

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. 19
Location: Unit N Sec. 32 Twp. 17-S Rng. 29-E Cty. Eddy

II.

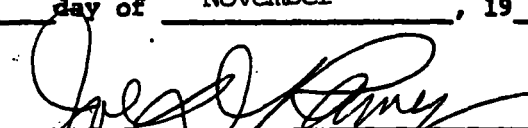
THE DIVISION FINDS:

- (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=QN-Grbg-SA) Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40 -acre proration unit comprising the SE/4 SW/4 of Sec. 32, Twp. 17-S, Rng. 29-E, is currently dedicated to the Old Loco Unit Well No. 14 located in Unit N of said section.
- (5) That this proration unit is (X) standard () nonstandard; if nonstandard, said unit was previously approved by Order No. N/A.
- (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 2,457 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 24th day of November, 19 82.


DIVISION DIRECTOR EXAMINER

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

Received: July 19, 1982
Supervisor: Toby
ADMINISTRATIVE ORDER
NFL 62

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 Marbach Energy Corporation Well Name and No. Old Lolo Unit Well No. 19
Location: Unit N Sec. 32 Twp. 17S Rng. 29E 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 - Qn. - Grbg. - SA) Pool, and the standard spacing unit in said pool is 40 acres.

(4) That a 40-acre proration unit comprising the SE 1/4 SW 1/4 of Sec. 32, Twp. 17S, Rng. 29E, is currently dedicated to the Old Lolo Unit Well No. 14 located in Unit N of said section.

(5) That this proration unit is ☒ standard () nonstandard; if nonstandard, said unit was previously approved by Order No. N/A.

(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 2,457 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____.

cc - Old Antenna
NMO+6EL Hobbs

DIVISION DIRECTOR _____ EXAMINER _____

Request for Infill Finding on

Old Loco Unit #19

in accordance with Administrative

Procedures amended February 8, 1980

N- 32-175-29E

Eddy

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OPERATOR	☒

NEW MEXICO OIL CONSERVATION COMMISSION

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FEB 8 1980

30-015-23156

Form C-101
Revised 11-75

5A. Indicate Type of Location
STATE ☒ FEDERAL ☐
5. State Well or Lease Number
B-4918

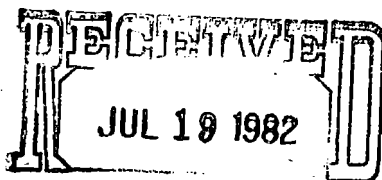
APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work		7. Unit & previous name	
b. Type of Well		Old Loco Unit	
DRILL ☒	DEEPEN ☐	8. Name of Location	
SINGLE ☒	MULTIPLE ☐	Old Loco Unit	
2. Name of Operator		9. Well No.	
Marbob Energy Corporation		19	
3. Address of Operator		10. Field name	
P.O. Box 304, Artesia, N. M. 88210		Grbg. SA	
4. Location of Well		Grbg Jackson SR Queen	
UNIT LETTER N LOCATED 990 FEET FROM THE South LINE		11. County	
AND 1650 FEET FROM THE West LINE OF SEC. 32 TWP. 17S RGE. 29E		Eddy	
15. Proposed Depth		16A. Formation	
2850'		Grayburg & Lovington	
21A. Kind & Status Frac. Bond		22. Approx. Date Work will start	
Statewide Active		2/4/80	
21B. Drilling Contractor			
Alta-West Drilling Co.			
21. Elevation (show whether DJ, RL, etc.)			
3586 GR			

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"	20#	250'	Circ.	
7 7/8"	4 1/2"	10.50#	2850'	225	

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



OIL CONSERVATION DIVISION
SANTA FE

APPROVAL
FOR 90 DAYS UNLESS
DRILLING COMMENCED,

EXPIRES 3-11-80

IN 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 Carolyn Davis Title Secretary Date 2/8/80

(This space for State Use)

APPROVED BY W.A. Gressett TITLE SUPERVISOR, DISTRICT II DATE FEB 11 1980

CONDITIONS OF APPROVAL, IF ANY:

Rule #5



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

FLAGSTAFF, ARIZONA

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form
Superseded by 1-1-1980
1-1-1980

All distances must be from the outer boundaries of the Section

Operator MARBOD ENERGY CORPORATION		Lease OLD LOCO UNIT		Acres 19
Unit Letter N	Section 32	Township 17 South	Range 29 East	County Eddy
Actual Section Location of Well: 990 South 1650 West				
Ground Level Elev. 3596	Tract description Grayburg & Lovington		Tract description Grbg Jackson SR Queen Grbg SA 40	

1. Outline the acreage dedicated to the subject well by colored pencil or hatch 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).

