

OIL CONSERVATION DIVISION
P. O. Box 2022
SANTA FE, NEW MEXICO
87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER
NFL 122

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 Texaco Inc. Well Name and No. New Mexico "AE" Well No. 26
Location: Unit F Sec. 12 Twp 18 South Rng. 34 East Cty. Lea

II.

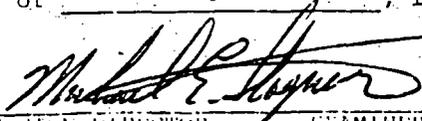
THE DIVISION FINDS:

- (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 Vacuum Abo Reef Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40-acre proration unit comprising the SW/4 NW/4 of Sec. 12, Twp 18 South, Rng. 34 East, is currently dedicated to the applicant's New Mexico "AE" Well No. 10 located in Unit E 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 160,000 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 4th day of February, 19 86.


DIVISION DIRECTOR EXAMINER ✓

cc: Oil Conservation Division - Hobbs

Received 10/25/84
Release Immediately

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

ADMINISTRATIVE ORDER
NFL 122

INFILL DRILLING FINDINGS AND WELL-SPACING WAIVER
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FEDERAL ENERGY REGULATORY COMMISSION REGULATIONS,
NATURAL GAS POLICY ACT OF 1978 AND OIL CONSERVATION DIVISION
ORDER NO. R-6013

I.

Operator Texaco Inc. Well Name and No. New Mexico "AE" Well No. 26
Location: Unit E Sec. 12 Twp. 18 South Rng. 34 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 Vacuum Abso Reef Pool, and the standard spacing unit in said pool is 40 acres.

(4) That a 40-acre proration unit comprising the SW/4 NW/4 of Sec. 12, Twp. 18 South, Rng. 34 East, is currently dedicated to the applicant's New Mexico "AE" Well No. 10 located in Unit E 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 160,000 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_____.

DIVISION DIRECTOR _____ EXAMINER _____

cc - OGD Hobbs
AMC + GEC Hobbs



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

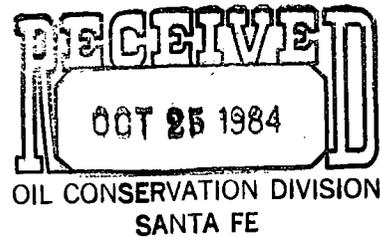
STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR



Texaco USA
Producing Department

PO Box 3109
Midland TX 79702

October 22, 1984



GOV-STATE AND LOCAL GOVERNMENTS
NEW MEXICO OIL CONSERVATION COMMISSION
EFFECTIVE AND EFFICIENT FINDING
NEW MEXICO "AE" STATE NO. 26
VACUUM ABO REEF POOL
LEA COUNTY, NEW MEXICO

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: NGPA Compliance

Gentlemen:

Attached is the infill well finding in connection with the category filing under Section 103 of the NGPA, for the above captioned well.

Included are the following:

- (a) New Mexico Oil Conservation Commission request for an Effective and Efficient Finding
- (b) Effective and Efficient Finding
- (c) Attachment I - Production curve detailing production problems - New Mexico "AE" State No. 10
- (d) Attachment II - Structure Map

If you have any questions, please contact Mr. Gary Kern at (915) 688-4656.

Yours very truly,

*James W. Cox*_{RSL}

James W. Cox
Petroleum Engineering Manager

GRK/so

Attachments

EFFECTIVE AND EFFICIENT FINDING
NEW MEXICO "AE" STATE NO. 26
VACUUM ABO REEF POOL
LEA COUNTY, NEW MEXICO

(A) In compliance with Rule 8 of "SPECIAL RULES AND REGULATIONS - NATURAL GAS POLICY ACT INFILL FINDINGS ADMINISTRATIVE PROCEDURE"; attached is a description of all wells drilled on the subject proration unit, which are, or have been completed in the same pool or reservoir as the infill well.

(a) Lease name and well locations:

(1) New Mexico "AE" State No. 10: Location: 1980' FNL and 990' FWL of Section 12, Twp. 18-S, Rg. 34-E

(2) New Mexico "AE" State No. 26: Location: 2080' FNL and 990' FWL of Section 12, Twp. 18-S, Rg. 34-E

(b) Spud date:

(1) New Mexico "AE" State No. 10: 7/19/63

(2) New Mexico "AE" State No. 26: 8/6/83

(c) Completion date:

(1) New Mexico "AE" State No. 10: 9/12/63

(2) New Mexico "AE" State No. 26: 10/25/83

(d) Description of mechanical problems experienced along with a summary of remedial action(s) taken and results obtained:

(1) New Mexico State "AE" State No. 10 - Well No. 10 is equipped with 2 7/8" casing (slim-hole completion), and was being produced via gas lift equipment. Gas lift was terminated in 1979 due to reduced gas volumes available and required compression making the gas lift operation economically unattractive. Beam pumping equipment was installed and the production declined to approximately 100 bopd.

