

CASE 5957: CONTINENTAL OIL COMPANY
(FOR DOWNHOLE COMMINGLING, RIO ARRIBA 7
COUNTY, NEW MEXICO

Case Number
5957

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
8 June 1977

IN THE MATTER OF:

Application of Continental Oil Company for
downhole commingling, Rio Arriba County,
New Mexico.

And

Application of Continental Oil Company for
downhole commingling, Rio Arriba County,
New Mexico.

CASE
5957

CASE
5958

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For New Mexico Oil
Conservation Commission:

Lynn Teschendorf, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Tom Kellahin, Esq.
KELLAHIN & FOX
500 Don Gaspar
Santa Fe, New Mexico

sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

I N D E X

VICTOR T. LYON

Direct Examination by Mr. Kellahin	3
Cross Examination by Mr. Nutter	10

E X H I B I T S

Continental Exhibit One, Plat	10
Continental Exhibit Two, Chart	10
Continental Exhibit Three, Chart	10
Continental Exhibit Four, Chart	10
Continental Exhibit Five, Chart	10
Continental Exhibit Six, Chart	10
Continental Exhibit Seven, Chart	10
Continental Exhibit Eight, Chart	10
Continental Exhibit Nine, Chart	10

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

sid morrison reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 MR. NUTTER: We'll call Case Number 5957.

2 Do you want to consolidate 57 and 58?

3 MR. KELLAHIN: Yes.

4 MR. NUTTER: We'll also call Case Number 5958.

5 MS. TESCHENDORF: 5957. Application of Continental
6 Oil Company for downhole commingling, Rio Arriba County, New
7 Mexico.

8 Case 5958. Application of Continental Oil Company
9 for downhole commingling, Rio Arriba County, New Mexico.

10 MR. NUTTER: For purposes of taking the record,
11 we've consolidated Cases 5957 and 5958.

12 MR. KELLAHIN: Tom Kellahin of Kellahin & Fox,
13 appearing on behalf of Continental Oil. Let the record re-
14 flect that I have the same witness as in the previous case.
15 He has been placed under oath and has qualified as an expert
16 witness.

17 MR. NUTTER: The record will so reflect.

18
19 DIRECT EXAMINATION

20 BY MR. KELLAHIN:

21 Q Mr. Lyon, would you refer to Exhibit Number One,
22 identify it, and tell us what Continental is seeking to ac-
23 complish?

24 A Well, Case Number 5957 is the application of Con-
25 tinental for permission to commingle in the wellbore production

1 from the Otero-Chacra and South Blanco-Pictured Cliffs forma-
2 tions in four wells on its AXI Apache "J" lease in Sections
3 5, 6, 7, and 8 of Township 25 North, Range 5 West, Rio Arriba
4 County, New Mexico.

5 Case 5958 is the application of Continental for
6 permission to commingle in the wellbore production from the
7 Gonzales-Mesaverde and the Otero-Chacra pools in eight of its
8 wells on the same lease.

9 Exhibit Number One is a plat showing the AXI Apache
10 "J" lease outlined in red and it consists of Section 5, 6, 7,
11 and 8 in Township 25 North, Range 5 West, Rio Arriba County,
12 New Mexico.

13 The exhibit also shows the wells on the lease and
14 by the colored circles the wells which we are seeking per-
15 mission to commingle in the wellbore. Wells which are circled
16 in blue are dual completions in the Pictured Cliffs and Chacra
17 formations. These are Wells Numbers 11, in Unit A of Section
18 6; 9, in Unit O of Section 6; 10 in Unit A of Section 5; and
19 12 in Unit K of Section 5.

20 The wells circled in green are dual completions in
21 the Mesaverde and Chacra and these are Wells Numbers 20 and 21,
22 in Unit C and I of Section 5; Wells Numbers 19 and 22, in Units
23 D and L of Section 6; Well Number 25, in Unit A of Section 7;
24 and Wells Numbers 23, 18, and 24, in Units D, A, and T, re-
25 spectively, in Section 8.

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 932-9212

1 Q Would you refer to Exhibit Number Two and identify
2 it?

3 A Exhibit Number Two is a tabulation showing pro-
4 duction from each of the wells on the lease for the month of
5 April, 1977.

6 The first column on the left shows the well number.
7 The second column shows the dual completion order, and the
8 third column shows the production from the South Blanco-
9 Pictured Cliffs, and alongside on the righthand of that
10 column there are some "X's" in parentheses and this shows
11 that those wells are exempt marginal; the other wells are
12 marginal. The next column shows the production from the
13 Gonzales-Mesaverde and then the fifth column shows the pro-
14 duction from the Otero-Chacra, and then to the right of that
15 column, on the extreme righthand side of the exhibit, the
16 figure in parentheses shows the percent that the Chacra pro-
17 duction represents of the total gas production from the wells
18 considering both zones, and I used the February figure because
19 I feel that it is probably more representative than the
20 April figure. We are beginning to experience higher line
21 pressures in that area because of lower demand and the lower
22 pressured zones are encountering some handicapping in pro-
23 ducing.

24 Q Would you refer to Exhibit Three and identify it?

25 A Exhibit Number Three is a tabulation of the pres-

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 sure information on the same format that was used on Exhibit
2 Two.

3 Well Number, the pressure, this is the last shut-in
4 pressure taken from the last deliverability test, for the
5 Pictured Cliffs, the Mesaverde, and the Chacra. As you can
6 see, there are not any extremely large differentials. The
7 largest differential in pressure, and this is surface pressure,
8 is on Well Number 24, which shows 976 pounds in the Mesaverde
9 as compared to 258 pounds in the Chacra, and the Mesaverde
10 has been shut in, in this well, for some time, therefore it
11 probably is unusually high on a comparison with the other
12 wells.

13 Q In your opinion, Mr. Lyon, is the pressure dif-
14 ferential significantly low enough that there will not be
15 migration between the zones or other wells producing?

16 A Yes. I think that's true.

17 Q Would you identify Exhibit Number Four?

18 A Exhibit Number Four is a decline curve of the
19 Chacra in the AXI Apache "J" Number 18. It covers the period
20 from 1972 through February of 1977.

21 Q Exhibit Number Five?

22 A Exhibit Number Five is a decline curve for the
23 Mesaverde in the AXI Apache "J" Number 18, covering the same
24 period.

25 Q Exhibit Number Six?

sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 A Exhibit Number Six is a decline curve for the
2 Chacra in Well Number 24, covering the same period that I
3 have shown on the other two exhibits.

4 Q Number Seven?

5 A Exhibit Number Seven is a decline curve on the
6 Mesaverde for Well Number 24, and as it shows, it was shut in
7 in November of 1973.

