

CASE No.

4961

Application,
Transcripts,
Small Exhibits

ETC.

dearnley, meier & mc cormick

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
Wednesday, May 9, 1973

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production
Company for down-hole commingling,
Lea County, New Mexico.

Case No. 4961

BEFORE: Daniel S. Nutter,
Examiner

TRANSCRIPT OF HEARING

1 MR. NUTTER: We will call Case Number 4961.

2 MR. CARR: Case 4961, application of Amoco Production
3 Company for downhole commingling, Lea County, New Mexico.

4 MR. COOTER: If the Examiner please, I am Paul
5 Cooter, of Atwood and Malone, Roswell, appearing on behalf of
6 the applicant, Amoco. The case will actually be presented, Mr.
7 Examiner, by Jerry Gross, from Amoco's Law Department in
8 Houston, a member of the Texas State Bar.

9 MR. GROSS: Mr. Nutter, we have one witness to be
10 sworn.

11 DANIEL R. CURRENS,
12 a witness, having been first duly sworn according to law, upon
13 his oath, testified as follows:

14 DIRECT EXAMINATION

15 BY MR. GROSS:

16 MR. GROSS: For the record, my name is Jerry Gross,
17 G-r-o-s-s, P. O. Box 3092, Houston, Texas, and I am an attorney
18 with Amoco Production Company. We have one witness which has
19 been sworn.

20 Q (By Mr. Gross) Would you please state your name for the
21 record, by whom you are employed, and in what capacity?

22 A Daniel R. Currens, employed by Amoco Production Company
23 as Staff Engineer.

24 Q Mr. Currens, have you previously testified as a
25 Petroleum Engineer before the New Mexico Oil Conservation

1 Commission?

2 A Yes, sir, I have.

3 Q Have you prepared or had prepared under your supervision
4 certain exhibits based on a study you made of the Eunice
5 area concerning your commingling application?

6 A Yes, sir.

7 MR. GROSS: Mr. Examiner, are there any questions
8 about Mr. Currens' qualifications?

9 MR. NUTTER: No, there are not.

10 Q (By Mr. Gross) Briefly, Mr. Currens, what is the
11 subject of your application today?

12 A Well, this is Amoco's application for downhole
13 commingling of what is now a triple completion in the
14 Blinbry Oil Pool, the Drinkard Oil Pool, and the Tubb
15 Gas Pool. The well is Amoco's Southland Royalty "A"
16 Well Number 4.

17 Q Have you prepared a plat which better illustrates the
18 location of this well in record to the Southland Royalty
19 area?

20 A Yes, sir.

21 Q We've identified as Applicant's Exhibit 1, a plat
22 prepared by Mr. Currens, and, to that, Mr. Currens, I
23 note that there are a number of wells. Have you
24 identified your subject well by a red arrow?

25 A Yes, the red arrow to the Southland Royalty "A" Number 4,

1 which is in Unit X of Section 4, Township 21 South,
2 Range 37 East, Lea County, New Mexico.

3 Q Also, there is a color code here, Mr. Currens, and on
4 that color code do you have certain wells identified by
5 completions?

6 A Yes, sir. I have identified the completions on the
7 Southland Royalty "A" Lease, the status of the wells as
8 they are now.

9 Q In regards to the uppermost part of your lease, Mr.
10 Currens, I note that by a number of wells you have the
11 initials D.H.C. What does that signify?

12 A Those are wells where we have previously obtained
13 approval for downhole commingling, which includes every
14 well on this lease with the exception of Number 4.

15 Q And the subject well you are going to commingle, the
16 Tubb Gas, the Blinebry Oil, and the Drinkard Oil. Now,
17 do you have another well on this lease that is commingled
18 in these zones except it is the Tubb Oil?

19 A Yes, the well immediately to the west of Number 4, Well
20 Number 8, was a triple completion in the Drinkard,
21 Blinebry, and Tubb, all three zones. And downhole
22 commingling of that triple was authorized by Order
23 Number R-4023, dated 9/25/70.

24 Q Mr. Currens, in regards to the Southland Royalty "A"
25 nomenclature, is the Royalty common throughout these

1 zones that we are discussing?

2 A Yes.

3 MR. GROSS: We have identified, Mr. Examiner, as
4 Exhibit 2, a schematic diagram of the completion of this well.

5 Q (By Mr. Gross) If you would, Mr. Currens, review the
6 various zones that have been completed in this well and
7 when and how.

8 A All right. Initially, the well was drilled in 1951 as a
9 Drinkard single. It was completed in November of '51
10 from the Drinkard, potentially flowing 350 barrels of
11 oil in 18 hours, or a rate of 446 barrels of oil per day.
12 It produced in that manner for several years and then
13 dual completion was authorized by adding the Tubb
14 interval just above it in April of 1954. The dual
15 completion was effected with the Tubb producing 647
16 Mcf a day. The Tubb was producing up the casing tubing
17 annulus and the Drinkard was producing up the tubing.

18 Then, subsequent to that, in 1963, a triple
19 completion was authorized by Order Number R-2497, dated
20 5/22/63, and the Blinebry Oil was added. It was
21 completed in July of '63, flowing 76 barrels of oil a day;
22 and, from that time, the mechanical configuration has
23 been as shown here; the Drinkard being a pumping well,
24 pumping up the long tubing string, the Tubb Gas flowing
25 up an annulus between the long tubing string and some

1 Hydrol, through the top Packer, the Model "FA", into the
2 annular space and being produced from the annulus, the
3 Blinebry flowing up the Blinebry oil string, the short
4 oil string, which is shown as the left tubing string in
5 the schematic.

6 Q The way your well is completed, Mr. Currens, does it
7 lend itself for work-over operations?

8 A Not readily, no, sir.

9 MR. GROSS: Mr. Examiner, we have identified as
10 Exhibit 3, the Form C-116, Gas-Oil Ratio Test.

11 Q (By Mr. Gross) On that, Mr. Currens, do you show the
12 producing capability of these various zones and what
13 barn burners they are, you might say?

