

CASE 5850: PENNZOIL COMPANY FOR ADOPTION OF POOL RULES, LEA COUNTY, NEW MEXICO

12-4-83  
P. 2087-2

CASE NO.

5850

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APPLICATION,  
TRANSCRIPTS,  
SMALL EXHIBITS,  
ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 16, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company ) CASE  
for an unorthodox gas well location, ) 5856  
San Juan County, New Mexico. )

BEFORE: Richard L. Stamets, 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: Gordon D. Ryan, Esq.  
Legal Counsel for Amoco Prod. Co.  
Security Life Bulding  
Denver, Colorado

ATWOOD, MALONE, MANN & COOTER  
Attorneys at Law  
P.O. Drawer 700  
Roswell, New Mexico

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I N D E X

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R. B. GILES

Direct Examination by Mr. Ryan

4

EXHIBIT INDEX

Offered      Admitted

Amoco Exhibit One, Plat

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Amoco Exhibit Two, Plat

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1 MR. STAMETS: We will call at this time Case 5856.

2 MS. TESCHENDORF: Case 5856, application of Amoco  
3 Production Company for an unorthodox gas well location,  
4 San Juan County, New Mexico.

5 MR. STAMETS: Call for appearances in this case.

6 MR. RYAN: I'm Gordon D. Ryan, Denver, Colorado,  
7 appearing on behalf of the applicant, Amoco Production  
8 Company. The file should reflect a letter from the firm of  
9 Atwood and Malone in Roswell in which they associate with me  
10 in this case.

11 MR. STAMETS: We have that in the file.

12 Is this the only appearance in this case? Do you  
13 have a witness?

14 MR. RYAN: Yes, sir, I have one witness.

15 MR. STAMETS: Will you stand and be sworn at this  
16 time, please?

17 (THEREUPON, the witness was duly sworn.)

18 MR. STAMETS: Mr. Ryan, you may proceed.

19 MR. RYAN: Mr. Examiner, this case involves an  
20 Amoco well that was drilled by mistake at an unorthodox  
21 location. There appears to be no way that I can find that  
22 this matter could be handled administratively so the matter  
23 has been set down for a hearing.  
24  
25

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1 R. B. GILES

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

4  
5 DIRECT EXAMINATION

6 BY MR. RYAN:

7 Q I have one witness and I will ask that he state his  
8 name, by whom employed and in what capacity?

9 A R. B. Giles, G-i-l-e-s, Amoco Production Company  
10 in Denver in an engineering supervisory capacity.

11 Q Mr. Giles, you have previously testified before  
12 this Commission and had your qualifications as an expert  
13 witness admitted, have you not?

14 A I have.

15 Q And you are familiar with the case that is  
16 presently pending?

17 A Yes.

18 Q Have you prepared some exhibits by you or under your  
19 supervision which show the subject matter of this case?

20 A Yes, two exhibits.

21 Q Would you please refer to these exhibits at this  
22 time and I ask that you identify and explain them?

23 A First before referring to Exhibit One I would like to  
24 relate what happened. Back on November 15 of last year Amoco's  
25 Elliott Gas Com "F" 1-R No. 1A was staked at a location

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1 indicated to be eight, six, oh from the east line and one, four  
2 five, oh from the south line of Section 33, Township 30 North,  
3 Range 9 West in San Juan County. The location was staked by  
4 E. V. Echohawk, Land Surveyor. This location fit the spacing  
5 requirements as defined by the Conservation Commission which  
6 are that you must be seven, nine, zero feet back from the  
7 boundary, exterior boundary, and one, three, zero feet from the  
8 interior boundary of a quarter-quarter section.

9 We paid two hundred and fifty dollars in damages to  
10 the surface owner, Fred Lawson, for this indicated location,  
11 the well was drilled and was completed on the thirtieth of  
12 December, 1976 and shut in awaiting a sales line connection.

13 We were informed by the offset surface land owner,  
14 Genevive Jaquez that El Paso Natural Gas requested approxi-  
15 mately ninety feet of right-of-way to lay the sales line to  
16 this well which El Paso Natural Gas had indicated was on her  
17 land and Genevive was confused because Amoco had not paid her  
18 surface damages and had indicated the well was not on her  
19 land so we requested El Paso Natural Gas check the survey and  
20 they found it to be corrected eight, five, three from the east  
21 line and one, two, four, six feet from the south line.

22 I refer you now to Exhibit One, this is a plat of  
23 the pipeline right-of-way. The solid line in the southeast  
24 quadrant of Section 33 is the line necessary to connect the  
25 Elliott Gas Com No. 1A Well into the sales line and it does

1 show that in the southeast-southeast quarter the well is  
2 actually located and would be on Genevive Jaquez' land.

3 So we contracted a third surveyor to survey the well  
4 and find who was correct. Fred Kerr surveyed the well and  
5 found it to be eight, two, zero feet from the east line and one,  
6 two, four, four from the south line and I refer you now to  
7 Exhibit Two which shows this location which is on Genevive  
8 Jaquez' land and is, therefore, an unorthodox location.

