

CASE 5688: DUGAN PROD. CORP. FOR
DOWNHOLE COMMINGLING, RIO ARRIBA
COUNTY, NEW MEXICO

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CASE NO.

5688

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 9, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Dugan Production Corpora-
tion for downhole commingling,
Rio Arriba County, New Mexico.

CASE
5688

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Richard T. C. Tully, Esq.
General Counsel
Dugan Production Corporation
P. O. Box 234
Farmington, New Mexico

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I N D E X

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THOMAS A. DUGAN

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1 MR. NUTTER: We will call Case Number 5688.

2 MR. CARR: Case 5688, application of Dugan
3 Production Corporation for downhole commingling, Rio Arriba
4 County, New Mexico.

5 MR. TULLY: If it please the Commission, my name is
6 Richard Tully, I'm general counsel for Dugan Production Corp.,
7 I have one witness to be sworn, Thomas A. Dugan.

8 MR. NUTTER: Mr. Dugan is still under oath.

9 MR. TULLY: Are the witness's qualifications still
10 a matter of record and acceptable?

11 MR. NUTTER: Yes.

12
13 THOMAS A DUGAN

14 called as a witness, having been previously sworn, was
15 examined and testified as follows:

16
17 DIRECT EXAMINATION

18 BY MR. TULLY:

19 Q Mr. Dugan, are you familiar with the application
20 for approval for downhole commingling of the Jicarilla E No. 1
21 Well?

22 A Yes.

23 Q What is the purpose of this application?

24 A Just recently we discovered that we had a packer
25 or tubing leak between the Pictured Cliff and the Mesaverde

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1 zones in this well and we are asking for permission to commingle
2 the well downhole because we do not think it is economically
3 feasible to correct the leak and it is also possibly hazardous
4 to the well if we attempt to correct the leak.

5 Q What is the minimum figures, monetary sum, that you
6 feel it would cost to repair this well?

7 A Well, if we were real lucky we might get the job
8 done for seventy-five hundred dollars and if we are not so
9 lucky it could cost as much as thirty or forty thousand dollars.

10 Q Do you feel that there might possibly be damage to
11 the formation in repairing this leak?

12 A Since this is a dual well it is very difficult to
13 work on the well without killing both zones and if you kill
14 these zones and as old as they are and as low as the pressure
15 is getting it is possible that you could damage them and not
16 get the well back.

17 Q Do you feel that there is marginal production in
18 each of these zones?

19 A If we continue to produce the well as is, we could
20 produce the well for a long period of time at a marginal
21 rate.

22 Q What price are you now receiving per MCF for this?

23 A We are getting twenty-three and a half, plus BTU's,
24 plus small producer, plus some taxes, which all boils down to
25 approximately thirty-nine cents per MCF.

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1 Q Okay, where is this well located?

2 A It's in the southwest quarter of Section 21, Township

3 26 North, Range 3 West.

4 Q Who is the operator of this well?

5 A Dugan Production Corporation.

6 Q What two zones has this well been dually completed

7 in?

8 A The Pictured Cliff and the Mesaverde.

9 Q Okay, I now hand you Exhibit Number One, would you

10 identify this exhibit and tell what it contains?

11 A This is just a map showing the well in relationship

12 to the other wells in the area and the yellow is the outline

13 of the Tapacito-Pictured Cliff Proration Unit and the blue

14 is the outline of the Blanco-Mesaverde Proration Unit.

15 Q I now hand you Exhibit Number Two, would you

16 identify this and tell what it contains?

17 A Okay, this is a resume of the completion of the

18 Jicarilla E-1 that occurred back in '58.

19 Q I now hand you Exhibit Number Three, would you

20 identify it and tell what it contains?

21 MR. NUTTER: Just a minute, Mr. Dugan, while we are

22 on this Exhibit Number Two, I haven't had time to read it but

23 does this completion data show that this well was dually

24 completed at that time?

25 A Yes, sir.

1 MR. NUTTER: Okay.

2 A Exhibit Three is the schematic drawing of the wellbore
3 and showing the perforations, the casing sizes and the tubing
4 sizes and where they are set and where the packer is set.

5 Q For the record would you tell us the casing sizes
6 and tubing sizes, as well as the perforations?

7 A Okay, there is ten-and-three-quarter set at two,
8 sixty-four and seven-and-five-eighths set at forty-one
9 hundred and a five-and-a-half liner set at sixty-one, sixty-
10 two.

11 Q If this application is approved what method of
12 downhole commingling do you propose?

13 A If it is approved I would propose to perforate the
14 Mesaverde tubing string at approximately thirty-nine, fifty,
15 which would be opposite the Pictured Cliff perforations and
16 then produce both zones through the Mesaverde tubing string,
17 in that manner.

18 Q I now hand you Exhibit Number Four, would you
19 identify it and tell what it contains?

20 A Okay, this is just a discussion as to the prognosis
21 of the future production but it is really derived from the
22 decline curves that are attached and the decline curve shows
23 the history of production for the last few years from both
24 zones.

25 Q Is there a steady rate of decline established for

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1 each of these zones?

2 A Yeah, it's a fairly steady rate, not too drastic
3 at this late date.

4 Q Do you believe that the rate of decline that is
5 shown on this could permit a reasonable allocation of the
6 commingled production for each of these zones?

7 A Yes, I think that with the eighteen years of
8 production history that we have from the well that it would
9 be no problem at all to arrive at an allocation for each zone.

10 Q Okay, I now hand you Exhibit Number Five, would you
11 identify this and tell what it contains?

12 A Okay, it is just a Xerox of the production history
13 for 1975, a Xerox from the New Mexico Engineering annual book
14 and the one shows the Tapacito-Pictured Cliff where we have
15 underlined the production from this well from the Tapacito-
16 Pictured Cliff and also from the Blanco-Mesaverde for each
17 zone. Essentially it says that the Pictured Cliff produced
18 thirty thousand, nine hundred and eighty-seven MCF in 1975 and
19 the Mesaverde produced twenty-eight thousand, eight hundred
20 and sixty-four MCF.

21 Q What method of allocation for each of these zones
22 would you recommend at this time?

23 A I propose that we just use the 1975 production from
24 each zone and dividing them out it would come out approximately
25 fifty-two percent of the well's production would be allocated

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1 to the Tapacito-Pictured Cliff zone, forty-eight percent
2 would be allocated to the Blanco-Mesaverde zone.

3 Q I now hand you Exhibit Number Six, would you
4 identify it and tell what it contains?

5 A Okay, it is just a tabulation of the shut-in
6 pressures that we had available on the well on each zone,
7 taken from the various packer leakage tests that had been run
8 and also from the deliverability tests that have been run
9 during the years. It shows that the pressures are getting
10 down where they are reasonably close to the same. The
11 Mesaverde is still slightly higher, maybe a hundred to a
12 hundred and fifty pounds higher than the Pictured Cliff
13 formation.

14 Q But you feel that this chart shows that there is
15 little pressure differential between the pressures in each of
16 these zones?

17 A Yes, it is a hundred and fifty pounds, approximately,
18 at this late date.

19 Q For this well is the ownership of the two zones
20 common?

21 A Yes.

22 Q Do you know of any other wells in the area where
23 commingling of these two zones or formations was allowed by
24 this Commission?

25 A Not in the immediate area, I'm not aware of one.

1 Q In your opinion will the total value of the gas be
2 reduced by commingling?

3 A No.

4 Q Do you feel that if this application is approved that
5 you will be able to produce more gas, be able to lift liquids
6 better and that type of thing?

7 A Since this is a relatively marginal well and the name
8 of the game in the marginal well business is to lift the
9 produced fluids, I feel that we can do that better by
10 commingling both zones downhole, so if that is true and we can
11 lift the produced fluids better, we will undoubtedly get better
12 production from the well and longer life from the well.

13 Q In your opinion, will approval of this application
14 for downhole commingling of the Tapacito-Pictured Cliff
15 formations and the Blanco-Mesaverde formation in this well
16 conserve the natural resources, prevent waste and not impair
17 and interfere with any correlative rights of any owners?

18 A I feel sure that it will if we can produce it in
19 that manner.

20 MR. TULLY: At this time we move for the introduction
21 of Exhibits One through Six into evidence.

22 MR. NUTTER: Applicant's Exhibits One through Six
23 will be admitted into evidence.

24 (THEREUPON, Applicant's Exhibits One through
25 Six were admitted into evidence.)

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1 MR. TULLY: Our direct examination is finished.

3 CROSS EXAMINATION

4 BY MR. NUTTER:

5 Q Mr. Dugan, is the well classified as a marginal
6 well in both of these gas pools?

7 A I think so, I'm not exactly sure how the State
8 classified them, I didn't check.

9 Q We will take administrative note of our records
10 in this case.

11 A I classify them as marginal, I don't know how the
12 State does it.

13 Q Okay. Now, I notice here on these decline curves,
14 Mr. Dugan, what kind of a leak, first of all, do you think
15 you've got in the well?

16 A I just don't have any idea.

17 Q All you know is that you've got communication?

18 A Yes, sir. It just occurred.

19 Q I notice now here that on the decline curve for
20 the Mesaverde that production took a very drastic decline in
21 the first two or three months of 1976 and there appears to
22 be a more or less corresponding increase in the production
23 from the PC, what do you attribute that to?

24 A Well, I would guess that is when our leak occurred.

25 Q Production from one is just coming out the other one

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1 then?

