

CASE 5852: JEROME P. MCHUGH FOR DOWN-
HOLE COMMINGLING, RIO ARriba COUNTY, NEW
MEXICO

CASE NO.

5852

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. 5852
ORDER NO. R-5410

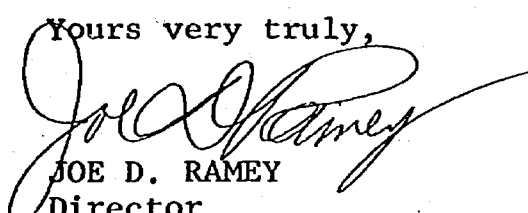
Applicant:

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 x
Artesia OCC x
Aztec OCC x

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. 5852
Order No. R-5410

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 Apache Wells Nos. 3 and 4, located in Units D and L, respectively, of Section 19, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle Wildhorse-Gallup and Basin-Dakota production from the above-described Well No. 3 at the surface and to commingle Wildhorse-Gallup and Basin-Dakota production within the wellbore of the above-described Well No. 4.

(4) That from the Wildhorse-Gallup zone, each of the subject wells is capable of low marginal production only.

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

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Case No. 5852
Order No. R-5410

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

(7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the wells are 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 aforesaid Apache Well No. 4 is shut-in for 7 consecutive days.

(9) That in order to allocate the commingled production to each of the commingled zones in the aforesaid Well No. 3, applicant should conduct semi-annual productivity tests on each of the productive zones; in order to allocate the commingled production to each of the commingled zones in the aforesaid Well No. 4, applicant should consult with the supervisor of the Aztec District Office of the Commission and determine an allocation formula.

IT IS THEREFORE ORDERED:

(1) That the applicant, Jerome P. McHugh, is hereby authorized to commingle Wildhorse-Gallup and Basin-Dakota production from his Apache Wells Nos. 3 and 4, located in Units D and L, respectively, of Section 19, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico, said production being commingled at the surface in the aforesaid Well No. 3, and in the wellbore of the aforesaid Well No. 4.

(2) That production from each of the commingled zones in the aforesaid Well No. 3 shall be determined on the basis of semi-annual productivity tests on each of the zones; and that the applicant shall consult with the Supervisor of the Aztec District Office of the Commission and determine an allocation formula for each zone in the aforesaid Well No. 4.

(3) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the aforesaid Apache Well No. 4 has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.

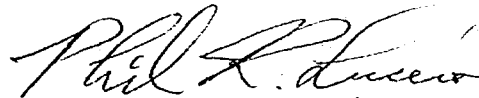
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Case No. 5852
Order No. R-5410

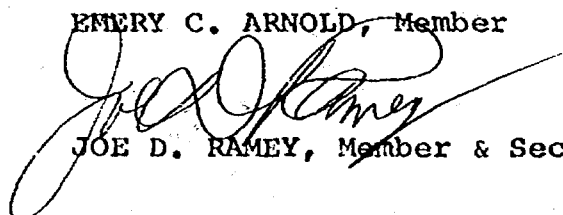
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member


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) 5852
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 5852.

2 MS. TESCHENDORF: Case 5852, application of Jerome
3 P. McHugh for downhole commingling, Rio Arriba County,
4 New Mexico.

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

8 MR. NUTTER: The record will show that Mr. Dugan is
9 still under oath. Please proceed.

10
11 THOMAS A. DUGAN

12 called as a witness, having been previously sworn, was
13 examined and testified as follows:

14
15 DIRECT EXAMINATION

16 BY MR. TULLY:

17 Q I'm now handing you an application for the downhole
18 commingling of the Apache No. 3 Well, would you identify this
19 and state the purpose of it, please?

20 A Okay, the Apache No. 3 Well is a dual completion in
21 the Gallup and Dakota formations and the Dakota formation is
22 a pretty poor well but the Gallup formation has been a real
23 good well but the bottom-hole pressure apparently has declined
24 enough to have caused problems in the production of the well
25 and we are seeking to commingle the production from these two

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1 zones.

2 Q Referring now to Exhibit Number One would you
3 identify it, please?

4 A Okay, Exhibit Number One is again a map showing the
5 location of the Apache 3 Well and other wells in the area. It
6 also indicates that it is a Gallup dual, also showing the
7 proration units of the two formations.

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

9 A Yes.

10 Q And is this on a Jicarilla Tribal Contract lease
11 also?

12 A Yes, it is.

13 Q Referring now to Exhibit Number Two, would you
14 identify this, please?

15 A Okay, this is a copy of our well history,
16 showing the daily report during the drilling and completion
17 of the well, showing how the well was completed in both
18 formations.

19 Q Referring now to Exhibit Number Three, identify that,
20 please?

21 A This is a copy of our sketch showing the dual
22 completion of the well that was filed with the application
23 for a dual completion originally.

24 Q What method of commingling do you propose if
25 this application is approved using this sketch?

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1 A. Well, in this particular well, let's go on to this
2 next exhibit and I'll explain what we have done up to now. As
3 you can see in Exhibit Four, the Gallup zone was a very good
4 well. These figures should be multiplied by ten, so the well
5 started out making better than a million a day and thirty
6 million a month and then declined to seven million a month
7 there in 1975 and then started logging off -- we started having
8 problems producing the well because of the associated liquid
9 oil and a small amount of water with the gas production, I
10 assume, and that the bottom-hole pressure declined enough so
11 that the well ceased to produce against the existing line
12 pressure and that's when we started studying what we should do
13 to get the well back.

14 In the fall of 1976 we installed a wellhead compressor
15 on the Gallup zone and you can see that this was very success-
16 ful in that we got the well to producing and lifting the liquids
17 on its own so it has, in fact, been producing around eight
18 million a month and it's quite successful.

19 If you will look at Exhibit Five, this is the decline
20 curve for the Dakota formation and you can note that the
21 Dakota formation has not performed well. It also produces a
22 considerable amount of -- well, I shouldn't say -- it produces
23 a small amount of water but it also produces a small amount of
24 gas and it's not able to lift the small amount of water that
25 it produces so what we would like to do on this well is

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1 commingle the production from both zones in front of the
2 compressor so that we can compress the gas from both zones
3 without measuring them separately through the compressor and
4 try to get some additional production from the Dakota forma-
5 tion in this manner and utilize our compressor in a little
6 better fashion also.

7 MR. NUTTER: Is the scale on this Exhibit Five times
8 ten also?

9 A. No, I'm afraid not.

10 MR. NUTTER: It's just straight?

11 Q (Mr. Tully continuing.) Do you propose to amend
12 this application to provide for commingling on the surface,
13 is that correct?

14 A. In this particular well, yes, we do. The Gallup
15 production is doing real well right now.

16 Q And Exhibit Number Six?

17 A. This is a Xerox copy of the New Mexico Oil and Gas
18 Engineering Committee Annual Report and it again shows the
19 production from both zones -- the 1975 production from
20 both zones.

21 Q And Exhibit Number Seven?

22 A. This shows the 1975 production from the Wildhorse-
23 Gallup Pool, the other wells in the pool. You will note
24 that the wells to the west are producing real well at this
25 time, in 1975.

1 Q And Exhibit Number Eight?

2 A Exhibit Number Eight is production from the Basin-
3 Dakota Pool and shows that these two wells -- the Apache 3 Well
4 isn't doing too well as compared to the offset wells.

5 Q And Exhibit Number Nine?

6 A This is showing the shut-in pressures from both
7 zones on the Apache 3 Well.

8 MR. TULLY: If it's all right I'll go ahead and go
9 through the Apache 4 in the same way with the A designation.

10 MR. NUTTER: That's fine.

11 Q (Mr. Tully continuing.) I'm now handing you the
12 application for the Apache No. 4 Well for downhole commingling.
13 Would you identify this, please and state its purpose?

14 A Okay. We have asked to commingle the gas production
15 from the Gallup and Dakota formations in the Apache 4 Well
16 downhole. Here again the Gallup formation was a very success-
17 ful completion. The Dakota formation was a marginal
18 completion and what we hoped to do was commingle the two
19 zones downhole and have enough gas velocity to lift produced
20 liquids from both zones.

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

22 A Yes.

23 Q And it's also located on a Jicarilla Apache Tribal
24 lease?

25 A Yes.

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1 Q And Exhibit One-A, would you identify One-A, please?

2 A That One again is a copy of a map showing the
3 location of the Apache 4 Well, the proration unit and the
4 offset wells.

5 Q And this well is immediately south of the Apache
6 No. 3?

7 A Yes.

8 Q Exhibit Two-A, would you identify this, please?

9 A This is a copy of our daily drilling report that
10 shows how the well was drilled and completed.

11 Q Exhibit Three-A?

12 A This is a copy of the sketch on the dual completion
13 and was part of the application, or previous application to
14 dual the well.

15 Q Exhibit Four-A?

16 A Okay, this is a copy of our decline curve on the
17 Apache 4 Gallup. It shows that the well produced very well
18 through 1973 and we started having problems with it logging
19 off in the middle of '74 and had problems keeping the well
20 producing through '75 and '76 undoubtedly because we were not
21 able to lift the produced fluids and the well stays logged
22 off.

23 Q The gas production on this particular exhibit, should
24 it be multiplied by ten?

25 A Yes.

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1 Q Referring now to Exhibit Five-A?

2 A This is a decline curve of the Dakota zone and
3 it indicates that its production is fairly constant when we
4 could keep it unloaded, except it only makes around three
5 hundred MCF a month, ten MCF a day.

6 Q And this exhibit is not to be multiplied by ten for
7 gas production?

8 A No.

9 Q Exhibit Six-A?

10 A This again is a Xerox of the New Mexico Oil and Gas
11 Engineering Committee Annual Report showing both zones of the
12 Apache 4 Well and showing what the annual cumulative production
13 is.

14 Q And Exhibit Seven-A?

15 A This shows the other wells in the Wildhorse-Gallup
16 Pool or the closest wells in the Wildhorse-Gallup Pool and
17 their 1975 production, here again showing that the wells to
18 the west are still producing well in 1975.

19 Q And Exhibit Eight-A?

20 A This shows the 1975 production from the Basin-Dakota
21 Pool on offset wells and shows that this well is a rather
22 marginal well.

23 Q Referring back now to the sketch of the dual
24 completion, what method do you propose to use for commingling?

25 A Well, we would like to perforate the Dakota tubing

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1 string just below the Gallup formation and attempt to
2 produce both zones through the Dakota tubing string. We hope
3 that the gas production from the Dakota will be enough to
4 assist in lifting the produced fluids from the Gallup formation
5 and get the well back to producing at a more steady rate. That
6 would be our first approach.

7 The second, if that is unsuccessful, the next
8 approach would be to pull the inch and a quarter tubing
9 strings and attempt to lift the produced fluids from both
10 zones by pumping the well and that way we could get the produced
11 fluids out of the well by pumping and increase our gas
12 production.

13 Q Referring now to Exhibit Nine-A would you identify
14 that, please?

15 A That is a tabulation of the shut-in pressures from
16 the Apache 4 Well, both zones.

17 Q Were these exhibits prepared under your supervision?

18 A Yes.

19 Q Okay. Is it your understanding that the ownership
20 of the zones which you plan to commingle in these two wells
21 is common?

22 A Yes.

23 Q And in your professional opinion will the total
24 value of the gas be reduced or increased by this commingling?

25 A We hope to increase the gas production and increase

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1 the total revenue from the well.

