

CASE 5851: JEROME P. MCHUGH FOR DOWN-  
HOLE COMMINGLING, RIO ARriba COUNTY, NEW  
MEXICO

CASE NO.

585/

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,

ETC.



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

DIRECTOR  
JOE D. RAMEY

LAND COMMISSIONER  
PHIL R. LUCERO  
April 13, 1977



STATE GEOLOGIST  
EMERY C. ARNOLD

Mr. Richard T. C. Tully  
General Counsel  
Dugan Production Corporation  
P. O. Box 234  
Farmington, New Mexico 87401

Re: CASE NO. 5851  
ORDER NO. R-5409

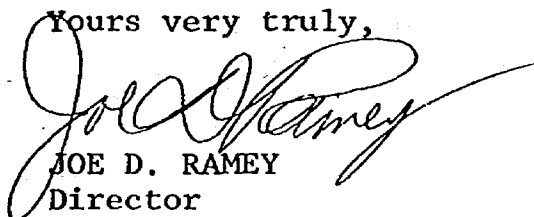
Applicant:

Jerome P. McHugh

Dear Sir:

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

Yours very truly,

  
JOE D. RAMEY  
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC	<u>X</u>
Artesia OCC	<u>X</u>
Aztec OCC	<u>X</u>

Other \_\_\_\_\_

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. 5851  
Order No. R-5409

APPLICATION OF JEROME P. McHUGH  
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 February 2, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 12th day of April, 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, Jerome P. McHugh, is the owner and operator of the Tribal Wells Nos. 1 and 2, located in Unit D of Section 16 and Unit L of Section 9, respectively, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Blanco Mesaverde and Basin-Dakota production in the wellbore of the aforesaid Tribal Well No. 1, and to commingle Tapacito-Pictured Cliffs, Blanco Mesaverde, and Basin-Dakota production in the wellbore of the aforesaid Tribal Well No. 2.

(4) That from the Tapacito-Pictured Cliffs zone, the aforesaid Well No. 2 is capable of low marginal production only.

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Case No. 5851  
Order No. R-5409

(5) That from the Blanco Mesaverde zone, each of the subject wells is capable of low marginal production only.

(6) That from the Basin-Dakota zone, each of the subject wells is capable of low marginal production only.

(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 are such that underground waste would not be caused by the proposed commingling provided that the wells are not shut-in for an extended period.

(9) 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 either of the subject wells is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the wells, applicant should consult with the supervisor of the Aztec District Office of the Commission and determine an allocation formula for each of the production zones.

IT IS THEREFORE ORDERED:

(1) That the applicant, Jerome P. McHugh, is hereby authorized to commingle Blanco Mesaverde and Basin-Dakota production within the wellbore of his Tribal Well No. 1, located in Unit D of Section 16 and to commingle Tapacito-Pictured Cliffs, Blanco Mesaverde and Basin-Dakota production within the wellbore of his Tribal Well No. 2, located in Unit L of Section 9, both in Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(2) That the applicant shall consult with the Supervisor of the Aztec District Office of the Commission and determine an allocation formula for the allocation of production to each zone in each of the subject wells.

(3) That the operator of the subject 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.

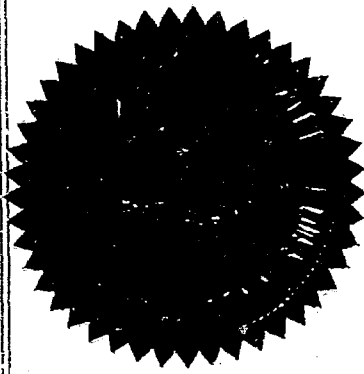
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Case No. 5851  
Order No. R-5409

(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.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*Phil R. Lucero*  
PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

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

S E A L

dr/

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 2, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Jerome P. McHugh for ) CASE  
downhole commingling, Rio Arriba ) 5851  
County, New Mexico. )

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

For the Applicant: Richard Tully, Esq.  
Attorney at Law  
Farmington, New Mexico

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

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1 MR. NUTTER: We will call Case Number 5851.

2 MS. TESCHENDORF: Case 5851, application of Jerome P.  
3 McHugh for downhole commingling, Rio Arriba County, New Mexico.

4 MR. TULLY: May it please the Commission, I'm  
5 Richard Tully, attorney for Jerome P. McHugh and I have one  
6 witness, Thomas A. Dugan, to be sworn.

7 (THEREUPON, the witness was duly sworn.)

8  
9 THOMAS A. DUGAN

10 called as a witness, having been first duly sworn, was  
11 examined and testified as follows:

12  
13 DIRECT EXAMINATION

14 BY MR. TULLY:

15 Q Would you state your name, address and occupation,  
16 please?

17 A. Thomas A. Dugan, 907 Hallett Circle, Farmington,  
18 New Mexico and I'm working as a Consulting Petroleum Engineer.

19 Q Have you previously testified before the New Mexico  
20 Oil Conservation Commission?

21 A. Yes.

22 MR. TULLY: Are the witness's qualifications a matter  
23 of record and acceptable?

24 MR. NUTTER: Yes, they are.

25 Q (Mr. Tully continuing.) I'm handing you an applica-

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1 tion for downhole commingling of the Tribal No. 1, would you  
2 state the purpose of this application, please?

3 A. Okay, Tribal No. 1 is completed as a Dakota well and  
4 it's a real poor well and we are looking to attempt to  
5 complete it in the Mesaverde formation, only we stated in  
6 this application that we would also attempt a Tapacito-  
7 Pictured Cliffs completion in the Tribal 1 but this was an  
8 error because we have already completed another well in the  
9 Tapacito-Pictured Cliffs so in the Tribal No. 1 we only wish  
10 to attempt a completion in the Blanco Mesaverde or in the  
11 Mesaverde formation and commingle the Dakota and the Mesaverde  
12 in the wellbore.

13 Q Referring now to Exhibit Number One would you identify  
14 it and tell what this exhibit contains?

15 A. This is just a map showing the location of the  
16 Tribal No. 1 and the other wells in the immediate vicinity  
17 of the 1, the proration unit of the Dakota formation and  
18 it's outlined in red which is the west half of Section 16.

19 You might note that there was a previous attempt to  
20 complete in the Mesaverde, to complete a Pictured Cliffs-  
21 Mesaverde dual by consolidating in this same quarter section,  
22 that was unsuccessful prior to the time that McHugh acquired  
23 the farmout on this acreage, and also, you might note that the  
24 Tribal No. 4, a Pictured Cliffs well, was completed in this  
25 quarter section previously.

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1 Q This well is located on a Jicarilla Tribal Contract  
2 Lease?

3 A Yes, it's on the Jicarilla Reservation.

4 Q Since this Dakota production has fallen off so  
5 greatly on this particular well are you having trouble with  
6 holding these leases?

7 A Yeah, production has fallen off but it never was  
8 very good to start with and the Jicarilla Tribe hasn't  
9 questioned whether this lease is producing in paying quantities  
10 but they have other leases and it might be difficult to show  
11 that this was producing in paying quantities at the present  
12 rate, or this particular well. Maybe the lease might be  
13 producing in paying quantities but this particular well isn't  
14 producing in paying quantities at this time.

15 Q And Jerome P. McHugh is the operator of this well?

16 A Yes.

17 Q Referring now to Exhibit Number Two, would you  
18 identify this, please?

19 A This is just a decline curve showing the past  
20 production of the Tribal No. 1 Well and it's quite obvious  
21 that it's not a very good well since it's producing less than  
22 a hundred MCF a month at the current time and it is difficult  
23 to produce because it does make some oil and we don't have  
24 enough reservoir energy or at least enough gas velocity to  
25 lift the produced fluids.

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1 Q Referring now to Exhibit Number Three, would you  
2 identify this, please?

3 A This is merely a Xerox of the New Mexico Oil and Gas  
4 Engineering Committee Annual Report showing 1975's production  
5 from the well. It's really a duplication of our decline  
6 curve, however, it shows you the cumulative production and  
7 it's quite obvious that the well is a marginal well.

8 Q Referring now to Exhibit Number Four, would you  
9 identify this, please?

10 A This is a copy of our daily drilling report while  
11 the well, the Dakota well, was drilled and completed and it  
12 merely shows the method in which the Dakota formation was  
13 completed and the history of the well, history of the drilling  
14 of the well.

15 Q Referring now to Exhibit Number Five, would you  
16 identify that, please?

17 A This is a Xerox copy of a portion of the IES log on  
18 the Tribal No. 1 and the third page of it shows the Dakota  
19 formations and the perforations that we currently have in the  
20 Dakota and also would show the Point Lookout zone of the  
21 Mesaverde formation on page two, which is the zone that we  
22 would like to attempt a completion in.

23 MR. NUTTER: Where is the interval that you've  
24 perforated, Mr. Dugan?

25 A It would be fifty-nine twenty or say fifty-nine

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1 thirty to forty and fifty-nine sixty-five to seventy-five,  
2 those two sand zones there.

3 Q (Mr. Tully continuing.) Looking at these logs do  
4 you feel that perforating in these particular sands you are  
5 going to have marginal production?

6 A Well, I hope not, but I'm afraid so. They don't  
7 look too good, no.

8 Q Referring now to Exhibit Number Six.

9 A This is a plat showing the production from the Blanco  
10 Mesaverde Pool and this would be the 1975 production and you  
11 can note that the offset well just to the west of our  
12 proposed Mesaverde completion which the Tribal No. 1 is shown  
13 as that yellow dot in Section 16 and the well just to the  
14 west is a rather marginal well and you will also note that  
15 Consolidated attempted a completion in this same quarter  
16 section in the Mesaverde and gave it up as unsuccessful, which,  
17 unfortunately, would lead us to believe that this would  
18 probably be a marginal type completion also.

19 Q Referring now to Exhibit Number Seven, would you  
20 identify it, please?

21 A Okay, this is the 1975 production from the Basin-  
22 Dakota Pool and shows the production from offset wells, also  
23 from the Tribal 1 and the Tribal 2 Wells, which show again  
24 that it's a marginal completion. However, some of the wells  
25 back to the west there aren't too bad.

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1 Q Referring now to Exhibit Number Eight, would you  
2 identify it, please?

3 A Okay, these are the shut-in pressures that we have  
4 on the Tribal 1 Well in the Dakota formation and you can see  
5 that the shut-in pressures have declined rather rapidly.

6 MR. NUTTER: Were those seven day shut-ins?

7 A We didn't label them and I don't know right now.

8 MR. NUTTER: Would they all be comparative, though?

9 A I think -- yeah, they are either seven or three day  
10 shut-ins. Possibly some of those later ones are three-day  
11 shut-ins, I don't know. The last one there was a seven day  
12 shut-in.

13 Q (Mr. Tully continuing.) Now, I'm going to hand  
14 you an application for the Tribal No. 2, would you identify  
15 it and tell what the purpose of it is, please?

16 A Okay, Tribal No. 2 is a well that is directly north  
17 of the Tribal No. 1 Well and it's also completed as a single  
18 Dakota well. It is completed very similar to the 1 and  
19 produces similar to the 1, although in this quarter section  
20 we do not have a Tapacito-Pictured Cliffs well and, of course,  
21 Exhibit One is merely a map showing its location and the  
22 offset wells.