2 A That would be my guess at this time. At the time
3 I didn't think much of it. Apparently Al must have thought
4 that because he sure caught it so fast on this one.

5 Q Now, there really isn't a decline as far as the
6 PC is concerned on Exhibit Number Four. There had been some
7 fluctuation but it is a relatively flat production history?

8 A Yes.

9 Q It appears that the well over the last several years
10 has averaged between two and three thousand MCF per month?

11 A Yes.

12 Q Although after some, so far unexplained increased
13 production in the Mesaverde in mid 1972, there has been a
14 steady decline of production of that well?

15 A Yes.

16 Q To what do you attribute that increase in production
17 in 1972 to?

18 A Well, we had the well unloaded a little better and
19 back to the old game of lifting the produced fluids better.

20 Q Okay, now, do both of these zones make liquids?

21 A Yes, they do, a small amount, not a large amount.

22 Q But you do have to produce through tubing to keep
23 those liquids unloaded?

24 A Yes.

25 Q And so far you haven't made any effort to determine

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1 what this leak is, where it is or just what is occurring
2 down in the wellbore?

3 A No, sir, there would be no way of -- well, I guess
4 there is, you could run some temperature surveys or something.

5 Q But you haven't run any tests?

6 A We haven't done that, no, sir.

7 MR. NUTTER: Are there any further questions of
8 the witness? He may be excused.

9 (THEREUPON, the witness was excused.)

10 MR. NUTTER: Do you have anything further? Does
11 anyone have anything they wish to offer in Case Number 5688?

12 MR. CARR: Mr. Examiner, we received a telegram from
13 Northwest Production Company, signed by T. W. Priddy which
14 reads: We have no objection to the application of Dugan
15 Production Corporation for downhole commingling in Case Number
16 5688. (End of reading.)

17 MR. NUTTER: One more question, Mr. Dugan. I notice
18 on Exhibit Number One, I guess, that Section 21 here lists
19 ownership as McHugh for the section but Dugan for the southwest
20 quarter. Now, does McHugh have an interest in this well?

21 MR. DUGAN: No, actually I acquired the Section 21
22 from Occidental Petroleum who drilled the well originally,
23 who had farmed it out to Northwest Production and I own all
24 rights in Section 21, having acquired them from Occidental. I
25 farmed out the north half and the southeast quarter to

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1 McHugh and he drilled the three Pictured Cliff wells shown
2 there.

3 MR. NUTTER: So, you have the Pictured Cliff rights
4 under the southwest quarter and you have the entire Mesaverde
5 rights to that west half?

6 MR. DUGAN: Yes, sir.

7 MR. NUTTER: So ownership of these two zones is the
8 same, is it?

9 MR. DUGAN: Yes, sir.


10 MR. NUTTER: Okay. If there are no further questions
11 and nothing further from the applicant -- does anyone have
12 anything they wish to offer in the case? If not, we will
13 take the case under advisement.

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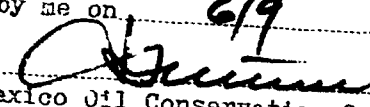
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, 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.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 3288
heard by me on 6/9, 1976.
, Examiner
New Mexico Oil Conservation Commission

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. 5688
Order No. R-5357

APPLICATION OF DUGAN PRODUCTION
CORPORATION 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 9, 1976,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 25th day of January, 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, Dugan Production Corporation, is
the owner and operator of the Jicarilla "E" Well No. 1, located
in Unit M of Section 21, Township 26 North, Range 3 West,
NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle
Tapacito-Pictured Cliffs and Blanco Mesaverde production
within the wellbore of the above-described well.

(4) That from the Pictured Cliffs zone, the subject well
is capable of low marginal production only.

(5) That from the Mesaverde zone, the subject 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.

-2-

Case No. 5688
Order No. R-5357

(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 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 any time the subject well 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, 52 percent of the commingled hydrocarbon production should be allocated to the Pictured Cliffs zone, and 48 percent of the commingled hydrocarbon production to the Mesaverde zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Dugan Production Corporation, is hereby authorized to commingle Tapacito-Pictured Cliffs and Blanco Mesaverde production within the wellbore of its Jicarilla "E" Well No. 1, located in Unit M of Section 21, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(2) That 52 percent of the commingled hydrocarbon production shall be allocated to the Pictured Cliffs zone and 48 percent of the commingled hydrocarbon production shall be allocated to the Mesaverde zone.

(3) 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.

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

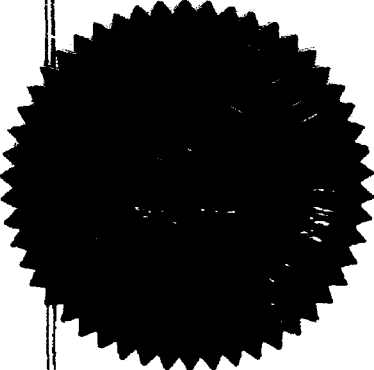
DONE at Santa Fe, New Mexico, on the day and year

-3-
Case No. 5688
Order No. R-5357

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/

10-3/4" O.D. Casing at 264'
Cemented w/200 sx

TOP OF PICTURED CLIFFS: 3900'
BASE OF PICTURED CLIFFS: 3970
PERFORATIONS: 3908' - 3913',
3949' - 3952',
3954' - 3964'

*would tubing
perf here
(opp PC
perfs)*

2 3/8" O.D. Tubing at 3885'

Burns Liner Hanger at 4010'

7 5/8" O.D. Casing at 4100'
cemented w/250 sx

TOP OF MESAVERDE: 5597'
PERFORATIONS: 6074' - 6078',
6088' - 6104',
6114' - 6124',
6138' - 6146'

DIAGRAMATIC SKETCH OF DUAL GAS WELL

TAPACITO PICTURED CLIFFS AND BLANCO MESAVERDE

*for allocation:
Proposed
to use 1975 production
52% to PC
48% to MV*

2 3/8" O.D. Tubing at 6056'
Baker Model "D" Production
Packer at 6056'

P.B.T.D. 6146'
5 1/2" O.D. Casing at 6162'
Cemented w/300 sx entire length
T.D. 6300

Exhibit #3

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL,
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

PROGNOSIS OF FUTURE PRODUCTION FROM EACH ZONE

It is our opinion the repair of the leaking packer for the dually completed Jicarilla E #1 Well will be expensive, and the size of the well and its age will not justify this expense.

As you can see from Exhibit "B" we are estimating the Pictured Cliffs formation will average approximately 1550 MCF per month for the next three years, and the Mesa Verde formation will also average approximately 1550 MCF per month. Assuming the price of interstate natural gas increases to \$0.55 in 1979, we will receive at the most \$1,705 gross production income per month from this well.

The sum of \$1,705 per month as the highest amount of income from this well for the next several years does not allow much room for error when the costs of repairing the leaking packer, or if necessary in the future, the costs of reworking the well are taken into account.

The repair of the packer leak, if made, will constitute an excessive and improper method of operating and producing this well, thereby constituting waste.

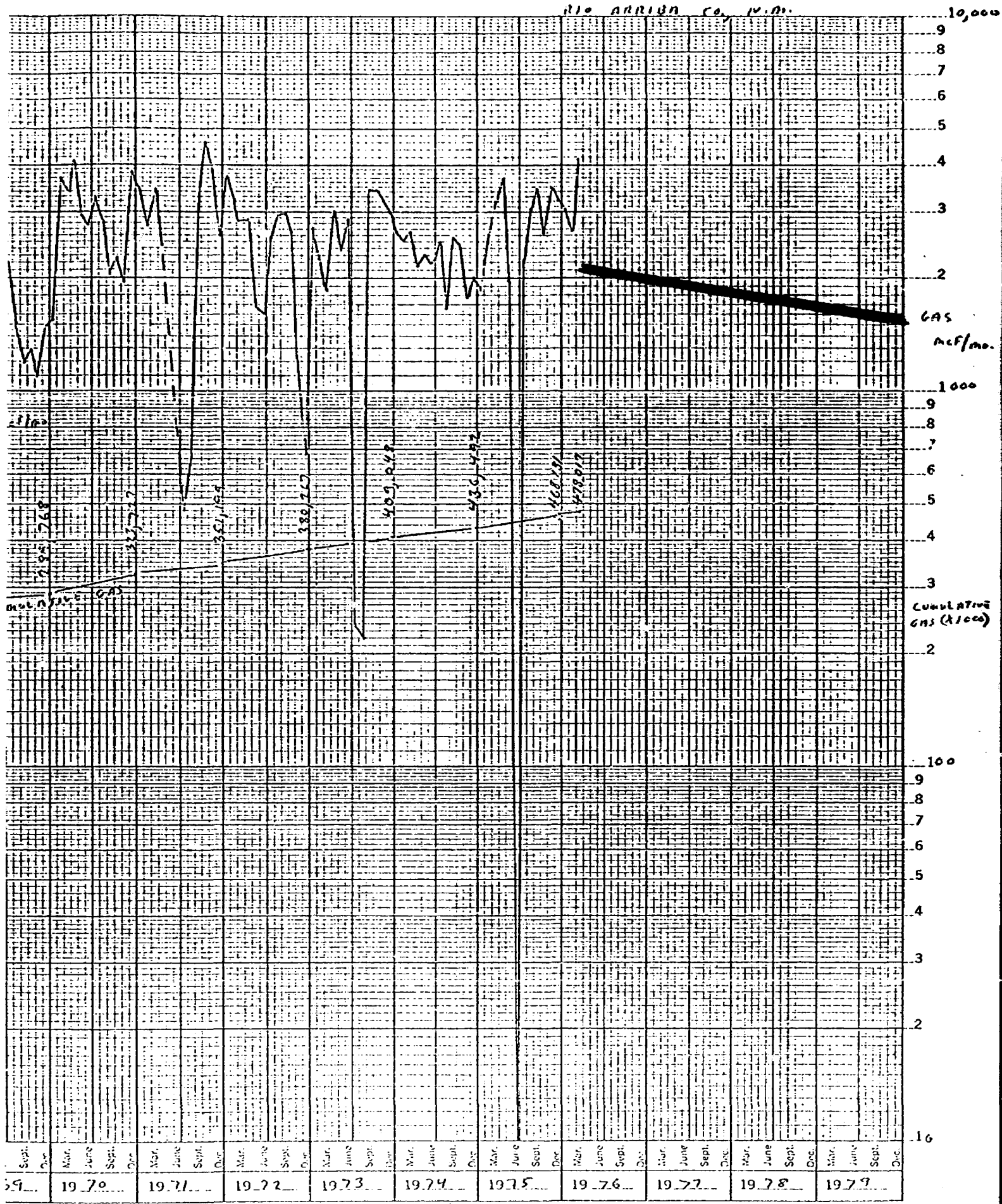
In addition, the Tapacito Pictured Cliffs Pool and Blanco Mesa Verde Pool have been steadily depleted for many years by this well and others. The steady decline in production from these pools are illustrated in Exhibit "B". It is possible the operations we undertake to repair the leaking packer may result in irreparable damage to these reservoirs. Needless to say, the ultimate recovery of gas production from these pools would be reduced.

