STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO
87501

ADMINISTRATIVE ORDER

NFL 65

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. 23

Location: Unit L 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 NW/4 SW/4 of Sec. 32, Twp. 17-S, Rng. 29-E, is currently dedicated to the Old Loco Unit Well No. 12 located in Unit L 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 16,206 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 ___

Received July 19, 1982
Suspense date: Today

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

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER

NFL 65

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. 23

Location: Unit L 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 NW/4 SW/4 of Sec. 32, Twp. 17S, Rng. 29E, is currently dedicated to the Old Loco Unit Well No. 12 located in Unit L 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 16,206 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 - OCD Artesia
NMO&GEC - Hobbs

DIVISION DIRECTOR ____ EXAMINER ____

Request for Infill Finding on

Old Loco Unit #23

in accordance with Administrative

Procedures amended February 8, 1980

L- 32-17S-29E

Eddy Co.

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	✓

NEW MEXICO OIL CONSERVATION COMMISSION

30-015-23831

Form C-101
Revised 1-1-65

JUN 1 9 1981
O. C. D.
ARTESIA, OFFICE

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: B-4918

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. Unit Agreement Name: Old Loco Unit

8. Farm or Lease Name: Old Loco Unit

2. Name of Operator: Marbob Energy Corporation

9. Well No.: 23

3. Address of Operator: P.O. Box 304, Artesia, N.M. 88210

10. Field and Pool, or Wildcat: SA Grbg Jackson SR Qn Grbg

4. Location of Well: UNIT LETTER L LOCATED 1650 FEET FROM THE South LINE AND 990 FEET FROM THE West LINE OF SEC. 32 TWP. 17S RGE. 29E NMPM

12. County: Eddy

19. Proposed Depth: 2900'

19A. Formation:

20. Rotary or C.T.: Rotary

21. Elevations (Show whether DF, RT, etc.): 3606' GR

21A. Kind & Status Plug. Bond: Statewide active

21B. Drilling Contractor: WEK Drilling Co.

22. Approx. Date Work will start: 7/6/81

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	~~250'~~ 275'	Circ.	
7 7/8"	4 1/2"	10.50#	2900'	250	

We propose to drill to approximately 2900' to test the Grayburg & Lovington formations. We do not anticipate gas at these depths and will not set up a blowout preventer program at this time.

RECEIVED
JUL 19 1982
OIL CONSERVATION
SANTA FE

APPROVAL VALID FOR 180 DAYS
UNLESS DRILLING UNDERWAY

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 Quinn Title: Production Clerk Date: 6/19/81

(This space for State Use)

APPROVED BY: Mike Williams TITLE: OIL AND GAS INSPECTOR DATE: JUN 2 3 1981

CONDITIONS OF APPROVAL, IF ANY: * As Noted Above

RULE #5

W MEXICO OIL CONSERVATION COMMI ON

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	Lease	Well No.
MARBOB ENERGY CORPORATION	OLD LOCO UNIT	23

Unit Letter	Section	Township	Range	County
L	32	17 South	29 East	EDDY

Actual Footage Location of Well:
1650 feet from the South line and 990 feet from the West

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3606	Grayburg & Lovington	Grbg. Jackson SR Qn Grbg. SA	40 Acres

