

FOR

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OPERATOR	:	H.L. BROWN
WELL NAME	:	FEDERAL 28 COM. NO. 1
LOCATION	:	ROOSEVELT COUNTY, NEW MEXICO
JOB NUMBER	:	
RIG	:	
DECLINATION	:	10.00 E

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* * * * *
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EC DISTRICT : WEST TEXAS BASE

H.L. BROWN
FEDERAL 28 COM. NO. 1
ROOSEVELT COUNTY, NEW MEXICO

DATE PRINTED : 12-FEB-88
OUR REF. NO. : S01255.7HL
DECLINATION : 10.00 JOB NUMBER :

PAGE NO. 2

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 DISTANCE	D I R E C T I O N D M	DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00 N	0.00	S 90 0 E	0.00
100.00	0 15	N 34 12 W	100.00	100.00	0.18 N	0.12 W	N 34 12 W	0.25
200.00	0 30	N 1 46 E	100.00	200.00	0.80 N	0.30 W	N 20 43 W	0.33
300.00	0 30	N 24 44 E	100.00	299.99	1.64 N	0.10 W	N 3 36 W	0.20
400.00	0 30	N 78 43 E	100.00	399.99	2.16 N	0.56 E	N 14 25 E	0.45
500.00	1 0	S 27 19 E	100.00	499.98	1.63 N	1.66 E	N 45 23 E	0.99
600.00	1 0	S 14 20 E	100.00	599.97	0.01 N	2.28 E	N 89 50 E	0.23
700.00	1 15	S 8 22 E	100.00	699.95	1.92 S	2.66 E	S 54 13 E	0.28
800.00	1 15	S 14 21 E	100.00	799.92	4.06 S	3.09 E	S 37 18 E	0.13
900.00	1 15	S 4 17 E	100.00	899.90	6.21 S	3.44 E	S 29 1 E	0.22
1000.00	1 30	S 4 14 E	100.00	999.87	8.60 S	3.62 E	S 22 50 E	0.25
1100.00	1 15	S 0 11 E	100.00	1099.84	10.99 S	3.71 E	S 18 40 E	0.27
1200.00	1 15	S 0 52 W	100.00	1199.82	13.18 S	3.70 E	S 15 41 E	0.02
1300.00	1 0	S 0 56 W	100.00	1299.80	15.14 S	3.67 E	S 13 38 E	0.25
1400.00	1 0	S 4 1 E	100.00	1399.78	16.88 S	3.72 E	S 12 25 E	0.09
1500.00	0 45	S 3 19 W	100.00	1499.77	18.41 S	3.73 E	S 11 27 E	0.27
1600.00	1 0	S 12 34 E	100.00	1599.76	19.93 S	3.85 E	S 10 56 E	0.35
1700.00	1 0	S 0 29 W	100.00	1699.74	21.66 S	4.03 E	S 10 33 E	0.23
1800.00	1 0	S 3 27 E	100.00	1799.73	23.40 S	4.08 E	S 9 53 E	0.07
1900.00	0 45	S 4 24 E	100.00	1899.72	24.92 S	4.18 E	S 9 31 E	0.27
2000.00	0 30	S 18 39 W	100.00	1999.71	26.00 S	4.05 E	S 8 51 E	0.35
2100.00	0 30	S 8 43 W	100.00	2099.71	26.85 S	3.84 E	S 8 8 E	0.09
2200.00	0 30	S 0 15 E	100.00	2199.70	27.72 S	3.78 E	S 7 46 E	0.08
2300.00	0 15	S 27 12 E	100.00	2299.70	28.35 S	3.93 E	S 7 54 E	0.30
2400.00	0 30	S 66 10 E	100.00	2399.70	28.79 S	4.40 E	S 8 41 E	0.34
2500.00	0 45	S 65 8 E	100.00	2499.69	29.24 S	5.39 E	S 10 27 E	0.25
2600.00	0 30	S 79 6 E	100.00	2599.69	29.57 S	6.43 E	S 12 16 E	0.29
2700.00	0 45	S 74 4 E	100.00	2699.68	29.83 S	7.49 E	S 14 6 E	0.26
2800.00	1 0	N 86 58 E	100.00	2799.67	30.00 S	9.00 E	S 16 42 E	0.38
2900.00	1 15	N 86 11 E	100.00	2899.65	29.88 S	10.96 E	S 20 9 E	0.25

CONTINUED ON NEXT PAGE ...