8 Q Exhibit Number Eight?

9 A Exhibit Number Eight is a decline curve on the
10 Pictured Cliffs of Well Number 9. It shows the production
11 is rather erratic.

12 Q Exhibit Number Nine?

13 A Exhibit Number Nine is a decline curve on the
14 Chacra of Well Number 9.

15 Q Mr. Lyon, have you made any calculations to deter-
16 mine what the remaining reserves are to be allocated to the
17 Chacra?

18 A Well, for Well Number 9 it's estimated that the
19 Chacra has remaining reserves of 76 million cubic feet, which
20 we anticipate will be produced in, approximately, in an
21 11-year period.

22 Q And as to the Pictured Cliffs formation?

23 A Pictured Cliffs has an estimated 45 million cubic
24 feet reserves, to be produced in a 9-year period.

25 Q Do you have a recommendation to the Examiner and

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 the Commission with regard to how to allocate production be-
2 tween the commingled zones?

3 A. Well, as to Well Number 9, we estimate that the
4 *PC?* Chacra will produce about 20 mcf per day when the downhole
5 commingling is affected, and we expect the Pictured Cliffs *Chacra?*
6 will continue to produce about the 35 mcf per day, which it
7 is presently producing, so we would suggest that 35% of the
8 production be allocated to the Pictured Cliffs; 65% to Chacra.

9 The Exhibit Two shows the current contribution of
10 the Chacra to the two zones and we would expect that the same
11 ratio would probably apply in the future.

12 Now, as to Well Number 24, we could make some
13 estimate of the percentage based on the period of time that
14 the Mesaverde produced in Number 24. I would suggest that
15 we -- after the dual completion, or after the downhole com-
16 mingling is affected, that we test the well for a month or
17 maybe two months and then allocate the additional production
18 to the Mesaverde and then apply that percentage for future
19 production.

20 Q. What is your proposed plan for commingling each of
21 these wells?

22 A. Well, the wells are completed in -- are dually
23 completed in a conventional manner, and we will merely go in
24 and kill the wells and remove the packers and run the tubing
25 back in without the packer and place them on production on a

1 commingled basis.

2 Q In your opinion, Mr. Lyon, will approval of this
3 application be in the best interests of conservation, the
4 prevention of waste, and the protection of correlative rights?

5 A Yes, I believe it will, and I might point out, sir,
6 we had originally planned to ask for downhole commingling
7 in the three wells plus one other well, on which I have ex-
8 hibits. I believe that these exhibits are representative
9 of the wells that we are dealing with here, and rather than
10 come up here several times for hearings, I thought that it
11 would be appropriate to ask for approval to downhole com-
12 mingle all of these wells at this time. If the Commission
13 desires, we can furnish comparable exhibits for the other
14 wells that we do not have exhibits for today.

15 MR. NUTTER: You're talking about the decline
16 curves, I presume?

17 A Yes. And/or we could provide in the order for
18 administrative procedures to handle these other wells, but
19 just in the interest of time and saving of effort on both
20 our part and the Commission's part, we'd like to have approval
21 either to downhole commingle these wells at this time, and
22 we would do the work whenever it becomes desirable from a
23 producing viewpoint, or in the alternative, have administra-
24 tive procedure where we could affect those on a well-by-well
25 basis.

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 Q Is the ownership between the two producing horizons
2 common in each of the wells?

3 A Yes, it is.

4 MR. KELLAHIN: We move the introduction of Exhibits
5 One through Nine.

6 MR. NUTTER: Continental Exhibits One through Nine
7 will be admitted in evidence.

8 MR. KELLAHIN: That concludes our case.

9
10 CROSS EXAMINATION

11 BY MR. NUTTER:

12 Q Mr. Lyon, I was having a hard time following your
13 testimony with regard to that Number 9 on that production.

14 A Yes.

15 Q Now, I got the reserves that you mentioned for
16 each of the zones. Now, what is the average daily rate of
17 production for each of the zones?

18 A Well, for Number 9, if you'll refer to Exhibit
19 Two, during April it produced 1005 mcf.

20 Q From the Chacra?

21 A Yes. Which is in the order of 35 mcf per day.

22 The Pictured Cliffs is not producing.

23 Q And why?

24 A Well, it just -- I'm not sure just what the mechan-
25 ical problem is in there. I think that the well is probably

1 loaded up with fluids.

2 Q Now, do we have an exhibit for that well, a decline
3 curve?

4 A Yes. That is Exhibit Eight. It shows the last
5 production to be in July, I believe, of 1966.

6 Q And that's Pictured Cliffs?

7 A Yes, sir.

8 Q So it was very erratic when it was producing and
9 it's been shut in, then, for ten years or more.

10 A Well, that's right. I hadn't noticed the differ-
11 ence in the years, but you're right, it has been.

12 Q Since 1966. Well, I think maybe what we ought
13 to do is go the same route on it that we go on Number 24, is
14 take tests on completion of the work.

15 A Well, that's entirely satisfactory.

16 Q Now, these percentages, these figures out here at
17 the right on Exhibit Number Two in parentheses are the per-
18 centage from the Chacra in each case, is that correct?

19 A Yes, that's since the Chacra is common in all of
20 these wells, I just gave a representation of the percent that
21 the Chacra produced in the two completions in each well.

22 Q Do you anticipate any difference in productivity
23 from the Chacra upon the commingling of Chacra with the Mesa-
24 verde or South Blanca, whichever the case might be?

25 A I really don't anticipate any.

sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

sid morrison reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 Q Your Chacra has higher pressures than the Pictured
2 Cliffs but it has lower pressures than the Mesaverde.

3 A Yes.

4 Q So I don't know, Mr. Lyon, it would appear that
5 possibly these pressures from the Mesaverde may retard flow
6 from the Chacra, actually, because they are considerably in
7 excess. You take Well Number 24 there, the Mesaverde has
8 976 pounds shut-in pressure as opposed to only 258 for the
9 Chacra.

10 A Yes, that's true, but Well Number 24 had a shut-
11 in period of some about three and a half years, as compared
12 to a week for the others.

13 Q Well, in both zones?

14 A No. No, just in the Mesaverde, so that 976 pounds
15 is probably not representative of the pressures that are
16 shown for the other completions.

17 Q I see.

18 A Because of the extended build-up time.

19 Q Well, still we have a differential, though, of
20 3-to-1 on the others with -- take Number 25, you have a pres-
21 sure of almost 700 pounds on the Mesaverde as opposed to 259.

