CASE 4084: Application of OLEN F. FEATHERSTONE for new oil pool and special pool rules, Lea County.

- CIDE Mumber

Application.

Transcripts.

Small Exhibits

209 SIMMS RLDG. . P.O. BOX 1092 . PHONE 243-6691 . ALBUQUERQUE, NEW MEXICO

# BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico May 13, 1970

# EXAMINER HEARING

IN THE MATTER OF:

Case No. 4084 being reopened pursuant ) to the provisions of Order No. R-3732, ) which order established 160-acre ) spacing units and an 80-acre proportional factor of 4.77 for the Feather- ) Wolfcamp Pool, Lea County, New Mexico. )

) Case No. 4084

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING



MR. NUTTER: We will call next Case 4084.

MR. HATCH: Case 4084. Reopened. Continued from the April 15, 1970 examiner hearing. In the matter of Case No. 4084 being reopened pursuant to the provisions of Order No. R-3732, which order established 160-acre spacing units and an 80-acre proportional factor of 4.77 for the Feather-Wolfcamo Pool, Lea County, New Mexico.

Mr. Examiner, this case was first reopened as you notice on April 15, 1970 in Hobbs, New Mexico. No one appeared in the case to show reason why it should not be developed on less than 160-acre spacing units and if no one makes an appearance here today, I would recommend that the special rules be abolished.

MR. NUTTER: Is there anyone present wishing to make an appearance in Case 4084? No appearance in this case, the special pool rules for this pool will be rescinded.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

STATE OF NEW MEXICO ) )ss COUNTY OF BERNALILLO )

I, GLENDA BURKS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

NOTARY PUBLIC

My Commission Expires:

March 12, 1973

I do hereby sartify that the foregoing is • duargleis researd of the process the Francisc hearing the Case to 408 Wer Hexico Vil Conservation Commission

1120 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6491 • ALBUQUERQUE, NEW MEXICO 87101 1400 FIRST NATIONAL BANK EAST • PHONE 256-1294 • ALBUQUERQUE, NEW MEXICO 87108

# BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

Hobbs, New Mexico April 15, 1970

REGULAR HEARING

IN THE MATTER OF:

Case No. 4084 being reopened pursuant to the provisions of Order No. R-3732, which order established 160-acre spacing ) Case No. 4084 units and an 80-acre proportional factor ) of 4.77 for the Feather-Wolfcamp Pool, Lea County, New Mexico.

BEFORE: A. L. Forter, Secretary-Treasurer
David F. eargo Governor
George Hatch, General Counsel

Daniel S. Nutter Examiner

TRANSCRIPT OF HEARING



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of Case To. 1011 being meanened numerant to the negligions of Oxfor Mo. 2-2722, thick prior cetallists (160 care annotate which and an about the factor of 4.77 for the Deather Molforn Colforn Cool. Tee County, Mor Morino.

A0042 We will continue the dasc until offer lunch. We will call nort Case We. 4330.

MD. HAMOU: Do you want to give an approximate time on this after lunch?

up. mummup: vos. ve will.

(To response.)

TP. MEMBER: Case 4004.

Of Case Mo. 4024 being reopened pursuant to the provisions of Order Mo. 202732, which order established 160 acre spacing units and an 20-acre proportional factor of 4.77 for the Feather-Molfcamp Pool, Lea County, New Mexico.

The call of the docket said all interested parties may appear and show cause why the said pool should not be developed on less than 160-acre spacing units and to show cause why the 30-acre proportional factor of 4.77 should or

should not be retained.

Anna was on March the 26th of 1969. The Annalicant in that dage was Olan P. Postherstone. Is there anyone present at the hearing representing the original Annalicant, Olan P. Postherstone, in this matter today? Is there anyone present at the hearing that wishes to make an eppearance in Case No. 4094?

Case No. 4084 will be continued to the Examiner Wearing to be held at mine o'clock a.m., May the 13th, at the Santa We Land Office Duilding in Santa We. With that, the bearing is adjourned.

(Thereupon, the hearing was adjourned.)

comment of otherstrate )

County of Bernalillo, State of New Mexico, do hereby certify that the forecoing and attached Transcript of Mearing before the Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Bunda Buylos
Court Reporter

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New Marico oil Conservation both Joing

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS,

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • AIBUQUERQUE, NEW MEXICO

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

March 26, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Olen F. Featherstone for the creation of a new pool and for special pool rules, Lea County, New Mexico.

Case No. 4084

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING



MR. UTZ: Case 4084.

MR. HATCH: Case 4084, application of Olen F. Featherstone for the creation of a new pool and for special pool rules, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin and Fox, Santa Fe, appearing for the applicant.

MR. UTZ: Any other appearances in this case?

(Whereupon, Applicant's Exhibits Numbers 1 through 8, inclusive, were marked for identification.)

(Witness sworn.)

#### WILLIAM BARNHILL

called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

#### DIRECT EXAMINATION

### BY MR. KELLAHIN:

- Q State your name, please.
- A William Barnhill.
- Q Mr. Barnhill, what business are you engaged in?
- A I am a consulting geologist from Roswell, New Mexico.
- Q In connection with your work as a consulting geologist, have you done any work for Olen F. Featherstone in connection with the application in Case 4084?

- A Yes, I have. I have prepared these exhibits.
- Q Have you testified before the Oil Conservation

  Commission and made your qualifications as a matter of record?
  - A Yes.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. UTZ: Yes, they are.

Q Mr. Barnhill, briefly, what is being proposed by Mr. Featherstone in the application before the Commission at this time?

A What is being proposed in this application 4084 is creation of a new pool with new pool rules, and applying for 160-acre spacing, with an 80-acre allowable, is essentially the proposal.

- Q This is for the applicant's Cabot State Well No. 1?
- A Yes, sir. Featherstone No. 1, Cabot State, in Section 29, 15-32, Lea County.
- Q That is the well is located in the northeast of the northwest quarter of that section?
  - A Yes, sir.
- Q Referring to what has been marked as Exhibit Number 1, would you identify that exhibit?
  - A Well, Exhibit Number 1 is a land plat of the area,

showing the North Anderson Ranch Unit approximately a mile to the southeast, and a dry hole in Section 32 known as the Lane Mill Unit, drilled by T.P. Coal and Oil; and a well immediately north in Section 20, a dry hole which was drilled by Cabot, and it is the Cabot Carper State.

Mr. Featherstone's well was drilled at the location you just described, in anticipation of encountering some of the Wolfcamp reef found in the North Anderson Ranch Field.

- Q Did you encounter that producing formation?
- A We encountered the formation, but it wasn't productive. If I could refer you to the electric log on the next sheet.
  - Q That is Exhibit Number 2?

A That would be Exhibit Number 2, which is the microlog of the Featherstone No. 1 Cabot State, you will notice that approximately 9,500 feet, there is approximately five feet of microlog porosity. The DST is on the log here, and that was the first DST. It went on down to the Anderson Ranch pay, itself, which is the Bough C, and took a DST at 9,725 to 9,778, and we did have gas to the surface in four minutes, and recovered 120 foot of oil and gas cut mud, and five barrels of oil.

Now, the Bough C, this particular zone here is what

is producing in the Anderson Ranch Unit to the southeast.

You will notice on this microlog, we just don't have any
microlog porosity.

This well was drilled to a depth of 10,200 feet, and subsequent DST below this recovered water. Five and a half-inch casing was run on this, and perforated this lower zone, which is the pay in the Anderson Ranch, more or less just seeing if anything would develop, which you will notice the perforations marked on the log, and it was acidized, and it did -- we just lost our porosity completely. So we went back up to this 9,500-foot zone, and perforated, 9,499, 9,500 to 9,501, and acidized this with 1,500 gallons. Currently, this well is out of that zone, which is the Bough B, and is flowing eight to ten barrels of oil per hour, no water.

- Q Is all of the production coming from this upper zone which is designated as B?
  - A Yes, sir.
- Q In your opinion, is the C zone contributing anything to this production?
- A Not to my knowledge would it be contributing anything.
  - Q It is open in the well bore, however, is it not?
  - A We have two feet open there, yes.