23 Q So you are trying to commingle this from three  
24 different zones which is different now, of course, from the  
25 Tribal No. 1?

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1 A. Yes, we would like to -- I guess we are kind of  
2 grasping at straws and we would like to attempt a completion  
3 in all three zones.

4 Q And Jerome F. McHugh is the operator of this well also?

5 A. Yes.

6 Q And it is on a Jicarilla Apache Tribal lease?

7 A. Yes, it is.

8 Q Referring now to Exhibit Number Two under Tribal  
9 No. 2 Well?

10 MR. NUTTER: I think if we just call the set of  
11 exhibits for the Tribal No. 1, Exhibits One through Eight and  
12 then call the other one One-A through Eight-A.

13 MR. TULLY: Okay, fine. It will be One-A through  
14 Nine-A for the Tribal No. 2.

15 A. Okay, Exhibit Two-A is a decline curve of the  
16 Tribal 2 well and it shows that it's a little better well  
17 than the Tribal 1 Well but still only makes around ten MCF a  
18 day or around three hundred MCF a month. It makes some  
19 oil and is, unfortunately, a marginal well.

20 Q (Mr. Tully continuing.) Referring now to Exhibit  
21 Three-A.

22 A. Okay, here again is the Xerox of the New Mexico Oil  
23 and Gas Engineering Committee Annual Report, showing the 1975  
24 production and the cumulative production, again indicating  
25 that it's not too good of a well.

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1 Q And Exhibit Four-A?

2 A Four-A is the daily drilling report compiled while  
3 we were drilling the well and shows the method in which the  
4 well was completed and stimulated.

5 Q And Exhibit Five-A?

6 A Okay, this is a Xerox copy of a portion of the IES  
7 log on the Tribal No. 2. It would show on page two, the  
8 Pictured Cliffs formation and on page three the Cliff House  
9 and on page four the Point Lookout and page five is the  
10 Dakota zone.

11 MR. NUTTER: I don't have that one on mine.

12 A Oh, you don't?

13 MR. NUTTER: I don't have a page five.

14 A Five is the Dakota interval and the perforations  
15 that we perforated in the Dakota zone.

16 Q (Mr. Tully continuing.) And would you detail a  
17 little bit more for us about where you plan to perforate in  
18 these three zones?

19 A Okay. Well, looking at the Xerox there of the  
20 Pictured Cliffs it sure does look skinny, I don't know if  
21 it's worth perforating or not but if we did it would be that  
22 interval thirty-six sixty-eight to seventy-two and which is  
23 not much of a sand. However, the Cliff House is a little  
24 better developed which would be an interval there of fifty-four  
25 fifty-six through seventy and fifty-four eighty-five through



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1 fifty-five hundred. Those two sand lenses there are a little  
 2 better developed and they are undoubtedly very hard and tight  
 3 with low porosities but might give up some gas and the Point  
 4 Lookout zone fifty-eight twenty-four through forty is probably  
 5 the best looking zone in the entire well while the Mesaverde  
 6 is pretty thin or for a Point Lookout it's pretty thin but it  
 7 is really a better developed sand than most of the sands in  
 8 the well.

9 Q So based upon this logic you feel that the  
 10 production from these other two wells is going to be marginal?

11 A I hope that we are surprised but I'm afraid they will  
 12 be marginal.

13 Q Referring now to Exhibit Six-A?

14 A Okay, this is the production from the Tapacito-Pictured  
 15 Cliffs Pool for 1975 and you can note that we are awfully close  
 16 to some pretty good wells but I'm afraid that we ran out of  
 17 sand in this particular well.

18 Q And Exhibit Seven-A?

19 A This is the 1975 production from the Blanco Mesaverde  
 20 Pool and it looks like we are kind of out a mile or so away  
 21 from any well of any consequence and it shows the offset  
 22 Mesaverde production.

23 Q And Exhibit Eight-A?

24 A Okay, this is the 1975 production from the Basin-  
 25 Dakota Pool, here again showing that the Tribal 1 and 2 are

1 rather marginal completions, although not too far from other  
2 wells that produce fairly well.

3 Q And the Tribal No. 1 is the one directly south of  
4 this arrow pointing?

5 A Yes.

6 Q And Exhibit Nine-A?

7 A Okay, this is the shut-in pressures on the Tribal 2  
8 that we have available and it indicates that the shut-in  
9 pressures declined rather rapidly.

10 Q Were these exhibits prepared under your supervision?

11 A Yes.

12 Q The ownership of the zones involved, is that common?

13 A I am told that it is common, yes. Mr. McHugh informed  
14 me that he owned all rights there.

15 Q Then in your professional opinion will the total  
16 value of the gas be reduced by this commingling that you plan  
17 to do?

18 A Well, it shouldn't be reduced.

19 Q It will be increased?

20 A Yes.

21 Q Going back now to the production decline curves for  
22 both of these wells, the Tribal 1 and the Tribal 2, what  
23 reasonable allocation of this commingled production do you  
24 propose?

25 A Well, in the case of the Tribal 1 Well, I would

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1 propose that we allocate the first hundred MCF to the Dakota  
2 formation and all of the oil and the remainder of the gas to  
3 the Mesaverde formation. That would be a hundred MCF per  
4 month to the Dakota formation, which is not a lot of gas and  
5 I'm sure all of the oil that the well produces will be coming  
6 from the Dakota formation as the Mesaverde formation in this  
7 area makes very little oil.

8 Q And the Tribal No. 2, what allocation do you propose  
9 on that one?

10 A I would propose that the first three hundred MCF  
11 per month of gas be allocated to the Dakota formation and the  
12 remainder of the gas be credited to the Mesaverde formation or  
13 if we decide to attempt a triple commingled producer, that  
14 the gas be split evenly between the other two zones and that  
15 all of the oil from the well be credited to the Dakota  
16 formation.

17 Q Now, in your professional opinion will the  
18 commingling of both of these wells conserve natural resources  
19 of the State of New Mexico, prevent waste and will not impair  
20 or interfere with any correlative rights?

21 A Yes.

22 MR. TULLY: At this time we move the introduction  
23 of Exhibits One through Eight for the Tribal No. 1 Well and  
24 Exhibits One-A through Nine-A for the Tribal No. 2 Well  
25 into evidence.

1 MR. NUTTER: Applicant's Exhibits One-A through  
2 Nine-A and One through Eight will be admitted into evidence.

3 (THEREUPON, Applicant's Exhibits One through  
4 Eight and One-A through Nine-A were admitted  
5 into evidence.)  
6

7 CROSS EXAMINATION

8 BY MR. NUTTER:

9 Q Mr. Dugan, this case was advertised to commingle  
10 the three zones, Pictured Cliffs, Blanco Mesaverde and  
11 Basin-Dakota in both of these wells, however, it is your  
12 proposal only to commingle or to perforate the Mesaverde and  
13 commingle it with the existing Dakota perforations in the  
14 Tribal No. 1?

15 A Yes, that was an error on our part. We didn't do  
16 our homework.

17 Q Right. And then in the Tribal No. 2, you've got  
18 existing Dakota perforations and you would probably perforate  
19 the Mesaverde and Pictured Cliffs there?

20 A Yes. After getting up here in this chair and  
21 looking at the Pictured Cliffs it sure looks skinny.

22 Q So maybe it will be just two zones?

23 A Yeah, just two zones. I think we probably have a  
24 better chance in the Mesaverde.

25 Q And at the present time the decline curve for the

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1 Tribal No. 1 indicates that the last month's production was  
2 less than seventy MCF, is that right?

3 A. The Tribal 1?

4 Q. Yes.

5 A. It's not much, whatever it is. Yes, I'm sure that's  
6 right.

7 Q. And the other wells were some better, producing  
8 between two and three hundred MCF per month?

9 A. Yes.

10 MR. NUTTER: Are there any further questions of  
11 Mr. Dugan? Mr. Kendrick?

12 MR. KENDRICK: Mr. Dugan, you ought to make your  
13 allocation in the form of based on percentages, based on the  
14 initial production after completion, using the numbers of one  
15 hundred MCF and three hundred MCF.

16 MR. DUGAN: Well, that might be easier if you put  
17 it on a percentage basis, yeah.

18 MR. KENDRICK: When the wells deplete down below  
19 a hundred you're going to have a negative production from the  
20 other formation?

21 MR. DUGAN: Oh, yeah, I was hoping that they didn't  
22 do that. I suppose that would be the more practical approach  
23 to put it on a percentage basis.

24 MR. KENDRICK: Thank you.

25 MR. NUTTER: Are there any further questions of the

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1 witness? He may be excused.

2 (THEREUPON, the witness was excused.)

3 MR. NUTTER: Do you have anything further, Mr. Tully?

4 MR. TULLY: No, nothing.

5 MR. NUTTER: Does anyone have anything they wish to  
6 offer in Case Number 5851? We will take the case under  
7 advisement.

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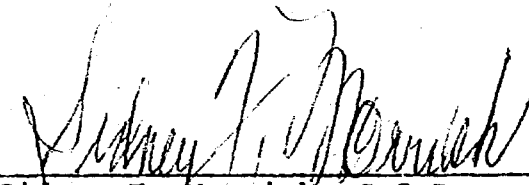
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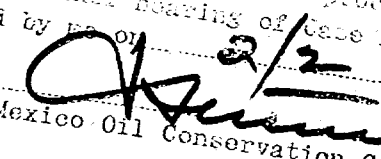
REPORTER'S CERTIFICATE

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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Phone (505) 982-9212

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 5851  
heard by me on 2/2, 1977  
  