22 A That's right.

23 Q So you've still got a 3-to-1 ratio.

24 A Yeah, that's true; that's true, although the wells
25 are all non-prorated. There may be some --

sid morrish reporting service
General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

1 Q South Blanco wells are not non-prorated, are they?
2 A Well, but they're marginal wells.
3 Q That was going to be my next question.
4 A Yes, they're marginal; none of them are non-marginal
5 wells.
6 Q They all are classified as marginal?
7 A Yes.
8 MR. NUTTER: Are there any further questions of
9 Mr. Lyon?
10 He may be excused. Do you have anything further,
11 Mr. Kellahin?
12 MR. KELLAHIN: No, sir.
13 MR. NUTTER: Does anyone have anything they wish
14 to offer in Case Number 5957 or 5958?
15 We'll take the case under advisement.
16 (Hearing concluded.)
17
18
19
20
21
22
23
24
25

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill
and ability.

Sally Walton Boyd
Sally Walton Boyd, C. S. R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 597-5958
heard by me on 6-8, 19 77.

[Signature] Examiner
New Mexico Oil Conservation Commission

sid morrish reporting service

General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982-9212

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. 5957
Order No. R-5558

APPLICATION OF CONTINENTAL OIL
COMPANY FOR DOWNHOLE COMMINGLING,
RIO ARriba COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 8, 1977,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 1st day of November, 1977, 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, Continental Oil Company, is the
owner and operator of the AXI Apache "J" Wells Nos. 9 and 11,
located in Units O and A, respectively, of Section 6, and the
AXI Apache "J" Wells Nos. 10 and 12, located in Units A and K,
respectively, of Section 5, all in Township 25 North, Range 5
West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle
South Blanco-Pictured Cliffs and Otero-Chacra production
within the wellbore of the above-described wells.

(4) That from the South Blanco-Pictured Cliffs zone,
Wells Nos. 10, 11, and 12 are capable of low marginal production
only.

(5) That from the Otero-Chacra zone, Wells Nos. 9, 10,
11, and 12 are capable of low levels of production only.

(6) That Well No. 9 is presently not capable of producing from the Pictured Cliffs formation, and the pressure in said formation in said well is not known at this time.

(7) 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.

(8) That the reservoir characteristics of each of the subject zones in Wells Nos. 10, 11, and 12 are such that underground waste would not be caused by the proposed commingling provided that none of the wells is shut-in for an extended period.

(9) That the operator should be permitted to recomplete Well No. 9 to commingle Pictured Cliffs and Chacra production in the common wellbore, provided however, that such authority should be rescinded and the well dually completed in the event the pressure in either of said zones is less than 50 percent of the pressure in the other zone.

(10) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Commission whenever any of the aforesaid wells is shut-in for 7 consecutive days.

(11) That in order to allocate the commingled production to each of the commingled zones in Wells Nos. 10, 11, and 12, 56 percent of the commingled production should be allocated to the South Blanco-Pictured Cliffs zone in Well No. 10 and 44 percent of the commingled production to the Otero-Chacra zone, 24 percent to the Pictured Cliffs and 76 percent to the Chacra in Well No. 11, and 44 percent to the Pictured Cliffs and 56 percent to the Chacra in Well No. 12.

(12) That upon completion of workover operations on Well No. 9, and after determination of whether downhole commingling will be permitted in said well, the applicant should consult with the Supervisor of the Aztec District Office of the Commission to determine an allocation formula for said well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to commingle Otero-Chacra and South Blanco-Pictured Cliffs production within the wellbore of its AXI Apache "J" Wells Nos. 9 and 11, located in Units O and A,

-3-

Case No. 5957

Order No. R-5558

respectively, of Section 6, and its AXI Apache "J" Wells Nos. 10 and 12, located in Units A and K, respectively, of Section 5, all in Township 25 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.

(2) That 56 percent of the commingled production shall be allocated to the South Blanco-Pictured Cliffs zone and 44 percent of the commingled production shall be allocated to the Otero-Chacra zone in Well No. 10, 24 percent of the commingled production to the South Blanco-Pictured Cliffs zone and 76 percent to the Otero-Chacra zone in Well No. 11, and 44 percent of the commingled production to the South Blanco-Pictured Cliffs zone and 56 percent to Otero-Chacra zone in Well No. 12.

(3) That the Secretary-Director of the Commission is hereby empowered to rescind the commingling authority herein contained for the aforesaid AXI Apache "J" Well No. 9 in the event the formation pressure encountered in either zone of said well is less than 50 percent of the formation pressure encountered in the other zone.

(4) That upon completion of workover operations on said Well No. 9, and after determination by the Secretary-Director that downhole commingling in said well will be permitted, the operator shall consult with the Supervisor of the Aztec District Office of the Commission to determine an allocation formula for said well.

(5) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

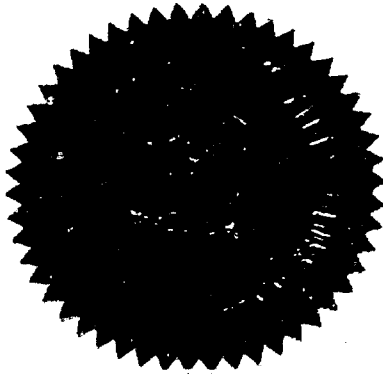
(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

-4-

Case No. 5957
Order No. R-5558

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



PHIL R. LUCERO, Chairman

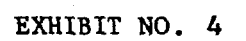
Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/

