

OIL CONSERVATION DIVISION
P. O. Box 2088
SANTA FE, NEW MEXICO
87501

ADMINISTRATIVE ORDER

NFL 74

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.

Operator Marbob Energy Corporation Well Name and No. Old Loco Unit Well No. 17
Location: Unit 0 Sec. 32 Twp. 17-S Rng. 29-E Cty. Eddy

II.

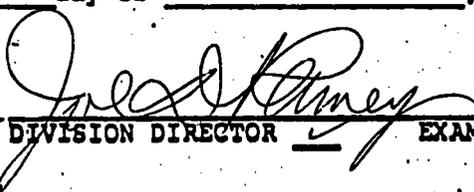
THE DIVISION FINDS:

- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.
- (2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is completed in the Grayburg-Jackson (SR-Q-G-SA) Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40-acre proration unit comprising the SW/4 SE/4 of Sec. 32, Twp. 17-S, Rng. 29-E, is currently dedicated to the Old Loco Unit Well No. 15 located in Unit 0 of said section.
- (5) That this proration unit is standard () nonstandard; if nonstandard, said unit was previously approved by Order No. NA.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 4,149 MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

- (1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this 20th day of May, 19 83.


DIVISION DIRECTOR _____ EXAMINER _____

OIL CONSERVATION DIVISION
P. O. Box 2088
SANTA FE, NEW MEXICO
87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER

NFL 74

INFILL DRILLING FINDINGS PURSUANT TO
SECTION 271.305(b) OF THE FEDERAL ENERGY REGULATORY
COMMISSION REGULATIONS, NATURAL GAS POLICY ACT OF 1978
AND OIL CONSERVATION DIVISION ORDER NO. R-6013-A

I.

Operator Marbob Energy Corporation Well Name and No. Old Loco Unit Well No. 17
Location: Unit 0 Sec. 32 Twp. 17-5 Rng. 29-E Cty. Eddy

II.

THE DIVISION FINDS:

- (1) That Section 271.305(b) of the Federal Energy Regulatory Commission Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find that the infill well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit.
- (2) That by Order No. R-6013-A, dated February 8, 1980, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
- (3) That the well for which a finding is sought is completed in the Grayburg - Jackson (SR-Q-G-SA) Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40-acre proration unit comprising the SW/4 SE/4 of Sec. 32, Twp. 17-5, Rng. 29-E, is currently dedicated to the Old Loco Unit Well No. 15 located in Unit 0 of said section.
- (5) That this proration unit is (standard) (nonstandard); if nonstandard, said unit was previously approved by Order No. NA.
- (6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
- (7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 4,149 MCF of gas from the proration unit which would not otherwise be recovered.
- (8) That all the requirements of Order No. R-6013-A have been complied with, and that the well for which a finding is sought is necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
- (9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved.

IT IS THEREFORE ORDERED:

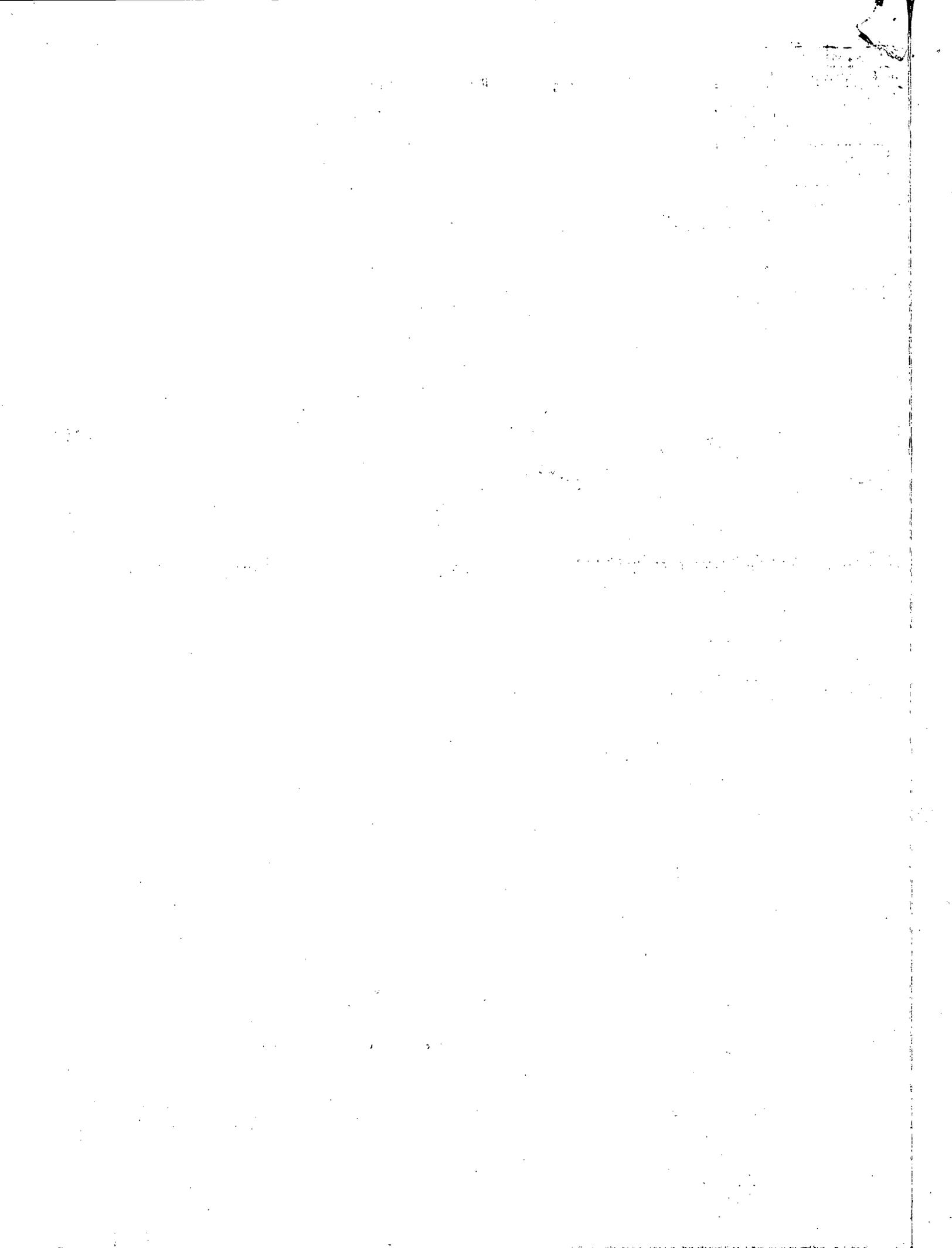
- (1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on this _____ day of _____, 19____.

DIVISION DIRECTOR _____

EXAMINER _____

*Request for Infill Finding on
Old Loco Unit #17
in accordance with Administrative
Procedures amended February 8, 1980*



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STAFF	
NO. OF	
NO. OF	
NO. OF OFFICE	
OPERATOR	✓

NEW MEXICO OIL CONSERVATION COMMISSION
RECEIVED

30-015-23042
Form C-101
Revised 1-1-65

OCT 19 1979

O. C. C.

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
B-5084

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Type of Work
Type of Well
DRILL DEEPEN PLUG BACK
IS ALL GAS WELL OTHER SINGLE ZONE MULTIPLE ZONE

7. Unit Agreement Name
Old Locomot

8. Firm or Lease Name
Old Loco Unit

Name of Operator
Marbob Energy Corporation

Address of Operator
Box 304, Artesia, N.M. 88210

9. Well No.
17

10. Field and Pool, or Wildcat
SA Grbg. Jackson Queen Grbg.

Location of Well
UNIT LETTER **0** LOCATED **330** FEET FROM THE **South** LINE
2310 FEET FROM THE **East** LINE OF SEC. **32** TWP. **17S** RGE. **29E** NMPM

17. County
Eddy

14. Proposed Depth 2850'	14A. Formation Grayburg & Lovington	15. Rotary or C.L. Rotary
16. Deviations (Show whether DL, RL, etc.) 3564 GL	21A. Kind & Status Plug. Bond Statewide active	21B. Drilling Contractor Alta-West Drilling Co.
		22. Approx. Date Work will start 10/23/79

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11"	8 5/8"	28#	250'	Circ.	
7 7/8"	4 1/2"	10.50#	2850'		

We propose to drill to approximately 2850' to test Grayburg and Lovington formation. We do not anticipate gas at these depths & will not set up a blowout preventer program at this time.

