

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 Cabot Petroleum Corporation Well Name and No. New Mexico State "U" Well #2Location: Unit B Sec. 4 Twp. 14S Rng. 33E Cty. Lea

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 Baum Upper Pennsylvanian Pool, and the standard spacing unit in said pool is 160 acre
- (4) That a 160-acre proration unit comprising the NE/4 of Sec. 4, Twp. 14S, Rng. 33E, is currently dedicated to the applicant's New Mexico State "U" Well #1 located in Unit G of said section.
- (5) That this proration unit is (X) 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 150,000 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 that 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 11th day of February, 19 86.  
DIVISION DIRECTOREXAMINER cc: OCD Hobbs  
NMO&GC Hobbs

Received Jan. 31, 1985  
Released Immediately

INFILL DRILLING FINDINGS AND WELL-SPACING WAIVER  
MADE 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

I.

Operator Cabot Petroleum Corporation Well Name and No. New Mexico State "U" Well No. 2  
Location: Unit B Sec. 4 Twp. 14 South Rng. 33 East Cty. Lea

II.

THE DIVISION FINDS:

(1) That Section 271.305(b) of the Federal Energy Regulatory Commission Interim 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, prior to the commencement of drilling, that the 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, and must grant a waiver of existing well-spacing requirements.

(2) That by Order No. R-6013, dated June 7, 1979, 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 to be completed in the Baum Upper Pennsylvanian Pool, and the standard spacing unit in said pool is 160 acres.

(4) That a 160-acre proration unit comprising the NE 1/4 of Sec. 4, Twp. 14 South, Rng. 33 East, is currently dedicated to the applicant's New Mexico State "U" Well No. 1 located in Unit G 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 150,000 MCF of gas from the proration unit which would not otherwise be recovered.

(8) That all the requirements of Order No. R-6013 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 as an exception to the standard well spacing requirements for the pool.

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 an exception to applicable well spacing requirements and 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 1/31/85  
NMO&CC - 1/31/85

DIVISION DIRECTOR \_\_\_\_\_ EXAMINER \_\_\_\_\_



# **OIL CONSERVATION COMMISSION**

**STATE OF NEW MEXICO**  
**P. O. BOX 2088 - SANTA FE**  
**87501**

**GOVERNOR**  
**BRUCE KING**  
**CHAIRMAN**

**LAND COMMISSIONER**  
**ALEX J. ARMIJO**  
**MEMBER**

**STATE GEOLOGIST**  
**A. L. PORTER, JR.**  
**SECRETARY - DIRECTOR**

**CABOT PETROLEUM CORPORATION**OIL AND GAS  
DRILLING AND PRODUCTION

806/669-2581

P. O. BOX 5001, PAMPA, TEXAS 79065

January 29, 1985

State of New Mexico  
Oil Conservation Division  
Mr. Michael E. Stogner  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Subject: New Mexico State "U" #2  
NGPA 103

Gentlemen:

As requested in your letter of January 9, 1985, we are supplying and attaching the supplementary information required for an infill well 103 filing pursuant to Division Order #R-6013-A.

Rule 5 - We have attached Form C-101 and C-102 in duplicate on the subject well.

Rule 6 - This well is located in the Baum Upper Penn Pool with a 160 acre spacing.

Rule 7 - The Baum Upper Penn was approved under Division Order #R-3644-B amended January 20, 1970.

Rule 8 - The New Mexico State "U" #1, 1980' FNL and 1980' FEL Section 4-14S-33E, Lea County, had a spud date of May 4, 1969, and was completed June 7, 1969. The average production from this well is currently 9 BOPD, 17 MCFD and 20 BWPD.

The New Mexico State "U" #2, 660' FNL and 1980' FEL Section 4-14S-33E, Lea County, had a spud date of April 15, 1984, and was completed July 1, 1984. The average production from this well is currently 15 BOPD, 32 MCFD and 5 BWPD.

As you can see from the cross-section of the two wells, porosity streaks have developed in the "U" #2 that were not in the original completion of the "U" #1. The addition of these porosity streaks and the increased well density in the Baum "C" enable us to efficiently drain this acreage thus increase the gross reserves by 115 MBO and 150 MMCF.