RECEIVED

FEB 8 1980

O. C. D.

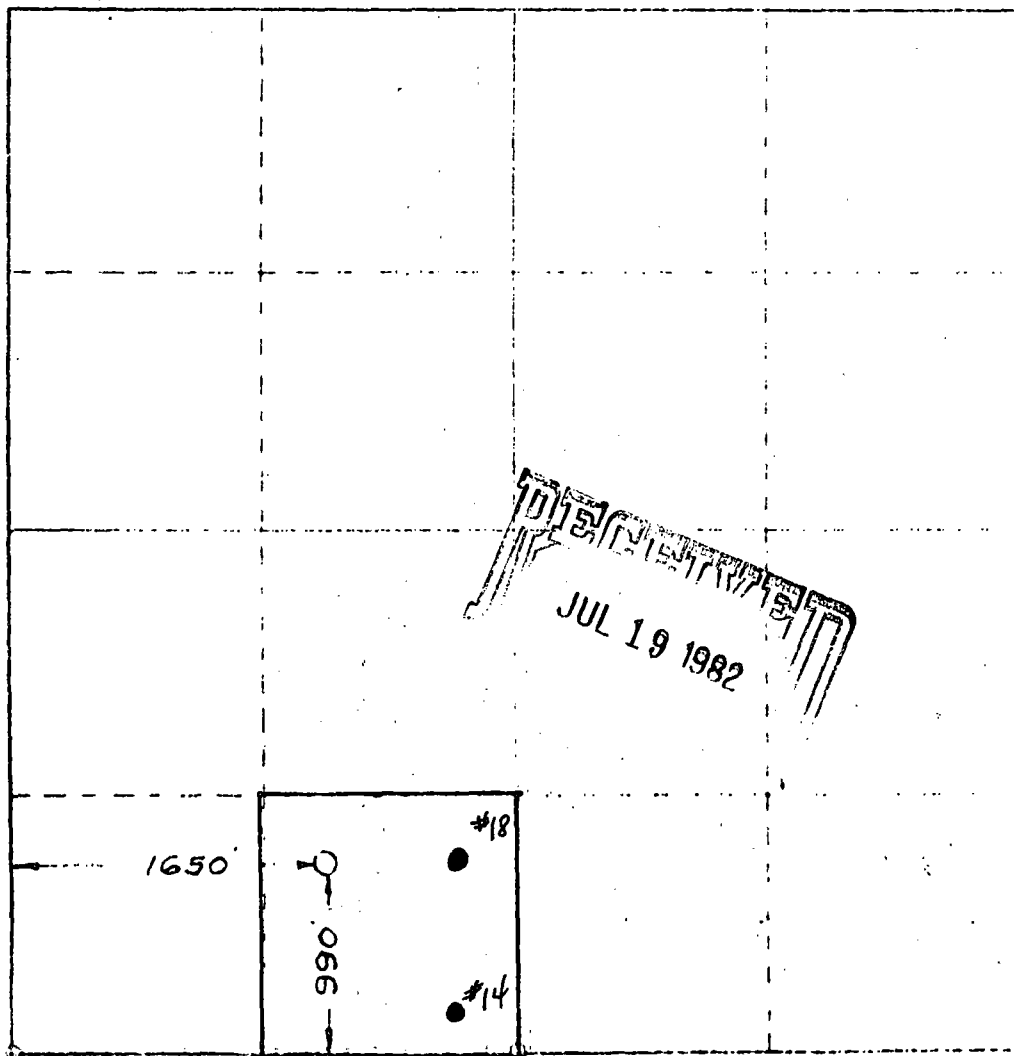
ARTESIA, OFFICE

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, forced-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

Carolyn Orta

Secretary

Marbob Energy Corp.

2/8/80

Rule #5

I hereby certify that the information shown on this plat is true and complete to the best of my knowledge and belief, and that the same is true and correct to the best of my knowledge and belief

January 17, 1980

John W. Shearn

Rule 6:

Old Loco Unit #19

Pool: Grayburg Jackson Seven Rivers Queen Grayburg San Andres

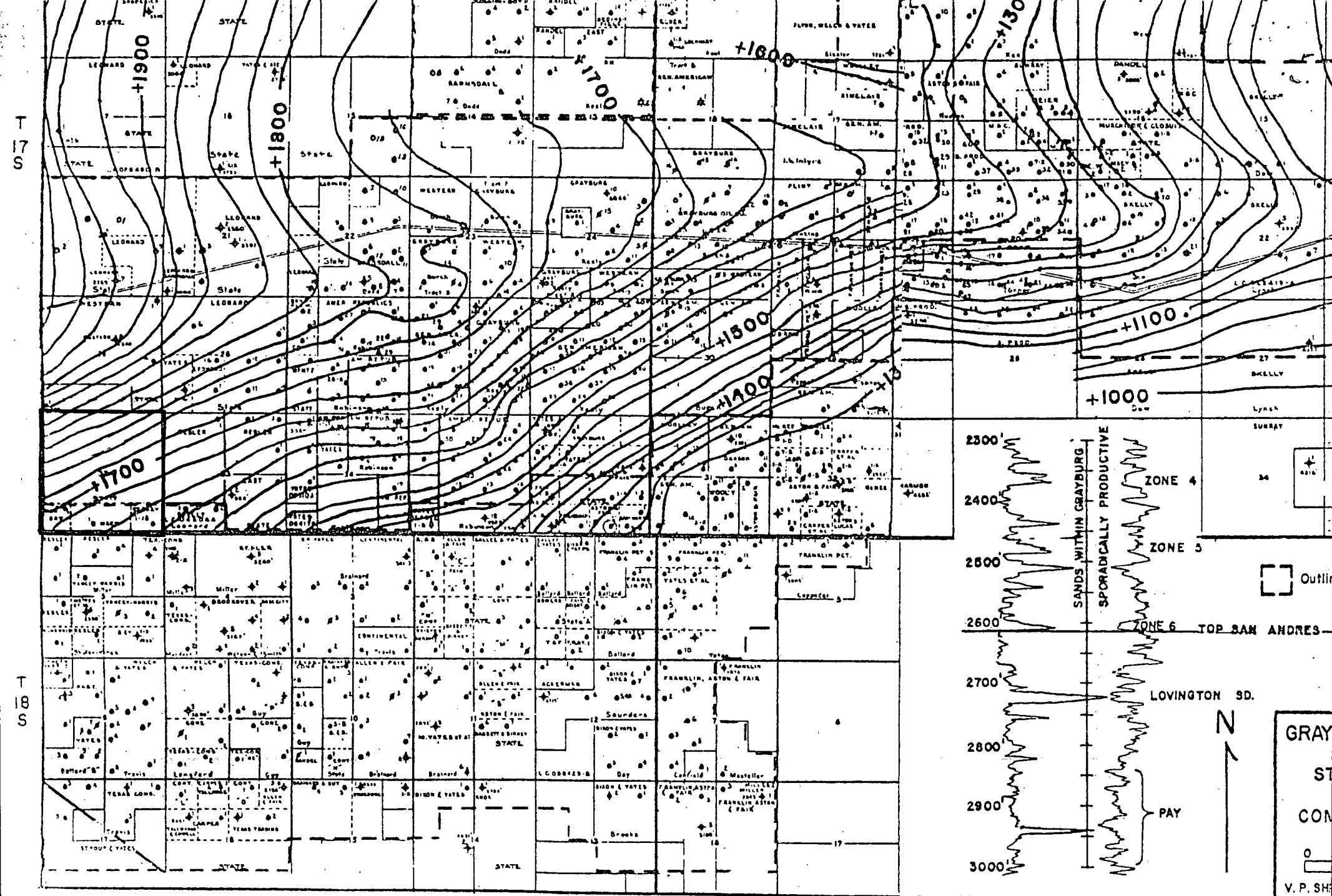
Standard spacing unit: 40 acres

Rule 7:

NA

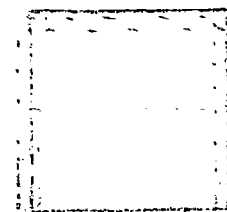
Rule 8:

- a. Old Loco Unit #14 - 330 FSL 2310 FWL Sec. 32-T17S-R29E
Old Loco Unit #18 - 990 FSL 2310 FWL Sec. 32-T17S-R29E
- b. #14 - 3/4/40
#18 - 11/13/79
- c. #14 - 4/9/40
#18 - 12/13/79
- d. None
- e. #14 - 2 bbl. oil, 1/3 mcf gas/day
#18 - 9 bbl. oil, 9 mcf gas/day
- f. NA
- g. Well #19 was drilled because of the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir. Since both #19 and #18 experienced new reservoir type conditions we feel the additional drilling was justified.



R 29 E

Rule #9-A



100-1000

Marbob Energy Corporation
Old Loco Unit, Well #19
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #19 was completed in the Grayburg Jackson pool in March 1980. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 9,828 barrels and gas reserves recoverable will be 2,457 mcf.

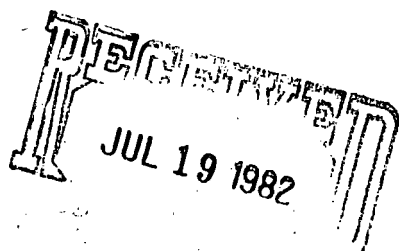
Oil reserves were calculated from the attached time/rate curve to an economic limit of approximately 1 BOPD (see table). Gas reserves were estimated using a study of the gas oil ratio performance not only on the specific well but on the pool history.