We feel the commingling of the gas production from these two pools in the well bore will allow the produced fluids to be lifted better, thereby more efficiently increasing the over-all gas production.

For the above reasons, the approval of this Application will result in more efficient production of gas from these two zones.

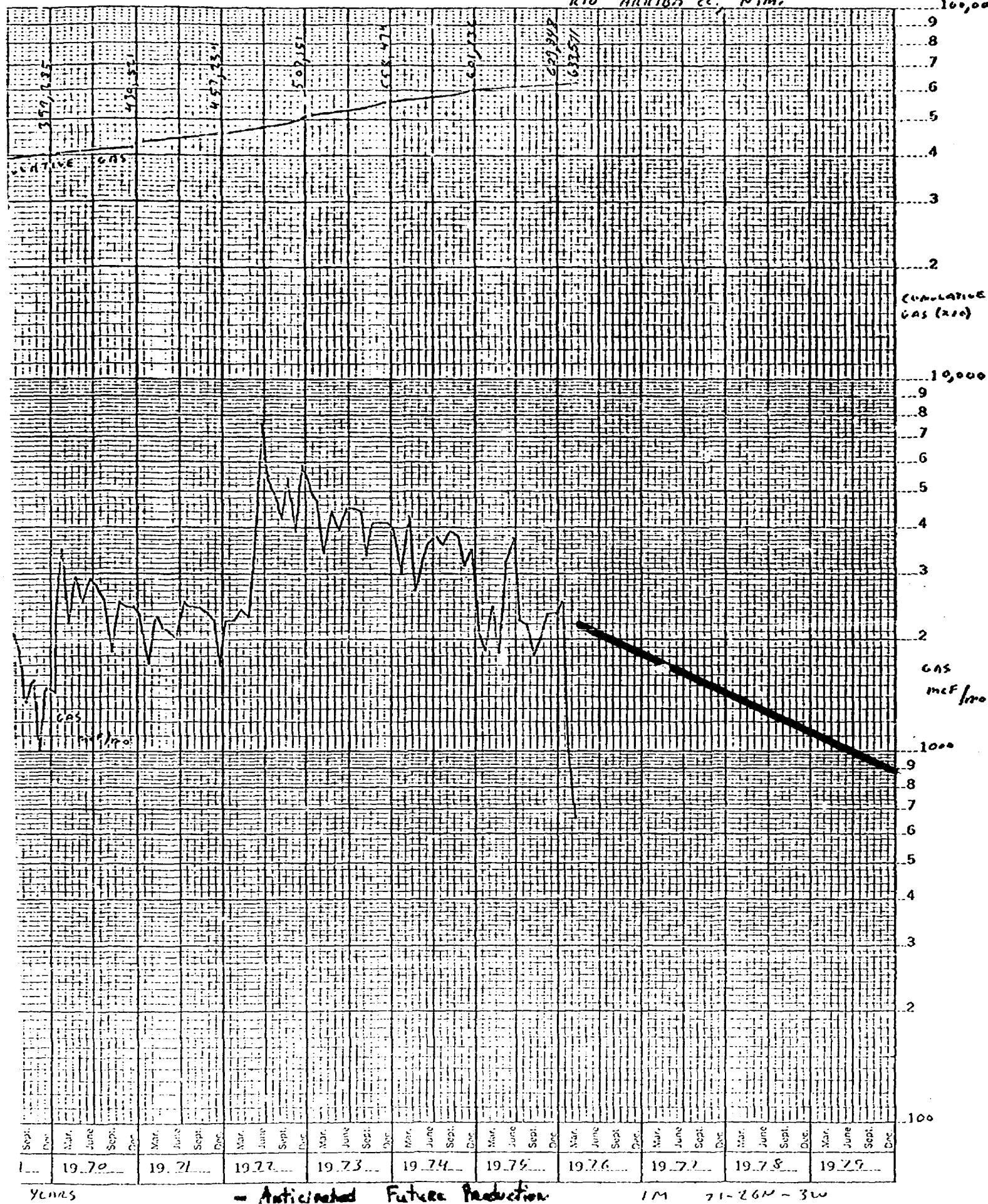
Exhibit #4

DUCAN PRODUCTION CORP.
 TICARILLA 'E' WELL No. 1
 TAPACIT PICTURED CLIFFS
 RIO ARRIBA CO., N.M.



YEARS - Anticipated Future Production 1M 71-26N-3W

DUCAN PRODUCTION CORP.
 JICARILIA 'E' WELL NO. 1
 BLANCO RESERVOIR
 RIO ARAIBO CL. N.M.



Dockets Nos. 17-76 and 18-76 are tentatively set for hearing on June 16 and June 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 9, 1976

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

The following cases will be heard before Daniel G. Matter, Examiner, or Michael L. Flanets, Alternate Examiner:

- CASE 5690:** Application of Mobil Oil Corporation for amendment of Order No. R-5120, Lea County, New Mexico. Applicant, in the above-styled cause, seeks amendment of Order No. R-5120, which order provided for the simultaneous dedication of a 320-acre non-standard gas proration unit, comprising the W/2 SW/4 and SE/4 SW/4 of Section 28 and the NW/4 and the SW/4 NE/4 of Section 33, Township 21 South, Range 37 East, Rumont Gas Pool, Lea County, New Mexico, to applicant's E. O. Carson Wells Nos. 4 and 22, located at unorthodox locations in Units II and I, respectively, of said Section 28. Applicant seeks amendment of said Order No. R-5120 by authorizing the simultaneous dedication of said unit to the previously approved E. O. Carson Wells Nos. 4 and 22 and to its E. O. Carson Well No. 23 located 1930 feet from the North line and 2640 feet from the West line of Section 33, Township 21 South, Range 37 East, Lea County, New Mexico.
- CASE 5689:** Application of Dalport Oil Corporation for an unorthodox oil well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jones Federal Well No. 4 to be drilled 990 feet from the South line and 1477 feet from the West line of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Queen Pool, Chaves County, New Mexico.
- CASE 4843: (Reopened)**
- In the matter of Case 4843 being reopened pursuant to the provisions of Order No. R-4435-A, which order extended the special pool rules for the Southeast Chaves Queen Gas Area, Chaves County, New Mexico, including a provision for 320-acre spacing and proration units for gas wells. All interested parties may appear and show cause why said Order No. R-4435 should not be rescinded.
- CASE 5691:** Application of Hanson Oil Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 990 feet from the North line and 2600 feet from the West line of Section 25, Township 26 South, Range 31 East, North Mason-Delaware Pool, Eddy County, New Mexico.
- CASE 5692:** Application of Cities Service Oil Company for a dual completion and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Owen "A" Well No. 1 located in Unit B of Section 35, Township 21 South, Range 37 East, Lea County, New Mexico, completing said well in such a manner as to commingle Blinberry and Drinkard oil production and to dually complete said zones with the "Antz-Granite Wash Pool.
- CASE 5670: (Continued from May 12, 1976 Examiner Hearing)**
- Application of Read & Stevens, Inc. for an unorthodox location and directional drilling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its Harris-Federal Well No. 3, the surface location of which is 660 feet from the South line and 1080 feet from the East line of Section 27, Township 15 South, Range 28 East, Chaves County, New Mexico, by directionally drilling said well from a Pick-off point at approximately 6000 feet and bottoming it at an unorthodox location in the Pennsylvanian formation within 250 feet of a point 990 feet from the South line and 1650 feet from the East line of said Section 27, the S/2 of the Section to be dedicated to the well.
- CASE 5688:** Application of Duran Production Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tapacito-Pictured Cliffs and Blanco-Mesa Verde production in the wellbore of its Nicarilla E Well No. 1, located in Unit "C" of Section 21, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5693:** Application of Jerome P. McHugh for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to downhole commingle Fruitland and Pictured Cliffs production in that area described as being all of Township 24 through 28 North, Ranges 9 through 15 West, San Juan County, New Mexico, excluding however, those lands within the boundaries of the Ballard-, Fulcher Kutz-, and West Kutz- and also those lands within the boundary of the Gallegos Canyon Unit Area.

