

CASE 7342: ARCO OIL AND GAS COMPANY FOR
X7 DOWNHOLE COMMINGLING, LEA COUNTY, NEW
MEXICO *ny*

Case No.

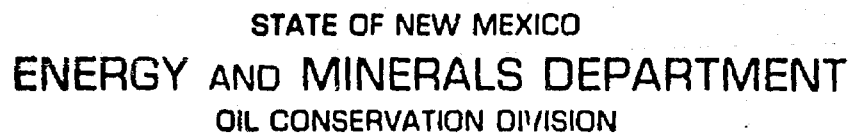
7342

Application

Transcripts.

Small Exhibits

ETC



LARRY KEHOE
SECRETARY

October 1, 1981

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

Mr. Gary Kilpatrick
Montgomery & Andrews
Attorneys at Law
Post Office Box 2387
Santa Fe, New Mexico

Re: CASE NO. 7342
ORDER NO. R-6783

Applicant:

ARCO Oil and Gas Company

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7342
Order No. R-6783

APPLICATION OF ARCO OIL AND GAS COMPANY
FOR DOWNHOLE COMMINGLING, LEA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 9, 1981, at Santa Fe, New Mexico, before Examiner, Daniel S. Nutter.

NOW, on this 30th day of September, 1981, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Arco Oil and Gas Company, is the owner and operator of the State 367 Well No. 2, located in Unit L of Section 36 and its Roy Barton Well No. 2 located in Unit B of Section 23, both in Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to commingle Blinebry and Drinkard production within the wellbores of the above-described wells.

(4) That from the Blinebry zone, the subject wells are capable of low marginal production only.

(5) That from the Drinkard zone, the subject wells are capable of low marginal production only.

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CASE NO. 7342
Order No. R-6783

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Division any time either of the subject wells are shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Hobbs district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

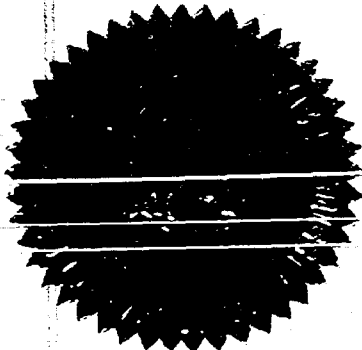
(1) That the applicant, Arco Oil and Gas Company, is hereby authorized to commingle Blinbry and Drinkard production within the wellbores of the State 367 Well No. 2, located in Unit L of Section 36 and its Roy Barton Well No. 2 located in Unit B of Section 23, both in Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the Hobbs district office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That the operator of the subject wells shall immediately notify the Division's Hobbs district office any time either of the wells have been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) 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 the day and year hereinabove designated.



S E A L

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
Joe D. Ramey
Director

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
9 September 1981
EXAMINER HEARING

IN THE MATTER OF:

Application of ARCO Oil and Gas
Company for downhole commingling,
Lea County, New Mexico.

CASE
7342

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Gary Kilpatric, Esq.
MONTGOMERY & ANDREWS
Paseo de Peralta
Santa Fe, New Mexico 87501

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I N D E X

ROBERT CRAIG

Direct Examination by Mr. Kilpatric 3

Cross Examination by Mr. Nutter 13

E X H I B I T S

Applicant Exhibit One, Plat 5

Applicant Exhibit Two, Plat 5

Applicant Exhibit Three, Sketch 6

Applicant Exhibit Four, Sketch 6

Applicant Exhibit Five, Sketch 6

Applicant Exhibit Six, Sketch 6

MR. NUTTER: Call Case Number 7342.

MR. PEARCE: Application of ARCO Oil and Gas Company for downhole commingling, Lea County, New Mexico.

MR. KILPATRIC: Mr. Examiner, I'm Gary Kilpatric, of Montgomery and Andrews here in Santa Fe, representing ARCO, and I have one witness, Mr. Robert Craig, to be sworn in.

(Witness sworn.)

ROBERT CRAIG

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KILPATRIC:

Q. Mr. Craig, by whom are you employed and in what capacity?

A. Employed by ARCO Oil and Gas Company as an operations engineer.

Q. Would you please give a brief description of your duties as operations engineer?

A. I determine rate and reserve projections for operating properties and for development drilling projects.

1

4

2

I also recommend workovers of existing wells and generally work to maximize recovery and production.

3

4

Q Have you testified before the Commission and had your qualifications accepted as a matter of record?

5

6

A No.

7

Q Would you then give a brief description of your education, experience, and expertise as it relates to the testimony you are prepared to give today?

8

9

10

A I graduated in May, 1977 with a BS degree in mechanical engineering from Texas A&M University.

11

12

I worked four years as an operations engineer for ARCO.

13

14

MR. KILPATRIC: Mr. Examiner, are the witness' qualifications acceptable?

15

16

MR. NUTTER: Yes, they are. What was your first name, please?

17

18

A Robert.

19

MR. NUTTER: All right, thank you.

20

Q Mr. Craig, what is it that ARCO is seeking here today?

21

22

A ARCO Oil and Gas Company seeks approval of its application to downhole commingle production from the Blinebry and Drinkard in its Roy Barton No. 2 Well and State 367 No. 2 Well.

23

24

25

1
2 Q Mr. Craig, where are these wells located,
3 and in that regard I refer you to what has been marked as
4 ARCO's Exhibits Number One and Number Two?

5 A The Roy Barton No. 2 is located 660 feet
6 from the north line and 660 feet from the east line of Section
7 23, Township 21 South, Range 37 East, Lea County, New Mexico.

8 And the State 367 No. 2 Well is located
9 1980 feet from the south line and 660 feet from the west line
10 of Section 36, Township 21 South, Range 37 East, Lea County,
11 New Mexico.

12 MR. NUTTER: Mr. Craig, I think you said
13 the Barton No. 2 was 660 from the north and east of 23?

14 A Yes, sir.

15 MR. NUTTER: It's 1980 from the east,
16 isn't it?

17 A Yes, sir, it's 1980 from the east and
18 660 from the north. I'm sorry.

19 Q So will you then again give the location
20 for the Roy Barton No. 2?

21 A The Roy Barton No. 2 is located 660 from
22 the north line and 1980 from the east line of Section 23,
23 Township 21 South, Range 37 East, Lea County, New Mexico.

24 Q And for State 367 No. 2?

25 A State 367 No. 2 is located 1980 from the

1
2 south line, 660 from the west line, Section 36, Township 21
3 South, Range 37 East, Lea County, New Mexico.

4 Exhibits Numbers One and Two are area
5 maps showing the locations of the wells and the offset oper-
6 ators.

7 Q Next let me direct your attention to what
8 have been marked as ARCO's Exhibits Numbers Four, Five --
9 Numbers Three, Four, Five, and Six, and ask you to identify
10 and explain each of them.

11 A Exhibits Three, Four, Five, and Six show
12 the present completions and proposed completions for the Roy
13 Barton No. 2.

14 Exhibit Three is the present completion
15 of the Roy Barton -- for the Roy Barton No. 2 and State 367
16 No. 2.

17 Exhibit Number Three shows the present
18 completion for the Roy Barton No. 2.

19 Exhibit Number Four shows the proposed
20 completion for the Roy Barton No. 2.

21 Exhibit Number Five shows the present
22 completion for the State 367 No. 2.

23 And Exhibit Number Six shows the proposed
24 completion for the State 367 No. 2.

25 Q What is the current status of the Roy

1
2 Barton No. 2 Well?

3 A As authorized by Commission Order DC 137,
4 the Roy Barton No. 2 is a dual producer from the Blinebry
5 and Drinkard. The Blinebry produces by pump from an average
6 depth of 5613 feet and has a current rate of 8 barrels of oil
7 per day and 19 barrels of water per day and 42 Mcf gas per
8 day.

9 The Drinkard has an average depth of
10 6534 feet, flows naturally with a current rate of 19 Mcf per
11 day.

12 Q What are the bottom hole pressures of
13 the two zones from which the wells have been producing?

14 A The bottom hole pressures for the Blinebry
15 and Drinkard on the Barton No. 2 at the average depths are
16 556 psia and 940 psia, respectively.

17 Correcting these pressures to a common
18 datum of 5650 feet yields respective pressures of 573 psia
19 and 630 psia.

20 Q What pressure differential for the two
21 zones does this correspond to?

22 A This corresponds to a pressure differ-
23 ential of 1.1 for the two zones, which is less than the 2
24 required by the Commission.

25 Q Is there any evidence that the fluids

1
2 produced from the Blinebry and Drinkard zones are incompatible?

3 A. As allowed by Order PC 219, production
4 from both zones on the Roy Barton No. 2 is commingled on the
5 surface and no evidence of fluid incompatibility has been
6 found.

7 Q. Will the total value of the crude oil
8 be reduced by commingling -- by the commingling sought by
9 ARCO for this well?

10 A. Since oil production from both zones is
11 classed as sour crude, downhole commingling will not affect
12 the value of the reserves.

13 Q. Is the ownership of the zones to be com-
14 mingled common?

15 A. Yes.

16 Q. And what is that ownership?

17 A. The royalty ownership is common to both
18 the Blinebry and the Drinkard.

19 Q. Will the commingling sought here today
20 jeopardize the efficiency of present or future secondary re-
21 covery?

22 A. No, in my opinion it won't.

23 Q. Mr. Craig, you have testified that the
24 production from the Blinebry is artificially lifted while the
25 Drinkard is by natural flow. Since that is the case, what

1
2 are the characteristics of this well which in your opinion
3 justify the granting of this application?

4 A. The Drinkard zone, which produces only
5 19 Mcf per day and less than one barrel of oil per day is
6 considered marginal and is rapidly approaching its economic
7 limit. If downhole commingling is not approved, this zone
8 will require plugging and any additional reserves will be
9 lost.

10 Reducing operating expense by downhole
11 commingling will enable ARCO to continue producing this zone
12 and possibly allow treatment of the zone to improve reservoir
13 performance.

14 Q. Have you supplied any additional inform-
15 ation to the Commission in support of this application with
16 respect to the Roy Barton No. 2 Well?

17 A. Yes. In support of our application the
18 following have been supplied to the Commission: One, a well
19 data sheet; two, a list of offset operators notified of ap-
20 plication; three, C-116 report for each zone; four, bottom
21 hole pressure survey for each zone; five, production decline
22 curves for each zone.

23 Q. Now turning your attention to the State
24 367 No. 2 Well, what is the status of that well?

25 A. The State 367 No. 2 is a dual producer

1
2 from the Blinebry and Drinkard, as authorized by Commission
3 Order No. NC 1630.

4 Both zones produce by natural flow. The
5 Blinebry produces from an average depth of 5753 feet and has
6 a current production of 4 Mcf gas per day, and a bottom hole
7 pressure of 612 psia.

8 Production from the Drinkard zone is
9 from an average depth of 6461 feet with a current production
10 of 2 barrels of oil per day and 136 Mcf gas per day and a
11 bottom hole pressure of 567 psia.

12 Q What is the pressure differential between
13 these two zones?

14 A Correcting these pressures to a common
15 datum of 5550 feet yields a pressure of 545 psia for the
16 Blinebry and a pressure of 496 for the Drinkard. This cor-
17 responds to a pressure differential of .91 for the two zones.

18 Q Is there any evidence that the fluid
19 produced from these two zones is incompatible?

20 A No. As allowed by Order PC No. 261,
21 production from both zones in the State 367 No. 2 is commingled
22 on the surface and no evidence of fluid incompatibility has
23 been found.

24 Q Will the total value of the crude oil
25 produced from this well be reduced if this application to

1
2 downhole commingle is granted?

3 A. Since oil production from both zones is
4 priced as sour crude, downhole commingling will not affect the
5 value of the reserves.

6 Q. Is there common ownership as to the two
7 zones sought to be commingled for this well?

8 A. Yes. There is common ownership in the
9 Blinebry and Drinkard.

10 Q. Will the commingling of the two zones
11 for this well jeopardize the efficiency of present or future
12 secondary recovery?

13 A. No, in my opinion it will not.

14 Q. Why is the downhole commingling needed
15 for State 367 No. 2 Well?

16 A. The Blinebry zone, which produces only
17 4 Mcf gas per day has reached its economic limit and will have
18 to be plugged if downhole commingling is not approved.

19 Approving this application will reduce
20 operating expense and encourage the operator to continue
21 producing the well.

22 For example, ARCO is prepared to install
23 artificial lift equipment to keep the wells pumped off and
24 producing at a maximum rate, something that might not be
25 economical to do if the zones were not commingled.

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2 Q. Have you supplied any additional informa-
3 tion to the Commission in support of this application with
4 regard to State 367 No. 2 Well?

5 A. Yes. In support of this application we
6 have furnished the Commission with the following items: One,
7 a well data sheet; two, a list of offset operators notified
8 of application; three, a C-116 report for each zone; four,
9 bottom hole pressure survey for each zone; five, production
10 decline curve for each zone.

11 Q. In your opinion, Mr. Craig, will the
12 granting of ARCO's application in Case 7342 to downhole com-
13 mingle the production for the Roy Barton No. 2 and the State
14 367 No. 2 Wells prevent waste and protect correlative rights?

15 A. Yes. It is my opinion, and ARCO's, that
16 approval of these applications will prevent waste by extending
17 the economic life of the wells.

18 Correlative rights are protected because
19 the common ownership of the production of the zones.

20 Q. Were ARCO's Exhibits Numbers One through
21 Six prepared by you or under your supervision?

22 A. Yes.

23 MR. KILPATRIC: Mr. Examiner, at this
24 time I move the introduction of Exhibits One through Six, and
25 I ask that the information previously supplied be considered

1
2 in the review of this application.

3 MR. NUTTER: It is part of the record.
4 Exhibits One through Six will be admitted in evidence.
5

6 CROSS EXAMINATION

7 BY MR. NUTTER:

8 Q. Mr. Craig, only one question. What was
9 the DC order that authorized the dual completion of the
10 Barton No. 2 again? DC something.

11 A. DC 137.

12 Q. Thank you.

13 MR. NUTTER: Are there any further
14 questions of Mr. Craig? He may be excused.

15 Do you have anything further, Mr. Kil-
16 patric?

17 MR. KILPATRIC: Nothing.

18 MR. NUTTER: Does anyone have anything
19 they wish to offer in case Number 7342?

20 We'll take the case under advisement.

21
22 (Hearing concluded.)
23
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25

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the examiner hearing of Case No. 7347 heard by me on 9/9 1981.

[Signature], Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 191-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

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ENERGY AND MINERALS DEPARTMENT
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STATE LAND OFFICE BLDG.
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E X H I B I T S

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Q Have you testified before the Commission and had your qualifications accepted as a matter of record?

A No.

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I worked four years as an operations engineer for ARCO.

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MR. NUTTER: Yes, they are. What was your first name, please?

A Robert.

MR. NUTTER: All right, thank you.