APPROVAL VALID FOR 90 DAYS AFTER DRILLING IS FINISHED, EXPIRES 1-23-80

PLEASE OVER SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTION. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Carolyn Lewis Title Secretary Date 10/18/79

(This space for State Use)

APPROVED BY W.A. Lewis TITLE SUPERVISOR, DISTRICT 2 DATE OCT 23 1979

REASONS OF APPROVAL, IF ANY:

RULE #5

100

100

100

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

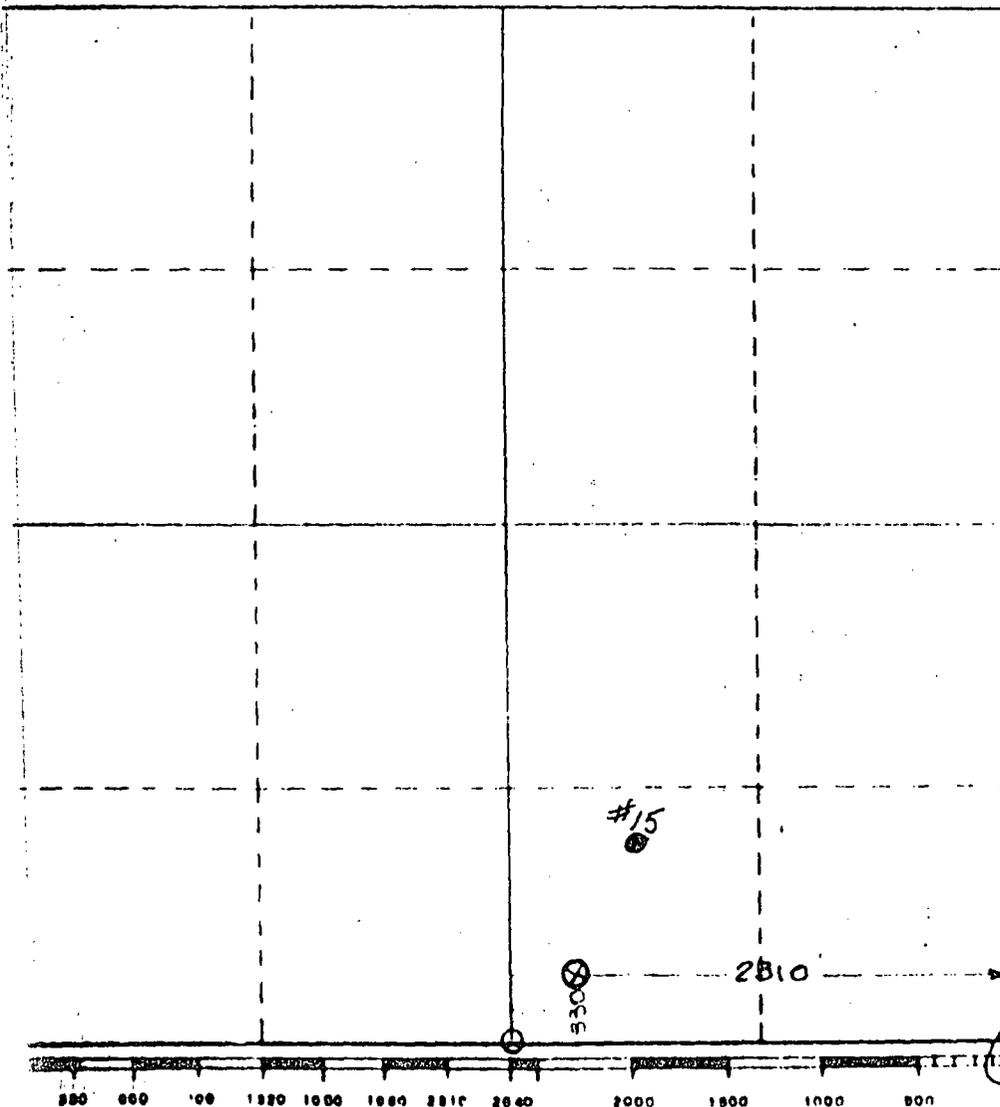
Operator MARBOB ENERGY CORPORATION		Lease OLD LOCO UNIT			Well No. 17
Unit Letter 0	Section 32	Township 17 South	Range 29 East	County EDDY	
Actual Footage Location of Well: 330 feet from the South line and 2310 feet from the East line					
Ground Level Elev. 3564	Producing Formation GRAYBUCC + LIVINGSTON		Drill GRAB THICKEN QUEN GRAB SA	Indicated Acreage 40 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 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 _____

Position
Sec

Company
Marbob Energy

Date
10-18-79

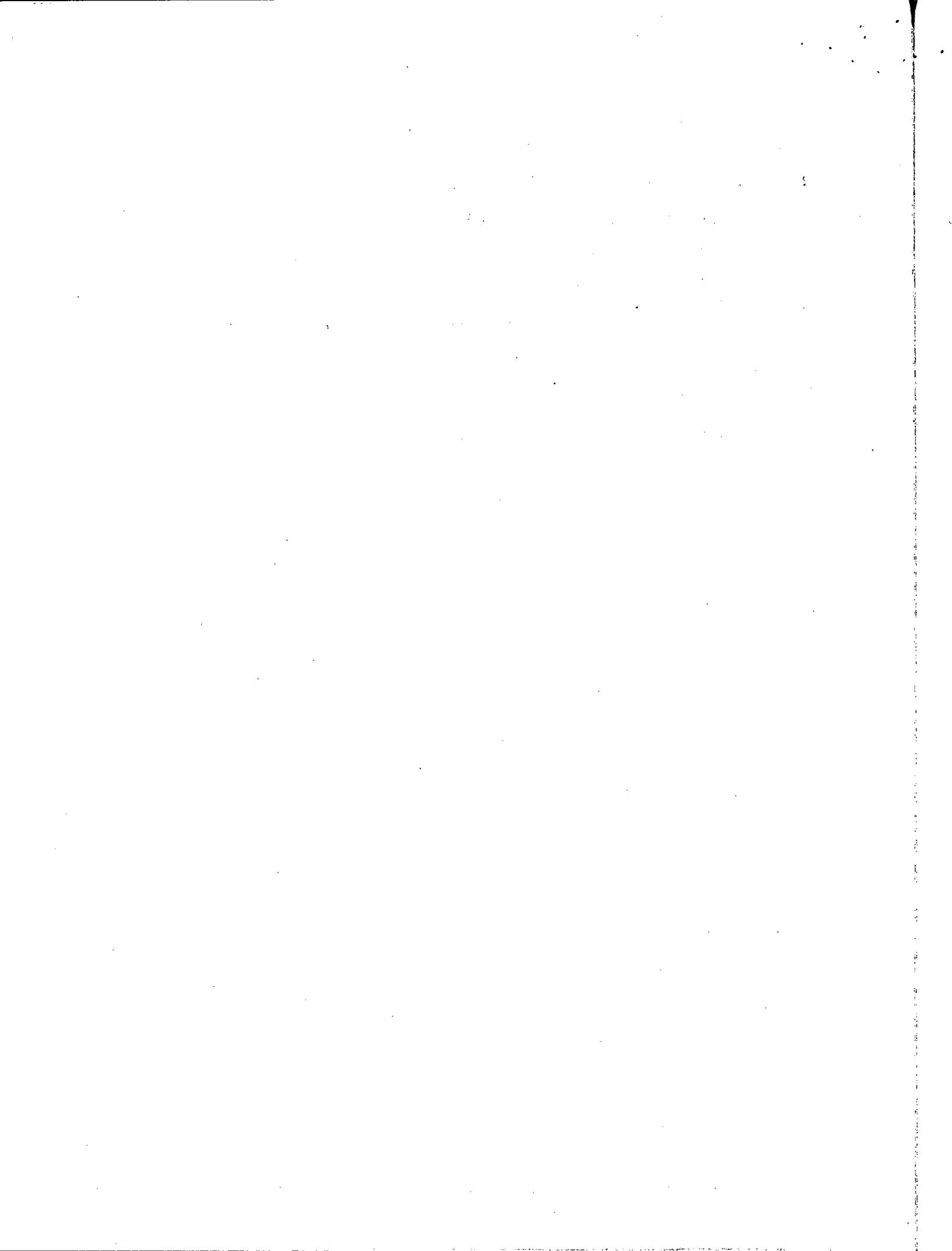
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date conveyed
September 25, 1979

Registered Professional Engineer and Land Surveyor
[Signature]

Plate No. **1559**

RULE # 5



Rule 6:

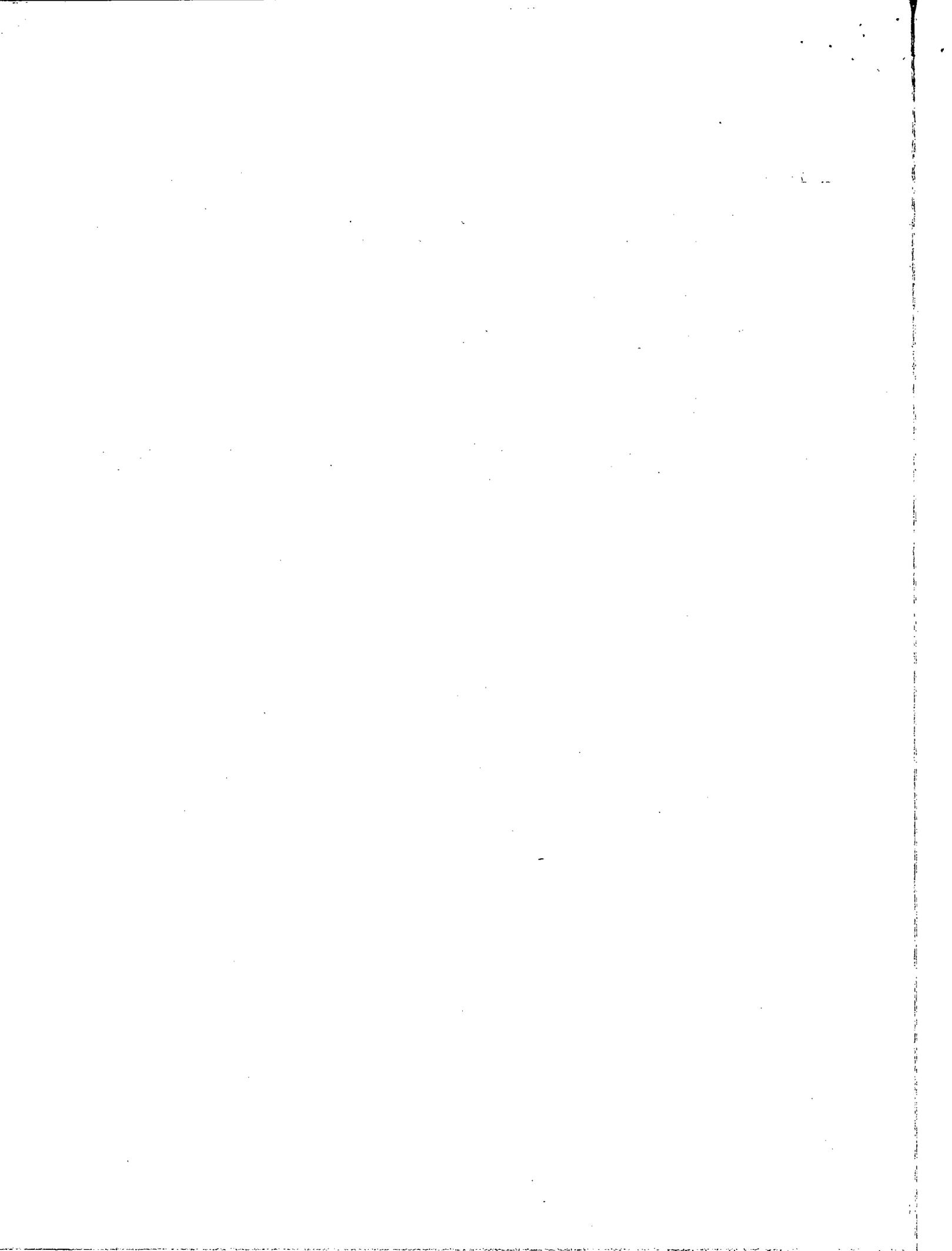
Old Loco Unit #17

Pool: Grayburg Jackson Seven Rivers Queen Grayburg San Andres

Standard spacing unit: 40 acres

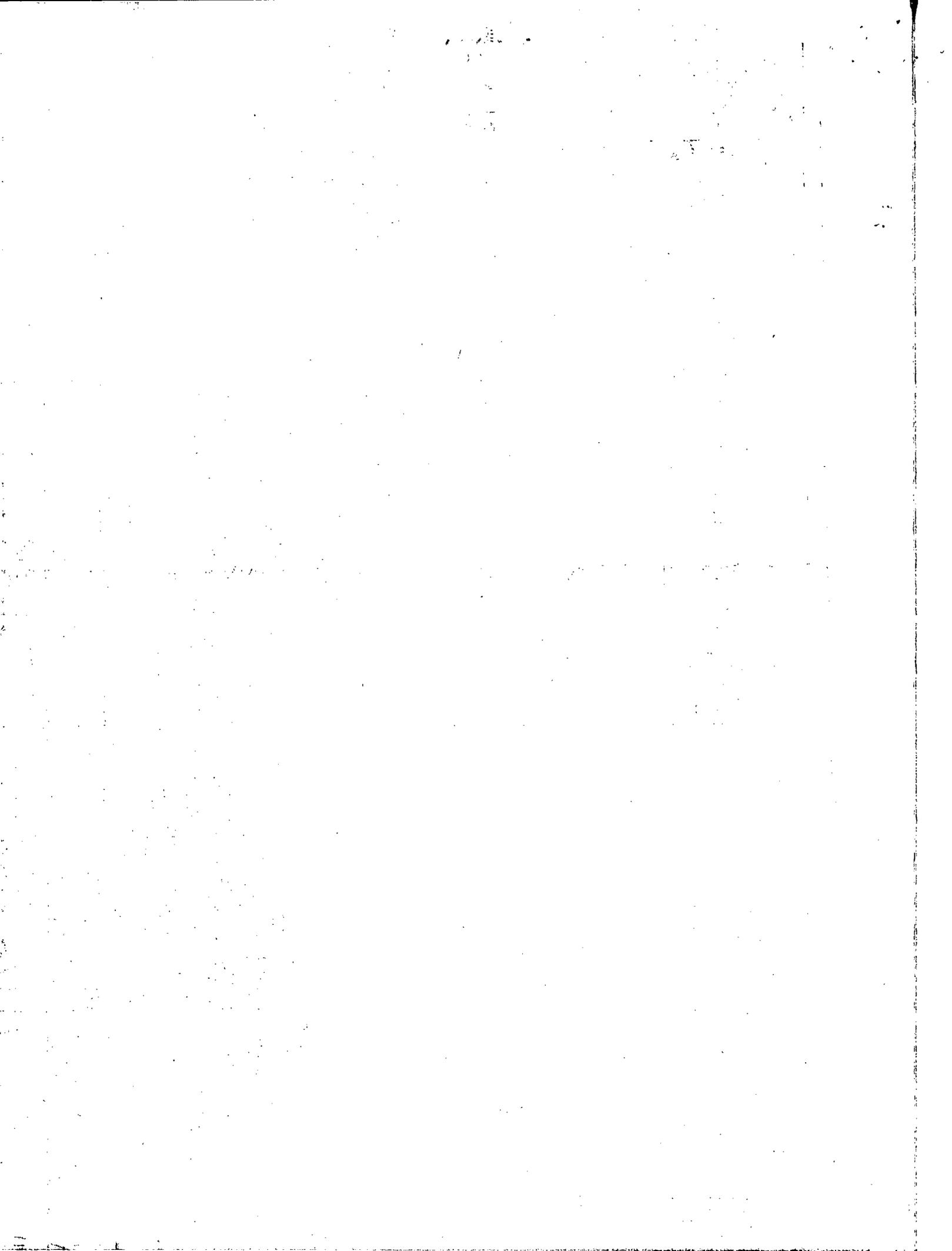
Rule 7:

NA



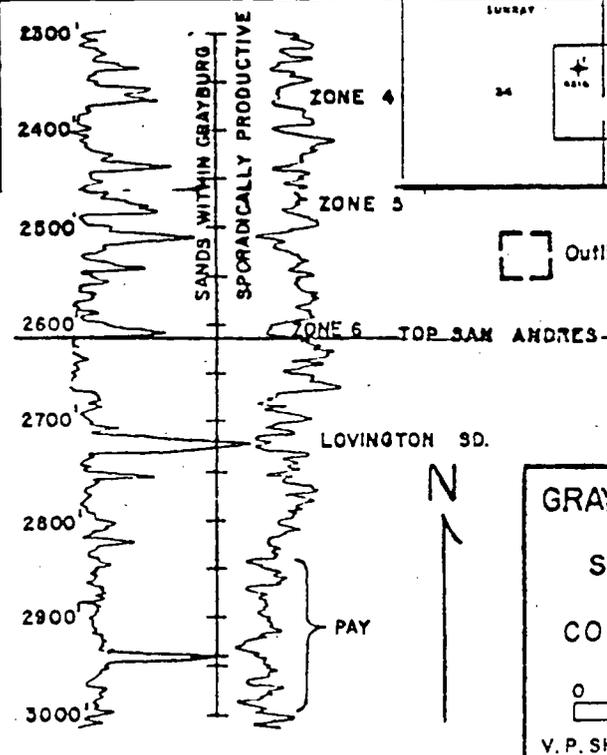
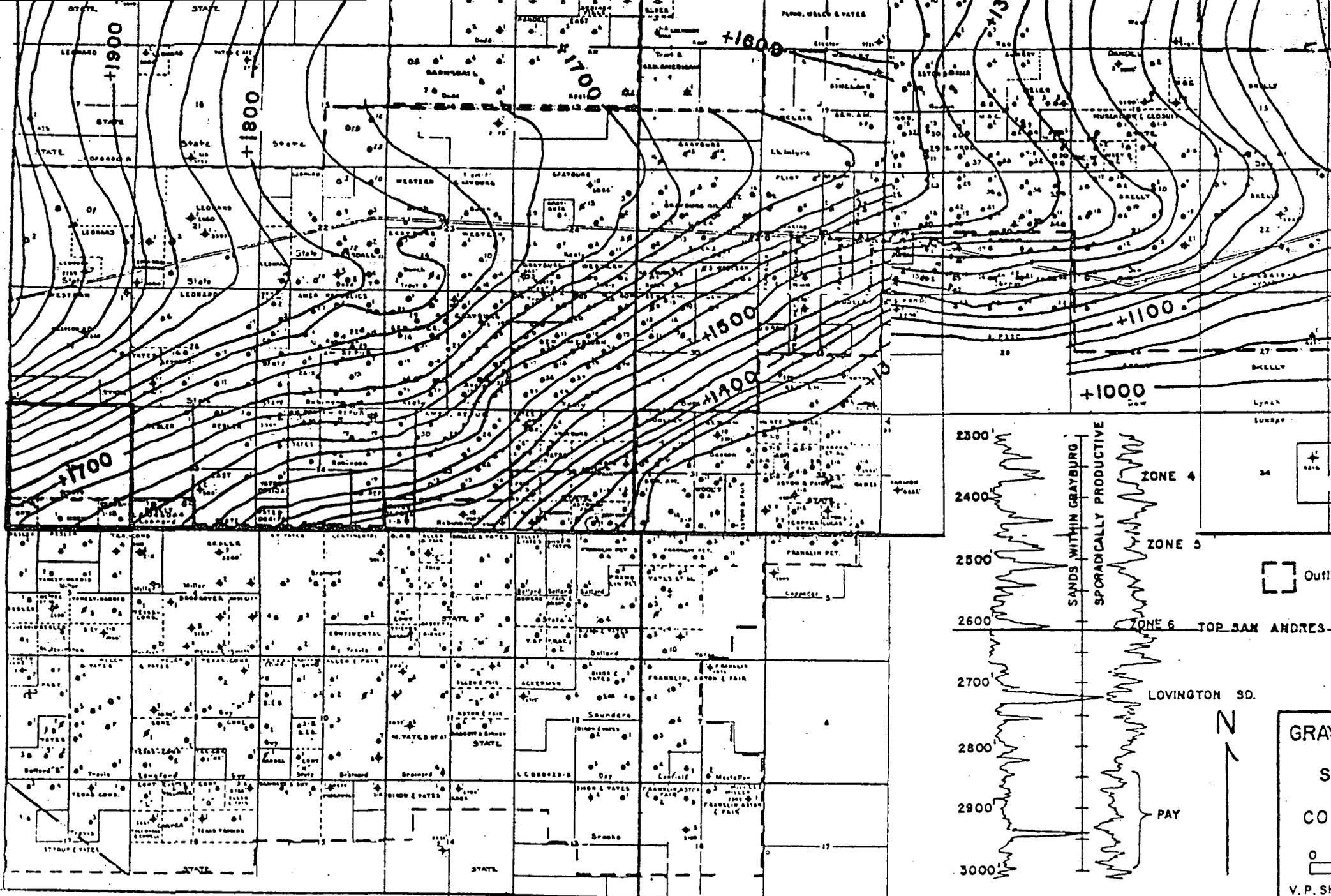
Rule 8:

- a. Old Loco Unit #15-990 FSL 1980 FEL Sec. 32-T17S-R29E
Old Loco Unit #17 - 330 FSL 2310 FEL Sec. 32-T17S-R29E
- b. #15 - 3/4/58
#17 - 11/5/79
- c. #15 - 4/7/58
#17 - 12/10/79
- d. None
- e. #15 - Injection
#17 - 9 bbl. oil, 5 mcf gas/day
- f. NA
- g. Well #15 was placed on injection in 1966 and needs to remain on injection for proper flooding of this unit.



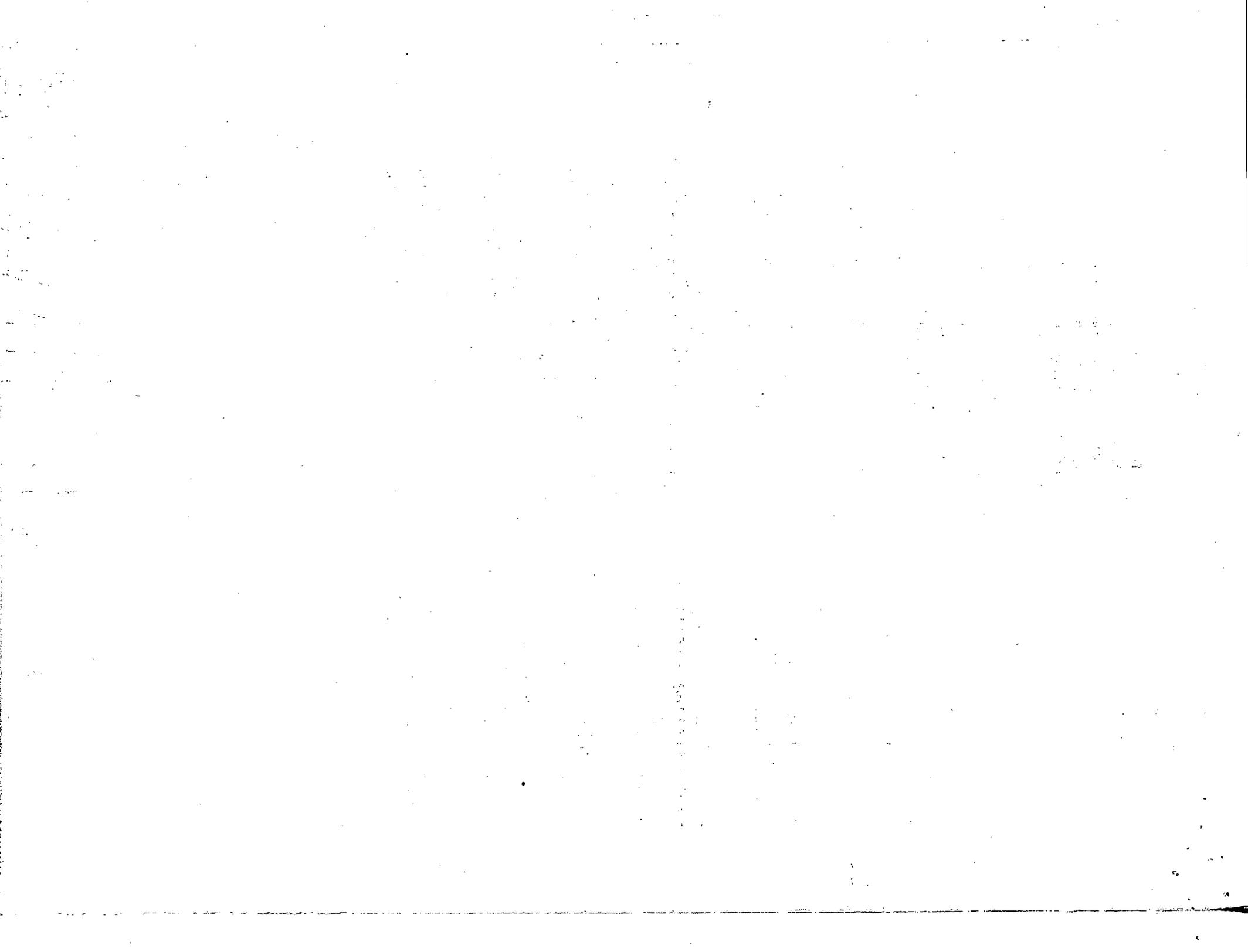
T 17 S

T 18 S



R 29 E

RULE # 9-A



Marbob Energy Corporation
Old Loco Unit, Well #17
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #17 was completed in the Grayburg Jackson pool in December 1979. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 8,136 barrels and gas reserves recoverable will be 4,149 mcf.

Oil reserves were calculated from the attached time/rate curve to an economic limit of approximately 1 BOPD (see table). Gas reserves were estimated using a study of the gas oil ratio performance not only on the specific well but on the pool history.

From a study of this immediate area in this pool I find per well producing rates in 1970 below what the rates are for the newly drilled infill wells. The daily producing rate of oil for well #17 in May 1982 was 9 BOPD. In 1970 the average daily producing rate per well on this property was 7 BOPD.

Due to extensive waterflooding in the area there has been significant oil migration into areas between injection wells or between injection and producing wells.