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

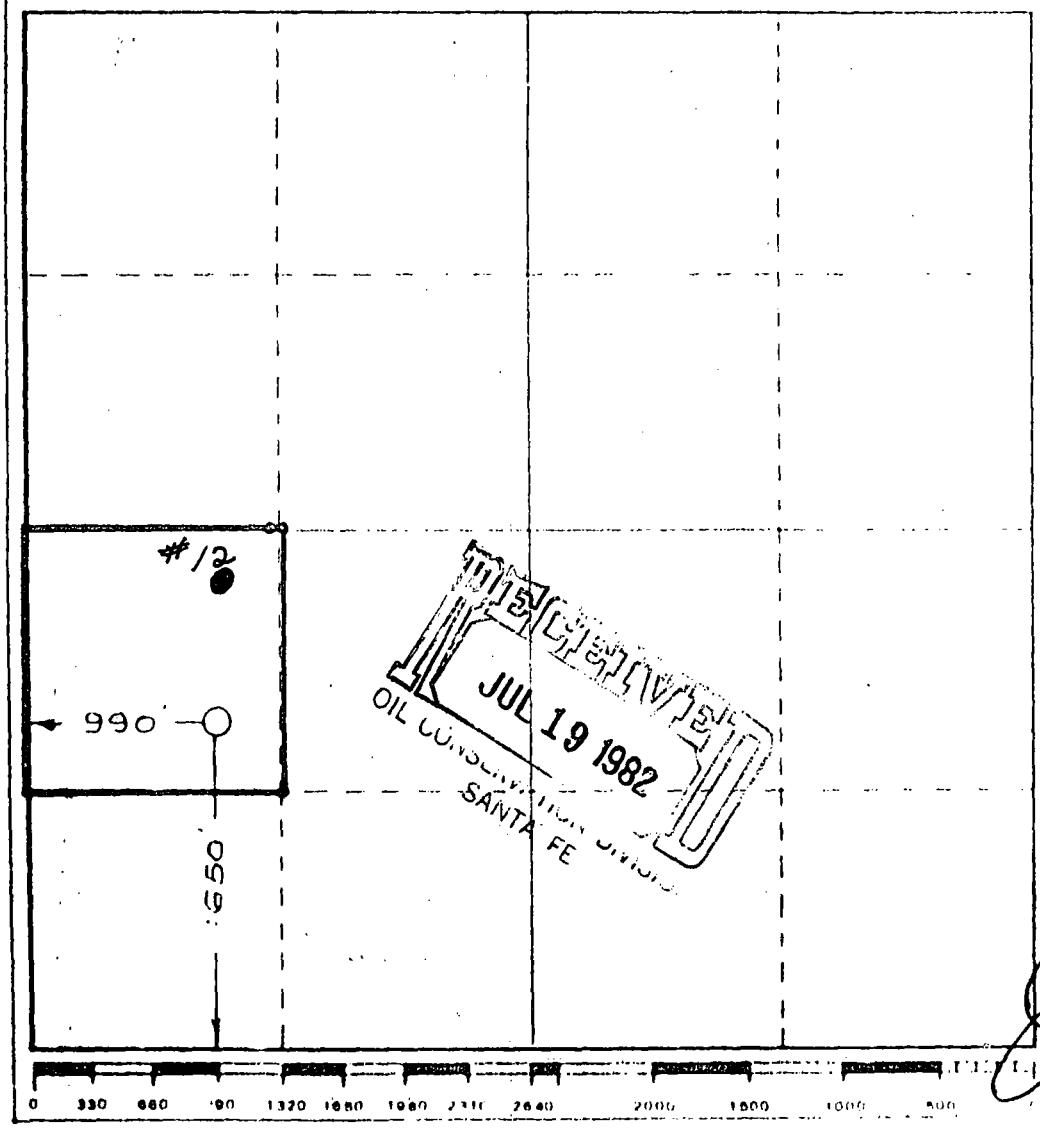
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



RECEIVED
JUL 19 1982
OIL CONSERVATION DIVISION
SANTA FE

CERTIFICATION

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

Carolyn Orris

Carolyn Orris

Production Clerk

Marbob Energy Corp.

6/19/81

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.

Rule #5

Date Surveyed

October 24, 1980

Registered Professional Engineer and/or Land Surveyor

John W. Thrum

Certificate No.

1559

Rule 6:

Old Loco Unit #23

Pool: Grayburg Jackson Sevn Rivers Queen Grayburg San Andres

Standard spacing unit: 40 acres

Rule 7:

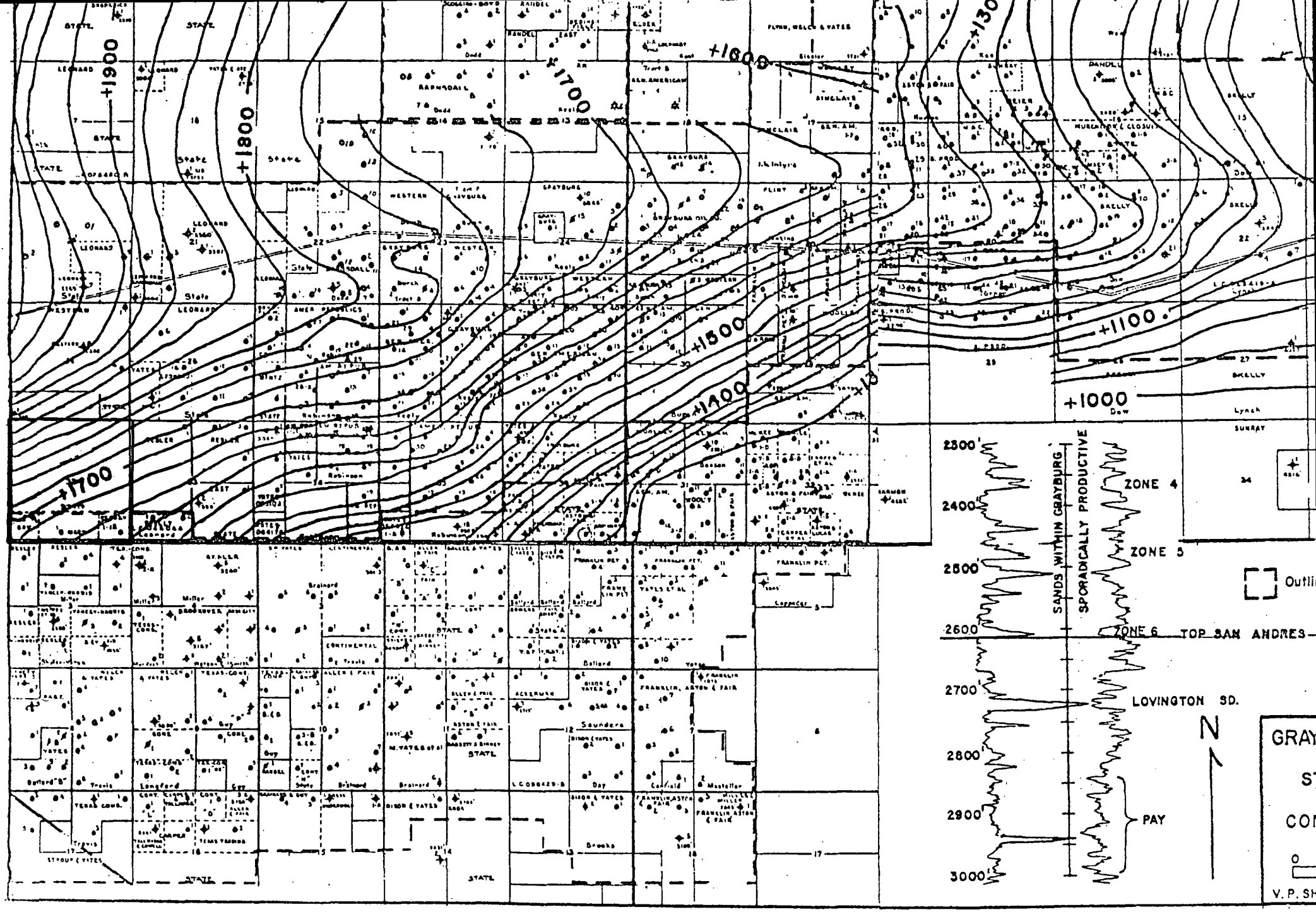
NA

Rule 8:

a. *Old Loco Unit #12 - 2310 FSL 9990 FWL Sec. 32-T17S-R29E*
   Old Loco Unit #23 - 1650 FSL 990 FWL Sec. 32-T17S-R29E
b. *1/29/58 - #12*
   7/31/81 - #23
c. *4/8/58 - #12*
   9/23/81 - #23
d. *None*

e. *1½ bbl. oil, 1/3 mcf gas/day - #12*
   # 23- 17 bbl. oil, 22 mcf gas/day
f. *NA*

g. *Well #12 is producing very little gas. The migration of oil and gas through waterflooding coupled with new reservoir condition type production rates on the new well make the drilling of a new well necessary to drain the reservoir.*


T 17 S
T 18 S
R 29 E
+1900
+1800
+1700
+1600
+1500
+1400
+1300
+1100
+1000
2300'
2400'
2500'
2600'
2700'
2800'
2900'
3000'
SANDS WITHIN GRAYBURG SPORADICALLY PRODUCTIVE
ZONE 4
ZONE 5
ZONE 6
TOP SAN ANDRES
LOVINGTON SD.
PAY
N
Outli
GRAY
ST
CON
V. P. SH

Rule #9-A

Marbob Energy Corporation
Old Loco Unit, Well #23
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #23 was completed in the Grayburg Jackson pool in September 1981. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 14,868 barrels and gas reserves recoverable will be 16,206 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 #23 in May 1982 was 17 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
Petroleum Engineer

7-15-82
Date

RULE #9-B

Marbob Energy Corp.
Old Loco Unit, Well #23
1650 FSL 990 FWL Sec. 32-T17S-R29E
Eddy County, N.M.