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MR. NUTTER: Mr. Craig, I think you said the Barton No. 2 was 660 from the north and east of 23?

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MR. NUTTER: It's 1980 from the east, isn't it?

A Yes, sir, it's 1980 from the east and 660 from the north. I'm sorry.

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18 datum of 5650 feet yields respective pressures of 573 psia
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21 zones does this correspond to?

22 A This corresponds to a pressure differ-
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25 Q Is there any evidence that the fluids

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3 A As allowed by Order PC 219, production
4 from both zones on the Roy Barton No. 2 is commingled on the
5 surface and no evidence of fluid incompatibility has been
6 found.

7 Q Will the total value of the crude oil
8 be reduced by commingling --- by the commingling sought by
9 ARCO for this well?

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12 the value of the reserves.

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16 respect to the Roy Barton No. 2 Well?

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18 following have been supplied to the Commission: One, a well
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20 plication; three, C-116 report for each zone; four, bottom
21 hole pressure survey for each zone; five, production decline
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24 367 No. 2 Well, what is the status of that well?

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2 from the Blinebry and Drinkard, as authorized by Commission
3 Order No. NC 1630.

4 Both zones produce by natural flow. The
5 Blinebry produces from an average depth of 5753 feet and has
6 a current production of 4 Mcf gas per day, and a bottom hole
7 pressure of 612 psia.

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9 from an average depth of 6461 feet with a current production
10 of 2 barrels of oil per day and 136 Mcf gas per day and a
11 bottom hole pressure of 567 psia.

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13 these two zones?

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15 datum of 5550 feet yields a pressure of 545 psia for the
16 Blinebry and a pressure of 496 for the Drinkard. This cor-
17 responds to a pressure differential of .91 for the two zones.

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19 produced from these two zones is incompatible?

20 A No. As allowed by Order PC No. 261,
21 production from both zones in the State 367 No. 2 is commingled
22 on the surface and no evidence of fluid incompatibility has
23 been found.

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25 produced from this well be reduced if this application to

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4 priced as sour crude, downhole commingling will not affect the
5 value of the reserves.

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7 zones sought to be commingled for this well?

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9 Blinebry and Drinkard.

10 Q Will the commingling of the two zones
11 for this well jeopardize the efficiency of present or future
12 secondary recovery?

13 A No, in my opinion it will not.

14 Q Why is the downhole commingling needed
15 for State 367 No. 2 Well?

16 A The Blinebry zone, which produces only
17 4 Mcf gas per day has reached its economic limit and will have
18 to be plugged if downhole commingling is not approved.

19 Approving this application will reduce
20 operating expense and encourage the operator to continue
21 producing the well.

22 For example, ARCO is prepared to install
23 artificial lift equipment to keep the wells pumped off and
24 producing at a maximum rate, something that might not be
25 economical to do if the zones were not commingled.

1
2 Q Have you supplied any additional informa-
3 tion to the Commission in support of this application with
4 regard to State 367 No. 2 Well?

5 A Yes. In support of this application we
6 have furnished the Commission with the following items: One,
7 a well data sheet; two, a list of offset operators notified
8 of application; three, a C-1116 report for each zone; four,
9 bottom hole pressure survey for each zone; five, production
10 decline curve for each zone.

11 Q In your opinion, Mr. Craig, will the
12 granting of ARCO's application in Case 7342 to downhole com-
13 mingle the production for the Roy Barton No. 2 and the State
14 367 No. 2 Wells prevent waste and protect correlative rights?

15 A Yes. It is my opinion, and ARCO's, that
16 approval of these applications will prevent waste by extending
17 the economic life of the wells.

18 Correlative rights are protected because
19 the common ownership of the production of the zones.

20 Q Were ARCO's Exhibits Numbers One through
21 Six prepared by you or under your supervision?

22 A Yes.

23 MR. KILPATRIC: Mr. Examiner, at this
24 time I move the introduction of Exhibits One through Six, and
25 I ask that the information previously supplied be considered

1
2 in the review of this application.

3 MR. NUTTER: It is part of the record.
4 Exhibits One through Six will be admitted in evidence.
5

6 CROSS EXAMINATION

7 BY MR. NUTTER:

8 Q Mr. Craig, only one question. What was
9 the DC order that authorized the dual completion of the
10 Barton No. 2 again? DC something.

11 A. DC 137.

12 Q Thank you.

13 MR. NUTTER: Are there any further
14 questions of Mr. Craig? He may be excused.

15 Do you have anything further, Mr. Kil-
16 patric?

17 MR. KILPATRIC: Nothing.

18 MR. NUTTER: Does anyone have anything
19 they wish to offer in case Number 7342?

20 We'll take the case under advisement.
21

22 (Hearing concluded.)
23
24
25

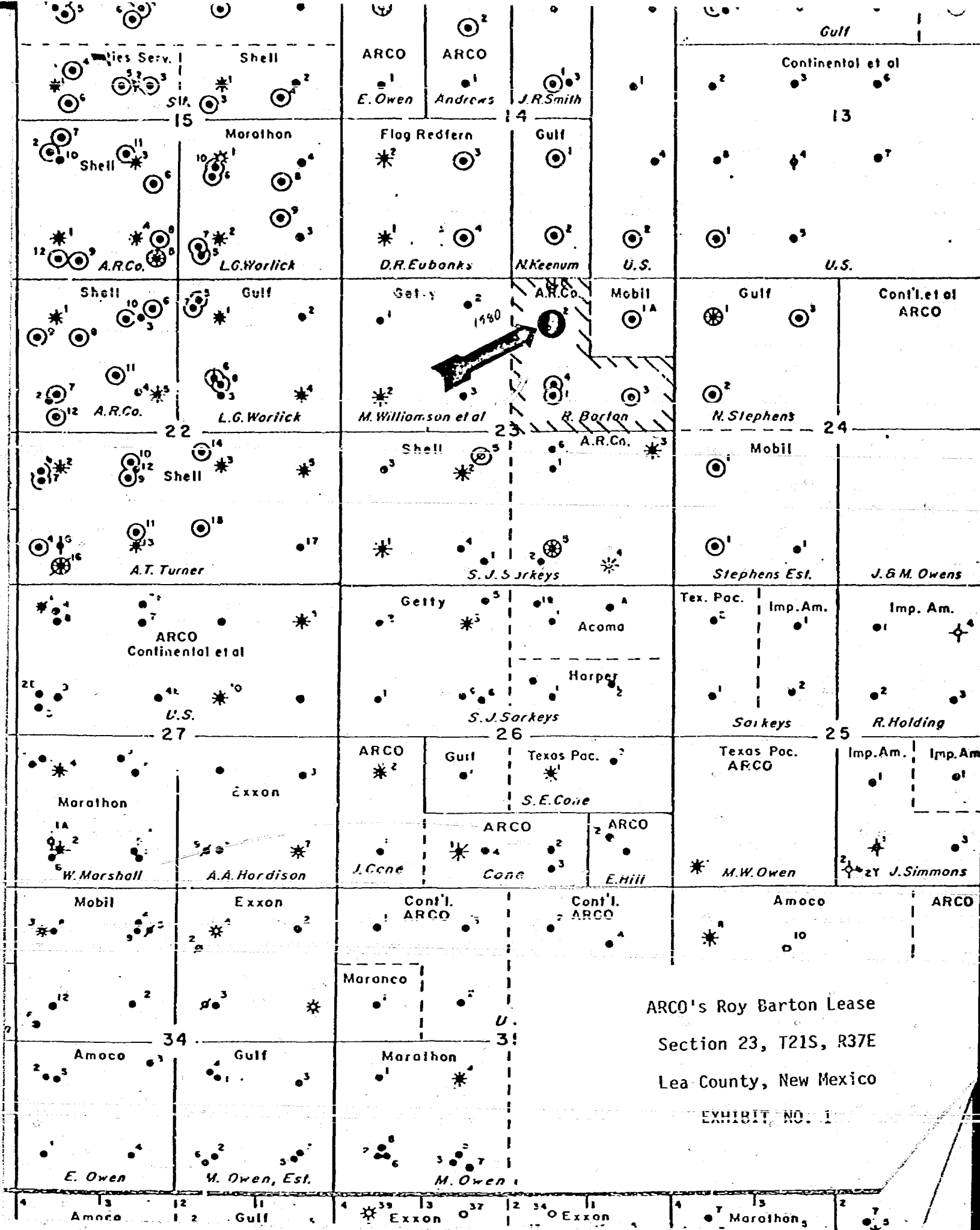
C E R T I F I C A T E

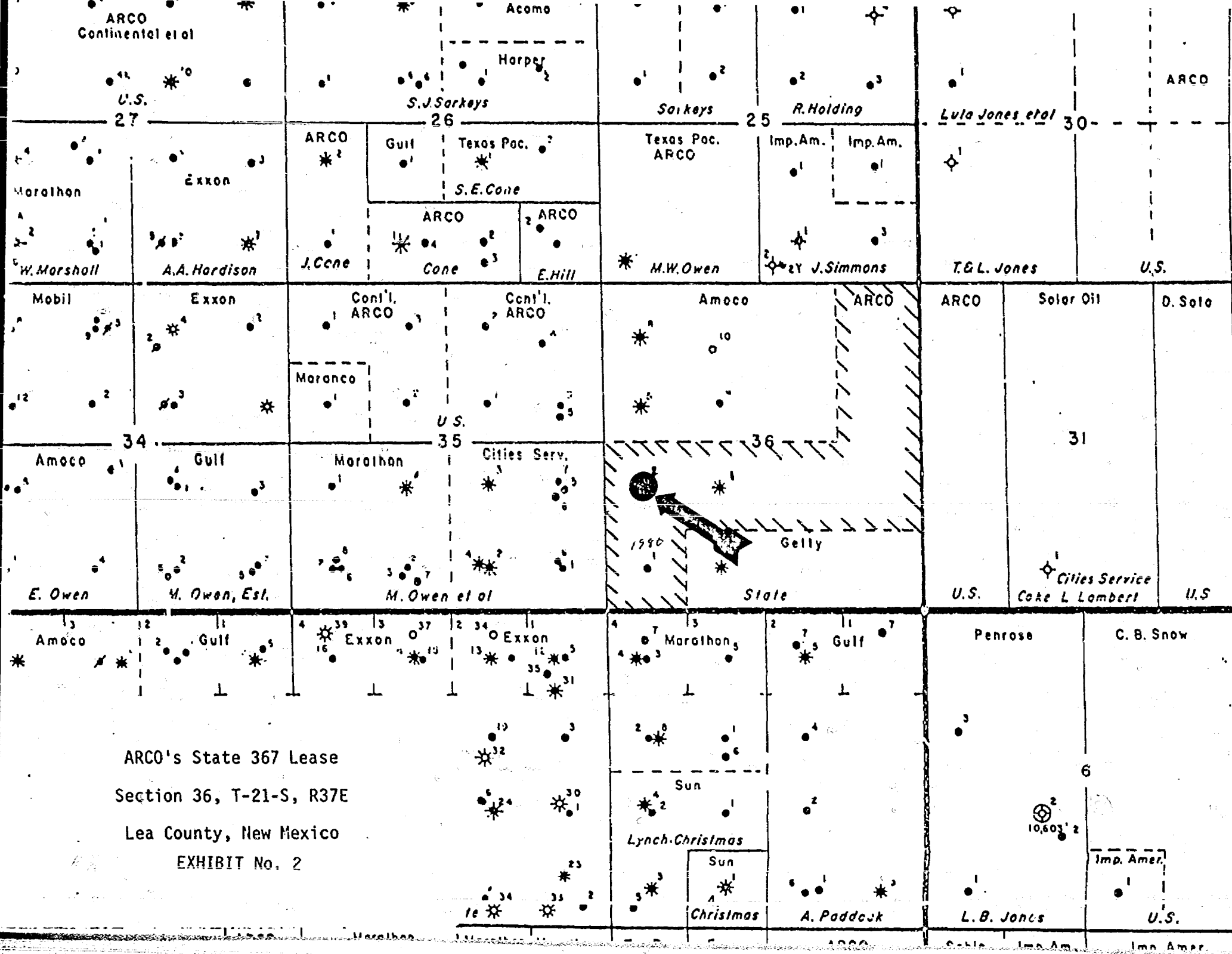
I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 7342
heard by me on 9/9 1981.
[Signature], Examiner
Oil Conservation Division



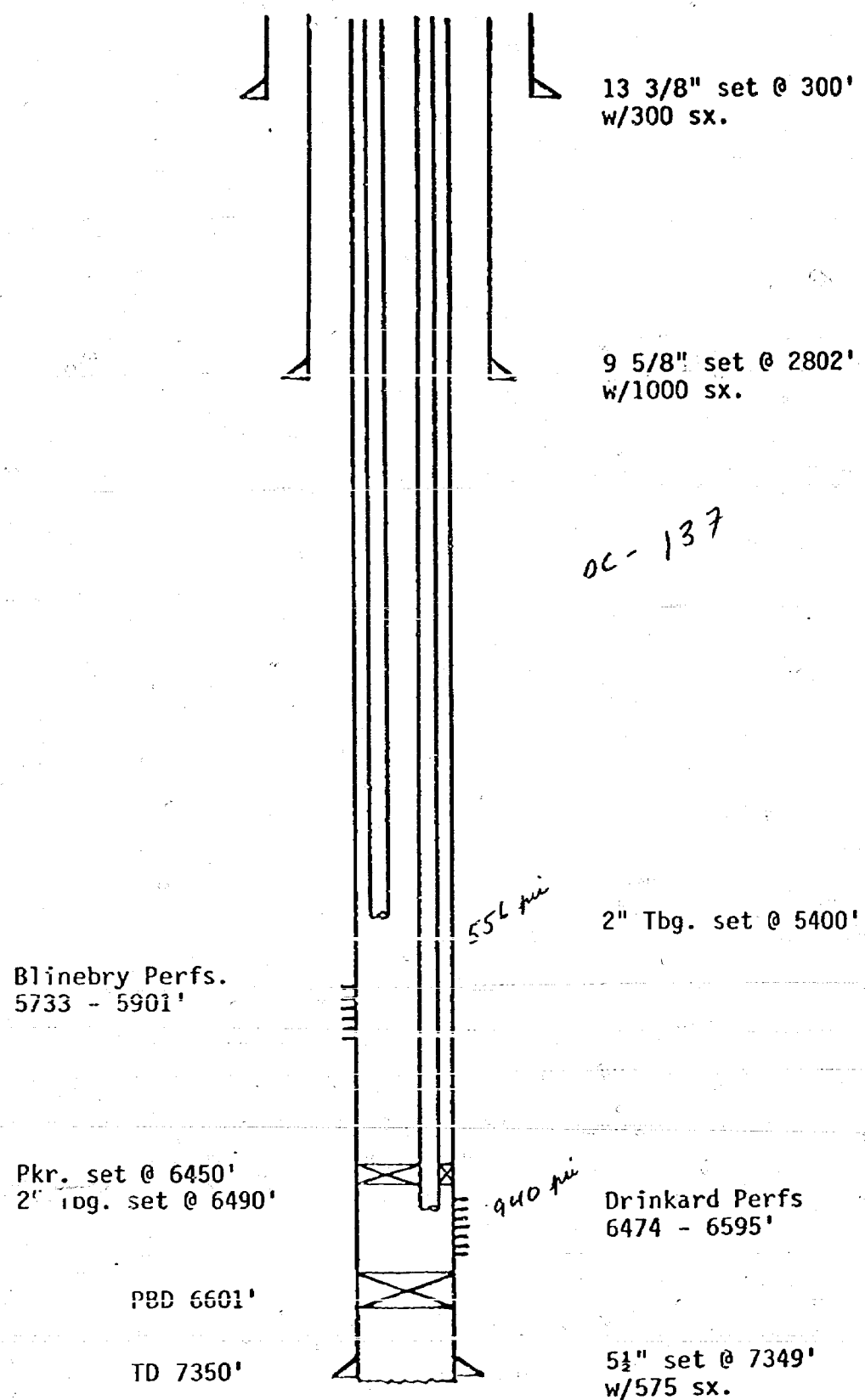


ARCO's State 367 Lease
Section 36, T-21-S, R37E
Lea County, New Mexico
EXHIBIT No. 2