In late 1979, an acid fracture stimulation treatment returned the well to flowing top allowable for a short period of time (Reference Attachment I). Due to pumping difficulties associated with producing a slim-hole completion, from a moderate depth (8358'), the beam

pumping equipment was removed and the well allowed to flow. Production rapidly declined to an average 35 bopd in late 1981 and 1982.

(2) New Mexico "AE" State No. 26 - No mechanical problems, new well, equipped with 5 1/2" casing.

(e) Current Rate of Production:

(1) New Mexico "AE" State No. 10 - Shut-in (not being produced due to new well on the proration unit)

(2) New Mexico "AE" State No. 26 - 3 BOPD, 66 mcf/d (production data, NMOCC, June '84)

(g) The reason for the recommendation and subsequent drilling of the New Mexico "AE" State No. 26 was that the existing well in the proration unit, New Mexico "AE" State No. 10 was not capable of draining oil and gas reserves underlying the proration unit for the following reasons:

(1) Problems mentioned under item (d) would preclude the possibility of economical pumping operations in this 2 7/8" slim-hole completion. Since the Vacuum Abo Reef is a water drive reservoir, increasing water-cut would in all probability make the well cease flowing and since pumping operations, necessary to produce a high water-oil ratio well, could not be carried out, reserves would be lost.

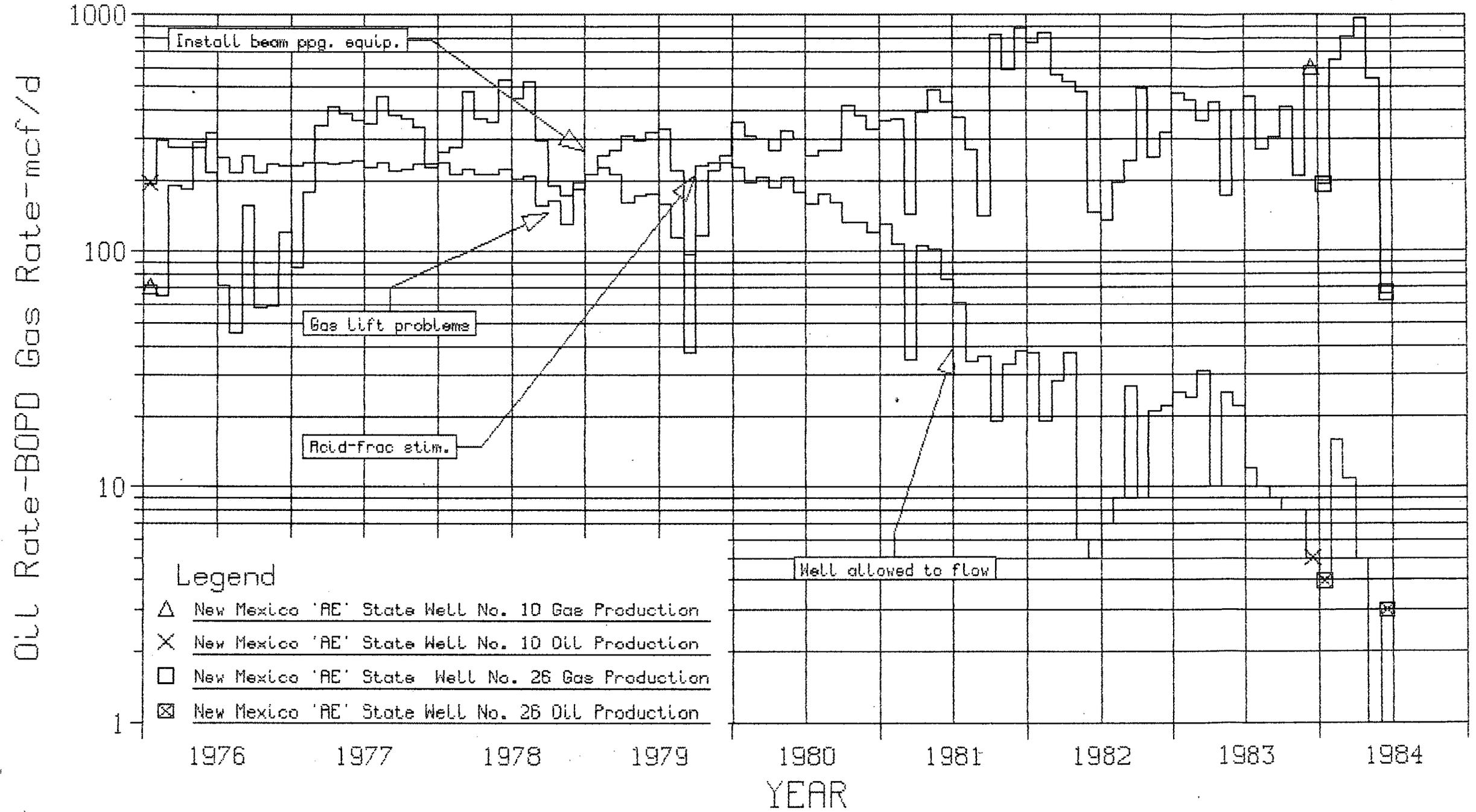
(B) In compliance with Rule 9 of "SPECIAL RULES AND REGULATION - NATURAL GAS POLICY ACT INFILL FINDINGS ADMINISTRATIVE PROCEDURES" indicated below is certain qualifying information necessary for such a finding.