2 Q Okay, referring back now to the production decline
3 curves on both of these wells, what reasonable allocation of
4 the commingled production do you propose, bearing in mind that
5 the Apache No. 3 will be commingled on the surface, do you
6 plan to meter that separately or not?

7 A We don't want to meter it separately on the Apache 3
8 but we could take some tests of each zone by shutting in one
9 zone and seeing how the other zone is producing and determine
10 very accurately how much each zone is producing and allocate
11 the production in that manner, on the 3. On the 4 where we
12 would be commingling downhole, here again I had in mind of
13 giving the first three hundred MCF a month to the Dakota
14 formation and the remainder of the gas and all of the oil to
15 the Gallup formation.

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

20 A Yes.

21 MR. TULLY: At this time we move for the introduction
22 of Exhibits One through Nine for the Apache No. 3 Well and
23 Exhibits One-A through Nine-A for the Apache No. 4 Well into
24 evidence.

25 MR. NUTTER: Exhibits One through Nine and One-A

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1 through Nine-A will be admitted into evidence.

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

6 CROSS EXAMINATION

7 BY MR. NUTTER:

8 Q Mr. Dugan, now what you are proposing on this
9 Apache No. 3 is to make no alterations to the existing down-
10 hole equipment at all but simply to commingle the two
11 streams at the surface so you can run them through a common
12 compressor, is that right?

13 A Yes, sir, that's right.

14 Q What do those little compressors cost, Mr. Dugan?

15 A In this case it was sixty thousand dollars.

16 Q And it handles only that one well?

17 A Yes, sir. The Ajax DPC-60, sixty horsepower
18 compressor. It's pretty expensive but in this case it was
19 a good investment.

20 Q And then on the other well you would have two
21 choices, either to perforate the long string of tubing or
22 pull both strings and run another string with it, a seating
23 nipple in it and pump?

24 A Yeah. We did set an individual well compressor on
25 the 4 this last fall and attempted to produce it by compressing

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1 the gas from the Gallup formation similar to what we did on
2 the 3 and we were unsuccessful in getting the well to produce
3 because it won't lift the produced liquids. I'm sure the well
4 will go back to producing three or four million MCF a month
5 from the Gallup formation if we could lift the produced fluids
6 but we haven't been able to do that so our first approach would
7 be to try to commingle the zones downhole and hope that the
8 Dakota gas would assist in lifting the produced fluids from
9 the Gallup formation and keep the well from logging off. If
10 this is unsuccessful then we would want to try to pump the
11 well.

12 Q You are only making about ten MCF a day though out
13 of the Dakota formation?

14 A Yeah, I know but it has got a little more pressure
15 and --

16 Q That little dribble of gas might --

17 A It might, it's a little doubtful.

18 Q You want to try it anyway?

19 A Yeah, that's what we want to do is try it.

20 MR. NUTTER: Are there any further questions of
21 Mr. Dugan? He may be excused.

22 (THEREUPON, the witness was excused.)

23 MR. NUTTER: Do you have anything further in this
24 case, Mr. Tully?

25 MR. TULLY: No, sir.

1 MR. NUTTER: Does anyone have anything they wish to
2 offer in Case Number 5852?

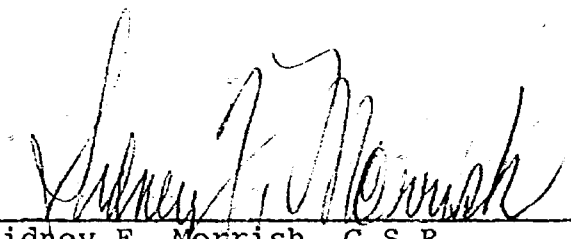
3 We will take the case under advisement.
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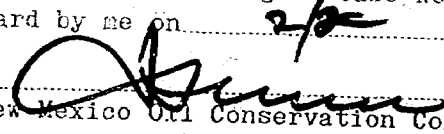
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REPORTER'S CERTIFICATE

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.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5852
heard by me on 2/2, 1977.
 Examiner
New Mexico Oil Conservation Commission

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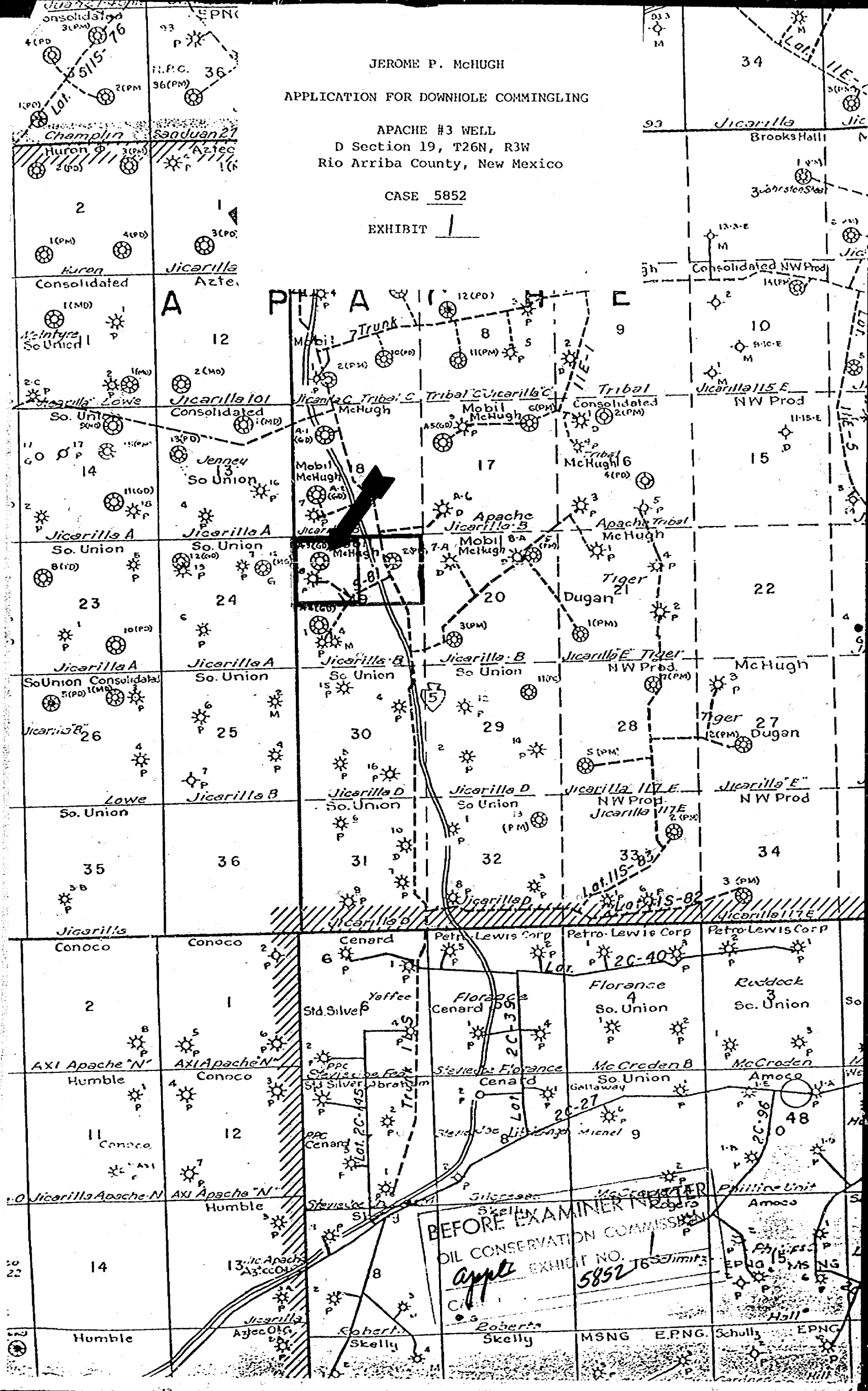
JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
D Section 19, T26N, R3W
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 1



• JEROME P. McHUGH
APPLICATION FOR
DOWNHOLE COMMINGLING

APACHE #3 WELL
D Section 19, T26N, R3W
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 2

RESUME OF APACHE #3 WELL COMPLETION HISTORY

5-4-69 Spudded 5:15 PM 5-3-69. Drilled 12-1/4" hole to 213'. Ran 7 jts 8-5/8" OD 24# J-55 8R csg set @ 211' RKB. Cemented with 175 sx Class "A" 2% CaCl. POB 9:30 PM, cement circulated. WOC.

5-5-69 Drilling @ 1941' with water.

5-6-69 Drilling @ 3495' with water.

5-7-69 Drilling @ 4398' with mud. WT 8.9, VIS 36.

5-8-69 Drilling @ 4750'. WT 8.9, VIS 35.

5-9-69 Trip @ 5072'. WT 9.1, VIS 41.

5-10-69 Drilling @ 5342'. WT 8.9, VIS 37.

5-11-69 Drilling @ 5670'. WT 9.1, VIS 37.

5-12-69 Drilling @ 5880'. WT 9.0, VIS 38, LCM 14%.

5-13-69 Trip @ 6062'. WT 9.1, VIS 40, LCM 15%.

5-14-69 Drilling @ 6402'. WT 9.0, VIS 40, LCM 7%.

5-15-69 Trip @ 6908'. WT 9.1, VIS 40, LCM 5%.

5-16-69 Trip @ 7238'. WT 9.2, VIS 40, LCM 5%.

5-17-69 Drilling @ 7470'. WT 9.3, VIS 40.

5-18-69 Trip @ 7844'. WT 9.4, VIS 43.

5-19-69 Drilling @ 7969'. WT 9.1, VIS 42, LCM 5%.

5-20-69 TD 8100'. WT 9.3, VIS 68.

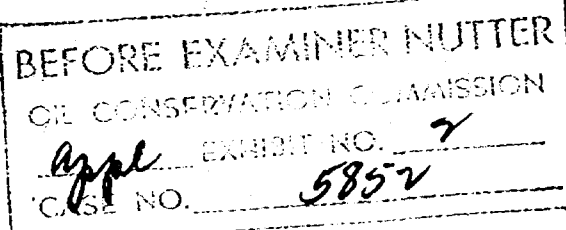
5-21-69 TD 8100'. Log stopped @ 2492', trip in hole to knock out bridges - log stopped @ 7400', went in hole, conditioned mud, ran Schlumberger IES, Density, and Sonic logs. Trip in hole, circulated 1-1/2 hrs, laying down drill pipe.

5-22-69 TD 8100'. Ran 246 jts 5-1/2" OD 14#, 15.5#, and 17# K-55 8R ST&C csg. TE 8112.26' set @ 8090' RKB. Cemented first stage with 125 sx Class "A" 8% gel, 200 sx Class "C" 7-1/2# salt/sk. Good mud returns while cementing. Did not work pipe while cementing. Max cementing pressure 800 psi. POB 5:45 PM. Cemented second stage through Baker stage tool @ 5978' with 100 units HYS-400 with 1/4 cu ft gilsonite per unit. POB 9:25 PM. Good mud returns while cementing. Max cementing pressure 450 psi. Cemented third stage through Baker stage tool @ 3790' with 150 units HYS-400. POB 10:15 PM. Good mud returns while cementing. Max cementing pressure 550 psi.

5-23-69 Moved out Arapahoe Rig #7.

6-17-69 TD 8100'. Moved in Signal Rig #1. Picked up 2-3/8" tbq, drilled Baker stage tool @ 3790'.