ROY BARTON No. 2

Present Completion

EXHIBIT NO. 3



ROY BARTON No. 2
Proposed Completion

EXHIBIT NO. 4

Rlinebry Perfs.
5733 - 5901'

2 3/8" Tbg. set @ 6595'
PBD 6601'

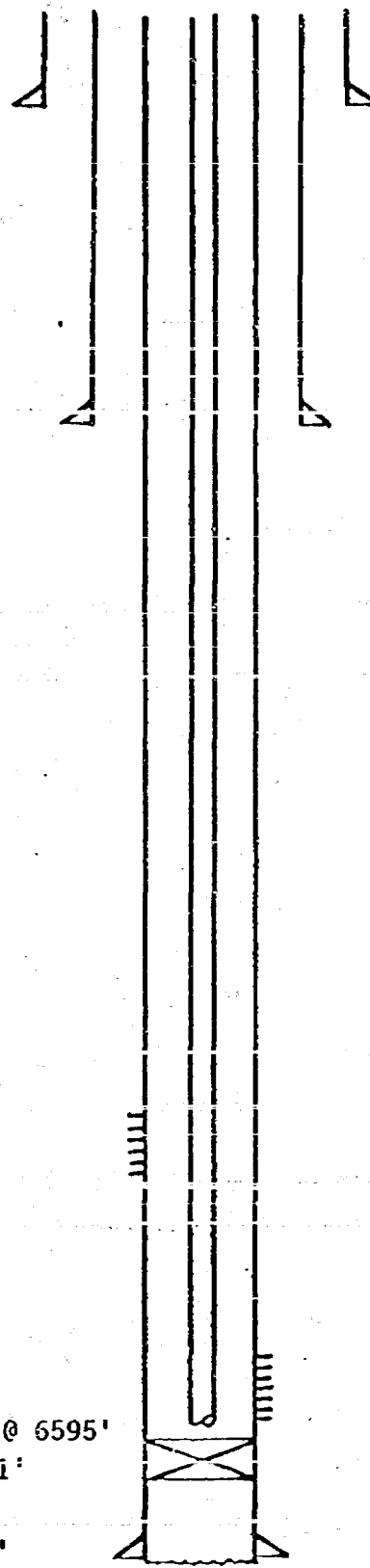
TO 7350'

13 3/8" set @ 300'
w/300 sx.

9 5/8" set @ 2802'
w/1000 sx.

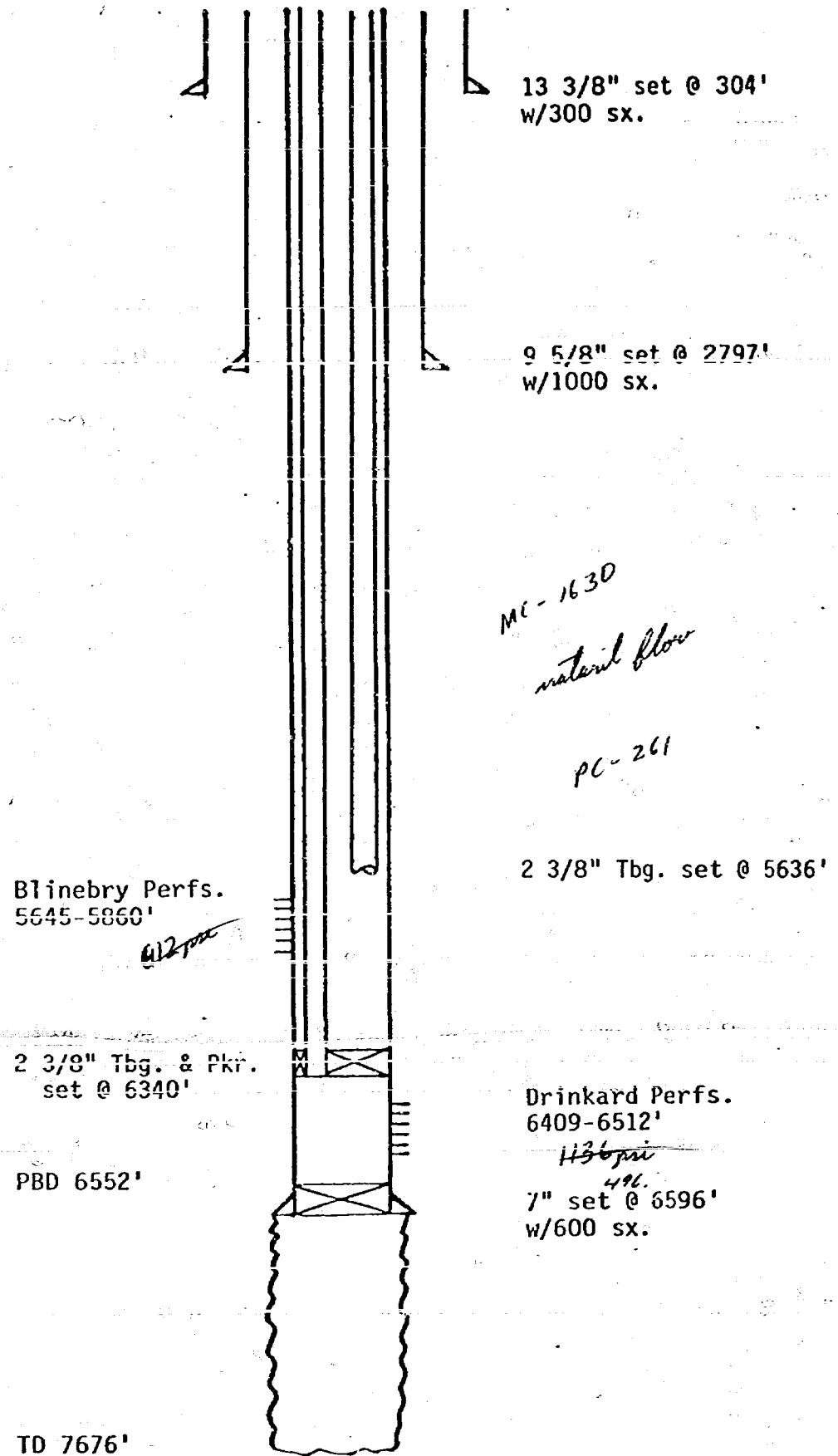
Drinkard Perfs
6474 - 6595'

5 1/2" set @ 7349'
w/575 sx.