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 #19 in May 1982 was 12 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 new reservoir conditions.



Paul G. White
Paul G. White
Petroleum Engineer

7-15-82
Date

Rule #9-B

Marbob Energy Corp.
Old Loco Unit, Well #19
990 FSL 1650 FWL Sec. 32-T17S-R29E
Eddy County, N.M.

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

<u>Year</u>	<u>Gross monthly Oil - bbls.</u>	<u>Gross Yearly Oil - bbls.</u>
1982 (6 mos.)	340	2,040
1983	240	2,880
1984	160	1,920
1985	108	1,296
1986	61	732
1987	47	564
1988	33	396
Total oil remaining:		9,828
Cumulative to 1/1/82		<u>14,976</u>
Total ultimate reserves:		24,804

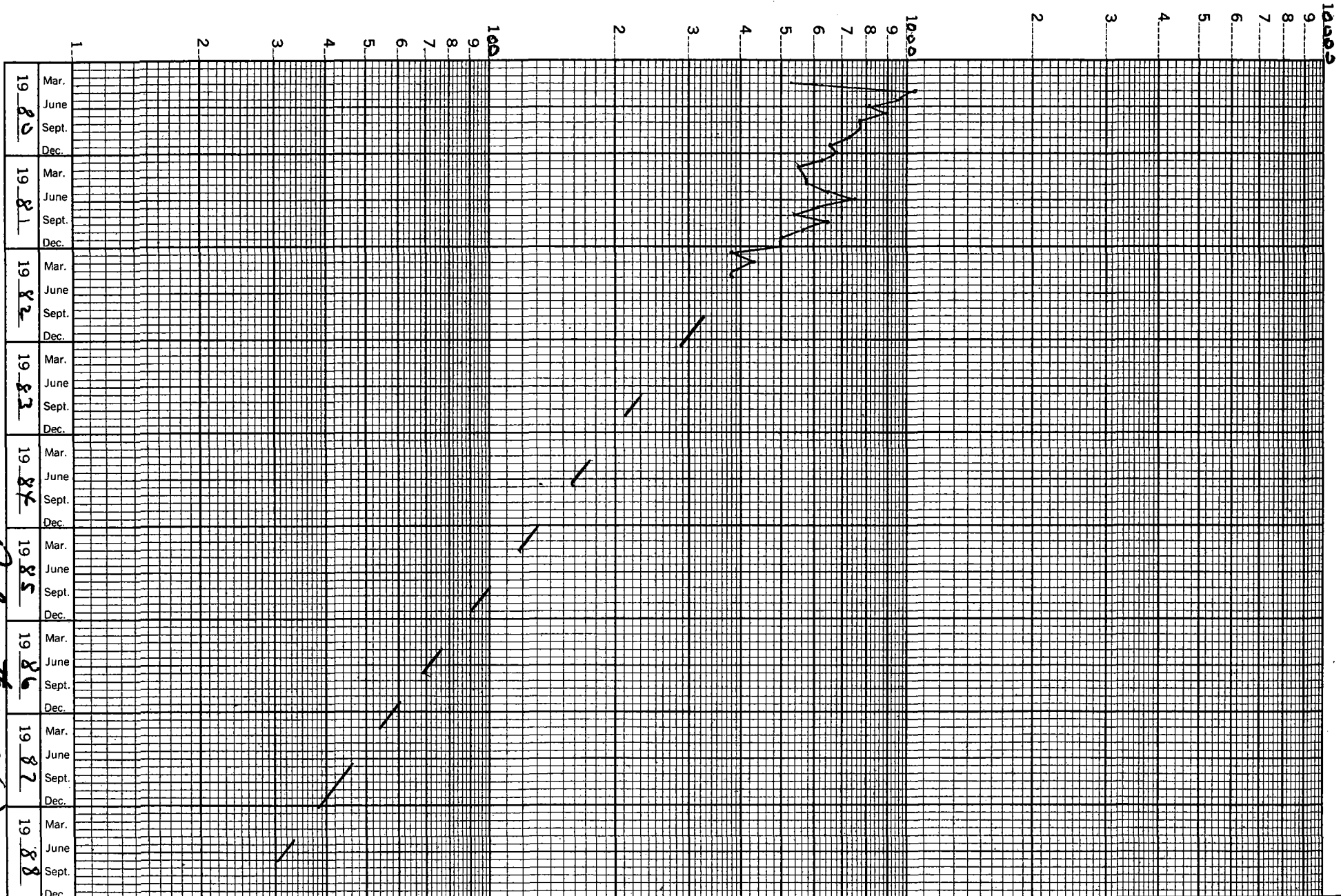
Gas-oil ratio average - 250 to 1

Remaining gas reserves - 2,457 mcf

Rule #9-B

BBLs / OIL / MONTH

OLD LOGO UNIT
WELL NO 19



Rate #9-C(2)

Rule 11:

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

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**NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

Form C-105
Revised 10-68

TYPE OF WELL

TYPE OF COMPLETION

NEW WELL ☒ WORK-OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. REVS. ☐ OTHER ☐

Name of Operator

Marbob Energy Corp.

Address (if other)

P.O. Box 304, Artesia, N.M. 88210

Location of Well

LETTER **N** LOCATED **990** FEET FROM THE **South** LINE AND **1650** FEET FROM

West **LINE OF SEC. 32 TWP. 17S RGE. 29E**

Date Spudded **2/4/80** 16. Date T.D. Reached **2/10/80** 17. Date Compl. (Ready to Prod.) **3/12/80** 18. Elevations (DF, RKII, RT, GR, etc.) **3586' GR** 19. Elev. Casinghead **3586' GR**

Total Depth **2862'** 21. Plug Back T.D. **2834'** 22. If Multiple Compl., How Many **1** 23. Intervals Drilled By **X** Rotary Tools Cable Tools

Producing Interval(s), of this completion - Top, Bottom, Name

2419 - 2543, 2654 - 2714 Premier & Grayburg

Type Electric and Other Logs Run

Gamma ray neutron

27. Was Well Cased

No

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	20#	310.82	11"	150 sax Cl. H 2% CC	
4 1/2"	10.50#	2850'	7 7/8"	370 sax Cl. H, 5/10 of 1% CFR 2, 5# salt, 10# sand per sack	

LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 3/8"	2730'	

Perforation Record (Interval, size and number)

2419-2423 - 8 shots
2430-2434 - 8 shots
2533-2543 - 16 shots .42
2654-2658 - 8 shots
2674-2676 - 4 shots

2682-2684 - 4 shots
2710-2714 - 8 shots

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
2419-2543	27000 gal gel water
	10,000# 20/40 sand, 6,000# 10/20 sand
2654-2714	39,000 gal gel water, 28,000# 20/40 sand, 12,000# 10/20 sand

PRODUCTION

First Production 3/20/80	Production Method (Flowing, gas lift, pumping - Size and type pump) Pump - 1 1/2"	Well Status (Prod. or Shut-in) Prod.
of Test 3/21/80	Hours Tested 24	Choke Size 50
Flowing Per Test Period 50	Oil - Bbl. to pipeline	Gas - MCF 50
Tubing Press.	Casing Pressure	Calculated 24-Hour Rate 50
		Oil - Bbl. to pipeline
		Gas - MCF 50
		Water - Bbl. 50
		Oil Gravity - API (Corr.)

Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold

Test Witnessed By

Mack C. Chase

List of Attachments

GRN log, deviation survey

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

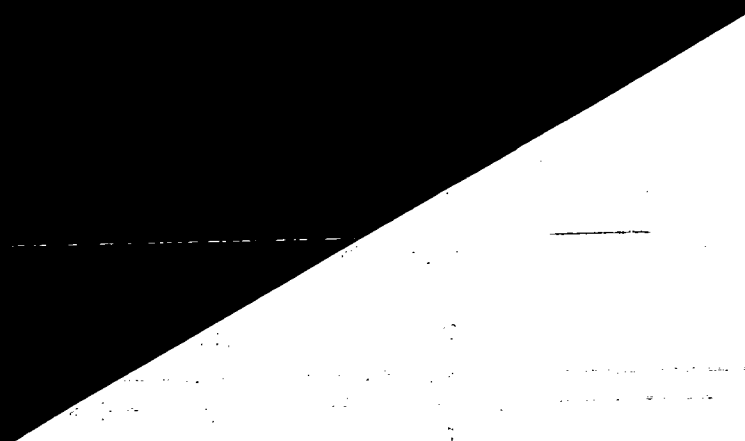
SIGNED *C. Chase*

TITLE **Secretary**

DATE **3/25/80**

From	to	Thickness in feet	Formation
0	23	25	Caliche
25	68	43	Red bed & gyp
68	250	182	Gyp, anhydrite
250	550	300	Salt
550	1100	550	Salt, anhydrite
1100	1950	850	Anhydrite, lime
1950	1960	10	Anhydrite, red shale
1960	1980	20	Anhydrite, shale, red sand
1980	2040	60	Anhydrite, dolomite, sand
2040	2060	20	Anhydrite, dolomite, sand, red shale
2060	2090	30	Anhydrite, dolomite, red shale
2090	2100	10	Anhydrite
2100	2140	40	Anhydrite, dolomite, red sand
2140	2150	10	Anhydrite, dolomite, sand, shale
2150	2160	10	Anhydrite, red & gray sand, shale
2160	2200	40	Anhydrite, red & gray sand
2200	2208	8	Anhydrite, dolomite, shale, sand
2208	2230	22	Anhydrite, dolomite, red & gray sand
2230	2240	10	Anhydrite, red & gray sand
2240	2260	20	Anhydrite, dolomite, red & gray sand
2260	2270	10	Anhydrite, dolomite, red sand, shale
2270	2280	10	Anhydrite, red sand
2280	2300	20	Anhydrite, red & gray sand
2300	2310	10	Anhydrite, red sand
2310	2390	80	Anhydrite, dolomite, red sand
2390	2400	10	Anhydrite, dolomite, red & gray sand
2400	2420	20	Anhydrite, dolomite
2420	2470	50	Anhydrite, dolomite, sand
2470	2480	10	Dolomite, red shale, sand
2480	2500	20	Dolomite, shale
2500	2550	50	Dolomite
2550	2590	40	Dolomite, anhydrite, sand
2590	2630	40	Dolomite, anhydrite
2630	2640	10	Dolomite, anhydrite, shale, sand
2640	2650	10	Dolomite, red shale
2650	2660	10	Dolomite, anhydrite
2660	2670	10	Dolomite, anhydrite, sand
2670	2700	30	Dolomite, sand
2700	2800	100	Dolomite, anhydrite, red shale, gray sand
2800	2820	20	Dolomite, anhydrite, sand
2820	2830	10	Dolomite, anhydrite, red & gray sand
2830	2840	10	Dolomite, anhydrite
2840	2850	10	Dolomite, anhydrite, sand
2850	2862	12	Dolomite, anhydrite, red shale
2862			TD
2834			PBTD

*Request for Infill Finding on
Old Loco Unit #19
in accordance with Administrative
Procedures amended February 8, 1980*



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NEW MEXICO OIL CONSERVATION COMMISSION

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30-615-23156

Form C-101
Revised 1-1-75

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5A. Indicate Type of Lease	STATE ☒ FEDERAL ☐
5. State Oil & Gas Commission No.	B-4918

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Type of Work		Type of Well		Type of Lease	
DRILL ☒ DEEPEN ☐ PLUG BACK ☐		SINGLE ☒ MULTIPLE ☐		7. Unit & previous name Old Loco Unit	
8. Name of Lessee Marbob Energy Corporation		9. Well No. 19		10. Field name Grbg. SA	
11. Location of Well P.O. Box 304, Artesia, N. M. 88210		12. Direction of Well Grbg Jackson SR Queen			
13. Direction of Well UNIT LETTER N LOCATED 990 FEET FROM THE South LINE		14. Direction of Well 1650 FEET FROM THE West LINE OF SEC. 32 TWP. 17S RGE. 29E		15. County Eddy	
16. Proposed Depth 2850'		17. Location Grayburg & Lovington		18. Direction of Well Rotary	
19. Kind & Status of Lease 3586 GR		20. Drilling Contractor Statewide Active		21. Approx. Date Work will start Alta-West Drilling Co. 2/4/80	

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"	20#	250'	Circ.	
7 7/8"	4 1/2"	10.50#	2850'	225	

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

RECEIVED
JUL 19 1982

APPROVED
FOR STATELESS
DRILLING COMMENCED,

EXPIRES 2-11-80

DOVE 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.

by Carolyn Price Title Secretary Date 2/8/80

(This space for State Use)

MOVED BY W. A. Gressett TITLE SUPERVISOR DISTRICT II DATE FEB 11 1980

DITIONS OF APPROVAL, IF ANY

Rule #5

(1) All of the

of the

**MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form
Superseded by 1-1-78
Effective Date 1-1-78

All distances must be from the outer boundaries of the Section

Operator MARBOB ENERGY CORPORATION		Section OLD LOCO UNIT		Page 19
Tract Letter N	Section 32	Range 17 South	Meridian 29 East	County Eddy
Actual Surface Location of Well 990		Section South	Range 1650	Meridian West
Ground Level Elev. 3586	Tract Description Grayburg & Lovington	Grbg Jackson SR Queen Grbg SA		Page 40

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
 - If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
 - If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, forced-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