14 A Yes, sir, the test taken last month in all three zones
15 are shown on here. Just briefly summarizing, the
16 Blinebry Oil produced 3 barrels of oil on that test with
17 a 3,000 gas-oil ratio. The Drinkard produced 1.4 barrels
18 of oil with a 4,286 gas-oil ratio, and the Tubb produced
19 .7 barrels of hydrocarbon with a 64,286 ratio.

20 Q How much water was produced during that time, Mr.
21 Currens?

22 A A total of 1.7 barrels of water.

23 Q Mr. Currens, do you have any information about what the
24 bottomhole pressures are in this field or in these three
25 zones?

1 A Well, in these three zones, roughly, we do. Most of the
2 wells in the area are multiply completed or downhole
3 commingled; but, we have some general information on the
4 bottomhole pressure.

5 Q What is your bottomhole pressure, as best determined, in
6 the Blinebry at this time?

7 A Well, the last definitive measuring we had in the
8 Blinebry was on this well in June of 1970, and it was
9 575 pounds at minus 2400. The Drinkard has been
10 estimated in this well at 590 pounds at a datum of minus
11 3050; and, last year in the Tubb, based on a shut-in
12 surface pressure and extrapolation through a full radiant
13 down to the Tubb, bottomhole pressure would have been
14 498 pounds at 2700 foot datum, minus 2700. So, they are
15 all very low and approximately within 100 pounds of each
16 other.

17 Q Mr. Currens, have you any evidence that these three zones
18 would be compatible?

19 A Yes, sir.

20 Q How is that?

21 A The production from these three zones certainly is
22 compatible, I believe. It's commingled at the surface
23 at this time. It's being commingled in all of these
24 zones in other wells. Surface commingling was
25 authorized for this lease by Order PC-89, dated 8/13/63.

1 So, they've been commingled almost ten years now.

2 Q So you wouldn't form any precipitate or anything like
3 that?

4 A No, we wouldn't expect anything, as well as all the
5 other downhole commingling we've had, we've seen no
6 problems.

7 MR. GROSS: Mr. Examiner, we've identified as
8 Amoco's Exhibits 4-A, 4-B, and 4-C, production decline curves.

9 Q (By Mr. Gross) What are these for, Mr. Currens, and
10 what do they signify?

11 A 4-A is a historical performance curve over the last five
12 years for the Blinbry in this well. 4-B is the same
13 thing for the Drinkard and 4-C is the same thing for the
14 Tubb, and they are provided to permit allocation of the
15 production and allowables to the three zones in the event
16 our application is approved.

17 Q Mr. Currens, in your expert opinion, would commingling
18 jeopardize the efficiency of any secondary recovery
19 operations, if any, in this area?

20 A No, I don't think that commingling these horizons at this
21 time in this area would have any effect on any future
22 secondary recovery.

23 Q Now, Mr. Currens, in fact, you are asking for approval
24 of a gas zone and two oil zones. As I understand, this
25 might be a little more unique, but has this previously

1 been approved by this Commission?

2 A By Order R-4363, dated August 28, 1972, Continental Oil
3 Company was authorized to downhole commingle the Eumont
4 Gas and Penrose-Skelly Oil in it's Lockhart A-17 Number
5 1.

6 Q Mr. Currens, do you feel that you could increase the
7 ultimate recovery of this well by this downhole
8 commingling?

9 A Yes, sir.

10 Q How is that?

11 A Well, for one thing, lower the economic limit. Our
12 current operating cost is about \$350 a month, and we
13 would anticipate the downhole commingling to drop on the
14 order of \$200 a month. That would extend the life of the
15 well to its economic limit. We might expect to get a
16 little more production by the removal of all that
17 downhole equipment, three Packers and two tubing strings
18 and so on, and we might be able to get a little cleanup
19 to some of these formations that are a little hard to get
20 to.

21 MR. GROSS: Mr. Examiner, that concludes our Direct
22 Testimony. We offer into evidence Exhibits 1 through 4-C.

23 MR. NUTTER: Amoco's Exhibits 1 through 4-C will be
24 admitted in evidence.

25 *****

CROSS-EXAMINATION

BY MR. NUTTER:

Q Mr. Currens, apparently, from the production charts 4-A through 4-C, the Blinebry at the present time is making around 2,000 Mcf of gas per month, is that correct?

A Yes, I think that's right.

Q And something in the neighborhood of 80 barrels of oil per month?

A Yes.

Q The Drinkard is making 1500 Mcf of gas a month?

A Yes, sir.

Q And in the neighborhood of 50 barrels of oil per month?

A Yes, sir, that's what these curves reflect.

Q While in the case of the Tubb, it is making 1100 to 1200 Mcf gas and negligible oil?

A Yes, sir.

Q What is the proration unit assigned to this Tubb Well in the Tubb Gas Pool?

A It's a marginal well at this time. Of course, it has a .75 factor, and, I can't answer that specifically. It's a very marginal well and it did have a .75 the last time I looked, which would indicate it was 120, so I would assume --

Q How long has this Number 8 to the west been classified as a Tubb Oil Well?

1 A Well, it was classified as a Tubb Oil Well at the time
2 of the commingling and I don't recall how long prior to
3 that, and that was in 1970.

4 Q If that is a 120-acre unit, it must cross the section
5 line and go down into this lease on Section 9, then?

6 A Yes, sir, that would be my supposition. I did not check
7 that because it's been marginal for so long.

8 Q It does have a marginal status?

9 A Yes, sir.

10 Q With a 120-acre unit assigned to it?

11 A Yes, sir.

12 Q Are you making any recommendation at this time as to
13 the allocation of production or are you just furnishing
14 us these materials that we may make an allocation?

15 A I wasn't making any recommendation on it. If this
16 application is granted, we will be happy with any
17 allocation you desire to make on it.

18 MR. NUTTER: Are there further questions of Mr.
19 Currens?

20 (No response.)

21 MR. NUTTER: Does anyone have anything they wish to
22 offer in Case 4961?

23 (No response.)