6-18-69 PBTD 8070'. Drilled Baker stage tool @ 5978'. Cleaned out to 8070'. Circulated hole, pressure tested csg and BOP to 4000 psi - held OK. Spotted 300 gals 15% HCl acid on bottom, pulled out of hole. Jet-Tech ran Gamma-Ray Correlation log. Perforated 2 jets/ft 7876-7888', 8010-8014', 8020-8024', 8050-8058'. Dowell frac Dakota with 60,000# 20-40 sd, 1790 bbls water with 2-1/2# J-166/1000 gals. Breakdown 2500 psi, IF 3000 psi, Avg 3000 psi,



Max and Final 3500 psi. Instant SI 2000 psi, 5-Min SI 2000 psi, Avg IR 55 B/M. Made 2 ball drops of 10 balls each, good pressure increase with each drop. Set bridge plug @ 7590'. Perforated 2 jets/ft 7410-7419'. Frac Gallup with 30,000# 20-40 sd, 735 bbls water with 2-1/2# J-166/1000 gals. Spearheaded frac with 400 gals 15% acidic acid. IF 3000 psi, Avg 2500 psi, Min 1600 psi, Final 1800 psi, Instant SI 1000 psi, 5-Min SI 900 psi, Avg IR 55 B/M.

- 6-19-69 PBTD 8070'. Rigged down Dowell, went in hole with bit, lost circulation while drilling bridge plug, wait on water. Drilled bridge plug, cleaned out to 8070'. Circulated hole, pulled tbg above Gallup perfs. Well flowing by heads, injected soap down tbg.
- 6-20-69 PBTD 8070'. Cleaned out sand to 8070'. Laid down 2-3/8" tbg, ran Baker Model "D" packer on Go International wire line, set @ 7849'. Ran 247 jts 1-1/4" OD 2.4# JCW 10R EUE tbg with seal assembly and blast joints. TE 7995.43' set @ 8003' RKB.
- 6-21-69 PBTD 8070'. Ran 230 jts 1-1/4" OD 2.4# JCW 10R EUE tbg set @ 7424' RKB. Pumped out tbg plugs, flanged up well head, released rig.
- 6-26-69 Swabbing Gallup and Dakota formations.
- 6-27-69 Swabbing.
- 6-28-69 Swabbing.
- 6-29-69 Swabbing.
- 6-30-69 Unable to get Dakota to unload. Gallup flowing est 800 MCFGPD.
- 7-11-69 Swabbed Dakota tbg, well kicked off flowing est 700 MCFGPD.

DIAGRAMMATIC SKETCH OF DUAL COMPLETION

Apache #3 Well

Township 26 North, Range 3 West, NMPM

Section 19: 990' FNL - 990' FWL

Rio Arriba County, New Mexico

8-5/8" OD Casing set @ 211'
Cemented with 175 sx.

Stage Tool at 3790'
Cemented with 900 Cu. Ft.

Stage Tool at 5978'
Cemented with 600 Cu. Ft.

Gallup
Tbg.
1-1/4" OD
2.4# JCW
Tbg. @
7424'

Top of Gallup 6793'

Gallup Perf. 7410-19'

Base Gallup 7510'

Top of Dakota 7975'

Dakota Perf. 7876-88'

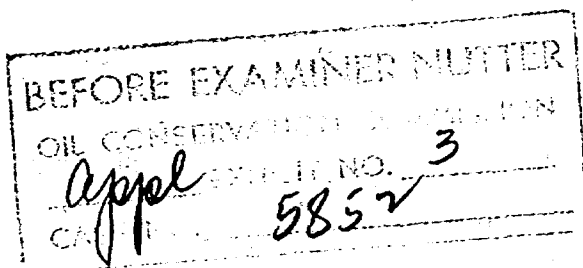
8010-14'

8020-24'

8050-58'

Baker Model "D" Packer 7849'

Dakota
Tbg.
1-1/4" OD
2.4# JCW
Tbg. @
8003'



JEROME P. McHUGH

APPLICATION FOR
DOWNHOLE COMMINGLING

CASE 5852

EXHIBIT 3

PBTD 8070'

5-1/2" OD Casing Set @ 8090'

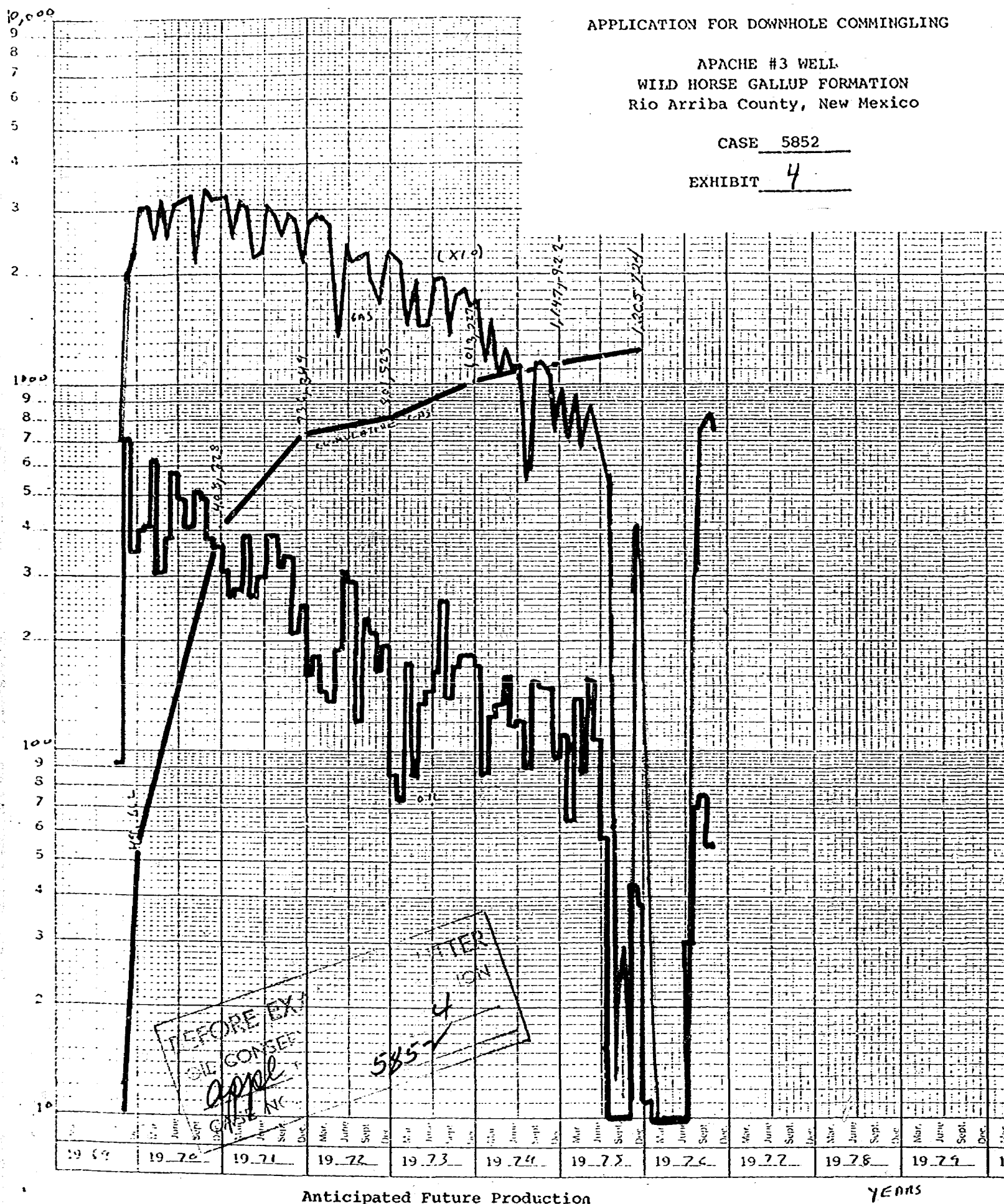
First Stage Cemented with 510 Cu. Ft.

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
WILD HORSE GALLUP FORMATION
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 4



Anticipated Future Production

YEARS

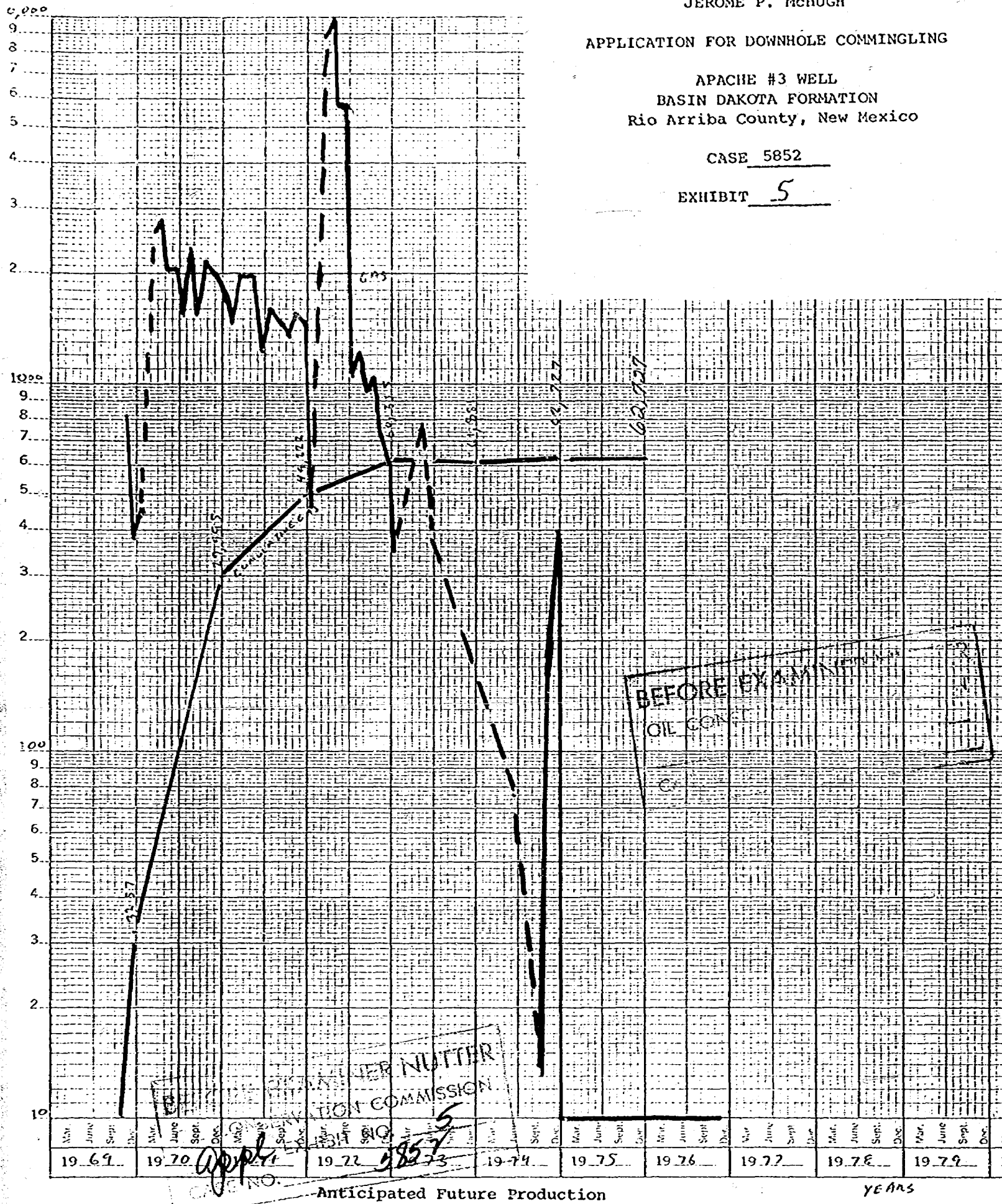
JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
BASIN DAKOTA FORMATION
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 5