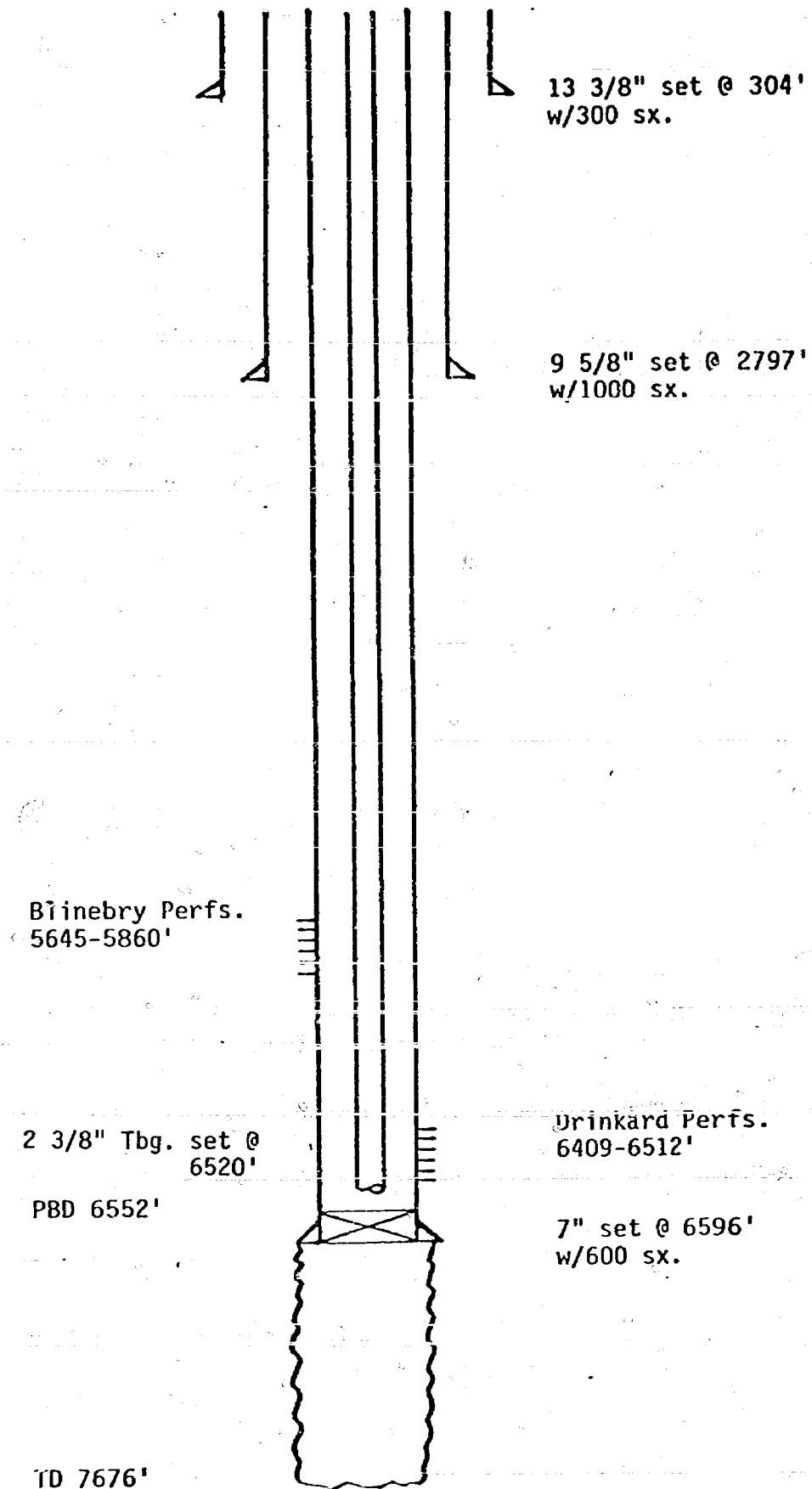
Present Completion

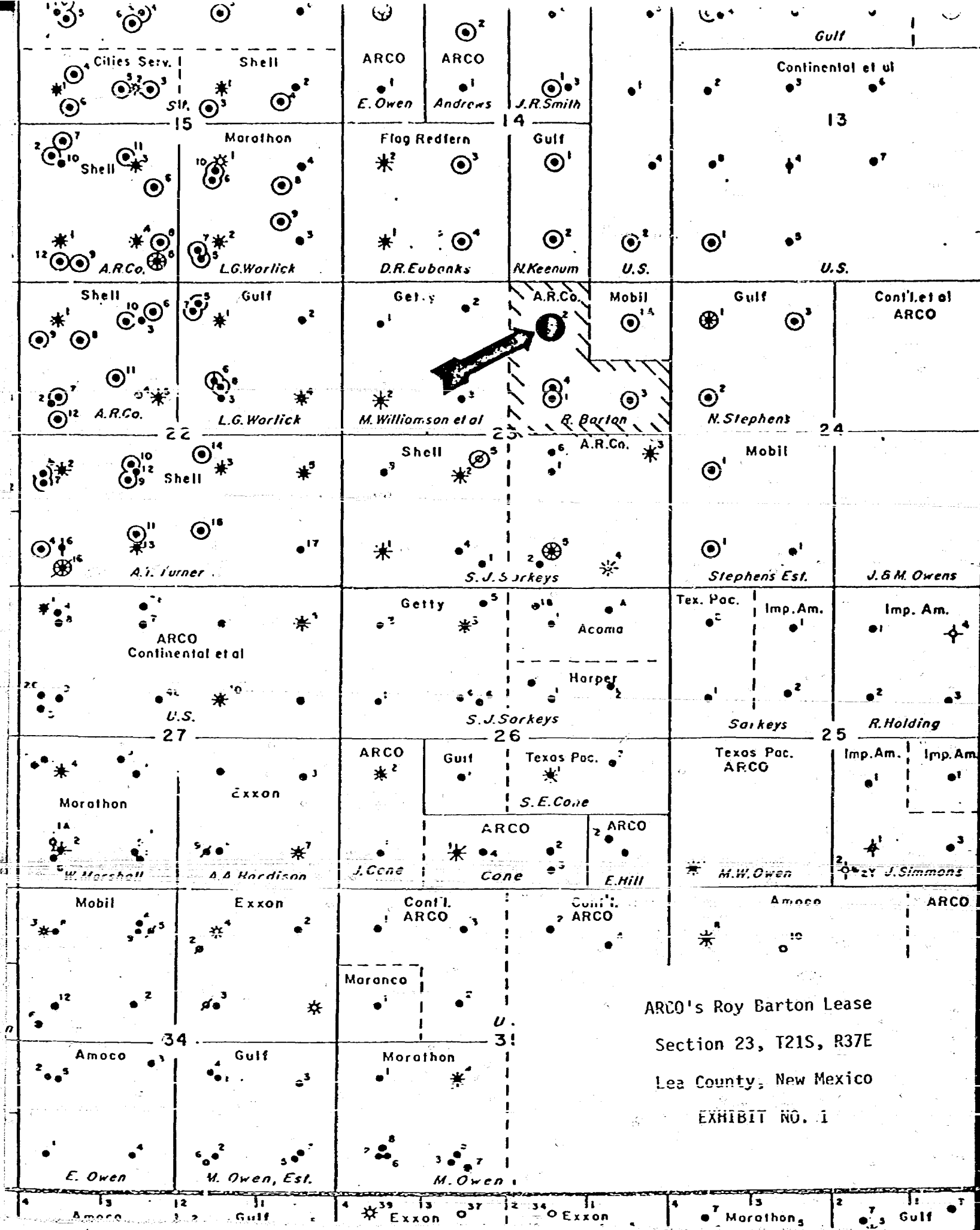
EXHIBIT NO. 5



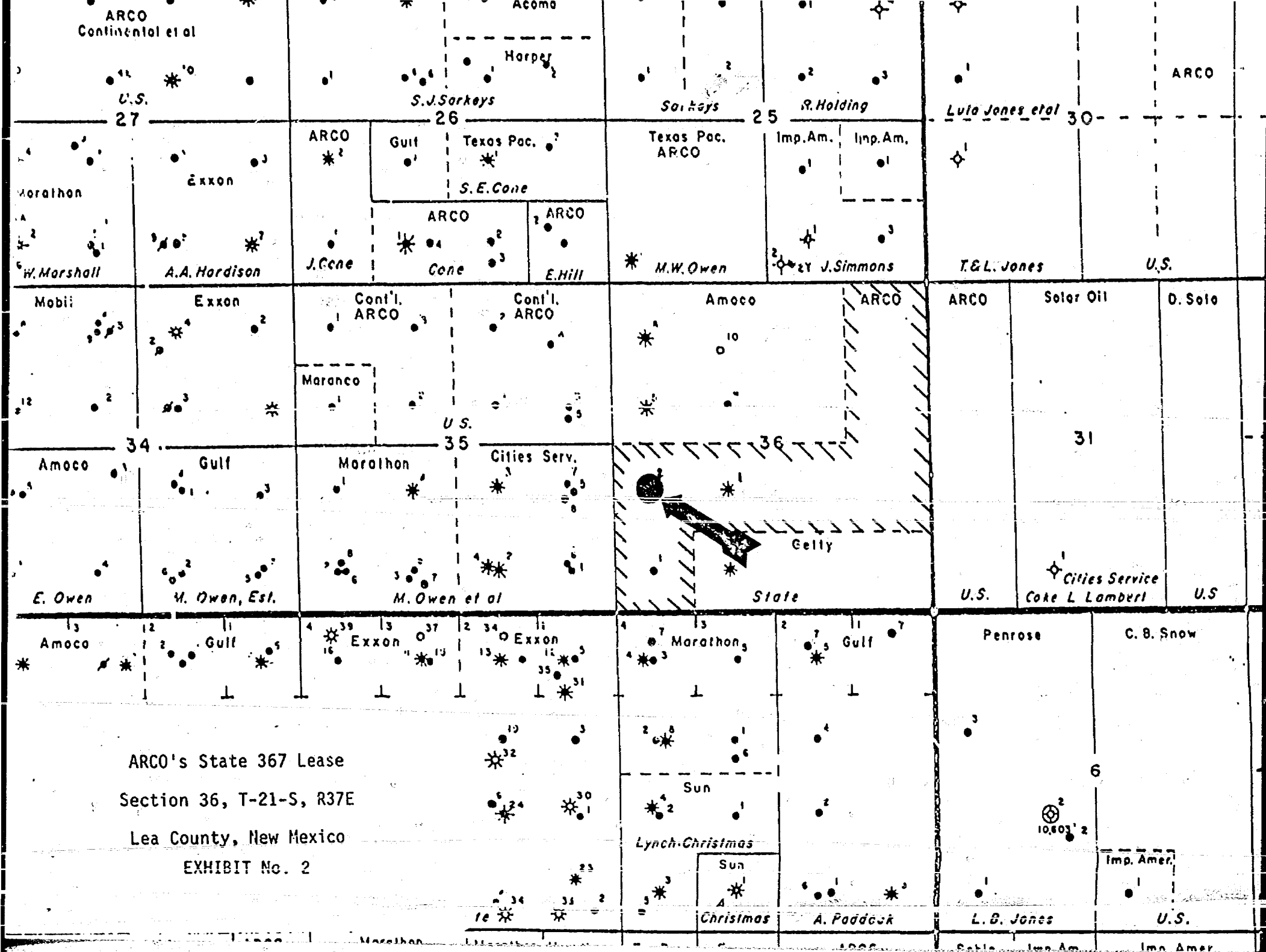
STATE 367 No. 2
Proposed Completion

EXHIBIT NO. 6





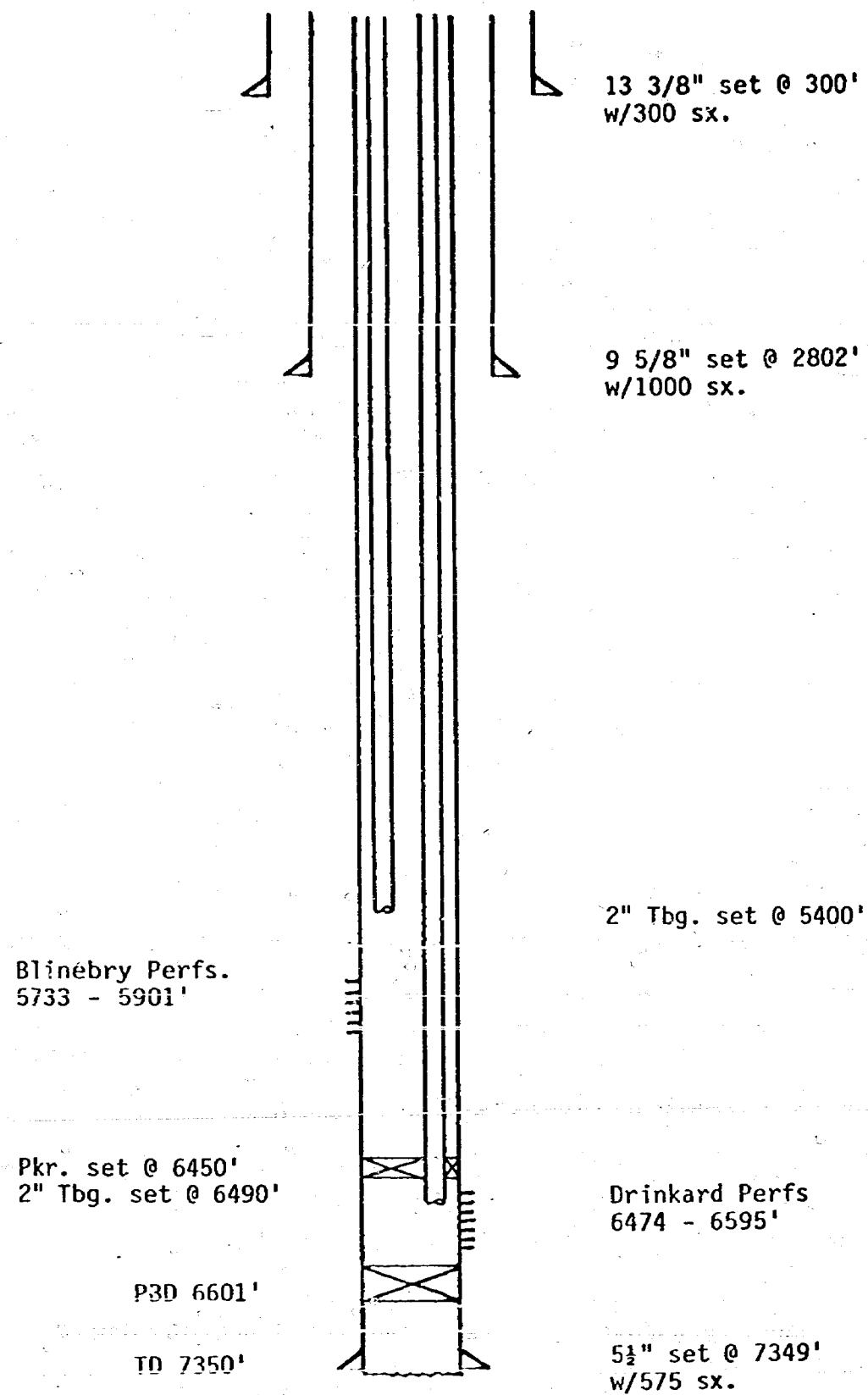
ARCO's Roy Barton Lease
 Section 23, T21S, R37E
 Lea County, New Mexico
 EXHIBIT NO. 1



ROY BARTON No. 2

Present Completion

EXHIBIT NO. 3



ROY BARTON No. 2
Proposed Completion

EXHIBIT NO. 4

Blinebry Perfs.
5733 - 5901'

2 3/8" Tbg. set @ 6595'
PBD 6601'

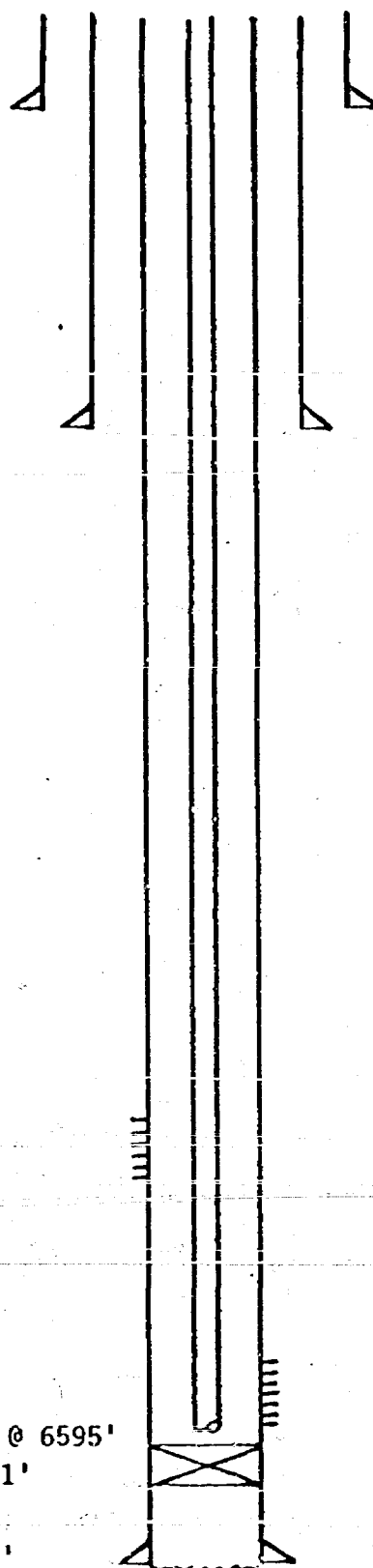
TD 7350'

13 3/8" set @ 300'
w/300 sx.

9 5/8" set @ 2802'
w/1000 sx.

Drinkard Perfs
6474 - 6595'

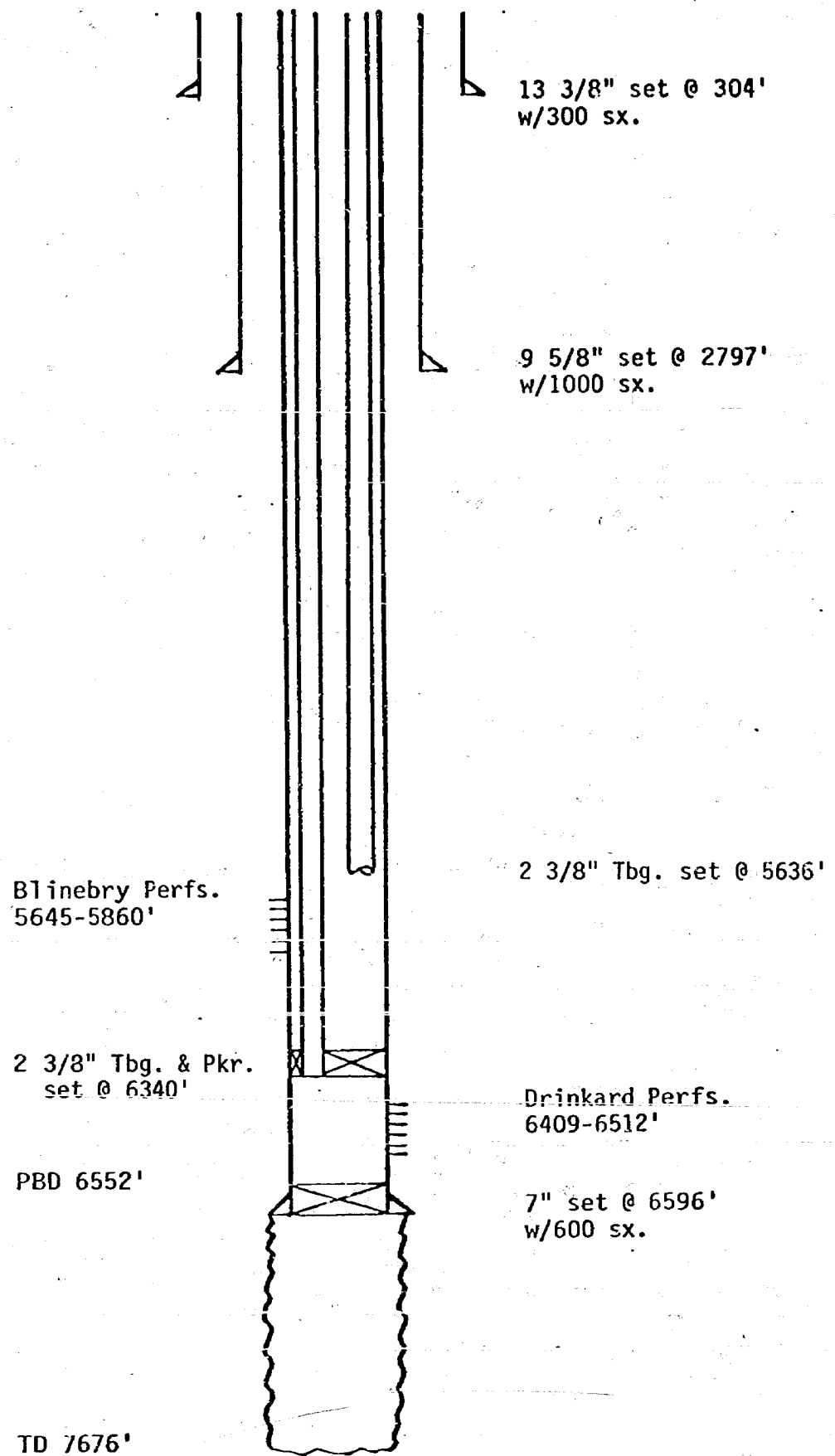
5 1/2" set @ 7349'
w/575 sx.