Examiner  
New Mexico Oil Conservation Commission

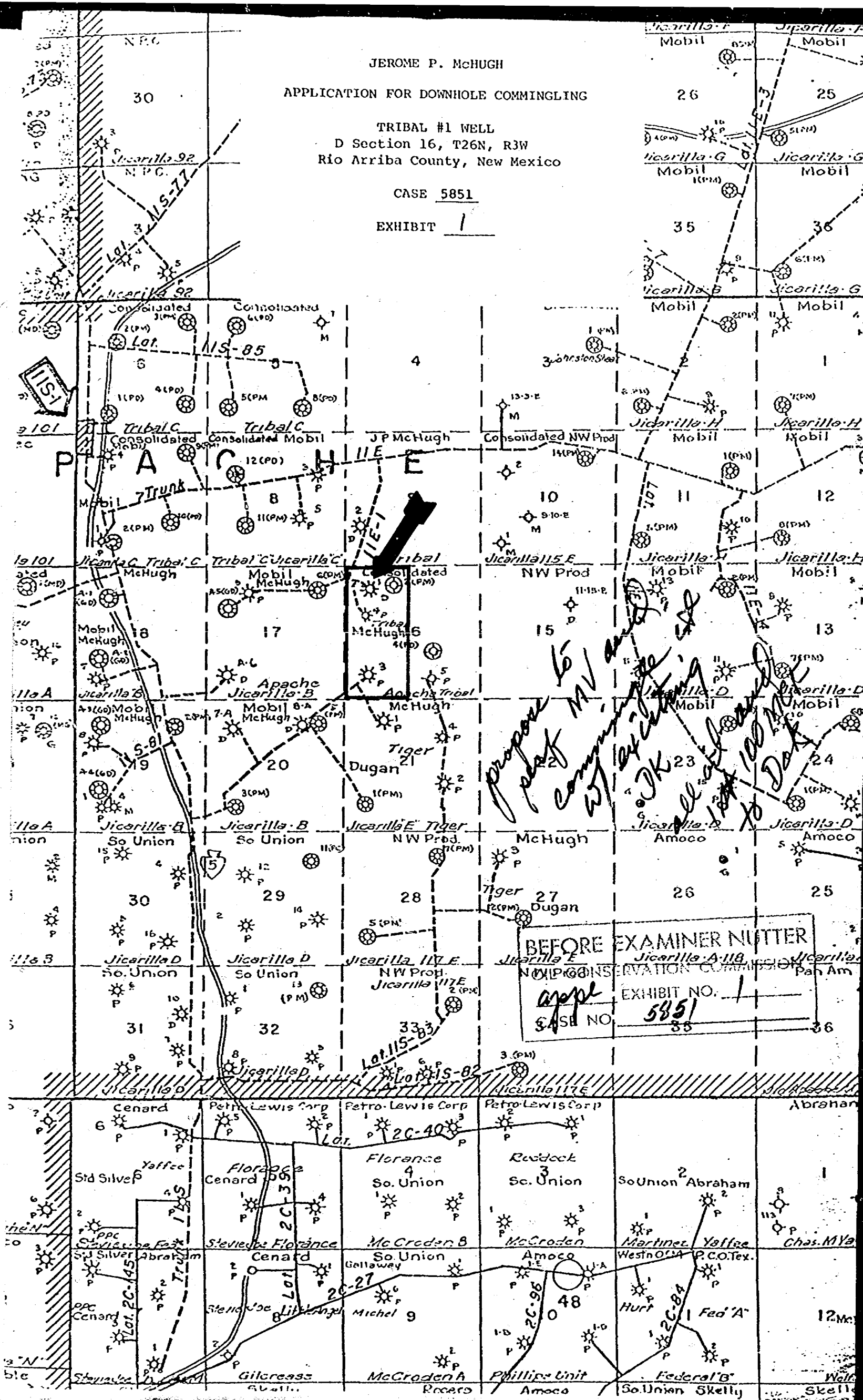
JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL  
D Section 16, T26N, R3W  
Rio Arriba County, New Mexico

CASE 5851

EXHIBIT 1



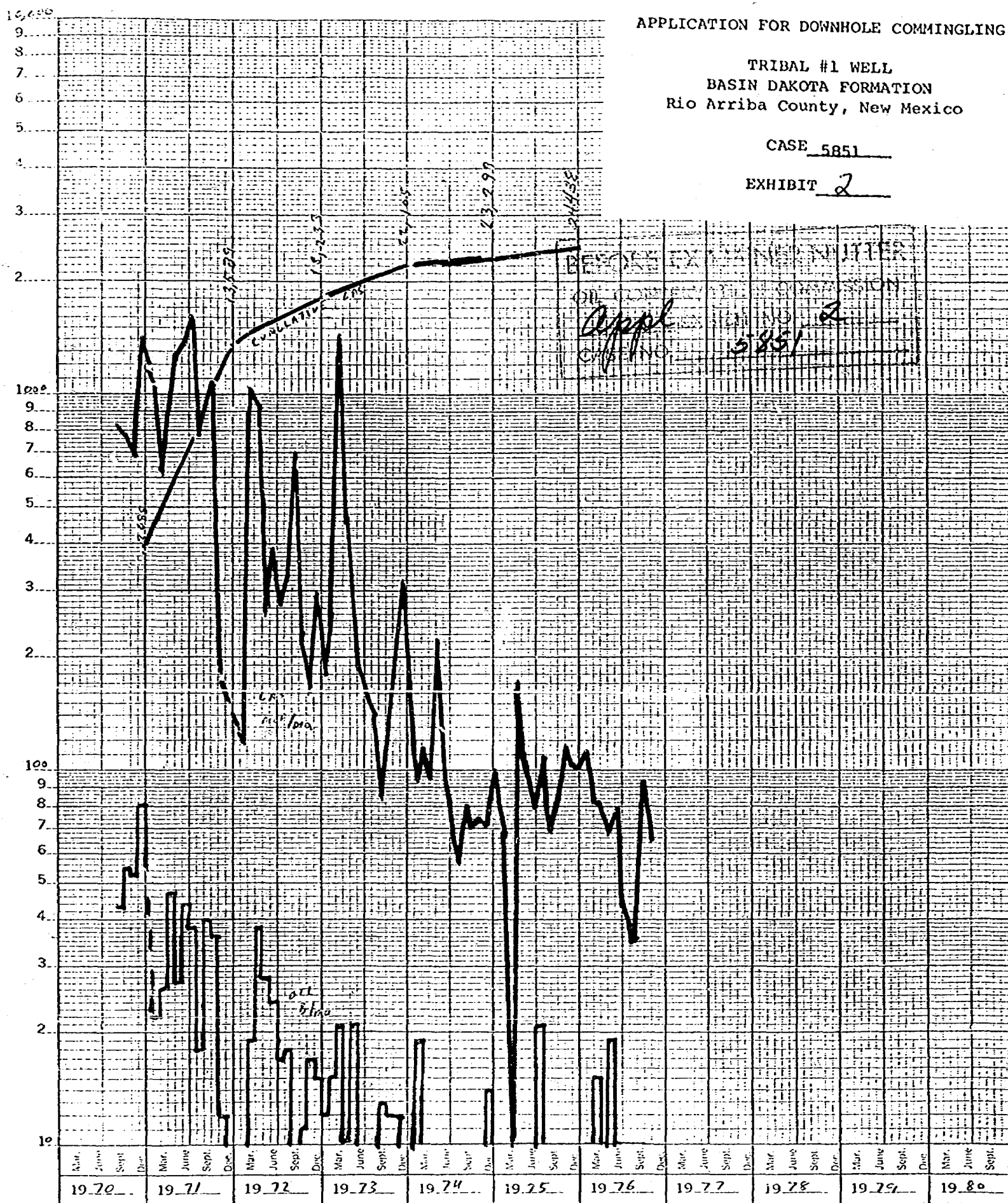


APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL  
BASIN DAKOTA FORMATION  
Rio Arriba County, New Mexico

CASE 5851

EXHIBIT 2



Anticipated Future Production

YEARS

JEROME P. MCHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL

CASE 5851

EXHIBIT 3

# ANNUAL REPORT

OF THE

NEW MEXICO OIL & GAS ENGINEERING  
COMMITTEE

HOBBS, NEW MEXICO

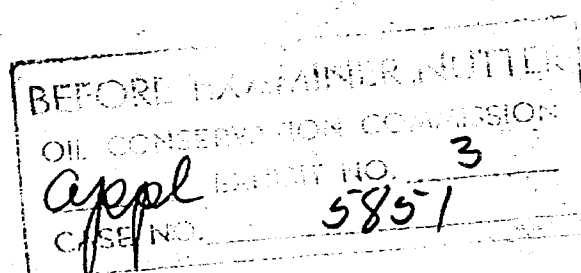
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VOLUME II

*Northwest New Mexico*

=====

# 1975



WELL S I R	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	NP	ACCU.
PRICE															
1M2228N 8W GAS	2698	1918	1756	2004	1945	2168	2076	2248	1301		1590	1834	21539	290105	
2M1426N 8W GAS	822	562	742	820	729	733	908	544	581	75	603	711	8068	115610	
ROELOFS															
1N2229N 8W GAS	1918	2790	3142	1384	2540	2512	2632	2328	1561	2167	1980	1935	26987	336187	
2M1029N 8W GAS	6199	5806	4502	5227	6479	5102	5446	5377	3238	5847	5117	5120	63852	670886	
TRIAL															
1D1626N 3M GAS	103	68	1	173	111	80	108	69	85	115	114	112	1139	24438	
2L 926N 3M GAS	297	220	287	289	291	210	281	222	302	203	297	318	3288	51029	
COMPANY TOTAL	973	1013	1011	1279	1266	1324	9733	9108	10152	9817	8923	10244	120731	13375017	
MERRION AND BAYLESS															
BLACKHOCK															
1C2026N11W GAS	2639	1673	2541	3425	3105	3120	4412	2652	3605	3813	2771	3926	38385	1942150	
CANADA MESA															
1A2424N 6W GAS	10330	10069	9416	7045	6551	9261	9127	9001	9086	9035	9571	8886	107278	433802	
212424N 6W GAS	12353	15359	16079	11290	12560	13076	12481	13230	14181	10584	13177	11732	156182	540727	
3A1424N 6W GAS	2302	2865	3955	2758	2579	2992	2527	1573	2908	2038	2530	1996	31022	86395	
CANYON LARGE UNIT NP															
105K 324N 6W GAS	2176	2087	2054	1675	1951				4795	5801	6429	5323	32291	118750	
CARNAHAN															
1P3530N12W GAS															
DELHI TAYLOR															
1M 426N11W GAS	2773	2960	3602	2620	2568	3082	2894	2363	2943	3135	2672	2168	33787	2381730	
OLD ROCK COM															
2P2825N 6W GAS	2884	4756	4403	4302	2846	5820	4933	5536	5086	4407	2352	4559	51789	195532	
COMPANY TOTAL	212	178	242	249	220	225	141	227	218	161	218	102	2370	42583	
MESA PETROLEUM COMPANY															
BAUNTON															
15N1530N11W GAS	3714	6821	4490	4216	2561	5723	7643	6175	5067	5656	5244	6253	63593	810232	
FEDERAL															
5B 529N12W GAS	9014	9043	9675	6211	9336	8088	10038	9812	9775	6587	10700	8829	107108	2054527	
6B 629N11W GAS	4568	6032	4881	3971	4283	3053	4115	4324	6635	5877	4345	5488	55160	1389778	
9N 929N12W GAS	6061	5937	6088	4384	5706	4207	5762	6187	5754	4518	5732	5768	66096	1418104	
100 129N11W GAS	7653	10069	9961	9744	6124	7775	8115	8002	7174	10151	6201	8202	99174	1844378	
11B2326N 6W GAS	13200	12756	15542	13506	18215	9983	13409	16475	15800	14552	12624	9720	165782	2151510	
12C2326N 6W GAS	10684	5361	8258	6985	8004	5212	7565	11912	11018	8287	7739	54109	96481	1424412	
13K2126N 6W GAS	8528	6665	8543	5877	9691	6117	8425	8408	8379	7210	8496	4959	91983	979725	
15A 129N13W GAS	4633	3156	4464	3856	3943	693	6732	4132	5880	4481	3408	4104	49103	854537	
16M 927N 8W GAS	519	342	469	434	433	317	435	594	209	633	594	252	5188	93657	
MCLEOD															
2L3428N10W GAS	21009	20910	15379	14303	15910	15317	15005	14951	10684	16216	16373	16064	192114	4323962	
STATE															
3203630N11W GAS	3133	3526	3824	4067	2540	3341	3781	3596	3242	3122	2601	3511	40284	669334	
STATE COM AD															
26N3629N11W GAS	11014	10534	10813	7265	9334	7025	10714	10385	10275	7845	9161	8999	113364	3333360	
STATE COM AF															
28B3629N10W GAS	6633	5811	4353	4976	4715	2358	6138	3485	1392	4462	5617	54710	1333212	133311	
STATE COM AG															
29N3629N10W GAS	8998	8588	6137	6922	6954	5312	8386	5573	3245	6066	7476	7567	81175	2129597	
STATE COM AH															
3013630N12W GAS	3018	2513	3134	3137	2657	1879	2886	3221	3140	3010	2281	3072	34147	700696	
STATE COM AI															
33N3227N 9W GAS	3028	3156	2430	4049	6050	3678	3766	3142	2324	3028	2747	2996	40394	880667	
STATE COM AJ															
3403632N12W GAS	3011	1489	2780	2332	2933	2687	2903	2123	2548	2920	2128	2424	30178	508369	
STATE COM AK															
35B3632N12W GAS	4012	2709	3600	2834	3519	3040	2903	2436	3070	3102	1863	3393	36481	548638	
STATE COM AL															
36B3231N 8W GAS	10924	6553	7253	10215	10351	10191	4947	6293	7889	5764	8107	12987	101474	1383300	
STATE COM AM															
37E 230N 8W GAS	2686	2235	2175	1943	3239	3258	2293	2563	1290	1917	1479	2509	27707	496973	
TRIEB FEDERAL															
203330N10W GAS	2102	1589	2151	2104	1892	1636	2132	2122	2081	1974	1892	1400	23075	428247	
COMPANY TOTAL	585	247	1204	615	641	1134	1413	863	656	940	725	860	9884	302850	
MOBIL OIL CORPORATION															
JICARILLA OTERO															
1K2124N 5W GAS	6743	4609	6312	4530	6084	5553	6556	6339	6349	5043	6364	6849	73431	1715602	
2G2824N 5W GAS	5643	5517	5834	4270	4417	5139	5276	5481	5492	3959	5244	6725	62999	1155895	
302824N 5W GAS															
PLUGGING APPROVED 1972															
JULANDER GAS COM															
1J1029N11W GAS	4925	5695	5898	6220	4355	6864	7419	7702	7496	7637	5467	6725	76103	1459549	
NYE															
1L 829N10W GAS	3946	4666	4735	3169	4846	4226	4993	3532	4268	4991	3844	4628	51824	1221356	
2G 829N10W GAS	5207	3184	3936	4148	3987	4085	3965	3121	3765	4215	3994	3390	46897	1193168	
3E 929N10W GAS	5895	3970	5453	4551	3723	4212	3733	2074	1875	454			35920	829241	
RICE															
1M2030N12W GAS	3822	3213	4030	3750	4249	3829	2843	4137	3976	3650	3381	3112	43992	859184	
H K RIDDLE															
1M 727N12W GAS	1760	1610	2293	1505	1985	1536	2537	2448	2399	2487	2174	1850	24574	888072	