DRAFT

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. 5688

Order No. R-_____

APPLICATION OF DUGAN PRO-
DUCTION CORPORATION 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 _____,
19____, at Santa Fe, New Mexico, before Examiner _____.

NOW, on this _____ day of _____, 19____, 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, Dugan Production Corporation,
is the owner and operator of the Ticarilla "E" Well No. 1,
located in Unit M of Section 21, Township 26 North, Range
3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle
Tapacito-Pictured Cliffs and Blanco Mesaverde pro-
duction within the wellbore of the above-described well.

(4) That from both the Pictured Cliffs and the Mesa-
verde formations, the subject well is capable only
of low marginal rates of production.

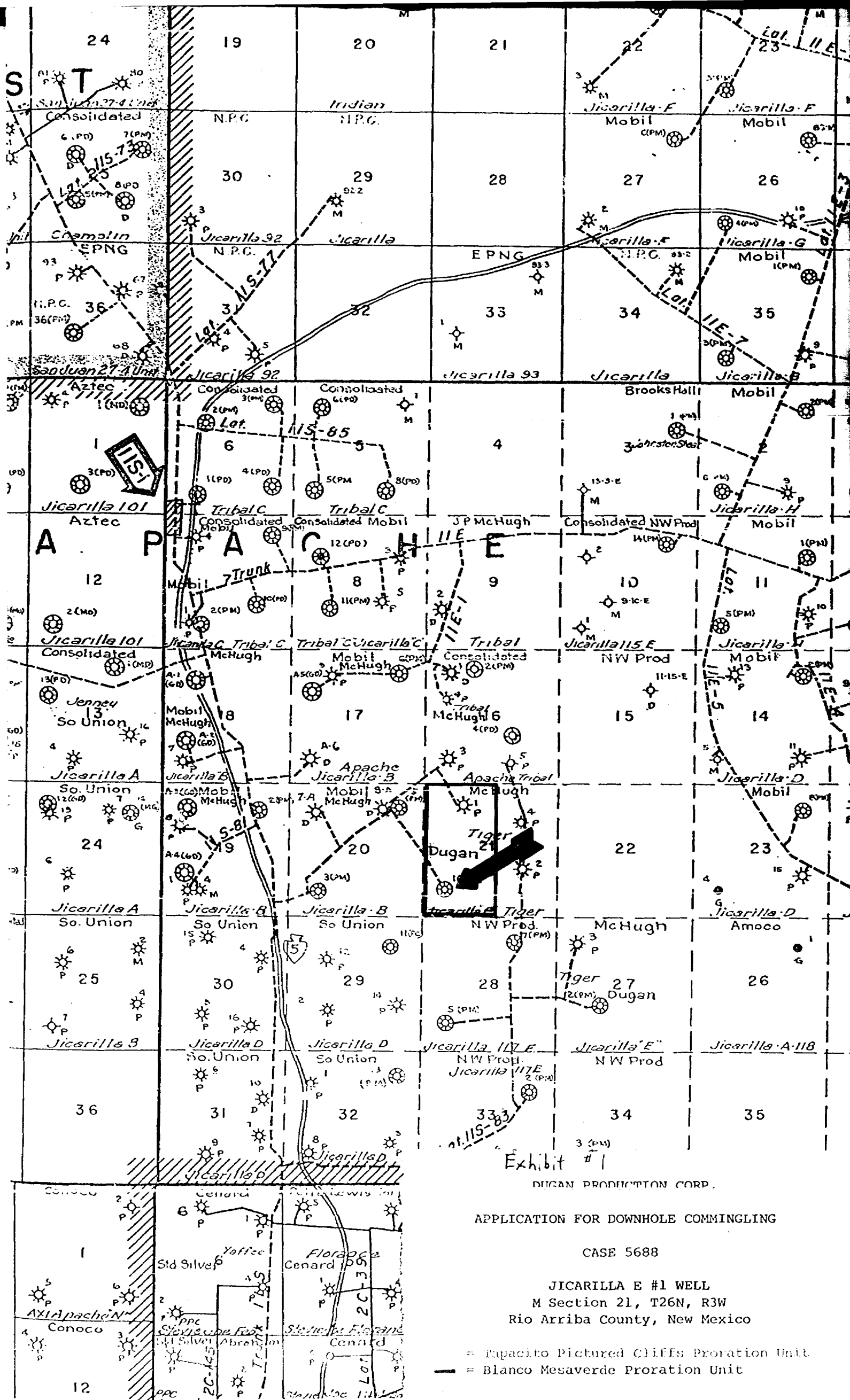


Exhibit #1

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

= Tapacito Pictured Cliffs Proration Unit
— = Blanco Mesaverde Proration Unit

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

RESUME OF JICARILLA E #1 WELL'S COMPLETION HISTORY

5-19-58 thru 6-19-58	Spud 3:30 a.m. 5-19-58. Drilled 15" hole to 265'. Ran 7 jts 10-3/4" 32.75# E-40 csg w/larkin guide shoe and larkin centralizer; TE 252' set @ 264', cemented w/200 sx neat plus 2% CaCl. Drilled 9-7/8" hole to 4110'. Ran 99 jts 7-5/8" csg, cemented @ 4100' w/250 sx 8% gel and 1/4# gel flow seal per sack w/2% CaCl. Drilled 6-3/4" hole to 6300', ran 5-1/2" liner TE 2152' set @ 6162' w/burns liner hanger @ 4010', cemented w/100 sx reg 100 diamix, 8% gel, 2% CaCl. Tested top of liner, failed to hold. Squeezed w/100 sx neat. Tested top of liner, failed to hold. Resqueeze w/150 sx neat. Tested top of liner, failed to hold; squeeze #3 w/100 sx, tested top of liner w/2000#, held OK.
6-22-58 thru 6-27-58	Perforate w/2 bullets per foot 6146-38, 6124-14, 6104-6088, 6078-74, 6067-63. Frac w/100,000 gal. water and 100,000# 20-40 sd BD 800# Min. 800#. Max. 3100#. Ave. 1800#. Dropped 95 RB, good pressure increase. AIR 62 BPM. Went on vacuum. Moved rig off hole. Rig up CPS, found sand @ 6093'. Cleared out hole, running to swab MV. Run 2-3/4" tbg.
6-29-58 thru 6-30-58	Set Baker cement retainer @ 6012' and squeezed perms w/100 sx 2% CaCl plus 1/4# gel flake/sx. Broke down. Max pressure 900#, final 100#. Resqueeze perms w/150 sx 2% CaCl plus 1/4# gel flake/sx. Squeeze 60 sx into formation. Break down 900#. Max. sq. press. 2000. Drilling cement to 6148'. Tested hole w/2000#. Did not break down.
7-1-58 thru 7-2-58	Reperforate w/2 bullets per foot 6146-38, 6124-14, 6104-6088, 6078-74. Frac w/80,000 gal water, 75,000# 20-40 sd and 50 RB BD 2200#. Max. 3400#. Ave. 2600#. Min. 2000#. Ave. IR 36.4 BPM. Ran 2" tbg to 6012'. Swabbed well.
10-10-58 thru 10-11-58	Pulling tubing. Preparation to perf. and frac Pictured Cliffs formation. Perforate w/2 bullets per foot 3908-13, 3954-64, 3949-52. Set BP @ 4025'. Frac w/34,000 gal water, 25,000# 20-40 sd, and 30 RB. BD 1500# IP 1200# Ave. 1400# Max. and final 1900#. Ave. IR 72 B/M. Ran tubing, swabbed well.
10-22-58 thru 11-7-58	Plan to run tubing and complete. Running tubing. Pulled bridge plug from 4025', cleaning out to complete FC form. Retrieved bridge plug. Plan to retrieve bridge plug from 4025' and complete MV form. Baker Model D @ 6056' w/2-3/8" OD 4.7# J-55 8R EUE tbg. 2-3/8" OD 4.7# J-55 8R EUE tbg set @ 3885'. Rig released. Well completed.

10-3/4" O.D. Casing at 264'
Cemented w/200 sx

TOP OF PICTURED CLIFFS: 3900'

BASE OF PICTURED CLIFFS: 3970

PERFORATIONS: 3908' - 3913',
3949' - 3952',
3954' - 3964'

2 3/8" O.D. Tubing at 3885'

Burns Liner Hanger at 4010'

7 5/8" O.D. Casing at 4100'
cemented w/250 sx

TOP OF MESAVERDE: 5597'

PERFORATIONS: 6074' - 6078',
6088' - 6104',
6114' - 6124',
6138' - 6146'

DIAGRAMATIC SKETCH OF DUAL GAS WELL
TAPACITO PICTURED CLIFFS AND BLANCO MESAVERDE

2 3/8" O.D. Tubing at 6056'
Baker Model "D" Production
Packer at 6056'

P.B.T.D. 6146'
5 1/2" O.D. Casing at 6162'
Cemented w/300 sx entire length
T.D. 6300'

Exhibit #3

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL,
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

PROGNOSIS OF FUTURE PRODUCTION FROM EACH ZONE

It is our opinion the repair of the leaking packer for the dually completed Jicarilla E #1 Well will be expensive, and the size of the well and its age will not justify this expense.