STATE 367 No. 2

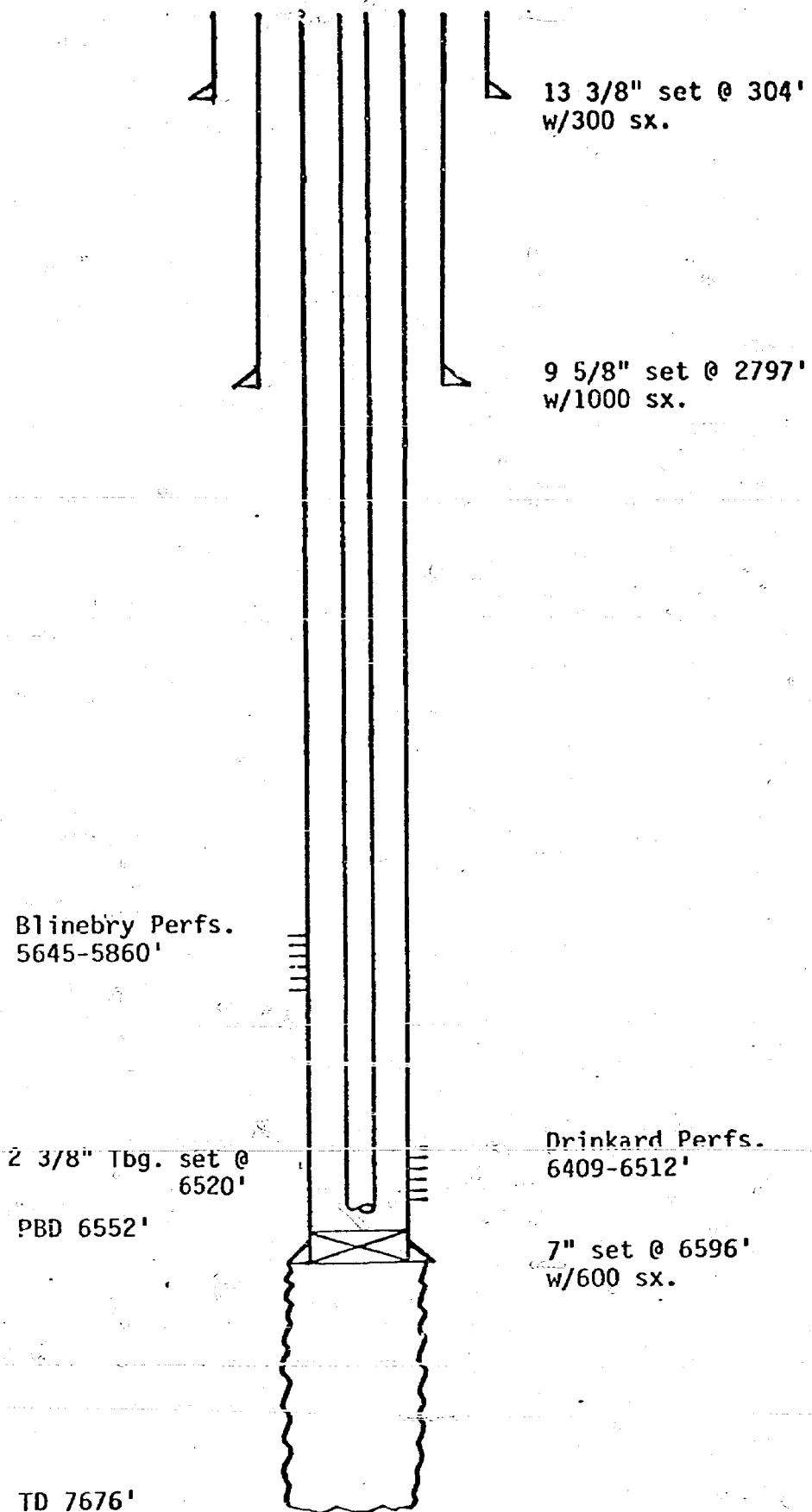
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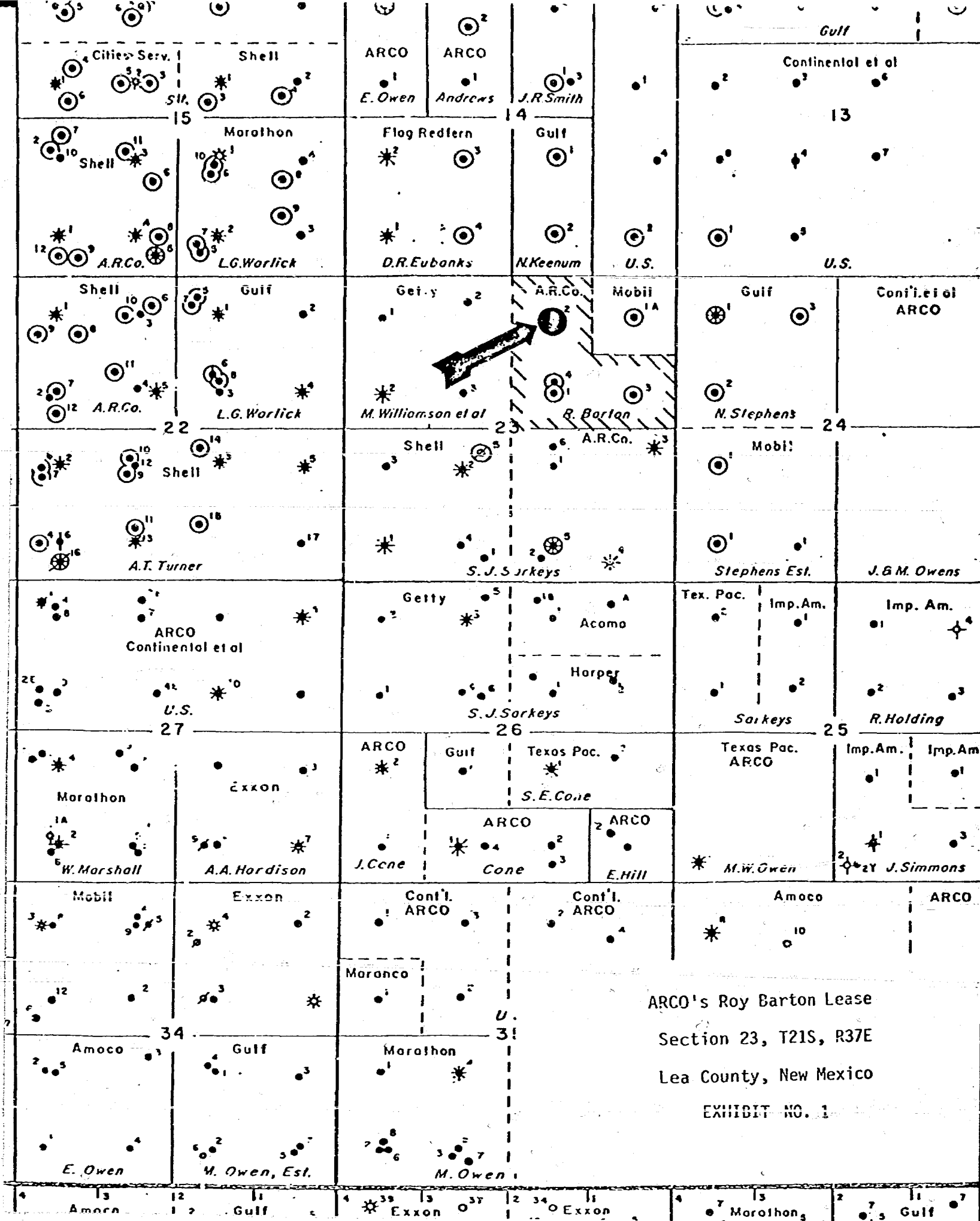
EXHIBIT NO. 5



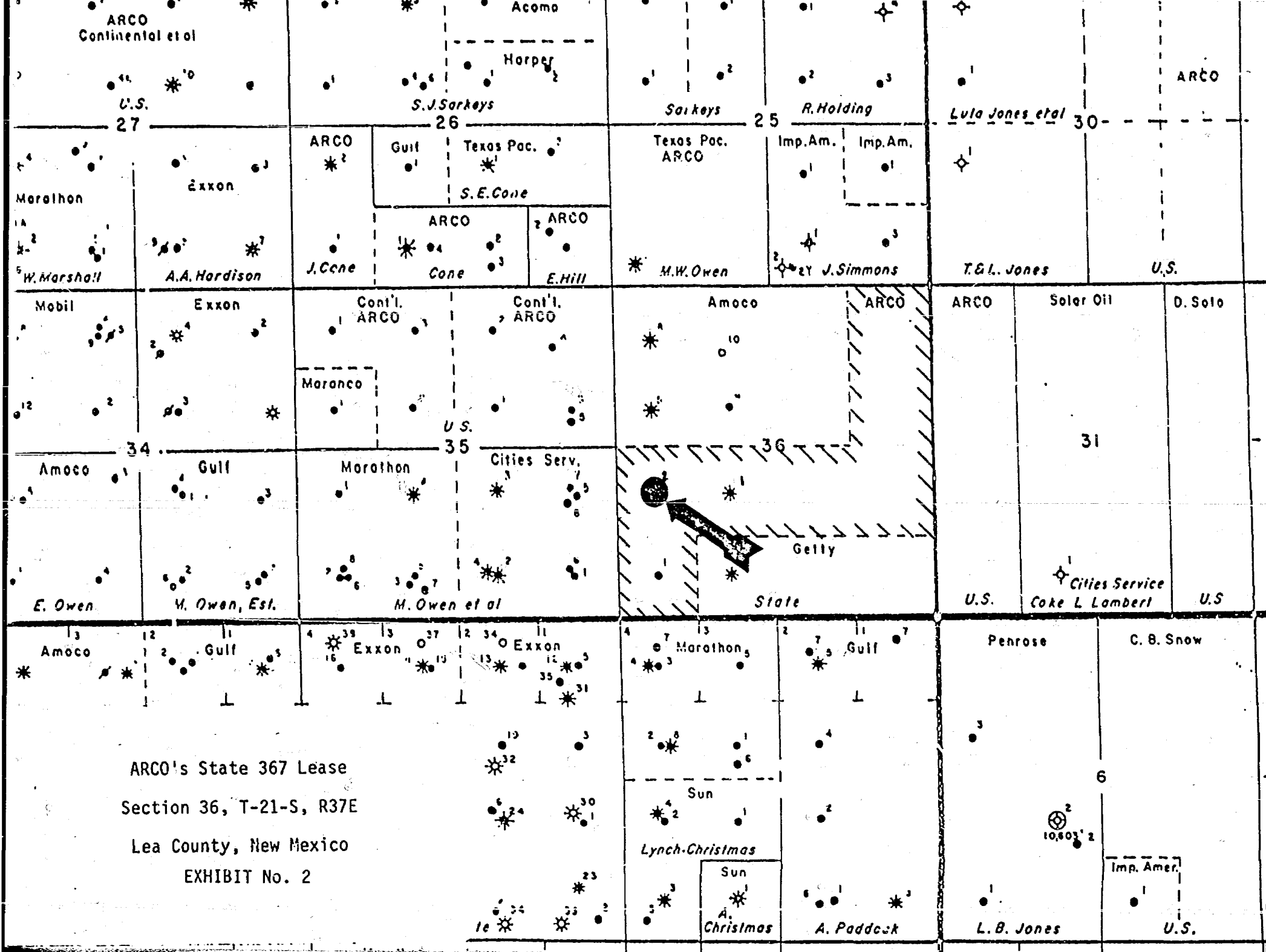
STATE 367 No. 2
Proposed Completion

EXHIBIT NO. 6





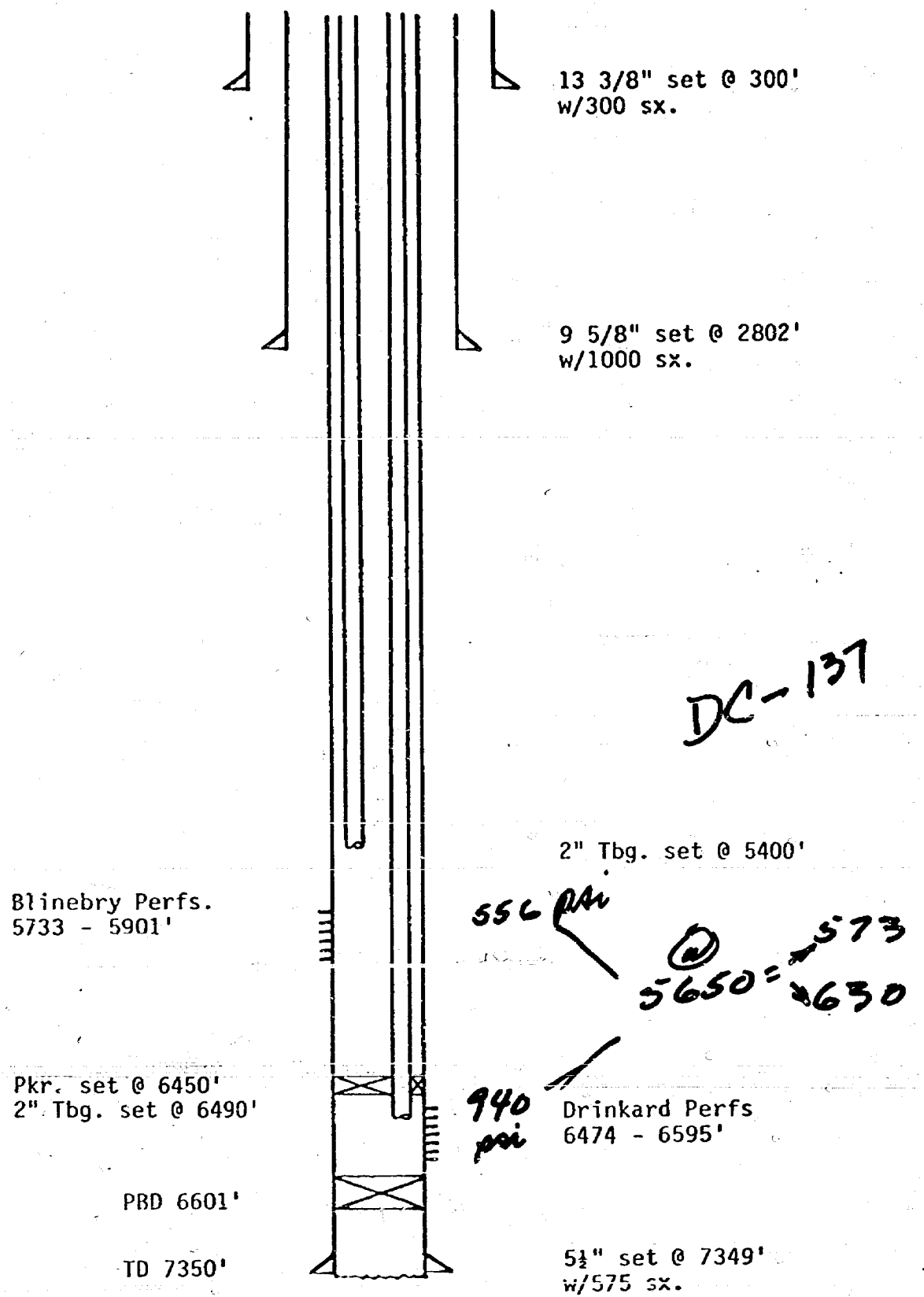
ARCO's Roy Barton Lease
 Section 23, T21S, R37E
 Lea County, New Mexico
 EXHIBIT NO. 1