RESUME OF TRIBAL #1 WELL COMPLETION HISTORY

5/27/70 Drilling at 40'. 12-1/2" surface hole. Spudded at 5:30 a.m. 5/27/70.

5/28/70 Drilling at 1150' with water. Bit #2 - 7-7/8" hole. Ran 10 jts 8-5/8" OD 24# J-55 8R ST&C csg. T.E. 245' set at 238' RKB. Cemented w/175 sx. Class "C" with 2% CaCl. P.O.B. 11:00 a.m. WOC 12 hours. Pressured up to 1200 psi--held OK.

5/29/70 Drilling at 3105' with water.

5/30/70 Drilling at 4092' with mud and Bit #4. Wt. 8.9, Vis 48.

5/31/70 Drilling at 4560' with Bit #5. Wt. 9.0, Vis 44.

6/1/70 Trip at 4966'. Wt. 9.3, Vis 39.

6/2/70 Drilling at 5264' with Bit #8. Wt. 9.2, Vis 41.

6/3/70 Drilling at 5505'. Wt. 9.2, Vis 41, WL 8.4.

6/4/70 Drilling at 5835'. Wt. 9.4, Vis 45, LCM 10%.

6/5/70 Drilling at 6110' with Bit #9. Wt. 9.1, Vis 41, LCM 15%.

6/6/70 Drilling at 6355'. Wt. 9.0, Vis 42, LCM 8%, WL 10.2.

6/7/70 Drilling at 6765' with Bit #10. Wt. 9.1, Vis 43, LCM 10%.

6/8/70 Drilling at 7180' with Bit #11. Wt. 9.1, Vis 42, LCM 10%.

6/9/70 Drilling at 7480' with Bit #12. Wt. 9.2, Vis 48, LCM 10%.

6/10/70 Drilling at 7765' with Bit #13. Wt. 9.2 Vis 45, LCM 9%, WL 8.4.

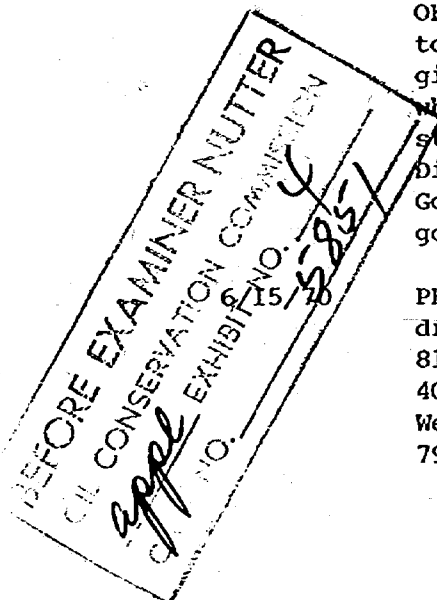
6/11/70 Trip at 8052' for Bit #15. Wt. 9.2, Vis 42, LCM 9%.

6/12/70 Drilling at 8160'. Wt. 9.2, Vis 42, LCM 8%.

6/13/70 TD 8195', Wt. 9.2, Vis 60. Ran Welex I.E.S. and Density Log. Went in hole, circulating-conditioning mud.

6/14/70 TD 8195', Wt. 9.2, Vis 60. Laid down drill pipe, ran 252 jts 4-1/2" OD 10.5 and 11.6# K-55 8R ST&C CF&I csg set at 8190'. Dowell cemented first stage with 100 sx 8% gel, 200 sx Class "C" 7-1/2# salt per sx. P.O.B. 7:45 p.m. 6/13/70. Good mud returns while cementing. Max. cementing press. 700 psi--reciprocated csg. OK while cementing. Cemented second stage through Baker stage tool at 6117' with 100 sx Class "C" 40% Diacel "D" 12-1/2# gilsonite per sx. P.O.B. 11:10 p.m. 6/13/70. Good mud returns while cementing. Max. cementing press. 600 psi. Cemented third stage through Baker stage tool at 3861' with 100 sx Class "C" 40% Diacel 12-1/2# gilsonite per sx. P.O.B. 12:20 a.m. 6/14/70. Good mud returns while cementing. Max. cementing press. 500 psi--good job. Nipple up and install 6" BOP.

PBTD 8155'. Picked up 2-3/8" OD tbg--went in hole with bit and drilled Baker stage tools at 3861' and 6117'. Cleaned out to 8155'. Dowell circulated hole, pressure tested csg and BOP to 4000 psi, held OK. Spotted 300 gal 15% HCl acid, pulled tbg. Welex ran Gamma Ray Correlation log, perforate 2 jets/ft 7980'-7984', 7991'-7995', 8059'-8063', 8094'-8097', and 8138'-8150'.



6/16/70

PBTD 8155'. Dowell fraced Dakota with 3500 HP, 80,000# 20-40 sd, 2390 bbls water with 2-1/2# J-166 per 1000 gal. Breakdown--2500 psi, I.F. 3900 psi, Max. 4200 psi, Ave. 3400 psi, Final 4100 psi. Instant shut-in 2400 psi. 10-min. shut-in 2000 psi, Ave. IR 44 B/M. Made four ball drops of 10 balls each, good pressure increase with each drop. Shut well in 2 hrs--flow well back, went in hole with tbg--jet hole down. Well kicked off. Tagged sand @ 8150', laid down 2-3/8" tbg.

6/17/70

PBTD 8155'. Ran 253 jts 1-1/4" OD 2.4# JCW 10R EUE tbg set at 8140'. Well making est. 1100 MCF, released Arapahoe rig.



COMPANY JEROME P. McHUGH  
WELL TRIBAL #1  
FIELD BASIN DAKOTA  
County RIO ARriba State N.M.  
Sec. 16 Twp 26-N Rge 3-W  
Location 870' FNL & 920' FNL  
COUNTY RIO ARriba STATE NEW MEXICO  
Other Services: DEN-C-G

Permanent Datum GROUND LEVEL		Elev. <u>1080'</u>	
Log Measured From <u>KELLY GUSUNG</u>		Ft. Above Perm. Datum	
Drilling Measured From <u>KELLY GUSUNG</u>		Elev.: K.B. <u>1093'</u> D.F. <u>1092'</u> G.L. <u>1080'</u>	
Date	<u>6-12-70</u>		
Run No.	<u>ONE</u>		
Depth—Drifter	<u>8195'</u>		
Depth—Wellc	<u>8183'</u>		
Wim. Log Inter.	<u>8177'</u>		
Top Log Inter.	<u>5145'</u>		
Casing—Drifter	<u>8 5/8" @ 238'</u>	@	@
Casing—Wellc	<u>2.38'</u>		
Bit Size	<u>7 7/8"</u>		
Type Fluid in Hole	<u>MUD C&amp;A</u>	<u>GEL</u>	
Dens. — Visc.	<u>9.3 1 G.8</u>		
pH   Fluid Loss	<u>— 1 — ml</u>		ml
Source of Sample	<u>CIRCULATED</u>		
R <sub>100</sub> (in Meas. Temp.	<u>2.35 @ 109' F</u>	@	@
R <sub>100</sub> (in Meas. Temp.	<u>2.81 @ 10' F</u>	@	@
R <sub>100</sub> (in Meas. Temp.	<u>3.00 @ 69' F</u>	@	@
Source R <sub>100</sub> R <sub>100</sub>	<u>PRESSI</u>		
R <sub>100</sub> (in BHT	<u>@ 163' F</u>	@	@
Time Since Circ.	<u>4 1/2 hr</u>		
Max. Spec. Temp.	<u>163' F @ B.H.</u>	@	@
Equip.   Location	<u>1151 LEARM.</u>		
and By	<u>J. PATTERSON</u>		
Witnessed By	<u>M.R. MITCHELL</u>		

Service Ticket No. W38485 Remarks: NO REPEAT HOLE FILL UP											
Change in Mud Type or Additional Samples						SCALE CHANGES					
Date	Sample No.					Type Log	Depth	Scale Up Hole		Scale Down Hole	
Depth-Driller											
Type Fluid in Hole											
Dens.	Visc.										
ph	Fluid Loss		ml								
Source of Sample						EQUIPMENT DATA					
R <sub>ui</sub> @ Meas.Temp.	@	°F		@	°F	Run No.	Tool Type and No.	Pad Type	Tool Position	Other	
R <sub>ui</sub> @ Meas.Temp.	@	°F		@	°F	1	14128		FREE		
R <sub>mc</sub> @ Meas.Temp.	@	°F		@	°F						
Source: R <sub>ui</sub>	R <sub>mc</sub>										
R <sub>m</sub> @ BHT	1.90	@ 163°F		@	°F						
R <sub>mf</sub> BHT	1.25	@ 163°F		@	°F						
R <sub>mc</sub> BHT	1.35	@ 163°F		@	°F						