9 Mr. Kerr surveyed the well from one corner and  
10 surveyed back to a second corner as proof of the location of  
11 the well.

12 Now, this puts the well fifty-four feet closer to  
13 that interior boundary of the forty than is permitted as a  
14 orthodox location. So we went ahead and paid Genevive Jaquez  
15 two hundred and fifty dollars on January 7 of this year for  
16 surface damages for drilling the well on her land.

17 Now, the reason for the incorrect drilling location  
18 is not really known. The original survey may have been an  
19 error or a vandal perhaps moved the stake before the location  
20 was built in the wrong spot. In any case, the well was  
21 drilled and completed at the wrong location so to speak, but  
22 this causes no problem as Amoco holds the leasehold completely  
23 surrounding the well and the well is actually further in toward  
24 the center of Section 33 than could be drilled and so the  
25 well has been completed for one, four, six, five MCFD which is

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1 a rather typical Blanco Mesaverde well in this area. It had  
 2 an absolute open flow potential of seven, nine, two, five MCFD  
 3 with a shut-in pressure of four, five, zero psi. That's a  
 4 little bit low on the shut-in pressure, we usually see about  
 5 five, five, zero psi in this area.

6 Q Mr. Giles, in your opinion can this application be  
 7 granted without violating the correlative rights of any  
 8 parties involved?

9 A It certainly can.

10 MR. RYAN: Mr. Examiner, I believe that's all we have  
 11 at this point. We will offer Exhibits One and Two into  
 12 evidence.

13 MR. STAMETS: These exhibits will be admitted.

14 (THEREUPON, Amoco's Exhibits One and Two  
 15 were admitted into evidence.)

16 MR. STAMETS: Are there any questions of the  
 17 witness. He may be excused.

18 (THEREUPON, the witness was excused.)

19 MR. STAMETS: Anything further in this case?

20 Oh, do you have a question, Mr. Kendrick?

21 MR. KENDRICK: No, I have a comment to make.

22 MR. STAMETS: Okay.

23 MR. KENDRICK: I am A. R. Kendrick, District Supervisor  
 24 for the Oil Commission. I would like the record to show that  
 25 the name of the well is Elliott Gas Com "F" Well No. 1A. There

1 has been some misinterpretation in Company's records of  
2 getting the number 1-R involved in the well name which is not  
3 part of the well name.

4 MR. RYAN: Sir, that's the way it is indicated on  
5 Exhibit Number One. At the top. "F" No. 1A, isn't that what he  
6 says is the correct name?

7 MR. KENDRICK: All right.

8 MR. RYAN: We will correct our records then.

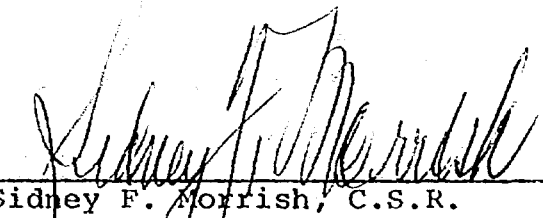
9 MR. STAMETS: Anything further in this case? The  
10 case will be taken under advisement.

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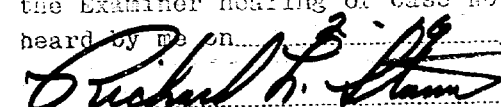
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REPORTER'S CERTIFICATE

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. 5856,  
heard by me on 3-19, 1977.

  
Richard H. Stamm, Examiner  
New Mexico Oil Conservation Commission

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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. 5850  
Order No. R-5389

APPLICATION OF PENNZOIL COMPANY  
FOR ADOPTION OF POOL RULES, LEA  
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 15th day of March, 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, Pennzoil Company, seeks, as an exception to Rule 506 of the Commission Rules and Regulations, a limiting gas-oil ratio of 4,500 cubic feet of gas per barrel of oil in the North Mescalero-Cisco Pool, Lea County, New Mexico.

(3) That the reservoir characteristics of the subject pool justify the establishment of a gas-oil limitation of 4,500 cubic feet of gas per barrel of liquid hydrocarbons.

(4) That in order to afford to the owner of each property in the North Mescalero-Cisco Pool the opportunity to produce its just and equitable share of the oil and gas in the subject pool and for this purpose to use its just and equitable share of the reservoir energy, a limiting gas-oil ratio of 4,500 cubic feet of gas per barrel of liquid hydrocarbons should be established for the pool.

-2-

Case No. 5850  
Order No. R-5389

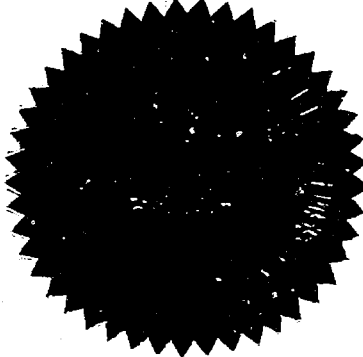
IT IS THEREFORE ORDERED:

(1) That effective March 1, 1977, the limiting gas-oil ratio in the North Mescalero-Cisco Pool, Lea County, New Mexico, shall be 4,500 cubic feet of gas for each barrel of liquid hydrocarbons produced; that, effective March 1, 1977, each proration unit in the North Mescalero-Cisco Pool shall produce only that volume of gas equivalent to 4,500 multiplied by the top unit allowable for the pool.