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

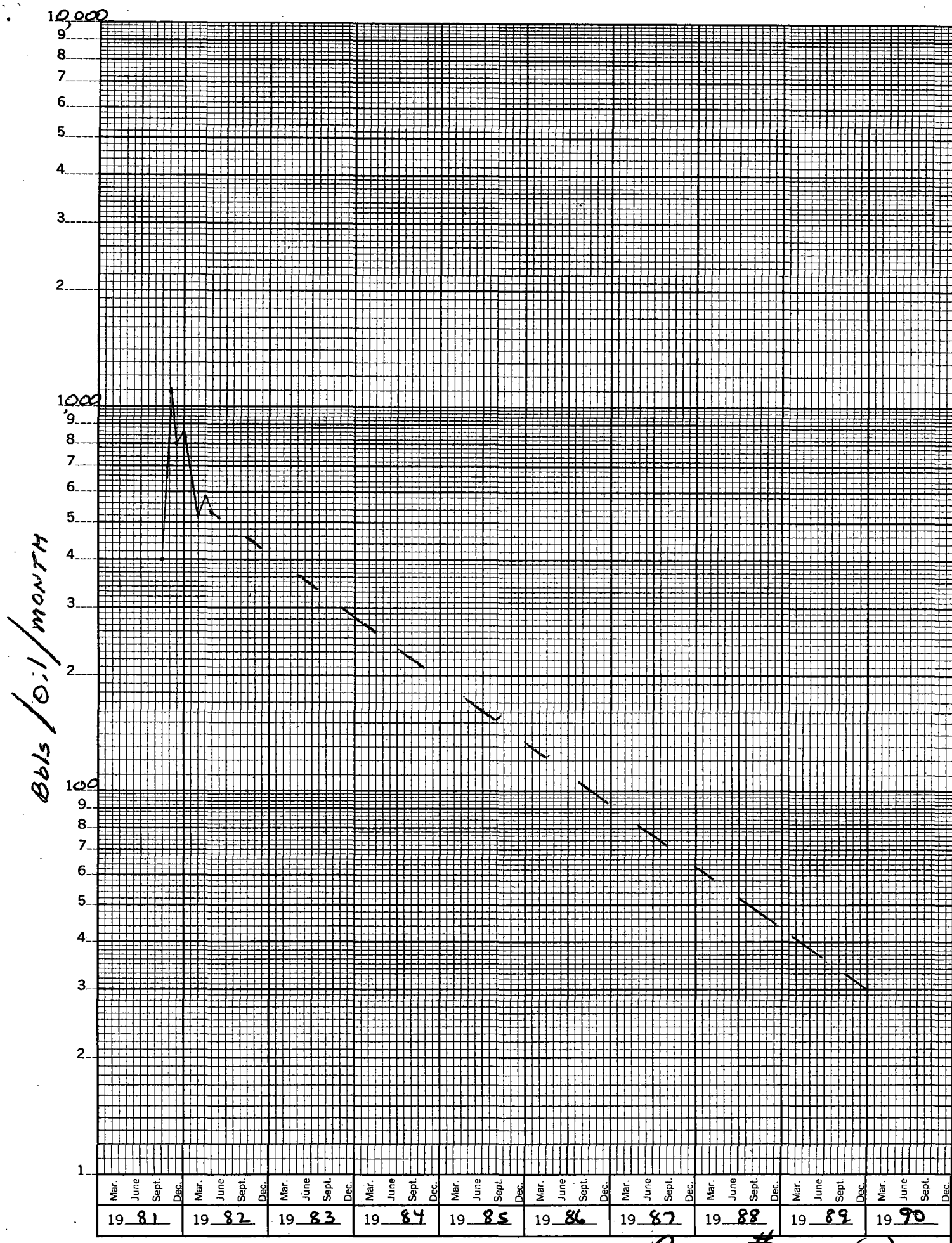
Year	Gross monthly Oil - bbls.	Gross yearly Oil - bbls.
1982 (6 mos.)	450	2,700
1983	340	4,080
1984	240	2,880
1985	160	1,920
1986	110	1,320
1987	76	912
1988	52	624
1989	36	432
	Total oil remaining:	14,868
	Cumulative to 1/1/82	2,489
	Total ultimate reserves:	17,357

Gas-oil ratio average - 1.09 to 1

Remaining gas reserves - 16,206 mcf

Rule #9-B

OLD LOCO UNIT
WELL NO. 23



RULE #9-C (2)

Rule 11:

Notice of this infill request has been sent to General American Oil Co., Box 3306, Odessa, Texas 79760; and Delta Drilling Co., Box 2012, Tyler, Texas 75701, as the offset operators.