Cases 5957-
5958



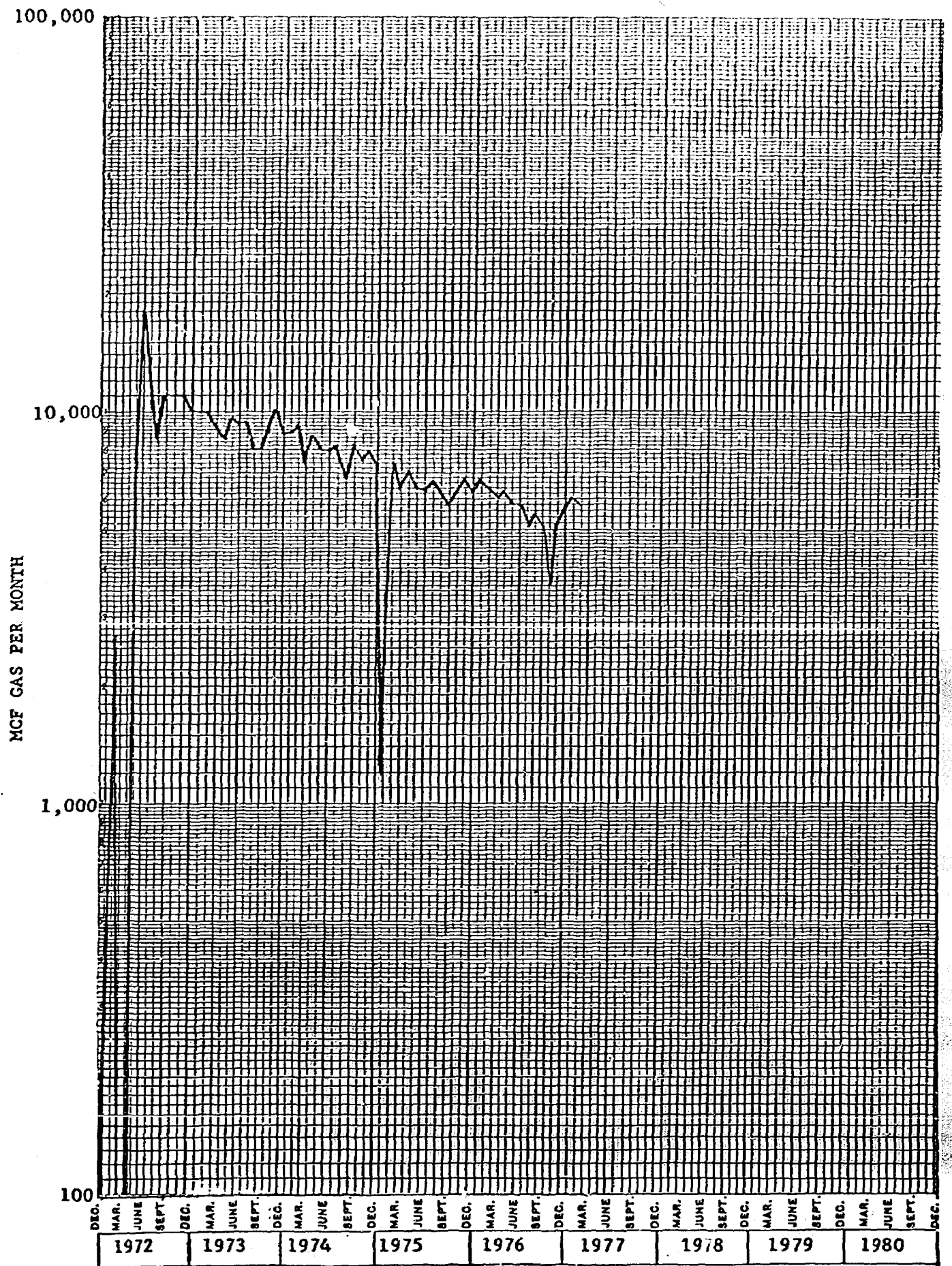


EXHIBIT NO. 5

OTERO-CHACRA POOL
AXI APACHE "J" NO. 24

CASE 5-5958-2K 6 & 7
Decline Curve
Chacra & MU #24

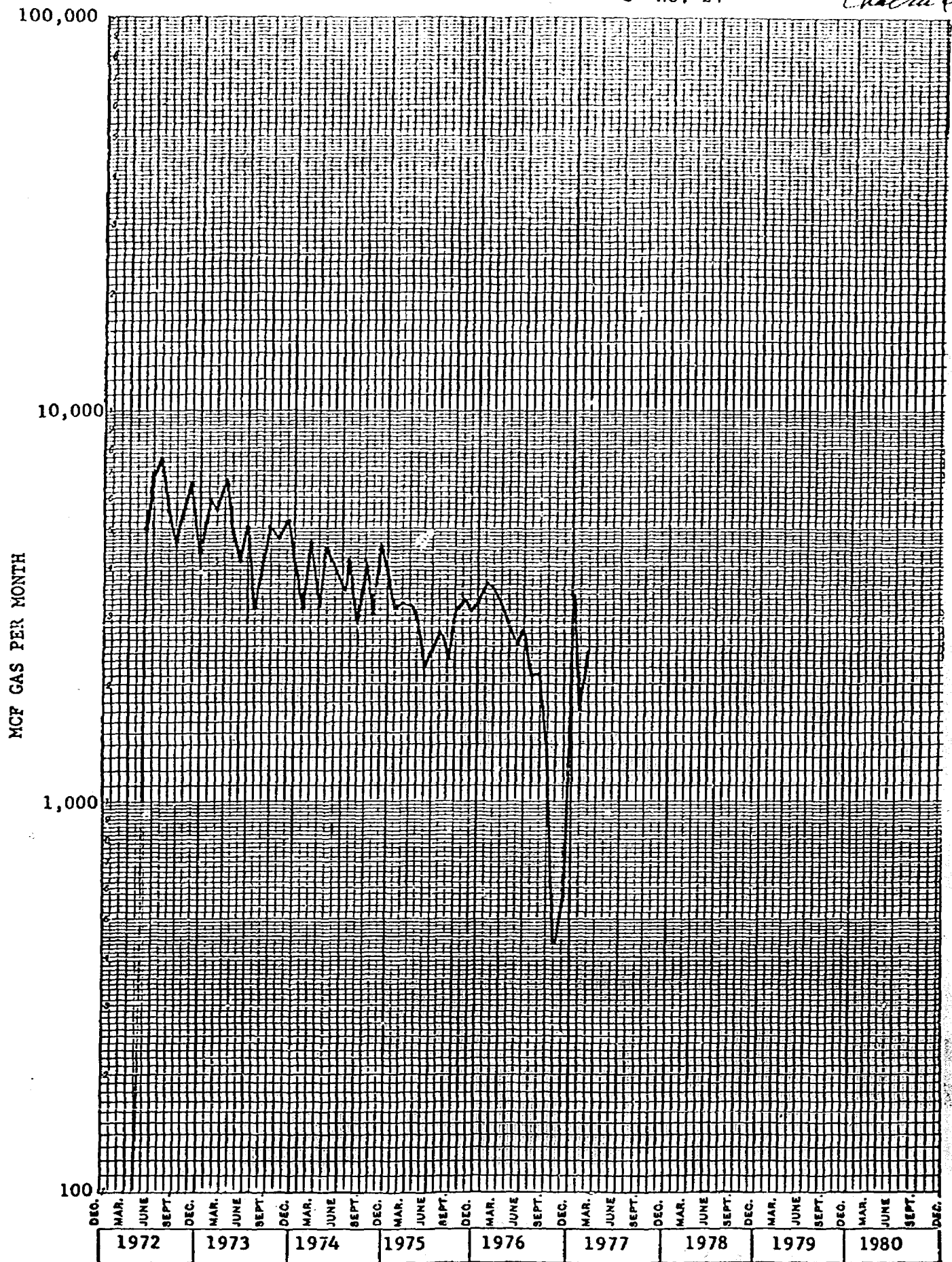