(2) 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*  
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 Pennzoil Company for  
adoption of pool rules, Lea County,  
New Mexico.

CASE  
5850

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:

Jason W. Kellahin, Esq.  
KELLAHIN & FOX  
Attorneys at Law  
500 Don Gaspar  
Santa Fe, New Mexico

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1 MR. NUTTER: We will call Case Number 5850.

2 MS. TESCHENDORF: Case 5850, application of Pennzoil  
3 Company for adoption of pool rules, Lea County, New Mexico.

4 MR. KELLAHIN: If the Examiner please, Jason  
5 Kellahin, Kellahin and Fox, appearing for the applicant. We  
6 have one witness to be sworn.

7 (THEREUPON, the witness was duly sworn.)

8  
9 J. C. RANEY

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

12  
13 DIRECT EXAMINATION

14 BY MR. KELLAHIN:

15 Q Would you state your name, please?

16 A J. C. Raney.

17 Q By whom are you employed and in what position,  
18 Mr. Raney?

19 A I'm employed by Pennzoil Company as an Advanced  
20 Petroleum Engineer.

21 Q Have you ever testified before the Commission and  
22 made your qualifications a matter of record?

23 A Yes, I have.

24 MR. KELLAHIN: Are the witness' qualifications  
25 acceptable?

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1 MR. NUTTER: Yes, they are.

2 Q (Mr. Kellahin continuing.) Mr. Raney, what is  
3 proposed by Pennzoil Company in Case Number 5850?

4 A We propose field rules or pool rules for the  
5 Mescalero North-Cisco Pool located in northwestern Lea County,  
6 New Mexico.

7 Q Now, does your proposal include a gas-oil ratio  
8 limitation change?

9 A Yes. We propose the normal forty acre spacing and  
10 proration unit for forty acres and normal Statewide spacing  
11 with a special gas-oil ratio limitation of forty-five hundred  
12 to one.

13 Q Now, referring to what has been marked as Exhibit  
14 Number One would you identify that exhibit?

15 A Yes, Exhibit Number One is a cross section and it  
16 has a structure map down at the bottom. The structure map is  
17 one to two thousand scale and it's contoured on twenty-five  
18 foot intervals.

19 The cross section is outlined in red pencil, going  
20 from the south to the north generally. It covers all of the  
21 current producing wells except the Cleary, the Zapata State  
22 No. 2 located in the east side of Section 10.

23 The structure map is contoured on top of the X  
24 limestone, a prominent marker at or near the top of the Cisco  
25 pay zone.

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1 The area outlined in yellow is the Pennzoil acreage  
2 and the area outlined in red on the structure map is generally  
3 the limits of the field which we believe to be limited  
4 somewhat by a porosity pinchout.

5 Q Now, referring to what has been marked as Exhibit  
6 Number Two would you identify that exhibit?

7 A Exhibit Number Two is a tabular and graphical  
8 presentation of the total pool production from the initial  
9 production of when the field was discovered in mid 1968 with  
10 what was then a Roger Hanks Zapata State 1, I believe it is,  
11 and it shows the total number of wells and this is oil and  
12 gas and water in barrels and MCF per month.

13 The purpose in this exhibit is to show the trend  
14 or the characteristics of the production from the pool, total  
15 pool and initially by individual wells. As of 1-1-77, there  
16 had been a total of four hundred and thirty-five thousand  
17 barrels of cumulative oil production and eight hundred and  
18 eighty million cubic feet of gas.

19 At the current time there are seven producing wells  
20 out of a total of ten that have penetrated the Cisco pay zone.

21 Q Now, referring to what has been marked as Exhibit  
22 Number Three, would you identify that exhibit?

23 A Yes, Exhibit Number Three is the production history  
24 by months for the Pennzoil State 11 No. 1 located in Unit L  
25 of Section 11, Township 10 South, Range 32 East. It shows the

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1 oil and gas and water production, along with the gas  
2 allowable for the Pennzoil State 11 No. 1.

3 Q Now, attached to that is a graphic presentation of  
4 the same information?

5 A Yes. The water and oil, the scale for that is on  
6 the left and the gas production is on the right in MCF per  
7 month.

8 Q Now, referring to what has been marked as Exhibit  
9 Number Four would you identify that exhibit?

10 A Yes, Exhibit Number Four is a tabulation of the  
11 daily production for a period from 12-25-76 through 1-26-77 to  
12 show some of the characteristics of the Pennzoil State 11 No. 1.

13 The well makes a fairly large volume of gas and with  
14 the intention of having this hearing we were doing some testing  
15 on our well. During the twelve day period beginning on  
16 January 4th up through January 16th, a twelve day period there,  
17 we reduced the choke on the casing back from a forty-two  
18 sixty-fourth to a twenty-four sixty-fourth to evaluate the  
19 total oil and water and gas production from this well.