(a) Formation Structure Map (See Attachment No. II)

(b) Volume of increased recovery expected to be obtained and a narrative describing how the increase was determined:

When originally drilled the increased ultimate recovery was anticipated to be 200,000 bbls of oil and 160 mmscf of gas. Oil reserves were determined based on initial potential rate at 150 bopd declining at an annual rate of 26.5% to an economic limit at 5 bopd. Gas reserves were determined using a constant GOR of 800 scf/bbl.

NEW MEXICO 'AE' STATE WELL NO.S 10 AND 26 PRODUCTION DATA



- Legend**
- △ New Mexico 'AE' State Well No. 10 Gas Production
 - × New Mexico 'AE' State Well No. 10 Oil Production
 - New Mexico 'AE' State Well No. 26 Gas Production
 - ⊠ New Mexico 'AE' State Well No. 26 Oil Production

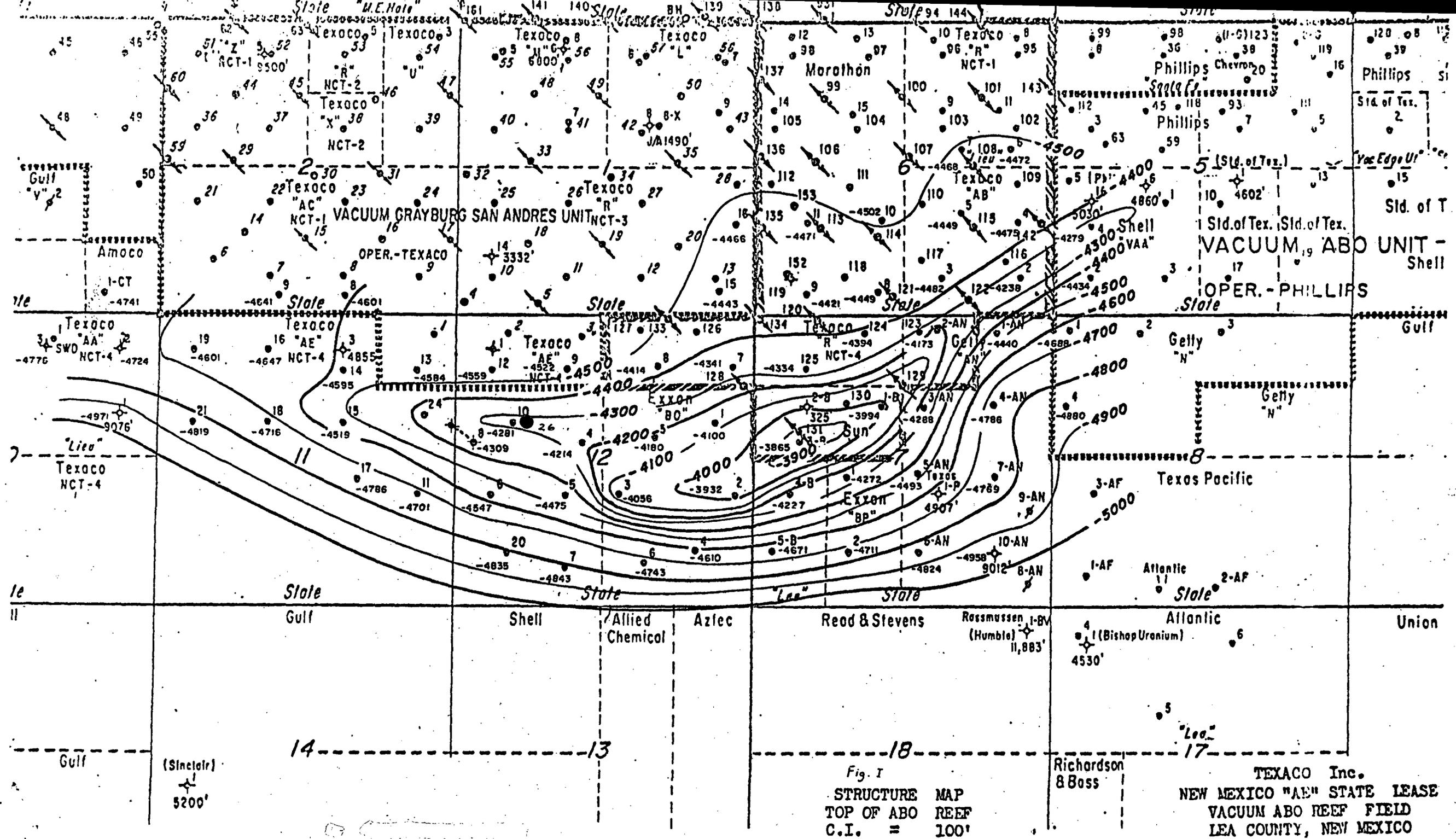


Fig. I
 STRUCTURE MAP
 TOP OF ABO REEF
 C.I. = 100'

TEXACO Inc.
 NEW MEXICO "AN" STATE LEASE
 VACUUM ABO REEF FIELD
 LEA COUNTY, NEW MEXICO



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

August 20, 1990

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Texaco, Inc.
c/o Campbell & Black, P.A.
P.O. Box 2208
Santa Fe, NM 87504-2208

Attention: William F. Carr

*RE: New Mexico "AE" State Well No. 26, E-12-T18S-R34E,
Vacuum Abo Reef Completion, Lea County, New Mexico.*

Dear Mr. Carr:

Per your letter dated May 8, 1990 and to our numerous conversations regarding this application, it was the Division's opinion at the time that such an application for hearing was unnecessary since both wells were previously addressed in Texaco's application for an Infill Well Finding, which resulted in the issuance of Division Administrative Order NFL-122, see copy attached.