Request for Infill Finding on

Old Loco Unit #23

in accordance with Administrative

Procedures amended February 8, 1980

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	✓

NEW MEXICO OIL CONSERVATION COMMISSION

30-015-23831

Form C-101
Revised 1-1-65

JUN 1 1981

O. C. D.
ARTESIA, OFFICE

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: B-4918

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

Type of Well: OIL WELL [X] GAS WELL [ ] OTHER [ ] SINGLE ZONE [X] MULTIPLE ZONE [ ]

7. Unit Agreement Name: Old Loco Unit

8. Farm or Lease Name: Old Loco Unit

9. Well No.: 23

Name of Operator: Marbob Energy Corporation

Address of Operator: P.O. Box 304, Artesia, N.M. 88210

10. Field and Pool, or Wildcat: SA Grbg Jackson SR Qn Grbg

Location of Well: UNIT LETTER L LOCATED 1650 FEET FROM THE South LINE

990 FEET FROM THE West LINE OF SEC. 32 TWP. 17S RGE. 29E NMPM

12. County: Eddy

19. Proposed Depth: 2900'

20. Rotary or C.T.: Rotary

Elevations (Show whether DF, RT, etc.): 3606' GR

21A. Kind & Status Plug. Bond: Statewide active

21B. Drilling Contractor: WEK Drilling Co.

22. Approx. Date Work will start: 7/6/81

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	~~250'~~	Circ.	
7 7/8"	4 1/2"	10.50#	2900'	250	

We propose to drill to approximately 2900' to test the Grayburg & Lovington formations. We do not anticipate gas at these depths and will not set up a blowout preventer program at this time.

APPROVAL VALID FOR 180 DAYS
UNLESS DRILLING UNDERWAY

12-23-81

RECEIVED
JUL 19 1982
OIL CONS.

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 Quinn Title: Production Clerk Date: 6/19/81

(This space for State Use)

APPROVED BY: [signature] TITLE: OIL AND GAS INSPECTOR DATE: JUN 23 1981

CONDITIONS OF APPROVAL, IF ANY: * As Noted Above

RULE #5

W MEXICO OIL CONSERVATION COMMI[illegible]ON

WELL LOCATION AND ACREAGE DEDICATION PL[illegible]T

Effective 1-1-65
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
MARBOB ENERGY CORPORATION	OLD LOCO UNIT	23

Unit Letter	Section	Township	Range	County
L	32	17 South	29 East	EDDY

Actual Footage Location of Well:

1650 feet from the South line and 990 feet from the West

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3606	Grayburg & Lovington	Grbg. Jackson SR Qn Grbg. SA	40 Acres

