

13 3/8" at 366' w/340 sx
8 5/8" at 3573' w/900 sx
4 1/2" at 9150' w/775 sx

WELL CLASS.	IND	2
FORMATION	DATUM	
ID	9310	(ABO)

CONTR	MGF	OPRS ELEV	3924	GL
-------	-----	-----------	------	----

F.R. 4-10-78
(Abo)
4-11-78 Drlg. 3573'
4-18-78 Drlg. 4064'
4-26-78 Drlg. 7430' dolo
5-2-78 Drlg. 8248' dolo & cnt
5-9-78 Drlg. 9055' shly dolo
5-17-78 TD 9310'; WOCU
5-23-78 TD 9310'; PBD 9120'; Tsng
Perf (Abo) 8894-8926', 8950-84'
8988-96', 9003-30', 9040-58' w/ (over-
(overall)
5-30-78 TD 9310'; PBD 9120'; Tsng
Acid (8894-9058') 15,000 gals

7-5-20

LEA
ENERGY RESERVES GROUP,
INC.

Buckeye
2 Amoco State
Sec 3, T18S, R35E

NM
Page 12

6-28-78 TD 9310'; PBD 9120'; WOSP
7-24-78 TD 9310'; PBD 9120'; Complete
LOG TOPS: Queen 4190', Grayburg 4848',
Delaware Sand 5310', Bone Spring 5940',
Glorieta 6367', Second Bone Spring 7767',
Blaine 8617', Abo 8872'
7-29-78 COMPLETION ISSUED

7-5-80 IC
IC 30-317 3120-00



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

RECEIVED
ENERGY RESERVES GROUP
DALLAS, TEXAS

ENERGY RESERVES GROUP, INC.
COMPANY

AMOCO STATE WELL NO. 2
WELL NAME

LEA COUNTY, NEW MEXICO
LOCATION

<u>JOB NUMBER</u>	<u>TYPE OF SURVEY</u>	<u>DATE</u>
WT 578 G 1729	Gyroscopic Multi Shot	5-3-78
WT 578 S 1728	Magnetic Multi Shot	5-3-78
WT 578 S 1780	Magnetic Multi Shot	5-15-78

SURVEY BY
James Blackledge
James Blackledge
Larry Massey

OFFICE
West Texas
West Texas
West Texas

ENERGY RESERVES GROUP, INC.
AMOCO STATE WELL NO. 2
LEA COUNTY, NEW MEXICO
EASTMAN WHIPSICK, INC.
GYROSCOPIC MULTI SHOT SURVEY
JAMES BLACKLEDGE - SURVEYOR
WT578-61729

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	R E C T A N G U L A R C O O R D I N A T E S F E E T	D O G L E G S E V E R I T Y D E G / 1 0 0 F T
0.	0 0	0	0.00	0.00	0.0
100.	0 15	S 39 W	100.00	.14 W	.3
200.	0 30	S 44 W	200.00	.57 W	.3
300.	0 30	S 17 W	299.99	1.40 S	.2
400.	0 45	S 35 W	399.99	2.38 S	.3
500.	0 45	S 48 W	499.98	3.36 S	.2
600.	0 30	S 47 W	599.97	4.10 S	.3
700.	0 45	S 15 W	699.97	5.02 S	.4
800.	0 45	S 35 W	799.96	6.20 S	.3
900.	0 30	S 53 W	899.95	6.98 S	.3
1000.	0 30	S 43 W	999.95	7.56 S	.1
1100.	0 30	S 59 W	1099.94	8.11 S	.1
1200.	0 30	S 43 W	1199.94	8.66 S	.1
1300.	0 30	S 36 W	1299.94	9.33 S	.1
1400.	0 30	S 44 W	1399.93	10.00 S	.1
1500.	0 45	S 48 W	1499.93	10.76 S	.3
1600.	0 30	S 89 W	1599.92	11.15 S	.5
1700.	0 45	S 81 W	1699.92	11.24 S	.3
1800.	1 0	N 68 W	1799.90	11.07 S	.5
1900.	1 0	N 61 W	1899.89	10.32 S	.1
2000.	1 0	N 57 W	1999.87	9.42 S	.1
2100.	1 15	N 55 W	2099.85	8.33 S	.3
2200.	1 0	N 47 W	2199.83	7.09 S	.3
2300.	1 0	N 57 W	2299.82	5.80 S	.2
2400.	1 15	N 41 W	2399.80	4.27 S	.3
2500.	1 30	N 38 W	2499.77	2.42 S	.3
2600.	1 30	N 35 W	2599.74	.31 S	.1
2700.	1 30	N 36 W	2699.70	1.82 N	.0
2800.	1 45	N 30 W	2799.66	4.19 N	.3
2900.	2 0	N 24 W	2899.61	7.11 N	.3