20 During this twelve day period the oil production  
21 averaged fourteen barrels per day and the water two barrels  
22 and the gas five hundred and thirty-one MCF as compared to  
23 fifty-six barrels of oil, fifty-three barrels of water and  
24 five hundred and eighty-eight MCF for a fourteen day period  
25 before and after the twelve day test period.

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1           During the test period there was a seventy-five  
2 percent decrease in oil, ninety-seven percent decrease in  
3 water and only a ten percent decrease in the gas production  
4 by increasing the casing pressure from an average of about  
5 ninety-five pounds up to a hundred and eighty pounds.

6           Q     Pinching the well back would not be effective to  
7 control this particular well, is that right?

8           A     No, we believe that pinching it back will not only  
9 produce about the same volume of gas but it will withdraw the  
10 reservoir energy in the form of gas and thereby creating  
11 waste and leaving recoverable hydrocarbon oil in the reservoir.

12           On Exhibit Four I would like to point out when we  
13 opened the casing back up to the normal forty-two sixty-fourth  
14 inch choke the oil came back fairly fast but the water came  
15 up and stayed up abnormally high for a period of about seven  
16 days after the casing was opened back up.

17           Q     Now, has the pool generally shown an increase in  
18 gas production?

19           A     Yes, back on Exhibit Two, in comparing the first  
20 couple of wells that were drilled in that the oil and gas  
21 starts out low and the water starts high and as more production  
22 is drawn out of the reservoir the water production tends to  
23 drop and the oil and gas increase and the gas has continued  
24 to increase up until the present time or through December of  
25 '76.

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1 On Exhibit Number Two I would like to point out the  
2 number of wells is also plotted on the right-hand side of the  
3 curve there. It shows the number of wells at the current  
4 time. There are seven wells in the pool.

5 Q Now, in your opinion will an increase in the gas-oil  
6 ratio result in the recovery of additional oil?

7 A Yes, and it will prevent waste of not only hydrocarbons  
8 but prevent the waste of hydrocarbon energy for the production  
9 of this oil.

10 Q Did you find any evidence of a gas cap?

11 A No indication at all and referring back to Exhibit  
12 One, the cross section, on this cross section the zones of  
13 interest and porosity are fairly correlatable across from  
14 well-to-well as we go from the south up to the north. The  
15 Pennzoil well is perforated over an interval from eighty-eight  
16 oh two down to approximately eighty-nine fifty and all or some  
17 of the intervals in all of the offsetting wells are perforated  
18 in these offsetting wells the same as our well is.

19 Q Will increasing the gas-oil ratio impair correlative  
20 rights of any operators in the pool?

21 A No, not in my opinion.

22 Q Were Exhibits One through Four prepared by you or  
23 under your supervision?

24 A Yes.

25 MR. KELLAHIN: At this time we offer into evidence

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1 Exhibits One through Four.

2 MR. NUTTER: Pennzoil Exhibits One through Four will  
3 be admitted into evidence.

4 (THEREUPON, Pennzoil Exhibits One through  
5 Four were admitted into evidence.)  
6

7 CROSS EXAMINATION

8 BY MR. NUTTER:

9 Q Mr. Raney, an inspection of your cross section,  
10 Exhibit Number One, reveals that all of the wells are perfora-  
11 ted in the area below the green band across there that is  
12 labeled the X limestone?

13 A Yes.

14 Q However, there are only two wells that are  
15 perforated in that upper section in the X limestone. That  
16 would be the well second from the right on the exhibit,  
17 that's Ard Drilling Company well?

18 A Yes.

19 Q And also your well, it has a little section open  
20 up there?

21 A Yes.

22 Q Is there anything of significance to that, is that  
23 little interval there possibly the interval that's producing  
24 large quantities of gas in the well?

25 A Well, not to my knowledge. The Ard well, I tried to

1 get the specific perforations. As you will note it is perforated  
2 in there with twenty-seven shots from eighty-seven eighty-two  
3 to eighty-nine sixty-nine over all but in looking at the logs  
4 that interval that is perforated in our well, eighty-eight oh  
5 two to eighty-eight oh six is correlatable across.

6 Q That's the top perforations?

7 A Yes, sir. That's correlatable across to the  
8 Ard well in -- I'm positive that it is perforated but you  
9 will note in the other wells in the cross section that  
10 interval is not present. It's present but doesn't have enough  
11 porosity to open up and to produce.

12 Now, the Ard well that you're talking about there in  
13 the southeast corner of Section 10 was a directional hole. They  
14 drilled a straight hole and it was non-productive and they  
15 asked us for a waiver for a directional hole and they drilled  
16 it almost due north to get back in the pay and we talked to  
17 them quite a bit about how it was going and the well looked  
18 like it was going to be a good one but I think it's so tight  
19 and is limited to the south by a porosity pinchout that it's  
20 not capable of producing any large volume of any type of  
21 fluids and whether or not it is effectively open in the  
22 interval you are speaking of.

23 Q Are all of the wells producing with approximately  
24 the same gas-oil ratio as your well?

25 A They vary all over the place. Some are real low,

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1 down around five or six hundred and some go up to twelve to  
2 fifteen thousand.