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

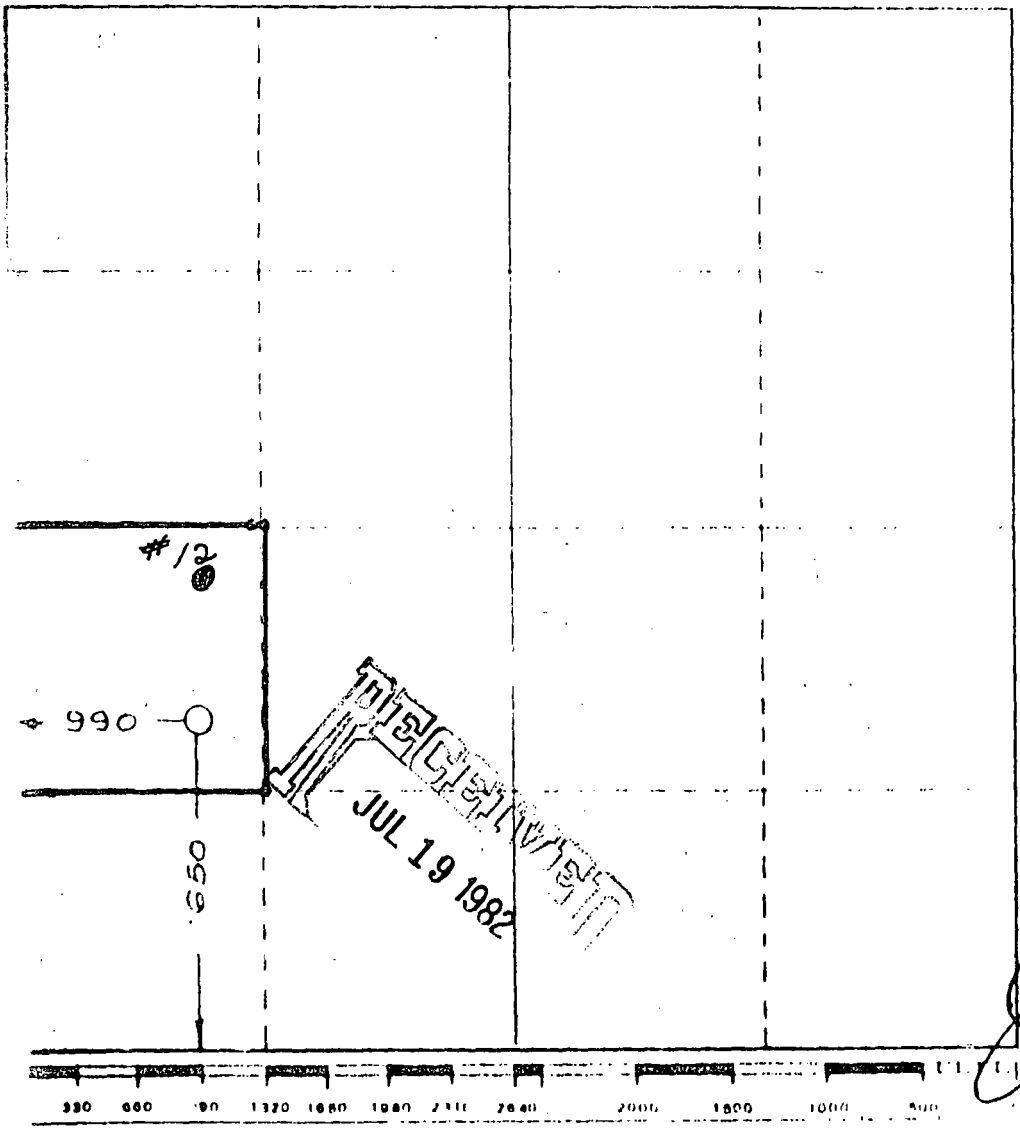
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



RECEIVED
JUL 19 1982

CERTIFICATION

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

Carolyn Orris

Carolyn Orris

Production Clerk

Marbob Energy Corp.

6/19/81

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.

Rule #5

October 24, 1980

Date Surveyed

John W. Stearn

Registered Professional Engineer and/or Land Surveyor

1559

Rule 6:

Old Loco Unit #23

Pool: Grayburg Jackson Sevn Rivers Queen Grayburg San Andres

Standard spacing unit: 40 acres

Rule 7:

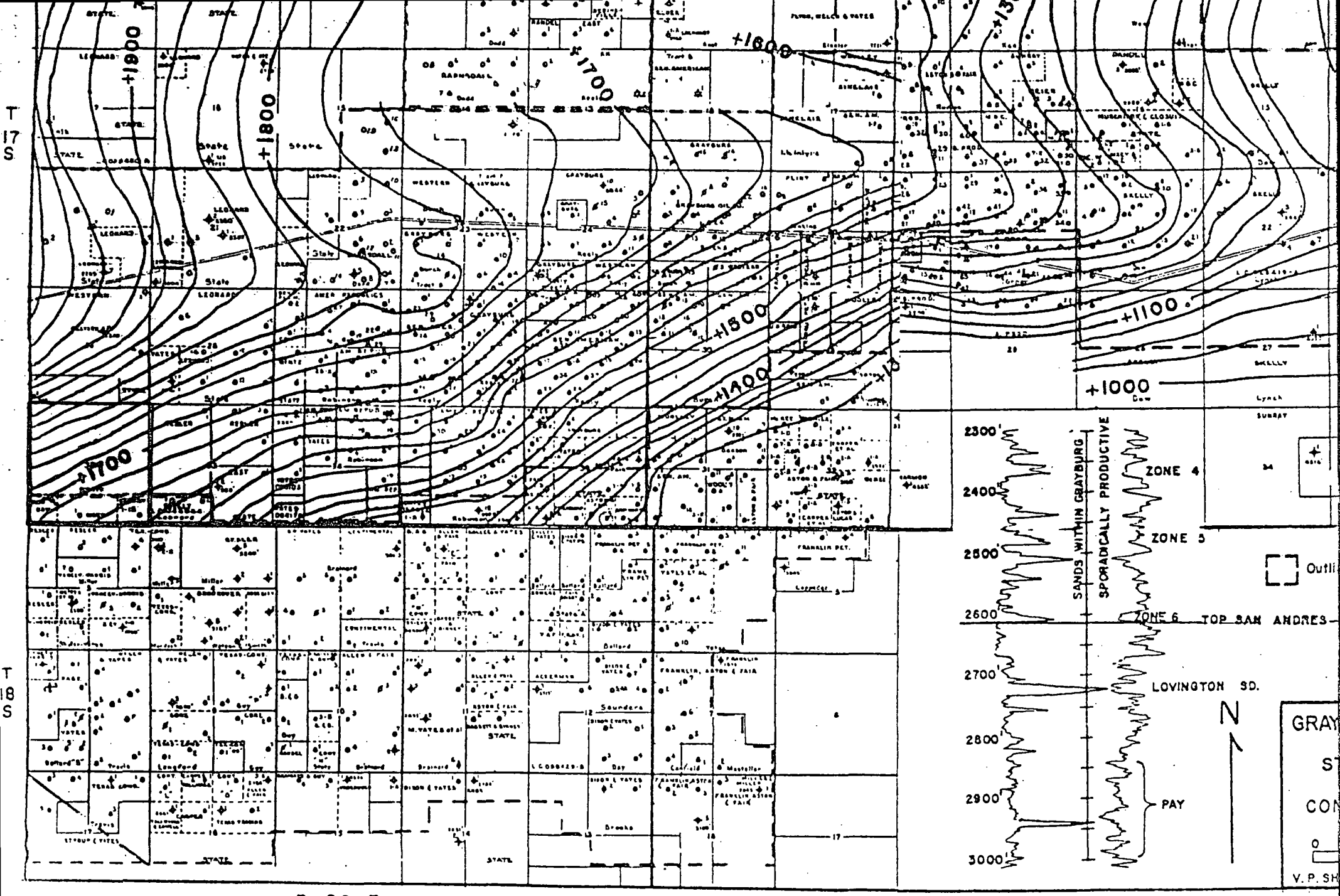
NA

Rule 8:

a. *Old Loco Unit #12 - 2310 FSL 9990 FWL Sec. 32-T17S-R29E*
   Old Loco Unit #23 - 1650 FSL 990 FWL Sec. 32-T17S-R29E
b. *1/29/58 - #12*
   7/31/81 - #23
c. *4/8/58 - #12*
   9/23/81 - #23
d. *None*

e. *1½ bbl. oil, 1/3 mcf gas/day - #12*
   # 23- 17 bbl. oil, 22 mcf gas/day
f. *NA*

g. *Well #12 is producing very little gas. The migration of oil and gas through waterflooding coupled with new reservoir condition type production rates on the new well make the drilling of a new well necessary to drain the reservoir.*


T 17 S
T 18 S
R 29 E
+1900
+1800
+1700
+1600
+1500
+1400
+1300
+1100
+1000
2300'
2400'
2500'
2600'
2700'
2800'
2900'
3000'
SANDS WITHIN GRAYBURG
SPORADICALLY PRODUCTIVE
ZONE 4
ZONE 5
ZONE 6
TOP SAN ANDRES
LOVINGTON SD.
PAY
N
Outli
GRAY
ST
CON
V. P. SH

Rule #9-A

Marbob Energy Corporation
Old Loco Unit, Well #23
Grayburg Jackson Seven Rivers Queen
Grayburg San Andres
Eddy County, New Mexico

Pertinent Engineering Data and Conclusions:

Well #23 was completed in the Grayburg Jackson pool in September 1981. This is an infill well located as per the attached plat.

Effective July 1, 1982, oil reserves recoverable will be 14,868 barrels and gas reserves recoverable will be 16,206 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 #23 in May 1982 was 17 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
Petroleum Engineer

7-15-82
Date

RULE #9-B

Marbob Energy Corp.
Old Loco Unit, Well #23
1650 FSL 990 FWL Sec. 32-T17S-R29E
Eddy County, N.M.