- Q Did you set a plug below that point?
- A Yes, there is a plug below that.
- Q But, in your opinion, is this a separate source of supply than that from which the Anderson Ranch is producing?
- A Yes, it is. These perforations at which the oil is coming from is the Bough B section, which does not produce in the Anderson Ranch Field to the southeast, or in the immediate area. It is present in these other wells in the Anderson Ranch Field, but they developed their good porosity in the Bough C, and they just never made any attempt to complete out of this Bough B section.
- Q Now, referring to what has been marked as Exhibit
  Number 3, would you identify that exhibit?
- A Exhibit Number 3 is just a subsurface contour map on the top of the Bough B section, and actually all it shows, it is just the updip-downdip relationship between Anderson Ranch and the Featherstone Cabot State. That is contoured on the Bough B section that we have open, and is making oil in the Featherstone well.

The next sheet attached to this Exhibit 3 is the BB cross-section, which goes from the Featherstone well to the Aztec 1-AW in Section 28. This is just a straight line cross-section.

Q The cross-section, then, is attached as the next page?

A It is the third sheet attached to Exhibit 3, which shows the Bough B section in the Featherstone well, and the Bough B section in the Aztec well, which was not tested, but the microlog, it is a very similar porosity situation. If you look down further on the Aztec 1-AW well, you can see the porosity that develops in the C section, which the Featherstone well does not have.

Q And the Aztec well, is that completed and producing from the Bough C zone?

- A Yes, out of that lower porosity below 9,900.
- Q Is it open in the B?

A There are no wells in the immediate area open in the B.

Q Referring to what has been marked as Exhibit Number 4, would you identify that exhibit?

A Well, Exhibit Number 4 is a subsurface map on the top of the Bough C, which is the producing horizon in the Anderson Ranch, itself, and there again it is essentially the same relationship structurally as these horizons, just updip-downdip situations. The second sheet attached to it is the AA cross-section. This section goes from the TP-Lane

Mill Unit, the dry hole in Section 32, to the Featherstone well in 29, to the dry hole Cabot Carper State in Section 20.

Again, the relationship here on the microlog is just to show the B horizon in the TP Well and the Featherstone Well. In the TP Well, you will notice the Bough B is essentially the same microlog thickness as the Featherstone Well.

TP Coal and Oil, which I have included in this record, the well data, did attempt a completion out of their Bough B section, in which the last report was that it was swabbing 40 barrels of oil per day, and they subsequently abandoned it.

There is only one thing wrong with this particular cross-section, in that the Cabot well to the north did not run a microlog section through the Bough B section, and what I have included here is just the induction log showing the same horizon, but we are looking at an induction log and microlog here, which is a little -- just isn't the way it should be, but that is all we have to use.

You will notice that in the Cabot well, the Bough B section has thickened up to, I would say, maybe fifteen feet of Queen limestone in there. That well did take a DST on the Bough B, and they had some gas and free oil on the DST, but

they attempted a completion out of the Bough C, and the well was consequently abandoned.

- Q Now, the only well that is actually producing, then, from the Bough B is the Olen Featherstone Cabot State No. 1?
  - A That's right.
- Q Referring to what has been marked as Exhibit Number 5, would you identify that exhibit?

A Exhibit Number 5 is just the well data on the Featherstone No. 1 Cabot State, with just the field records in there of the DST's, and casing, cementing, perforations, the acidizing, and the pressures they were treated under. Actually, just the complete daily history of the well on its completion.

- Q Is the well presenting flowing?
- A Yes, it is.
- Q How long has it been operating as a Queen well?
- A Well, that would be effective about February 25th.
- Q What volume is it presently producing?
- A It is producing 8.77 barrels of oil per hour.
- Q Now, referring to what has been marked as Exhibit Number 6, would you identify that exhibit?
- A Well, Exhibit Number 6 is of the wells that I just mentioned, that is the Cabot Corporation, and the TP Lane Mill.

It did have DST in the Bough B, which is just the well file on those wells, just to show that that particular zone had been tested, although there was not a completion. Plus the Union well in the Union 133 also tested the Bough B, and they recovered free oil. That is the only three wells that have even run a DST on this particular zone.

Q Now, referring to what has been marked as Exhibit Number 7, would you identify that exhibit?

A All the offset operators were asked to comply by letter whether they would have any objection to forming a new pool, and the spacing proration units, which the only one that I actually have received a copy of, they were asked to be addressed to Mr. Porter with a copy to Mr. Featherstone, and I have the copy here stating the approval of Cabot Corporation and Tenneco. Unless the Commission has something adverse to report, all the adjacent operators said they would have no objection.

Q And then the third page of that exhibit is the assignment of allowable?

A That was the assignment of the allowable by the Oil Conservation Commission.

Q That was based on what kind of acreage dedication? Was that based on 40-acre units?

- A That is based on 80.
- Q On 80. Because you are within one mile of the Anderson Ranch Unit, is that correct?
  - A Yes.
- Q And that was a Wolfcamp well, and the assignment was based on the basis of 80-acre spacing as provided in the Anderson Ranch Unit, is that the situation?
  - A That's right.
- Q Referring to Exhibit Number 8, would you identify that exhibit?
- A Well, Number 8 is the interpretation and calculation of the two DST's, both the Bough B horizon and the Bough C horizon, prepared by Halliburton in their Duncan, Oklahoma office on their computer calculations, which we prefer to use due to the fact they are just a little more accurate than the regular field data, although it is just the interpretation.
  - Now, that is the first two pages?
  - A That is the first two pages.
- Q Referring to the third page of the exhibit, would you discuss the information shown on that?
- A Well, that is the reserve calculations for the Bough B section at 9,498 to 9,502. And the lower zone, which would be the Bough C, that would be the reserve calculations.

- Q That is referred to as Zone 1, that would be the B?
- A Yes, that really should be, that would be the B zone. That is just a typographical error. That is the Bough B.
  - Q And Zone 2 is the Bough C, is that correct?
  - A Yes.
- Q Based on these calculations, is that calculation based on the information shown on the Halliburton calculation?
  - A Yes, it is.
- Q Now, based on these calculations, in your opinion, would a well located and spaced on 80 acres be economic?
- A Well, 80-acre spacing, the figure is 50,000 barrels, 50,776 barrels, which would not be economically feasible.
  - Q What is the depth of these wells?
  - A The Bough B horizon is at 9,500.
- Q What is the approximate cost of drilling a well to the Bough B?
  - A \$120,000.00
- Q If the Commission sees fit to grant your request for 160-acre spacing, would that be an economic operation for the operator here?
  - A Well, what we would like to do, if the Commission

would grant us temporary spacing on this, we would certainly improve the situation from the reserve calculations. We calculate that 101,552 barrels, which is kind of a skinny operation at its best, but we would have hopes of doing some additional development in there, and getting more reservoir data and information to see if this B zone is an actual commercial zone, which, since it has not produced in the immediate area, we really have a lot of unanswered questions.

- Q Specifically, Mr. Barnhill, do you have any pressure information at this time?
- A Only on this material presented here on the calculations.
  - Q And that is based on the drill stem test?
  - A Yes, sir.
- Q Do you have any information on the permeability of the formation?
- A No more than what is calculated off these Halliburton charts.
  - Q You have no cores?
  - A No cores, no.
- Q Now, according to your Exhibit Number 1, the Cabot well is located on acreage originally owned by Cabot and farmed out to Featherstone?

- A That's correct.
- Q Do you have any arrangement with Tenneco and Texas Pacific, or whoever is the owner of the remaining half of that quarter-section that would be dedicated to the well, does Featherstone have that acreage?
  - A Yes, he does.
  - Q He could dedicate the 160 acres to the well?
  - A Yes, he could.
- Q What would be the next action in the event this application is approved on the part of the applicant here, in regard to future development?
- A It would be proposed to re-enter the Cabot Carper State located in the southeast quarter of Section 20, which is diagonally to the northeast, and attempt a completion out of the Bough B section in that well. That well did test some free oil out of that zone. That would be the first step. There is not a microlog of that particular section, as mentioned earlier, but the induction log looks like there might be possibly fifteen feet of clean lime in there.
- Q Would it be practical to go ahead with that type of operation on the basis of 80-acre spacing?
- A I think it would be just economically feasible on 80 acres. I don't believe the economics would apply at all.

Actually, the present well owned by Mr. Featherstone would not make 160-acre allowable?