As you can see from Exhibit "B" we are estimating the Pictured Cliffs formation will average approximately 1550 MCF per month for the next three years, and the Mesa Verde formation will also average approximately 1550 MCF per month. Assuming the price of interstate natural gas increases to \$0.55 in 1979, we will receive at the most \$1,705 gross production income per month from this well.

The sum of \$1,705 per month as the highest amount of income from this well for the next several years does not allow much room for error when the costs of repairing the leaking packer, or if necessary in the future, the costs of reworking the well are taken into account.

The repair of the packer leak, if made, will constitute an excessive and improper method of operating and producing this well, thereby constituting waste.

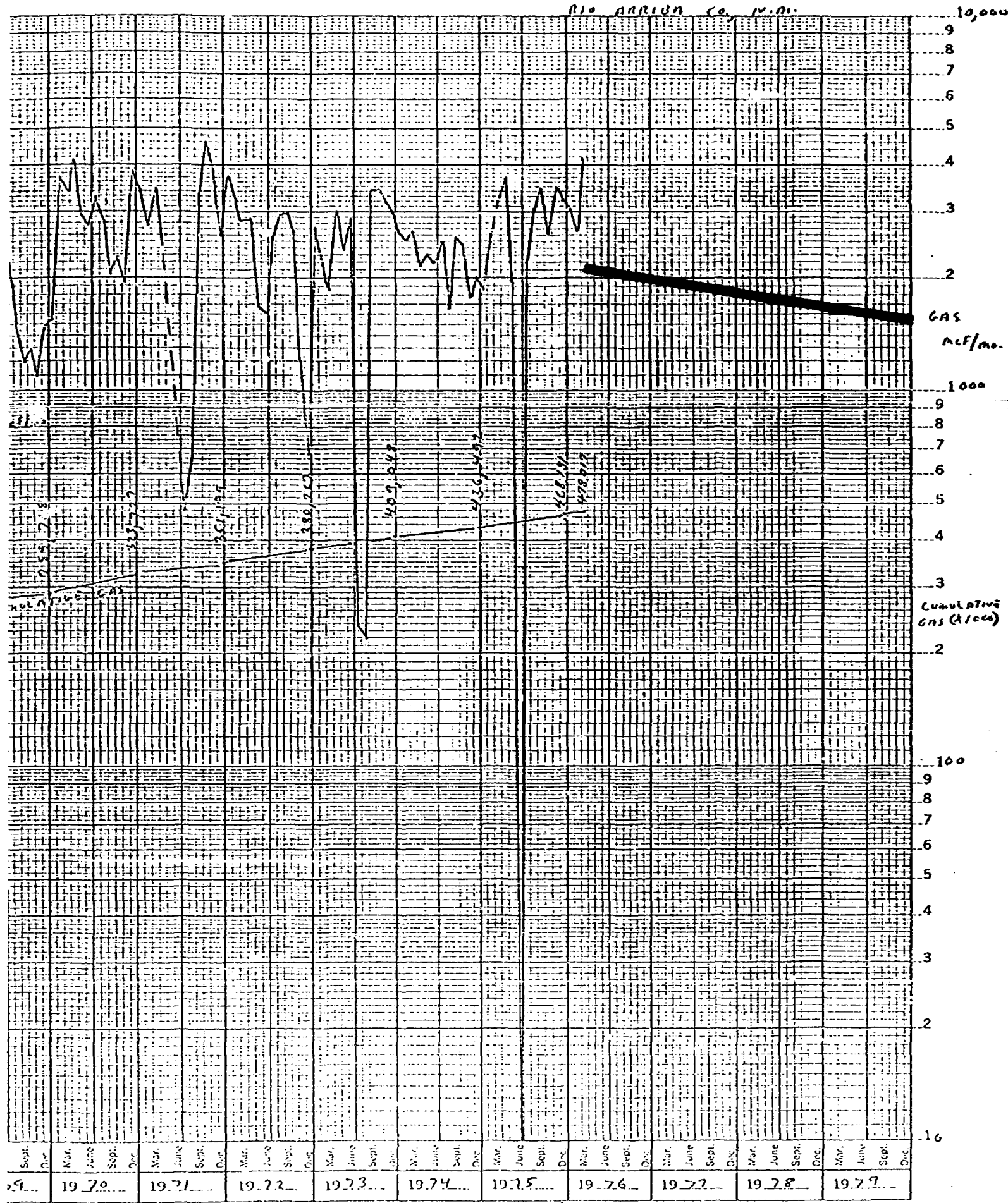
In addition, the Tapacito Pictured Cliffs Pool and Blanco Mesa Verde Pool have been steadily depleted for many years by this well and others. The steady decline in production from these pools are illustrated in Exhibit "B". It is possible the operations we undertake to repair the leaking packer may result in irreparable damage to these reservoirs. Needless to say, the ultimate recovery of gas production from these pools would be reduced.

We feel the commingling of the gas production from these two pools in the well bore will allow the produced fluids to be lifted better, thereby more efficiently increasing the over-all gas production.

For the above reasons, the approval of this Application will result in more efficient production of gas from these two zones.

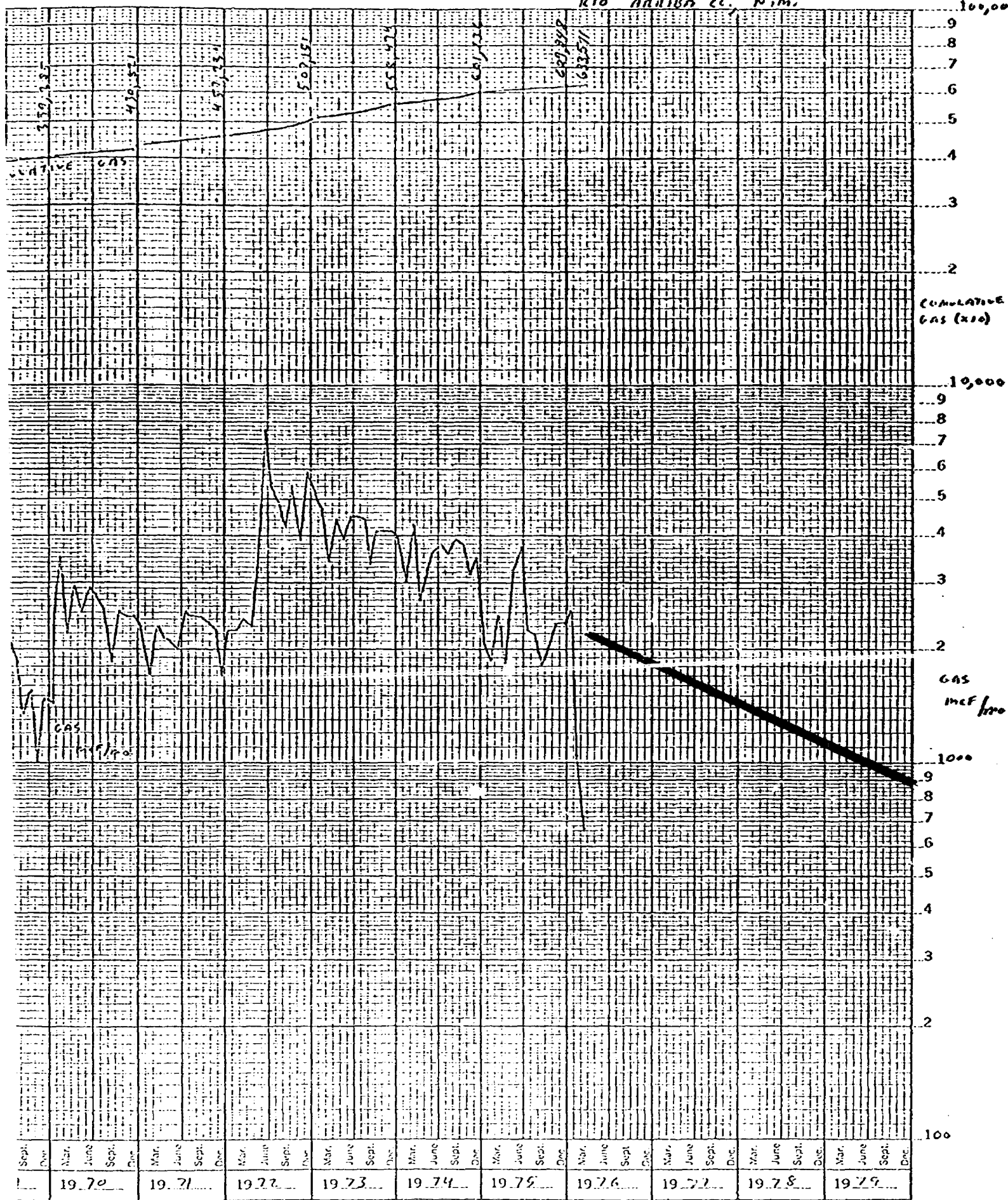
Exhibit #4

DUGAN PRODUCTION CORP.
 JICARILLA 'E' WELL NO. 1
 TAPACIT PICTURED CLIFFS
 RIO ARRIEN CO., N.M.



YEARS - Anticipated Future Production 1M 21-26N-3W

DUGAN PRODUCTION CORP.
 JICARILLA 'E' WELL NO. 1
 BLANCO, VERMILION
 RIO ARABO CO., N.M.