24 MR. NUTTER: We will take the case under advisement.
25

R E P O R T E R ' S C E R T I F I C A T E

I, JOHN DE LA ROSA, a Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

John De La Rosa
COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Boarding Hearing of Case No. 4961 heard by me on 5/2 1973

Arthur Examiner
New Mexico Oil Conservation Commission

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E X H I B I T S

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OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87301

June 25, 1973

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMJO
MEMBER

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

Mr. Paul Cooter
Atwood, Malone, Mann & Cooter
Attorneys at Law
Post Office Box 700
Roswell, New Mexico 88201

Re: Case No. 4961
Order No. R-4564
Applicant:
Amoco Production Co.

Dear Sir:

Enclosed herewith are two copies of the above-referenced
Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC X

Artesia OCC

Aztec OCC

Other Mr. Jerry Gross, Amoco - Houston, Texas

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4961
Order No. R-4564

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DOWN-HOLE COMMINGLING,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 9, 1973,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of June, 1973, the Commission, a
quorum being present, having considered the testimony, the
record, and the recommendations of the Examiner, and being fully
advised in the premises,

FINDS:

(1) That due public notice having been given as required
by law, the Commission has jurisdiction of this cause and the
subject matter thereof.

(2) That the applicant, Amoco Production Company, is the
owner and operator of the Southland Royalty "A" Well No. 4,
located in Unit X of Section 4, Township 21 South, Range 37 East,
NMPM, Lea County, New Mexico.

(3) That said well was originally completed as a single
producer from the Drinkard Oil Pool and was subsequently
completed as a dual completion, producing Drinkard oil through
tubing and Tubb gas through the casing-tubing annulus; that the
well was later completed as a triple completion, producing oil
from the Blinebry and Drinkard pools through parallel strings
of tubing and gas through the casing-tubing annulus by means
of a triple flow tube.

(4) That the Blinebry formation and the Drinkard formation
in the vicinity of the subject well are currently being considered
for secondary recovery by means of water flood.

(5) That the commingling of Tubb Gas Pool production in the
well-bore with production from the Blinebry and Drinkard Oil Pools
because of the associated problems of equity determination and
possible migration of fluids from one zone into another, might
delay and possibly prevent the formation of waterflood projects in

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Case No. 4961
Order No. R-4564

the area thereby leaving considerable volumes of oil reserves unrecovered, causing waste.

(6) That the possible commingling of production from the Blinebry and Drinkard Oil Pools in the well-bore of the subject well, maintaining the Tubb gas production as a separate entity in the well, would be less likely to create the problems described above, provided accurate determination of Blinebry and Drinkard production could be made.

(7) That in order to protect correlative rights and prevent waste, the application should be denied.

IT IS THEREFORE ORDERED:

(1) That the application of Amoco Production Company to complete its Southland Royalty "A" Well No. 4, located in Unit X of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the commingling in the well-bore of production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool is hereby denied.

(2) That jurisdiction of this cause is hereby retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


I. R. Trujillo
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

A. L. Porter, Jr.
A. L. PORTER, Jr., Member & Secretary

S E A L

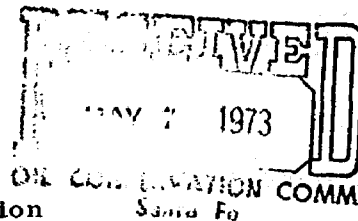
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Atlantic Richfield Company

North American Producing Division
Permian District
Post Office Box 1610
Midland, Texas 79701
Telephone 915 682 8631

May 4, 1973

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



Attn: Mr. A. L. Porter, Jr.

Re: Examiner Hearing May 9, 1973
CASE 4961
Application of Amoco Production Company
For Down-hole Commingling

File Case 4961

Gentlemen:

Atlantic Richfield Company is opposed to Amoco's application for down-hole commingling of production from the Blinbry and Drinkard Oil pools with the Tubb Gas pool in its Southland Royalty "A" Well No. 4, located in Unit X of Section 4, Township 21 South, Range 37 East, Lea County, New Mexico.

The Tubb Gas pool in this area still has substantial reserves remaining and it is our belief that if the oil pools have higher pressure than the gas pool, the oil will enter and damage the gas zone and thereby cause waste. There are also numerous waterflood projects proposed in this area and we do not believe that the commingling of a gas zone with the proposed flood zones would be in the best interest of conservation. Therefore, Atlantic Richfield Company respectfully requests your consideration of the above statements when hearing the subject case.

Very truly yours,

V. M. Hollrah

V. M. Hollrah

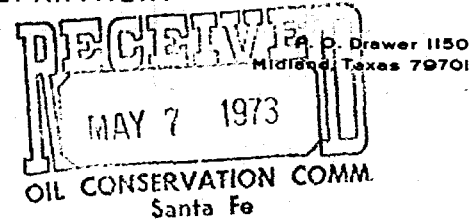
NR/agp

Gulf Oil Company - U.S.

EXPLORATION AND PRODUCTION DEPARTMENT
MIDLAND DISTRICT

W. B. Hopkins
DISTRICT MANAGER
J. A. Hord
DISTRICT EXPLORATION
MANAGER
J. L. Pike
DISTRICT PRODUCTION
MANAGER
M. B. Moseley
DISTRICT SERVICES MANAGER

May 4, 1973



EXAMINER HEARING MAY 9, 1973
CASE 4961 DOWN-HOLE COMMINGLING
BLINEBRY & DRINKARD OIL POOLS
WITH TUBB GAS POOL

File Case 4961

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

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Gulf Oil Corporation has received notice of Amoco Production Company's application to commingle production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool in the well bore of their No. 4 Southland Royalty "A" located in Unit X, Sec. 4, T-21-S, R-37-E, Lea County, New Mexico.

We believe the inclusion of the Tubb Prorated Gas Pool completion with two oil pools is a dangerous precedent to establish. We can appreciate the fact that all three producing horizons are at or near their economic limits in this particular well bore, however, this is not representative of the pools as a whole.

The Drinkard Oil Pool is a good waterflood prospect. Gulf operates its Central Drinkard Waterflood some three miles distant and is currently attempting to form its South Drinkard Unit also some three miles distant. Sun Oil is presently attempting to form its North Drinkard Unit approximately one mile from Amoco's well and Atlantic Richfield is also attempting to form its Blinebry-Drinkard Unit approximately one mile distant.