No, it would be hard pressed to make an 80-acre allowable. We do have plans to go ahead and reacidize this Bough B section, but it wouldn't make 160-acre allowable

Well, as a consultant for Mr. Featherstone, Mr. under no circumstances. Barnhill, would you recommend to him that he enter the Carper State Well in Section 20 and attempt to complete it, if the pool was spaced on 80 acres?

On 80 acres?

yes.

Would you recommend that he attempt to complete No, sir. that well on the basis of 160 acres?

Yes, 1 would.

In your opinion, would there be any further development of this Bough C zone in the area, if this

Well, I believe when you look at the facts on the application is not approved? matter here, it is just a real highly questionable situation at best, but it would -- since the Bough B has not produced, we really don't know much about it. We can't present enough evidence on drainage, and one thing or another. There wouldn't be any point in trying to kid anybody. If it was a new zone, whether it is going to be real commercial or not, we really don't know at this time. It would certainly be not commercial on 80-acre spacing.

- Q Would a temporary order for a period of one year give Mr. Featherstone an opportunity to obtain additional information which may or may not justify 160-acre spacing on the basis of drainage? Would the additional year give you enough time to obtain that information?
  - A I think it would, yes.
- Q Would the additional one year give you time to make tests on the present well, and establish some information as to the drainage pattern of that well?
  - A Yes.
- Q Then, frankly, we do not have information showing drainage, is that correct?
- A We have very little information on this Bough B section here, that's right, very little information.
- Q Are you then requesting the Commission on the basis of economics, for an opportunity to make further developments in this pool and test to determine the proper acreage dedication, is that what you are asking for?

- A Yes.
- Q Were Exhibits 1 through 8 prepared by you or under your supervision?
  - A Yes, they were.

MR. KELLAHIN: At this time, I would like to offer Applicant's Exhibits 1 through 8.

MR. UTZ: Without objection, Exhibits 1 through 8 will be entered into the record of this case.

MR. KELLAHIN: That is all we have.

(Whereupon, Applicant's Exhibits Numbers 1 through 8, inclusive, were admitted into evidence.)

# CROSS EXAMINATION

# BY MR. UTZ:

- Q Mr. Barnhill, what do you estimate the profit would be on a barrel of oil?
  - A \$1.60.
- Q It would be a little rough on 23,400 barrels to pay out that \$120,000, wouldn't it?
  - A Which figure was that, sir?
- Q 23,400 barrels, which you show as your recoverable reserves from 160 acres.
  - A Well, on 160 acres, is 101,552.
  - Q Your net recovery on 160 is 23,400, isn't it, if

you assume the factor of 25 per cent?

MR. KELLAHIN: That is the Bough C zone, if the Examiner please.

- Q Is that the C zone?
- A That is the C zone, yes. That zone is not going to contribute anything to the well bore.
- Q You don't think that you will get any of that 23,400?
  - A No, sir, I really don't.
- Q Then there is not much reason for being here, is there?
- A It is a matter of presenting the data we have.

  But the C zone just isn't producing in this well, unfortunately.
  - Q So it is 101,552?
  - A Yes.
  - Q And that Zone 1 is the B zone?
- A Yes, sir. I am sorry that is called Zone 1 there, but that is the Bough B.
  - Q Do you have a suggestion for a pool name?
- A Not at this time, sir. I am not the operator in this, and I don't know what they are going to attempt to call it.
  - Q Does he have a suggestion?

- A I don't know of one at this time, sir.
- Q What did you say the top of the perforations were on your B zone?
- A That is at, on the B zone, the top of the perfs is 9,499, 9,500, and 9,501.
- Q And you are not asking for a discovery allowable here, since the well won't make it anyhow?
  - A That's right.
  - Q But you are asking an 80-acre allowable?
  - A Yes, sir.
- Q And I believe you requested a one-year temporary order?
  - A Yes, sir.

MR. UTZ: Any other questions of the witness?

The witness may be excused. Any statements?

MR. HATCH: The Commission has received a letter from Tenneco Oil Company dated March 11th. The application of Olen Featherstone for the formation of a new pool and adoption of a 160-acre proration unit surrounding their recent discovery northeast, northwest Section 29, Township 15 South, Range 32 East, will be heard March 26, 1969. Tenneco Oil Company has no objections to this spacing unit. Signed, C. H. Madsen, Geologist. That is the only communication I

have a record of receiving here. That is from Tenneco.

THE WITNESS: I believe we have one there from Cabot Corporation.

MR. HATCH: You show a copy coming here, but I couldn't find it.

MR. UTZ: Well, we didn't find it. Any other statements? The case will be taken under advisement. We will adjourn now until one thirty o'clock this afternoon.

(Whereupon, the hearing was adjourned for the morning, to reconvene at one thirty o'clock, P.M.)

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STATE	OF	NEW	MEXICO	)	
				)	ss.
COUNT	Y OF	BE	RNALILLO	)	

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

COURT REPORTER

I do harshy cortify that the foregoing is a complete record of the proceedings in the knowledge bearing of Case to 40.5%.

New Nextoo Oil Conservation Commission

EL PASO, TEXAS

JMAR 3 V 1969 New Mexico Press Clipping Burrau Altinguerrue, N. M. would allow LTV to increase its current 63 per cent stock increase in Jones & Laughlin to 81 per cent but would seek in the courts to compel LTV

New Mexico Oil

22

# Permo-Pennsylvanian Well Finished As Discovery

Special to EL PASO TIMES HOBBS, N.M. — Olen F. Featherstone of Roswell, No. I Cabot-State, Lea explorer, a miles northwest of Lovingson, has been finished as a Permo-Pennsylvanian discovery, 1½ miles northwest of Wolfcamp wells in the Anderson Ranch, North field.

It flowed 168 barrels of off daily from perforations detween 9,499 and 9,727 feet, following a 2,000 gallon acid stimulation. The production was through a 28-64-inch opening on the tubing.

Location spots 860 feet from north and 1,380 feet from west lines of section 29-15s-32e.

H. L. Brown Jr. of Midland No. 1 Continental-Federal, Chaves San Andres strike, 10 milessoutheast of Elkins, has been potentialed for a daily pumping yield of 65 barrels of oil, plus 40 barrels of water, from perforations extending from 3,734 to 3,798 feet after a 3,250-gallon acid injunction

3,250-gallon acid injection.

It is 660 feet from north and east lines of section 29-8s-3le. The pumper is two miles southeast of Brown's No. 1-20 Shell-Federal, another San Andres opener, and is three miles southeast of the Cato (San Andres) reservoir.

Locations for exploratory ventures have been staked in Lea.

Deeper of the two is Freeport Oil Co. of Midland No. 1 State, a Devonian wildcat slated for 15,000 feet, 31/2 miles southeast of Tatum. It spots 1,650 fet from south

It spots 1,650 fet from south and 2,310 feet from east lines of section 11-13s-36e, 5½ miles 11,400-foot operation in the Levington, East (Strawn) pool of Lea, six miles southeast of Lovington.

It is 2,040 feet from north and 1,930 feet from east lines of section 19-16s-37e, a location northeast and northwest of producers in the seven well

Roden Oil Co. of Midland staked No. 2 Roden-Bluitt-Federal as a location north stepout to the six-well Bluitt, East (San Andes oil) reservoir of Roosevelt, five miles east of Bluitt.

It spots 510 feet from north and 660 feet from west line of section 19-8s-38e. Proposed goal is 4,750 feet.

Pennzoil United Inc. of Midland was making hole below 2,216 feet in anhydrite and salt towards a 4,000-foot San Andres goal in No. 1-21 Pubco-Federal, 16 miles northwest of Caprock in Chaves.

Location is \$60 feet from south and west lines of section 21-8s-31e, a mile southeast of the opener of the Siete (San Andres) pool and a location northeast of a recently completed San Andres oil producer.

#### **RUNNING CASING**

Jake L. Hamon of Midland No. 2-33-K State is at total depth 13,040 feet running production casing. The indicated third Devonian oil well in the Shoe Bar, East region of Lea, is three miles southwest of Lovington.

An eight-hour drillstem test conducted on the interval at 12,992-13,040 feet returned 2,077 feet of water blanket southwest of the Gladioia, Southwest (Devonian) area.

Scoggins-Ronneberg Ltd. of Corpus Christi scheduled No. 1 State as a 4,690-foot San Andres prospector, 10 miles southwest of Crossroads.