ROY BARTON No. 2

Present Completion

EXHIBIT NO. 3



ROY BARTON No. 2
Proposed Completion

EXHIBIT NO. 4

Blinebry Perfs.
5733 - 5901'

2 3/8" Tbg. set @ 6595'
PBD 6601'

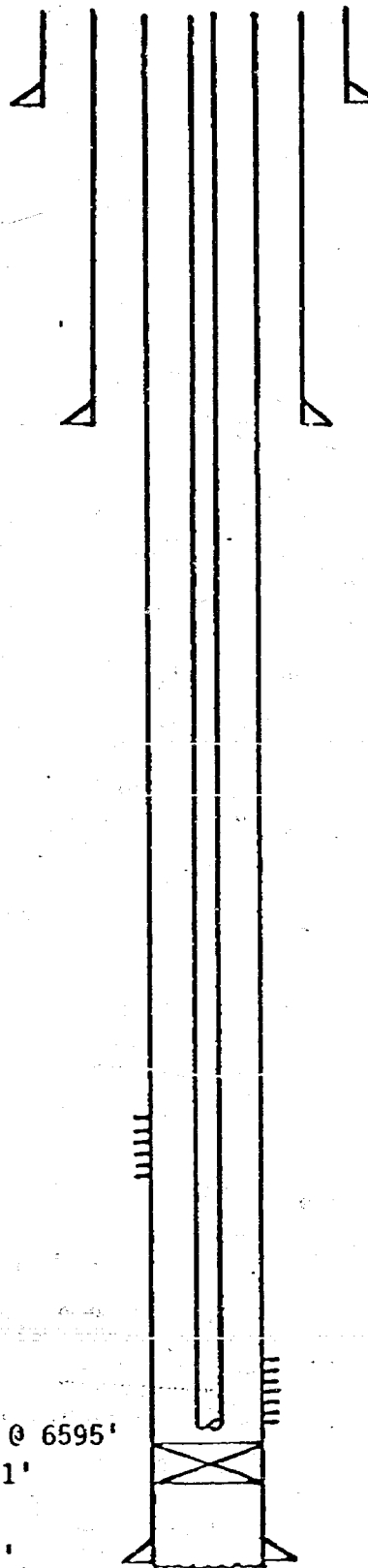
TD 7350'

13 3/8" set @ 300'
w/300 sx.

9 5/8" set @ 2802'
w/1000 sx.

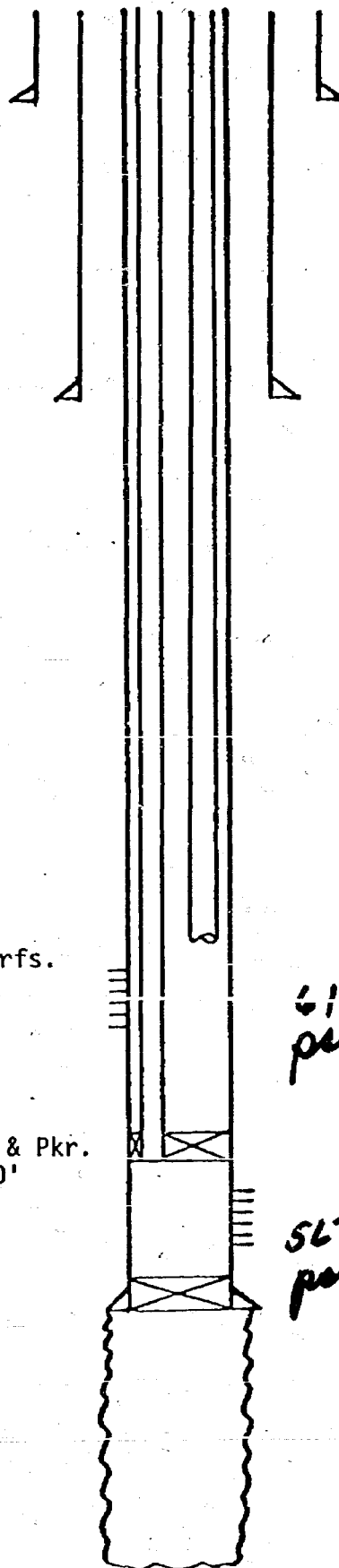
Drinkard Perfs
6474 - 6595'

5 1/2" set @ 7349'
w/575 sx.



Present Completion

EXHIBIT NO. 5



13 3/8" set @ 304'
w/300 sx.

9 5/8" set @ 2797'
w/1000 sx.

MC 1630
both flow

Blinebry Perfs.
5645-5860'

gas

2 3/8" Tbg. & Pkr.
set @ 6340'

oil

PBD 6552'

2 3/8" Tbg. set @ 5636'

412
psi

5556 → 445
→ 496

Drinkard Perfs.
6409-6512'

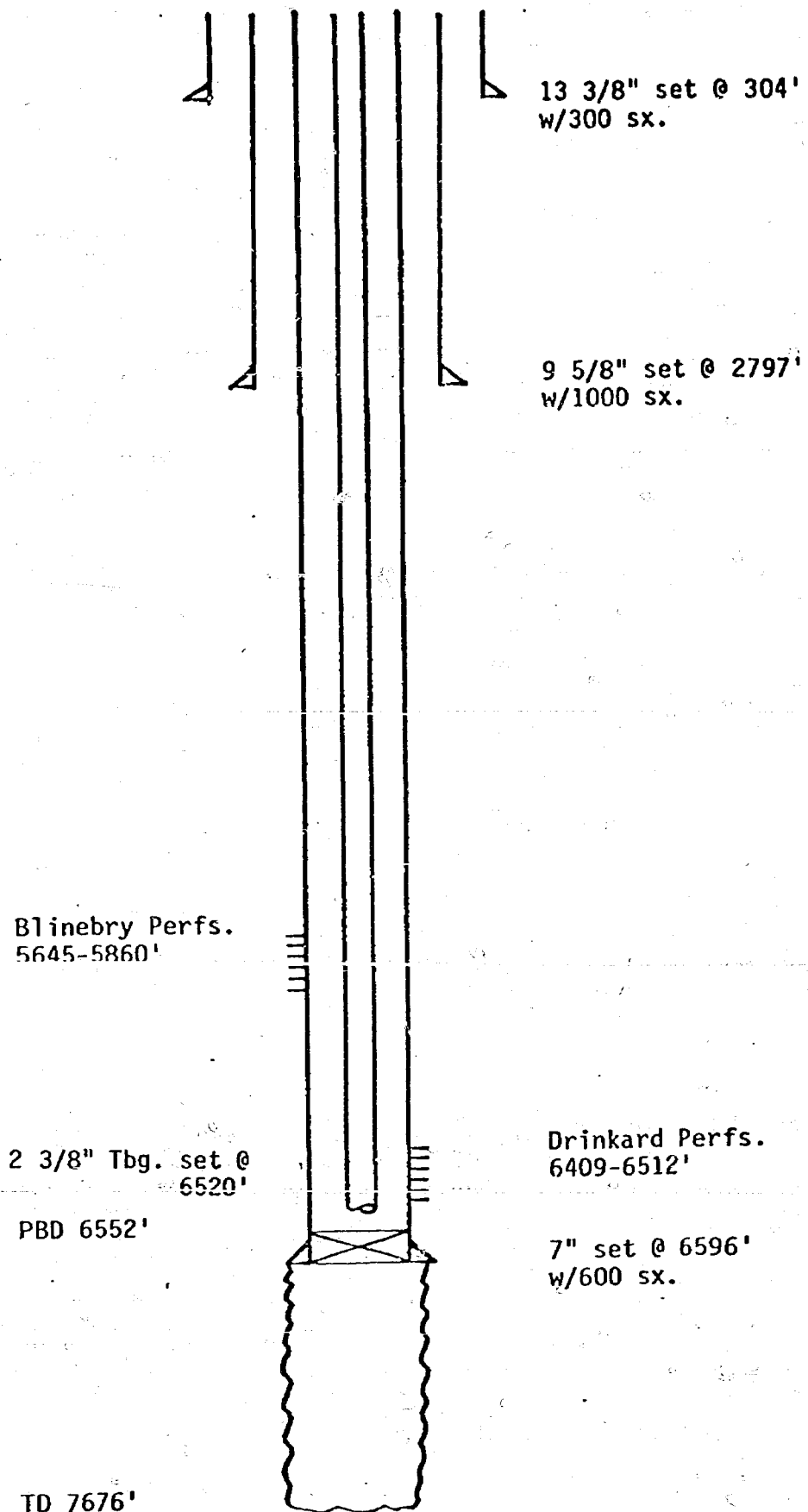
567
psi

7" set @ 6596'
w/600 sx.

TD 7676'

STATE 367 No. 2
Proposed Completion

EXHIBIT NO. 6



Dockets Nos. 29-81 and 30-81 are tentatively set for September 23 and October 7, 1981. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 9, 1981

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- CASE 7341: Application of Superior Oil Company for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of South Carlsbad Strawn and Morrow production in the wellbore of its Collatt State Com Well No. 1 located in Unit J of Section 1, Township 23 South, Range 26 East.
- CASE 7342: Application of Arco Oil and Gas Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinebry and Drinkard production in the wellbore of its State 367 Well No. 2 located in Unit L of Section 36 and its Roy Barton Well No. 2 located in Unit B of Section 23, both in Township 21 South, Range 37 East.
- CASE 7343: Application of Caribou Four Corners, Inc. for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Cha Cha Gallup - Oil Pool underlying the E/2 NW/4 of Section 18, Township 29 North, Range 14 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 7344: Application of Read & Stevens, Inc. 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 the W/2 of Section 19, Township 23 South, Range 28 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 7345: Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Lovington Penn Pool underlying the N/2 NE/4 of Section 13, Township 16 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 7346: Application of Cibola Energy Corporation for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Devonian formations underlying the W/2 of Section 19, Township 10 South, Range 29 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 7347: Application of Tenneco Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the South Line and 860 feet from the West Line of Section 20, Township 16 South, Range 34 East, Kemnitz-Morrow Gas Pool, the W/2 of said Section 20 to be dedicated to the well.

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100

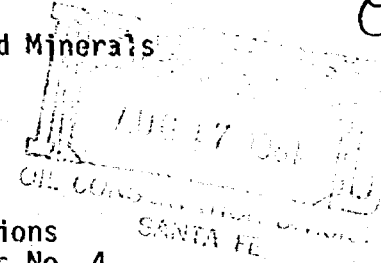
Don - Please call



August 12, 1981

Mr. Roy Johnson
Oil Conservation Division
New Mexico Department of Energy and Minerals
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 7342



Dear Sir:

RE: Downhole Commingling Applications
Roy Barton No. 2, S.J. Sarkeys No. 4
and State 367 No. 2
Lea Co., New Mexico

As you requested in our telephone conversation of August 11, 1981, I am sending you copies of the three downhole commingling applications we submitted earlier this year. In answer to some of the questions you raised concerning the applications, we hope you will consider the following information in making your decision.

- 1) Roy Barton No. 2 - This well produces by pumping the Blinebry oil and flowing the Drinkard gas. As commingling an oil and gas zone is generally more complicated, we wish to point out that the production from the Drinkard is extremely marginal at 19 MCF/GPD. If downhole commingling is not approved for this case, the Drinkard zone will have to be plugged as it is becoming uneconomical to produce as a dual.
- 2) S.J. Sarkeys No. 4 - This well's Drinkard zone was shut-in in 1976. Its shut-in pressure after 5 years of 1007 psi cannot equitably be compared to the 24-hour shut-in pressure of 431 psi on the Blinebry zone. We believe that if the Blinebry were allowed to stabilize for 5 years, the pressure quotient would be less than the 2.0 considered acceptable by the Commission.
- 3) State 367 No. 2 - This case is similar to that of the Barton in that ARCO wishes to commingle an oil zone (Blinebry) and a gas zone (Drinkard). In this well the Blinebry production of 1 BOPD and 15 MCF/GPD is uneconomical and will require plugging if commingling is not granted.

Ask
Don

Mr. Roy Johnson
August 12, 1981
Page 2

ARCO believes that approval of the downhole commingling applications for these three wells is necessary to prevent loss of hydrocarbons due to economic reasons.

If you require any additional information concerning these applications, please contact me at 915-684-0157.

Very truly yours,

Robert E. Craig
Robert E. Craig

REC:cn

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100

May 26, 1981

Mr. Joe D. Ramey
Oil Conservation Division
New Mexico Department of Energy and Minerals
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Downhole Commingling Application
Roy Barton No. 2
Section 23, T-21-S, R-37-E

Dear Sir:

ARCO Oil and Gas Company requests administrative approval under the provisions of Rule 303-C to commingle downhole production from the Blinebry and Drinkard zones of the Roy Barton No. 2 located in Section 23, T-21-S, R-37-E, of Lea County, New Mexico.

Production on this lease is presently being commingled in the surface facilities (Order #PC-219) with no evidence of fluid incompatibility. Since the crudes are commingled at the battery before sale, no change in value will result from commingling the production downhole. Ownership of both zones is common and correlative rights will not be violated.

This well produces from a maximum depth of 6595' and is therefore allowed a commingled production rate up to 40 BOPD. The water production limit is 40 BWPD from each zone.

The Roy Barton No. 2 produces 8 BOPD + 19 BWPD + 42 MCFGPD under artificial lift from the Blinebry zone. Estimated bottom hole pressure is 556 psia. Drinkard production is by natural flow. Presently this zone produces 19 MCFGPD from a measured bottom hole pressure of 940 psia.

Additional information, such as decline curves, Form C-116-A, List of Offset Operators, and lease and well information is included as required by Rule 303-C. Offset operators are being notified by registered mail with a copy of this application.

*Sent for
Hwy 9-9
for Craig
to DSN
8/18*

Case 7342

Downhole Commingling Application

Page 2

Thank you for your consideration.