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	DOG LEG SEVERITY DEG/100FT
3000.	2 15	N 25 W	2999.54	10.48 N 30.29 W	.3
3100.	2 15	N 28 W	3099.46	13.99 N 32.04 W	.1
3200.	2 15	N 29 W	3199.39	17.45 N 33.91 W	.0
3300.	2 15	N 27 W	3299.31	20.91 N 35.75 W	.1
3400.	2 0	N 27 W	3399.24	24.22 N 37.44 W	.3
3500.	1 45	N 23 W	3499.19	27.18 N 38.82 W	.3
3600.	2 0	N 16 W	3599.13	30.26 N 39.91 W	.3
3700.	1 45	N 16 W	3699.08	33.41 N 40.81 W	.2
3800.	2 0	N 18 W	3799.02	36.54 N 41.77 W	.3
3900.	1 45	N 19 W	3898.97	39.64 N 42.81 W	.3
4000.	2 0	N 15 W	3998.92	42.77 N 43.76 W	.3
4100.	2 30	N 26 W	4098.84	46.44 N 45.14 W	.7
4200.	2 15	N 19 W	4198.75	50.27 N 46.72 W	.4
4300.	2 45	N 24 W	4298.66	54.32 N 48.32 W	.5
4400.	2 45	N 20 W	4398.54	58.77 N 50.12 W	.2
4500.	2 15	N 27 W	4498.45	62.77 N 51.85 W	.6
4600.	2 45	N 22 W	4598.35	66.74 N 53.66 W	.5
4700.	2 45	N 24 W	4698.24	71.15 N 55.54 W	.1
4800.	2 45	N 23 W	4798.12	75.55 N 57.45 W	.0
4900.	3 0	N 27 W	4898.00	80.10 N 59.57 W	.3
5000.	2 45	N 22 W	4997.87	84.66 N 61.65 W	.4
5100.	3 0	N 23 W	5097.74	89.29 N 63.57 W	.3
5200.	3 15	N 26 W	5197.60	94.25 N 65.83 W	.3
5300.	3 15	N 22 W	5297.43	99.43 N 68.13 W	.2
5400.	3 15	N 24 W	5397.27	104.65 N 70.35 W	.1
5500.	3 30	N 21 W	5497.10	110.09 N 72.60 W	.3
5600.	3 15	N 24 W	5596.93	115.53 N 74.85 W	.3
5700.	3 30	N 22 W	5696.75	120.94 N 77.16 W	.3
5800.	4 0	N 19 W	5796.54	127.07 N 79.45 W	.5
5900.	4 0	N 17 W	5896.30	133.70 N 81.60 W	.1

MEASURED DEPTH FEET	DRIFT ANGLE D W	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	DOG LEG SEVERITY DEG/100FT
6000.	4 15	N 15 W	5996.04	140.62 N 83.58 W	.3
6100.	4 30	N 17 W	6095.74	147.95 N 85.69 W	.3
6200.	4 30	N 15 W	6195.44	155.49 N 87.85 W	.2
6300.	4 30	N 16 W	6295.13	163.05 N 89.95 W	.1
6400.	5 15	N 17 W	6394.77	171.20 N 92.36 W	.8
6500.	4 0	N 9 W	6494.44	179.05 N 94.17 W	1.4
6600.	4 30	N 8 W	6594.16	186.38 N 95.27 W	.5
6700.	4 30	N 8 W	6693.85	194.15 N 96.36 W	0.0
6800.	4 15	N 9 W	6793.56	201.69 N 97.49 W	.3
6900.	4 30	N 10 W	6893.27	209.22 N 98.74 W	.3
7000.	4 45	N 9 W	6992.95	217.17 N 100.08 W	.3
7100.	4 30	N 6 W	7092.62	225.16 N 101.13 W	.3
7200.	4 15	N 6 W	7192.33	232.75 N 101.93 W	.3
7300.	3 30	N 6 W	7292.10	239.47 N 102.63 W	.8
7400.	3 15	N 7 W	7391.93	245.32 N 103.30 W	.3
7500.	3 30	N 9 W	7491.75	251.15 N 104.12 W	.3
7600.	3 45	N 14 W	7591.55	257.34 N 105.38 W	.4
7700.	3 30	N 18 W	7691.35	263.42 N 107.12 W	.4
7800.	3 30	N 15 W	7791.17	269.27 N 108.85 W	.2
7900.	3 30	N 16 W	7890.98	275.16 N 110.49 W	.1
8000.	3 30	N 17 W	7990.79	281.01 N 112.22 W	.1
8100.	3 30	N 16 W	8090.61	286.86 N 113.95 W	.1
8200.	3 45	N 24 W	8190.41	292.80 N 116.11 W	.6
8300.	4 0	N 29 W	8290.18	298.85 N 119.13 W	.4
8400.	4 45	N 49 W	8389.89	304.74 N 123.90 W	1.7
8448.	5 0	N 37 W	8437.71	307.72 N 126.68 W	2.2