JEROME P. MCHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL

CASE 5852

EXHIBIT 6

ANNUAL REPORT

OF THE

NEW MEXICO OIL & GAS ENGINEERING
COMMITTEE

HOBBS, NEW MEXICO

VOLUME II

Northwest New Mexico

1975

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Appl EXHIBIT NO. 6
CASE NO. 5852

WELL S. E. R.	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCU.
16L2029N 9W GAS	2438	1807	2317	2250	1829	1322	2139	1962	1521	1753	1576	1463	22407	69497
17P 126N 8W GAS	2711	2094	3334	3438	2251	2217	3394	3556	3231	2865	2825	1886	33889	50813
18M 126N 8W GAS	4027	2534	3853	3659	3128	2709	3423	3234	3123	2482	2213	1487	35074	75016
19C1226N 8W GAS	9489	8972	8961	11152	8746	7111	9208	8872	9084	8331	8844	6286	104409	221302
20P1226N 8W GAS	9152	7142	8870	7002	6137	5253	8819	5445	5445	5545	5929	4130	79233	97284
21L3127N 7W GAS	7958	5251	6311	4533	4539	3854	5042	4426	4120	4185	4055	3116	51793	71764
26N 730N 8W GAS	114	93	69	83	55	65	54	43	52	53	37	10	1176	1176
27P1226N 8W GAS	14782	14782	9815	9815	9317	7190	8712	8237	7742	7134	7261	5449	101189	101189
LIVELY COM	3559	3890	2810	2075	3787	3145	3312	3165	2213	3405	2156	2729	37454	101958
15H3230N 8W GAS	4047	3863	2320	2075	3787	3145	3312	3165	2213	3405	2156	2729	37454	101958
COMPANY TOTAL	95895	90820	101411	94552	105727	94842	104261	95188	82124	94003	90409	63145	1132343	3274292
LYNCO OIL CORPORATION														
DICK MOUNTAIN	102	689	344	16	356	439	2998	445	1519	2168	263	86	9475	373835
2H 130N14W GAS				130	495	2768	3993	711	1413	1766	170	2465	14666	157697
SCHUMACHER	15098	10507	13582	10069	14127	8895	14703	13626	13245	12911	8690	12944	148397	205009
COMPANY TOTAL	15200	11196	13966	10215	14988	12102	21694	14782	16177	16845	9878	15495	172538	10922
M AND M PRODUCTION AND OPERATION														
MEXICO FEDERAL	1481	1853	1883	1682	2260	1467	1336	1169	1452	1114	1518	1489	18704	179157
MARATHON OIL COMPANY														
JICARILLA	4997	4218	5205	4550	5414	4211	915	4651	5081	4092	5488	4685	57518	703823
9A2826N 5W GAS	39458	39350	37574	27182	36138	4923	8923	30879	43012	30879	43012	260313	3216186	3216186
10B2726N 5W GAS	4808	1173	9834	6213	7821	6805	4403	6335	7402	5784	7314	6952	74595	104825
11M2826N 5W GAS	6113	5209	6487	8147	7338	5422	5723	8237	8038	6639	6430	7213	8147	101700
12A3326N 5W GAS	7534	6067	7130	7851	7378	6890	5731	8135	8446	6920	8230	7840	88172	1017636
13M3326N 5W GAS	1696	3955	4939	5151	5059	4537	4274	5300	5637	4822	4724	516	55429	760935
14M3426N 5W GAS	13223	9723	12555	12487	11167	10713	10515	11153	12916	10487	12304	12388	139621	1396888
16I3426N 5W GAS	7914	6243	8337	7581	7534	6829	7348	8310	7937	7037	8636	7229	91100	327806
OHIO GOVT	19440	14299	17656	18218	17443	12859	12006	19592	18057	16071	16679	13331	195687	4289705
2P1226N11W GAS	26917	26216	22645	15026	32265	22939	29641	29641	25121	20845	29046	26000	306412	6564497
OHIO A GOVT	12433	8761	9663	7724	6576	10214	5981	11867	10573	12039	11744	10705	118379	545795
2E2626N11W GAS	16752	11798	14474	14040	13183	12587	9436	14640	15964	14935	14711	14190	167755	380664
3P2626N11W GAS	731	693	776	859	87	50	37	337	72	72	783	510	8646	304470
COMPANY TOTAL	161891	137003	156484	134746	158537	112639	100008	127894	125175	109792	150057	155714	1635880	29648212
T.H. McELVAIN OIL & GAS PROPERTIES														
11I324N 7W GAS	4872	4606	4096	6925	6368	5435	4605	3933	4674	4090	3012	4149	56784	1742728
MILLER, S.	3630	4353	4006	5784	6884	5183	6748	8563	7460	6121	4833	6768	70133	1968431
3M1224N 7W GAS	23	10959	8102	12709	13252	10518	11353	10456	12154	10211	7645	10916	126917	3691159
COMPANY TOTAL	8502	10959	8102	12709	13252	10518	11353	10456	12154	10211	7645	10916	126917	3691159
JEROME P. McHUGH														
APACHE	2708	2338	3007	2698	3244	2572	2323	2688	2939	2923	3224	3091	33755	297960
2L1826N 3W GAS	2595	2173	2726	1879	2732	1795	1928	2223	2374	2072	2569	1866	26933	240408
30I2926N 3W GAS	LAST PROD. DATE 12/74													
4L1926N 3W GAS	2199	3023	3579	2693	3548	2577	1902	58	3938	1904	2872	2999	31292	304997
5E1726N 3W GAS	5431	2725	7157	4705	3526	3542	1693	2155	2926	3701	4539	42122	331837	6929
6M1726N 3W GAS	1939	1582	2698	1819	1220	1095	757	2320	147	1430	2218	15643	200943	200943
7D2026N 3W GAS	882026N 3W GAS	LAST PROD. PRIOR TO 6/73												
BOLIN HARDIE	2202	2483	3188	1603	3100	2889	2944	2521	1877	2957	2805	3303	31872	372026
103429N 8W GAS	3132	3455	3449	3262	3720	4105	4098	3876	3555	3679	2976	4045	43352	474905
FLORANCE	1632	3217	3762	2334	4117	2590	3896	3124	1698	3733	3324	2740	36172	461750
1C2629N 8W GAS	3084	1746	2672	1199	3532	2877	2773	2417	1812	2246	2046	1744	28154	327674
202829N 8W GAS	3392	3195	2765	2747	2570	2682	2536	2194	1673	2103	1936	1913	29828	465251
4M2429N 8W GAS	3174	5305	4436	3853	4347	4612	5329	4845	4441	5283	2814	5376	5381	584496
502328N 8W GAS	8411	6140	8930	8700	6987	7058	5190	8584	8938	7358	5516	9870	91482	1224810
JICARILLA	8854	6190	6691	6656	4822	4213	4283	5324	6330	5994	6912	6712	76041	976227
2L3026N 4W GAS	5402	3382	5372	4823	4051	5087	4730	5384	5988	5126	4304	4792	5844	834328
3D3126N 4W GAS	5020	5190	7291	6939	6441	6373	5086	6828	8415	5780	7002	4677	75422	848137
4L3126N 4W GAS	4744	3179	4942	4608	3952	4725	4165	4465	4552	3795	5071	4891	52701	632315
5D2926N 4W GAS	1809	1380	1811	1418	1528	2118	1617	2321	2097	1849	1677	390	19804	218913
6L2926N 4W GAS	3495	2765	3303	3451	2849	2662	2006	3240	2900	2750	2933	3523	35801	437911
7O3226N 4W GAS	4354	3035	4080	3655	3318	3709	4296	4180	3618	3609	3609	45836	574134	574134
8L3226N 4W GAS	977	728	865	1041	929	1004	776	746	944	739	912	991	10672	161480
MOORE	2486	2692	2804	2429	2330	2469	2977	2805	2812	2738	2100	2559	31191	262064
1A3627N12W GAS	3186	2380	3102	2550	3249	1958	3357	3251	3104	3111	2724	2435	34007	243098
2C2427N13W GAS	6574	5805	8205	8574	6701	7355	8428	6028	7872	7584	7803	6214	87055	459833
3G2326M11W GAS	4181	4732	5238	4410	4687	5957	5326	4763	5757	6320	6623	5630	67017	499814
ONEDA FEDERAL	39	155	265	1038	1954	1965	1652	1782	1491	1945	1770	1786	15904	82258
PINOW	23	79	118	80	71	111	40	103	103	112	54	74	974	5758