EXHIBIT NO. 6

GONZALES MESA VERDE POOL
AXI APACHE "J" NO. 24

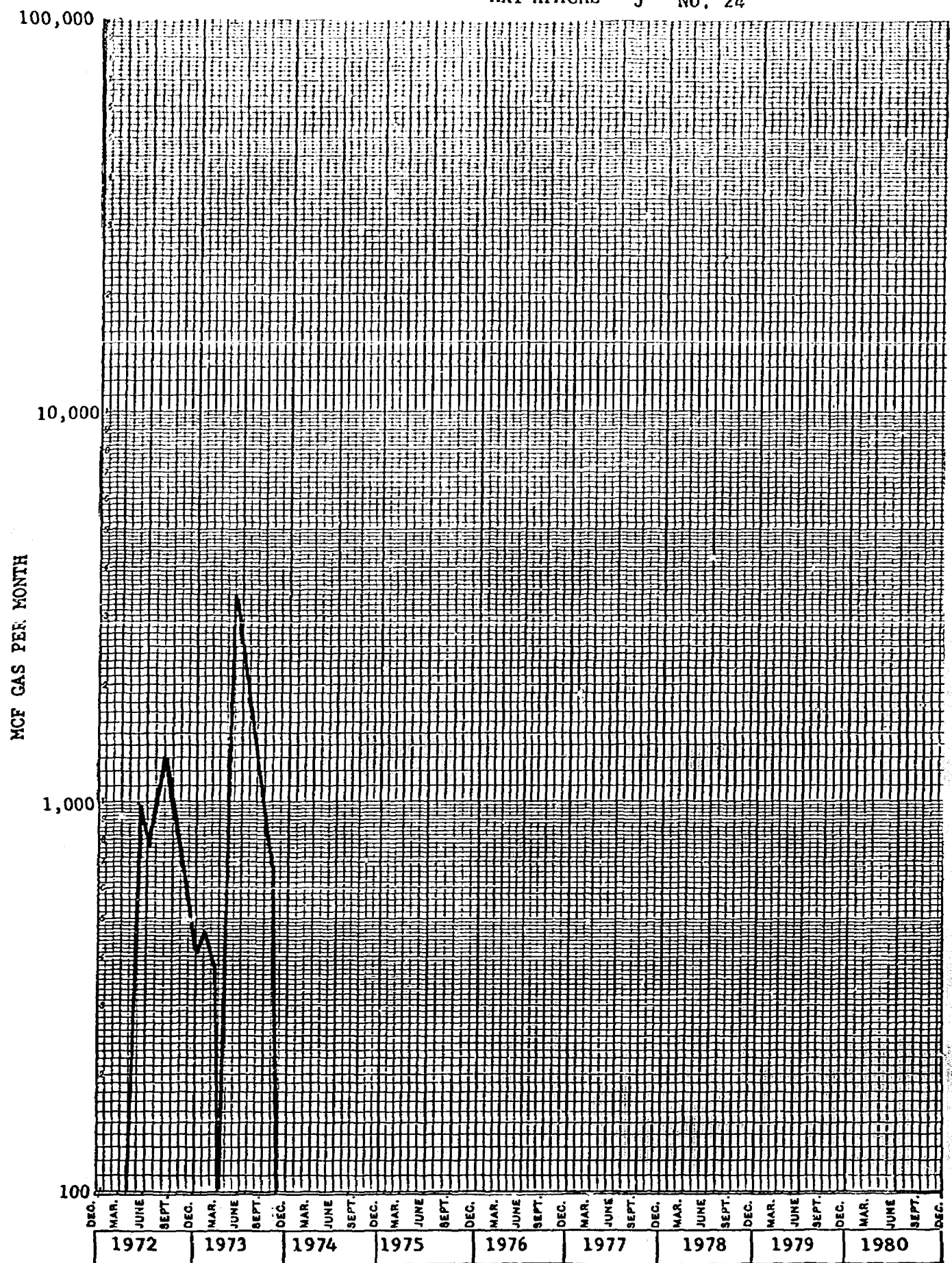


EXHIBIT NO. 7

S. BLANCO PICTURED CLIFFS

SK 8#9

A X I APACHE J NO. 9

Decline Curve

Case 5957

P.C. & Co.