Rule 9 - We have attached the formation structure map, production curves, area map and compensated neutron logs on the two wells to support our finding for the necessity for an infill well. As described in the statement of Rule 8, we calculated an increase in gross reserves fo 115 MBO and 150 MMCF.

Rule 11 - We have on this day notified the offset operators by registered mail of our application for Section 103 determination.

Ike Lovelady, Inc.  
P. O. Drawer 2666  
Midland, Texas 79702

Yates Petroleum Corporation  
207 South 4th  
Artesia, New Mexico 88210

M W J Producing Company  
1804 First National Bank Building  
Midland, Texas 79701

If any additional information is required, please let us know.

Sincerely yours,

  
Ray Wooldridge

LRW:ap

Enclosures

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.

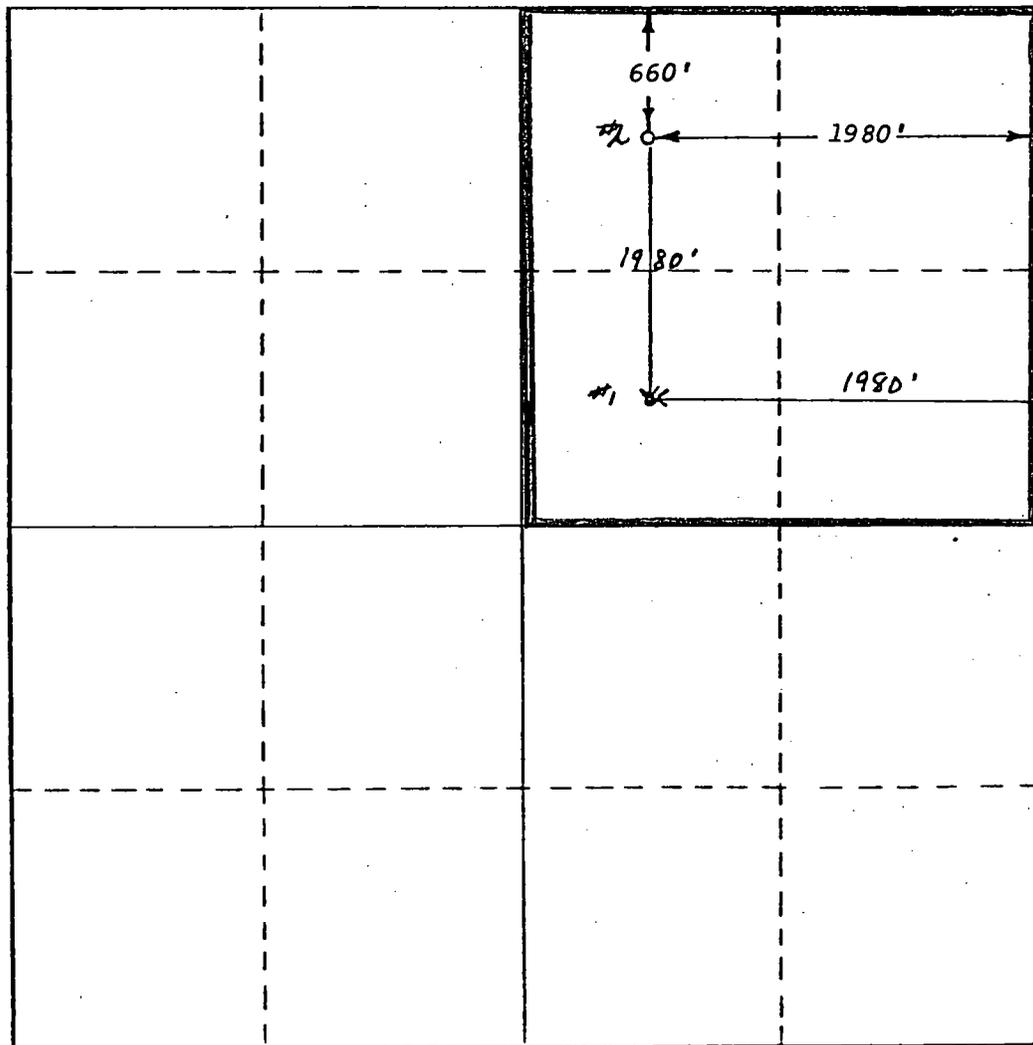
Operator <b>CABOT PETROLEUM CORPORATION</b>		Lease <b>New Mexico State "U"</b>		Well No. <b>2</b>
Unit Letter	Section <b>4</b>	Township <b>T-14-S</b>	Range <b>R-33-E</b>	County <b>Lea County, New Mexico</b>
Actual Footage Location of Well: <b>660</b> feet from the <b>North</b> line and <b>1980</b> feet from the <b>East</b> line				
Ground Level Elev. <b>4237'</b>	Producing Formation <b>Permo-Penn</b>	Pool <b>Baum Upper Penn</b>	Dedicated Acreage: <b>160</b> 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.