3 Q Now, the pool GOR in December of 1976 would have  
4 been about -- roughly, about twelve thousand to one, wouldn't  
5 it?

6 A Yes.

7 Q And yet your well has a GOR of about seventeen  
8 thousand, five hundred to one in December of 1976.

9 A One thing I would like to point out back on Exhibit  
10 Two and also on Exhibit Three. This oil in that pool carries  
11 quite a bit of paraffin and it is affected by the weather. The  
12 oil production is down, not only in our well, but everybody  
13 else's wells in December. We hot oiled our well twice, the  
14 casing as well as the flow line, and these are all fairly  
15 short flow lines and I think that probably affects the gas-oil  
16 ratio some and December is not a representative month for  
17 any of the wells there.

18 Q In other words, if your flow lines get paraffined  
19 up that would have the same effect as cutting down the choke  
20 on the well which you did in your test period in early  
21 January and that did cause the GOR to go up then?

22 A Yes.

23 Q Could you obtain the GOR's on the individual  
24 wells and send them to us, Mr. Raney?

25 A They will come out of the New Mexico Oil and Gas

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Phone (505) 982-9212



1 Engineering Committee Reports.

2 Q When were the last GOR's taken in the pool, do you  
3 know, on a pool-wide basis?

4 A I don't know but these are all individual wells,  
5 individual one well leases.

6 Q So they all have an individual battery on them?

7 A Yes.

8 Q We'll take administrative notice of the Commission's  
9 records in this case in this field and you won't have to  
10 furnish them to us then. We will have the GOR's on the wells.

11 A Okay.

12 Q Now, this Wil-Mc well which is further south in  
13 the pool, is it still producing?

14 A No, if you will notice on the cross section there  
15 is an interval down about eighty-nine fifty. If it is it's  
16 commingled with what the geologist interpreted as Wolfcamp.  
17 It's perforated up around eighty-seven eighteen is the  
18 bottom of the upper perforation.

19 Q That's the only well that has those perforations  
20 way up there?

21 A Yes.

22 Q You feel like that's Wolfcamp up there?

23 A Yes, but we included it on the cross section because  
24 that was the log that we had there. The Cleary Zapata State  
25 No. 2, we didn't have a log on it, that's why we didn't include

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1 it on the cross section.

2 Q Now, which of the wells that you've shown on your  
3 plat down here on Exhibit Number One are still producing, are  
4 all of them producing?

5 A Yes, all of them with the red dot and the Cleary  
6 Marillo State in the northwest corner of Section 10 and the  
7 Cabine State 1-K and they are plugged and abandoned. In  
8 Section 11 the Cabine State 1-K is producing out of a shallow  
9 dome. On the New Mexico Oil and Gas Engineering Committee  
10 reports I don't have any record that this well ever produced  
11 out of the Cisco and the Marillo produced just a very small  
12 amount, less than two hundred barrels of oil out of the Cisco.

13 Q The other wells are all producing?

14 A Yes, there are seven wells producing.

15 Q Well, there's eight wells over here.

16 A No, there's seven.

17 Q The Wil-Mc is not producing?

18 A Well, it's out of the zone --

19 Q Well, it has a set of perforations down low though.

20 A If it is it's commingled between the Wolfcamp and  
21 the Cisco and we don't have any record of it. It's not  
22 included in the Mescalero North-Cisco Pool.

23 Q Does the well record indicate that it has got those  
24 lower perforations, however?

25 A What we've got is PI, production in place in scout

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1 cards and that's where this data here came from on here and  
2 there is no record of it, you know, the scout cards that we  
3 have of that zone ever having been plugged off and looking at  
4 the interval that is shown to be perforated I think that's an  
5 error because you are right in the middle of a big shale  
6 section.

7 Q So it may not be perforated in that pool at all  
8 then?

9 A I would say that the drill stem test doesn't  
10 indicate that either.

11 MR. NUTTER: Are there any further questions of  
12 Mr. Raney?

13  
14 REDIRECT EXAMINATION

15 BY MR. KELLAHIN:

16 Q Mr. Raney, in the event it became necessary to shut  
17 the Pennzoil well in, in your opinion would that cause any  
18 damage to the well?

19 A Yes, I think that it would. There is a possibility  
20 of creating cross flow from one of these thin stringers to  
21 the other and from opening the well back up when we were down  
22 in mid October for four days, fishing the rods and changing the  
23 pump on this well when we came back on we made quite a large  
24 volume of gas there. If you will note on Exhibit Number  
25 Three, that's the largest volume of gas produced from that

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1 well and we only produced twenty-seven days during that month  
2 and I think by either shutting the well in or pinching it back  
3 at the surface all we're going to do is increase the gas and  
4 decrease the oil recovery and we're not going to want to  
5 accomplish the means of returning it down to the current gas  
6 allowable which is based on a two thousand to one gas-oil ratio  
7 and by letting this gas come out by itself without the oil it  
8 would be creating waste in the reservoir.