The unorthodox location of the No. 26 well could best be handled administratively by notifying all offsetting operators, if any, and referencing the data submitted by Texaco in the previous administrative application. Also, what action resulted in Texaco's decision not to abandon the No. 10 well as previously stated in the C-102 for, and data provided on, the No. 26 well for its Infill Well Finding.

Should you have any questions concerning this matter, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner".

Michael E. Stogner
Chief Hearing Officer/Engineer

MES/ag

cc: Oil Conservation Division - Hobbs
File: NFL-122

OIL CONSERVATION DIVISION
P. O. Box 2022
SANTA FE, NEW MEXICO
87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

ADMINISTRATIVE ORDER
NFL 122

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Operator Texaco Inc. Well Name and No. New Mexico "AE" Well No. 26
Location: Unit E Sec. 12 Twp 18 South Rng. 34 East Cty. Lea

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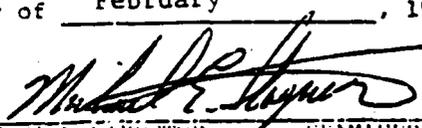
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- (3) That the well for which a finding is sought is to be completed in the Vacuum Abo Reef Pool, and the standard spacing unit in said pool is 40 acres.
- (4) That a 40-acre proration unit comprising the SW/4 NW/4 of Sec. 12, Twp. 18 South, Rng. 34 East, is currently dedicated to the applicant's New Mexico "AE" Well No. 10 located in Unit E 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 160,000 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.
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IT IS THEREFORE ORDERED:

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- (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 4th day of February, 19 86.


DIVISION DIRECTOR EXAMINER ✓

cc: Oil Conservation Division - Hobbs

CAMPBELL & BLACK, P.A.