*Paul Andrew*

Name <b>Paul Andrew</b>
Position <b>Agent</b>
Company <b>Cabot Petroleum Corp.</b>
Date <b>2/10/84</b>

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 <b>Feb. 7, 1984</b>
Registered Professional Engineer and/or Land Surveyor

*Gary D. Baswell*

Certificate No. **6689**



NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-4-65

All distances must be from the outer boundaries of the Section.

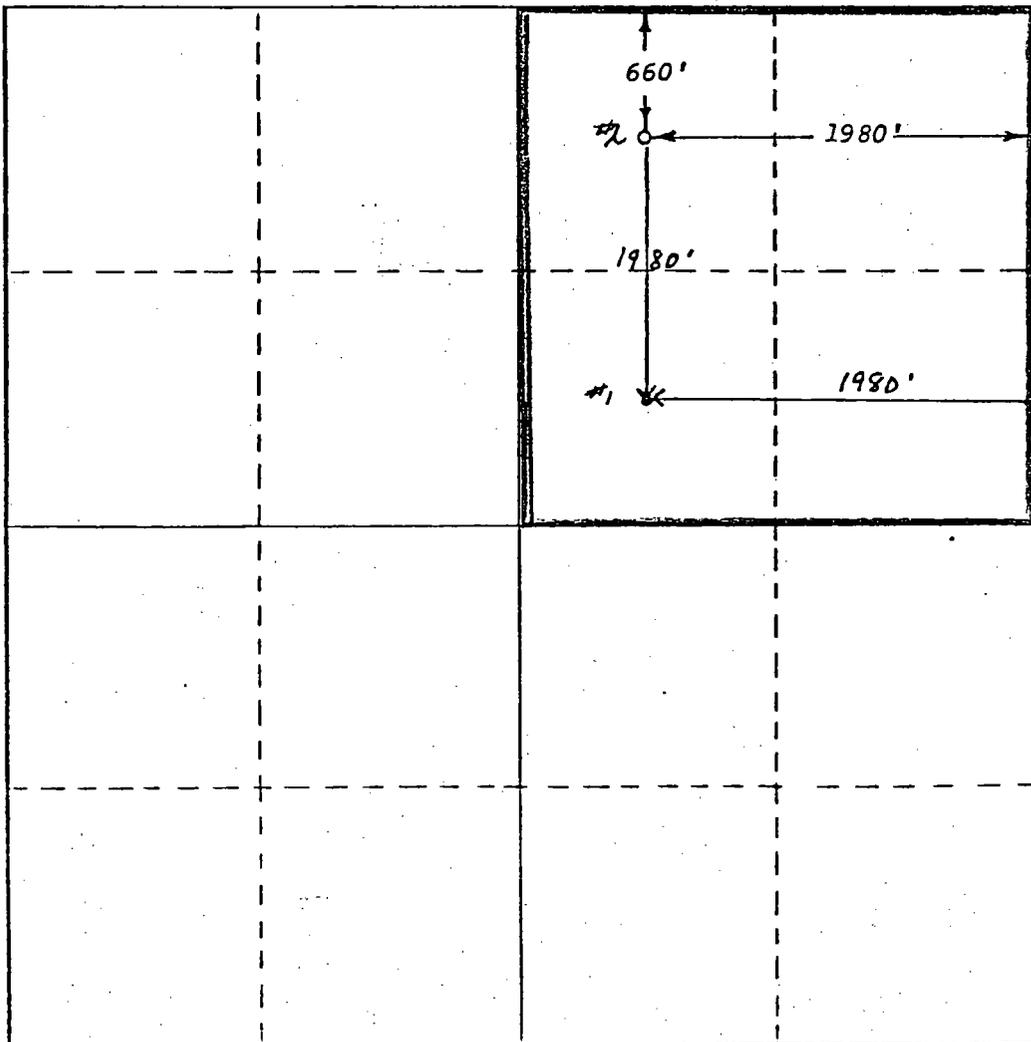
Operator <b>CABOT PETROLEUM CORPORATION</b>		Lease <b>New Mexico State "U"</b>		Well No. <b>2</b>
Unit Letter	Section <b>4</b>	Township <b>T-14-S</b>	Range <b>R-33-E</b>	County <b>Lea County, New Mexico</b>
Actual Footage Location of Well: <b>660</b> feet from the <b>North</b> line and <b>1980</b> feet from the <b>East</b> line				
Ground Level Elev. <b>4237'</b>	Producing Formation <b>Permo-Penn</b>	Pool <b>Baum Upper Penn</b>	Dedicated Acreage: <b>160</b> Acres	