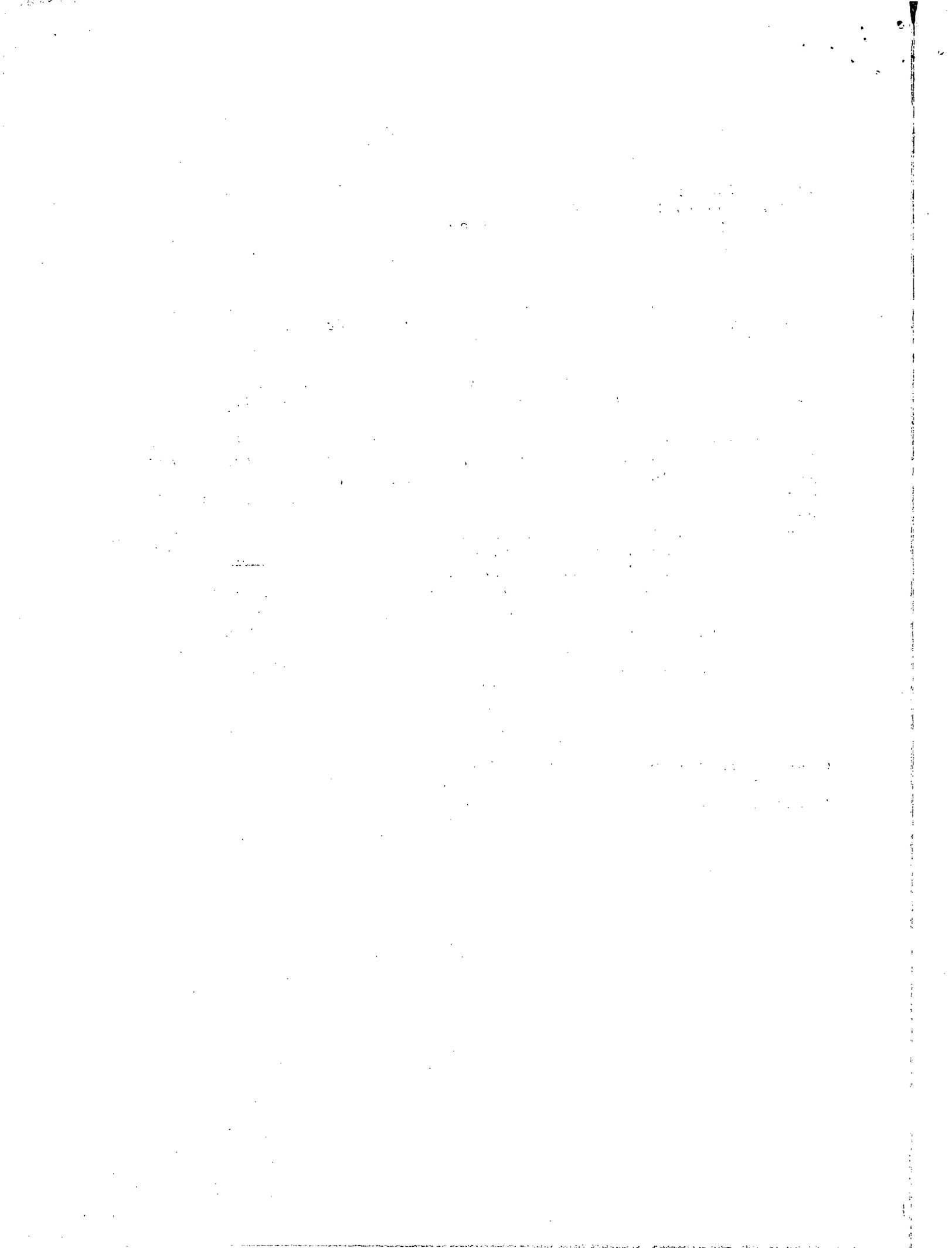
It is evident from the rate of production and from oil reserves remaining that pattern density has to be increased to recover additional oil and gas reserves.

Therefore, it is my recommendation that well density be increased by drilling infill wells. It is my conclusion that many infill wells will experience reservoir conditions.

Paul G. White
Petroleum Engineer

Date

RULE # 9-B



Marbob Energy Corp.
Old Loco Unit, Well #17
330 FSL 2310 FEL Sec. 32-T17S-R29E
Eddy County, N.M.

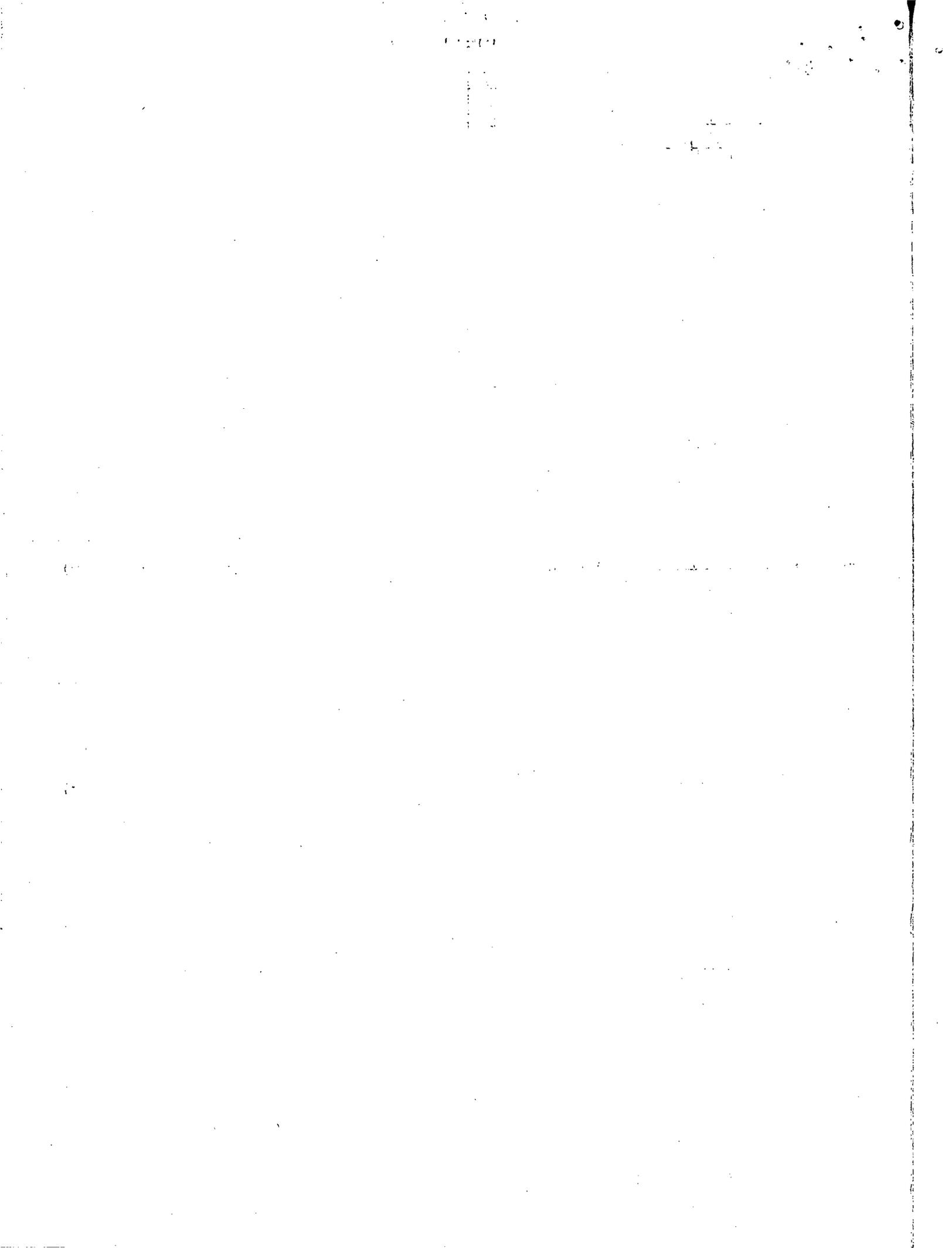
Calculation of oil reserves - refer to rate/time curves:

<u>Year</u>	<u>Gross monthly Oil - bbls.</u>	<u>Gross Yearly Oil - bbls.</u>
1982 (6 mos.)	240	1,440
1983 185	185	2,220
1984 130	130	1,560
1985	94	1,128
1986	66	792
1987	48	576
1988	35	<u>420</u>
Total oil remaining:		8,136
Cumulative to 1/1/82		<u>14,286</u>
Total ultimate reserves:		22,422