Very truly yours,

Susan M. Tidwell

Susan M. Tidwell
Operations Engineer

SMT:fd

Attachments

cc: NMOCC Area Supervisor
P. O. Box 1980
Hobbs, New Mexico 88240

Offset Operators

ROY BARTON #2

1. Operator: ARCO Oil and Gas Company
P. O. Box 1510
Midland, Texas 79702

2. Lease, Well, and Location:

Roy Barton #2
660' FNL & 1980' FEL
Section 23-21S-37E
Lea County, New Mexico

3. Producing Zones:

Blinebry-pump
Drinkard-natural flow
Bottom-most perforation at 6595'

4. Commission Order No. Authorizing Dual Completion:

DC-137

5. Decline Curves: attached

6. Fluid Incompatibility:

Production from these zones is being
commingled in the surface facilities of
the S. J. Sarkey's Lease. No evidence of
fluid incompatibility has been found.
(PC-219)

7. Value of Commingled Fluids:

As production from both zones is currently
priced as sour crude, downhole commingling
will not affect the value of the oil.

8. Current Production: See attached C-116.

9. Bottom Hole Pressures:

Blinebry - 556 psi ✓
Drinkard - 940 psi ✓

10. All Offset Operators are being notified by copy of this application.

*both zones
must
either
pump or
flow*

*Bl is gas
DN is oil
hwy
only*

OFFSET OPERATORS

ACOMA OIL CORPORATION
812 CONTINENTAL LIFE BLDG.
FORT WORTH, TEXAS 76102

GETTY OIL CORP.
BOX 1231
MIDLAND, TEXAS 79702

GULF ENERGY & MINERALS COMPANY
BOX 1150
MIDLAND, TEXAS 79702

MOBIL OIL CORPORATION
BOX 633
MIDLAND, TEXAS 79702

SHELL OIL COMPANY
P. O. BOX 1509
MIDLAND, TEXAS 79702

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

G-116
Revised 1-1-65

Operator ARCO Oil and Gas Company				Pool Plinybry				County Lea							
Division of Atlantic Richfield Company															
Address P. O. Box 1710, Hobbs, New Mexico 88240				TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>					
LEASE NAME	WELL NO.	GATE OF TEST				STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT / BBL.
		U	S	T	R						WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
Roy Barton	2	R	23	21S	37E	5/10/81	P		8	24	19	392	8	42	5250
Above is a 24 hr. productivity test preparatory to downhole comingline with the Drinkard Zone.															

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.

Susan M. Tidwell
(Signature)

Operations Engineer

May 26, 1981

(Title)

(Date)

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS**

C-116
Revised 1-1-65

Operator ARCO Oil and Gas Company				Pool Drinkard				County Lea								
Address P. O. Box 1710, Hobbs, New Mexico 88240				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 BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
Roy Barton	2			15	37E	5-09-81	S	21/64	50	0	24	0	39.2	0	19	-0-
Above is a 24 hr. productivity test run to downhole comingling with the Blinbry Zone.																

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.

Susan M. Tidwell
(Signature)

Operations Engineer
(Title)

May 26, 1981
(Date)

To

Office

From

Office

Date

Sussex Tidwell

Madrid, Texas

V. J. Cummings

Chesapeake

Date

State, Field, (Formation)

Datum plane

Field tests conducted by

Well No. 2 1/2

Date of test

Well elevation feet DF

Test depth feet DF

Top of perforation feet DF

Hour of well shut in

Tubing pressure PSI, GA

Oil level feet, DF

Water level feet, DF

Temperature at test depth deg F

Bottom hole pressure at test depth PSI, GA

Correction test depth to hole PSI, GA

Grd. PSI per foot

Total PSI

Bottom hole pressure at top of perforation PSI, GA

Correction top of perf. to datum plane PSI, GA

Total PSI

Date

Lease and well number

Date of test

Well elevation feet DF

Test depth feet DF

Top of perforation feet DF

Hour of well shut in

Tubing pressure PSI, GA

Oil level feet, DF

Water level feet, DF

Temperature at test depth deg F

Bottom hole pressure at test depth PSI, GA

Correction test depth to hole PSI, GA

Grd. PSI per foot

Total PSI

Bottom hole pressure at top of perforation PSI, GA

Correction top of perf. to datum plane PSI, GA

Total PSI

Date

Key Block No. 2 1/2

Date of test

Well elevation feet DF

Test depth feet DF

Top of perforation feet DF

Hour of well shut in

Tubing pressure PSI, GA

Oil level feet, DF

Water level feet, DF

Temperature at test depth deg F

Bottom hole pressure at test depth PSI, GA

Correction test depth to hole PSI, GA

Grd. PSI per foot

Total PSI

Bottom hole pressure at top of perforation PSI, GA

Correction top of perf. to datum plane PSI, GA

Total PSI

Date

To
State, Field, (formation)Office
Midland, Texas

Datum plane

From
H. J. CummingsOffice
Odessa, Texas

Field tests conducted by

Date

New Mexico, Eureka, Dinakard

Lease and well number

Date of test

Well elevation feet DF

Test depth feet DF

Top of perforation feet DF

Hours well shut in

Tubing pressure, PSI, GA

Oil level feet, DF

Water level feet, DF

Troughs - time at test depth

Bottom hole pressure at test depth PSI, GA

Correction test depth to

Feet

Grad. PSI per foot

Total PSI

Bottom hole pressure at Middle perforation PSI

Correction top of perf. to datum plane

Feet

Grad. PSI per foot

Total PSI

Change from previous test

Date

PSI

Key Barton No 2-1

2-13-84

3406

16350

4474

27

26

4461

863

7194

420

77

940

10,000

1,000

100

BOPM

ROY BARTON NO. 2
BLINEBRY OIL ZONE
LEA COUNTY, N. M.
OIL PRODUCTION
PUMP

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.																								
19 77												19 78												19 79												19 80												19 81											

10,000

1,000

MCFPM

12 1/2 YEARS BY MONTHS
40 CYCLES
MADE IN U.S.A.
KEUFFEL & ESSER CO.ROY BARTON NO. 2
BLINEBRY OIL ZONE
LEA COUNTY, N. M.
GAS PRODUCTION

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 77											
Jan.	Feb.	Mar.	Apr.	May <td>June</td> <td>July</td> <td>Aug.</td> <td>Sept.</td> <td>Oct.</td> <td>Nov.</td> <td>Dec.</td>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 78											
Jan.	Feb.	Mar.	Apr.	May <td>June</td> <td>July</td> <td>Aug.</td> <td>Sept.</td> <td>Oct.</td> <td>Nov.</td> <td>Dec.</td>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 79											
Jan.	Feb.	Mar.	Apr.	May <td>June</td> <td>July</td> <td>Aug.</td> <td>Sept.</td> <td>Oct.</td> <td>Nov.</td> <td>Dec.</td>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 80											
Jan.	Feb.	Mar.	Apr.	May <td>June</td> <td>July</td> <td>Aug.</td> <td>Sept.</td> <td>Oct.</td> <td>Nov.</td> <td>Dec.</td>	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19 81											

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100

May 26, 1981

Mr. Joe D. Ramey
Oil Conservation Division
New Mexico Department of Energy and Minerals
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Downhole Commingling Application
State 367 No. 2
Section 36, T-21-S, R-37-E

Dear Sir:

ARCO Oil and Gas Company requests administrative approval under the provisions of Rule 303-C to commingle downhole production from the Blinebry and Drinkard zones of the State 367 No. 2 located in Section 36, T-21-S, R-37-E, of Lea County, New Mexico.

Production on this lease is presently being commingled in the surface facilities (Order #PC-261) with no evidence of fluid incompatibility. Since the crudes are commingled at the battery before sale, no change in value will result from commingling the production downhole. Ownership of both zones is common and correlative rights will not be violated.

This well produces from a maximum depth 6512' and is therefore allowed a commingled production rate up to 40 BOPD. The water production limit is 40 BWPD from each zone.

The State 367 No. 2 produces 4 MCFGPD from the Blinebry by natural flow and has a measured bottom hole pressure of 612 psia. Drinkard production is also by natural flow. This zone currently produces 2 BOPD + 136 MCFGPD from a measured bottom hole pressure of 567 psia.

Additional information, such as decline curves, Form C-116-A, List of Offset Operators, and lease and well information is included as required by Rule 303-C. Offset operators are being notified by registered mail with a copy of this application.

*Set for Dec 9 9/9
Case 7342 for Craig to DSW 8/18*

*Commingling
oil zone w/o
gas zone
w/o only.*

Thank you for your consideration.

Very truly yours,

Susan M. Tidwell

Susan M. Tidwell
Operations Engineer

SMT:fd

Attachments

cc: NMOCC Area Supervisor
P. O. Box 1980
Hobbs, New Mexico 88240

Offset Operators

STATE 367 #2

1. Operator: ARCO Oil and Gas Company
P. O. Box 1610
Midland, Texas 79702

2. Lease, Well, and Location:

State 367 #2
1980' FSL & 660' FWL
Section 36-21S-37E
Lea County, New Mexico

3. Producing Zones:

Blinebry by natural flow.
Drinkard by natural flow.
Bottom-most perforation at 6512'.

4. Commission Order No. Authorizing Dual Completion:

MC-1630

5. Decline Curves: attached

6. Fluid Incompatibility:

Production from these zones is being
commingled in the surface facilities
evidence of fluid incompatibility has
been found. (PC-261).

7. Value of Commingled Fluids:

As production from both zones is currently
priced as sour crude, downhole commingling
will not affect the value of the oil.

8. Current Production: See attached C-116.

9. Bottom Hole Pressures:

Blinebry - 612 psi
Drinkard - 567 psi

10. All Offset Operators are being notified by copy of this application.

OFFSET OPERATORS:

Amoco
P. O. Box 68
Hobbs, New Mexico 88240

Getty Oil Company
P. O. Box 730
Hobbs, New Mexico 88240

Marathon Oil Company
P. O. Box 2409
Hobbs, New Mexico 88240

Cities Service Oil Company
P. O. Box 1919
Midland, Texas 79702

Exxon
P. O. Box 1600
Midland, Texas 79701

Conoco, Inc.
P. O. Box 460
Hobbs, New Mexico 88240

Petro Lewis Corporation
P. O. Box 509
Levelland, Texas 79336

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator ARCO Oil and Gas Company Division of Atlantic Richfield Co.		County Lea														
Address P. O. Box 1710, 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	TAG. PRES.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - OIL RATIO CU. FT./BBL.
		U	S	T	R							WATER BBLs.	GRAV. OIL	OIL BBLs.	GAS M.C.F.	
State 367	2	L	36	215	37E	5-09-81	S	19/64"	50	1	24	0	39.2	0	4	-0-
Above is a 24 hr. productivity test preparatory to downhole commingling with the Drinkard Zone.																

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.

Sum M Tidwell
(Signature)

Operations Engineer
(Title)

May 26, 1981

(Date)

C-116
Revised 1-1-65

(Date)



To

Office

From

Office

Date

SUSAN Tidwell

Midland, Tex.

V.J. Cummings

Chessa, Tex.

Date

SUSAN Tidwell

Midland, Tex.

V.J. Cummings

Chessa, Tex.

Date

New Mexico - El Paso - Big Bend

Hours

Tubing

Oil

Water

Temperature

Bottom

Correction

Grad.

Total

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Grad.

Total

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To Susana Tidwell Office Midland Texas From V.J. Cummings Office Mesa, Texas Date

State, Field, (Formation)

New Mexico - Eureka - Drinkard

Datum plane

Fluid tests conducted by

Special Projects

Lease and well number

Date of test

Well elevation feet DF

Test depth feet DF

Top of perforation feet DF

Hours shut in

Tubing pressure PSI, GA

Oil level feet, DF

Water level feet, DF

Temperature at test depth deg F

Bottom hole pressure at test depth PSI, GA

Correction test depth to feet

Grd. PSI per foot

Total PSI

Bottom hole pressure at actual perforation PSI, GA

Correction top of perf. to datum plane feet

Grd. PSI per foot

Total PSI

Change from previous test Date

PSI

Bottom hole pressure at datum plane PSI, GA

* Sackkeys No. 4 1/2

3-4-81

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→ State 367 No. 2 1/2

3-4-81

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Sackkeys No. 4 Last Produced 9-76

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STATE 367 NO.2
BLINEBRY ZONE
LEA COUNTY, NEW MEXICO
OIL PRODUCTION - FLOWING
CUM: 53,227

46 6690

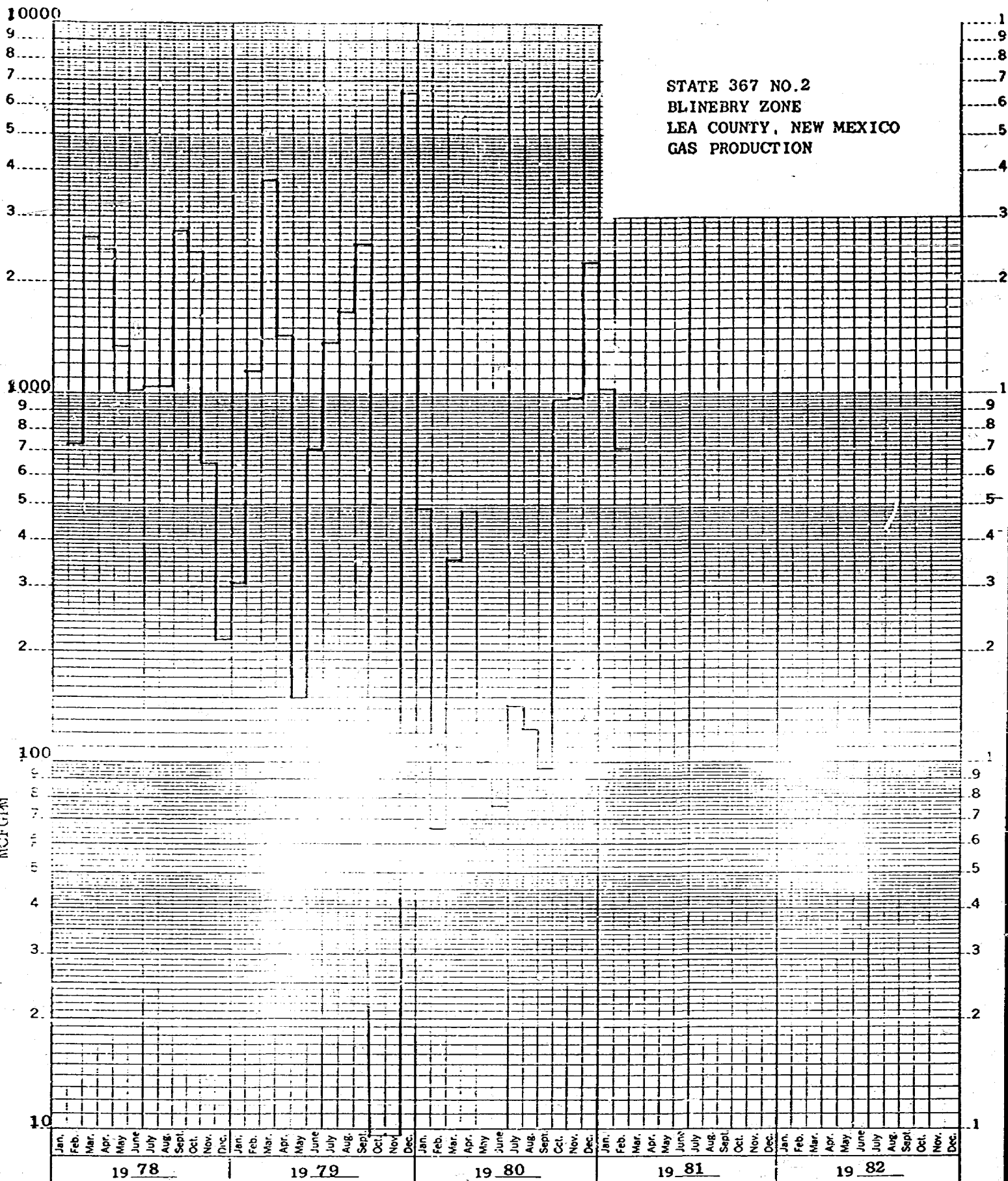
KOE 5 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADISON, WIS.