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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.*

*Paul Andrew*

Name <b>Paul Andrew</b>
Position <b>Agent</b>
Company <b>Cabot Petroleum Corp.</b>
Date <b>2/10/84</b>

*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 <b>Feb. 7, 1984</b>
Registered Professional Engineer and/or Land Surveyor

*Larry D. Beaswell*

Certificate No. **6689**

30-025-28614

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
K-3846

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
 b. Type of Well DRILL  DEEPEN  PLUG BACK   
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

7. Unit Agreement Name

8. Farm or Lease Name  
New Mexico 'U' State

2. Name of Operator  
Cabot Petroleum Corporation

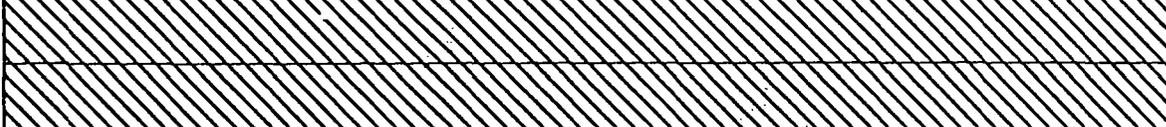
9. Well No.  
2

3. Address of Operator  
P. O. Box 5001, Pampa, Texas 79065

10. Field and Pool, or Wildcat  
Baum Upper Penn

4. Location of Well UNIT LETTER B LOCATED 660 FEET FROM THE North LINE  
 AND 1980 FEET FROM THE East LINE OF SEC. 4 TWP. 14S RGE. 33E NMPM

12. County  
Lea



19. Proposed Depth 10,300' 19A. Formation Permo-Penn 20. Rotary or C.T.  
Rotary

21. Elevations (Show whether DF, RT, etc.) 4237' GR 21A. Kind & Status Plug. Bond \$50,000 Blanket in force #749971 21B. Drilling Contractor Unknown yet 22. Approx. Date Work will start Upon Approval

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48#	400'	450 sxs	Surface
12 1/4"	8 5/8"	28#	4100'	1925	Surface
7 7/8"	5 1/2"	17# & 20#	10,300'	555	3000'

Blowout Preventer Program: Cameron double hydraulic Type SS, 10" 3000# and Hydril Type GK, 12" 3000# with Koomey-Weise 80 gallon accumulator, 3000# 3 stations with Hydril control valve.

The above or type equivalent.