BEFORE EXAMINED NUTTER  
OIL COMPANY  
Apple  
5  
5851

JEROME P. MCHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL

RIO ARriba COUNTY, NEW MEXICO

CASE 5851

EXHIBIT 5

POINT LOOKOUT

UPPER MANCOS

5850

5900

5907

5950

6000

6050

6068

6100

would  
perf  
MIV ~~exp~~ here



GRANEROS

7940  
7973  
-847

7940

7950

7980

7984

7991

7995

8000

DAKOTA

57

4'

8050

8059

8063

SP

IN

8094

8097

8100

ONE MINUTE  
EVAL MARKER

12'

TOTAL 27'

8138

8150

8150

8150

40" IND. RESISTIVITY

18" NORMAL

40" IND. CONDUCTIVITY



TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

43556 X 6	36739 X 5	20702 X	4	59840 X 3	212348 X 2	5312 X 1
15302 X 7	14277 X 8	9	49746 X 10	23457 X 11	85463 X	155365 X
35625 X	1048 X	16	15	2390 X	37697 X	58834 X
46440 X 19	11107 X 20	21	22	6734 X 23	1580 X	588 X 24
1580 X	45205 X	28	27	1259 X	1595 X	815 X
30	53434 X 29	31972 X	26	3495 X	25	

1975 PRODUCTION FROM BLANCO-MESAVERDE POOL

BEFORE EXAMINER  
OIL CONSERVATION COMMISSION  
Appel  
5851

JEROME P. McHUGH  
APPLICATION FOR DOWNHOLE COMMINGLING  
TRIBAL #1 WELL  
RIO ARriba COUNTY, NEW MEXICO  
CASE 5851  
EXHIBIT 6

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	6 X 49186 X 32181	5 ⊕	4	3	2	1
	7 X 30920	8 35765 X	9 X 3219	10	11	12
	18 X 26933	17 31292 X X 42122	16 X 1139 ⊕	15	14	13
	19 X 2683	20 X 19643 ⊕	21	22	23	24
	30	29	28	27	26	25

1975 PRODUCTION FROM BASIN DAKOTA POOL

BEFORE EXAMINATION  
OIL CONSTRUCTION  
appd  
LA BUREAU NO. 7  
5851

JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL  
RIO ARriba COUNTY, NEW MEXICO

CASE 5851

EXHIBIT 7

SHUT-IN PRESSURES

Tribal #1 Well

<u>Date</u>	<u>Casing Pressure</u>
7-28-70	2158
11-18-70	2262
5-6-71	1710
5-15-71	1620
5-8-72	1040
5-4-73	887
6-14-74	400

BEFORE EXAMINER NUTTER  
CIE CONSERVATION COMMISSION  
*Appl* EXHIBIT NO. 8  
CASE NO. 5851

JEROME P. MCHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #1 WELL  
D Section 16, T26N, R3W  
Rio Arriba County, New Mexico

CASE 5851

EXHIBIT 8

EXHIBIT 1-A

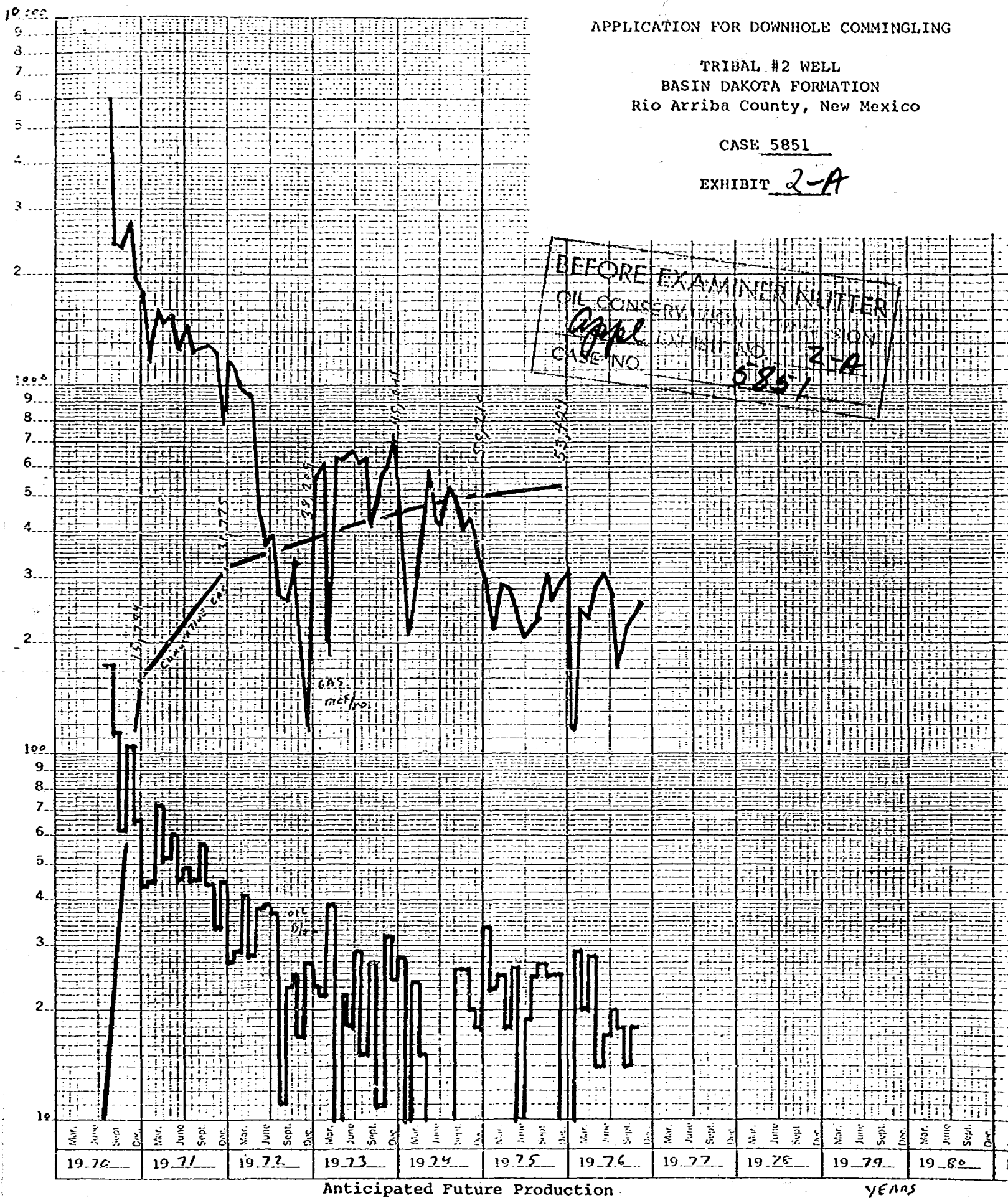
BEFORE EXAMINED BY  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 1-A  
CASE NO. 58351

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #2 WELL  
BASIN DAKOTA FORMATION  
Rio Arriba County, New Mexico

CASE 5851

EXHIBIT 2-A



Anticipated Future Production

YEARS

JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #2 WELL

CASE 5851

EXHIBIT 3-A

# ANNUAL REPORT

OF THE

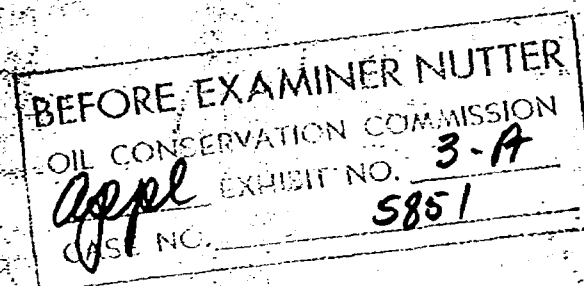
## NEW MEXICO OIL & GAS ENGINEERING COMMITTEE