#

100,000

10,000

MCF GAS PER MONTH

1,000

100

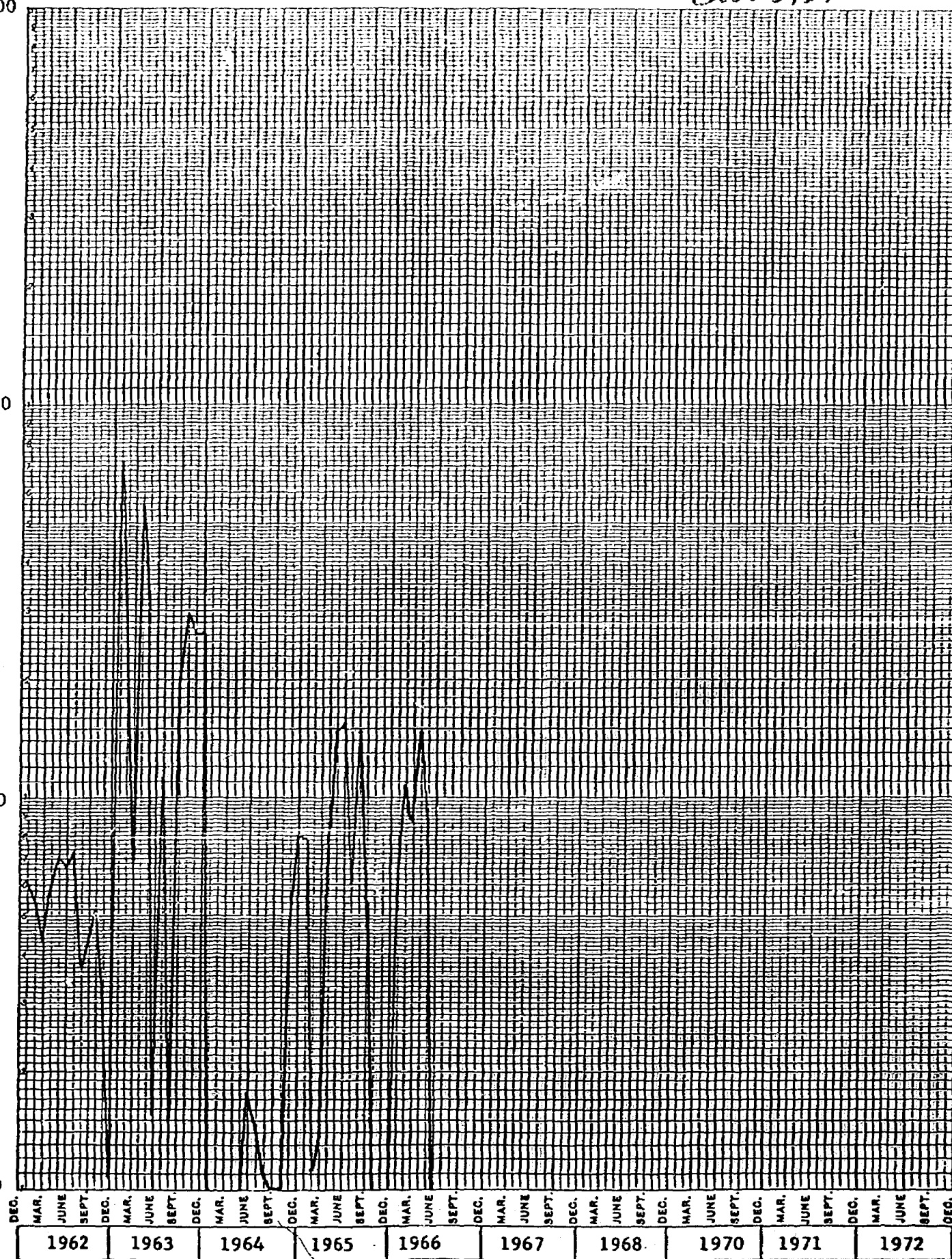


EXHIBIT NO. 8

OTERO-CHACRA POOL

AXI APACHE "J" NO. 9

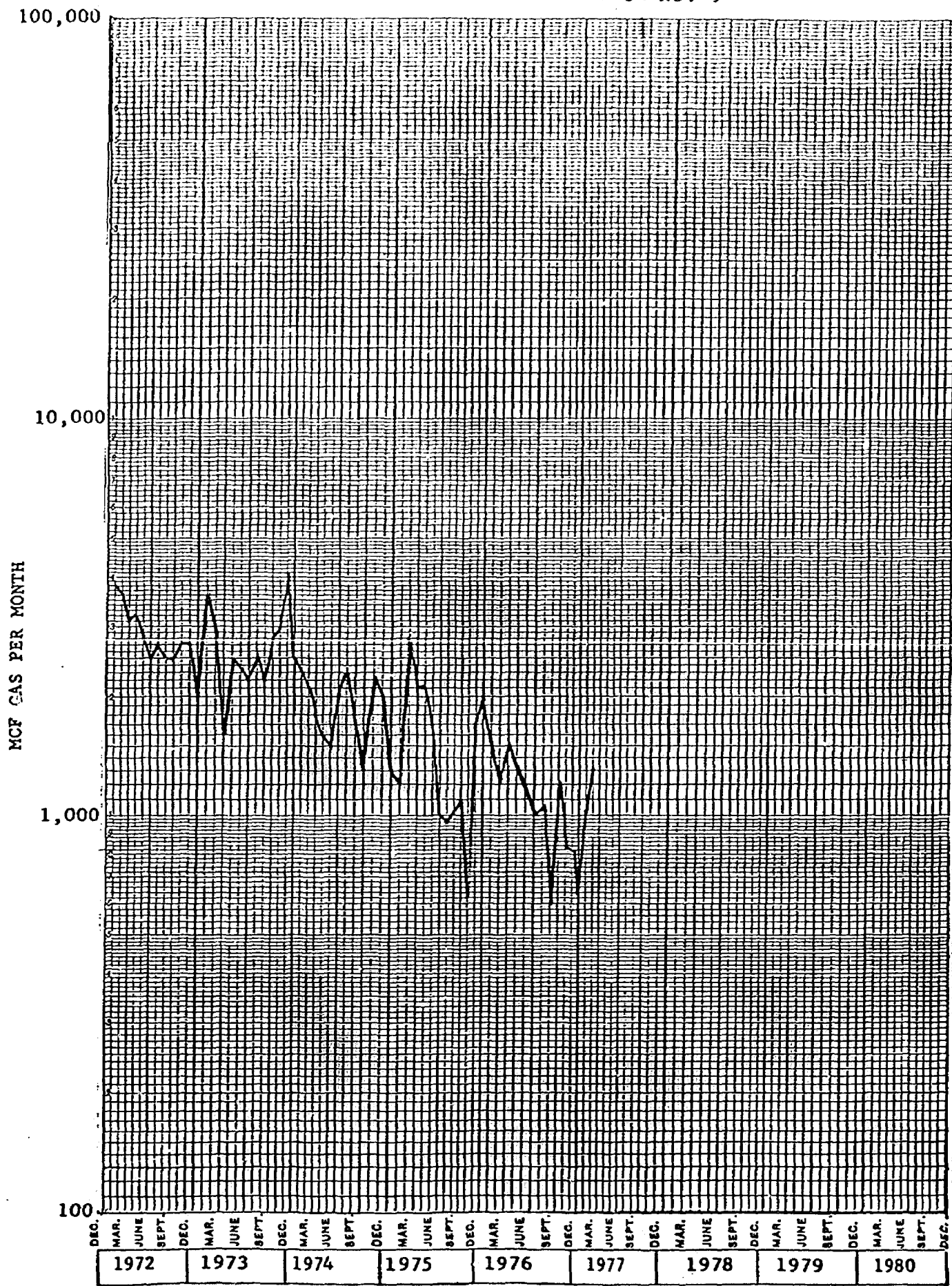


EXHIBIT NO. 9



L. P. Thompson
Division Manager
Production Department
Hobbs Division

Continental Oil Company
P.O. Box 460
1001 North Turner
Hobbs, New Mexico 88240
(505) 393-4141

May 13, 1977

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

Attention Mr. J. D. Ramey, Secretary-Director

Gentlemen:

Application for Downhole Commingling AXI Apache "J" Lease, Rio Arriba
County, New Mexico

Enclosed in triplicate is our application for commingling in the wellbore
production from the Otero-Chacra and Gonzales-Mesaverde or South Blanco-
Pictured Cliffs formations on the AXI Apache "J" lease in Rio Arriba County,
New Mexico.

Please set this matter for hearing on Wednesday, June 8, 1977.

Yours very truly,


L. P. Thompson

VTL/jj

Enc

CC:

C. F. Ellis - Houston
F. O. Hull - Houston
J. W. Kellahin - Santa Fe

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
CONTINENTAL OIL COMPANY FOR PERMISSION
TO COMMINGLE IN THE WELLBORE PRODUCTION
FROM THE GONZALES-MESAVERDE AND OTERO-
CHACRA POOLS IN EIGHT WELLS: AND ALSO
TO COMMINGLE IN THE WELLBORE PRODUCTION
FROM SOUTH BLANCO-PICTURED CLIFFS AND
OTERO-CHACRA POOLS IN FOUR WELLS ON ITS
AXI APACHE "J" LEASE, SECTIONS 5, 6, 7
AND 8, TOWNSHIP 25 NORTH, RANGE 5 WEST,
RIO ARriba COUNTY, NEW MEXICO.