APPROVAL VALID FOR 180 DAYS  
PERMIT EXPIRES 8/20/84  
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 [Signature] Title Agent Date 2/10/84

(This space for State Use)  
JERRY SEXTON  
DISTRICT SUPERVISOR

FEB 9 1984

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

30-025-28614

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
K-3846

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
b. Type of Well DRILL  DEEPEN  PLUG BACK   
OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. Name of Operator  
Cabot Petroleum Corporation

3. Address of Operator  
P. O. Box 5001, Pampa, Texas 79065

4. Location of Well  
UNIT LETTER B LOCATED 660 FEET FROM THE North LINE  
AND 1980 FEET FROM THE East LINE OF SEC. 4 TWP. 14S RGE. 33E NMPM

7. Unit Agreement Name

8. Farm or Lease Name  
New Mexico 'U' State

9. Well No.  
2

10. Field and Pool, or Wildcat  
Baum Upper Penn

12. County  
Lea

19. Proposed Depth  
10,300'

19A. Formation  
Permo-Penn

20. Rotary or C.T.  
Rotary

21. Elevations (Show whether DF, RT, etc.)  
4237' GR

21A. Kind & Status Plug. Bond  
\$50,000 Blanket in force #749971

21B. Drilling Contractor  
Unknown yet

22. Approx. Date Work will start  
Upon Approval

23. PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17 1/2"	13 3/8"	48#	400'	450 sxs	Surface
12 1/4"	8 5/8"	28#	4100'	1925	Surface
7 7/8"	5 1/2"	17# & 20#	10,300'	555	3000'

Blowout Preventer Program: Cameron double hydraulic Type SS, 10" 3000# and Hydril Type GK, 12" 3000# with Koomey-Weise 80 gallon accumulator, 3000# 3 station with Hydrill control valve.

The above or type equivalent.

APPROVAL VALID FOR 180 DAYS  
PERMIT EXPIRES 8/20/84  
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 [Signature] Title Agent Date 2/10/84

(This space for State Use)  
ORIGINAL SIGNED BY JERRY SEXTON  
DISTRICT 1 SUPERVISOR

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

FEB 20 1984

CONDITIONS OF APPROVAL, IF ANY:

DATE - 1-23-85

NAME - NEW MEXICO STATE U #2

STATE, CO - NEW MEXICO, LEA

LOCATION - 660 FNL + 1980 FEL

SEL 4 T 145 - R33E

FIELD - BAUM

DATUM - 4254 KB

SPUD - 4-15-84

COMPLETED - JUN 1984

TREATMENT

JUN 1984 - TEST CANYON WET

10078-96 SET LCBP @ 10065

PERF 9986-92 ACID 9986-92

W/ 1400 GAL MOD 202 SET LCBP 9970

PERF 9895, 9887-89, 9879-81, 9866-72

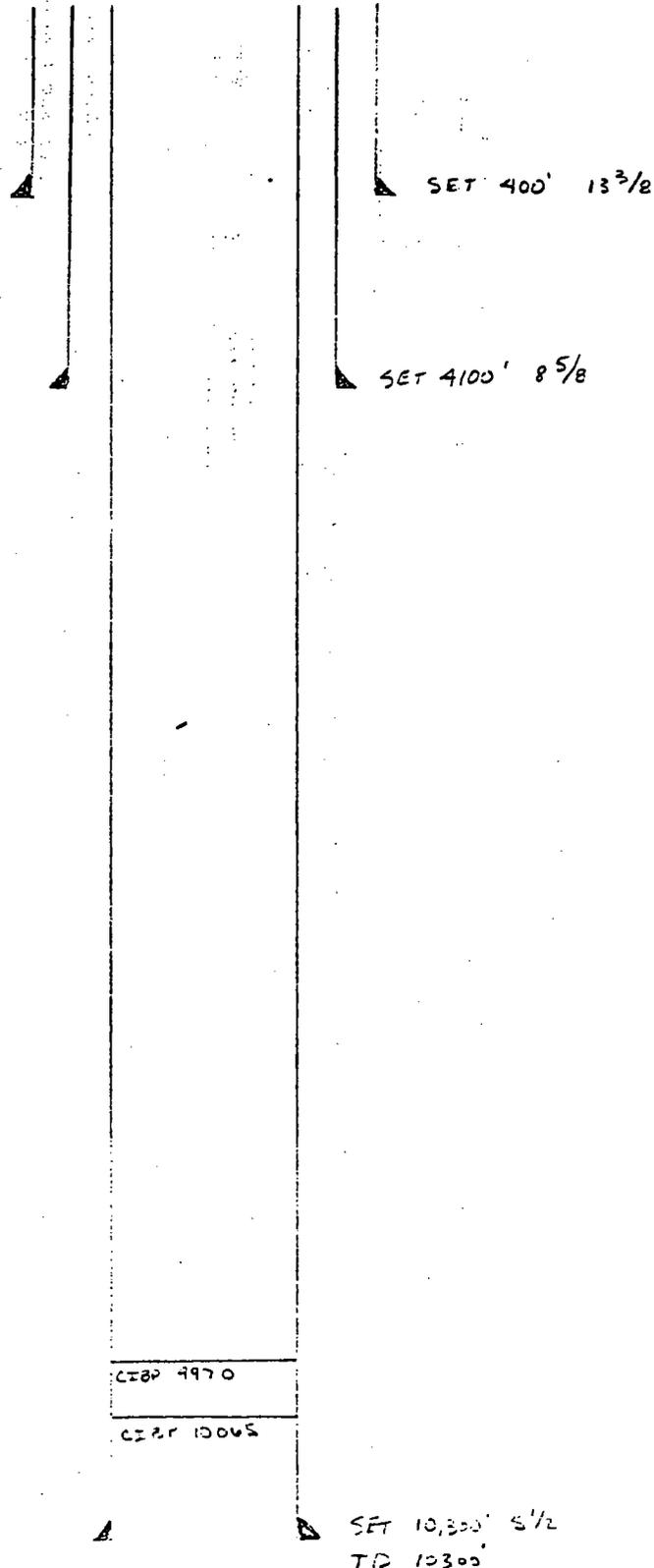
9854, 9842, 9837 ACID 9837-9895

W/ 3400 GAL MOD 202

OCT 1984 PERF 9787, 9779, 9763-75, 9753

9747-50 ACID 9747-9787 W/

3000 GAL MOD 202



SET 400' 13 3/8'

SET 4100' 8 5/8'

PERF 9970

PERF 10065

SET 10,300' 8 1/2'  
TD 10300'

DATE - 1-23-85  
NAME - NEW MEXICO STATE U #1  
STATE, CO: NEW MEXICO, LEA  
LOCATION - 1980 FNL + 1980 FFL  
SEL 4 T 145 - R33E

FIELD - BAUM FIELD  
DATUM - 4249 KB  
SPUD - MAY 4, 1969  
COMPLETED - JUNE 1969

TREATMENT

JUNE 1969 - PERF 9842-50, 9853-55, 9859-61  
ACID W/ 200 GAL 7 1/2% ACID

JUNE 1963 - PERF 9887-89, 9894-96, 9900-06  
9842-47 ACID 9887-9906 W/  
1500 GAL MOD 202 ACID 9842-9861  
W/ 4500 GAL MOD 202  
PERF 9761-65, 9776-90 UNABLE TO  
BREAK DOWN

FEB 1984 - PERF 9761-66, 9780-90 AND 9761-9790  
W/ 4000 GAL MOD 202 PERF 9740-48  
9679-84, 9653-58 ACID 9653-9740  
W/ 4000 GAL MOD 202