We believe that commingling of the Tubb Gas with the Blinebry and Drinkard Oil Pools may, because of equity determination as well as mechanical problems, delay and possibly prevent the formation of waterflood projects in the area thereby leaving considerable volumes of oil reserves unrecovered.



A DIVISION OF GULF OIL CORPORATION

Oil Conservation Commission
May 4, 1973
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In view of the above, Gulf Oil Corporation respectfully recommends that the Oil Conservation Commission deny Amoco's application to commingle production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool in the well bore of their No. 4 Southland Royalty "A" located in Unit 4, Sec. 4, T-21-S, R-37-E, Lea County.

Yours very truly,


J. L. PIKE

CFK:jmc

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 9, 1973

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for June, 1973, from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico;
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico, for June, 1973.

CASE 4943: (Continued from the April 11, 1973 Examiner Hearing)

Application of M. W. Staples for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce oil from his Vanderventer Well No. 2 located 1310 feet from the North line and 1330 feet from the East line of Section 20, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Said well was drilled as an injection well at said location pursuant to authority granted by Order No. R-3341.

CASE 4928: (Continued from the April 11, 1973, Examiner Hearing)

Application of Union Oil Company of California for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to the Atlantic Richfield Oil Company Pure-Federal Well No. 11 located in Unit K of said Section 11. Applicant further seeks a provision for the payment of proper costs to be borne by applicant for such well and the related well equipment, a provision for allocation of actual operating costs, and the establishment of charges for supervision of such well and the designation of an operator thereof; and for such other relief as proper. Also to be considered will be the risk involved in drilling the subject well.

CASE 4932: (Continued from the April 11, 1973, Examiner Hearing)

Application of Atlantic Richfield Company for a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 340.94-acre non-standard gas proration unit comprising the W/2 of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to its Pure Federal Well No. 1 located in Unit K of said Section 11.

CASE 4959: Application of Tamarack Petroleum Company, Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Bronco Wolfcamp Unit Area, comprising 762 acres, more or less, of fee lands in Section 35, Township 12 South, and Section 2, Township 13 South, both Range 38 East, Lea County, New Mexico.

CASE 4960: Application of Tamarack Petroleum Company, Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Wolfcamp formation through three wells in its Bronco Wolfcamp Unit Area, Bronco-Wolfcamp Pool, Lea County, New Mexico.

CASE 4961: Application of Amoco Production Company for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool in the well-bore in its Southland Royalty "A" Well No. 4 located in Unit X of Section 4, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 4962: Application of Amoco Production Company for special pool rules, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Peterson-Pennsylvanian Pool, Roosevelt County, New Mexico, including a provision for classification of oil wells and gas wells, 160-acre spacing for oil wells, 320-acre spacing for gas wells, and a limiting gas-oil ratio of 4,000 to one.

CASE 4963: Application of Texaco Inc. for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the North Benson Queen Unit Area comprising 1800 acres, more or less, of Federal and State lands in Township 18 South, Range 30 East, Eddy County, New Mexico.

CASE 4964: Application of Texaco Inc. for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its North Benson Queen Area, North Benson-Queen Pool, Eddy County, New Mexico, by the injection of water into the Queen formation through 20 wells in said unit area.

CASE 4965: Application of Read & Stevens, Inc. for a dual completion, contraction of vertical limits, creation of a new pool and special pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Buffalo Valley-Pennsylvanian Pool, Chaves County, New Mexico, to exclude the producing interval from 8548 feet to 8578 feet as found in its Langley Com Well No. 1 located in Unit C of Section 13, Township 15 South, Range 27 East, and to redesignate said pool as the Buffalo Valley Lower-Pennsylvanian Gas Pool, and for the creation of a new pool for the

(Case 4965 continued from page 2)

above-described producing interval to be designated Buffalo Valley Upper-Pennsylvanian Gas Pool. Applicant also seeks the adoption of special rules for said proposed new pool similar to the pool rules for the presently existing pool; applicant further seeks approval for the dual completion of the above-described well to produce from both of the aforesaid two pools.

CASE 4966: Application of Read & Stevens, Inc. for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests underlying the N/2 of Section 36, Township 12 South, Range 30 East, Chaves County, New Mexico, to be dedicated to a well to be drilled to the Queen formation in Unit B of said Section 36, in the Southeast Chaves Queen Gas Area. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a 200 percent charge for risk involved in drilling said well.

CASE 4967: Application of John M. Etcheverry for dissolution of a standard proration unit and the creation of two non-standard proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dissolution of the standard 160-acre proration unit comprising the SW/4 of Section 29, Township 14 South, Range 34 East, West Tres Papalotes-Pennsylvanian Pool, Lea County, New Mexico, dedicated to the Mark Production Company Etcheverry Well No. 1 located in Unit L of said Section 29, and the creation of two non-standard 80-acre proration units, one comprising the N/2 and the other the S/2 of the SW/4 of said Section 29; the first unit would be dedicated to the aforesaid Etcheverry Well No. 1 and the second unit would be dedicated to a well proposed to be drilled in Unit P of said Section 29.

CASE 4968: Application of Benjamin K. Horton for the amendment of Order No. R-1814, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-1814 to provide for the dissolution of the 344.28-acre non-standard unit approved by paragraph 4 of said order which unit comprises all of partial Section 11 plus Lot 4 and the SW/4 SW/4 of partial Section 12, Township 28 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico. Applicant proposes the creation of a 275.36-acre non-standard unit comprising all of the aforesaid partial Section 11 only to be dedicated to his Federal Well No. 2 located 1190 feet from the South line and 2210 feet from the East line of said Section 11.