APPLICATION

Applicant, CONTINENTAL OIL COMPANY, hereby respectfully requests permission
to commingle in the wellbore production from the Gonzales-Mesaverde and Otero-Chacra
Pools in eight wells; and from Otero-Chacra and South Blanco-Pictured Cliffs Pools
in four wells on its AXI Apache "J" lease, Sections 5, 6, 7 and 8, Township 25 North,
Range 5 West, Rio Arriba County, New Mexico, and in support thereof would show:

1. Applicant is the owner of an oil and gas lease from the Jicarilla
Apache Tribe designated AXI Apache "J" and consisting of Sections 5, 6, 7 and 8
in Township 25 North, Range 5 West, Rio Arriba County, New Mexico.

2. Applicant has drilled wells to the South Blanco-Pictured Cliffs,
Otero-Chacra, and Gonzales-Mesaverde Pools on said lease as single completions
as well as multiple completions.

3. The following wells are dual completions as indicated:

<u>Well No.</u>	<u>Unit-Section</u>		<u>Upper</u>	<u>Lower</u>
9	O	6	P.C.	Chacra
10	A	5	P.C.	Chacra
11	A	6	P.C.	Chacra
12	K	5	P.C.	Chacra
18 X	A	8	Chacra	Mesaverde
19	D	6 ✓	Chacra	Mesaverde
20 ✓	C	5	Chacra	Mesaverde
21 X	I	5	Chacra	Mesaverde
22	L	6 ✓	Chacra	Mesaverde
23	D	8	Chacra	Mesaverde
24	P	8	Chacra	Mesaverde
25	A	7	Chacra	Mesaverde

4. Several of said wells have encountered producing difficulties and are marginally economic producing as dual completions.

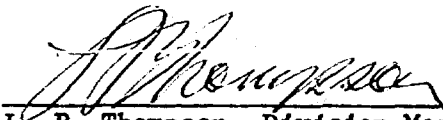
5. Commingling production from the two zones in the dual-completed wells would increase producing rates and would permit recovery of additional gas reserves.

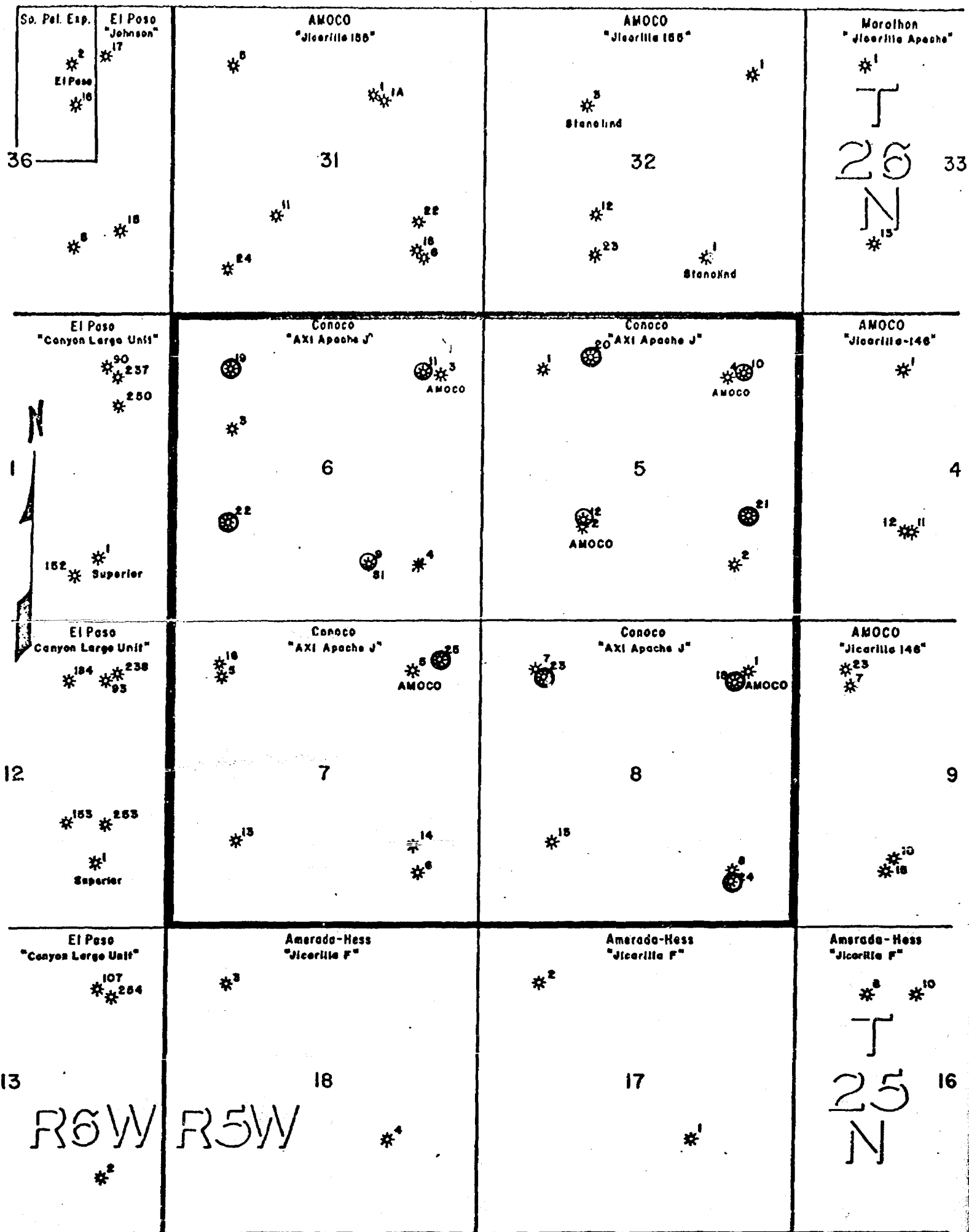
6. The granting of this application would be in the interest of preventing waste and would not impair correlative rights.

WHEREFORE, applicant respectfully requests that this matter be set for hearing before the Commission's duly appointed examiner and upon hearing an Order be entered granting the commingling in the wellbore of the pools and wells described above.