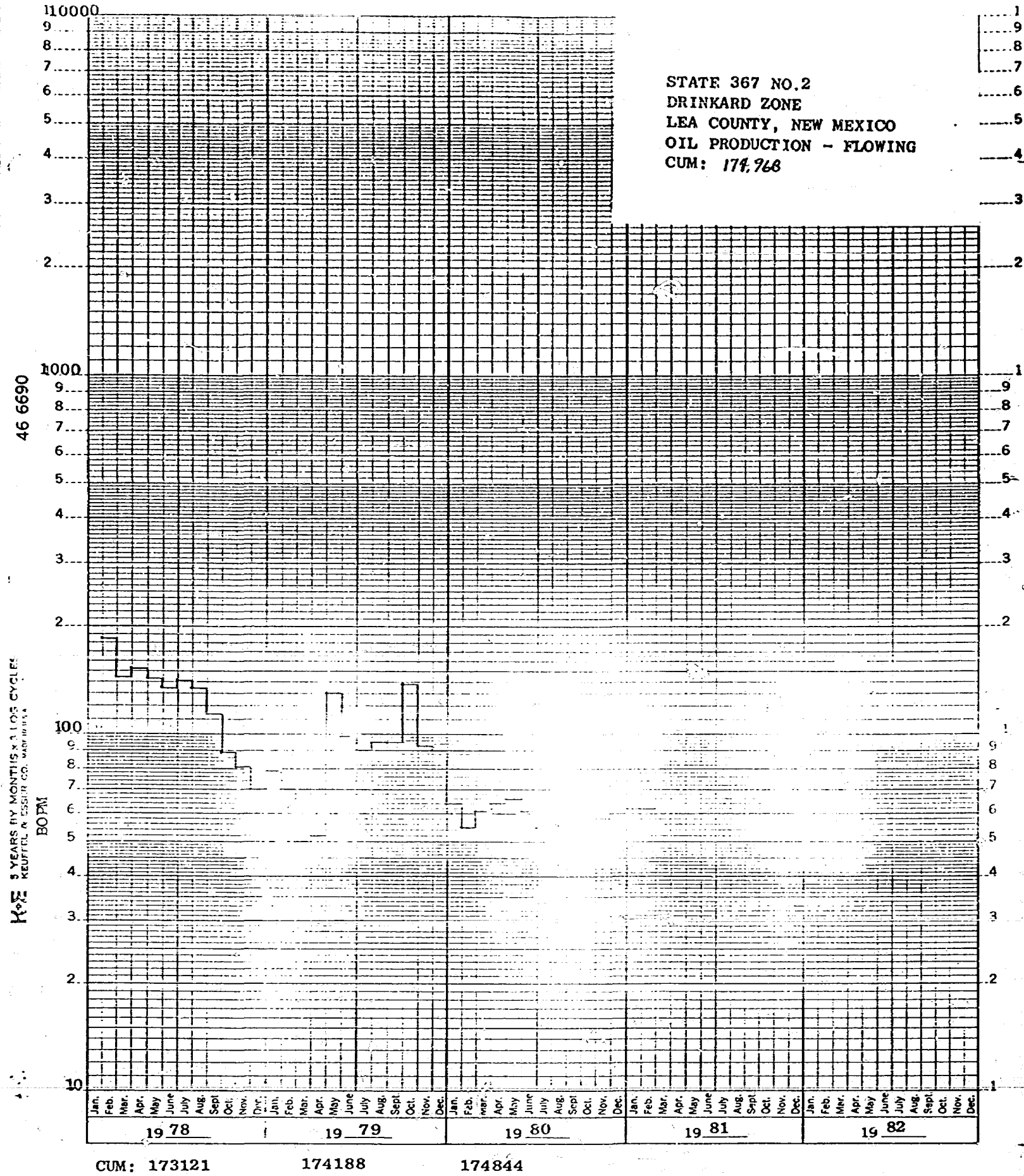
BOPM

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.																								
19 78												19 79												19 80												19 81												19 82											
CUM: 51531												52428												53149																																			

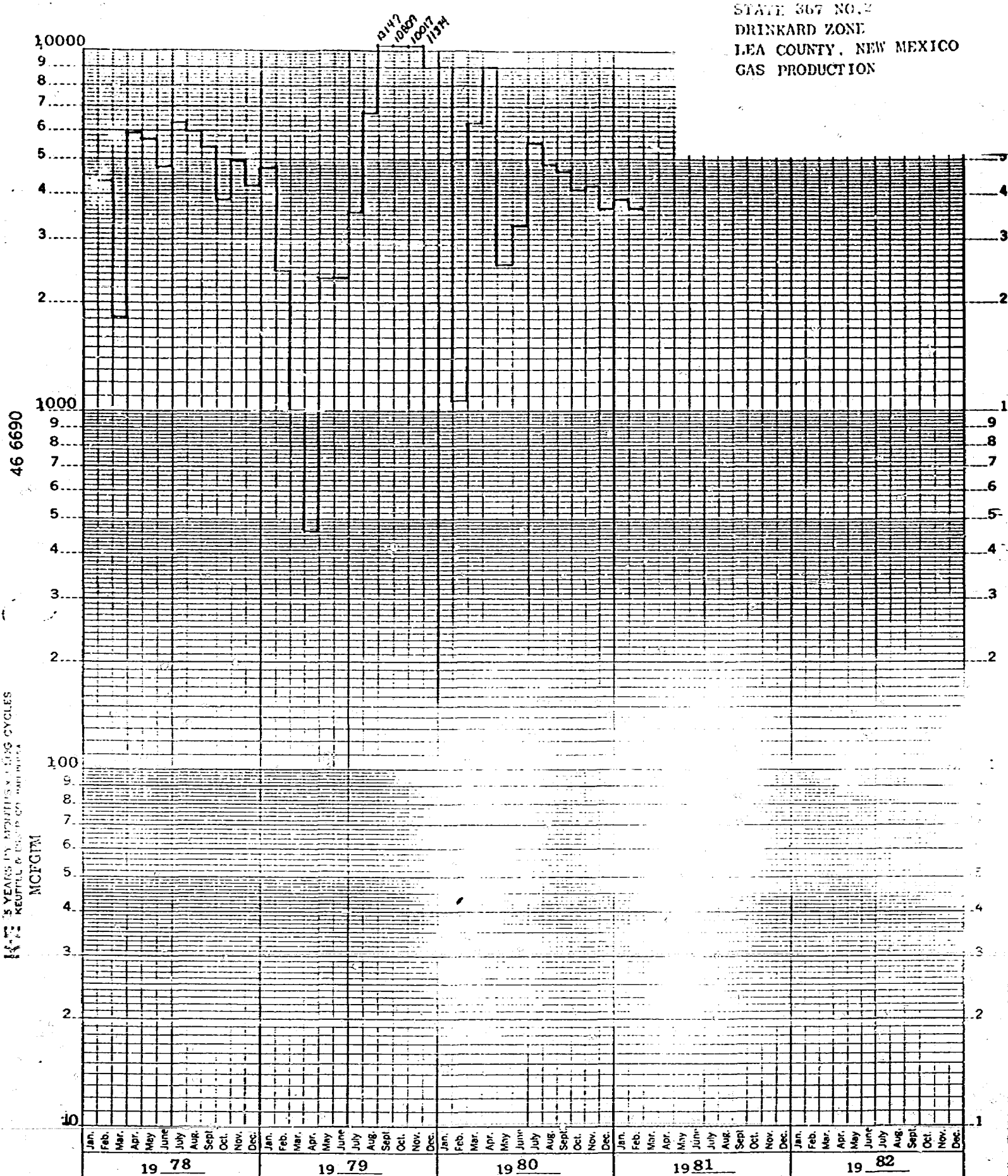
46 6690

אברהם



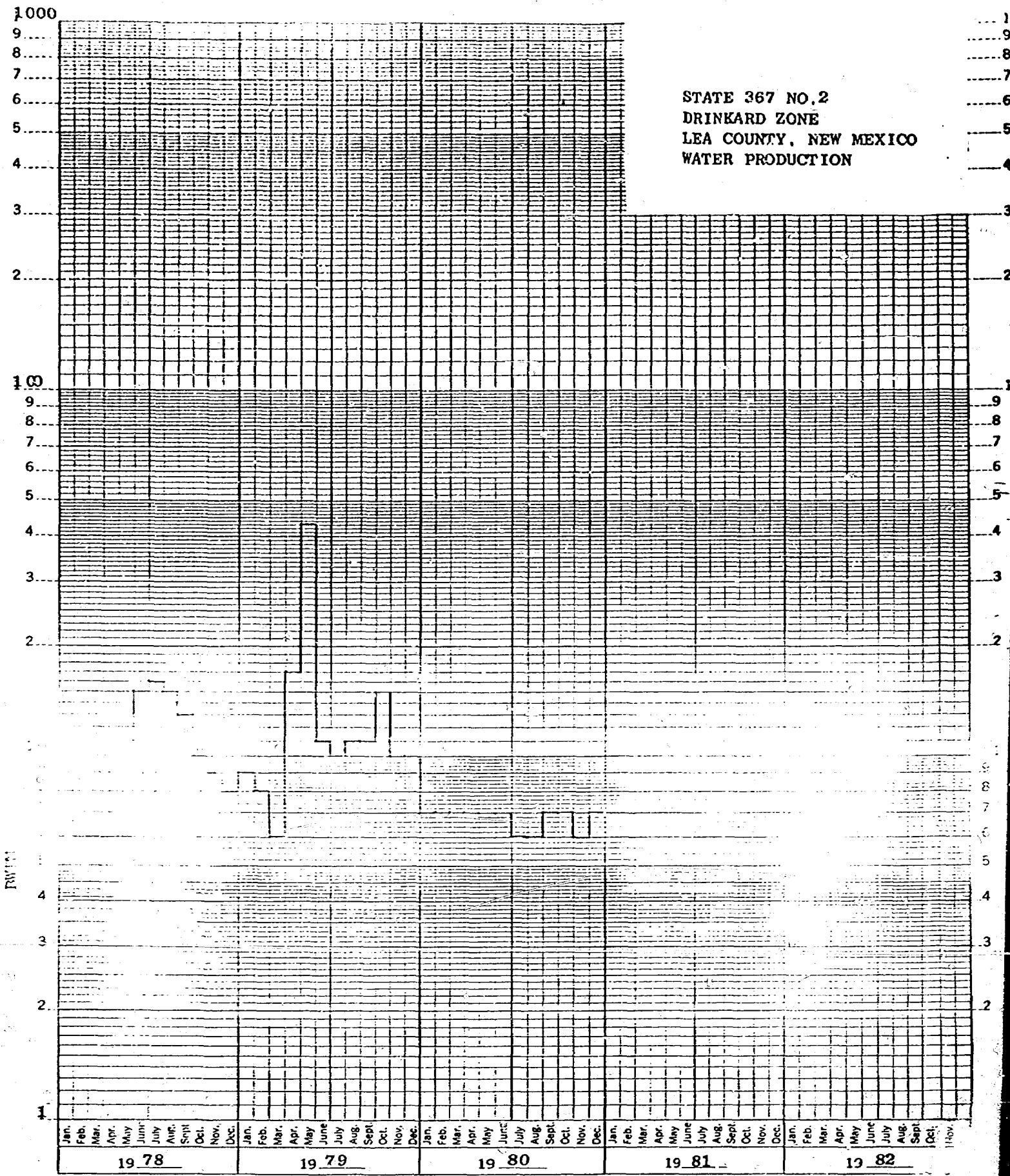


STATE 367 NO. 2
 DRINKARD ZONE
 LEA COUNTY, NEW MEXICO
 GAS PRODUCTION



46 6690

ME 5 YEARS BY MONTHLY CYCLES
KEUFFEL & NAUGHTON



STATE 367 NO.2
DRINKARD ZONE
LEA COUNTY, NEW MEXICO
WATER PRODUCTION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 7342

Order No. R-6783

APPLICATION OF ARCO OIL AND GAS COMPANY

FOR DOWNHOLE COMMINGLING, LEA

COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 9,
19 81, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of September, 19 81, the
Division Director, 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 Division has jurisdiction of this cause and the
subject matter thereof.

(2) That the applicant, Arco Oil and Gas Company, is
the owner and operator of the State 367 Well No. 2,
~~and~~ and its Roy Barton Well No. 2 located in Unit B of Section 23,
located in Unit L of Section 36, both in Township 21 South,
Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authority to commingle
Blinebry and Drinkard production
within the wellbores of the above-described wells.

(4) That from the Blinebry zone, the subject wells ^{are} ~~is~~ capable of low marginal production only.

(5) That from the Drinkard zone, the subject wells ^{are} ~~well~~ is capable of low marginal production only.

(6) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.

(8) That to afford the Division the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobbs district office of the Division any time ^{either of} the subject wells ^{are} ~~is~~ shut-in for 7 consecutive days.

~~(9) That in order to allocate the commingled production to each of the commingled zones in the subject well, _____ percent of the commingled _____ production should be allocated to the Blinebry zone, and _____ percent of the commingled _____ production to the Drinkard zone.~~

~~(RECOMMENDED)~~

(9) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Hobbs district office of the Division and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, Arco Oil and Gas Company, is hereby authorized to commingle Blinebry and Drinkard production within the wellbore^s of the State 367 Well No. 2, located in Unit E of its Roy Barton Well No. 2 located in Unit B of Section 23, both in Section 36 and/, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the Hobbs district office of the Division and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(ALTERNATE)

~~(2) That _____ percent of the commingled production shall be allocated to the Blinebry zone and _____ percent of the commingled production shall be allocated to the Drinkard zone~~

(3) That the operator of the subject wells shall immediately notify the Division's Hobbs district office ^{either of} any time the well^s has been shut-in for 7 consecutive days and shall concurrently present, to the Division, a plan for remedial action.

(4) 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 the day and year hereinabove designated.