FINAL CLOSURE - DIRECTION: N 22 DEGS 22 MINS 33 SECS W
 DISTANCE: 332.78 FEET

ENERGY RESERVES GROUP, INC.
AMOCO STATE WELL NO. 2
LEA COUNTY, NEW MEXICO
5-15-78

EASTMAN WHIPSTOCK INC.
LARRY MASSEY - SURVEYOR
WT578-S1780

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	DOG LEG SEVERITY DEG/100FT
8448.	5 0	N 37 W	8437.71	307.72 N	0.0
8484.	4 15	N 19 W	8473.59	310.27 N	4.5
8534.	3 30	N 3 W	8523.48	313.58 N	2.6
8584.	3 15	N 0 W	8573.39	316.51 N	.8
8634.	3 0	N 7 W	8623.32	319.21 N	.5
8684.	3 15	N 16 W	8673.24	321.88 N	1.1
8734.	3 30	N 18 W	8723.16	324.69 N	.6
8784.	3 45	N 24 W	8773.06	327.64 N	.9
8834.	3 15	N 36 W	8822.96	330.28 N	1.8
8884.	3 15	N 43 W	8872.88	332.47 N	.8
8934.	3 15	N 46 W	8922.80	334.49 N	.3
8984.	3 0	N 45 W	8972.73	336.40 N	.5
9034.	3 0	N 47 W	9022.66	338.22 N	.2
9084.	3 0	N 47 W	9072.59	340.00 N	0.0
9134.	2 45	N 45 W	9122.53	341.74 N	.5
9184.	2 45	N 40 W	9172.47	343.51 N	.5
9234.	2 45	N 33 W	9222.41	345.44 N	.7
9284.	2 30	N 38 W	9272.36	347.30 N	.7
9309.	3 0	N 43 W	9297.33	348.21 N	2.2

FINAL CLOSURE - DIRECTION: N 23 DEGS 17 MINS 9 SECS W
DISTANCE: 379.09 FEET

ENERGY RESERVES GROUP, INC

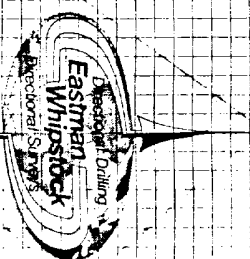
AMOCO STATE NO.2

LEA COUNTY, NEW MEXICO

CLOSURE:
379.09' N 23° 17' W OF
SURFACE LOCATION
NORTH 348.21' WEST 149.86'
9309 MD-9297.33 TVD

WEST LEASE LINE

330' SPACING



660'

330'

SCALE 1" = 50'

SURFACE LOCATION

3000'

2000'

4000'

5000'

6000'

7000'

8000'

8448'

8784'

9034'

9309'