SNAKE EYES DAKOTA (GAS)														
DAVIS OIL COMPANY														
EL NOR FEDERAL														
241721N 8W GAS														
PLUGGING APPROVED 1975														
362289														
8114														
JAMES P. DUNIGAN														
SNAKE EYES														
242021N 8W GAS														
PLUGGING APPROVED 1974														
271678														
1737														
JENNECO OIL COMPANY														
SNAKE EYES														
1C2021N 8W GAS														
LAST PROD. PRIOR TO 6/73														
U 37588														
814														
TABLE MESA MISS (GAS) (ABANDONED)														
JOHN F. STAYER														
TABLE MESA														
29H 927N17W GAS														
PLUGGING APPROVED 1973														
1193006														
74398														
TOCITO DOME PENN NORTH (GAS)														
GULF COAST PRODUCING CO														
NAVAJO TOCITO														
1G 926N18W GAS														
1400	1566	6071	815	3329	514	5029	437	395						
OIL		56	191	259	117	110								
411026N18W GAS		3910	9866	3158	1532	994			242	15	19595	19596		
OIL		55	200		93	84					1836	1836		
MAT				19							19460	124373		
											432	3095		
											19			
COMPANY TOTAL OIL		211	391	509	210	496	194	395	40	242	15	2268	4931	
GAS	1400	1566	9981	10681	6487	2048	5029	1431				39058	143969	
MAT				19								19		
TWIN MOUND MESAVERT (ABANDONED)														
PUBCO PETROLEUM CORPORATION														
RUSSELL														
1N 429N14W GAS														
PLUGGING APPROVED 1959														
652995														
4575														
TWIN MOUNDS PICTURED CLIFFS (GAS)														
DUGAN PRODUCTION CORPORATION														
CLINE														
1G3330N14W GAS														
			435	1078	1207	1334	1154	1555	777	97	7637	37821		
MAYRE														
1P3130N14W GAS														
			1127	5098	3698	3686	2635	3093	1999	2222	23858	23858		
COMPANY TOTAL GAS			1562	6176	4905	5020	3789	4648	2776	2619	31495	81679		
MESA PETROLEUM COMPANY														
RUSSELL														
2N3330N14W GAS														
	2224	2368	2019	2098	3036	2766	2593	2765	2035	321	871	23096	1189990	
UTE DOME-DAKOTA (GAS)														
AMOCO PRODUCTION CO														
MOUNTAIN UTE GAS COM C														
1G 131N14W GAS														
5273	4128	5659	3551	2475	2066	2841	3919	5627	7868	6038	3210	52654	194150	
401031N14W GAS	613	1269	1430	1112	1432	1429	1521	1563	1165	1374	1191	902	15031	140360
OIL													70	
MOUNTAIN UTE GAS COM G	956	6061	7260	5071	6318	4458	4110	6437	6790	7645	5782	5069	71657	164977
MOUNTAIN UTE GAS COM I	15523	14550	16197	9246	10019	8880	10711	13278	13168	16451	12189	9027	149039	357684
P AND R	131N14W GAS	2839	3261	2943	3108	2845	2830	2996	3338	3517	3460	3332	3148	37617
UTE INDIANS A	1M3632N14W GAS	1471	1371	3160	3070	1171	3155	3650	3820	3695	2725	27288	99286	
OIL													2830	
2M3632N14W GAS													16430	
3M3632N14W GAS													6528	
5K3532N14W GAS													1266202	
6H 32N14W GAS													668749	
LAST PROD. DATE 02/74														
2657														
3871														
LAST PROD. PRIOR TO 6/73														
5K3532N14W GAS														
6H 32N14W GAS														
LAST PROD. PRIOR TO 6/73														
UTE MOUNTAIN TRIBAL D														
3F1031N14W GAS														
3397	1101	3582	720	1546	1254	1150	1109	738	1305	889	707	17558	395023	
401031N14W GAS	269	168	397	278	249	175	122	117	275	308	366	213	2937	18313
5F1031N14W GAS	953	1027	1092	765	920	715	351	859	1059	668	391	295	9095	58912
UTE MOUNTAIN TRIBAL J														
1K 131N14W GAS	2739	2286	2803	1661	1446	920	555	1722	2450	3215	2798	911	23537	95346
2L1131N14W GAS	4423	4868	4820	4315	5305	6118	5264	4881	5217	6022	1435	15147	149083	
4L 131N14W GAS	2134	2233	1897	1592	1659	1598	1552	1372	1453	1268	1591	1268	19265	82032
COMPANY TOTAL OIL	2134	2233	1897	1395	1652	1659	1598	1553	1372	1453	1351	1268	19265	82032
GAS	54562	48091	60661	39928	34537	3159	34527	48122	52989	61317	50812	29524	547803	6215758
UTE DOME PARADOX (GAS)														
AMOCO PRODUCTION CO														
MOUNTAIN UTE GAS COM A														
1G3227N13W GAS														
82368	79680	79162	59003	76592	76422	70630	64761	55601	69899	69743	70071	854032	3624719	
MOUNTAIN UTE GAS COM B	105751	104423	103869	77004	100168	82791	94360	78742	73104	91373	89394	92637	1093316	1980601
UTE INDIANS A	25123	26093	29871	21484	29106	28744	28627	24928	21648	25928	26094	25361	312807	4418156
7F 231N14W GAS	60291	40049	43111	30126	39176	38838	38474	34467	23590	36291	36768	36998	444379	7011476
8G3432N14W GAS	68978	66341	64438	47974	47060	63036	62225	55569	47437	60827	61942	33721	679568	3436304
UTE MOUNTAIN TRIBAL D														
5911	5947	7428	5581	7038	6335	5915	4289	3287	4927	4530	1940	63129	7457217	
UTE MOUNTAIN TRIBAL E	51848	49272	44014	38799	50809	50315	49684	43661	37005	45881	46817	47213	555318	7196617
UTE MOUNTAIN TRIBAL K														
COMPANY TOTAL GAS	380270	371805	371893	279971	350249	346482	349615	306417	267472	335126	335308	307941	4002549	40560639
PAY AMERICAN CORP														
NAVAJO C														
1D 129N17W GAS														
PLUGGING APPROVED 1965														
2608150														
49699														
MAW PICTURED CLIFFS (GAS)														
DUGAN PRODUCTION CORPORATION														
NOTSONAW														
1G3227N13W GAS														
			3212	5229	6885	5054	5551	5359	4833	4549	40682	40682		
MAW														
1L3227N13W GAS														
			2848	3071	1830	2064	2053	2088	2071	1950	17975	17975		
COMPANY TOTAL GAS			6060	8300	8715	7118	7654	7457	6904	6499	52655	58657		
WILD HORSE GALLUP (GAS)														
AZTEC OIL AND GAS COMPANY														
JICARILLA														
2N1226N 4W GAS														
613	377	353	736	630	1719	1390	2194	1958	1639	1591	1799	14875	111302	
OIL	13					11	23		10		22	79	181	
JEROME P. MCHUGH														
APACHE														
1O1826N 3W GAS														
	913	500	495	583	552	535	425	633	787	548	754	820	7558	107154
2L1826N 3W GAS		39	42	60	55	78	57	43	52	42	39	43	578	51986
LAST PROD. PRIOR TO 6/73														
501926N 3W GAS														
	9764	6978	9399	6846	8543	6856	5249	132	293	14	1412	2516	37802	1205724
OIL														
4L1926N 3W GAS		251	188	128	1020	478	548	468	136	181	103	131	4316	336028
OIL		13	12	43	36	20	35						207	5155

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	11	12	7	8	9	10
		X 14875				
	14	13	X 4567 18	17	16	15
	X 44781		✱			
	X 188307 23	X 205165 24 X 108299	X 57802 19 X 4316	20	21	22
	26	25	30	29	28	27
	35	36	31	32	33	34

1975 PRODUCTION FROM WILD HORSE-GALLUP POOL

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 5852

JEROME P. McHUGH
APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
RIO ARriba COUNTY, NEW MEXICO

CASE 5852EXHIBIT 7

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	56413 X 11	12	7	35765 X 8	9	10
	X 45336	X 35212	X 30920	X 3219		
	61343 X 14	56609 X 13	33755 X 18	31292 X 17	1139 X 16	15
	X 79065	X 40257	26933 X	X 42122	+	
	61061 X 23	38233 X 24	* 19	19643 X 20	+	22
	X 30595		X 2683			
	81128 X 26	25	30	29	28	27
	35	36	31	32	33	34

1975 PRODUCTION FROM BASIN DAKOTA POOL

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 8
CASE NO. 5852

JEROME P. MCHUGH
APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
RIO ARriba COUNTY, NEW MEXICO

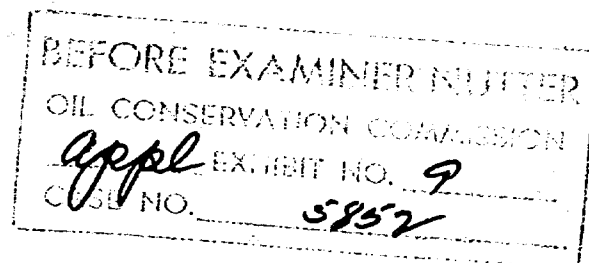
CASE 5852

EXHIBIT 8

SHUT-IN PRESSURES

Apache #3 Well

<u>Date</u>	<u>Gallup Tubing</u>	<u>Dakota Tubing</u>
8-2-69	1350	1496
12-3-69	1344	1153
5-19-70	1182	1147
9-16-70	1090	910
5-6-71	1032	890
9-1-71	925	772
5-8-72	792	---
7-3-72	---	799
5-4-73	658	---
5-6-74	485	200
4-21-75	427	---
7-23-75	405	450
12-29-76	325	120



JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #3 WELL
D Section 19, T26N, R3W
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 9

JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #4 WELL
L Section 19, T26N, R3W
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 1-A

BEFORE EXAMINER NOTED

CONSENYA PROVISION

EXHIBIT 1-A

CASE NO. 333,5852

JEROME P. McHUGH
APPLICATION FOR
DOWNHOLE COMMINGLING
APACHE #4 WELL
L Section 19, T26N, R3W
Rio Arriba County, New Mexico
CASE 5852 EXHIBIT 2

RESUME OF APACHE #4 WELL COMPLETION HISTORY

7-17-69 Nipped up @ 243'. Ran 8 jts csg. TE 245' set @ 240' RKB. Cemented with 175 sx plus 2% CaCl. POB 8:15 PM. Cement circulated.

7-18-69 Drilling @ 1920' w/water. Pressured up to 800# - held OK.

7-19-69 Drilling @ 3170' w/water.

7-20-69 Drilling @ 3995'. Mixing mud and LCM. Lost circulation @ 3852' and @ 3995'.

7-21-69 Drilling @ 4480'. WT 8.8, VIS 39, LCM 10%.

7-22-69 Drilling @ 5010'. WT 8.9, VIS 39.

7-23-69 Drilling @ 5230'. WT 9.0, VIS 42.

7-24-69 Drilling @ 5454'. WT 9.1, VIS 40.

7-25-69 Drilling on junk @ 5623'. WT 9.2, VIS 40.

7-26-69 Trip @ 5810'. WT 9.2, VIS 42.

7-27-69 Drilling @ 5990'. WT 9.2, VIS 39, LCM 12%.

7-28-69 Drilling @ 6220'. WT 9.2, VIS 40. Drilling w/Bit #13.

7-29-69 Drilling @ 6465' w/Bit #14. WT 9.2, VIS 45.

7-30-69 Drilling @ 6795'. WT 9.3, VIS 42.

7-31-69 Drilling @ 7097'. WT 9.2, VIS 41.

8-1-69 Drilling @ 7362'. WT 9.4, VIS 45.

8-2-69 Drilling @ 7590'. WT 9.5, VIS 42.

8-3-69 Drilling @ 7881'. WT 9.6, VIS 40.

8-4-69 Drilling @ 8100'. WT 9.5, VIS 44.

8-5-69 Drilling @ 8270'. WT 9.5, VIS 53.

8-6-69 TD 8280'. WT 9.5, VIS 53. Ran Welex IES and Density logs, conditioned hole, laid down drill pipe.

8-7-69 TD 8280'. WT 9.5, VIS 53. Ran 296 jts 5-1/2" OD 14#, 15.5#, and 17# J-55 8R ST&C csg, set @ 8278' RKB. BJ cemented first stage with 125 sx Class "A" 8% gel, 200 sx Class "C" 7-1/2# salt/sk. POB 7:45 PM. Approx 1/3 partial mud returns while cementing, worked csg free while cementing. Cemented second stage through Baker stage tool @ 6145' with 225 sx 3% Lodense. POB 10:15 PM. No mud returns during job. Cemented third stage with 325 sx 3% Lodense through Baker stage tool @ 3954'. No mud returns while cementing.

8-8-69 TD 8280'. Moved out Arapahoe Rig #7.

9-17-69 Moved in Aztec Well Service Rig #56.

9-18-69 PBTD 8245'. Picked up 2-3/8" OD tbg, drilled stage tools @ 3954' and 6145'. Cleaned out to 8245', pressure tested csg to 3500 psi - held OK. Spotted 300 gals 15% HCl, pulled tbg.

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
appl EXHIBIT NO. 2-A
CASE NO. 5852

9-19-69 PBTB 8245'. Ran Go International Gamma-Ray Correlation log. Perforated 2 jets/ft @ 8020-8024', 8152-8157', 8162-8166', and 8191-8201'. Broke formation down @ 2900 psi, started sand frac, locked up w/226 bbls fluid in hole. Bled back and pressured up twice, unable to pump into fm. Went in hole with tbq, circulated hole, recovered thick balls of friction reducing agents, spotted 300 gals 15% HCl, pulled out of hole. Dowell frac Dakota with 50,000# 20-40 sand, 1550 bbls water with 2-1/2# J-100 friction reducing agent. IF 3400 psi, Avg 3200 psi, Max 4000 psi, Min 3000 psi, Final 4000 psi, Instant SI 2400 psi, 5-Min SI 2000 psi, Avg IR 53 B/M, made 2 ball drops of 10 balls each, good ball action.