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 DISTANCE	DIRECTION D M	DOGLEG SEVERITY
3000.00	1 15	S 81 47 E	100.00	2999.63	29.97 S	13.14 E	32.72 S 23 41 E	0.26
3100.00	1 15	S 82 45 E	100.00	3099.60	30.26 S	15.30 E	33.91 S 26 50 E	0.02
3200.00	1 30	N 77 17 E	100.00	3199.57	30.15 S	17.69 E	34.95 S 30 24 E	0.54
3300.00	1 30	N 76 19 E	100.00	3299.54	29.55 S	20.23 E	35.81 S 34 24 E	0.03
3400.00	1 15	S 83 38 E	100.00	3399.51	29.40 S	22.62 E	37.09 S 37 34 E	0.54
3500.00	1 30	S 84 36 E	100.00	3499.48	29.64 S	25.00 E	38.78 S 40 9 E	0.25
3600.00	1 30	S 74 34 E	100.00	3599.45	30.11 S	27.57 E	40.83 S 42 29 E	0.26
3700.00	1 30	S 75 37 E	100.00	3699.41	30.79 S	30.10 E	43.06 S 44 21 E	0.03
3800.00	1 45	S 72 45 E	100.00	3799.37	31.56 S	32.83 E	45.54 S 46 8 E	0.26
3900.00	1 45	S 63 54 E	100.00	3899.33	32.69 S	35.67 E	48.38 S 47 30 E	0.27
4000.00	1 30	S 65 3 E	100.00	3999.29	33.91 S	38.23 E	51.10 S 48 25 E	0.25
4100.00	1 30	S 65 11 E	100.00	4099.25	35.01 S	40.60 E	53.61 S 49 14 E	0.00
4200.00	1 30	S 68 20 E	100.00	4199.22	36.04 S	43.01 E	56.11 S 50 2 E	0.08
4300.00	1 30	S 68 29 E	100.00	4299.18	37.01 S	45.44 E	58.60 S 50 50 E	0.00
4400.00	1 45	S 64 20 E	100.00	4399.14	38.14 S	48.04 E	61.34 S 51 33 E	0.28
4500.00	1 30	S 69 29 E	100.00	4499.10	39.25 S	50.65 E	64.08 S 52 13 E	0.29
4600.00	1 30	S 66 38 E	100.00	4599.07	40.23 S	53.07 E	66.60 S 52 50 E	0.07
4700.00	2 0	S 69 46 E	100.00	4699.02	41.36 S	55.91 E	69.55 S 53 30 E	0.51
4800.00	2 0	S 70 55 E	100.00	4798.96	42.54 S	59.19 E	72.89 S 54 18 E	0.04
4900.00	2 0	S 72 4 E	100.00	4898.90	43.65 S	62.50 E	76.24 S 55 4 E	0.04
5000.00	1 45	S 63 12 E	100.00	4998.85	44.89 S	65.53 E	79.43 S 55 35 E	0.38
5100.00	2 0	S 65 21 E	100.00	5098.79	46.31 S	68.47 E	82.66 S 55 56 E	0.26
5200.00	2 0	S 62 22 E	100.00	5198.73	47.85 S	71.61 E	86.12 S 56 15 E	0.10
5300.00	2 0	S 70 17 E	100.00	5298.67	49.25 S	74.80 E	89.56 S 56 38 E	0.28
5400.00	2 0	S 64 11 E	100.00	5398.61	50.60 S	78.02 E	92.99 S 57 2 E	0.21
5500.00	2 0	S 60 5 E	100.00	5498.55	52.23 S	81.10 E	96.46 S 57 13 E	0.14
5600.00	2 30	S 66 59 E	100.00	5598.47	53.98 S	84.61 E	100.36 S 57 28 E	0.57
5700.00	2 0	S 59 54 E	100.00	5698.39	55.73 S	88.12 E	104.27 S 57 41 E	0.57
5800.00	2 15	S 59 48 E	100.00	5798.32	57.59 S	91.33 E	107.97 S 57 46 E	0.25
5900.00	2 15	S 62 13 E	100.00	5898.25	59.50 S	94.76 E	111.89 S 57 53 E	0.10

CONTINUED ON NEXT PAGE ...