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

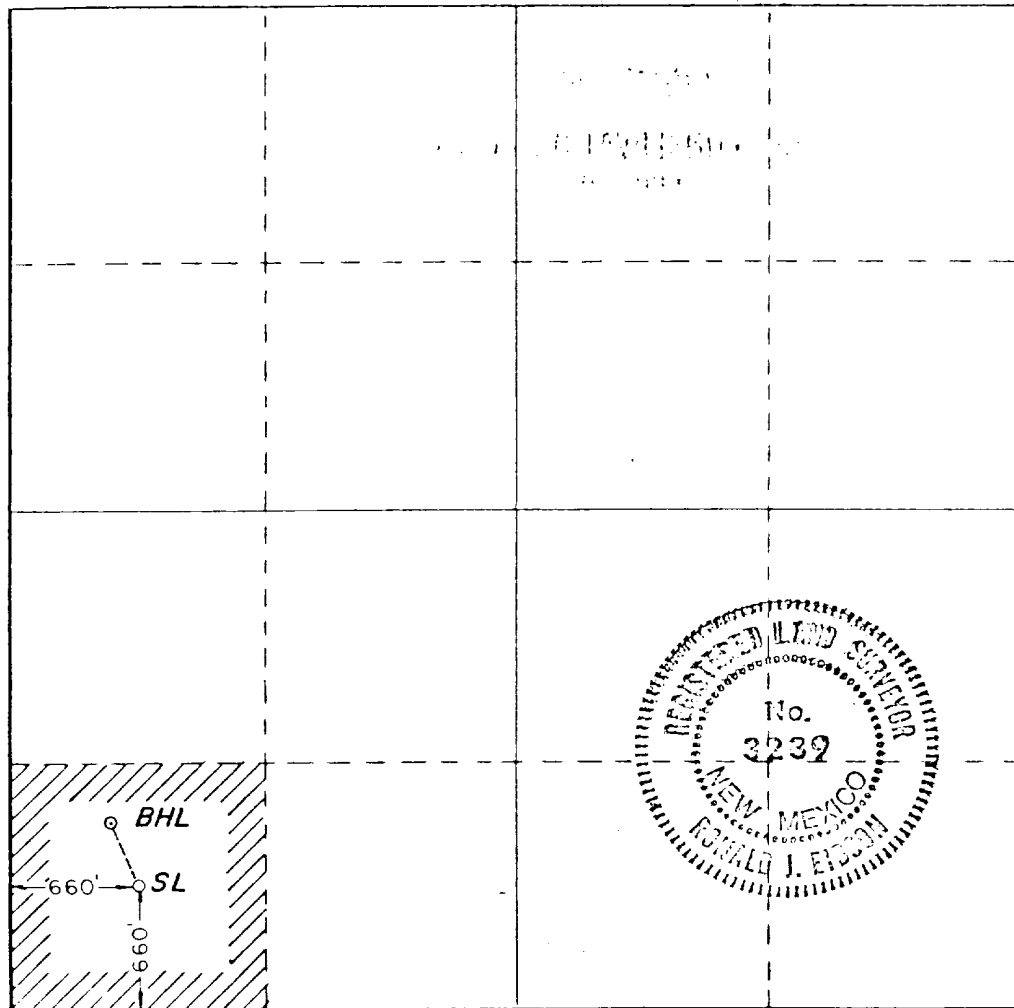
Operator Energy Reserves Group Inc.		Lease Amoco State		Well No. 2	
Unit Letter M	Section 3	Township 18 South	Range 35 East	County Lea	
Actual Location of Well:					
660		feet from the	South	line and	660
				feet from the	West
Ground Level Elev. 3923.9	Producing Formation Abo Detrital		Pool Undesignated		Dedicated Acreage: 40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 working 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 _____

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.

Name
Ronald J. Edison

District Engineer

Energy Reserves Group Inc.

April 3, 1978

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

April 1, 1978

Registered Professional Engineer and Registered Surveyor

Ronald J. Edison

Certificate No. **John W. West 676**
Ronald J. Edison 3239

0 330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600



(915) 563-0511 / Telex: 74-3452
P. O. Box 5577 / Midland, Texas 79701
Int'l: TWX 910-881-5066 / Cable: EASTCO

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, James Blackledge, in the employ of Eastman Whipstock, Inc., did on the days of May 3, 19 78 thru May 4, 19 78 conduct or supervise the taking of a Gyroscopic Multi-Shot survey by the method of magnetic orientation from a depth of 0 feet to 3500 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Energy Reserves Group, Inc. for their Amoco State #2, Lea County, State of New Mexico, in the field.

The data for this survey and the calculations 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.

James Blackledge
Directional Supervisor / Surveyor

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

Larry Masse

Before me, the undersigned authority, on this day personally appeared James Blackledge, 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 30 th day of May, 19 78.

Donal M. [Signature]
Notary Public in and for the County of
Midland, Texas
My commission expires May 26 1980



(915) 563-0511 / Telex: 74-3452
P. O. Box 5577 / Midland, Texas 79701
Int'l: TWX 910-881-5066 / Cable: EASTCO

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, James Blackledge, in the employ of Eastman Whipstock, Inc., did on the days of May 3, 1978 thru May 4, 1978 conduct or supervise the taking of a Magnetic Multi-Shot survey by the method of magnetic orientation from a depth of 3500 feet to 8448 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Energy Reserves Group, Inc. for their Amoco State #2, Lea County, State of New Mexico, in the field.

The data for this survey and the calculations 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.

James Blackledge
Directional Supervisor/Surveyor

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

Larry Massey

Before me, the undersigned authority, on this day personally appeared James Blackledge, 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 30 th day of May, 1978.

Anna M. Smith
Notary Public in and for the County of
Midland, Texas
My commission expires May 24 1980



P. O. Box 5577/Midland, Texas 79701/(915) 563-0511
TWX 910-881-5066/Cable: EASTCO

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Larry Massey, in the employ of Eastman Whipstock, Inc., did on the days of May 15, 19 78 thru May 15, 19 78 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 8448 feet to 9309 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Energy Reserves Group, Inc. for their Amoco State Well No. 2, Lea County, State of New Mexico, in the _____ field.

The data for this survey and the calculations 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.

Larry Massey
Directional/Supervisor/Surveyor

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

James Blackledge

Before me, the undersigned authority, on this day personally appeared Larry Massey, 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 5/16 day of May, 19 78.

Anna M. Smith
Notary Public in and for the County of
Midland, Texas
My commission expires May 26 1980