YEARS

- Anticipated Future Production

IM 71-26M-3W

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

SHUT-IN PRESSURES

<u>Date Shut-in Pressure Taken</u>	<u>Length of Shut-in Days</u>	<u>Pictured Cliffs Csg</u>	<u>Mesaverde Tbg</u>
11-17-58	9	969	1225
11-24-58	7	1006	1217
7-13-61	7	674	802
7-27-61	7	709	790
1-02-63	7	617	735
1-16-63	7	647	742
7-23-64	7	616	712
9-01-64	7	623	767
9-15-64	7	644	752
1-06-65	7	651	---
8-31-65	7	586	747
9-14-65	7	622	755
8-09-66	7	595	744
8-23-66	7	619	748
5-02-67	7	617	758
5-16-67	7	635	761
6-21-67	7	642	778
5-13-68	7	652	772
5-19-70	7	---	742
9-16-70	3	435	705
5-06-71	7	454	722
9-01-71	3	540	690
5-08-72	7	392	722
5-04-73	7	407	722
1-30-74	3	288	418
5-06-74	3	305	440
7-23-75	3	330	360

Exhibit # 6

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

Exhibit #5

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

[illegible]

WU AGENCY SANA.

SSB214(1744)(1-035288A160)PD 06/08/76 1743

TLX ELPHATGAS ELP

ZCZS 03003 PD EL PASO, TX

PMS OIL CONSERVATION COMMISSION

STATE LAND OFFICE BLDG

SANTA FE, NEW MEXICO

Case 5688
RECEIVED

JUN 9 - 1976

OIL CONSERVATION COMMISSION

ATTENTION: MR. W F CARR

WE HAVE NO OBJECTION TO THE APPLICATION OF DUGAN PRODUCTION
CORPORATION FOR DOWNHOLE COMINGLING IN CASE NO. 5688.

NORTHWEST PRODUCTION CORPORATION

T. W. BITTICK

NNNN

DUGAN PRODUCTION CORP.

APPLICATION FOR DOWNHOLE COMMINGLING

CASE 5688

JICARILLA E #1 WELL
M Section 21, T26N, R3W
Rio Arriba County, New Mexico

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Exhibit # 2

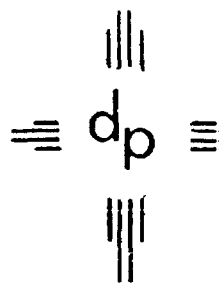
Dockets Nos. 17-76 and 18-76 are tentatively set for hearing on June 16 and June 23, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 9, 1976

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

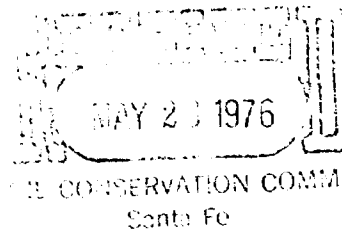
The following cases will be heard before Daniel S. Mutter, Examiner, or Richard L. Stamets, Alternate Examiner:

- CASE 5690: Application of Mobil Oil Corporation for amendment of Order No. R-5120, Lea County, New Mexico. Applicant, in the above-styled cause, seeks amendment of Order No. R-5120, which order provided for the simultaneous dedication of a 320-acre non-standard gas proration unit, comprising the W/2 SW/4 and SE/4 SW/4 of Section 28 and the NW/4 and the SW/4 NE/4 of Section 33, Township 21 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to applicant's E. O. Carson Wells Nos. 4 and 22, located at unorthodox locations in Units M and L, respectively, of said Section 28. Applicant seeks amendment of said Order No. R-5120 by authorizing the simultaneous dedication of said unit to the previously approved E. O. Carson Wells Nos. 4 and 22 and to its E. O. Carson Well No. 23 located 1980 feet from the North line and 2640 feet from the West line of Section 33, Township 21 South, Range 37 East, Lea County, New Mexico.
- CASE 5689: Application of Dalport Oil Corporation for an unorthodox oil well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jones Federal Well No. 4 to be drilled 990 feet from the South line and 1477 feet from the West line of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Queen Pool, Chaves County, New Mexico.
- CASE 4843: (Reopened)
- In the matter of Case 4843 being reopened pursuant to the provisions of Order No. R-4435-A, which order extended the special pool rules for the Southeast Chaves Queen Gas Area, Chaves County, New Mexico, including a provision for 320-acre spacing and proration units for gas wells. All interested parties may appear and show cause why said Order No. R-4435 should not be rescinded.
- CASE 5691: Application of Hanson Oil Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 990 feet from the North line and 2600 feet from the West line of Section 25, Township 26 South, Range 31 East, North Mason-Delaware Pool, Eddy County, New Mexico.
- CASE 5692: Application of Cities Service Oil Company for a dual completion and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Owen "A" Well No. 1 located in Unit P of Section 35, Township 21 South, Range 37 East, Lea County, New Mexico, completing said well in such a manner as to commingle Blinebry and Drinkard oil production and to dually complete said zones with the Wantz-Granite Wash Pool.
- CASE 5670: (Continued from May 12, 1976 Examiner Hearing)
- Application of Read & Stevens, Inc. for an unorthodox location and directional drilling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its Harris-Federal Well No. 3, the surface location of which is 660 feet from the South line and 1980 feet from the East line of Section 27, Township 15 South, Range 28 East, Chaves County, New Mexico, by directionally drilling said well from a kick-off point at approximately 6000 feet and bottoming it at an unorthodox location in the Pennsylvanian formation within 250 feet of a point 990 feet from the South line and 1650 feet from the East line of said Section 27, the S/2 of the Section to be dedicated to the well.
- CASE 5688: Application of Dugan Production Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tapacito-Pictured Cliffs and Blanco-Mesa Verde production in the wellbore of its Jicarilla E Well No. 1, located in Unit M of Section 21, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5693: Application of Jerome P. McHugh for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to downhole commingle Fruitland and Pictured Cliffs production in that area described as being all of Township 24 through 28 North, Ranges 9 through 15 West, San Juan County, New Mexico, excluding however, those lands within the boundaries of the Ballard-, Fulcher Kutz-, and West Kutz- and also those lands within the boundary of the Gallegos Canyon Unit Area.



dugan production corp.

May 25, 1976



W. F. Carr
General Counsel
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, NM 87501

Re: Application for Approval for Down-Hole Commingling
of the Jicarilla E #1 Well (PC and MV)

Dear Bill:

Enclosed are the following items regarding the application for approval for down-hole commingling of the Jicarilla E #1 Well located in the SW/4 of Section 21, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico:

1) Three copies of the Application for Approval for Down-Hole Commingling of the Jicarilla E #1 Well (PC and MV).

2) Three copies of a Certificate of Mailing stating that all operators of leases offsetting the dedicated acreage for this well and the USGS have been notified of this Application for the proposed commingling.

We would appreciate it if you would place this Application for hearing on June 9, 1976, if one is needed. We would also appreciate it if our hearing would be placed after Jerome P. McHugh's Application for down-hole commingling of the Fruitland-Pictured Cliffs formations in a large area is heard on the same date.

Thank you in advance for your assistance.

Sincerely,

Rick Tully

Richard Tully
General Counsel

cb

Enclosures

APPLICATION FOR APPROVAL FOR DOWN-HOLE COMMINGLING
OF THE JICARILLA E #1 WELL (PC AND MV)

Applicant Operator:

Dugan Production Corp.
Box 234
Farmington, NM 87401

Lease:

Jicarilla Apache Tribal Contract #116, insofar
as it covers the following described lands:
Township 26 North, Range 3 West, NMPM
Section 21: All
Rio Arriba County, New Mexico

Well Name and Location:

Jicarilla E #1 Well (PC and MV)
Township 26 North, Range 3 West, NMPM
Section 21: 995' FSL - 825' FWL
Rio Arriba County, New Mexico

Names of the Pools the
Well is Completed in:

Tapacito Pictured Cliffs Pool
Blanco Mesa Verde Pool
Both zones are classified as gas zones

New Mexico Oil Conservation
Commission Order Authorizing
Dual Completion:

Order No. DC-721 dated January 22, 1959

Ownership of the Two Zones
to be Commingled:

Common

Current 24-Hour Productivity
Test on Commission Form C-116:

See attached Exhibit "A"

Production Decline Curve for
Both Zones for a Period of at
Least One Year and Anticipated
Future Production:

See attached Exhibit "B"

Resume of Well's Completion
History and Prognosis of Future
Production from Each Zone:

See attached Exhibit "C"

Current Measured Surface
Pressure for Each Zone:

3-Day Shut-In Pressures	7-20-75	5-3-74	1-28-74
Tapacito Pictured Cliffs:	330	305	288
Blanco Mesa Verde:	360	440	418

Offsetting Leases and Operators:

A. Jicarilla Apache Tribal Contract #116 (Same Lease)
Township 26 North, Range 3 West, NMPM

Section 21: All

Operators: Dugan Production Corp.
Box 234
Farmington, NM 87401

Jerome P. McHugh
600 South Cherry Street, Suite 1225
Denver, CO 80222

Nassau Resources, Inc.
600 South Cherry Street, Suite 1225
Denver, CO 80222

B. Jicarilla Contract #98
Township 26 North, Range 3 West, NMPM

Section 20: E/2

Operator: Jerome P. McHugh
600 South Cherry Street, Suite 1225
Denver, CO 80222

Mobil Oil Corporation
Box 5444
Denver, CO 80217

C. Jicarilla Contract #100
Township 26 North, Range 3 West, NMPM

Section 29: NE/4

Operator: Southern Union Production Company
Suite 1700, 8350 North Central Expressway
Dallas, TX 75206

Aztec Oil & Gas Company
2000 First National Bank Building
Dallas, TX 75202

D. Jicarilla Contract #117
Township 26 North, Range 3 West, NMPM

Section 28: N/2

Operator: Northwest Pipeline Corporation
Box 1526
Salt Lake City, UT 84110

5-25-76
(Date)

EXHIBIT "A"
NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-112
 Revised 1-1-65

Operator Dugan Production Corp.		Pool Blanco Mesa Verde				County Rio Arriba										
Address Box 234, Farmington, NM 87401						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	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.	
Jicarilla E	1	M	21	26N	3W	5-19-76	F	—	187	—	24	5 gal	—	0	93	—

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.