H.L. BROWN
FEDERAL 28 COM. NO. 1
ROOSEVELT COUNTY, NEW MEXICO

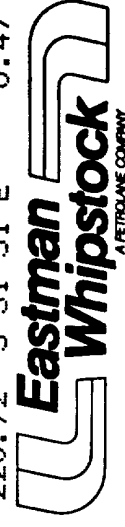
DATE PRINTED : 12-FEB-88
OUR REF. NO. : S01255.7HL
DECLINATION : 10.00 JOB NUMBER :

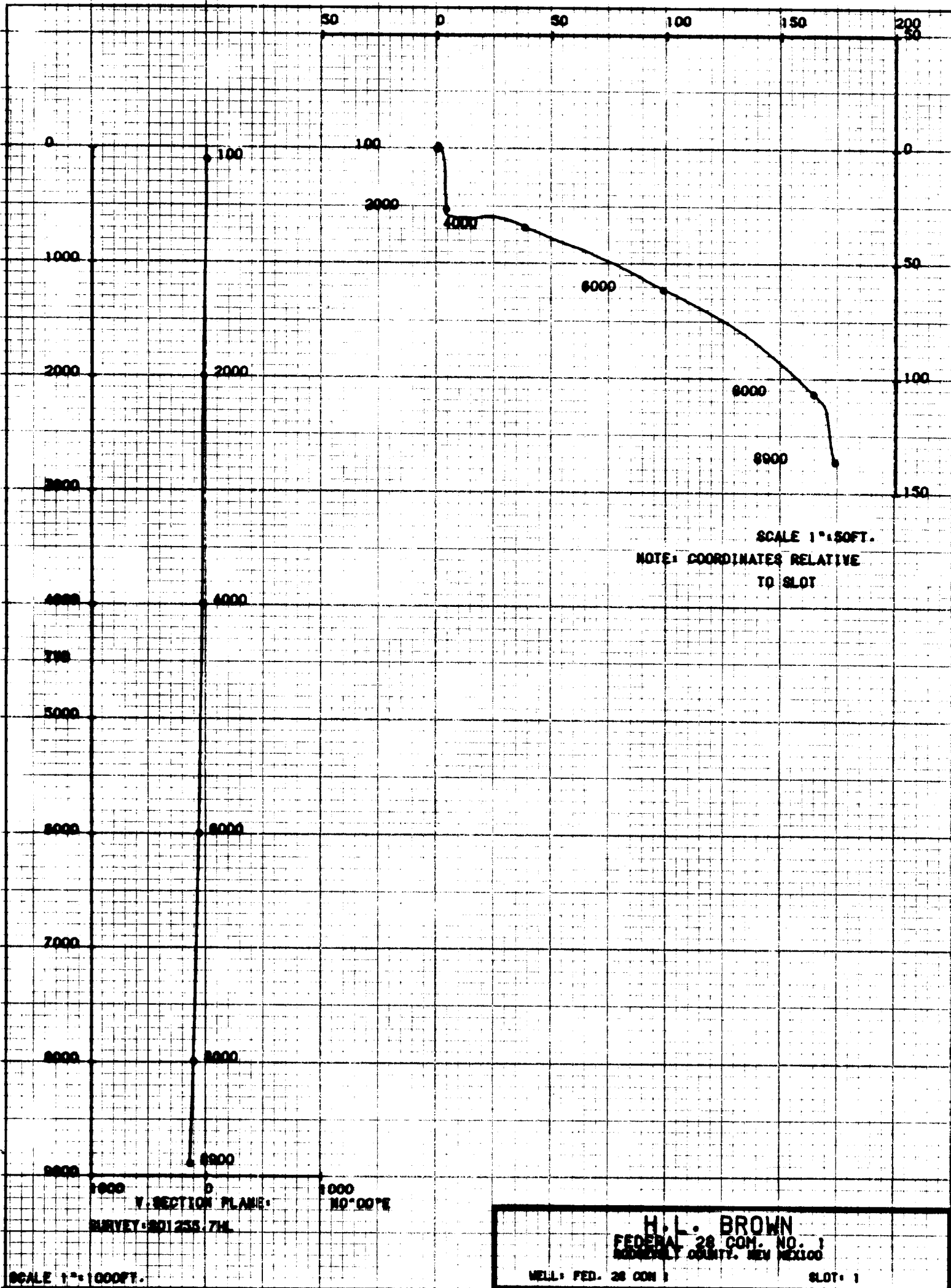
PAGE NO. 4

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 DISTANCE	D I R E C T I O N D M	DOGLEG SEVERITY
6000.00	2 30	S 65 7 E	100.00	5998.16	61.34 S	98.48 E	S 58 5 E	0.28
6100.00	2 15	S 65 2 E	100.00	6098.08	63.08 S	102.24 E	S 58 19 E	0.25
6200.00	2 15	S 62 56 E	100.00	6198.00	64.80 S	105.76 E	S 58 30 E	0.08
6300.00	2 15	S 62 50 E	100.00	6297.92	66.59 S	109.26 E	S 58 38 E	0.00
6400.00	2 0	S 62 45 E	100.00	6397.85	68.29 S	112.55 E	S 58 45 E	0.25
6500.00	2 15	S 61 39 E	100.00	6497.78	70.02 S	115.83 E	S 58 51 E	0.25
6600.00	2 15	S 61 33 E	100.00	6597.71	71.89 S	119.29 E	S 58 56 E	0.00
6700.00	2 30	S 62 30 E	100.00	6697.62	73.83 S	122.95 E	S 59 1 E	0.25
6800.00	2 15	S 58 30 E	100.00	6797.53	75.87 S	126.55 E	S 59 3 E	0.30
6900.00	2 15	S 57 31 E	100.00	6897.46	77.95 S	129.88 E	S 59 2 E	0.04
7000.00	2 15	S 54 31 E	100.00	6997.38	80.14 S	133.14 E	S 58 57 E	0.12
7100.00	2 15	S 54 31 E	100.00	7097.30	82.42 S	136.32 E	S 58 51 E	0.00
7200.00	2 15	S 50 31 E	100.00	7197.23	84.81 S	139.44 E	S 58 41 E	0.16
7300.00	2 30	S 49 31 E	100.00	7297.14	87.47 S	142.61 E	S 58 29 E	0.25
7400.00	2 30	S 50 33 E	100.00	7397.04	90.28 S	145.96 E	S 58 16 E	0.04
7500.00	2 30	S 50 33 E	100.00	7496.95	93.04 S	149.33 E	S 58 4 E	0.00
7600.00	2 30	S 48 33 E	100.00	7596.85	95.87 S	152.65 E	S 57 52 E	0.09
7700.00	2 30	S 47 34 E	100.00	7696.76	98.79 S	155.89 E	S 57 38 E	0.04
7800.00	2 15	S 44 34 E	100.00	7796.67	101.66 S	158.88 E	S 57 23 E	0.27
7900.00	2 0	S 47 35 E	100.00	7896.60	104.24 S	161.55 E	S 57 10 E	0.27
8000.00	2 0	S 47 35 E	100.00	7996.54	106.59 S	164.12 E	S 57 0 E	0.00
8100.00	2 0	S 40 35 E	100.00	8096.48	109.10 S	166.55 E	S 56 46 E	0.24
8200.00	2 0	S 42 37 E	100.00	8196.42	111.71 S	168.87 E	S 56 31 E	0.07
8300.00	2 0	S 3 40 E	100.00	8296.36	114.86 S	170.21 E	S 55 59 E	1.33
8400.00	2 0	S 9 43 E	100.00	8396.30	118.32 S	170.62 E	S 55 16 E	0.21