CASE 4946: (Continued and Readvertised)

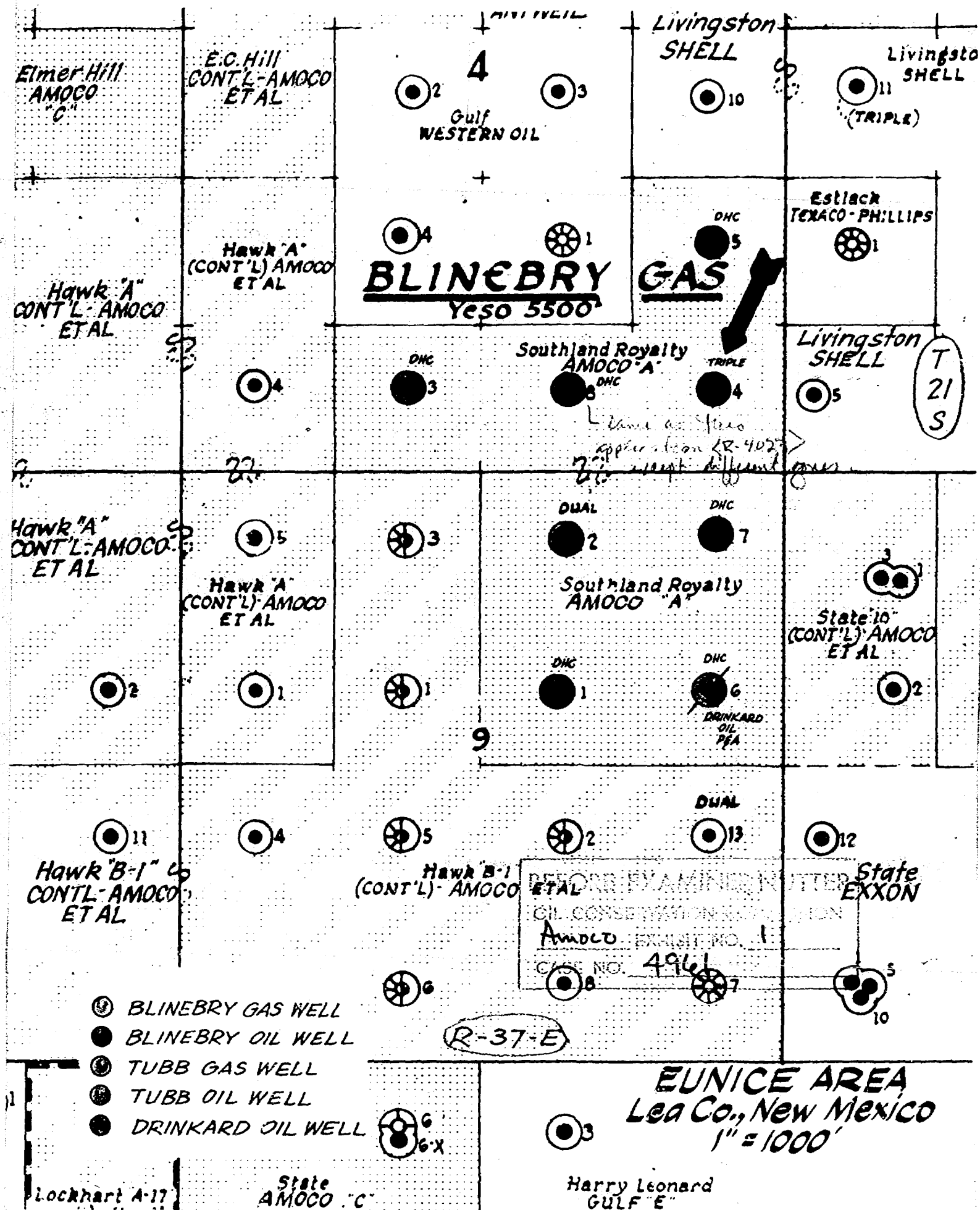
Application of Union Texas Petroleum for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks

(Case 4946 continued from page 3)

the promulgation of special pool rules for the Crosby-Fusselman Pool, Lea County, New Mexico, including a provision for classification of oil wells and gas wells, 320-acre spacing for all wells, and a limiting gas-oil ratio of 5000 to one. (This case will be continued to the May 23rd Examiner Hearing.)

CASE 4885: (Continued and Readvertised)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit John Lemley and Juanita Franks and Aetna Casualty and Surety Company and all other interested parties to appear and show cause why the Lemley and Franks Greathouse Well No. 1, located in Unit F of Section 10, Township 23 North, Range 1 West, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