 (Signature)

Agent

(Title)

5-25-76

(Date)

EXHIBIT "B"

DUGAN PRODUCTION CORP.
TICARILLA 'E' WELL NO. 1
TAPACITO PICTURED CLIFFS
RIO ARRIBA CO., N.M.

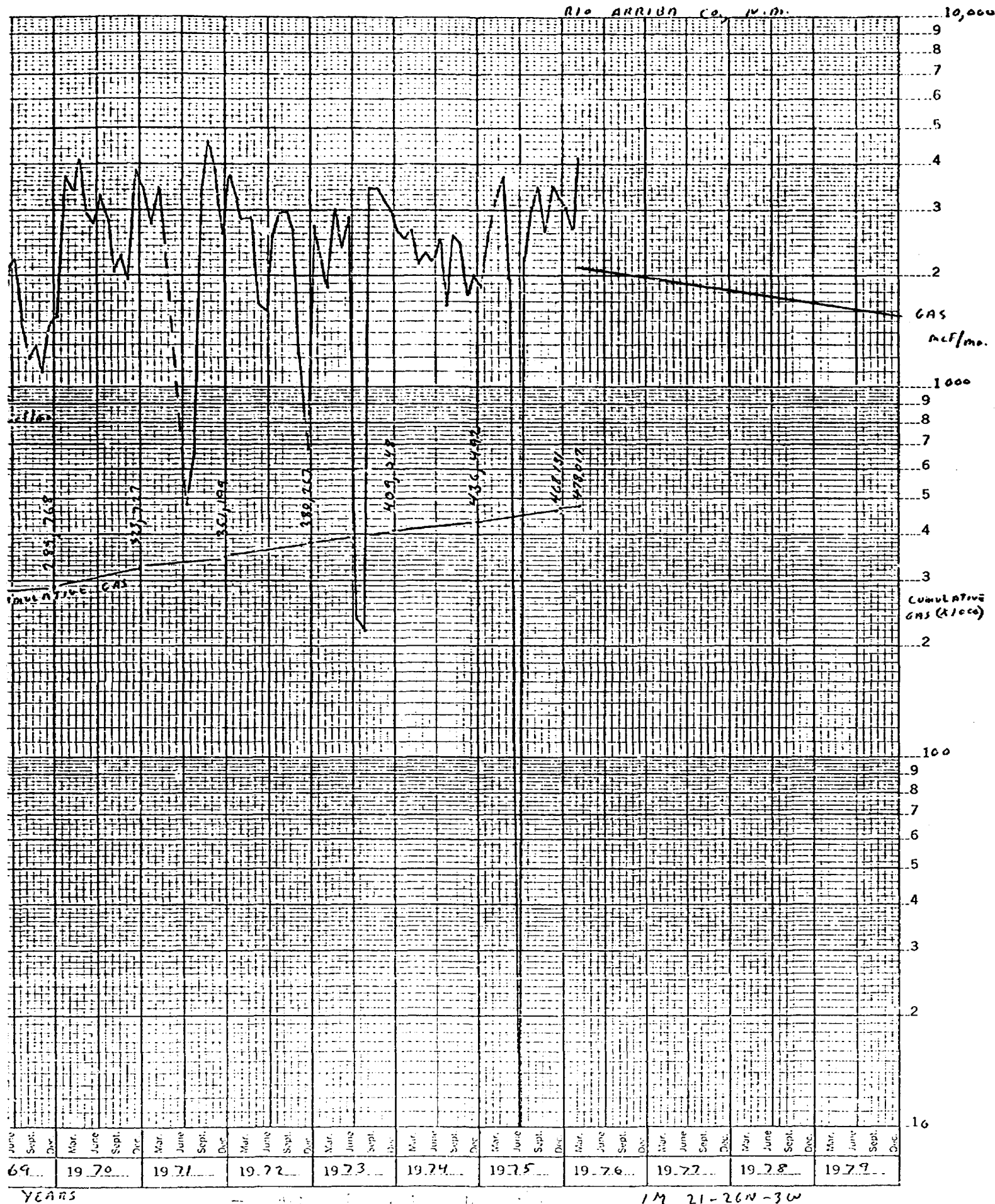
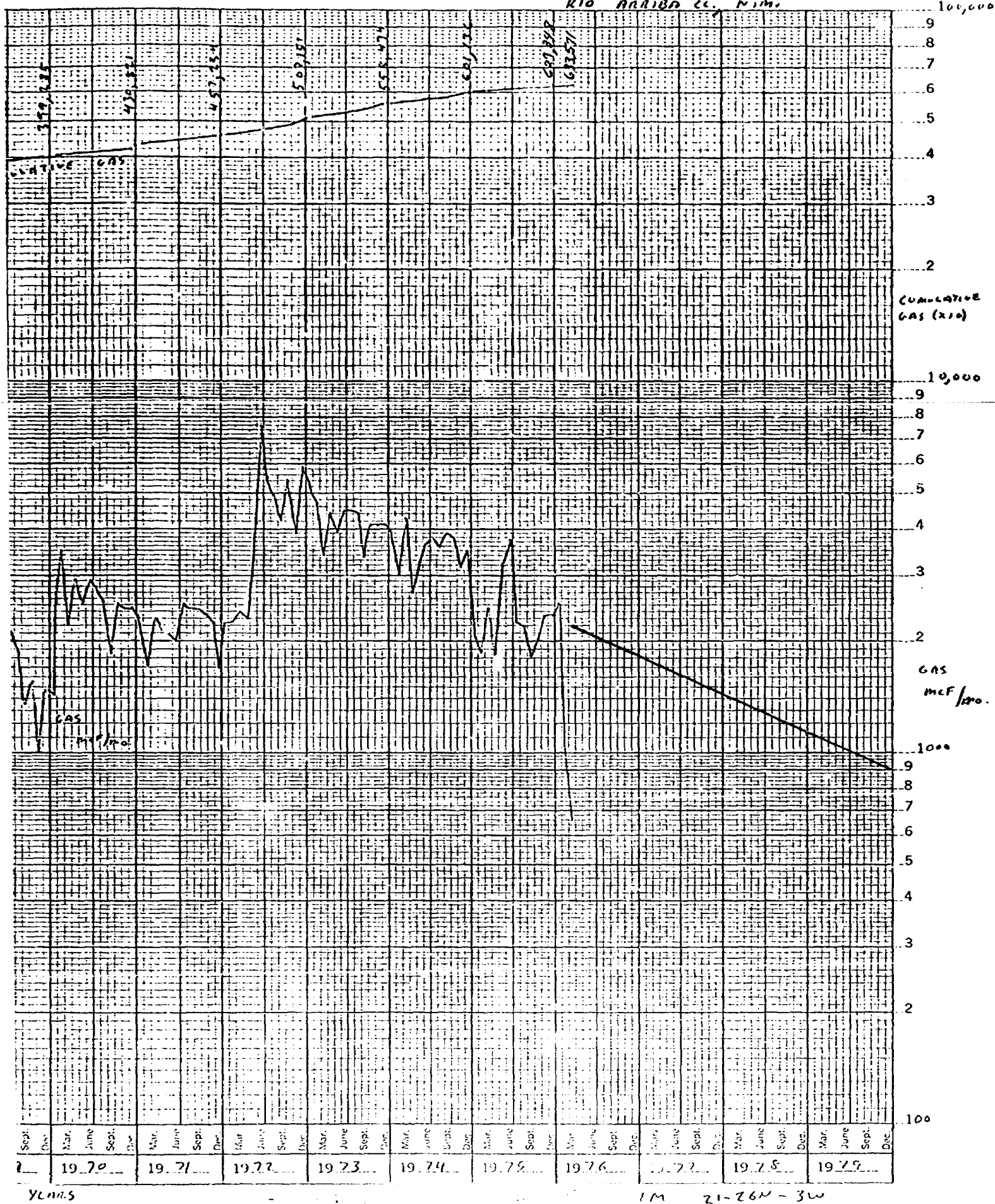


EXHIBIT "B"

DUCAN PRODUCTION CORP.
TICARILLA 'E' WELL NO. 1
BLANCO MESAVERDE
RIO ARRIBA CO., N.M.