Drillsite is 660 feet from north and 330 feet from west lines of section 16-10s-34e, a location southeast of Pennsylvanian production in the Inberegion.

#### LEA EXPLORER

Pan American Petroleum Corp. plans No. 1 Bright-Federal as a 3,300-foot Yates explorer, in Lea, 15 miles southeast of Maljamar.

It is 660 feet from north and 1,980 feet from west lines of 5 o. peters of Anaheim, Calif., S No. 2 Federal is to be a 4,500-foot wildcat in DeBaca County, 1,980 feet from north and 100 east lines of section 11-6n-26e, 31824 miles north of Santa Rosa.

ing areas have been staked in Stepouts to proven produc-Lea and Roosevelt counties in Southeast New Mexico.

J. M. Huber Corp. of Midland plans No. 1-B Lone Star-Federal as location south outpost to the two-well Devonian reservoir in the Prairie, South multipay field of Roosevelt, four miles southeast of Milne-

Drillsite for the 13,000-foot project is 2,130 feet from south and 660 feet from east lines of section 20-8s-36e.

Deeper of the Lea operations is Pennzoil United Inc. No. 1-16 State, a 12,000-foot Strawn prospector, I miles northeast of the Lovington, East (Pennsylvanian) region.

It spots four miles southeast so of Lovington, 660 feet from south and west lines of section 16-16s-37e.

Sam Boren of Midland scheduled No. 1-A Boren-Barbara-State as a souhtwest stepout to the nearer of the two Pennsylvanian oil wells in the Bagley, East territory, 10 miles southeast of Caprock in

The 10,400-foot probe is 660 feet from south and east lines of section 6-12s-34e.

Cities Service Oil Co. scheduled No. 1-CK State as an and 7,700 feet of 62-gravity formation crude from the drill pipe and 2.5 cubic feet of gas pius 1,900 cubic centimeters of oil was recovered from the sample chamber.

Initial one-hour shut-in pressure was 5,015 pounds. Flow pressures varied from 1,652 to 3,680 pounds. Final shut-in bottomhole pressure also for one hour was 4,859 pounds.

It is 554 feet from south and 1,983 feet from west lines of section 30-16s-36e, a location northwest of the two-well

An earlier investigation of the Devonian between 12,990 and 13,038 feet recovered 7,023 feet of 62.5-gravity oil and 3,077 feet of water blanket on the 5½-hour test.

Phillips Petroleum Co. No. 1-A Tower-Commission has been finished as the sixth well and a southwest extender for the Ranger Lake, West (Devonian gas) reservoir of Lea. 10 miles west of Tatum.

Two calculated, absolute open flow potentials have been reported from the operation. The first was for 6,712,000 cubic feet of gas per day, plus 34 barrels of 54.4 degree distillate in four hours, while the second was for 4,354,000 cubic feet of gas daily with 43 barrels of liquid hydrocarbons in five hours.

The production was from shot holes at 12,862-12,874 feet which had been injected with 1.000 gallons of acid.

Location is 1,980 feet from south and west lines of section 24-12s-34e. Pennsylvanian and Devonian oil production in the vicinity is carried in the Ranger Lake field.

C. P. Sims No. 1 Vivian-Gulf Lea, Santa Rosa gas discovery in the Drinkard multipay field, five miles southeast of Eunice, was completed for a calculated, absolute open flow of 130,000 cubic feet of gas per day.

The production was from perforations at 740-764 feet after treating with 250 gallons of acid.



# OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2000 - SANTA FE 87501 GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBER

STATE GEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

May 20, 1970

Mr. Jason Kellahin Kellahin & Fox Attorneys at Law Post Office Box 1769 Santa Fe, New Mexico Re: Case No. 4084 (Reopened)
Order No. R-3732-A
Applicant:

OLEN F. FEATHERSTONE

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.

Secretary-Director

ALP/ir
Copy of order also sent to:
Hobbs OCC x
Artesia OCC
Aztec OCC
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. 4084 Order No. R-3732-A

APPLICATION OF OLEN F. FEATHERSTONE FOR THE CREATION OF A NEW POOL AND FOR SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 13, 1970, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 20th day of May, 1970, 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 by Order No. R-3732, dated April 18, 1969, temporary Special Rules and Regulations were promulgated for the Feather-Wolfcamp Pool, Lea County, New Mexico, establishing 160-acre spacing units and an 80-acre proportional factor of 4.77 for allowable purposes for a period of one year.
- (3) That pursuant to the provisions of Order No. R-3732, this case was reopened to allow the operators in the subject pool to appear and show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.

-2-CASE No. 4084 Order No. R-3732-A

- (4) That no operator in the subject pool appeared to show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.
- (5) That only one well is presently producing from the subject pool.
- (6) That it is not anticipated that additional wells will be drilled in the subject pool.
- (7) That the operators in the subject pool have not established that one well can efficiently and economically drain and develop 160 acres.
- (8) That no necessity exists for the continuation of the Special Rules and Regulations promulgated by Order No. R-3732 and that said rules should therefore be abolished.

#### IT IS THEREFORE ORDERED:

- (1) That the Special Rules and Regulations governing the Feather-Wolfcamp Pool, Lea County, New Mexico, promulgated by Order No. R-3732, are hereby abolished.
- (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

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Membe

A. L. PORTER, Jr., Member & Secretary



### OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87801 GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER ALEX J. ARMIJO MEMBUR

STATE GEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

### April 18, 1969

Ţ	OCKET MAILED	Case No. 4084
Mr. Jason Kellahin	Re:	Order No. R-3732
Kellahin & Fox	Re:	
Post Office Box 1769	DOCKET MANILO	Olen F. Featherstone
Santa Fe, New Mexico	4-2-70	
	Date-	
Dear Sir:		a dommis-
Enclosed herewith as sion order recently	re two copies of the entered in the st	the above-referenced Commis- ubject case.
	Verv t	ruly yours,
		Carter In.
	• • • • • • • • • • • • • • • • • • • •	
	A. L.	PORTER, Jr. tary-Director
	Secret	cary biron
ALP/ir		
Copy of order also	sent to:	
Hobbs OCCX		
Artesia OCC		
Aztec OCC	_ <del>_</del>	
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. 4084 Order No. R-3732 NOMENCLATURE

APPLICATION OF OLEN F. FRATHERSTONE FOR THE CREATION OF A NEW POOL AND FOR SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

#### ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 26, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 18th day of April, 1969, 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, Olen F. Featherstone, seeks the creation of a new oil pool for Wolfcamp production in Lea County, New Mexico, including a provision for 160-acre spacing units and the assignment of 80-acre allowables.
- (3) That the evidence presently available indicates that the Olen F. Featherstone Cabot State Well No. 1, located in the NE/4 NW/4 of Section 29, Township 15 South, Range 32 East, NMPM, Lea County, New Mexico, having its top perforations at 9499 feet, has discovered a separate common source of supply which should be designated the Feather-Wolfcamp Pool; that the vertical limits

-2-CASE No. 4084 Order No. R-3732

of said pool should be the Wolfcamp formation as found in the interval from 9499 feet to 9630 feet on the log of the aforesaid Olen F. Featherstone Cabot State Well No. 1; and that the horizontal limits of said pool should be the NW/4 of said Section 29.

- (4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 160-acre spacing units and the assignment of 80-acre proportional factor of 4.77 should be promulgated for the Feather-Wolfcamp Pool.
- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- (6) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.
- (7) That this case should be reopened at an examiner hearing in April, 1970, at which time the operators in the subject pool should be prepared to appear and show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 assigned to the subject pool should or should not be retained.

#### IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production, is hereby created and designated the Peather-Wolfcamp Pool, with vertical limits comprising the Wolfcamp formation as found in the interval from 9499 feet to 9630 feet on the log of the discovery well, Olen F. Featherstone's Cabot State Well No. 1, located in the NE/4 NW/4 of Section 29, Township 15 South, Range 32 East, NMPM, Lea County,

-3-CASE No. 4094 Order No. R-3732

New Mexico, and horizontal limits comprising the following-described area:

### TOWNSHIP 15 SOUTH, RANGE 32 EAST, NMPM Section 29: NW/4

(2) That temporary Special Rules and Regulations for the Feather-Wolfcamp Pool, Lea County, New Mexico, are hereby promulgated as follows:

#### SPECIAL RULES AND REGULATIONS FOR THE FEATHER-WOLFCAMP POOL

- RULE 1. Each well completed or recompleted in the Feather-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof, and not nearer to or within the limits of another designated Wolfcamp oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.
- RULE 2. Each well shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square, which is a quarter section being a legal subdivision of the United States Public Land Surveys.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.
- RULE 4. Each well shall be located within 150 feet of the center of a governmental guarter-quarter section or lot.
- RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an

CASE No. 4084 Order No. R-3732

application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. A standard proration unit (158 through 162 acres) shall be assigned an 80-acre proportional factor of 4.77 for allowable purposes, and in the event there is more than one well on a 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

#### IT IS FURTHER ORDERED:

- (1) That the locations of all wells presently drilling to or completed in the Feather-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before May 1, 1969.
- (2) That each well presently drilling to or completed in the Feather-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 160 acres to the well has been filed with the Commission, or until a non-standard unit containing less than 160 acres has been approved.
- (3) That this case shall be reopened at an examinar hearing in April, 1970, at which time the operators in the subject pool may appear and show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show

-5-CASE No. 4084 Order No. R-3732

cause why the 80-acre proportional factor of 4.77 assigned to the subject pool should or should not be retained.

(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

DAVID F. CARGO, Chairman

ALEX J. ARMIJO, Mether

A. L. PORTER, Jr., Member & Secretary

#### DOCKET: REGULAR HEARING - WEDNESDAY - MAY 13, 1970

OIL CONSERVATION COMMISSION - 9 & Ms. - MORGAN HAUL, STATE LAND OFFICE BUILDING, SANYS WE, NEW MEXICO

#### ALLOWABLE: (1) Consideration of the oil allowable for June, 1970;

(2) Consideration of the allowable production of gas for June, 1970, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico; also presentation of purchaser's nominations for said pools for the six-month period beginning July 1, 1970; consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for June, 1970.

THE FOLLOWING CASES WILL BE HEARD BEFORE DANIEL S. NUTTER, EXAMINER, OR ELVIS A. UTZ, ALTERNATE EXAMINER:

- CASE 4354: Application of Michael P. Grace and Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicants, in the above-styled cause, seek an order pooling all mineral interests from the surface of the ground down to and including the Morrow formation underlying the N/2 of Section 11, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, said acreage to be dedicated to a well to be drilled in either the NE/4 NW/4 or the NW/4 NE/4 of said Section 11. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 4355: Application of Pan American Petroleum Corporation for pool consolidation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the consolidation of the North Bagley-Upper Pennsylvanian and North Bagley-Lower Pennsylvanian Pools, Lea County, New Mexico, into one pool. Applicant further requests the Lower Pennsylvanian Allowable Factor be applied to the consolidated pool.

#### CASE 3727 (Reopened):

In the matter of Case 3727 being reopened pursuant to the provisions of Order No. R-3428, which order established 640-acre spacing units for the Rock Tank-Upper Morrow and Rock Tank-Lower Morrow Gas Pools, Eddy County, New Mexico, for a period of one year after first pipeline connection in either of the pools. All interested persons may appear and show cause why said pools should not be developed on 320-acre spacing units.

- CASE 4356: Southeastern nomenclature case calling for an order for the creation, abolishment, extension and contraction of certain pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico.
  - (a) Create a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Baum-Morrow Gas Pool. The discovery well is the RK Petroleum Corporation State No. 1 located in Unit B of Section 27, Township 13 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM SECTION 27: N/2

(b) Create a new pool in Lea County, New Mexico, classified as a gas pool for Queen-Penrose production and designated as the East Querecho Plains-Queen Gas Pool. The discovery well is Robert N. Enfield's Hudson Federal No. 1 located in Unit O of Section 30, Township 18 South, Range 33 East, NMPM.

TOWNSHIP 18 SOUTH, RANGE 33 EAST, NMPM SECTION 30: SE/4

(c) Abolish the Bluitt-San Andres Pool in Roosevelt County, New Mexico, described as:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM

SECTION 7: All

SECTION 8: All

SECTION 17: All

SECTION 18: All

(d) Extend the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM

SECTION 8: S/2

SECTION 17: W/2

(e) Contract the Bagley-Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area;

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM SECTION 4: NE/4

(Case 4356 continued)

(f) Extend the North Bagley-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM SECTION 33: E/2

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM SECTION 4: NE/4

(g) Extend the Cerca-Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 34 EAST, NMPM SECTION 34: NW/4

TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM SECTION 8: NW/4

(h) Extend the Double L-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM SECTION 12: E/2 NE/4

(i) Extend the Hobbs-Blinebry Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM SECTION 33: NE/4

(j) Extend the Lea-Bone Springs Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 35: SE/4

TOWNSHIP 20 SOUTH, RANGE 34 EAST, NMPM SECTION 2: E/2

(k) Extend the Rock Tank-Lower Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 24 EAST, NMPM SECTION 12: All

-4-

(1) Extend the Rock Tank-Upper Morrow Gas Pool in Eddy County, New Mexico, to include therein:

### TOWNSHIP 23 SOUTH, RANGE 24 EAST, NMPM SECTION 12: All

(m) Extend the Tulk-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

### TOWNSHIP 14 SOUTH, RANGE 32 EAST, NMPM SECTION 34: NE/4

(n) Extend the Tulk-Wolfcamp Pool in Lea County, New Mexico, to include therein:

### TOWNSHIP 15 SOUTH, RANGE 32 EAST, NMPM SECTION 9: NE/4

#### CASE 4301: (Continued from the March 25, 1970, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Robert T. Smith and all other interested persons to appear and show cause why the following Robert T. Smith wells located in Section 32, Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program:

State Well No. 1 located 487 feet from the North line and 990 feet from the East line;

State "A" Well No. 1 located 400 feet from the North line and 990 feet from the East line;

State Well No. 3 located 330 feet from the North line and 330 feet from the West line;

State Well No. 6 located 220 feet from the North line and 1485 feet from the East line;

State Well No. 6-Y located approximately 5 feet West of the above-described Well No 6;

State Well No. 8 located 1155 feet from the North line and 2475 feet from the East line.

CASE 4337:

(Continued from the April 15, 1970, Examiner Hearing)
Application of Petroleum Corporation of Texas for an exception to Order No. R-3221, as amended, Eddy County,
New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for applicant's Dexter Hanagan Graridge Federal Well No. 1 located in Unit J, Section 22, Township 17 South, Range 30 East, Jackson-Abo Pool, Eddy County, New Mexico. Applicant seeks authority to dispose of salt water produced by said well in an unlined surface pit in the vicinity of said well.

CASE 4336:

(Continued from the April 15, 1970, Examiner Hearing)
Application of Byron McKnight for an exception to Order
No. R-3221, as amended, Lea County, New Mexico. Applicant,
in the above-styled cause, seeks an exception to Order No.
R-3221, as amended, which order prohibits the disposal of
water produced in conjunction with the production of oil or
gas on the surface of the ground in Lea, Eddy, Chaves and
Roosevelt Counties. Said exception would be for applicant's
lease comprising all of Section 19, W/2 of Section 20, NW/4
Section 29, and NW/4 Section 30, Township 19 South, Range
34 East, undesignated Yates-Seven Rivers gas pool, Lea County,
New Mexico. Applicant seeks authority to dispose of salt
water produced by wells on said leases in unlined surface
pits on the leases.

CASE 4084:

(Reopened) (Continued from the April 15, 1970, Examiner Hearing).

In the matter of Case No. 4084 being reopened pursuant to the provisions of Order No. R-3732, which order established 160-acre spacing units and an 80-acre proportional factor of 4.77 for the Feather-Wolfcamp Pool, Lea County, New Mexico. All interested parties may appear and show cause why the said pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.

CASE 4351: (Continued from the April 29, 1970, Examiner Hearing) Application of Humble Cil & Refining Company for well reclassification and simultaneous dedication of acreage, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reclassification of its New Mexico "G" State Well No. 5 from an oil well in the Eumont Pool to a gas well in said pool. Applicant further seeks the dedication of a standard 640-acre gas proration unit comprising all of Section 23, Township 21 South, Range 36 East, Lea County, New Mexico, to said Well No. 5 and to applicant's New Mexico "G" State Well No. 9, located, respectively in Units E and G of said Section 23, and authority to produce the allowable assigned to said unit from either of said wells in any proportion.