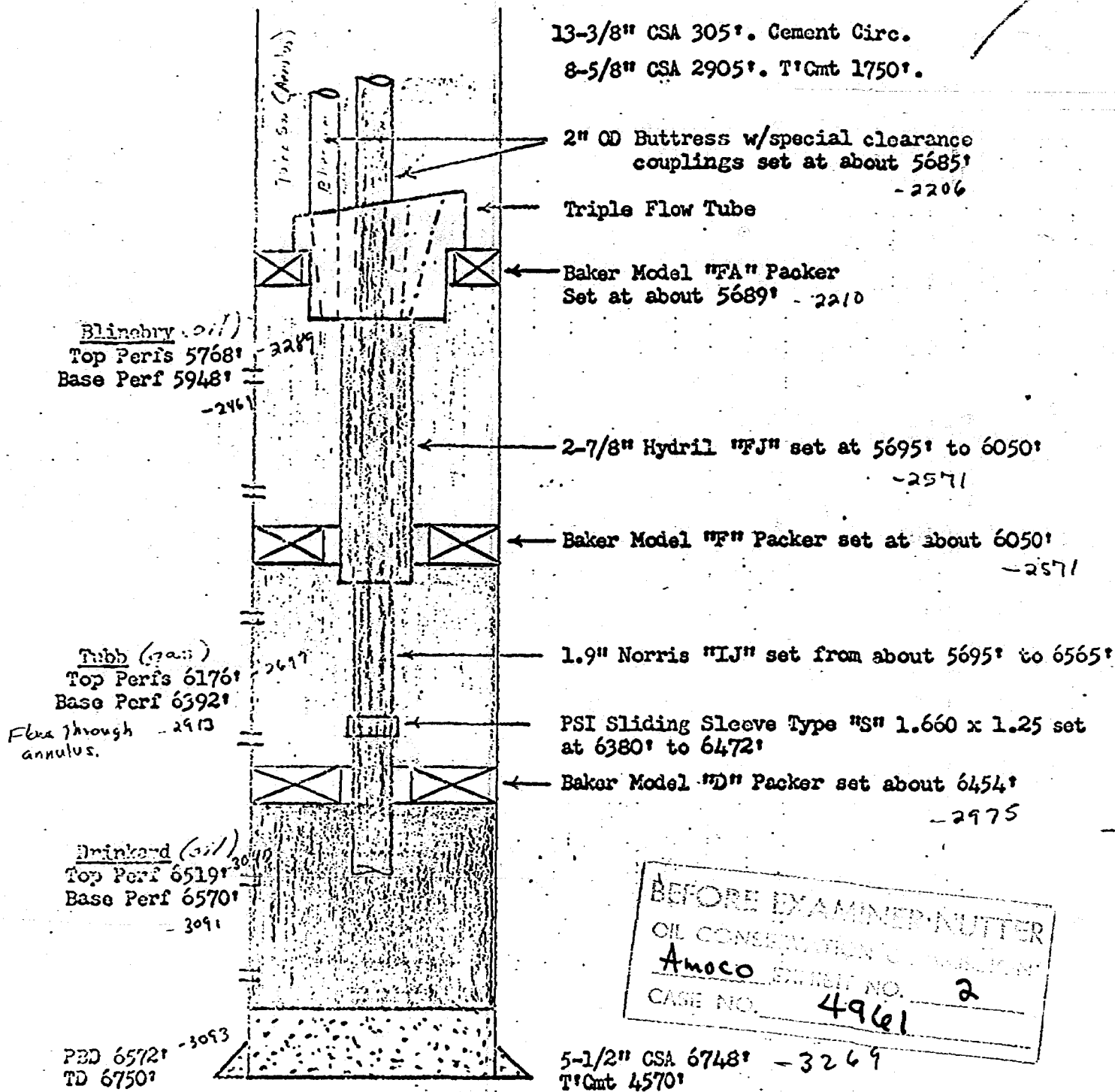


AMERICAN PETROLEUM CORPORATION

ENGINEERING CHART
(TRACING)

SUBJECT: Drillhead Royalty "A" No. 4 (Multiple Comp. Ept.)
Unit X, Sec. 4, T-21-S, R-37-E, Lea Co., N. M.
Drinkard - Tubb - Blinobry

*Drill in 1951
in Drinkard
1954 - Tubb
- 1943 - (K-2497)
Blinobry*



NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator AMOCO PRODUCTION COMPANY		Pool Blinebry-Drinkard-Tubb				County Lea										
Address P. O. Box 68, Hobbs, New Mexico						TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>				
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TSG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT. / BBL.
		U	S	T	R							WATER BBL.	GRAV. OIL	OIL BBL.	GAS M.C.F.	
Southland Royalty A	4	X	4	21	37											
Blinebry Oil						4/9/73	F	18	50	3	24	1	36.5	3	9	3000
Drinkard Oil						4/10/73	P	--	--	2	24	0.7	38.0	1.4	6	4286
Tubb Gas						4/17/73	F	64	210	Hi. Pr. Lo. Pr.	24	0	50.4	0.7	45 TSTM	64286 TSTM

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Amoco EXHIBIT NO. 3
CASE NO. 4941

BHP-
Blinebry (1970) 575# (-2400)
Drinkard 590# (-3050)
Tubb (1970) 499# (-2700)

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

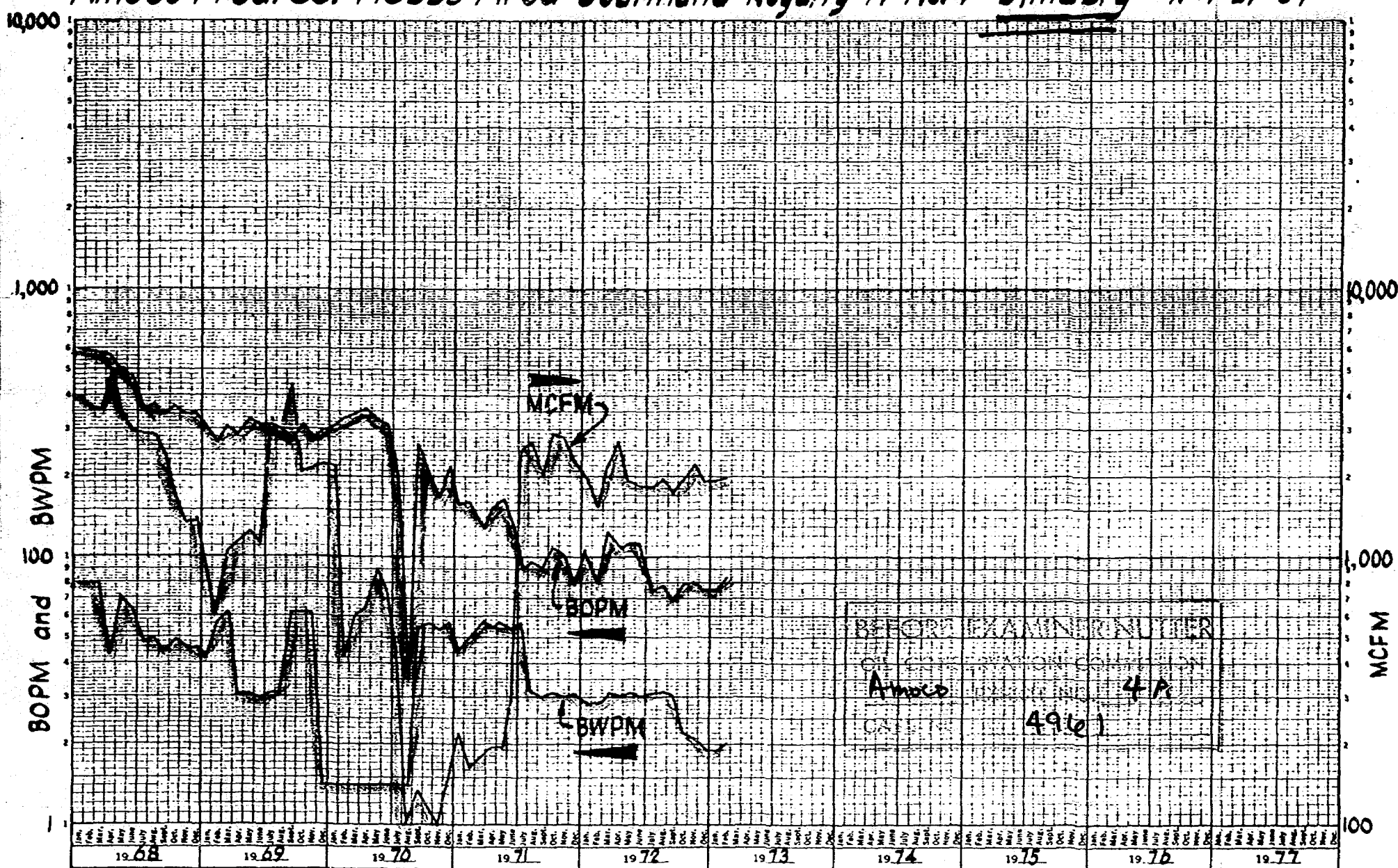
Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