YEARS

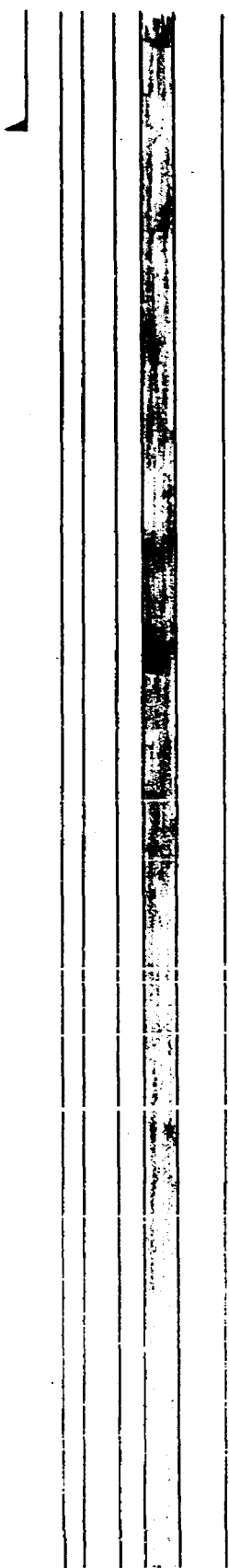
LM 21-26N-3W

EXHIBIT "C"

RESUME OF JICARILLA E #1 WELL'S COMPLETION HISTORY

5-19-58 thru 6-19-58	Spud 3:30 a.m. 5-19-58. Drilled 15" hole to 265'. Ran 7 jts 10-3/4" 32.75# E-40 csg w/larkin guide shoe and larkin centralizer; TE 252' set @ 264', cemented w/200 sx neat plus 2% CaCl. Drilled 9-7/8" hole to 4110'. Ran 99 jts 7-5/8" csg, cemented @ 4100' w/250 sx 8% gel and 1/4# gel flow seal per sack w/2% CaCl. Drilled 6-3/4" hole to 6300', ran 5-1/2" liner TE 2152' set @ 6162' w/burns liner hanger @ 4010', cemented w/100 sx reg 100 diamix, 8% gel, 2% CaCl. Tested top of liner, failed to hold. Squeezed w/100 sx neat. Tested top of liner, failed to hold. Resqueeze w/150 sx neat. Tested top of liner, failed to hold; squeeze #3 w/100 sx, tested top of liner w/2000#, held OK.
6-22-58 thru 6-27-58	Perforate w/2 bullets per foot 6146-38, 6124-14, 6104-6088, 6078-74, 6067-63. Frac w/100,000 gal. water and 100,000# 20-40 sd BD 800# Min. 800#. Max. 3100#. Ave. 1800#. Dropped 95 RB, good pressure increase. AIR 62 BPM. Went on vacuum. Moved rig off hole. Rig up CPS, found sand @ 6093'. Cleared out hole, running to swab MV. Run 2-3/4" tbq.
6-29-58 thru 6-30-58	Set Baker cement retainer @ 6012' and squeezed perfs w/100 sx 2% CaCl plus 1/4# gel flake/sx. Broke down. Max pressure 900#, final 100#. Resqueeze perf w/150 sx 2% CaCl plus 1/4# gel flake/sx. Squeeze 60 sx into formation. Break down 900#. Max. sq. press. 2000. Drilling cement to 6148'. Tested hole w/2000#. Did not break down.
7-1-58 thru 7-2-58	Reperforate w/2 bullets per foot 6146-38, 6124-14, 6104-6088, 6078-74. Frac w/80,000 gal water, 75,000# 20-40 sd and 50 RB BD 2200#. Max. 3400#. Ave. 2600#. Min. 2000#. Ave. IR 36.4 BPM. Ran 2" tbq to 6012'. Swabbed well.
10-10-58 thru 10-11-58	Pulling tubing. Preparation to perf. and frac Pictured Cliffs formation. Perforate w/2 bullets per foot 3908-13, 3954-64, 3949-52. Set BP @ 4025'. Frac w/34,000 gal water, 25,000# 20-40 sd, and 30 RB. BD 1500# IP 1200# Ave. 1400# Max. and final 1900#. Ave. IR 72 B/M. Ran tubing, swabbed well.
10-22-58 thru 11-7-58	Plan to run tubing and complete. Running tubing. Pulled bridge plug from 4025', cleaning out to complete PC form.

Retrieved bridge plug. Plan to retrieve bridge plug from 4025' and complete MV form. Baker Model D @ 6056' w/2-3/8" OD 4.7# J-55 8R EUE tbg. 2-3/8" OD 4.7# J-55 8R EUE tbg set @ 3885'. Rig released. Well completed.



10 3/4" O.D. Casing at 264'

Cemented w/200sx

TOP OF PICTURED CLIFFS: 3900'

BASE OF PICTURED CLIFFS: 3970

PERFORATIONS: 3908' - 3913'

3949' - 3952'

3954' - 3964'

2 3/8" O.D. Tubing at 3885'

Burns Liner Hanger at 4010'

7 5/8" O.D. Casing at 4100'
cemented w/250 sx

TOP OF MESAVERDE: 5597'

PERFORATIONS: 6074'-6078',
6088'-6104',
6114'-6124',
6138'-6146'

DIAGRAMATIC SKETCH OF DUAL GAS
COMPLETION FOR "E" WELL 1-21

2 3/8" O.D. Tubing at 6056'
Baker Model "D" Production
Packer at 6056'

I I
I I
I I

P.B.T.D. 6146'
5 1/2" O.D. Casing at 6162'
Cemented w/300 sx entire length
T.D. 6300

PROGNOSIS OF FUTURE PRODUCTION FROM EACH ZONE

It is our opinion the repair of the leaking packer for the dually completed Jicarilla E #1 Well will be expensive, and the size of the well and its age will not justify this expense.

As you can see from Exhibit "B" we are estimating the Pictured Cliffs formation will average approximately 1550 MCF per month for the next three years, and the Mesa Verde formation will also average approximately 1550 MCF per month. Assuming the price of interstate natural gas increases to \$0.55 in 1979, we will receive at the most \$1,705 gross production income per month from this well.

The sum of \$1,705 per month as the highest amount of income from this well for the next several years does not allow much room for error when the costs of repairing the leaking packer, or if necessary in the future, the costs of reworking the well are taken into account.

The repair of the packer leak, if made, will constitute an excessive and improper method of operating and producing this well, thereby constituting waste.

In addition, the Tapacito Pictured Cliffs Pool and Blanco Mesa Verde Pool have been steadily depleted for many years by this well and others. The steady decline in production from these pools are illustrated in Exhibit "B". It is possible the operations we undertake to repair the leaking packer may result in irreparable damage to these reservoirs. Needless to say, the ultimate recovery of gas production from these pools would be reduced.

We feel the commingling of the gas production from these two pools in the well bore will allow the produced fluids to be lifted better, thereby more efficiently increasing the over-all gas production.

For the above reasons, the approval of this Application will result in more efficient production of gas from these two zones.

CERTIFICATE OF MAILING

I hereby certify that I mailed a true copy of the Application
for Approval for Down-Hole Commingling of the Jicarilla E #1 Well (PC and MV)
to each of the offsetting operators and to the United States Geological Survey
on May 25, 1976.

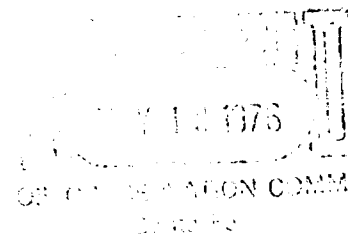
DUGAN PRODUCTION CORP.

By: Richard Jolly
General Counsel

dp

dugan production corp.

May 17, 1976



W. F. Carr
General Counsel
New Mexico Oil Conservation Commission
State Land Office Building
Santa Fe, NM 87501

Re: Application for Approval for Down-Hole Commingling of the
Jicarilla E #1 Well (PC and MV)

Dear Bill:

Pursuant to our telephone conversation of this date we wish to make an application for down-hole commingling of the captioned well. We have previously furnished the exact legal location of the well and its producing formations. If you need additional information, please advise.

We request the hearing for this application be held on June 9, 1976.

Thank you for your assistance.

Sincerely,

Rick

Richard Tully
General Counsel

pt

Link Tully - 325-0223

Lucas Production Corp for down-hole
commencingLapacito Pictured Cliffs
Blanco Mesa Verde

Jicarilla E #1 Sec 21, T 26 N, R 3 W,

995 FSL + 825 FWL

R. A.

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. 5688

Order No. R- 5357

APPLICATION OF DUGAN PRODUCTION CORPORATION
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 9,
19 76, at Santa Fe, New Mexico, before Examiner Daniel E. Nutter.

NOW, on this day of January, 19 77, 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, Dugan Production Corporation, is the
owner and operator of the Jicarilla "E" Well No. 1, located
in Unit M of Section 21, Township 26 North, Range
3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Tapa-
cito-Pictured Cliffs and Blanco Mesaverde production
within the wellbore of the above-described well.

(4) That from the Pictured Cliffs zone, the
subject well is capable of low marginal production only.

(5) That from the Mesaverde zone, the
subject 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.

Case No. 5688
Order No. R-

(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 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 any time the subject well 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, 52 percent of the commingled hydrocarbon production should be allocated to the Pictured Cliffs zone, and 48 percent of the commingled hydrocarbon production to the Mesaverde zone.

IT IS THEREFORE ORDERED:

(1) That the applicant, Dugan Production Corporation, is hereby authorized to commingle Tapacito-Pictured Cliffs and Blanco Mesaverde production within the wellbore of ~~the~~ its Jicarilla "E" Well No. 1, located in Unit M of Section 21, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(2) That 52 percent of the commingled hydrocarbon production shall be allocated to the Pictured Cliffs zone and 48 percent of the commingled hydrocarbon production shall be allocated to the Mesaverde zone.

(3) 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.

(4) 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.