Respectfully submitted,

CONTINENTAL OIL COMPANY


L. P. Thompson, Division Manager



CHACRA - PIC. CLIFFS DUAL

CHACRA - MESAVERDE DUAL

CONOCO	
PRODUCTION DEPARTMENT	HOBBS DIVISION
AXI APACHE J LEASE RIO ARRIBA COUNTY, NEW MEXICO	
SCALE 0 1000 2000'	
ERW	

- CASE 5950: Application of Joe Don Cook for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of produced salt water from his State Well No. 1, located in Unit J of Section 2, Township 19 South, Range 31 East, Shuart Pool, Eddy County, New Mexico, into an earthen evaporation pit in said Section 2.
- CASE 5951: Application of Odessa Natural Corporation for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the W/2 of Section 32, Township 24 North, Range 3 West, Rio Arriba County, New Mexico, 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. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 5952: Application of Hudson & Hudson for unorthodox oil well locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of 14 oil wells to be drilled at the following locations:
- 25 feet from the North and East lines of Units B, C, D, E, F, G, J, K, N, and O; and 25 feet from the North line and 330 feet from the East line of Units A, H, I, and P, all in Section 25, Township 17 South, Range 31 East, Maljarar Grayburg-San Andres Pool, Eddy County, New Mexico.
- CASE 5953: Application of Rice Engineering & Operating, Inc., for amendment of Order No. R-5384, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5384 to extend the injection interval in its Hobbs Salt Water Disposal Well No. 16 located in Unit P of Section 16, Township 19 South, Range 38 East, Lea County, New Mexico, to include the total open-hole section from 4176 feet to 10,008 feet.
- CASE 5954: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Chacra production in the wellbore of its Breech Well No. 368 located in Unit I of Section 23, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.
- CASE 5955: Application of Petro Oil Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Foxie-Federal Well No. 2 to be drilled in the center of Unit O of Section 18, Township 20 South, Range 28 East, Eddy County, New Mexico, the E/2 of said Section 18 to be dedicated to the well.
- CASE 5956: Application of Continental Oil Company for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 160-acre non-standard gas proration unit comprising the E/2 NE/4, NW/4 NE/4, and NE/4 SE/4 of Section 27, Township 20 South, Range 38 East, Warren-Tubb Gas Pool, Lea County, New Mexico, to be dedicated to its Warren Unit Well No. 42 located in Unit I of said Section 27.
- CASE 5957: Application of Continental Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Otero-Chacra and South Blanco-Pictured Cliffs production in the wellbores of its AXI Apache "J" Wells Nos. 9 and 11, located in Units C and A, respectively, of Section 6, and Wells Nos. 10 and 12, located in Units A and K of Section 5, Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 5958: Application of Continental Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gonzales-Pesaverde and Otero-Chacra production in the wellbores of its AXI Apache "J" Wells Nos. 18, 23, and 24 located in Units A, D, and P of Section 8; Nos. 19 and 22 in Units D and L of Section 6; Nos. 20 and 21, in Units C and I of Section 5; and No. 25 in Unit A of Section 7, all in Township 25 North, Range 5 West, Rio Arriba County, New Mexico.
- CASE 5959: In the matter of the application of the Oil Conservation Commission on its own motion to consider the creation, extension, and abolishment of certain pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico:
- a) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the North Cato-San Andres Pool. The discovery well is the Cleary Petroleum Corporation Federal "15" Well No. 1 located in Unit M of Section 15, Township 7 South, Range 30 East, NMM. Said pool would comprise:

TOWNSHIP 7 SOUTH, RANGE 30 EAST, NMM
Section 15: SW/4

DRAFT

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:

CASE NO. 5957

Order No. R- 5558

APPLICATION OF CONTINENTAL OIL
COMPANY FOR DOWNHOLE COMMINGLING,
RIO ARriba COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 8,
19 77, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of October, 1977, 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, Continental Oil Company, is the
owner and operator of the AXI Apache "J" Wells Nos. 9 and 11, located
in Units O and A, respectively, ^{Section 6} and the AXI Apache ^{"J" Wells} Nos. 10 and 12,
located in Units A and K, respectively, of Section 5, all in
Township 25 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle South Blanco-Pictured Cliffs and Otero-Chacra production within the wellbore of the above-described wells.

(4) That from the South Blanco-Pictured Cliffs zone, Wells Nos. 10, 11, and 12 are capable of low marginal production only.

(5) That from the Otero-Chacra zone, Wells Nos. 9, 10, 11, and 12 are capable of ^{low levels of} ~~marginal~~ production only.

(6) That Well No. 9 is presently not capable of producing from the Pictured Cliffs formation, and the pressure in said formation in said well is not known at this time.

(7) 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.

(8) That the reservoir characteristics of each of the subject zones in Wells No. 10, 11, and 12 are such that underground waste would not be caused by the proposed commingling provided that none of the wells is shut-in for an extended period.

(9) That the operator should be permitted to recomplete Well No. 9 to commingle Pictured Cliffs and Chacra production in the common wellbore, provided however, that such authority should be rescinded and the well dually completed in the event the pressure in either of said zones is less than 50 percent of the pressure in the other zone.

(10) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Aztec district office of the Commission whenever any of the aforesaid wells is shut-in for 7 consecutive days.

(11) That in order to allocate the commingled production to each of the commingled zones in Wells Nos. 10, 11, and 12, ⁵⁶~~64~~ percent of the commingled production should be allocated to the South Blanco-Pictured Cliffs zone ~~and~~ in Well No. 10 ^{and} ~~36~~ ⁴⁴ percent of the commingled production to the Otero-Chacra zone, 24 percent to the Pictured Cliffs and 76 percent to the Chacra in Well No. 11, and 44 percent to the Pictured Cliffs and 56 percent to the Chacra in Well No. 12.

(12) That upon completion of workover operations on Well No. 9, and after determination of whether downhole commingling will be permitted in said well, the applicant should consult with the Supervisor of the Aztec District Office of the Commission to determine an allocation formula for said well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Continental Oil Company, is hereby authorized to commingle Otero-Chacra and South Blanco-Pictured Cliffs production within the wellbore of its AXI Apache "J" Wells ^{of Section 6,} Nos. 9 and 11, located in Units O and A, respectively, ^A and its AXI Apache "J" Wells Nos. 10 and 12, located in Units A and K, respectively, of Section 5, all in Township 25 North, Range 5 West, NMPM, Rio Arriba County, New Mexico.

(2) That ⁵⁶~~64~~ percent of the commingled production shall be allocated to the South Blanco-Pictured Cliffs zone and ⁴⁴~~36~~ percent of the commingled production shall be allocated to the Otero-Chacra zone in Well No. 10, 24 percent of the commingled production to the South Blanco-Pictured Cliffs zone and 76 percent to the Otero-Chacra zone in Well No. 11, and 44 percent of the commingled production to the South Blanco-Pictured Cliffs zone and 56 percent to Otero-Chacra zone in Well No. 12.

(3) That the Secretary-Director of the Commission is hereby empowered to rescind the commingling authority herein contained for the aforesaid AXI Apache "J" Well No. 9 in the event the formation pressure encountered in either zone of said well is less than 50 percent of the formation pressure encountered in the other zone.

-4-

Case No. 5957
Order No. R-

(4) That upon completion of workover operations on said Well No. 9, and after determination ^{by the Secretary-Director} that downhole commingling in said well will be permitted, the operator shall consult with the Supervisor of the Aztec District Office of the Commission to determine an allocation formula for said well.

(5) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

(6) That jurisdiction of this cause is 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.