CASE 4352: (Continued from the April 29, 1970, Examiner Hearing) Application of Jack L. McClellan for the creation of a new gas pool or, in the alternative, the establishment of pool rules for two existing pools, Chaves and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Queen gas pool comprising the followingdescribed acreage:

#### CHAVES COUNTY, NEW MEXICO

#### TOWNSHIP 15 SOUTH, RANGE 29 EAST

Section 11: SE/4 Section 12: SW/4

Section 13: NW/4

Section 14: E/2

Section 23: NE/4 and SW/4

In the alternative applicant seeks the promulgation of special rules for the Sulimar-Queen Pool, Chaves County, and Double L-Queen Pool, Chaves and Lea Counties, New Mexico, as separate or as consolidated pools, including provisions for the classification of oil and gas wells, spacing and well location requirements for oil and gas wells, and an allocation formula for withdrawals by oil wells and gas wells.

#### DOCKET: REGULAR HEARING - WEDNESDAY - APRIL 15, 1970

OIL CONSERVATION COMMISSION - 9 A.M. - THE HOLIDAY INN. 200 SOUTH LINAM,
HOBBS, NEW MEXICO

#### ALLOWABLE: (1) Consideration of the oil allowable for May, 1970;

(2) Consideration of the allowable production of gas for May, 1970, from fifteen prorated pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico. Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for May, 1970.

THE FOLLOWING CASES WILL BE HEARD BY THE COMMISSION OR BY A. L. PORTER, Jr., EXAMINER OR DANIEL S. NUTTER, ALTERNATE EXAMINER:

- CASE 4332: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the inclusion of the NW/4 of Section 10, Township 9 South, Range 36 East, Lea County, New Mexico, in the Allison-Pennsylvanian Pool or the Vada-Pennsylvanian Pool, whichever is proper.
- CASE 4333: Application of Phillips Petroleum Company for a dual completion and salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Marley "A" Well No. 1, a wildcat well, located in Unit P of Section 3, Township 11 South, Range 31 East, Chaves County, New Mexico, in such a manner as to permit the production of oil from the San Andres formation through perforations from 4148 feet to 4165 feet and the disposal of produced salt water into the San Andres formation through the perforated interval from 4344 feet to 4800 feet.

#### CASE 4084: (Reopened)

In the matter of Case No. 4084 being reopened pursuant to the provisions of Order No. R-3732, which order established 160-acre spacing units and an 80-acre proportional factor of 4.77 for the Feather-Wolfcamp Pool, Lea County, New Mexico. All interested parties may appear and show cause why the said pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.

- CASE 4334: Application of Pan American Petroleum Componation for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to recomplete its State Gas Com "BG" Well No. 1 at an unorthodox location 1450 feet from the North line and 1490 feet from the West line of Section 2, Township 29 North, Range 10 West, Blanco-Mesaverde Pool, San Juan County, New Mexico, the N/2 of said section to be dedicated to the well.
- CASE 4335: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Vacuum (Grayburg-San Andres) Pocl by the injection of water into the San Andres formation through its Lea "FE" State Wells Nos. 2 and 4, located in Units C and E, respectively, of Section 11, Township 17 South, Range 34 East, Lea County, New Mexico.
- CASE 4336:

  Application of Byron McKinight for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of cilior gas on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties. Said exception would be for applicant's lease comprising all of Section 19, W/2 Section 20, NW/4 Section 29, and NW/4 Section 30, Township 19 South, Range 34 East, undesignated Yates-Seven Rivers gas pool, Lea County, New Mexico. Applicant seeks authority to dispose of salt water produced by wells on said leases in unlined surface pits on the leases.
- CASE 3859: (Continued from the October 15, 1969, Regular Hearing) Application of Wilson Oil Company for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Commission Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said exception would be for applicant's leases in Sections 13, 23, and 24 of Township 21 South, Range 34 East, and Sections 7 and 18 of Township 21 South, Range 35 East, Wilson Yates-Seven Rivers Pool, Lea County, New Mexico. Applicant, seeks authority to continue to dispose of produced water in seven unlined surface pits located in the center of the W/2 of said Section 13, center of the W/2SE/4 of said Section 13, SW/4 NE/4 of said Section 23, center of SW/4 of said Section 24, denter of the NE/4 of said Section 7, NE/4 SW/4 of said Section 7, NW/4 NW/4 of said Section 18.

(Case 3859 continued)

In the alternative, applicant seeks an extension of time in which to comply with the provisions of said order.

- CASE 4337: Application of Petroleum Corporation of Texas for an exception to Order No. R-3221, as amended, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties. New Mexico. Said exception would be for applicant's Dexter Hanagan Graridge Federal Well No. 1 located in Unit J. Section 22, Township 17 South, Range 30 East, Jackson-Abo Pool, Eddy County, New Mexico. Applicant seeks authority to dispose of salt water produced by said well in an unlined surface pit in the vicinity of said well.
- CASE 4338: Application of Skelly Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its Lea "D" Lease by selective injection of water into various zones of the Grayburg-Jackson Pool through three wells located in Units B, H, and J of Section 26, Township 17 South, Range 31 East, Eddy County, New Mexico. Applicant further seeks a procedure whereby said project may be expanded administratively without a showing of well response.
- CASE 4339: Southeastern nomenclature case calling for an order for the creation of certain new pools and the assignment of oil discovery allowables and the contraction and extension of certain other pools in Lea, Chaves and Eddy Counties, New Mexico.
  - (a) Create a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the Tower-San Andres Pool comprising the following:

TOWNSHIP 11 SOUTH, RANGE 31 EAST, NMPM SECTION 3: SE/4

(Case 4339 continued)

Further, for the assignment of approximately 20,740 barrels of oil discovery allowable to the discovery well Phillips Petroleum Company's Marley "A" Well No. 1, located in Unit P

(b) Create a new pool in Lea County. New Mexico, classified as of said Section 3 an oil pool for Pennsylvanian production and designated as the Tres Papalotes-Pennsylvanian Pool, comprising the following:

### TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM SECTION 33: NE/4

Further, for the assignment of approximately 52,340 barrels of oil discovery allowable to the discovery well Lone Star Producing Company's New Mexico (80) State Well No. 1 located in Unit B of said Section 33.

(c) Create a new pool in Eddy County, New Mexico, classified as an oil pool for Cherry Canyon production and designated as the Sand Dunes-Cherry Canyon Pool. The discovery well is Texas American Oil Corporation's Todd 26 Federal Well No. 2 located in Unit G of Section 26, Township 23 South, Range 31 East, NMPM. Said pool would comprise:

### TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM SECTION 26: SW/4 NE/4

(d) Create a new pool in Lea County. New Mexico, classifed as an oil pool for Devonian production and designated as the Warren-Devonian Pool. The discovery well is Continental Oil Company's SEMU Burger B No. 58 located in Unit C of Section 29, Township 20 South, Range 38 East, NMPM. Said pool would comprise:

## TOWNSHIP 20 SOUTH RANGE 38 EAST, NMPM

(e) Extend the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico.to include therein:

TOWNSHIP 14 SOUTH, RANGE 27 EAST, NMPM SECTION 26: S/2

(Nass 4339 continued)

(%) Extend the East Caprock-Devonian Pool in Lea County, New Mexico, to include therein:

### TOWNSHIP 12 SOUTH, RANGE 32 EAST, NMPM SECTION 23: NE/4

(g) Extend the Eagle Creek-San Andres Pool in EddyCCounty, New Mexico, to include therein:

### TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM SECTION 23: NW/4 NW/4

(h) Extend the South Eunice-San Andres Pool in Lea County, New Mexico, to include therein:

### TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM SECTION 11: NE/4

(i) Extend the Maljamar Grayburg-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM SECTION 9: NE/4 SECTION 10: NW/4

(j) Extend the Quail Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM SECTION 20: All

-6-

(k) Extend the Round Tank-Queen Pool in Chaves County, New Mexico, to include therein:

> TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM SECTION 30: W/2 NW/4 and NW/4 SW/4

(1) Extend the Shugart Pool in Eddy County, New Mexico, to include therein:

> TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM SECTION 25: W/2 NW/4

(m) Contract the Bough Permo- Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area:

> TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMPM SECTION 14: S/2

(n) Extend the Vada-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

> TOWNSHIP 9 SOUTH, RANGE 33 EAST, NMPM SECTION 13: S/2

> TOWNSHIP 9 SOUTH, RANGE 34 EAST, NMPM SECTION 18: S/2

> TOWNSHIP 9 SOUTH, RANGE 35 EAST, NMFM

SECTION 10: SE/4

SECTION 14: S/2

SECTION 15: NE/4 SECT: NW/4

## OIL CONSERVATION COMMISSION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

April 21, 1969

Commissioner of Public Lands for the State of New Mexico State Land Office Building Santa Fe, New Mexico

> Re: Case No. 4084 - Application of Olen F. Featherstone for the creation of a new pool and special pool rules, Lea County, New Mexico

Attention: Mr. Ted Bilberry

Gentlemen:

Application in the above-described case was filed with the Commission on March 4, 1969. The case was heard before an examiner on March 26, 1969.