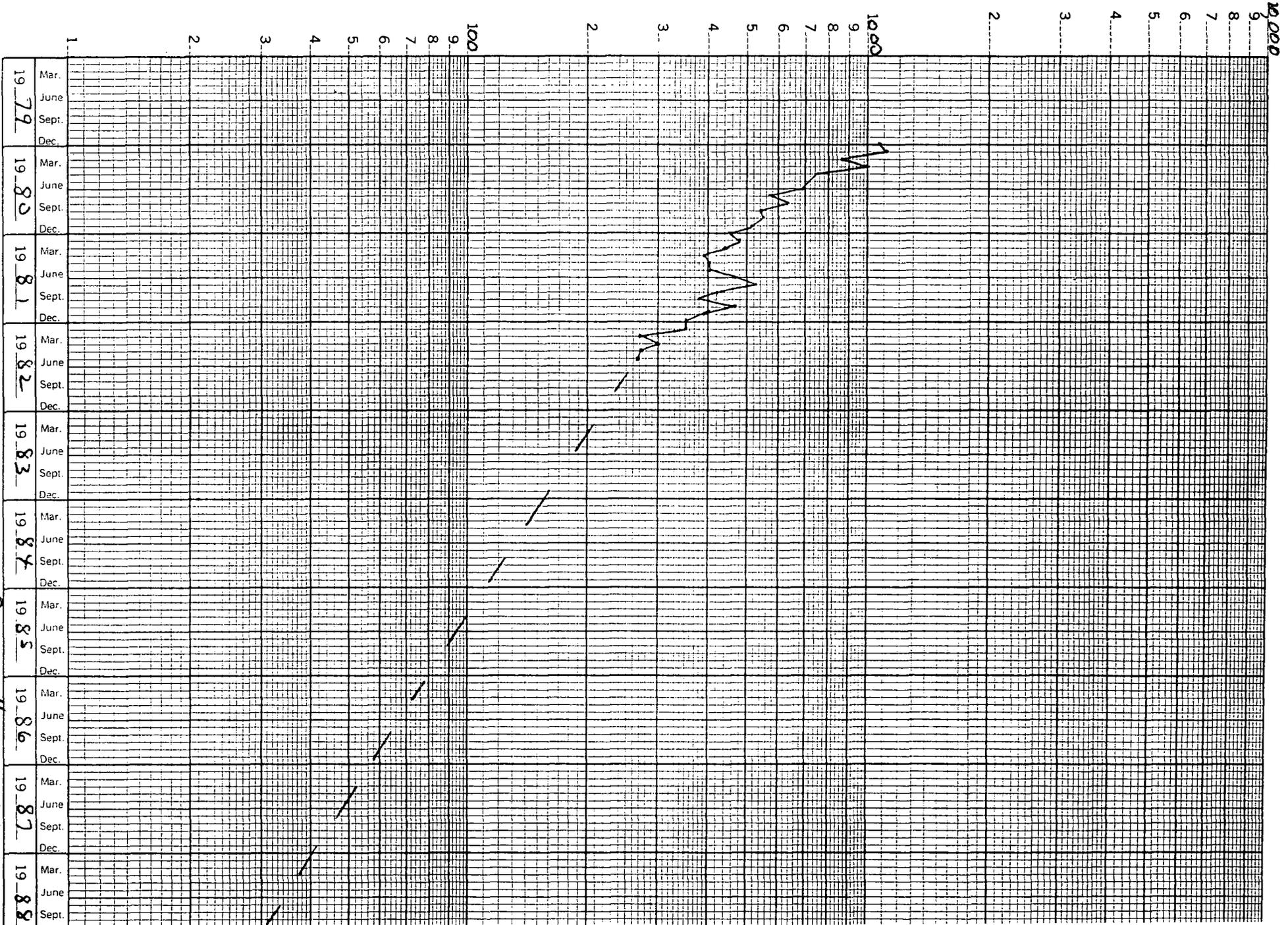
Gas-oil ratio average - 510 to 1

Remaining gas reserves - 4,149 mcf

RULE #9-B

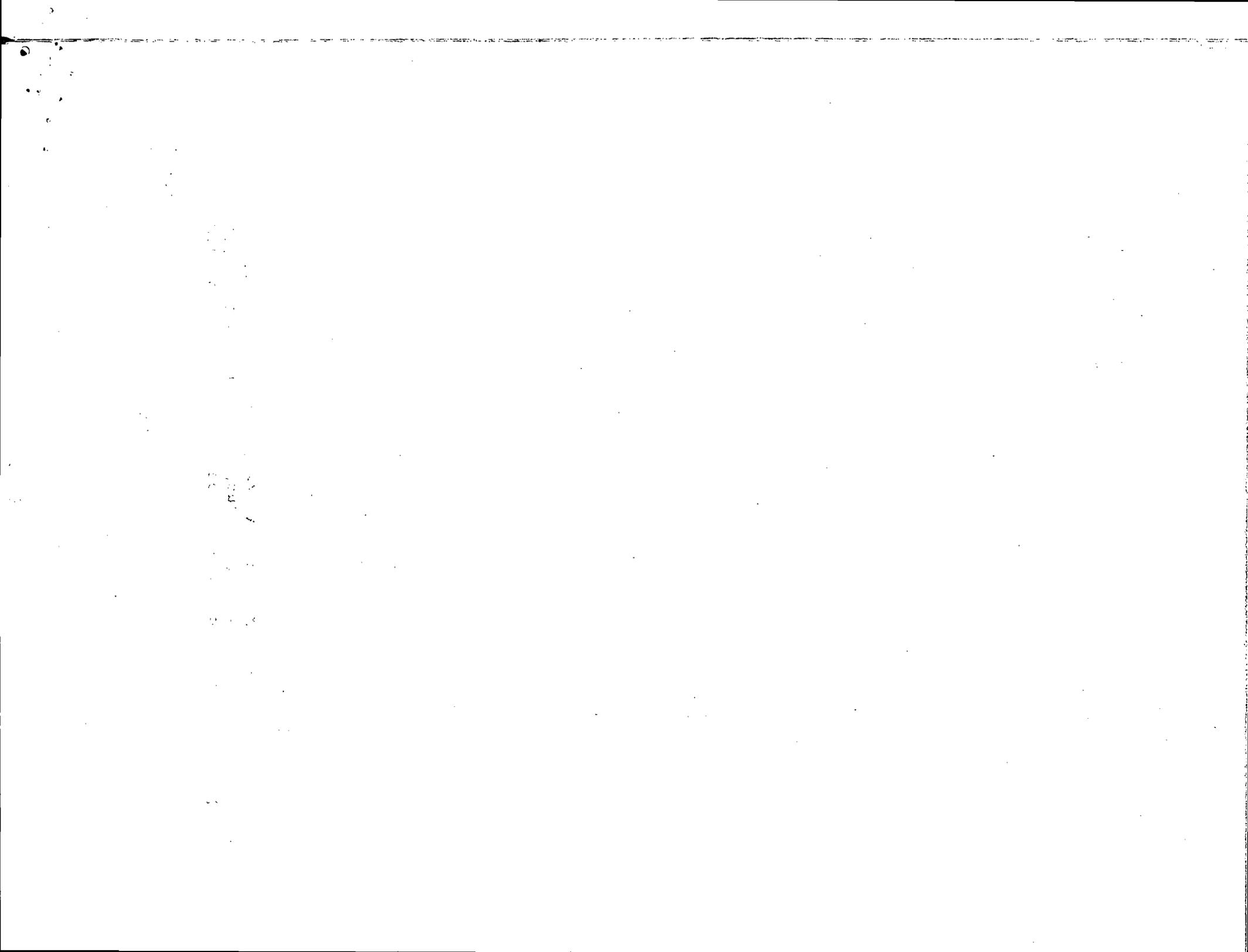


Bbls / Oil / Month



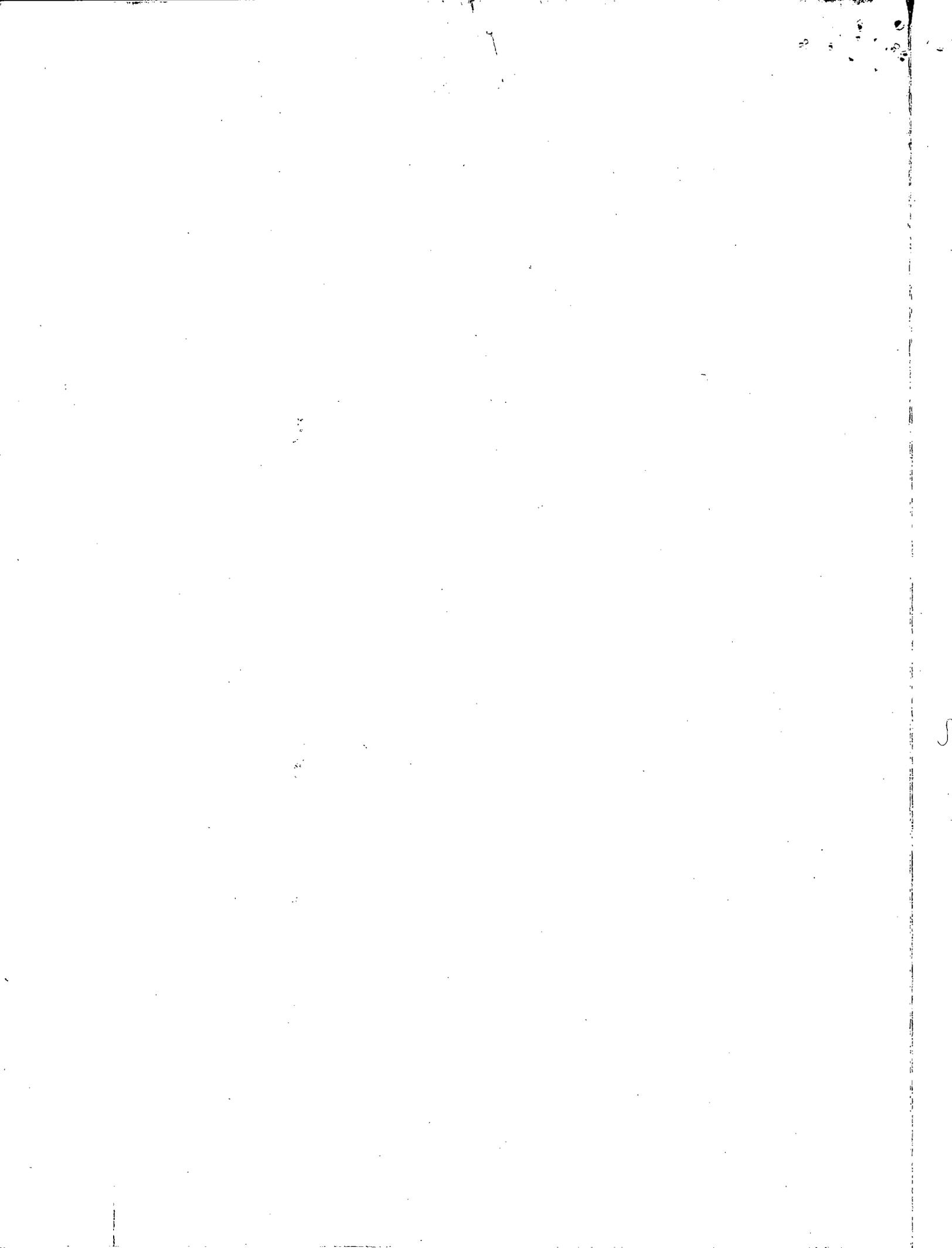
OLD LOGO UNIT
WELL NO 17

RULE # 9-C(2)



Rule 11:

Notice of this infill request has been sent to Depco., Inc. 1000 Petroleum Bldg., Denver, Colorado 80202; and Anadarko Production Co., Box 2497, Midland, Texas 79702, as the offset operators.