8500.00	2 0	S 4 46 E	100.00	8496.24	121.78 S	171.06 E	S 54 33 E	0.17
8600.00	2 0	S 6 48 E	100.00	8596.18	125.25 S	171.41 E	S 53 51 E	0.07
8700.00	2 15	S 7 51 E	100.00	8696.11	128.93 S	171.88 E	S 53 8 E	0.25
8800.00	2 15	S 10 53 E	100.00	8796.03	132.80 S	172.52 E	S 52 25 E	0.12
8900.00	2 0	S 21 48 E	100.00	8895.96	136.36 S	173.56 E	S 51 51 E	0.47

CLOSURE - DISTANCE : 220.72

REPORT UNITS : Feet







**EASTMAN
CHRISTENSEN**

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

SURVEY CERTIFICATION SHEET

**STATE OF TEXAS
COUNTY OF MIDLAND**

I, Gary DeSpain, in the employ of Eastman Christensen, Inc. did on the days of February 11, 1988 thru February 11, 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 8900 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of H.L. Brown Jr. for their Federal 28 Com. No. 1, Roosevelt 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.

Gary DeSpain
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.

Before me, the undersigned authority, on this day personally appeared Gary DeSpain, 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 _____

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-85

All distances must be from the outer boundaries of the Section

Operator H.L. Brown, Jr.		Lease Federal 28 Com.		Well No. 1
Unit Letter H	Section 28	Township 7 South	Range 37 East	County Roosevelt
Actual Footage Location of Well: 1650 feet from the North line and 330 feet from the East line				
Ground Level Elev. 4060.4	Producing Formation Siluro-Devonian	Pool Undesig. Siluro-Devonian	Dedicated Acreage: 80 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below

2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes" type of consolidation communitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Irene C. Rosas

Name

Irene C. Rosas

Position

Production Clerk

Company

H. L. Brown, Jr.

Date

November 23, 1987

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

November 6, 1987

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST, 676

RONALD J. EIDSON, 3239