Perforated 2 jets/ft 7544-7550'. Spearheaded w/300 gals 15% HCl, frac Gallup with 20,000# 20-40 sand, 778 bbls water with 2-1/2# J-166/1000 gals. IF 3300 psi, Avg 3500 psi, Max 3500 psi, Instant SI 1300 psi, 5-Min SI 1000 psi, Avg IR 46.5 B/M.

9-20-69 PBTB 8245'. Ran tbq with bit, cleaned out to 8245'. Well kicked for 6 hrs - died. Checked sand fillup, circulated hole, laid down 2-3/8" tbq. Set Baker Model "D" packer @ 7960' on Go International wire line.

9-21-69 PBTB 8245'. Ran 257 jts 1-1/4" OD 2.4# JCW 10R EUE tbq set @ 8169' with Baker seal assembly @ 7960' and Baker blast jts @ 7540-7560'. Ran 239 jts 1-1/4" OD 2.4# JCW 10R EUE tbq set @ 7574' RKB. Released rig.

9-24-69 Moved in Aztec Well Service Rig #4. Swabbed Dakota zone. Well kicked off, flowed to pit overnight.

9-25-69 Swabbed well.

9-26-69 Swabbed well.

9-27-69 Swabbed well.

9-28-69 Swabbed Gallup zone. Well did not kick off. Released rig.

10-7-69 Moved in Lowrance Specialty. Swabbed Gallup zone 8 hrs.

10-8-69 Swabbed Gallup zone 10 hrs, well kicked off, flowing to pit.

DIAGRAMMATIC SKETCH OF DUAL COMPLETION

Apache #4 Well

Township 26 North, Range 3 West, NMPM

Section 19: 1650' FSL - 990' FWL

Rio Arriba County, New Mexico

8-5/8" OD Casing set @ 240'
Cemented with 175 sx

Stage Tool at 3954'
Cemented with 900 Cu. Ft.

Stage Tool at 6145'
Cemented with 600 Cu. Ft.

Gallup
Tbg
1-1/4" OD
2.4# JCW
Tbg @
7574'

Top of Gallup 6945'
Gallup Perf. 7544-50'
Base Gallup 7623'

Dakota Perf. 8020-24'
8152-57'
8162-66'
8191-8201'

Baker Model "D" Packer at 7960'

Dakota
Tbg
1-1/4" OD
2.4# JCW
Tbg @
8169'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
appl EXHIBIT NO. 3-A
CASE NO. 5852

JEROME P. McHUGH

APPLICATION FOR
DOWNHOLE COMMINGLING

CASE 5852

EXHIBIT 3-A

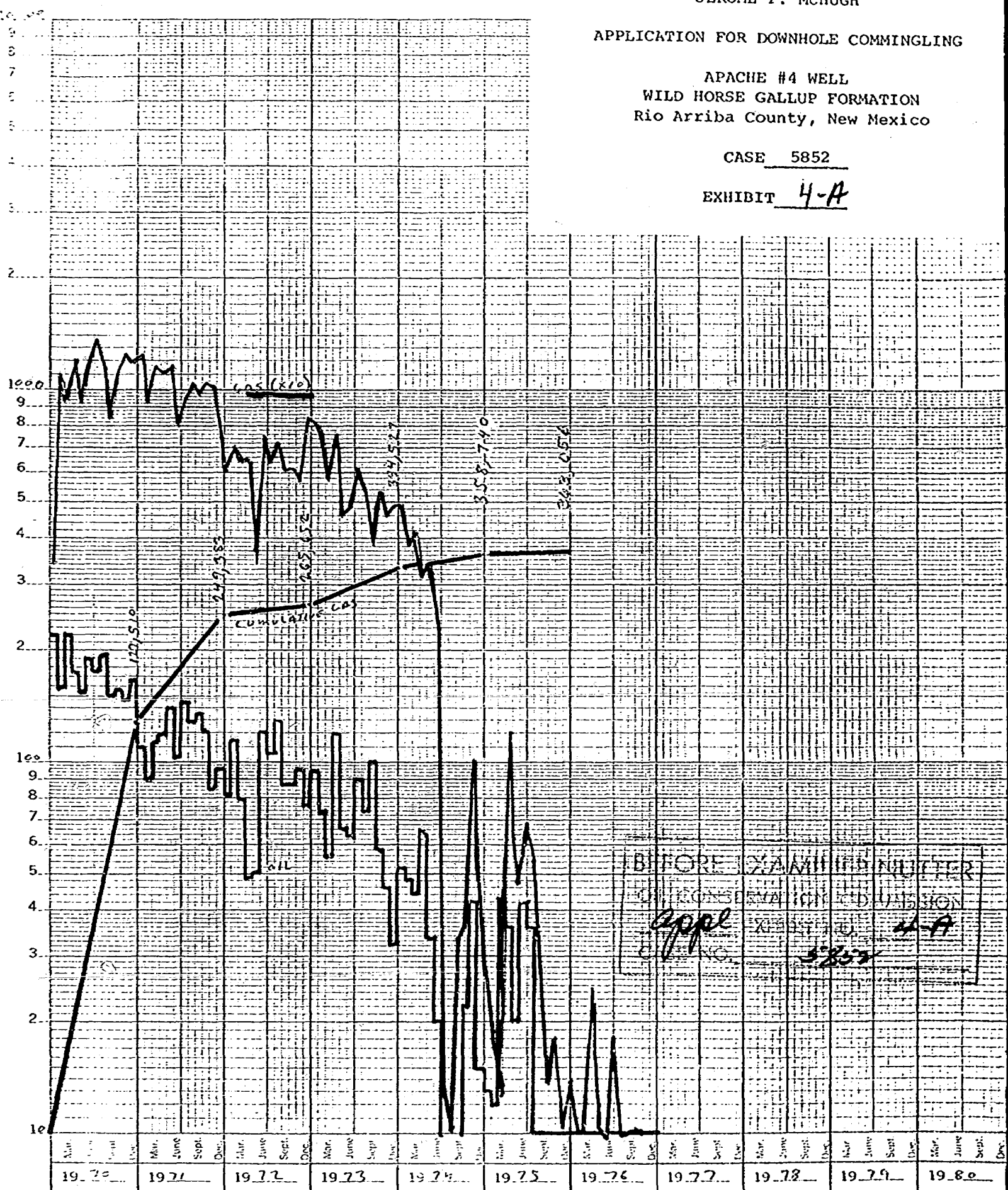
5-1/2" OD Casing Set @ 8278'
First Stage Cemented with 450 Cu. Ft.

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #4 WELL
WILD HORSE GALLUP FORMATION
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 4-A



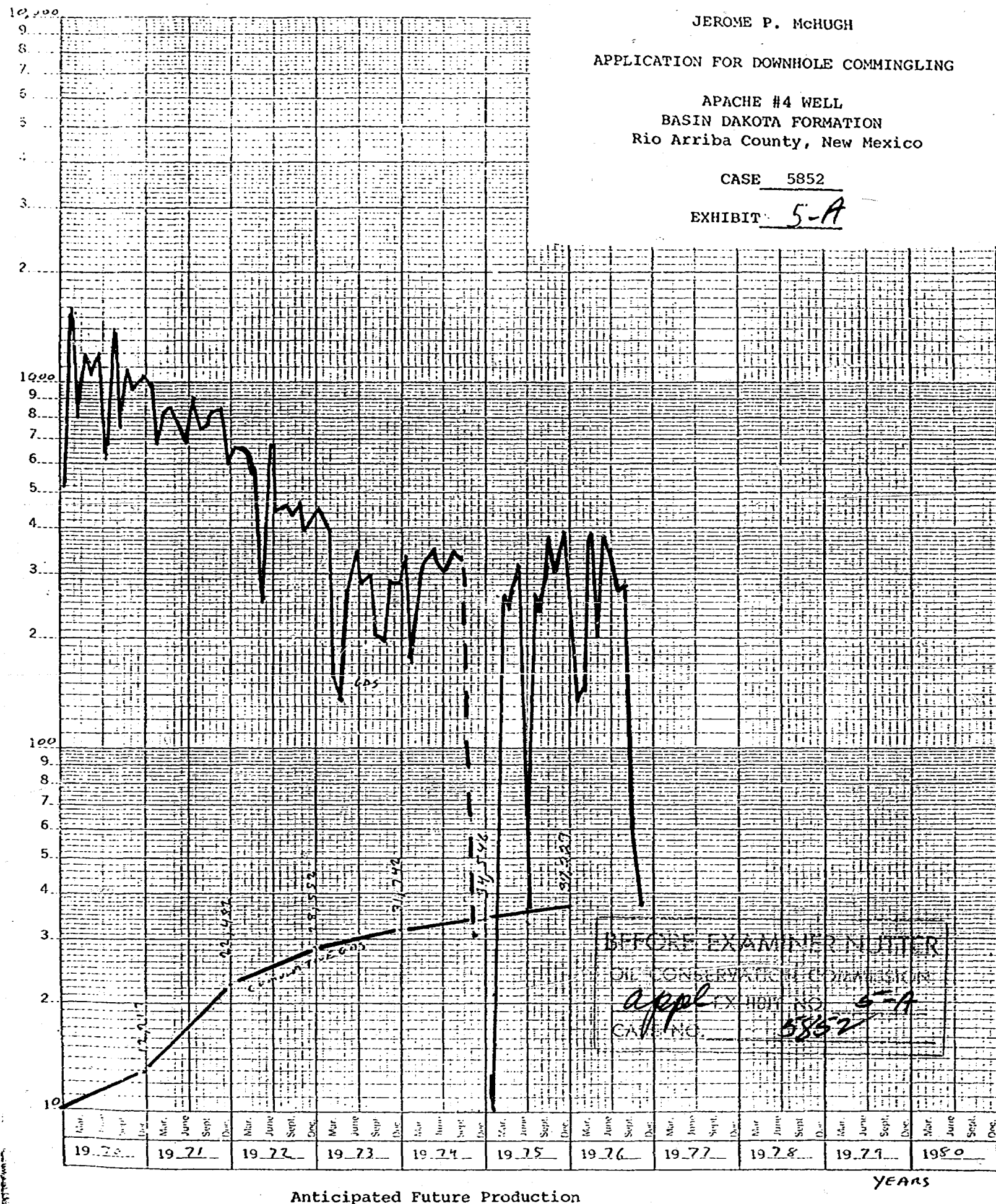
JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #4 WELL
BASIN DAKOTA FORMATION
Rio Arriba County, New Mexico