HOBBS, NEW MEXICO

==  
**VOLUME II**

*Northwest New Mexico*  
==

# 1975



WELL	TYPE	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	4P	ACCU.
PRICE																
1M1228N 6W	GAS	2898	1918	1756	2004	1965	2168	2076	2248	1301		1590	1834	21538	290105	
2M1428N 8W	GAS	882	582	742	810	729	716	908	519	531	753	683	711	8168	113610	
ROELOFS																
1M2229N 8W	GAS	1918	2190	3142	1384	2540	2510	2632	2328	1661	2167	1980	1935	26987	336187	
2M1029N 8W	GAS	6199	5806	4502	5024	5102	5446	5372	5372	3238	5847	5117	5729	63858	670684	
TRIAL																
101626N 3W	GAS	103	68	1	173	111	80	108	69	85	115	114	112	1139	24438	
2L 924N 3W	GAS	277	276	287	278	288	215	278	225	307	264	294	314	3284	51052	
COMPANY TOTAL	GAS	9173	10113	10111	103147	103559	100377	97355	98261	101832	98747	98936	102544	1207317	1337017	
HERRION AND DAYLESS																
BLACKROCK																
1C2028N11W	GAS	2639	1673	2541	3425	3105	3829	4432	2655	3535	3813	2771	3926	38385	1942150	
CANADA MESA																
1A2424N 6W	GAS	10330	10069	9416	7045	6631	9261	9127	9301	9386	9035	9571	8686	107278	433802	
212424N 6W	GAS	12393	15359	16079	11290	12510	13076	12481	13230	14181	10584	13177	11739	156182	540727	
3A1424N 6W	GAS	2302	2865	3953	2758	2519	2992	2527	1575	2903	2035	2530	1996	31022	84971	
CANYON LARGO UNIT NP																
1B5K 324N 6W	GAS	2176	2087	2054	1675	1931				4795	5801	4429	5323	32291	118750	
CARNAHAN																
1P3530N12W	GAS															
DELHI TAYLOR																
1M 426N11W	GAS	2773	2960	3602	2620	2568	3089	2896	2363	2943	3135	2672	2168	33787	2381730	
DLO ROCK COM																
2P2825N 6W	GAS	2884	4756	4403	4302	2846	5820	4832	5536	5086	4407	2352	4559	51789	195532	
COMPANY TOTAL	GAS	35497	39809	42050	33115	32220	38053	36219	34551	42634	38810	39501	38390	450734	6405783	
MESA PETROLEUM COMPANY																
BRUNTING																
15N1330N11W	GAS	3714	6821	4490	4216	2561	5723	7643	6175	5067	5686	5244	4253	63593	810232	
FEDERAL																
58 529N12W	GAS	9014	9043	9675	6211	9336	8088	10038	9812	9775	6587	10700	8829	107108	2054527	
68 629N11W	GAS	4568	4022	4881	3971	4283	3014	4115	4324	6675	5813	4343	5418	55187	1389778	
9N 929N12W	GAS	6061	5937	6082	4384	5736	4207	5762	6187	5754	4514	5732	5768	66054	1418104	
100 129N11W	GAS	7653	10069	9961	9744	6124	7778	8115	8002	7174	10151	6201	8202	99174	1844378	
11B2326N 6W	GAS	13200	12756	15542	13506	18212	9983	13409	16475	15800	16552	12624	9720	165782	2151510	
12C2326N 6W	GAS	10684	5361	8258	6985	8034	5212	7565	11912	11015	8287	7739	5459	96481	1424412	
13K2126N 6W	GAS	8528	6665	8543	5877	9891	6517	8425	8408	8328	7210	8496	4959	91978	979725	
1FA 129N13W	GAS	4633	3155	4464	3846	3943	693	6732	4164	5880	4481	3408	4104	49103	854537	
16N 927N 8W	GAS	519	342	449	434	433	317	435	594	209	633	594	252	5181	93627	
MCLEOD																
2L3428N10W	GAS	21009	20910	15379	14303	15910	15310	15005	14951	10684	16216	16373	16064	192114	4323967	
STATE																
3203630N11W	GAS	3133	3526	3824	4067	2540	3341	3781	3596	3242	3122	2601	3511	40284	669534	
STATE COM AD																
26N3629N11W	GAS	11014	10534	10813	7265	9334	7025	10714	10385	10275	7845	9161	8999	113364	333360	
STATE COM AF																
28B3629N10W	GAS	6633	5811	4353	4976	4715	2358	6139	3485	1392	4790	4442	5617	54710	1333212	
STATE COM AG																
29N3629N10W	GAS	8998	8588	6137	6922	6954	5312	8386	5573	3245	6066	7426	7567	81175	2129597	
STATE COM AH																
3013630N12W	GAS	3018	2513	3134	3137	2857	1878	2886	3221	3140	3010	2281	3072	34147	700696	
STATE COM AI																
33N3227N 9W	GAS	3028	3156	2430	4049	6050	3678	3766	3142	2324	3028	2747	2996	40394	880667	
STATE COM AJ																
3403632N12W	GAS	3011	1489	2780	2332	2933	2687	2903	2123	2548	2820	2128	2424	30178	508369	
STATE COM AK																
35B3632N12W	GAS	4012	2709	3600	2834	3519	3040	2903	2436	3370	3102	1863	3393	36481	548638	
STATE COM AL																
36B3231N 8W	GAS	10924	6553	7253	10215	10351	10191	4947	6293	7889	5764	8107	12987	101474	1383300	
STATE COM AM																
37E 230N 8W	GAS	2686	2235	2175	1943	3239	3258	2293	2563	1290	1977	1679	2509	27707	496973	
TRIEB FEDERAL																
203330N10W	GAS	2102	1589	2151	2104	1892	1636	2132	2122	2081	1974	1892	1400	23075	428247	
COMPANY TOTAL	GAS	585	13375	136374	123321	138829	111382	138093	135853	126656	127882	125581	129553	157523	2975415	
MOBIL OIL CORPORATION																
JICARILLA OTERO																
1K2124N 5W	GAS	6743	6609	6312	4530	6084	5653	6556	6339	6349	5043	6364	6849	73431	1715602	
2G2824N 5W	GAS	5645	5517	5834	4270	4417	5139	5276	5481	5492	3959	5244	6725	62999	1175594	
302824N 5W	GAS															
JULANDER GAS COM																
1J1029N11W	GAS	4925	5695	5898	6220	4355	6864	7419	7702	7496	7637	5467	6725	76103	1459549	
NYE																
1L 829N10W	GAS	3946	4666	4735	3169	4846	4226	4993	3532	4248	4791	3844	4628	51824	1221354	
2G 829N10W	GAS	5207	3184	3936	4148	3887	4085	3955	3121	3765	4215	3994	3390	46891	1193368	
3E 929N10W	GAS	5895	3970	5433	4551	3723	4212	3733	2074	1875	454			35920	829241	
RICE																
1J2030N12W	GAS	3822	3213	4030	3750	4249	3829	2843	4137	3976	3650	3381	3112	43992	859384	
M K RIDDLE																
1H 727N12W	GAS	1760	1610	2293	1505	1985	1536	2537	2448	2339	2487	2174	1850	24574	888072	

RESUME OF TRIBAL #2 WELL COMPLETION HISTORY

5/3/70 TD 231'. WOC. Drilled 12-1/4" hole to 231'. Ran 11 jts 235' 8-5/8" 24# J-55 csg, set at 226'. Cemented with 175 sx Class "A" with 2% CaCl. P.O.B. at 4:00 a.m. 5/3/70. Cement circulated.

5/4/70 Drilling at 1670' with water. Drilling 7-7/8" hole.

5/5/70 Drilling at 3306'. Making trip and survey. Drilling with water.

5/6/70 Drilling at 4010' with Bit #5. Mud wt. 8.9, Vis 37, LCM 5%.

5/7/70 Drilling at 4645' with Bit #6. Wt. 9.1, Vis 37.

5/8/70 Drilling at 4954'. Wt. 9.2, Vis 40.

5/9/70 Drilling at 5245'. Wt. 9.3, Vis 41.

5/10/70 Drilling at 5419'. Wt. 9.3, Vis 40.

5/11/70 Drilling at 5738'. Wt. 9.2, Vis 39.

5/12/70 Drilling at 6018'. Wt. 9.2, Vis 45, LCM 20%.

5/13/70 Drilling at 6272'. LCM 18%, Wt. 9.0, Vis 43.

5/14/70 Drilling at 6600'. Wt. 9.0, Vis 42, LCM 11%.

5/15/70 Drilling at 7075'. Wt. 9.1, Vis 44, WL 7.4.

5/16/70 Drilling at 7292'. Wt. 9.2, Vis 41, LCM 10%.

5/17/70 Drilling at 7581'. Wt. 9.2, Vis 42, LCM 10%. Drilling with Bit #13.

5/18/70 Drilling at 7890'. Wt. 9.2, Vis 48, LCM 7%.

5/19/70 Drilling at 8030'. Wt. 9.2, Vis 44, LCM 10%.

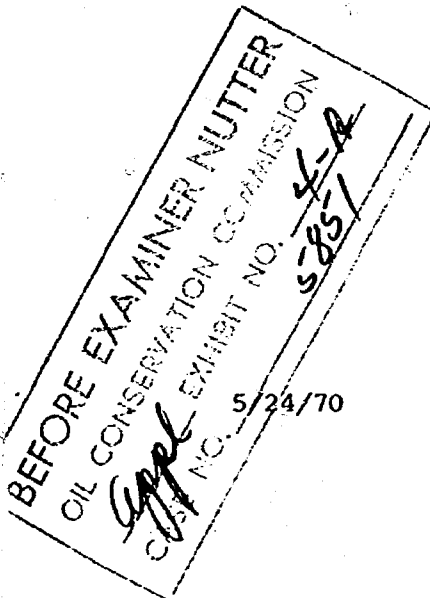
5/20/70 Drilling at 8144'. Wt. 9.2, Vis 43, LCM 10%.

5/21/70 TD 8180'. Wt. 9.3, Vis 66, WL 11.0. Attempted to log with Welex, hit bridge at 7625'. Went in hole with drill pipe to clean out.

5/22/70 TD 8180'. Ran Welex IES and Density log--went in hole conditioning mud. Laid down drill pipe--running casing.

5/23/70 TD 8180. Ran 250 jts 4-1/2" OD 11.6# and 10.5# K-55 8R ST&C CF&I csg, set at 8180'. Cemented first stage with 100 sx Class "C" 8% gel, 200 sx Class "C" 7-1/2# salt per sx. POB 10:15 a.m. 5/22/70. Good mud circulation during job. Max cementing pressure 700 psi. Cemented second stage through Baker stage collar at 5984' with 100 sx Class "C" 40% Diacel "D" 12-1/2# gilsonite per sx. POB 1:00 p.m. 5/22/70. Good mud returns while cementing. Max cementing pressure 500 psi. Cemented third stage through Baker stage tool at 3781' with 100 sx Class "C" 40% Diacel "D" 12-1/2# gilsonite per sx. POB 2:00 p.m. 5/22/70. Good mud returns while cementing. Max cementing pressure 500 psi. Nipple up csg, installed 6" hydraulic BOP. Picking up 2-3/8" tbg.

5/24/70 PBSD 8136'. Went in hole with 2-3/8" tbg and bit. Drilled Baker stage tools at 3781' and 5984'. Cleaned out to 8136'.





Pressure tested casing and BOP to 4000 psi--held OK. Spotted 300 gal 15% HCl--pulled out of hole. Welex ran Gamma Ray Correlation log. Perforate 2 jets/foot 7905'-7909', 7918'-7922', 7980'-7984', 8015'-8019', 8054'-8060', 8066'-8077'. Dowell fraced Dakota formation with 3500 HP, 70,000# 20-40 sd, 2138 bbls water, 2-1/2# J-166 per 1000 gal. Breakdown--4000 psi, IF 3800 psi, Min. 3100 psi, Ave. 3150 psi, Final 3600 psi. Instant shut-in 1900 psi, 10 min. shut-in 1700 psi. Ave. IR 47 B/M. Made 4 ball drops of 8 balls each, some pressure increase with each ball drop. Well shut in 2 hrs. Flowing well back.

5/25/70

PBTD 8136'. Went in hole with 2-3/8" tbg, jetted hole down with drilling gas. Well kicked off making est 1000 MCF. Laid down 2-3/8" tbg.

5/26/70

PBTD 8136'. Ran 254 jts 1-1/4" OD 2.4# JCW 10R EUE tbg. Set at 8067' RKB. Pumped out tbg plug, released rig.



Permanent Datum <u>GROUND LEVEL</u>	Elev. <u>7040</u>
Log Measured From <u>KELLY GUSHING</u>	ft. Above Perm. Datum
Drilling Measured From <u>KELLY GUSHING</u>	

Elev.: K.B. <u>7053</u>
D.F. <u>7052</u>
G.L. <u>7040</u>

1955

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
Appel EXHIBIT NO. 5-A  
CASE NO. 5851

JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #2 WELL

RIO ARriba COUNTY, NEW MEXICO

CASE 5851

EXHIBIT 5a

FRUITLAND

PICTURED CLIFFS

3580

3658

14

19

16

130

3450

3500

3550

3600

3650

3700

CLIFF HOUSE

MENEFEE

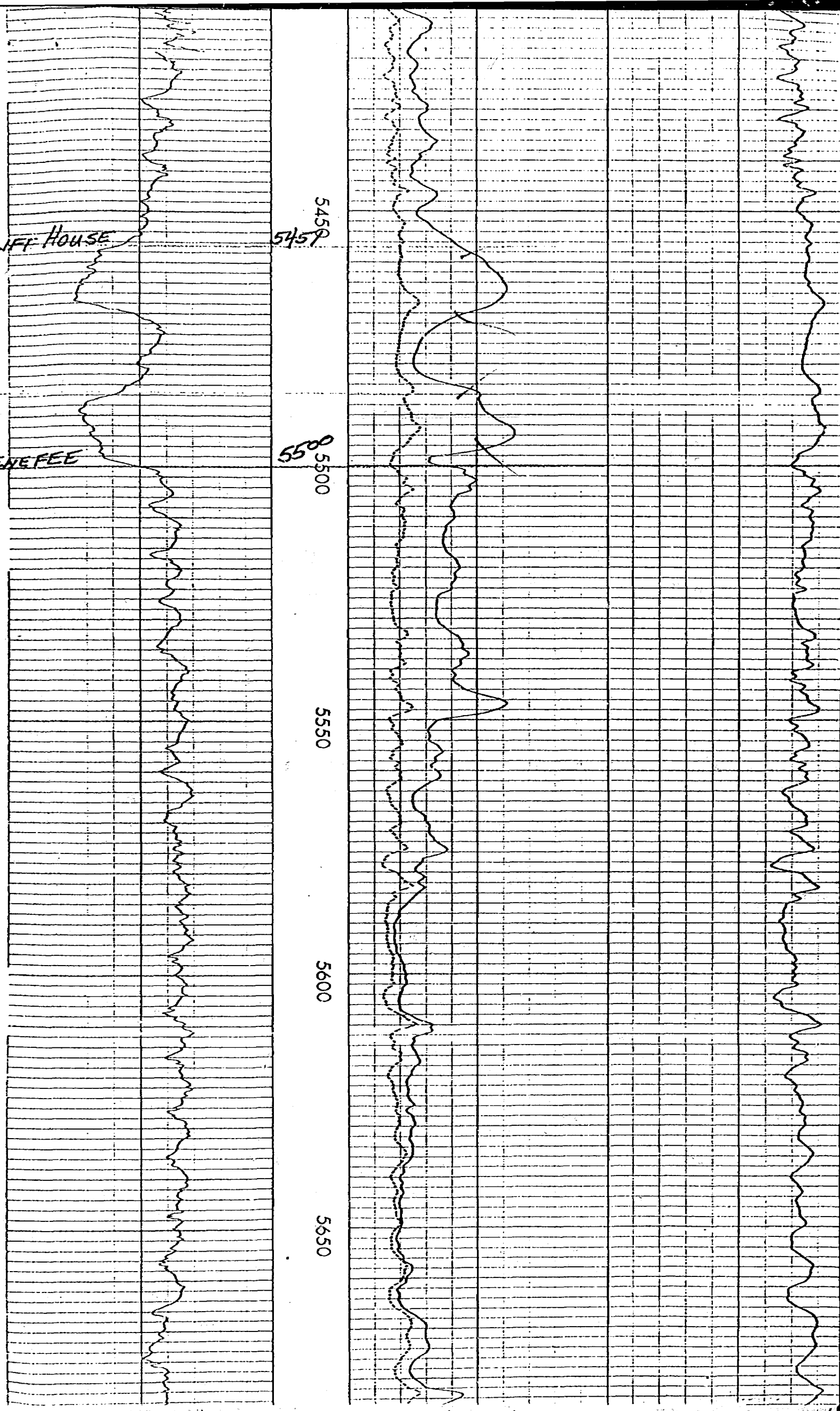
5450  
5457

5500  
5500

5550

5600

5650



POINT LOOKOUT

5824

UPPER MANCOS

5988

5750

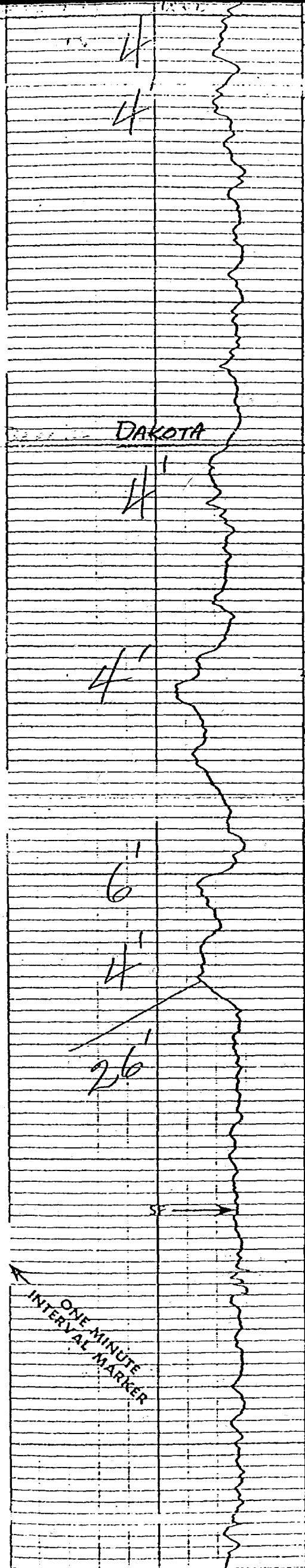
5800

5850

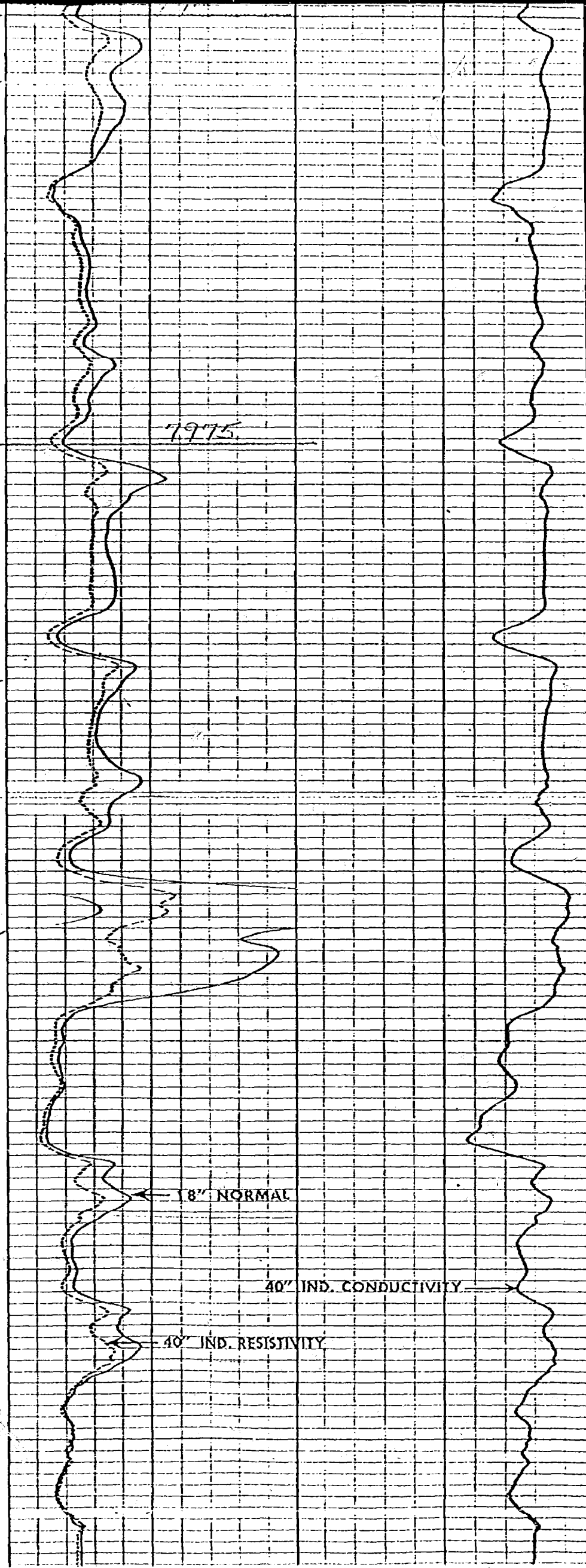
5900

5950

6000



7900  
7905  
7914  
7918  
  
7950  
  
7976  
7980  
  
8000  
8011  
8015  
  
8050  
8050  
8056  
8062  
8066  
  
8100  
  
8150



ONE MINUTE  
INTERVAL MARKER

18" NORMAL

40" IND. CONDUCTIVITY

40" IND. RESISTIVITY

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

33461 X	44051 X	18765 X				
6	5		4	3	2	1
X	X	X				
33306	26397	32999				
42074 X	35454 X	32946 X				
7	8		9	10	11	12
12938 X	X	X				
28238	45074	61585				
	41114 X	29948 X	80942 X			
18	17		16	15	14	13
X			X			
35901			40643			
28565 X	32754 X	19738 X	26583 X			
19	20	21	22	23	24	
X	X	X	X			
45024	20123	30987	17484			
58457 X	29567 X	35459 X	79092 X	12189 X		
30	29		28	27	26	25
X	X	X	X	X		
46374	82387	25930	93760	14148		

1975 PRODUCTION FROM TAPACITO PICTURED CLIFFS POOL

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
Appel EXHIBIT NO. 6-A  
CASE NO. 5851

JEROME P. McHUGH  
APPLICATION FOR DOWNHOLE COMMINGLING  
TRIBAL #2 WELL  
RIO ARriba COUNTY, NEW MEXICO  
CASE 5851  
EXHIBIT 6-A



TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

43556 X	36739 X			59840 X	212348 X	5312 X
6		5	4	3	2	1
		20792 X			X 85463	X 155365
	15302 X			49746 X	23457 X	
7		8	9	10	11	12
X 35625		X 14277			X 37497	X 58834
		1048 X	+		2390 X	+
18		17	16	15	14	13
					+	X 15395
	46400 X	11107 X			6734 X	589 X
19		20	21	22	23	24
X 1580		X 45205	X 28864			X 815
		53434 X	1259 X			
30		29	28	27	26	25
			X 31972	X 3495		

1975 PRODUCTION FROM BLANCO-MESAVERDE POOL

BEFORE EXAMINER NUTTER  
OIL CONSERVATION DIVISION  
Appr. 5851 7-B  
CASE NO. 5851

JEROME P. McHUGH  
APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #2 WELL  
RIO ARriba COUNTY, NEW MEXICO

CASE 5851

EXHIBIT 7-A



TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	6 X 49186 X 32181	5 +	4	3	2	1
	7 X 30920	8 35765 X	9 X 3219	10	11	12
	18 33755 X 26933	17 31292 X 42122	16 X 1139 +	15	14	13
	19 +	20 X 19643 +	21	22	23	24
	30 X 2683	29	28	27	26	25

1975 PRODUCTION FROM BASIN DAKOTA POOL

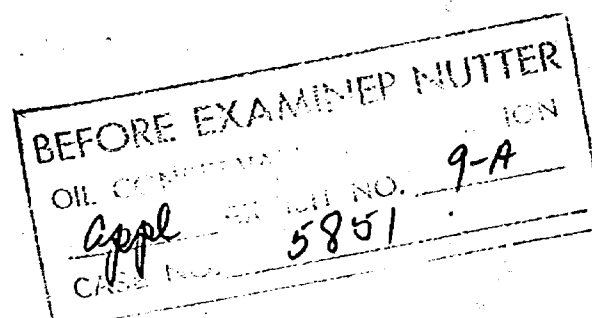
BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
Appl EXHIBIT NO. 8-A  
CASE NO. 5851

JEROME P. MCHUGH  
APPLICATION FOR DOWNHOLE COMMINGLING  
TRIBAL #2 WELL  
RIO ARriba COUNTY, NEW MEXICO  
CASE 5851  
EXHIBIT 8-A

SHUT-IN PRESSURES

Tribal #2 Well

<u>Date</u>	<u>Casing Pressure</u>
6/15/70	2240
9/9/70	1562
5/6/71	1052
5/8/72	882
5/4/73	622
6/14/74	525



JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

TRIBAL #2 WELL  
L Section 9, T26N, R3W  
Rio Arriba County, New Mexico

CASE 5851

EXHIBIT 9-A

- CASE 5845: Application of Texaco Inc. for an unorthodox location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Navajo Tribe "BS" Well No. 5 to be drilled 1340 feet from the South line and 1300 feet from the West line of Section 23, Township 26 North, Range 18 West, Tootie Dome Penn "D" Pool, San Juan County, New Mexico.
- CASE 5846: Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its South Empire Deep Unit Well No. 13 to be drilled 660 feet from the South line and 1597 feet from the West line of Section 30, Township 17 South, Range 29 East, South Empire Field, Eddy County, New Mexico, the S/2 of said Section 30 to be dedicated to the well.
- CASE 5810: (Continued from the January 19, 1977, Examiner Hearing)
- Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Stonewall "EP" Com Well No. 1, located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico, to produce gas from the North Burton Flat-Wolfcamp Gas Pool and an undesignated Morrow gas pool.
- CASE 5847: Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Gossett "EU" Well No. 1, located in Unit K of Section 26, Township 17 South, Range 25 East, Eddy County, New Mexico, in such a manner as to produce gas from the Lower Wolfcamp or Upper Pennsylvanian and the Lower Pennsylvanian formations through the casing-tubing annulus and tubing, respectively.
- CASE 5848: Application of Yates Petroleum 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 Pipkin HE Well No. 1 to be drilled 660 feet from the South and West lines of Section 4, Township 18 South, Range 25 East, Eddy County, New Mexico, the S/2 of said Section 4 to be dedicated to the well.
- CASE 5849: Application of King Resources Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Long Canyon Unit Area comprising 18,880 acres, more or less, of State and Federal lands in Townships 19 and 20 South, Ranges 19 and 20 East, Chaves County, New Mexico.
- CASE 5850: Application of Pennzoil Company for adoption of pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the adoption of pool rules for the North Mesalero-Cisco Pool, Lea County, New Mexico, including provision for a special gas-oil ratio limit of 4,500 to one.
- CASE 5117: (Reopened)
- In the matter of Case 5117 being reopened pursuant to the provisions of Order No. R-4691-A, which order extended the temporary special pool rules for the North Dagger Draw-Upper Pennsylvanian Pool, Eddy County, New Mexico. All interested parties may appear and show cause why said North Dagger Draw-Upper Pennsylvanian Pool should not be developed on less than 160-acre proration units and why the special depth bracket allowable should be retained.
- CASE 5851: Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tapacito-Pictured Cliffs, Blanco Mesaverde, and Basin-Dakota production in the wellbore of his Tribal Wells Nos. 1 and 2 located in Unit D of Section 16 and Unit L of Section 9, respectively, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5832: Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Wildhorse-Gallup and Basin-Dakota production in the wellbore of his Apache Wells Nos. 3 and 4, located in Units D and L, respectively, of Section 19, Township 26 North, Range 3 West, Rio Arriba County, New Mexico.
- CASE 5853: Application of Carl Engwall for an exception to casing and cementing requirements of Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing and cementing requirements of Order No. R-111-A to eliminate the salt protection casing string in a well he proposes to drill in Unit L of Section 27, Township 20 South, Range 34 East, Lynch-Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 5854: Application of Palmer Oil and Gas Company for an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Stevenson Well No. 2 to be drilled 1850 feet from the North line and 1150 feet from the West line of Section 8, Township 26 North, Range 2 West, Blanco-Mesaverde Pool, Rio Arriba County, New Mexico, the N/2 of said Section 8 to be dedicated to the well.

dp

dugan production corp.

DEC 3 - 1976  
OIL CONSERVATION COMM.  
Santa Fe

December 2, 1976

Joe Ramey  
Secretary - Director  
N. M. Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, NM 87501

Re: Downhole Commingling of Tribal #1 and #2 Wells and Apache #3 and #4 Wells

Dear Mr. Ramey:

Enclosed are replacement applications in duplicate for the downhole commingling of the captioned wells. Apparently the original applications were lost in the mail.

Please note we are requesting these applications be set for hearing on February 2, 1977.

If you need further information or assistance, please advise.

Sincerely,

*Richard Tully*

Richard Tully  
General Counsel

pt

Enclosures

dp dugan production corp.

November 23, 1976

Joe D. Ramey  
Secretary - Director  
New Mexico Oil Conservation Commission  
Box 2088  
Santa Fe, NM 87501

Re: Applications for Approval for Downhole Commingling of the Tribal #1,  
Tribal #2, Apache #3, and Apache #4 Wells in Rio Arriba County,  
New Mexico

Dear Mr. Ramey:

Enclosed are the following items concerning the captioned Applications for  
downhole commingling of the Tribal #1, Tribal #2, Apache #3, and Apache #4  
Wells:

1. Two copies of the Application for Approval for Downhole  
Commingling for each of these four wells as well as a Certificate of Mailing  
for each well stating that all operators of leases offsetting the dedicated  
acreage for each well, the USGS, and the Supervisor of the District III Office  
of the Oil Conservation Commission have been sent copies of these Applications.

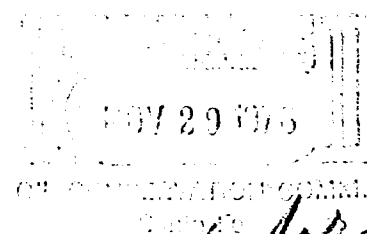
Please set these Applications for hearing on December 15, 1976, if possible.

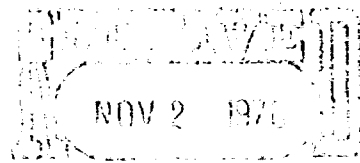
Sincerely,

*Richard T. C. Tully*  
Richard T. C. Tully  
General Counsel

pt

Enclosures





OIL CONSERVATION COMM.  
Santa Fe

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

Case 5851

In the Matter of the Application of  
Jerome P. McHugh for Downhole Commingling  
of the Tribal #1 Well in Rio Arriba County,  
New Mexico

APPLICATION

Pursuant to Rule 303 C of the State of New Mexico Oil Conservation Commission Rules and Regulations, the Applicant, Jerome P. McHugh, by and through his attorney, Richard T. C. Tully, hereby makes application for approval of downhole commingling in the well bore of the Tribal #1 Well in Rio Arriba County, New Mexico.

The Applicant further states:

1. The Operator of the Tribal #1 Well is the Applicant, Jerome P. McHugh.
2. The Tribal #1 Well is located on the Jicarilla Tribal Contract No. 116 insofar as it covers the following described lands:

Township 26 North, Range 3 West, NMPM  
Section 16: W/2  
Rio Arriba County, New Mexico

3. The legal location of the well is as follows:

Township 26 North, Range 3 West, NMPM  
Section 16: 870' FNL - 920' FWL (Unit Letter D)  
Rio Arriba County, New Mexico

4. The Tribal #1 Well is currently completed in the Basin Dakota Pool.

5. The Tribal #1 Well is capable of only low marginal production from the Tapacito Pictured Cliffs Pool, the well is also capable of only low marginal production from the Blanco Mesa Verde Pool, and the well is also capable of only low marginal production from the Basin Dakota Pool.

6. The ownership of the above mentioned pools is common.

7. The proposed commingling from the above three pools will result in the recovery of additional hydrocarbons from each of the mentioned pools, thereby preventing waste, and the commingling will not violate correlative rights.

# 1016-26-3

WHEREFORE, the Applicant requests this Application be set for hearing on December 15, 1976; and after this hearing the New Mexico Oil Conservation Commission grant this Application by giving approval to the downhole commingling of the Tribal #1 Well in Rio Arriba County, New Mexico.

Respectfully submitted,

*Richard T. C. Tully*

Richard T. C. Tully  
Attorney for Applicant  
P. O. Box 234  
Farmington, New Mexico 87401

CERTIFICATE OF MAILING

I certify that I mailed a copy of the Application for Downhole Commingling for the Tribal #1 Well in Rio Arriba County, New Mexico to all operators of leases offsetting the dedicated acreage for this well, the U. S. Geological Survey, and the Supervisor of the District III Office of the Oil Conservation Commission.

*Richard T. C. Tully*

Richard T. C. Tully  
Attorney for Applicant  
P. O. Box 234  
Farmington, New Mexico 87401

ROUGH

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. 5851

Order No. R- 5409

APPLICATION OF JEROME P. MCHUGH  
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 February 2,  
19 77, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this April day of February, 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, Jerome P. McHugh, is the  
owner and operator of the Tribal Wells Nos. 1 and 2, located  
in Unit D of Section 16, Township 26 North, Range  
3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Blanco Mesaverde  
and to commingle Basin-Dakota  
Tapacito-Pictured Cliffs, and Blanco Mesaverde, and production  
in the wellbore of the aforesaid Tribal Well No. 2.

(4) That from the Tapacito-Pictured Cliffs zone, the  
aforesaid Well No. 2  
subject well is capable of low marginal production only.

(5) That from the Blanco Mesaverde zone, each of  
subject wells is capable of low marginal production only.

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

(7) That from the Basin-Dakota zone, each of the subject wells is  
capable of low marginal production only.

and Basin-Dakota production in the wellbore of the aforesaid Tribal Well No. 1.



Blanco Mesaverde and Basin-Dakota production within the wellbore of his Tribal Well No. 1, located in Unit D of Section 9, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico, and to commingle 16

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(8) 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 wells <sup>are</sup> ~~is~~ not shut-in for an extended period.

(9) 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 <sup>either of</sup> ~~the~~ subject wells is shut-in for 7 consecutive days.

(10) That in order to allocate the commingled production to each of the commingled zones in the ~~subject wells~~, <sup>applicant should consult with the supervisor of the Aztec District Office of the Commission and determine an allocation formula for each of the</sup> ~~production shall be allocated to the Tapacito-Pictured Cliffs zone, and~~ <sup>production zones.</sup> ~~percent of the commingled production to the Blanco Mesaverde zone, and~~ <sup>percent of the commingled production to the Basin-Dakota zone.</sup>

IT IS THEREFORE ORDERED:

(1) That the applicant, Jerome P. McHugh, is hereby authorized to commingle Tapacito-Pictured Cliffs, and ~~Blanco Mesaverde and Basin-Dakota~~ production within the wellbore of <sup>his</sup> ~~the~~ Tribal Well No. ~~1~~ 2, located in Unit ~~1~~ <sup>L of</sup> ~~Section 9, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.~~

(2) That <sup>the applicant shall consult with the Supervisor of the Aztec District Office of the Commission and determine an allocation formula for the</sup> ~~the applicant shall consult with the Supervisor of the Aztec District Office of the Commission and determine an allocation formula for the~~ <sup>production shall be allocated to the Tapacito-Pictured Cliffs zone, and</sup> ~~production shall be allocated to the Tapacito-Pictured Cliffs zone, and~~ <sup>percent of the commingled production shall be allocated to the Blanco Mesaverde zone, and</sup> ~~percent of the commingled production shall be allocated to the Blanco Mesaverde zone, and~~ <sup>percent of the commingled production shall be allocated to the Basin-Dakota zone.</sup>

(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.