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

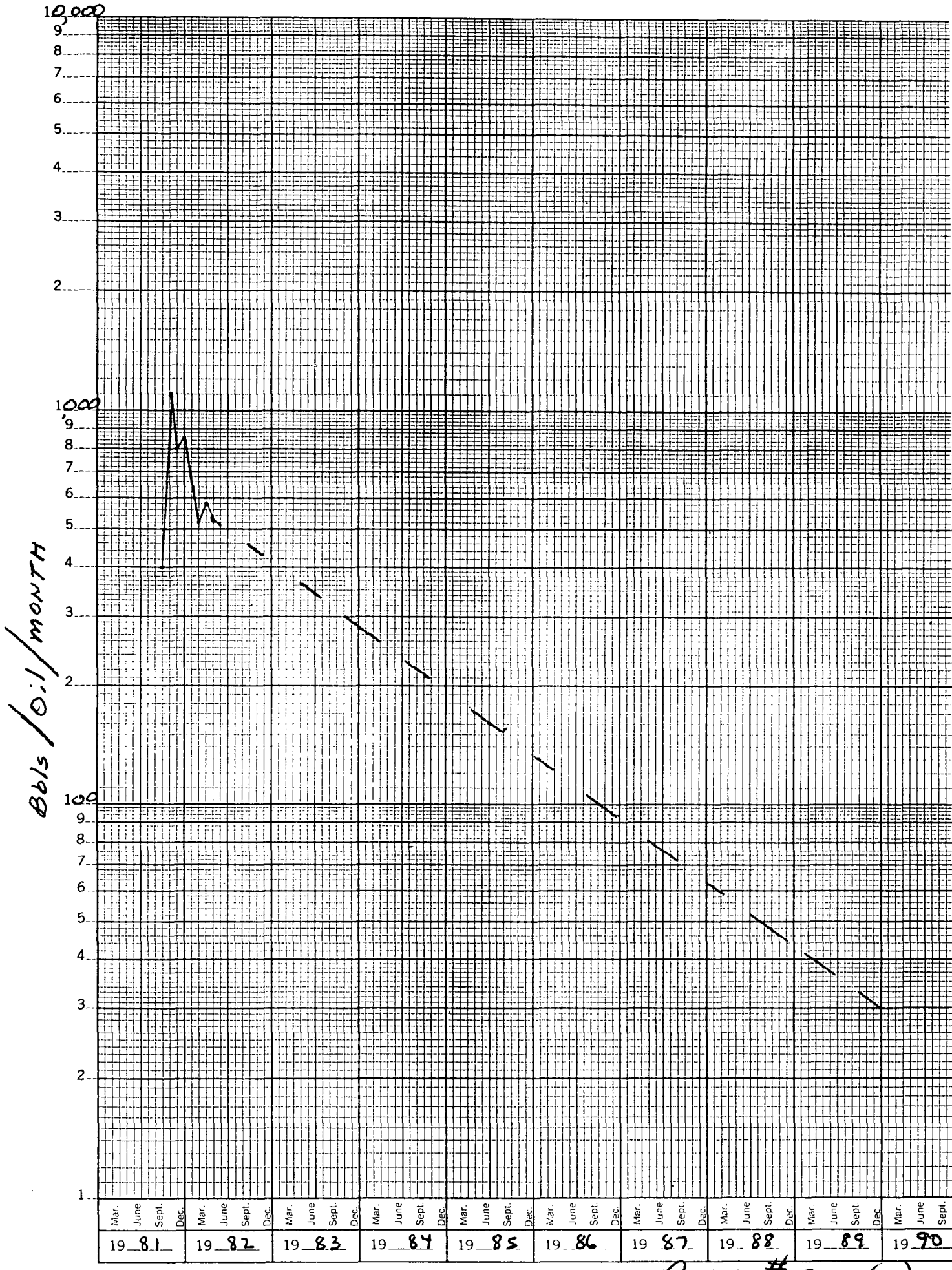
Year	Gross monthly Oil - bbls.	Gross yearly Oil - bbls.
1982 (6 mos.)	450	2,700
1983	340	4,080
1984	240	2,880
1985	160	1,920
1986	110	1,320
1987	76	912
1988	52	624
1989	36	432
	Total oil remaining:	14,868
	Cumulative to 1/1/82	2,489
	Total ultimate reserves:	17,357

Gas-oil ratio average - 1.09 to 1

Remaining gas reserves - 16,206 mcf

Rule #9-B

OLD LOCO UNIT
WELL NO. 23



RULE #9-C (2)

Rule 11:

Notice of this infill request has been sent to General American Oil Co., Box 3306, Odessa, Texas 79760; and Delta Drilling Co., Box 2012, Tyler, Texas 75701, as the offset operators.