9 MR. NUTTER: Do you have any knowledge as to what  
10 the original solution GOR was there?

11 A. Nothing other than the produced gas-oil ratio is  
12 all we've got.

13 MR. NUTTER: And it was low at the beginning of the  
14 life of the field?

15 A. Yes, and I'm not sure. You see the discovery well  
16 was drilled by a pre-Pennzoil Company, Zapata and plugged and  
17 abandoned and Roger Hanks reentered it and completed it in  
18 the Cisco and the water volumes at that well, we planned when  
19 we drilled our well, we planned that we would be making the  
20 large volumes of water that they make and we have never made  
21 the water and we have made more gas than anybody has ever  
22 made.

23 MR. NUTTER: What do you think this is, solution  
24 gas drive accompanied by some water assistance there?

25 A. That's a possibility that's entered into it but the

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1 log calculations, you're talking about twenty-two to thirty  
2 percent but there is a possibility of a limited water drive  
3 from the west or northwest there and it almost has to be in  
4 the recovery on the Cleary Fina State No. 1 located in the  
5 east side of Section 10. That well has recovered approximately  
6 forty-five percent of the oil in place on a forty acre spacing  
7 using the derived water data, water saturation and porosity.

8 MR. NUTTER: That's the well that is due west of  
9 your well?

10 A. Yes.

11 MR. NUTTER: Are there any further questions of  
12 Mr. Raney? He may be excused.

13 (THEREUPON, the witness was excused.)

14 MR. NUTTER: Do you have anything further, Mr.  
15 Kellahin?

16 MR. KELLAHIN: That's all, Mr. Nutter, thank you.

17 MR. NUTTER: Does anyone have anything they wish to  
18 offer in Case 5850? We will take the case under advisement.

19

20

21

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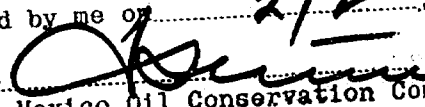
REPORTER'S CERTIFICATE

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

  
Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 5850  
heard by me on 2/2, 19 77  
 Examiner  
New Mexico Oil Conservation Commission

BEFORE EXAMINER NUMBER

OIL CONSERVATION COM.