CASE 5852

EXHIBIT 5-A



JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #4 WELL

CASE 5852

EXHIBIT 6-A

ANNUAL REPORT

OF THE

NEW MEXICO OIL & GAS ENGINEERING
COMMITTEE

HOBBS, NEW MEXICO

==
VOLUME II

Northwest New Mexico
==

1975

BEFORE EXAMINER	
OIL CONSERVATION COMMISSION	
Appl	EXHIBIT NO. 6-A
CASE NO.	5852

WELL S. T. R.	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCU.
16L2029N 9W GAS	2438	1807	2317	2250	1829	1322	2139	1952	1521	1793	1576	1463	22407	69497
17P 126N 8W GAS	2711	2094	3354	3438	2251	2277	3335	3556	3231	2857	2825	1886	33859	50113
18M 126N 8W OIL	4059	2534	3850	1688	3129	2773	3423	3231	3122	2482	2212	1487	35124	78018
19C1226N 8W GAS	9459	8572	8961	11152	8046	7171	9231	6872	9234	8731	8844	6286	104599	221302
20P1226N 8W GAS	9459	8572	8961	11152	8046	7171	9231	6872	9234	8731	8844	6286	104599	221302
21L13127N 7W GAS	7968	5231	6311	4588	4509	3854	5042	4426	4150	4188	4095	3114	57493	73684
26N 122N 8W OIL	114	93	83	56	56	65	54	43	52	53	56	52	10776	11177
27P1626N 8W GAS			14782	9815	9317	7192	8712	8257	7742	7134	7261	6452	85386	85386
LIVELY COM														
16L2029N 9W GAS	3559	3890	2810	3075	3787	3345	3319	3165	2213	3505	2156	2729	33454	101958
17P 126N 8W GAS	4047	3563	2320	2970	3599	3496	3225	3071	1907	2834	2857	1930	36099	132316
COMPANY TOTAL	936	789	943	929	818	862	792	765	761	825	562	591	9113	25585
LYNCO OIL CORPORATION	95895	90820	101471	94352	105727	94342	104281	95188	82124	94309	90409	83243	1132343	3274592
DICK HUNT FEDERAL														
111230N14W GAS	102	689	384	16	356	439	2998	445	1519	2169	263	86	9475	303835
2H 130N14W OIL				130	495	2768	3993	711	1413	1765	170	2465	14665	157697
SCHUMACHER														
3E1830N10W GAS	15098	10507	13582	10069	14127	8895	14703	13626	13245	12911	8690	12944	148397	205009
COMPANY TOTAL	15200	11196	13966	10215	14988	12132	21694	14782	15177	16345	9878	15495	172533	109322
M AND M PRODUCTION AND OPERATION														
MEXICO FEDERAL														
111024N 6W OIL	1481	1853	1883	1682	2260	1467	1335	1169	1452	1114	1518	1489	18704	179157
MARATHON OIL COMPANY														
JICARILLA APACHE														
8P2726N 5W GAS	4997	4218	5205	4550	5414	4211	4916	4661	5081	4092	5488	4685	57518	703823
9A2826N 5W OIL	3962	3935	3754	2719	3653	893	14	49	44	18	3047	4008	26011	321618
10B2726N 5W GAS	4861	1173	9834	6213	7821	6505	4403	6335	7402	5734	7314	6552	74595	1046825
11M2826N 5W OIL	6112	5209	6407	8147	7438	5432	5725	8242	8033	6655	6430	7217	81470	107000
12A3326N 5W GAS	7554	6067	7150	7841	7378	6890	5751	8125	8445	6920	7840	6866	88172	107636
13M3326N 5W OIL	1696	3953	4959	5191	5054	4594	4274	5300	5531	4885	4782	5105	55345	760855
14N3426N 5W GAS	13223	9723	12555	12487	11167	10713	10515	11143	12916	10487	12304	12388	139621	1309888
1613426N 5W OIL	7914	6264	8370	7581	7534	6822	738	8310	7582	7037	8634	7283	91100	362395
OHIO GOVT														
2P1528N11W GAS	19640	14299	17656	18218	17463	12659	12006	19592	18057	16077	16679	13331	195887	4289705
OHIO A GOVT														
212328N11W OIL	26977	26216	22645	15026	32265	22933	29641	29694	25121	20845	29044	26000	306412	658497
OHIO C GOVT														
2E2628N11W GAS	12433	8781	9663	7724	6576	10214	5981	11887	10573	12033	11744	10705	118379	3455795
3P2628N11W OIL	16752	11798	14420	14049	13783	12541	944	14400	15944	14932	14711	14190	167218	389766
COMPANY TOTAL	731	693	776	830	850	597	1379	1379	737	72	783	510	8645	304670
I. H. McILVAIN OIL & GAS PROPERTIES	161891	137003	156484	134746	158537	112639	100058	127894	125175	109792	156057	155714	1635880	29648212
MILLER														
1A1324N 7W GAS	4872	4606	4096	6925	6368	5435	4605	3933	4634	4090	3012	4148	56784	174228
MILLER B														
5N1224N 7W GAS	3630	6353	4006	5784	6884	5183	6748	6563	7450	6121	4633	6768	70133	1948431
COMPANY TOTAL	23	18	32	32	31	30	28	13	13	34	34	43	453	14972
JEROME P. McHUGH	8502	10959	8162	12709	13232	10518	11353	10456	12154	10211	7645	10918	126917	3691159
APACHE														
101826N 3W GAS	2708	2338	3007	2698	3244	2572	2323	2688	2939	2923	3224	3091	33755	297960
2L1826N 3W GAS	2595	2173	2726	1879	2732	1795	1929	2223	2374	2072	2569	1866	26933	240408
301926N 3W GAS	LAST PRD. DATE 12774													
4L1926N 3W GAS	263	241	320	36	263	238	371	307	397	247	2683	98043		
5E1726N 3W GAS	2199	3023	3579	2693	3548	2577	1902	58	3938	1901	2872	2999	31292	308907
6M1726N 3W OIL	5447	2725	59	7158	4755	3521	3521	1693	2155	2925	3721	4539	511	6929
7D2026N 3W GAS	1939	1582	2698	1618	1819	1220	1095	757	2520	747	1430	2218	19643	200945
8B2026N 3W OIL	LAST PRD. PRIOR TO 6/73													
BOLIN HARDIE														
103429N 8W GAS	2202	2483	3188	1603	3100	2889	2944	2521	1877	2957	2805	3303	31872	372026
FLORANCE														
1E2628N 8W GAS	3132	3455	3449	3262	3720	4105	4098	3876	3555	3679	2976	4045	43352	474505
HARDIE														
1C2624N 6W GAS	1632	3217	3762	2334	4117	2590	3896	3124	1698	3733	3324	2740	36172	461750
202829N 8W OIL	3084	1746	2672	1199	3532	2877	2773	2417	1812	2246	2046	1744	28154	327674
4M2429N 8W GAS	3392	3195	2765	2747	2570	2682	2556	2194	1673	2103	1936	1913	29828	466295
502328N 8W OIL	3174	5306	4436	3853	4347	4612	5329	4845	4461	5283	2814	5374	53818	584287
JICARILLA														
103026N 4W GAS	8411	6140	8930	8700	6987	7058	5193	8584	8938	7358	5516	9670	91482	1224810
2L3026N 4W GAS	8854	6190	6691	6656	4822	6273	4283	6324	6330	5994	6912	6712	76041	976227
303126N 4W GAS	5402	3382	5312	4825	4051	5087	4738	5384	5988	5125	4304	4792	58452	854318
4L3126N 4W GAS	5920	5190	7291	6939	6441	6373	5086	6828	5780	7002	4677	75942	846137	86137
502926N 4W OIL	4744	3178	4944	4408	3352	4725	4165	4655	4552	3795	5071	4891	52791	639315
6L2926N 4W GAS	1809	1380	1611	1418	1528	2118	1617	2321	2387	1849	1677	390	19804	218913
703226N 4W GAS	3495	2765	3303	3455	2869	2662	2006	3240	2936	2760	2923	3522	35991	431510
8L3226N 4W OIL	4354	3035	4080	3655	3318	3573	3709	4296	4180	4339	3669	3669	45836	574134
MOORE														
1A 730N 8W GAS	977	728	865	1041	929	1004	776	766	944	739	912	991	10672	161480
NASSAU														
1A3627N12W GAS	2486	2682	2804	2429	2330	2469	2977	2805	2812	2738	2100	2559	31191	262064
2C2427N13W GAS	3186	2380	3102	2550	3249	1953	3357	3251	3104	3111	2724	2435	3407	241338
3G2326N11W GAS	6521	5802	8206	8574	6701	7350	8428	6028	7875	7584	7803	6214	87055	459333
ONEDA FEDERAL														
1C 826N11W OIL	6181	4732	5238	6410	4687	5957	5326	4763	5750	6320	6023	5630	67017	499814
PINON														
1F1330N14W GAS	39	156	265	1098	1954	1965	1652	1782	1491	1945	1770	1786	15904	83258
OIL	23	79	118	80	71	111	40	105	103	112	54	74	974	5756