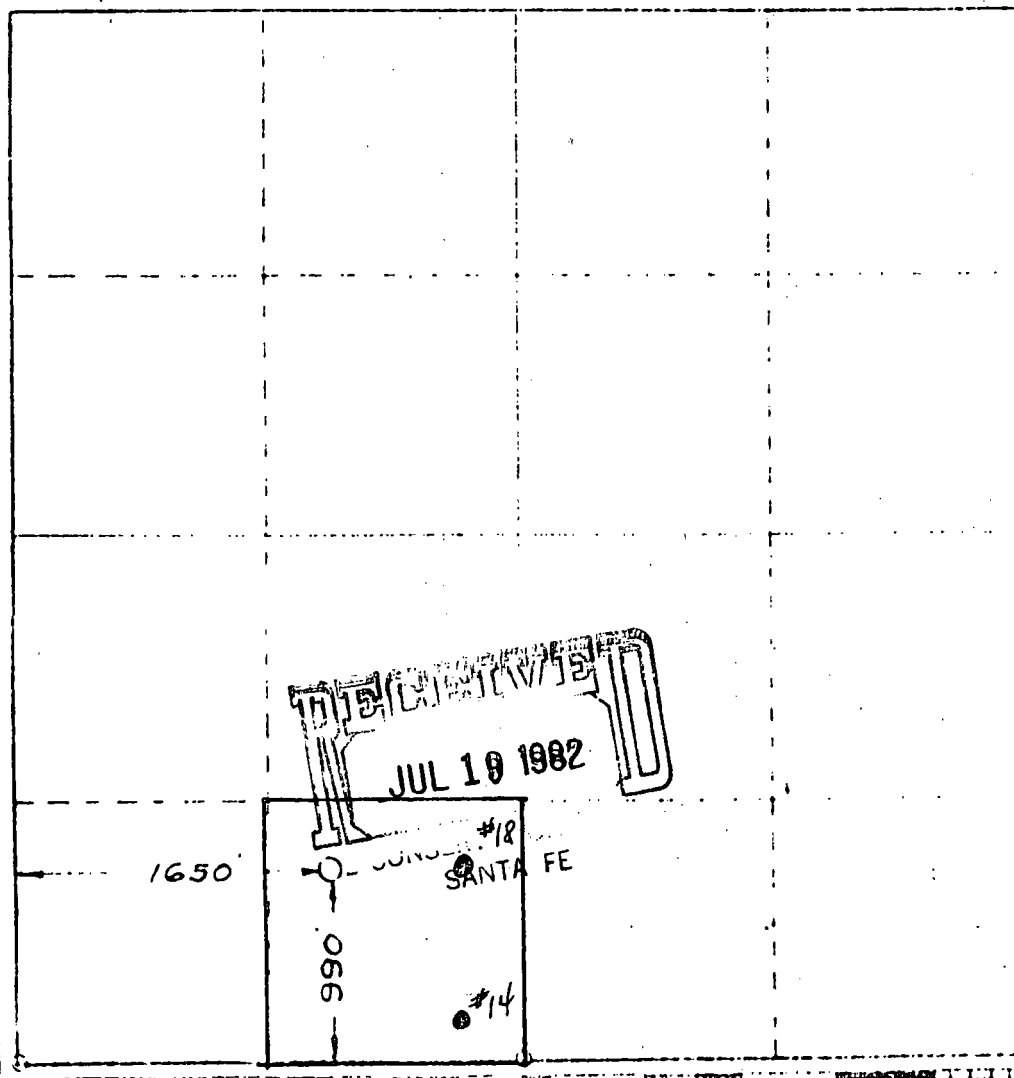
If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____
- * No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

RECEIVED

FEB 8 1980

O. C. D.

ARTESIA, OFFICE



CERTIFICATION

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

Carolyn Davis

Secretary

Marbob Energy Corp.

2/8/80

R. #5

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

January 17, 1980

W. W. Shearn

Handwritten signature
In Accordance

Rule 6:

Old Loco Unit #19

Pool: Grayburg Jackson Seven Rivers Queen Grayburg San Andres

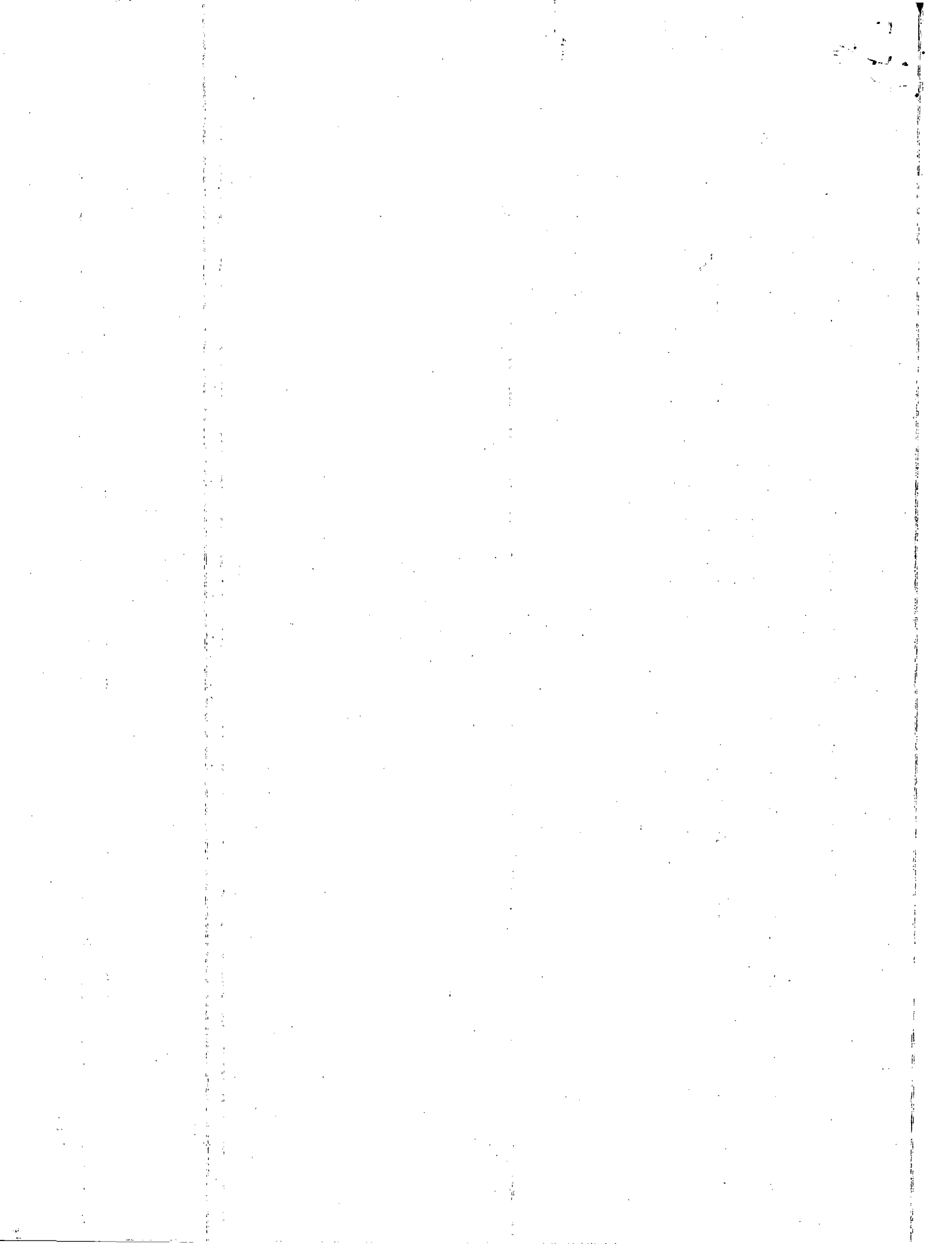
Standard spacing unit: 40 acres

Rule 7:

NA

Rule 8:

- a. Old Loco Unit #14 - 330 FSL 2310 FWL Sec. 32-T17S-R29E
Old Loco Unit #18 - 990 FSL 2310 FWL Sec. 32-T17S-R29E
- b. #14 - 3/4/40
#18 - 11/13/79
- c. #14 - 4/9/40
#18 - 12/13/79
- d. None
- e. #14 - 2 bbl. oil, 1/3 mcf gas/day
#18 - 9 bbl. oil, 9 mcf gas/day
- f. NA
- g. Well #19 was drilled because of the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir. Since both #19 and #18 experienced new reservoir type conditions we feel the additional drilling was justified.