Request for Infill Finding on

Old Loco Unit #17

in accordance with Administrative
Procedures amended February 8, 1980.

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LAND OFFICE	
OPERATOR	✓

NEW MEXICO OIL CONSERVATION COMMISSION
RECEIVED

30-015-23047
Form C-101
Revised 1-1-65

OCT 19 1979

O. C. C.

ARTESIA OFFICE

5A. Indicate Type of Lease
STATE FEE

5. State Oil & Gas Lease No.
B-5084

7. Unit Agreement Name
Old Loco Unit

8. Firm or Lease Name
Old Loco Unit

9. Well No.
17

10. Field and Pool, or Wildcat
SA Grbg. Jackson Queen Grbg.

12. County
Eddy

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

a. Type of Work

DRILL DEEPEN PLUG BACK

b. Type of Well

OIL WELL GAS WELL SINGLE ZONE MULTIPLE ZONE

1. Name of Operator
Marbob Energy Corporation

2. Address of Operator
Box 304, Artesia, N.M. 88210

3. Location of Well
UNIT LETTER 0 LOCATED 330 FEET FROM THE South LINE

AND 2310 FEET FROM THE East LINE OF SEC. 32 TWP. 17S RGE. 29E NMPM

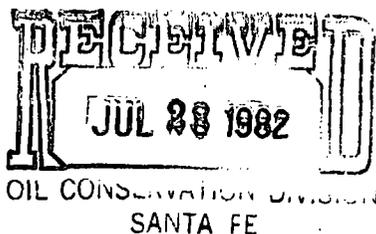
19. Proposed Depth 2850'
19A. Formation Grayburg & Lovington
20. Rotary or C.T. Rotary

21. Elevations (Show whether DT, RL, etc.) 3564 GL
21A. Kind & Status Plug. Bond Statewide active
21B. Drilling Contractor Alta-West Drilling Co.
22. Approx. Date Work will start 10/23/79

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
11"	8 5/8"	28#	250'	Circ.	
7 7/8"	4 1/2"	10.50#	2850'	225	

We propose to drill to approximately 2850' to test Grayburg and Lovington formation. We do not anticipate gas at these depths & will not set up a blowout preventer program at this time.



APPROVAL VOID FOR 90 DAYS UNLESS DRILLING IS FINANCED, EXPIRES 1-23-80

ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Cynthia Cross Title Secretary Date 10/18/79

(This space for State Use)

APPROVED BY W.A. Gussitt TITLE SUPERVISOR, DISTRICT 12 DATE OCT 23 1979

CONDITIONS OF APPROVAL, IF ANY: RULE #5

THE UNIVERSITY OF CHICAGO
LIBRARY

1954

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

All distances must be from the outer boundaries of the Section

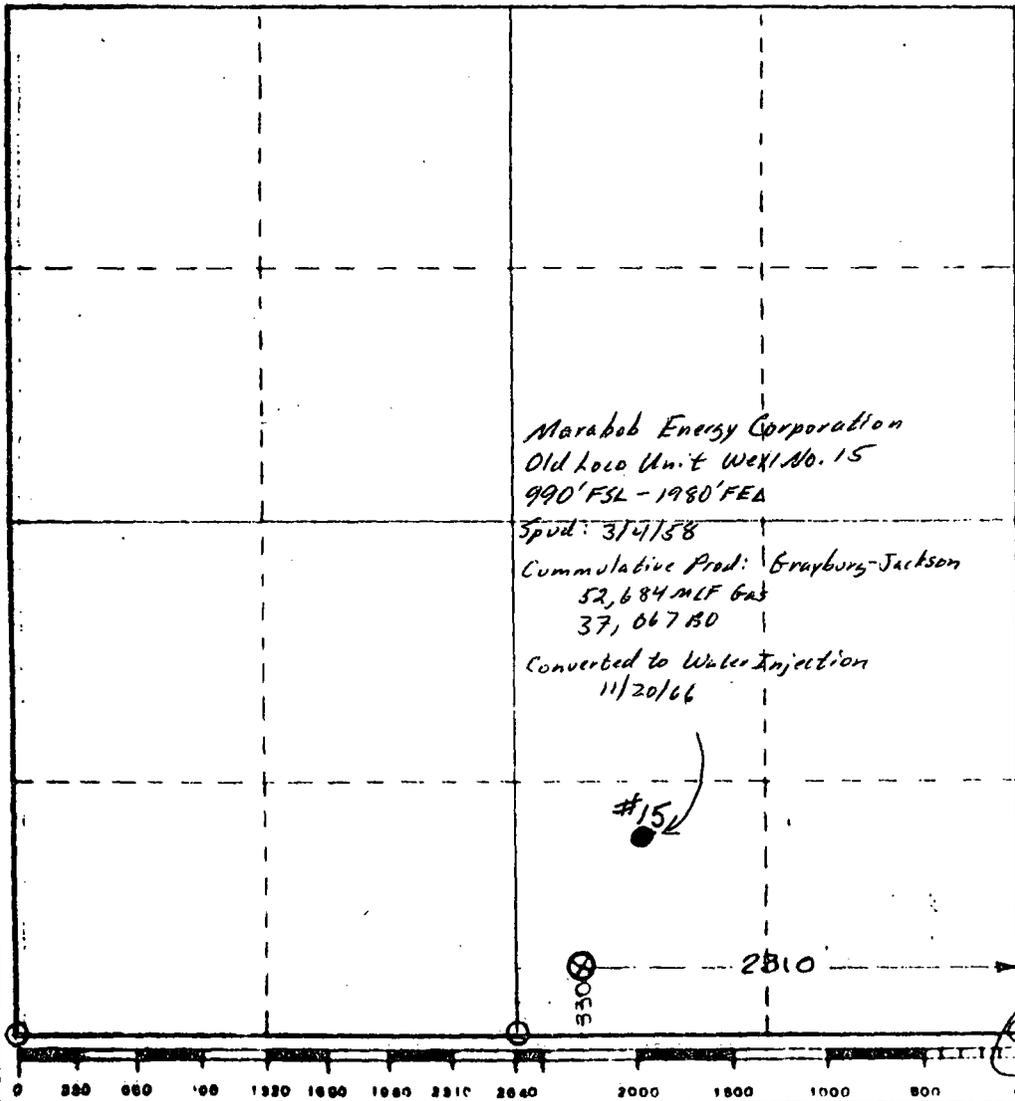
Operator MARBOB ENERGY CORPORATION		Lease OLD LOCO UNIT		Well No. 17
Unit Letter 0	Section 32	Township 17 South	Range 29 East	County EDDY
Actual Footage Location of Well: 330 feet from the South line and 2310 feet from the East line				
Ground Level Elev. 3564	Producing Formation GRAYBURG + LOVINGTON		Depth GRAB JACKSON QUEEN BEGG SA	Estimated 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.



Marabob Energy Corporation
Old Loco Unit Well No. 15
990' FSL - 1980' FEA
Spud: 3/4/58
Cumulative Prod: Grayburg-Jackson
52,684 MCF Gas
37,067 BO
Converted to Water Injection
11/20/66

#15L

2310

DOEE

CERTIFICATION

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

Name _____
 Position **Sec**
 Company **Marabob Energy**
 Date **10-18-79**

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
September 25, 1979
 Registered Professional Engineer
 and Land Surveyor
Shirley W. Shear
 Certificate No. **1559**

RULE #5

1/20/20
1/20/20

Rule 6:

Old Loco Unit #17

Pool: Grayburg Jackson Seven Rivers Queen Grayburg San Andres

Standard spacing unit: 40 acres

Rule 7:

NA

Rule 8:

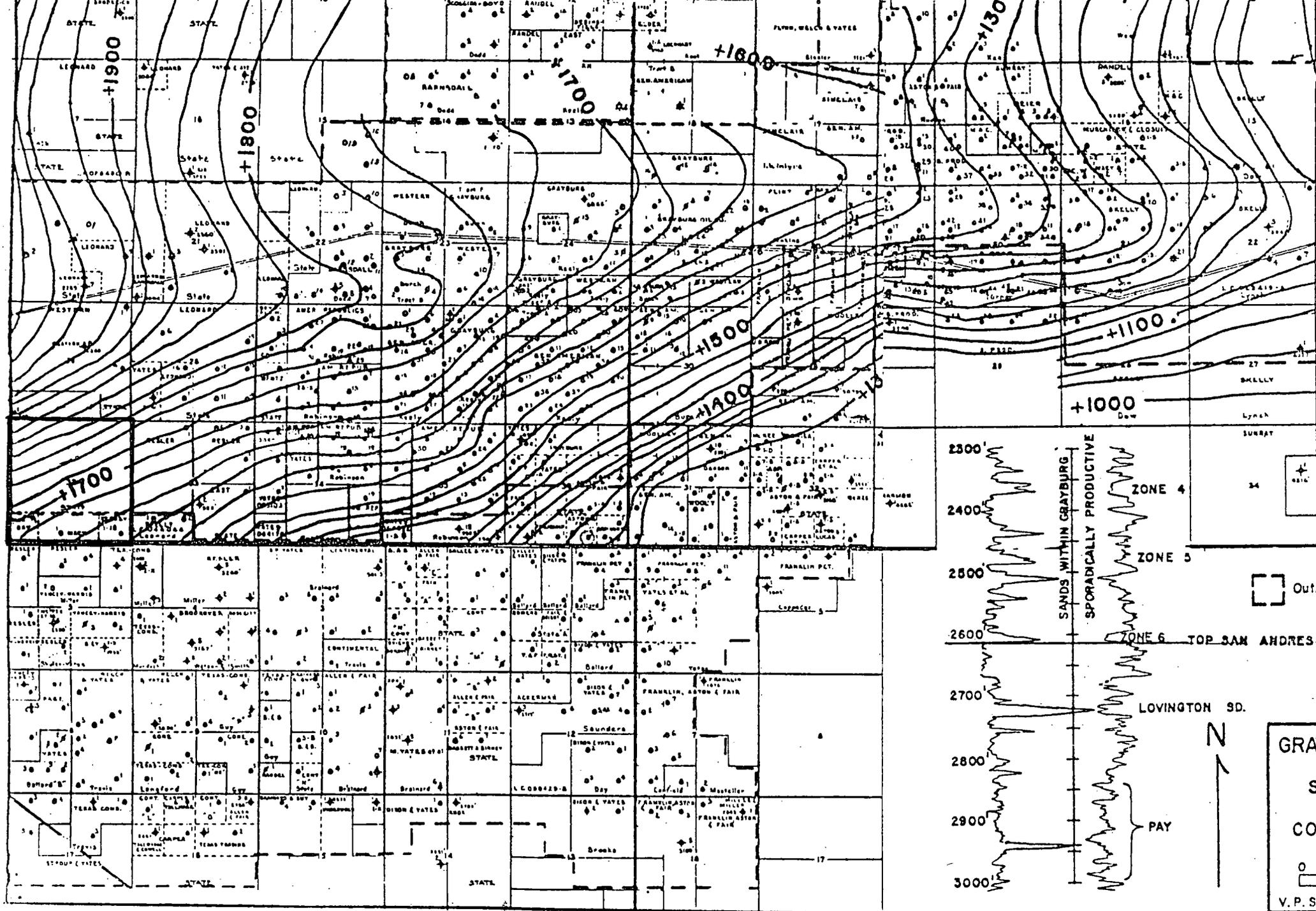
- a. Old Loco Unit #15-990 FSL 1980 FEL Sec. 32-T17S-R29E
Old Loco Unit #17 - 330 FSL 2310 FEL Sec. 32-T17S-R29E
- b. #15 - 3/4/58
#17 - 11/5/79
- c. #15 - 4/7/58
#17 - 12/10/79
- d. None
- e. #15 - Injection
#17 - 9 bbl. oil, 5 mcf gas/day
- f. NA
- g. Well #15 was placed on injection in 1966 and needs to remain on injection for proper flooding of this unit.

T 17 S

T 18 S

R 29 E

RULE # 9-A



GRAY
S
CO
0
V.P. SH



Marbob Energy Corporation
Old Loco Unit, Well #17
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #17 was completed in the Grayburg Jackson pool in December 1979. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 8,136 barrels and gas reserves recoverable will be 4,149 mcf.

Oil reserves were calculated from the attached time/rate curve to an economic limit of approximately 1 BOPD (see table). Gas reserves were estimated using a study of the gas oil ratio performance not only on the specific well but on the pool history.

From a study of this immediate area in this pool I find per well producing rates in 1970 below what the rates are for the newly drilled infill wells. The daily producing rate of oil for well #17 in May 1982 was 9 BOPD. In 1970 the average daily producing rate per well on this property was 7 BOPD.

Due to extensive waterflooding in the area there has been significant oil migration into areas between injection wells or between injection and producing wells.

It is evident from the rate of production and from oil reserves remaining that pattern density has to be increased to recover additional oil and gas reserves.

Therefore, it is my recommendation that well density be increased by drilling infill wells. It is my conclusion that many infill wells will experience reservoir conditions.

Paul G. White
Paul G. White
Petroleum Engineer

July 27, 1982
Date

RULE # 9-B

Marbob Energy Corp.
Old Loco Unit, Well #17
330 FSL 2310 FEL Sec. 32-T17S-R29E
Eddy County, N.M.

Calculation of oil reserves - refer to rate/time curves:

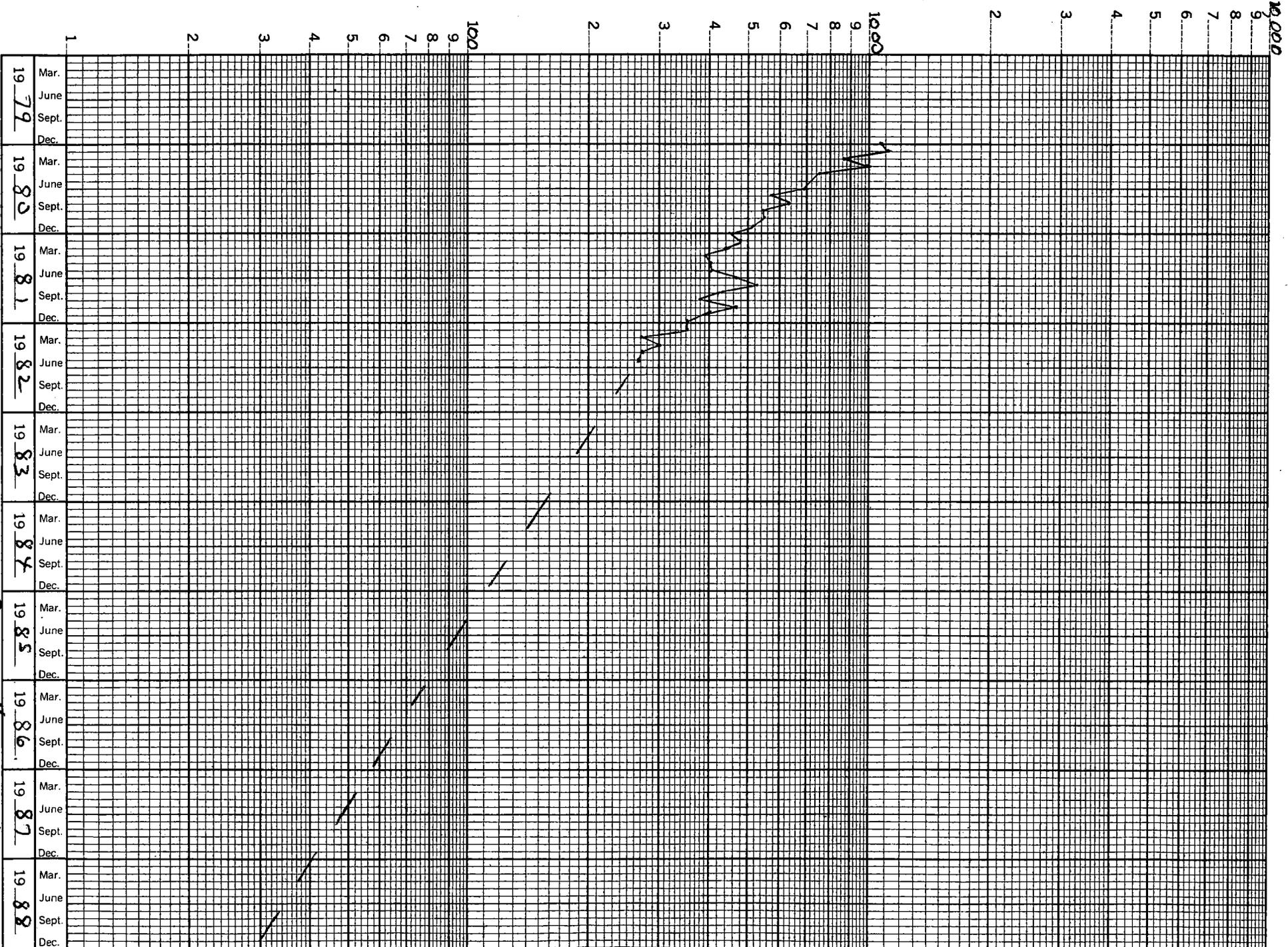
<u>Year</u>	<u>Gross monthly Oil - bbls.</u>	<u>Gross Yearly Oil - bbls.</u>
1982 (6 mos.)	240	1,440
1983 185	185	2,220
1984 130	130	1,560
1985	94	1,128
1986	66	792
1987	48	576
1988	35	<u>420</u>
Total oil remaining:		8,136
Cumulative to 1/1/82		<u>14,286</u>
Total ultimate reserves:		22,422

Gas-oil ratio average - 510 to 1

Remaining gas reserves - 4,149 mcf

RULE #9-B

Bbls / Oil / Month



RULS #9-0(2)

OLD LOG UNIT
 WELL NO 17

Rule 11:

Notice of this infill request has been sent to Depco., Inc. 1000 Petroleum Bldg., Denver, Colorado 80202; and Anadarko Production Co., Box 2497, Midland, Texas 79702, as the offset operators.