LAWYERS

JACK M. CAMPBELL
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
MARK F. SHERIDAN
WILLIAM P. SLATTERY
PATRICIA A. MATTHEWS

JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87504-2208
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

May 8, 1990

HAND-DELIVERED

RECEIVED

MAY 8 1990

OIL CONSERVATION DIVISION

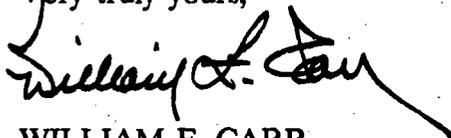
William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

Re: In the Matter of the Application of Texaco, Inc. for Unorthodox Well
Locations, and Simultaneous Dedication, Lea County, New Mexico

Dear Mr. LeMay:

Enclosed in triplicate is the application of Texaco, Inc. in the above-referenced case. Texaco, Inc. respectfully requests that this matter be placed on the docket for the May 30, 1990 Examiner hearings.

Very truly yours,


WILLIAM F. CARR

WFC:mlh

Enclosures

cc w/enclosures: Mr. Glen Carter
Texaco, Inc.

BEFORE THE
OIL CONSERVATION DIVISION
NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

RECEIVED
MAY 8 1990

IN THE MATTER OF THE APPLICATION OF
TEXACO, INC. FOR UNORTHODOX WELL
LOCATIONS AND SIMULTANEOUS DEDICATION,
LEA COUNTY, NEW MEXICO.

OIL CONSERVATION DIVISION

CASE NO. _____

APPLICATION

TEXACO, INC. ("Texaco"), by and through its undersigned attorneys, hereby makes application to the New Mexico Oil Conservation Division for approval of unorthodox oil well locations and simultaneous dedication, and in support thereof states:

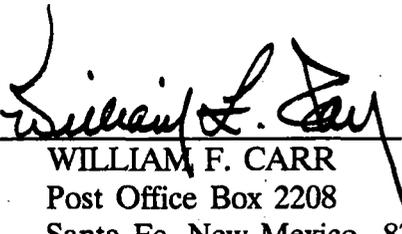
1. Texaco is the operator of a 40-acre standard oil proration unit in the Vacuum Abo Reef Pool, comprised of the SW/4 NW/4 (Unit E) of Section 12, Township 18 South, Range 34 East, N.M.P.M., Lea County, New Mexico.
2. Texaco proposes to simultaneously dedicate to this 40-acre proration unit its New Mexico "AE" State No. 10 Well located 1980 feet from the North line and 990 feet from the West line of Section 12, and its New Mexico "AE" State No. 26 Well located 2080 feet from the North line and 990 feet from the West line of Section 12, Abo Reef Pool.
3. Texaco seeks an exception to the well location requirements of Division Rule 104 C I to permit these wells which are 100 feet apart to simultaneously produce from the Vacuum Abo Reef Pool.

4. Approval of this application will afford Texaco the opportunity to produce its just and equitable share of hydrocarbons underlying this spacing unit thereby protecting its correlative rights and will otherwise be in the best interest of conservation and the prevention of waste.

WHEREFORE, Texaco respectfully requests that this matter be set for hearing before a duly appointed Examiner of the Oil Conservation Division on May 30, 1990, and that after notice and hearing as required by law, the Division enter its order granting this application and providing such other relief as is proper.

Respectfully submitted,

CAMPBELL & BLACK, P.A.

By: 
WILLIAM F. CARR
Post Office Box 2208
Santa Fe, New Mexico 87504
Telephone: (505) 988-4421

ATTORNEYS FOR TEXACO, INC.

Sec. 12 Township No. 18 South of Range No. 34 East, N.M.P.M.,
 County Yca, New Mexico.

		New Mexico AE State Well No. 10 1980' FWL - 990' FWL Spud: 7/19/63 Vacuum Rho Reef Completion Cumulative Production as of 12/31/84 Gas - 1725233 MCF D.I. - 1178016 B.G. Application Well Texas Inc.	New Mexico AE State Well No. 26 2080' FWL - 990' FWL Spud: 9/6/83 Vacuum Rho Reef Completion Cumulative Production as of 12/31/84 Gas - 132480 MCF D.I. - 145680

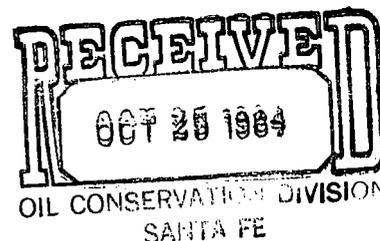




Texaco USA
Producing Department

PO Box 3109
Midland TX 79702

October 22, 1984



GOV-STATE AND LOCAL GOVERNMENTS
NEW MEXICO OIL CONSERVATION COMMISSION
EFFECTIVE AND EFFICIENT FINDING
NEW MEXICO "AE" STATE NO. 26
VACUUM ABO REEF POOL
LEA COUNTY, NEW MEXICO

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: NGPA Compliance

Gentlemen:

Attached is the infill well finding in connection with the category filing under Section 103 of the NGPA, for the above captioned well.