WELL S T R	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	MP	ACUM	
SNAKE EYES DAKOTA D (GAS)																
.....																
DAVIS OIL COMPANY	.....															
EL MORTE FEDERAL	.....															
241721N 8W OIL	PLUGGING APPROVED	1975														362289
.....																
JAMES P. DUNIGAN	.....															
SNAKE EYES	.....															
242021N 8W GAS	PLUGGING APPROVED	1974														271078
OIL	.....															
.....																
TENNOCO OIL COMPANY	.....															
SNAKE EYES	.....															
1C2021N 8W GAS	LAST PROD. PRIOR TO 6/73														U 17588	
OIL	.....															
.....																
TABLE MESA MISS (GAS) (ABANDONED)																
.....																
JOHN F. STAYER	.....															
TABLE MESA	.....															
29H 927N17W GAS	PLUGGING APPROVED	1975														1193006
OIL	.....															
.....																
TOCITO DOME PENN NORTH (GAS)																
.....																
GULF COAST PRODUCING CO	.....															
NAVAJO TOCITO	.....															
1G 926N16W GAS	1400	1566	6071	815	3329	514	5029	437	395	40	242	15	19596	19596		
4L1026N18W GAS			3910	9866	3158	1532	496	110					1836	1836		
OIL			55	200		93		994					1960	124373		
WAT					19			84					432	3095		
COMPANY TOTAL OIL	1400	1566	9981	10681	509	210	496	194			242	15	2268	4931		
WAT					6487	2046	5029	1431	395	40			39056	143969		
.....																
TWIN MOUND MESAVERDE (ABANDONED)																
.....																
PUBCO PETROLEUM CORPORATION	.....															
RUSSELL	.....															
IN 429N14W GAS	PLUGGING APPROVED	1959														652995
OIL	.....															
.....																
TWIN MOUNDS PICTURED CLIFFS (GAS)																
.....																
DUGAN PRODUCTION CORPORATION	.....															
CLINE	.....															
103330N14W GAS					435	1078	1207	1334	1154	1555	777	97	7637	37821		
MAVER					1127	5098	3698	3686	2635	3093	1999	2522	23858	23858		
COMPANY TOTAL GAS					1562	6176	4905	5020	3789	4648	2776	2519	31495	61679		
.....																
MESA PETROLEUM COMPANY	.....															
RUSSELL	.....															
2N3330N14W GAS	2224	2368	2019	2098	3036	2756	2593	2765	2035	321		871	23096	1189990		
.....																
UTE DOME-DAKOTA (GAS)																
.....																
ANOCO PRODUCTION CO	.....															
MOUNTAIN UTE GAS COM C	.....															
1G 31N15W GAS	2273	4128	5659	3551	2475	2066	2841	3918	5627	7868	4038	3210	52654	194150		
MOUNTAIN UTE GAS COM E	.....															
1G1031N14W GAS	613	1269	1430	1112	1482	1429	1521	1563	1185	1374	1191	902	15031	140360		
COMPANY TOTAL GAS														70		
.....																
MOUNTAIN UTE GAS COM G	.....															
1G2532N14W GAS	6956	6061	7260	5071	6018	4458	4110	6437	6733	7645	5782	5069	71657	164977		
MOUNTAIN UTE GAS COM I	.....															
1G2532N14W GAS	15523	14550	16197	9246	10019	8680	10721	13278	13168	16451	12189	9027	149039	357684		
P AND R	.....															
1D 131N14W GAS	2839	3261	2943	3108	2845	2830	2996	3338	3517	3460	3332	3148	37617	1991442		
UTE INDIANS A	.....															
1M3632N14W GAS	1471	1371		3160	3070	1171	3155	3650		3820	3695	2725	27268	99286		
2M3632N14W GAS	LAST PROD. DATE 02/74															
3H3532N14W GAS	LAST PROD. DATE 02/74															
4H3532N14W GAS	LAST PROD. DATE 02/74															
6H 231N14W GAS	LAST PROD. PRIOR TO 6/73															
UTE MOUNTAIN TRIBAL D	.....															
3F1031N14W GAS	3397	1101	3582	720	1546	1254	1150	1109	738	1305	889	707	17558	393023		
4F1031N14W GAS	188	397	278	249	715	122	117	275	366	308	366	213	2537	18315		
7F1031N14W GAS	953	1027	1092	765	920	715	551	859	1059	668	391	595	5095	58912		
UTE MOUNTAIN TRIBAL J	.....															
1K 131N14W GAS	2732	2286	2803	1651	1446	920	586	1722	2450	3215	2798	911	23537	95346		
2L 131N14W GAS	2233	428	4820	4315	19	5105	6118	1266	481	5577	6022	1435	53147	149083		
4L 131N14W GAS	2134	2233	1897	1395	1652	1659	1598	1553	1372	1453	1351	1268	19565	82032		
2L 131N14W GAS	10106	8001	11821	6939	4518	2102	366	2767	9338	15626	8199	1882	81715	358147		
COMPANY TOTAL OIL	2134	2233	1897	1395	1652	1659	1598	1553	1372	1453	1351	1268	19565	84932		
GAS	54562	48091	60461	39926	36537	31135	34527	44122	52989	67317	50892	29524	547803	6215158		
.....																
UTE DOME PARADOX (GAS)																
.....																
ANOCO PRODUCTION CO	.....															
MOUNTAIN UTE GAS COM A	.....															
1G 31N15W GAS	82368	79680	79162	59003	76592	76422	70630	64761	55601	69899	69743	70071	854052	3624719		
MOUNTAIN UTE GAS COM F	.....															
1G2532N14W GAS	105751	104423	103869	77004	100168	82791	94060	78742	73104	91373	89394	92637	1093316	1980601		
UTE 1F1031N14W GAS	.....															
7F 231N14W GAS	25123	26093	29871	21484	29106	28744	28627	24928	21648	25928	26094	25361	312807	4478156		
8F 231N14W GAS	40271	40049	43111	30126	39376	38838	38574	34467	23590	36291	36788	36998	444379	7611476		
8G3332N14W GAS	68979	66341	64438	47974	47060	63036	62225	55569	47437	60827	61942	33721	679568	3436304		
UTE 1F1031N14W GAS	.....															
1F1031N14W GAS	5911	5947	7428	5581	7038	6336	5915	4289	3287	4927	4530	1940	63129	7457217		
UTE MOUNTAIN TRIBAL H GAS COM	.....															
1K 131N14W GAS	21848	49272	44014	38799	50809	50315	49684	43661	37005	45881	46817	47213	555318	7138617		
UTE 1F1031N14W GAS	.....															
1P3333N14W GAS	PLUGGING APPROVED 1973															
COMPANY TOTAL GAS	380270	371805	371893	279971	350249	346482	349615	306417	267472	335126	335308	307941	4002549	40560659		
.....																
PAN AMERICAN CORP	.....															
NAVAJO C	.....															
1D 129N17W GAS	PLUGGING APPROVED	1965														2608150
OIL	.....															
.....																
WAM PICTURED CLIFFS (GAS)																
.....																
DUGAN PRODUCTION CORPORATION	.....															
NOTSONAW	.....															
1G3227N13W GAS					3212	5229	6885	5054	5551	5359	4833	4549	40682	40682		
WAW					2848	3071	1830	2064	2053	2088	2071	1950	17975	17975		
COMPANY TOTAL GAS					6060	8300	8715	7118	7604	7457	6904	6499	58657	58657		
.....																
WILD HORSE GALLUP (GAS)																
.....																
AZTEC OIL AND GAS COMPANY	.....															
JIC 2H1226N 4W OIL	413	377	353	736	620	1719	1390	2194	1963	1639	1591	1799	14875	111302		
.....																
JEROME P. MCHUGH	.....															
APACHE	.....															
1D1826N 3W GAS	913	500	495	583	562	535	426	633	789	548	754	820	7553	107154		
2L1826N 3W OIL	54	39	42	40	50	78	57	40	52	42	39	45	578	51566		
3D1926N 3W GAS	LAST PROD. PRIOR TO 6/73															
4L1926N 3W GAS	9764	6978	9399	6846	8543	6556	5249	132	233	14	1412	2516	57802	1205724		
5L1926N 3W GAS	111	62	128	85	158	108	54	48	135	181	103	134	807	363820		
6L1926N 3W GAS	213	18	43	36	70	42	38	5	5	5	5	5	201	5150		

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	11	12		7	8	9	10
		X 14975					
	14	13		X 7532 18	17	16	15
	X 44731			+			
	X 183307 23	205.65 X 24 X 108299		X 57802 19	20	21	22
				X 4316			
	26	25		30	29	28	27
	35	36		31	32	33	34

1975 PRODUCTION FROM WILD HORSE-GALLUP POOL

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7-A
CASE NO. 5852

JEROME P. MCHUGH
APPLICATION FOR DOWNHOLE COMMINGLING
APACHE #4 WELL
RIO ARriba COUNTY, NEW MEXICO
CASE 5852
EXHIBIT 7-A

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM

	56413 X 11				35765 X 8		
	X 45336	X 35212		X 30920	X 3219		10
	61343 X 14	56609 X 13 40257	33755 X 18	31292 X 17	1139 X 16 +		15
	X 79085		X 26933	X 42122			
	61061 X 23	38233 X 24	+ 19	19643 X 20 +		21	22
	X 30595		X 2683				
	81128 X 26		30	29	28		27
	35	36	31	32	33		34

1975 PRODUCTION FROM BASIN DAKOTA POOL

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO. 8-A
5852
apple

JEROME P. MCHUGH
APPLICATION FOR DOWNHOLE COMMINGLING
APACHE #4 WELL
RIO ARriba COUNTY, NEW MEXICO
CASE 5852
EXHIBIT 8-A

SHUT-IN PRESSURES

Apache #4 Well

<u>Date</u>	<u>Gallup Tubing</u>	<u>Dakota Tubing</u>
10-18-69	1330	1348
10-25-69	1332	1360
5-19-70	982	1032
9-16-70	890	1030
6-30-71	657	922
9-1-71	710	750
5-8-72	752	792
5-4-73	570	592
10-10-73	486	500
5-6-74	425	400
4-21-75	472	---
7-23-75	364	482
1-6-77	215	450

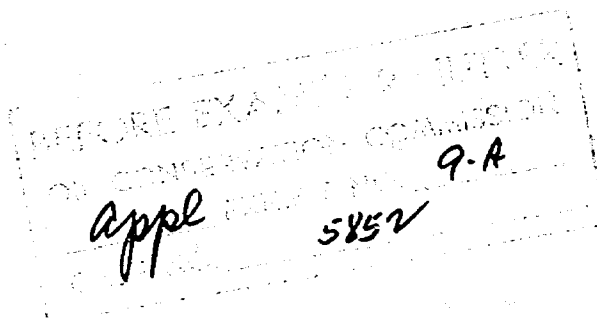
JEROME P. McHUGH

APPLICATION FOR DOWNHOLE COMMINGLING

APACHE #4 WELL
L Section 19, T26N, R3W
Rio Arriba County, New Mexico

CASE 5852

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, Tooto 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 NE 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 5852: 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.

Case 5852

NOV 2 1971
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

In the Matter of the Application of
Jerome P. McHugh for Downhole Commingling
of the Apache #3 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 Apache #3 Well in Rio Arriba County, New Mexico.

The Applicant further states:

1. The Operator of the Apache #3 Well is the Applicant, Jerome P. McHugh.

2. The Apache #3 Well is located on Jicarilla Tribal Contract No. 98 insofar as it covers the following described lands:

Township 26 North, Range 3 West, NMPM
Section 19: N/2 (Dakota formation)
Section 19: NW/4 (Gallup formation)
Rio Arriba County, New Mexico

3
D19-26-3

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

Township 26 North, Range 3 West, NMPM
Section 19: 990' FNL - 990' FWL (Unit Letter D)
Rio Arriba County, New Mexico

4. The Apache #3 Well is currently dually completed in the Wildhorse Gallup Pool and the Basin Dakota Pool. The New Mexico Oil Conservation Commission Order No. 1886 authorized the dual completion of this well.

5. The Apache #3 Well is capable of only low marginal production from the Wildhorse Gallup 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 two 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.

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 Apache #3 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 Apache #3 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/

ji

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. 5852

Order No. R- 5410

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 day of February, 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, Jerome P. McHugh, is the
owner and operator of the Apache Wells Nos. 3 and 4, located
D and L, respectively,
in Units / of Section 19, Township 26 North, Range
3 West, NMPM, Rio Arriba County, New Mexico.

(3) That the applicant seeks authority to commingle
Wildhorse-Gallup and Basin-Dakota production from the
above-described well No. 3 at the surface and to commingle Wildhorse-Gallup and Basin-Dakota production
within the wellbore of the above-described well No. 4.

(4) That from the Wildhorse-Gallup zone, each of the
subject wells is capable of low marginal production only.

(5) That from the Basin-Dakota zone, each of the
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.

Case No. _____

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 wells ^{are} ~~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 ^{aforsaid Apache Well No. 4} ~~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 ^{aforsaid Well No. 3, applicant} ~~subject well~~, ^{should conduct quarterly semi-annual productivity tests on each of} ~~percent of the commingled~~ production should be allocated ^{The productive zones; in order to allocate the commingled pro-} ~~to the Wildhorse-Gallup zone, and~~ percent of the ^{duction to each of the commingled zones in the aforsaid Well No.} ~~commingled~~ production to the Basin-Dakota. ^{A, applicant should consult with the supervisor of the Aztec District} ~~zone. Office of the Commission and determine an allocation~~ formula.

IT IS THEREFORE ORDERED:

(1) That the applicant, Jerome P. McHugh, is hereby authorized to commingle Wildhorse-Gallup and Basin-Dakota production ^{from his} ~~within the wellbores~~ of the Apache Wells Nos. 3 and 4, located in Units D and L, respectively, of Section 19, Township 26 North, Range 3 West, NMPM, Rio Arriba County, New Mexico, said production

^{being commingled at the surface in the aforsaid Well No. 3, and in the well bore of the} (2) That ^{production} ~~percent of the commingled~~ from each of the commingled zones in the aforsaid Well No. 3 shall be determined on the ^{basis of semi-annual productivity tests on each of the zones; and that} ~~production shall be allocated to the~~ ^{the applicant shall consult with the Supervisor of the Aztec District} ~~production shall be allocated to the~~ Basin-Dakota ^{Office of the Commission and determine an allocation formula for each} ~~the aforsaid Well No. 4.~~ ^{zone in} ~~the aforsaid Well No. 4.~~ ^{aforsaid Well No. 4}

(3) That the operator of the subject well shall immediately notify the Commission's Aztec district office any time the ^{aforsaid Apache} ~~Well No. 4~~ 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.