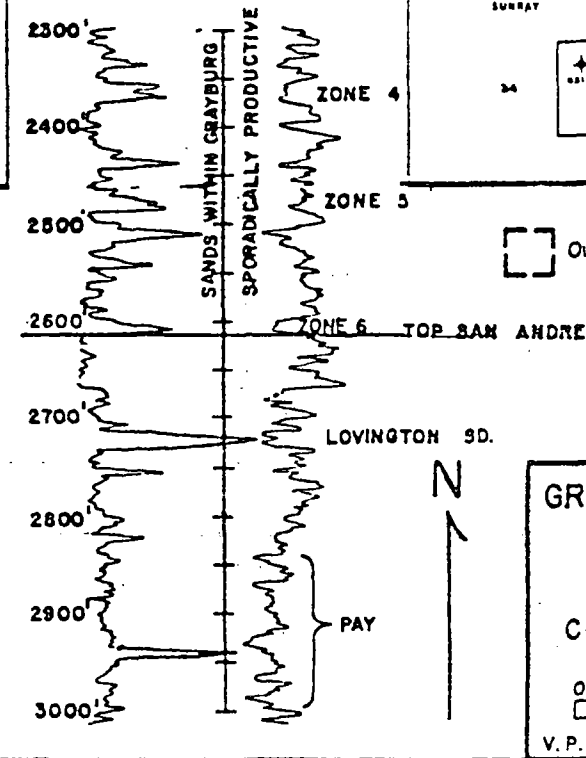
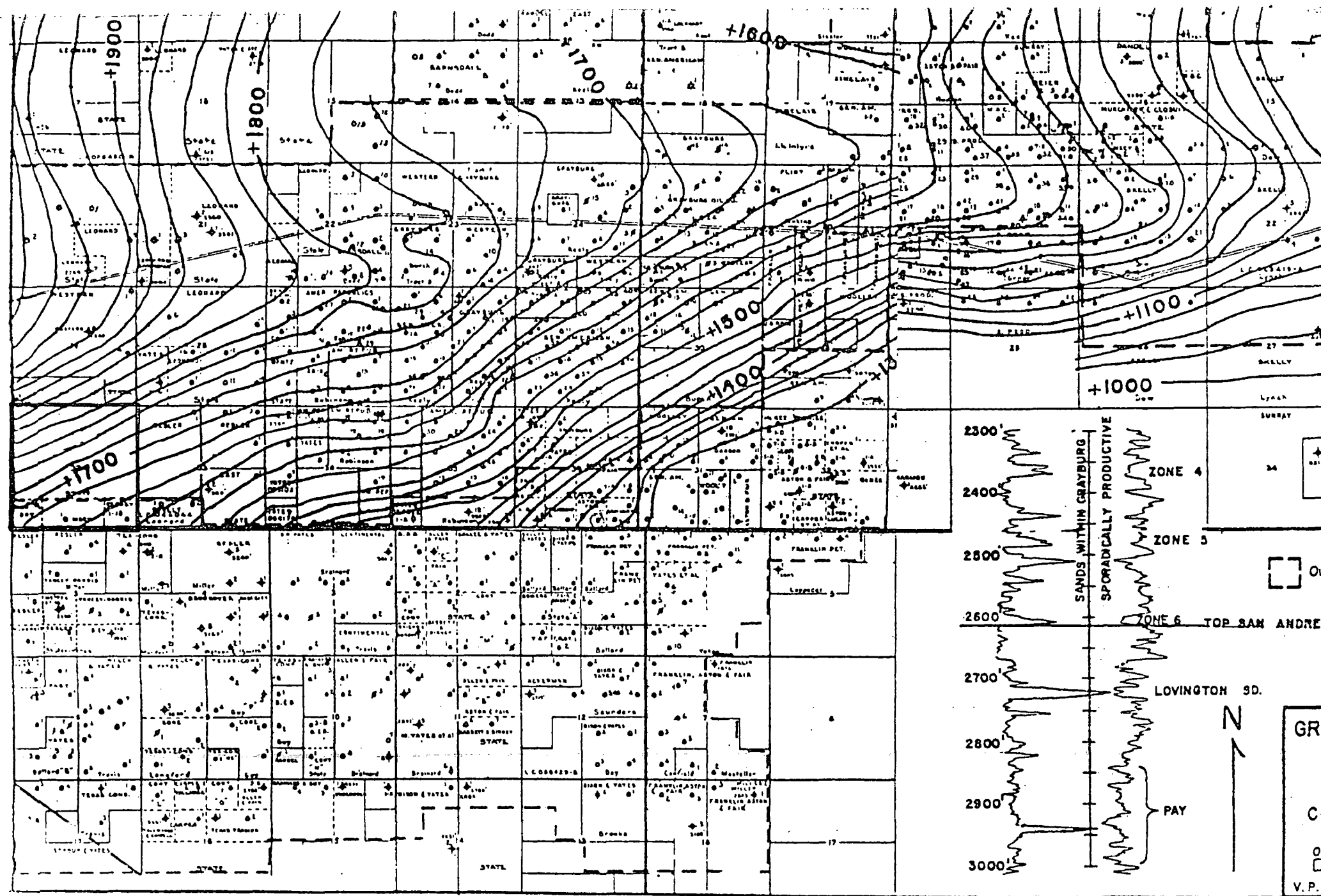