Included are the following:

- (a) New Mexico Oil Conservation Commission request for an Effective and Efficient Finding
- (b) Effective and Efficient Finding
- (c) Attachment I - Production curve detailing production problems - New Mexico "AE" State No. 10
- (d) Attachment II - Structure Map

If you have any questions, please contact Mr. Gary Kern at (915) 688-4656.

Yours very truly,

James W. Cox
Petroleum Engineering Manager

GRK/so

Attachments



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION

TONY ANAYA
 GOVERNOR

POST OFFICE BOX 2088
 STATE LAND OFFICE BUILDING
 SANTA FE, NEW MEXICO 87501
 (505) 827-5800

TEXACO, INC.
 P.O. Box 3109
 Midland, Texas 79702

Attention: R.V. Shoemaker
 Gas Engr. & Sales Manager

RE: Well head price ceiling
 determination, NGPA of
 1978

Gentlemen:

The New Mexico Oil Conservation Division has received your application for a wellhead price ceiling category determination under the sections(s) of the Natural Gas Policy Act of 1978 indicated below if your application is incomplete, forms are attached hereto, indicating the documents and further information which must be filed before your application can be considered. If your application is complete, it will be acted upon administratively unless written objection is received within 15 days of its filing.

WELL NAME AND LOCATION New Mexico "AE" State 12-18S-34E #26

SECTION(S) APPLIED FOR 103

DATE APPLICATION RECEIVED January 17, 1984

APPLICATION INCOMPLETE Please submit the required In-Fill Well Finding data for this well as soon as possible.

Sincerely,

DATE: March 5, 1984

NOTE:

THIS FORM LETTER MUST ACCOMPANY TWO COPIES OF THE SUPPLEMENTARY INFORMATION.

EFFECTIVE AND EFFICIENT FINDING

NEW MEXICO "AE" STATE NO. 26
VACUUM ABO REEF POOL
LEA COUNTY, NEW MEXICO

(A) In compliance with Rule 8 of "SPECIAL RULES AND REGULATIONS - NATURAL GAS POLICY ACT INFILL FINDINGS ADMINISTRATIVE PROCEDURE"; attached is a description of all wells drilled on the subject proration unit, which are, or have been completed in the same pool or reservoir as the infill well.

(a) Lease name and well locations:

(1) New Mexico "AE" State No. 10: Location: 1980' FNL and 990' FWL of Section 12, Twp. 18-S, Rg. 34-E

(2) New Mexico "AE" State No. 26: Location: 2080' FNL and 990' FWL of Section 12, Twp. 18-S, Rg. 34-E

(b) Spud date:

(1) New Mexico "AE" State No. 10: 7/19/63

(2) New Mexico "AE" State No. 26: 8/6/83

(c) Completion date:

(1) New Mexico "AE" State No. 10: 9/12/63

(2) New Mexico "AE" State No. 26: 10/25/83

(d) Description of mechanical problems experienced along with a summary of remedial action(s) taken and results obtained:

(1) New Mexico State "AE" State No. 10 - Well No. 10 is equipped with 2 7/8" casing (slim-hole completion), and was being produced via gas lift equipment. Gas lift was terminated in 1979 due to reduced gas volumes available and required compression making the gas lift operation economically unattractive. Beam pumping equipment was installed and the production declined to approximately 100 bopd.

In late 1979, an acid fracture stimulation treatment returned the well to flowing top allowable for a short period of time (Reference Attachment I). Due to pumping difficulties associated with producing a slim-hole completion, from a moderate depth (8358'), the beam

pumping equipment was removed and the well allowed to flow. Production rapidly declined to an average 35 bopd in late 1981 and 1982.

(2) New Mexico "AE" State No. 26 - No mechanical problems, new well, equipped with 5 1/2" casing.

(e) Current Rate of Production:

(1) New Mexico "AE" State No. 10 - Shut-in (not being produced due to new well on the proration unit)

(2) New Mexico "AE" State No. 26 - 3 BOPD, 66 mcf/d (production data, NMOCC, June '84)

(g) The reason for the recommendation and subsequent drilling of the New Mexico "AE" State No. 26 was that the existing well in the proration unit, New Mexico "AE" State No. 10 was not capable of draining oil and gas reserves underlying the proration unit for the following reasons:

(1) Problems mentioned under item (d) would preclude the possibility of economical pumping operations in this 2 7/8" slim-hole completion. Since the Vacuum Abo Reef is a water drive reservoir, increasing water-cut would in all probability make the well cease flowing and since pumping operations, necessary to produce a high water-oil ratio well, could not be carried out, reserves would be lost.