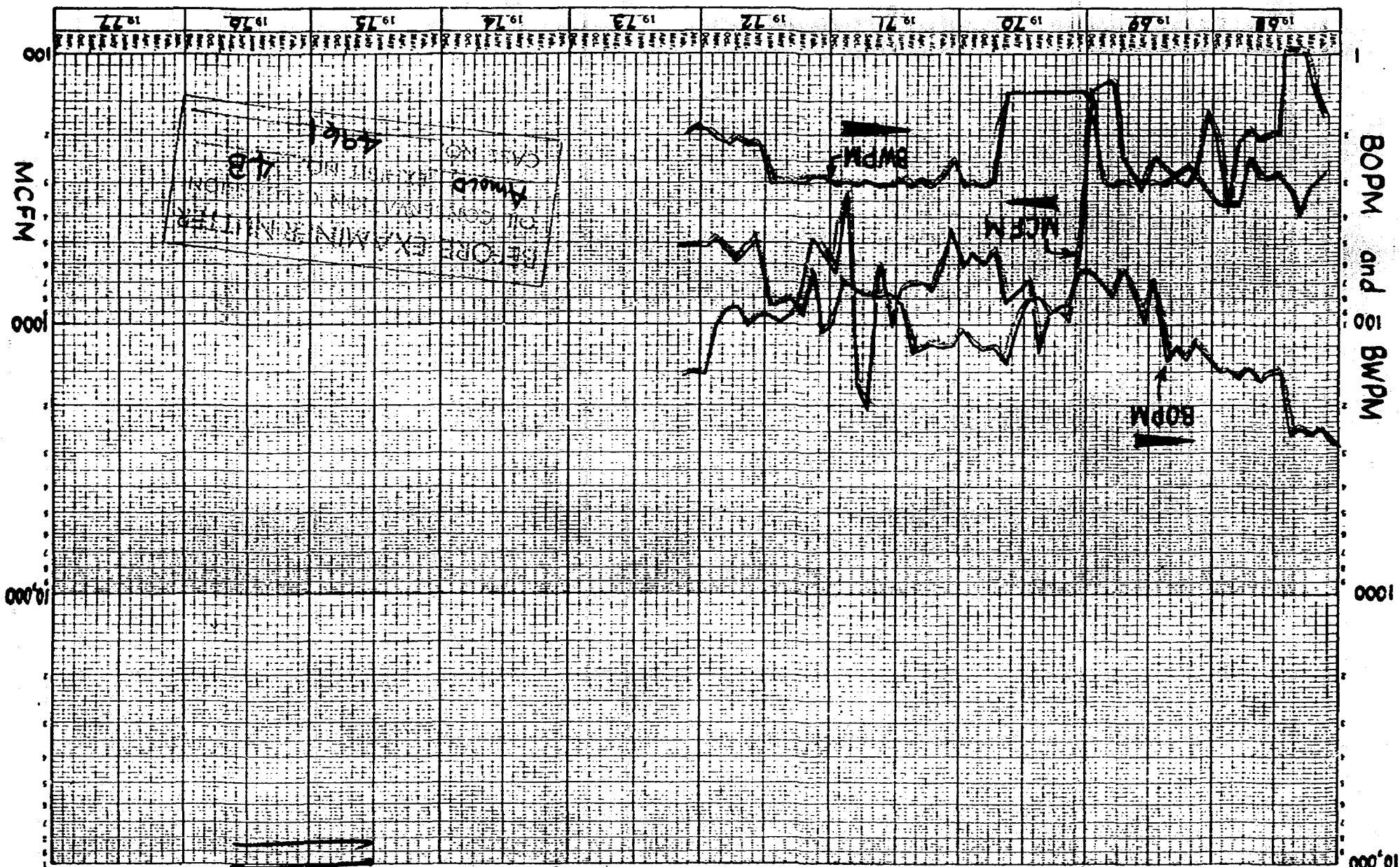
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

C. A. Floyd
(Signature)
Division Administrative Superv.
(Title)
May 7, 1973
(Date)

Amoco Prod. Co.-Hobbs Area-Southland Royalty "A" No. 4-Blinebry x 4-2/-37



Amoco Prod. Co.-Hobbs Area - Southland Royalty "A" No. 4 - Drinkard X-4-21-37





Set for hearing

Amoco Production Company

500 Jefferson Building
P.O. Box 3092
Houston, Texas 77001

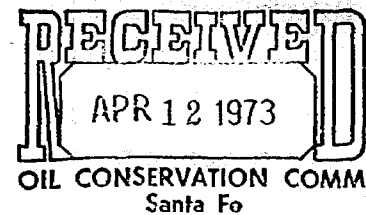
J. C. Burton
Division Engineer

can 4961

April 10, 1973

File: WRG-986.51NM-1979

Re: Application for Hearing
Downhole Commingling
Southland Royalty "A" Well No. 4
→ Blinebry, Tubb and Drinkard Pools



New Mexico Oil Conservation Commission (3)
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Amoco Production Company respectfully requests a hearing for the purpose of obtaining approval for downhole commingling production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool in its Southland Royalty "A" Well No. 4. That well is located in Unit X, Section 4, T21S, R37E, Lea County, New Mexico. Production from each zone in this currently completed triple completion is marginal.

Attached is a map showing the area in the vicinity of this well.

We respectfully request this matter be included on the Docket of the Hearing to be held May 9, 1973.