Pennzoil EXHIBIT NO. 2

CASE NO. 5850

MESCALERO NORTH CISCO POOL

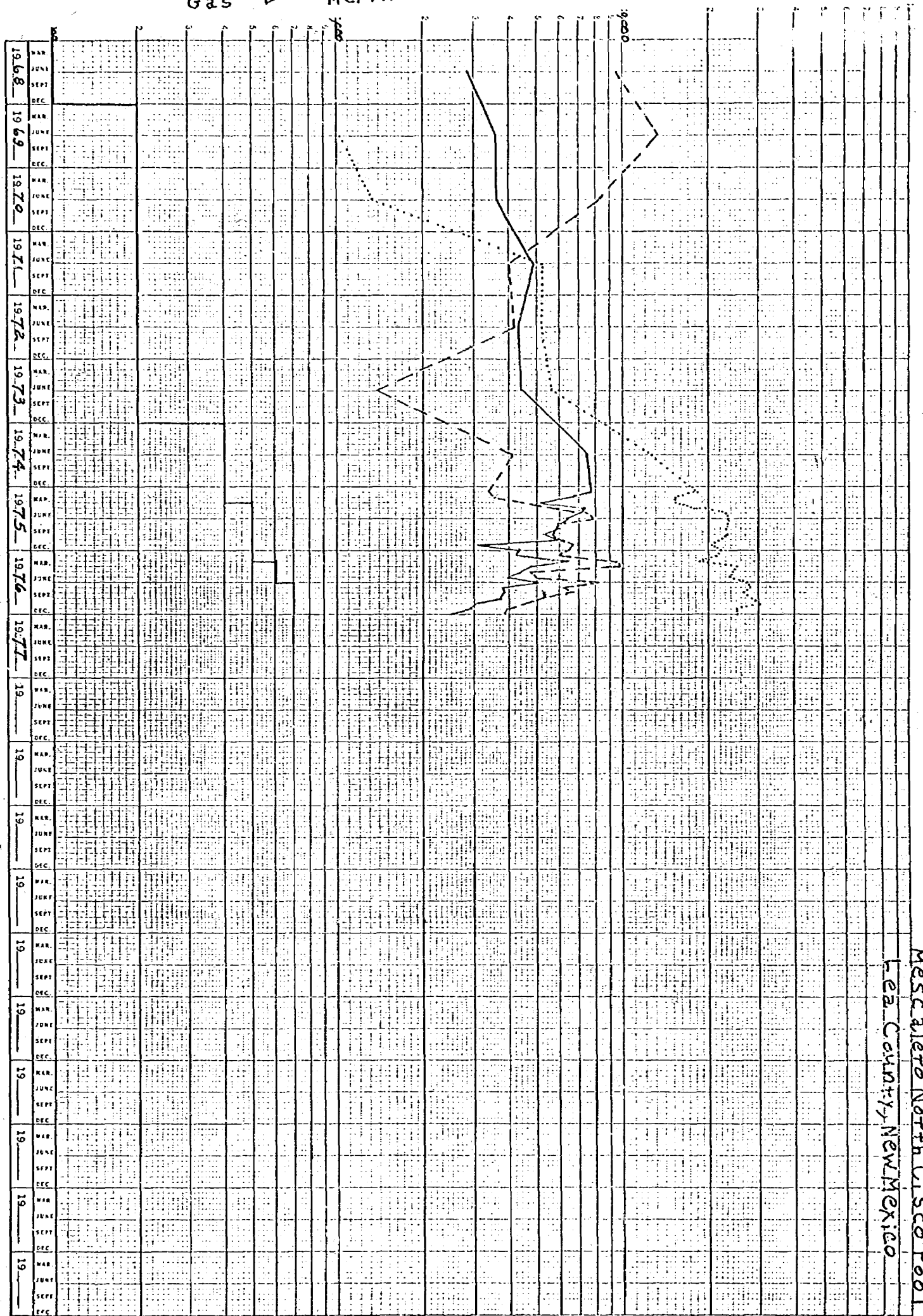
T-10-S, R-32-E

LEA COUNTY, NEW MEXICO

TOTAL POOL PRODUCTION HISTORY

Date	No. of Wells	Oil B/Mo.	Gas MCF/Mo.	Water B/Mo.
1968	1	2,883	N.R.	9,492
1969	2	3,610	1,038	13,231
1970	2	3,634	1,343	8,360
1971	2	4,876	5,325	4,071
1972	2	4,351	5,275	4,217
1973	2	4,422	5,631	1,397
1974	4	7,485	12,478	4,152
Jan. '75	4	7,770	18,357	3,389
Feb. '75	4	6,648	15,266	3,564
Mar. '75	5	6,119	15,229	5,007
Apr. '75	5	7,247	17,865	5,847
May '75	5	7,174	23,086	7,457
June '75	5	6,383	23,806	7,830
July '75	5	5,948	23,601	5,912
Aug. '75	5	5,984	23,096	5,983
Sept. '75	5	5,333	23,275	5,230
Oct. '75	5	5,900	22,481	6,304
Nov. '75	5	3,070	20,145	6,754
Dec. '75	5	4,386	22,379	6,573
Jan. '76	5	4,232	21,438	5,960
Feb. '76	6	6,502	19,675	9,501
Mar. '76	6	4,743	25,451	9,753
Apr. '76	6	4,430	24,278	4,684
May '76	6	3,797	24,058	4,973
June '76	7	5,146	27,522	8,158
July '76	7	3,782	28,040	6,119
Aug. '76	7	3,878	26,918	6,786
Sept. '76	7	3,743	28,755	5,155
Oct. '76	7	3,073	30,532	4,627
Nov. '76	7	2,936	25,214	3,958
Dec. '76	7	2,483	25,463	3,887
Cum:	1-1-77	435,272	880,268	573,910

Oil Prod. ———  
 Water ✓ BYPM ———  
 Gas ✓ MCFPM ·····



No. of Prod. Wells

Mesquite North Cisco Pool  
 Lea County, New Mexico



PENNZOIL COMPANY  
 State "11" #1  
 Unit L, Sec. 11, T-10-S, R-32-E  
 Lea County, N. M.  
 Mescalero Cisco, North Pool

Production History

<u>Mo-Yr</u>	<u>Oil</u> <u>Bbls/Mo</u>	<u>Gas</u> <u>MCF/Mo</u>	<u>Water</u> <u>Bbls/Mo</u>	<u>GOR</u>	<u>Gas</u> <u>Allow</u>
2-1976	2,271	125	1,136	55	13,340
3	2,183	8,165	994	3,740	14,260
4	1,953	14,744	568	7,505	13,800
5	1,779	14,143	977	7,950	14,260
6	2,320	16,230	2,041	6,966	13,800
7	2,032	18,346	1,780	9,029	14,260
8	2,064	18,660	1,808	9,041	14,260
9	2,025	23,003	1,774	11,360	13,800
10	1,505	23,258	1,319	15,471	14,260
11	1,764	22,422	1,546	12,711	13,800
12	1,213	21,333	1,059	17,587	14,260

BEFORE EXAMINER NUTTER  
 OIL CONSERVATION COMMISSION  
*Pennzoil* EXHIBIT NO. 3  
 CASE NO. 5850

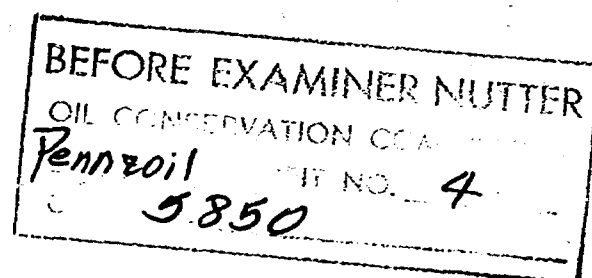


PENNZOIL COMPANY  
STATE "11" NO. 1  
UNIT L, SEC. 11, T-10-S, R-32-E  
LEA COUNTY, NEW MEXICO  
MESCALERO CISCO, NORTH POOL