Order No. R-3732, effective April 18, 1969, created the Feather-Wolfcamp Pool, Lea County, New Mexico and established 160-acre spacing and proration units therefor.

Very truly yours,

A. L. PORTER, Jr. Secretary-Director

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CABOT

### CABOT CORPORATION PLO BOX HOLDAMPALTEXAS

March 21, 1969

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

Attention Mr. A. L. Porter

Gentlemen:

Case 4084 - Application of Olen F. Featherstone for Creation of New Pool

Cabot-Corporation, as royalty owner in Olen F. Featherstone's Cabot-State Well No. 1, Section 29-15-32, Lea County, New Mexico, and as lease owner in the immediate area, hereby wishes to express its support of the application of Olen F. Featherstone in Case 4084. We understand Mr. Featherstone is requesting provisions for 160-acre spacing and proration units and the assignment of 80-acre allowables. It is our belief these rules are required to provide orderly and economic development of the Wolfcamp formation in this area.

Yours very truly,

W. M. Sargent, Jr

Chief Petroleum Engineer

WMSJr:mn

cc: Olen F. Featherstone

#### DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 26, 1969

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

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 4078: Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Devils Fork-Gallup Pool and an undesignated Mesaverde oil pool in the well-bore of his NCRA State Well No. 3 located in Unit L of Section 16, Township 24 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 4079: Application of Robert B. Holt for the creation of a new pool, assignment of a discovery allowable, and the promulgation of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Middle Pennsylvanian oil pool for his Aztec State Well No. 2 located in Unit A of Section 26, Township 13 South, Range 32 East, Lea County, New Mexico, and for the assignment of an oil discovery allowable in the amount of approximately 48,715 barrels to said well. Applicant further seeks the promulgation of special pool rules for said pool, including a provision for 160-acre proration units and the assignment of 80-acre allowables.

#### CASE 3975: (Reopened)

In the matter of Case No. 3975 being reopened pursuant to the provisions of Order No. R-3618, which order established 80-acre spacing units for the East Bluitt-San Andres Pool, Reosevelt County, New Mexico, for a period of approximately two months. All interested parties may appear and present evidence as to whether the subject area is indeed a separate common source of supply or an extension of the Bluitt-San Andres Gas Pool. Further, in the event said East Bluitt-San Andres Gas Pool, the Commission will consider the amendment of the Special Rules and Regulations governing the Bluitt-San Andres Gas Pool to provide for the classification of oil and gas wells, spacing and well location requirements for oil and gas wells, and an allocation formula for withdrawals from the gas cap and oil rim.

CASE 4080: Application of Monsanto Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Black River Unit Area comprising 14,961.23 acres, more or less, of State, Federal and Fee lands

-2Docket No. 9-69
Examiner Hearing - March 26, 1969

#### CASE 4080 - Continued

in Townships 25 and 26 South, Ranges 23 and 24 East, Eddy County, New Mexico.

- CASE 4081: Application of Curtis Hankamer for a unit agreement, Eddy County, New Mexico. Applicant in the above-styled cause, seeks approval of the Brushy Draw Deep Unit Area comprising 9,672.53 acres, more or less, of State and Federal lands in Township 26 South, Ranges 29 and 30 East, Eddy County, New Mexico.
- CASE 4082: Application of Sam D. Ares for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject produced salt water into the Yates-Seven Rivers formation in the open-hole interval from approximately 3358 to 3495 feet in his Arnott Ramsey "A" Well No. 3, located 660 feet from the North and West lines of Section 2, Township 25 South, Range 36 East, Jalmat Yates Seven Rivers Pool, Lea County, New Mexico.
- CASE 4083: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Penrose Skelly Pool and the Paddock Pool in the well-bore of its Eunice King Well No. 7 located in Unit G of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, with the provision that no more than one allowable will be produced from said well.
- CASE 4084: Application of Olen F. Featherstone for the creation of a new pool and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Wolfcamp oil pool for his Cabot State Well No. 1 located in the NE/4 NW/4 of Section 29, Township 15 South, Range 32 East, Lea County, New Mexico, and for the promulgation of special rules therefor including a provision for 160-acre spacing and proration units and the assignment of 80-acre allowables.
- CASE 4085: Application of Tamarack Petroleum Corporation, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seaks authority to dispose of produced salt water into the Queen formation in the perforated interval from approximately 4948 feet to 5043 feet in its Cabot 23 State Well No. 2 located in Unit C of Section 23, Township 19 South, Range 35 East, Pearl-Queen Pool, Lea County, New Mexico.

-3Docket No. 9-69
Examiner Hearing - March .6, 1969

- CASE 4086: Application of Name of Propagaty for a such completion and salt water disposable teachersty, New Mexico. Applicant, in the above-styled cause needs authority to dually complete its CSA Federal Well No. I Indested in Unit Des Section 29, Township 26 South, Range of East, Scarborough Yates-Seven Rivers Pool, Lea Southy, New Mexico, in such a manner as to permit production of oil from the Yenes formation and the disposal of produced salt water into the Seven Rivers formation through parallel strings of tubing.
- CASE 4087: Application of Selsz Dil Bompany for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its McCallister Well No. I launted in Unit C of Section 7, Township 22 South, Range 38 East, Lea County, New Mexico, to produce oil from undesignated Drinkard and Abo oil pools through parallel strings of tubing.
- CASE 4071: (Continued from the March 19, 1969, Regular Hearing)
  Application of C. J. Siviley for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete his Federal Silver Well No. 4 is sated in the SW/4 SE/4 of Section 28, Township 20 South, Range 34 East, Tynch Yates-Seven Rivers Pool, in such a manner as to permit production of oil from the Yates-Seven Rivers formations and the disposal of produced salt water into the Tower Seven Rivers formation.
- CASE 4088: Application of Faul M. Membhon, Cha, for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Upper Pennsylvanian formation underlying Section 21. Township 22 South, Range 23 East, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled at an unorthodox gas well location 990 feet from the North and East lines of said Section 21, and within one mile of the Endian Basin-Upper Pennsylvanian Gas Fool. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.
- CASE 4089: Application of Faul M. Mershon, Gr., for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the special rules and regulations governing the Indian Basin-Upper Pennsylvanian Gas Pool to permit the drilling of a well at an unorthodox gas well location 990 feet from the North and East lines of Section

-4Docket No. 9-69
Examiner Hearing - March 26, 1969

21, Township 22 South, Range 23 East, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

CASE 4090: Application of Getty Oil Company for an exception to Commission Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to re-enter and deepen approximately 3500 feet in the Yates formation four wells located in Sections 19 and 30 of Township 20 South, Range 34 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string provided the production string would be cemented to the surface.

CASE 4091: Application of Union Oil Company of California for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Elliott Federal Well No. 1 located in Unit O of Section 27, Township 11 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Field Ranch-Wolfcamp Pool and the disposal of produced salt water into the San Andres, Glorieta, Blinebry, Tubb and Abo formations in the open-hole interval from approximately 4458 feet to 8050 feet.

TENNECO OIL COMPANY A Major Component of Tenneco to



# 0 BOX 1531 • 1530 WHICO BUTLOTES • WITH AND, 15 (AS 1932)

March 11, 1969

Car 4084

Mr. A. L. Porter Oil Conservation Commission Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Porter:

The application of Olen Featherstone for the formation of a new pool, and adoption of a 160 acre proration unit surrounding their recent discovery, NE NW Section 29, T-15-S, R-32-E, will be heard March 26, 1969.

Tenneco Oil Company has no objections to this spacing unit.