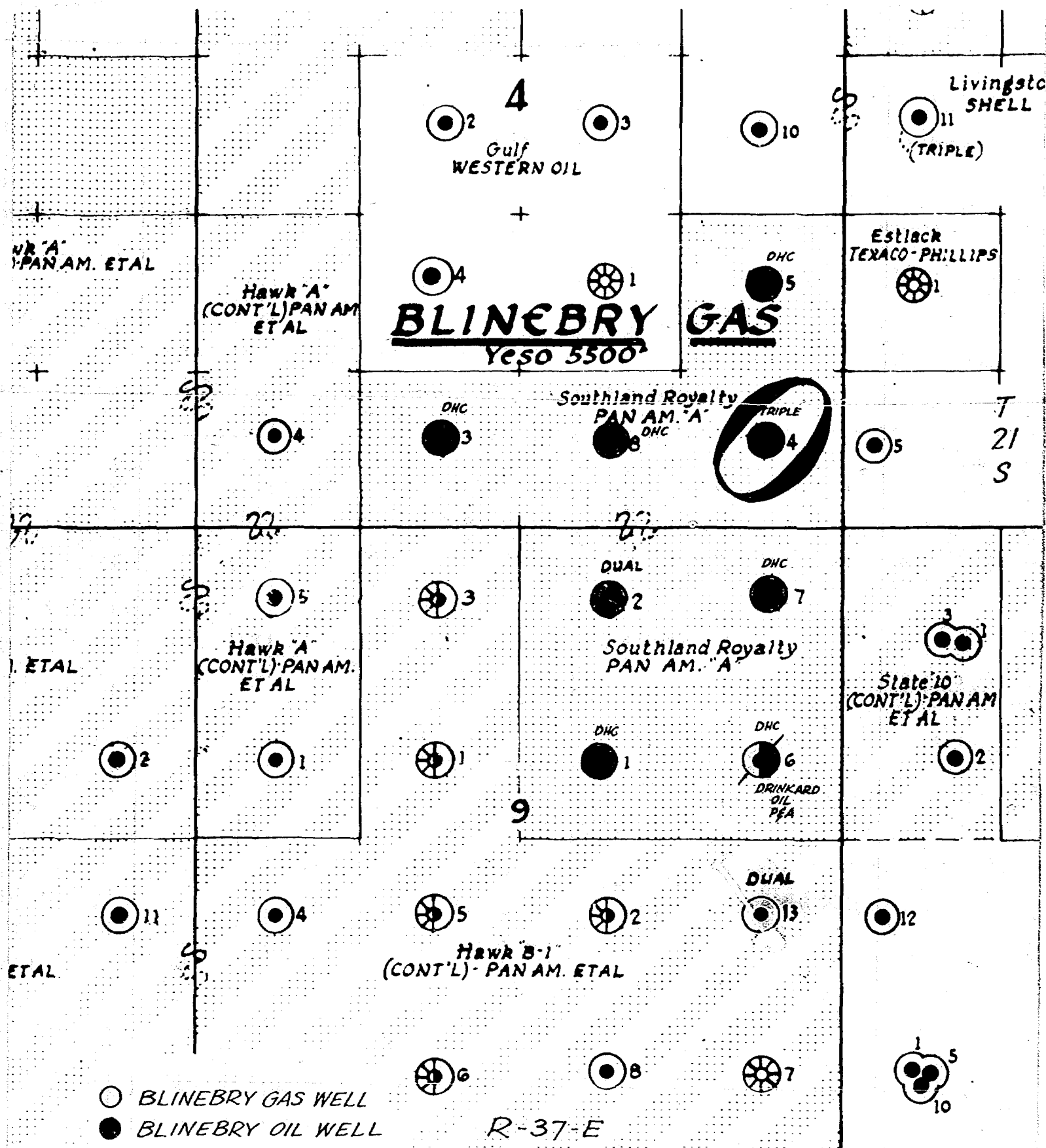
Yours very truly,

J. C. Burton

Attachment

DRC:as

DOCKET MAILED
Date 4-26-73



DRAFT

dr/ *Dr*

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DOWN-HOLE COMMINGLING,
LEA COUNTY, NEW MEXICO.

ASP
CASE NO. 4961

Order No. R-4564
DR

Jan 6-21-73
ORDER OF THE COMMISSION

BY THE COMMISSION:

gsh
This cause came on for hearing at 9 a.m. on May 9, 1973,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of June, 1973, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Amoco Production Company, is the
owner and operator of the Southland Royalty "A" Well No. 4,
located in Unit X of Section 4, Township 21 South, Range 37 East,
NMPM, Lea County, New Mexico.

(3) That said well was originally completed as a single producer from the Drinkard Oil Pool and was subsequently completed as a dual completion, producing Drinkard oil through tubing and Tubb gas through the casing-tubing annulus; ~~that~~ that the well was later completed as a triple completion, producing oil from the Blinebry and Drinkard pools through parallel strings of tubing and gas through the casing-tubing annulus by means of a triple flow tube.

(4) That the Blinebry formation and the Drinkard formation in the vicinity of the subject well are currently being considered for secondary recovery by means of water flood.

(5) That the commingling of Tubb Gas Pool production in the well-bore with production from the Blinebry and Drinkard Oil Pools, because of the associated problems of equity determination and possible migration of fluids from one zone into another, might delay and possibly prevent the formation of waterflood projects in the area thereby leaving considerable volumes of oil reserves unrecovered, causing waste.

(6) That the possible commingling of production from the Blinebry and Drinkard Oil Pools in the well-bore of the subject well, maintaining the Tubb gas production as a separate entity in the well, would be less likely to create the problems described above, *provided accurate determination of Blinebry and Drinkard production could be made.*

(7) That in order to protect correlative rights and prevent waste, the application should be denied.

IT IS THEREFORE ORDERED:

(1) That the application of Amoco Production Company to complete its Southland Royalty "A" Well No. 4, located in Unit X of Section 4, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the commingling in the well-bore of production from the Blinebry and Drinkard Oil Pools and the Tubb Gas Pool is hereby denied.

(2) That jurisdiction of this cause is hereby retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

CASE No.

4962

Application,
Transcripts,
Small Exhibits

ETC.