389' 13 3/8 CS9

4090' 8 5/8 CS9

9975' 4 1/2 CS9  
TD 9975

20 YEARS BY MONTH 555-2151  
NEW MEXICO STATE

MONTHLY PRODUCTION - BARRELS

10,000

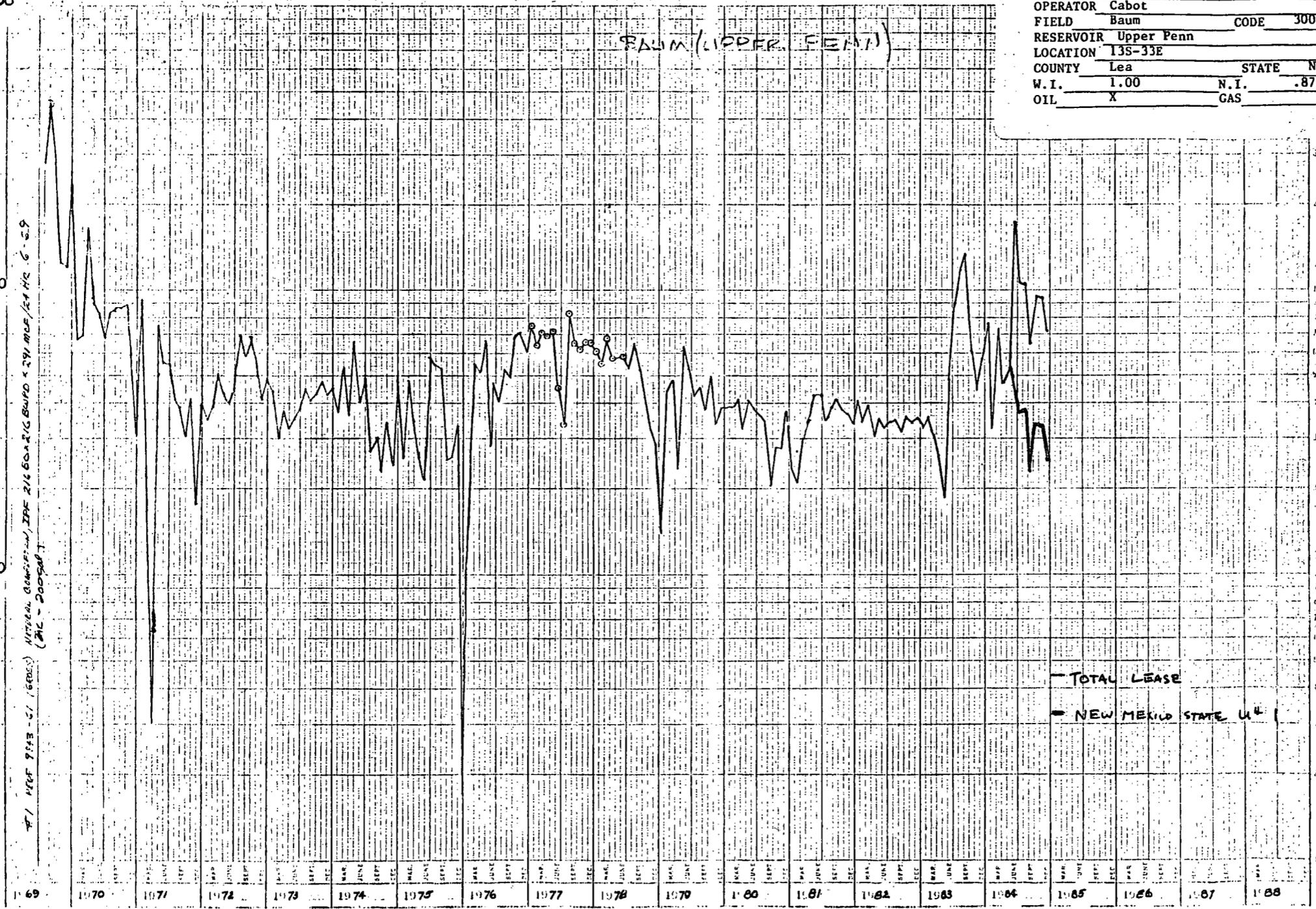
1,000

100

W/ WEP 9113-01 (6000) NITROGEN INJECTION, 21660 AIG BUID 5.291 MCF/24 Hrs 6-5.9  
(MC - DOUGLAS)

BAUM (UPPER FEM)

ENTITY NO. & M.P. NM-025-0016-M01  
 LEASE State of NM "U" WELLS  
 OPERATOR Cabot  
 FIELD Baum CODE 30004  
 RESERVOIR Upper Penn  
 LOCATION 135-33E  
 COUNTY Lea STATE NM  
 W.I. 1.00 N.I. .875  
 OIL X GAS



1,000

BOPM

100

- TOTAL LEASE

- NEW MEXICO STATE U<sup>4</sup>

1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988