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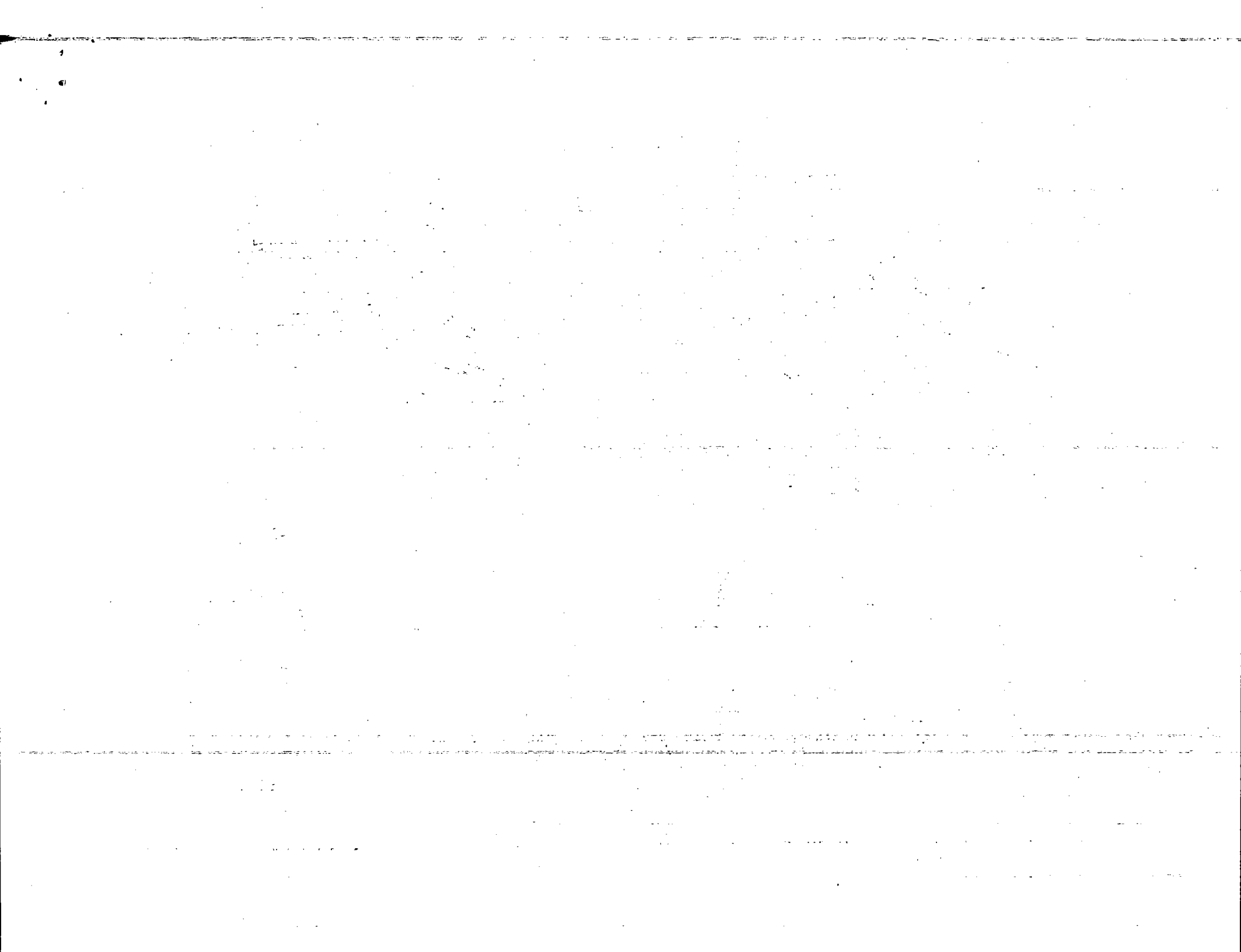
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Rule #9-A



GRA
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V.P.S



Marbob Energy Corporation
Old Loco Unit, Well #19
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #19 was completed in the Grayburg Jackson pool in March 1980. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 9,828 barrels and gas reserves recoverable will be 2,457 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 #19 in May 1982 was 12 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 new reservoir conditions.

Paul G. White

Paul G. White
Petroleum Engineer

7-15-82
Date

Rule #9-B

Marbob Energy Corp.
Old Loco Unit, Well #19
990 FSL 1650 FWL Sec. 32-T17S-R29E
Eddy County, N.M.

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

<u>Year</u>	<u>Gross monthly Oil - bbls.</u>	<u>Gross Yearly Oil - bbls.</u>
1982 (6 mos.)	340	2,040
1983	240	2,880
1984	160	1,920
1985	108	1,296
1986	61	732
1987	47	564
1988	33	396
Total oil remaining:		9,828
Cumulative to 1/1/82		<u>14,976</u>
Total ultimate reserves:		24,804