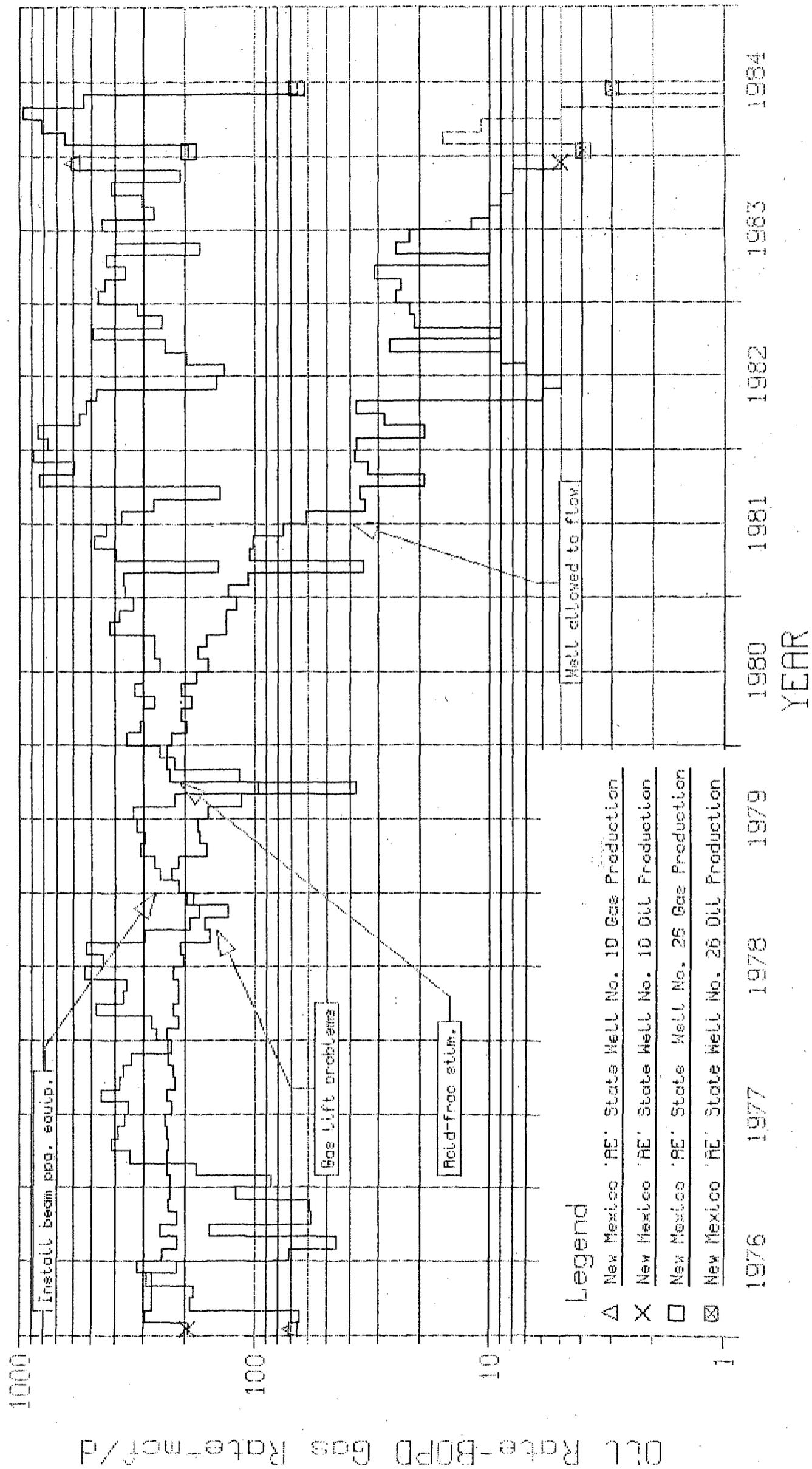
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(a) Formation Structure Map (See Attachment No. II)

(b) Volume of increased recovery expected to be obtained and a narrative describing how the increase was determined:

When originally drilled the increased ultimate recovery was anticipated to be 200,000 bbls of oil and 160 mmscf of gas. Oil reserves were determined based on initial potential rate at 150 bopd declining at an annual rate of 26.5% to an economic limit at 5 bopd. Gas reserves were determined using a constant GOR of 800 scf/bbl.