Date	Casing Choke	Casing Press.	Oil Bbl.	H <sub>2</sub> O Bbl.	Gas MCF/D	GOR CF/Bbl.
12-25 to 12-31-76	42/64"	95	46 B/D	30	579	12,586
1-01-77	42/64"	125	42 "	27	530	12,619
1-02-77	42/64"	80	66 "	35	610	9,242
1-03-77	42/64"	90	63 "	30	495	7,857
1-04-77	42/64"	95	66 "	33	486	7,364
1-05-77	24/64"	180	17 "	6	482	28,353
1-06-77	24/64"	185	11 "	0	494	44,909
1-07-77	24/64"	180	11 "	0	482	43,818
1-08-77	24/64"	180	11 "	0	482	43,818
1-09-77	24/64"	180	17 "	3	517	30,412
1-10-77	24/64"	175	17 "	3	510	30,000
1-11-77	24/64"	190	14 "	6	505	36,071
1-12-77	24/64"	180	11 "	3	610	55,455
1-13-77	24/64"	195	14 "	0	635	45,357
1-14-77	24/64"	185	14 "	0	585	41,786
1-15-77	24/64"	180	17 "	0	540	31,765
1-16-77	24/64"	180	14 "	6	535	38,214
1-17-77	30/64"	145	22 "	38	617	28,045
1-18-77	36/64"	125	30 "	68	595	19,833
1-19-77	42/64"	95	58 "	90	540	9,310
1-20-77	42/64"	90	58 "	78	570	9,828
1-21-77	42/64"	95	66 "	83	640	9,697
1-22-77	42/64"	95	66 "	68	635	9,621
1-23-77	42/64"	95	73 "	58	683	9,356
1-24-77	42/64"	95	47 "	48	610	12,978
1-25-77	42/64"	95	54 "	50	607	11,241
1-26-77	42/64"	95	66 "	38	612	9,273

Red. csg. ck. to 24/64" @  
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Inc. csg. ck. to 30/64" @  
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Inc. csg. ck. to 36/64" @  
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Inc. csg. ck. to 42/64" @  
9:00 A.M.



J. C. Raney

- 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, Tociito 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 Mescalero-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.

BEFORE THE  
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION  
OF PENNZOIL COMPANY FOR ADOPTION  
OF POOL RULES, LEA COUNTY, NEW  
MEXICO.

A P P L I C A T I O N

Comes now Pennzoil Company and applies to the Oil Conservation Commission of New Mexico for the adoption of pool rules for the North Mescalero-Cisco Pool, Lea County, New Mexico, including provision for a gas-oil ratio of 4,500 mcf of gas per one barrel of oil, and for such other provisions as may be proper, and in support thereof would show the Commission:

1. Applicant is the operator of a well designated as the State 11, No. 1, located in unit "L", Section 11, Township 10 South, Range 32 East, N.M.P.M., Lea County, New Mexico.
2. Applicant proposes the adoption of pool rules providing for 40-acre spacing and proration units, with normal, statewide well locations, and a provision for a gas-oil ratio of 4500:1.
3. Because of the producing characteristics encountered by applicant, a higher GOR is necessary in order to produce the oil underlying the pool without waste. In the absence of an increase in the gas-oil ratio, gas will be lost in the reservoir, constituting waste.

4. The rules as proposed by applicant will prevent waste, and the correlative rights of the various owners will be protected.

WHEREFORE applicant prays that this application be set for hearing before the Commission or the Commission's duly appointed examiner, and that after notice and hearing as required by law the Commission enter its order adopting the pool rules as proposed.

Respectfully submitted,

PENNZOIL COMPANY

By Jason Kellahin  
KELLAHIN & FOX  
P. O. Box 1769  
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

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. 5850

Order No. R- 5389

APPLICATION OF PENNZOIL COMPANY  
FOR ADOPTION OF POOL RULES, LEA  
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 March 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, Pennzoil Company, seeks, as an exception to Rule 506 of the Commission Rules and Regulations, a limiting gas-oil ratio of 4,500 cubic feet of gas per barrel of oil in the North Mescalero-Cisco Pool, Lea County, New Mexico.

(3) That the reservoir characteristics of the subject pool justify the establishment of a gas-oil limitation of 4,500 cubic feet of gas per barrel of liquid hydrocarbons.

(4) That in order to afford to the owner of each property in the North Mescalero-Cisco Pool the opportunity to produce its just and equitable share of the oil and gas in the subject pool and for this purpose to use its just and equitable share of the reservoir energy, a limiting gas-oil ratio of 4,500 cubic feet of gas per barrel of liquid hydrocarbons should be established for the pool.

-2-

Case No. 5850

Order No. R-\_\_\_\_\_

IT IS THEREFORE ORDERED:

(1) That effective march 1, 1977, the limiting gas-oil ratio in the North Mescalero-Cisco Pool, Lea County, New Mexico, shall be 4,500 cubic feet of gas for each barrel of liquid hydrocarbons produced; that, effective march 1, 1977, each proration unit in the North Mescalero-Cisco Pool shall produce only that volume of gas equivalent to 4,500 multiplied by the top unit allowable for the pool.

(2) 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 herein-  
above designated.