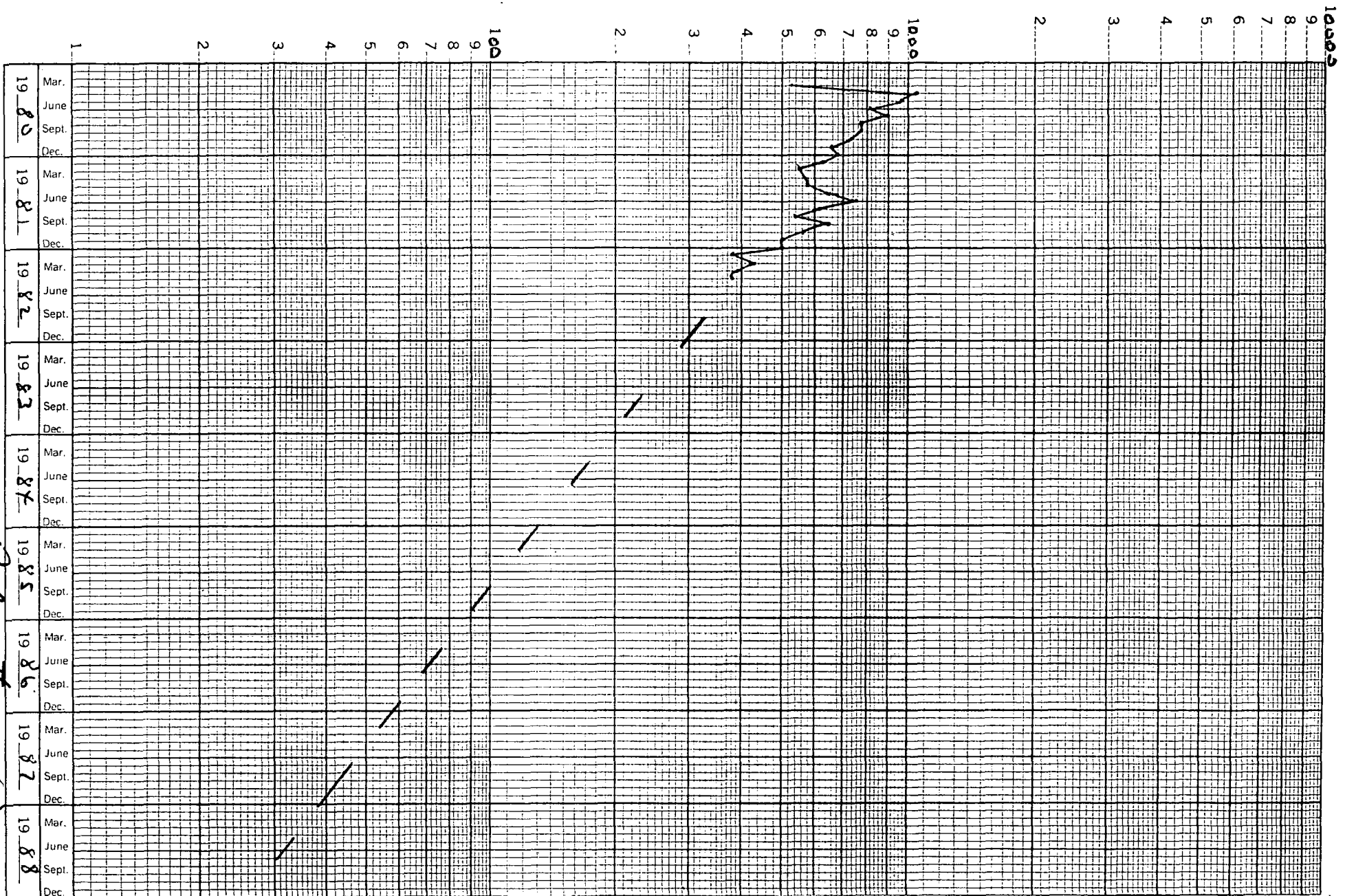
Gas-oil ratio average - 250 to 1

Remaining gas reserves - 2,457 mcf

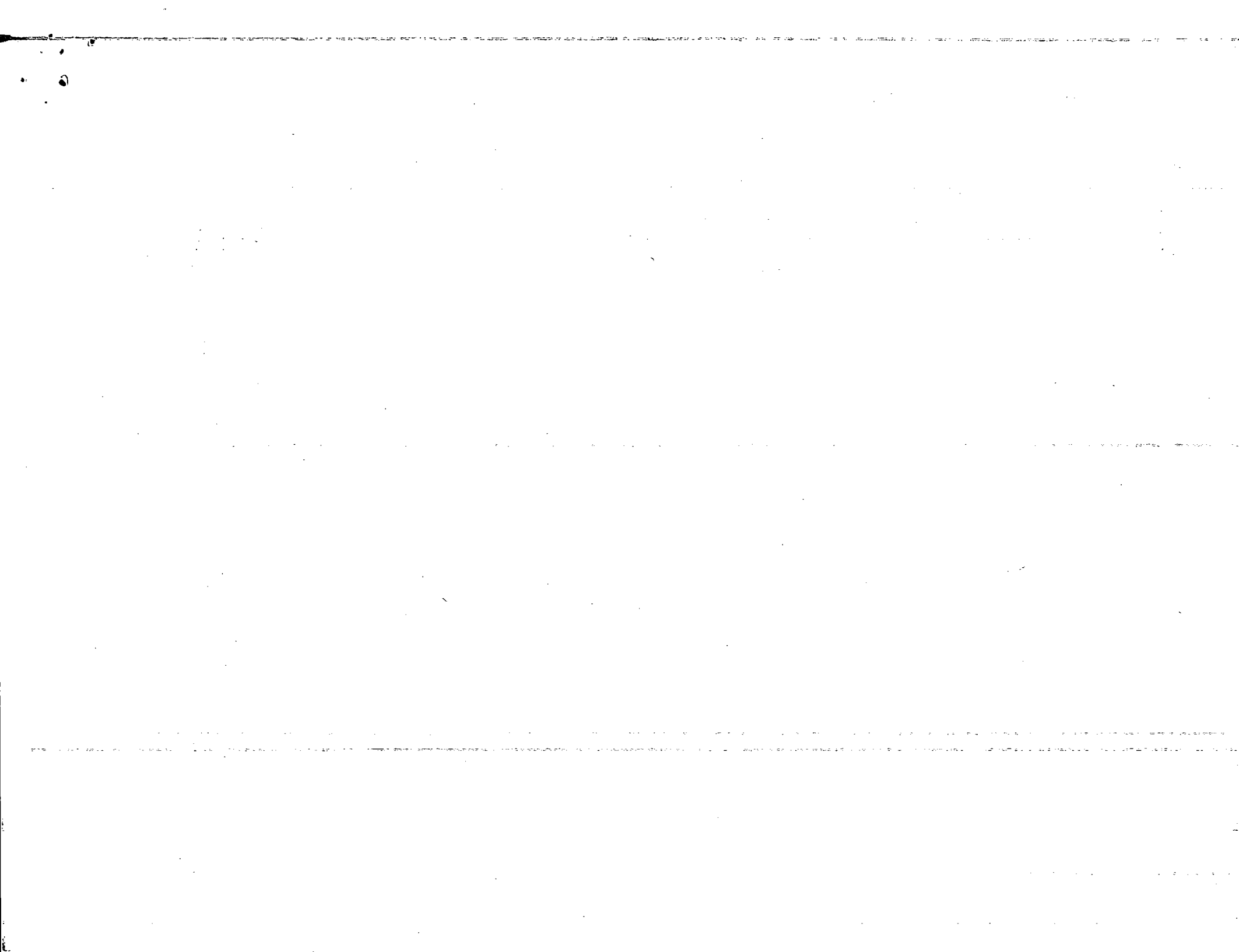
Rule #9-B

BBLs / OIL / MONTH

OLD LOG UNIT
WELL NO 19



Rate #9-C(2)



Rule 11:

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

DATE 3/25/80

From	to	Thickness in feet	Formation
0	23	25	Caliche
25	68	43	Red bed & gyp
68	250	182	Gyp, anhydrite
250	550	300	Salt
550	1100	550	Salt, anhydrite
1100	1950	850	Anhydrite, lime
1950	1960	10	Anhydrite, red shale
1960	1980	20	Anhydrite, shale, red sand
1980	2040	60	Anhydrite, dolomite, sand
2040	2060	20	Anhydrite, dolomite, sand, red shale
2060	2090	30	Anhydrite, dolomite, red shale
2090	2100	10	Anhydrite
2100	2140	40	Anhydrite, dolomite, red sand
2140	2150	10	Anhydrite, dolomite, sand, shale
2150	2160	10	Anhydrite, red & gray sand, shale
2160	2200	40	Anhydrite, red & gray sand
2200	2208	8	Anhydrite, dolomite, shale, sand
2208	2230	22	Anhydrite, dolomite, red & gray sand
2230	2240	10	Anhydrite, red & gray sand
2240	2260	20	Anhydrite, dolomite, red & gray sand
2260	2270	10	Anhydrite, dolomite, red sand, shale
2270	2280	10	Anhydrite, red sand
2280	2300	20	Anhydrite, red & gray sand
2300	2310	10	Anhydrite, red sand
2310	2390	80	Anhydrite, dolomite, red sand
2390	2400	10	Anhydrite, dolomite, red & gray sand
2400	2420	20	Anhydrite, dolomite
2420	2470	50	Anhydrite, dolomite, sand
2470	2480	10	Dolomite, red shale, sand
2480	2500	20	Dolomite, shale
2500	2550	50	Dolomite
2550	2590	40	Dolomite, anhydrite, sand
2590	2630	40	Dolomite, anhydrite
2630	2640	10	Dolomite, anhydrite, shale, sand
2640	2650	10	Dolomite, red shale
2650	2660	10	Dolomite, anhydrite
2660	2670	10	Dolomite, anhydrite, sand
2670	2700	30	Dolomite, sand
2700	2800	100	Dolomite, anhydrite, red shale, gray sand
2800	2820	20	Dolomite, anhydrite, sand
2820	2830	10	Dolomite, anhydrite, red & gray sand
2830	2840	10	Dolomite, anhydrite
2840	2850	10	Dolomite, anhydrite, sand
2850	2862	12	Dolomite, anhydrite, red shale
2862			TD
2834			PBTD