NEW MEXICO 'AE' STATE WELL NO. S 10 AND 26 PRODUCTION DATA



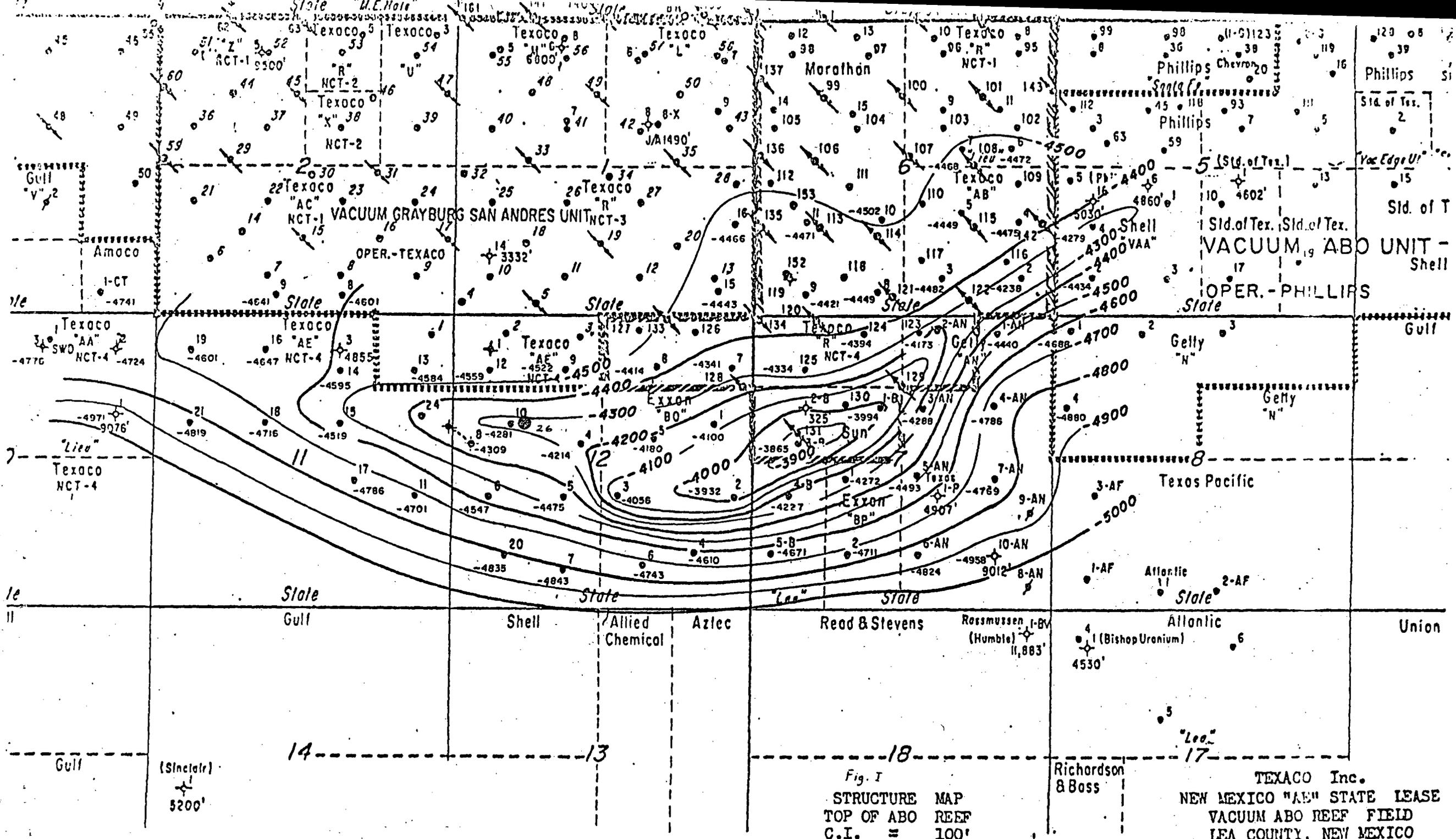


Fig. 1
 STRUCTURE MAP
 TOP OF ABO REEF
 C.I. = 100'

TEXACO Inc.
 NEW MEXICO "AE" STATE LEASE
 VACUUM ABO REEF FIELD
 LEA COUNTY, NEW MEXICO