Sincerely,

TENNECO OIL COMPANY

C. H. Madsen Geologist

CHM/1ba

cc: Olen Featherstone Roswell, New Mexico

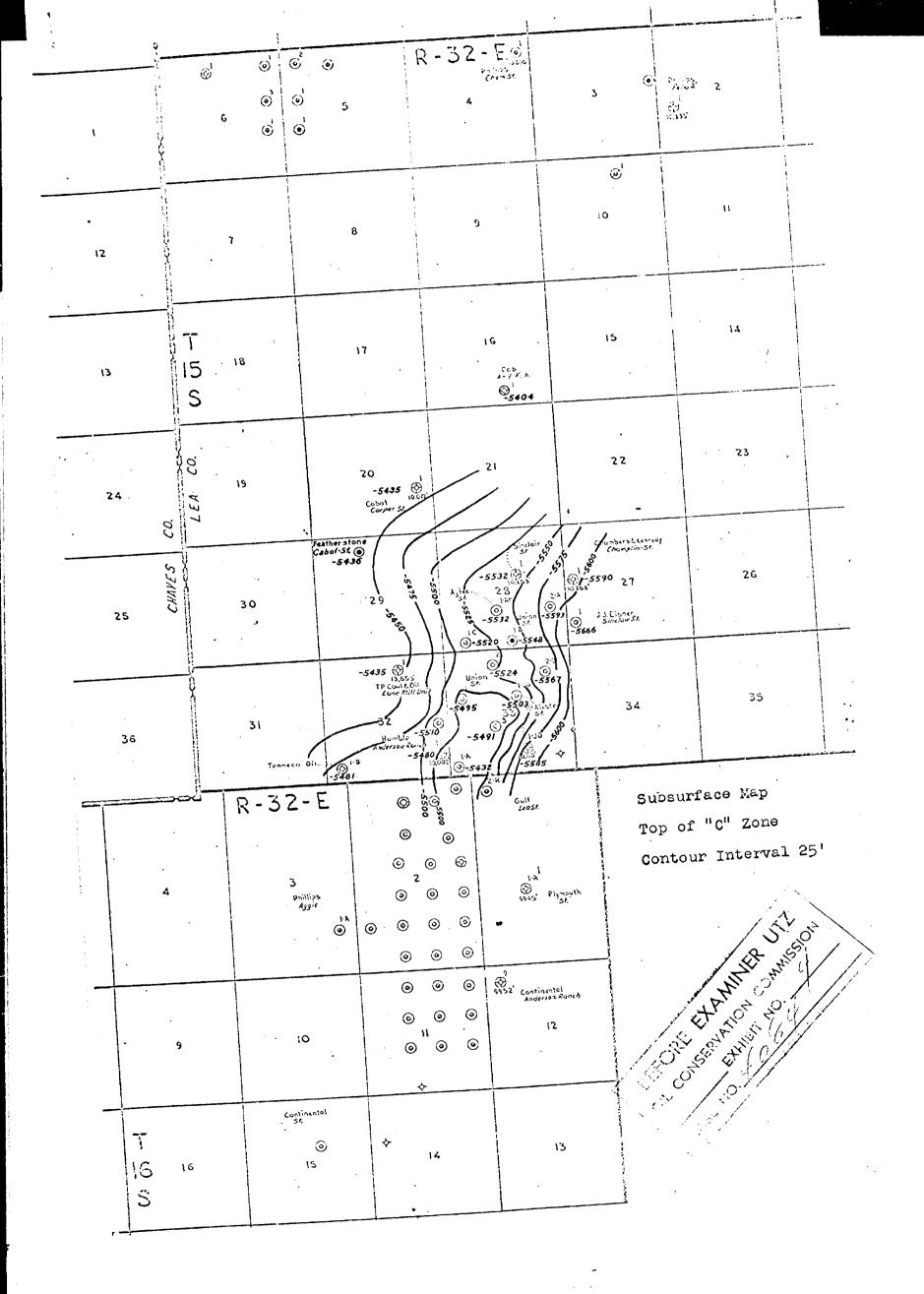
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OLEN F. FEATHERSTONE
No. 1 Cabot State
Sec. 29, T.15S, R.32E, N.M.P.M.,
Lea County, New Mexico

#### DRILL STEM TEST

Jan. 30, 1969 DST #1 - 9475' - 9552' 77" No Water Blanket.

Opened tool at 10:10 P.M.

Halliburton tester.

IF 15 min. - opened with good blow - good blow throughout.

ISI 1 hr.

FF 2 hrs. - gas to surface in 2 min. - good blow - increased to strong blow - gas very wet.

FSI 2 hrs.

IH 4290# FH 4290#

# PRESSURES IF 144# ISI 3380# FF 288# FSI 3357#

Temperature - 138° Oil Gravity - 39°

Recovered: 120' Gas Cut Mud 1000' oil = 10.8 barrels No Water

Prep to drill ahead.

T, Pay 8489

OIL CONSERVATION COMMISSION CASE NO 1/0/6-1

OLEN F. FEATHERSTONE
NO. 1 CABOT STATE
Sec. 29, T 15S, R 32E, N.M.P.M.,
Lea County, New Mexico
Page Three

#### DAILY DRILLING REPORT

Feb. 1, 1969 Drilling - 9633' - lime.
Mud Wt. 8.7
Vis. 36
W.L. 11

Feb. 2, 1969 Drilling - 9745' - lime.
Mud Wt. 8.8
Vis. 40
W.L. 11

DST #2 - 9725' - 9778' 53' No Water Blanket
Open tool @ 9:50 P.M.

IF 15 min. - strong blow throughout
ISI 1 hr.

FF 1 hr. 30 min. - strong blow - GTS in 4 min. FSI 2 hrs.

Recovery:

Oil - 5 barrels plus 120' O&GCM Mud -

Water - None.

Temp.

IH 4548# FH 4548#

Pressures

ISI 2395# FSI 1649#

15 min. 1 hr. 30 min. IF 115# IF 207# FF 138# FF 277#

Feb. 3, 1969 Going back into hole to drill. TD - 9778'.

Feb. 4, 1969 DST #3 - 9770' - 9369'. 99'
Tool open @ 11:40 P.M.
15 min. pre-flow.
1 hr. shut in - tool open 3 hrs.
Good blow throughout test - no gas.
Final shut in - 2 hrs.
Recovered 360' drilling mud.

IH - 4650# FH - 4563#

IF 132# FF 175#

ISI 833# FSI 745#.

Feb. 5, 1969 Drilling - 9906' - lime and shale Mud Wt. 8.9
Vis. 40
W.L. 10

OLEN F. FEATHERSTONE NO. 1 CABOT STATE Sec. 29, T 158, R 32E, N.M.P.M., Lea County, New Mexico Page Four

#### DAILY DRILLING REPORT

Feb. 6, 1969 DST #4 - 9940-10,030' - Failed to get test.

DST #5 - 9940-10,030' Feb. 7, 1969 Open tool 8:45 P.M. IF - 15" ISI - 1' FF - 1' FSI - 1'

Recovered 90' drilling mud

#### Pressures:

IH - 4671# FH - 4671# IF - 65# FF - 65# ISI - 3069# FSI - 1898#

TD - 10,290' - circulating and running logs. Feb. 8, 1969

80' No WB DST #6 - 10,210' - 10,290' Open tool @ 10:45 a.m. Feb. 9, 1969 IF - 15 min. - open weak - increased to good. ISI - 1 hr. FF - 1 hr. 15 min. - open strong; decreased to end of test. FSI - 1 hr. Recovered: 8500' sulfur water.

> Pressures: TH 4822# FH 4822# 15 min. IF 548# FF 2071

1 hr. ISI 3850# FSI 3850#

1 hr. 15 min. IF 2136# FF 3828#

Temp. -  $140^{\circ}$ 

Ran 9994' of 5-1/2" pipe - insert float @ 9961' Plug down @ 6:00 P.M. Feb. 10, 1969 Cemented with 250 sxs 50-50- poz mix.

WOC Feb. 11, 1969

OLEN F. FEATHERSTONE
NO. 1 CABOT STATE
Sec. 29, T 15S, R 32E, N.M.P.M.,
Lea County, New Mexico
Page Five

### DAILY DRILLING REPORT

February 17, 1969 Running tubing today, will perf. and acidize tomorrow.

February 18, 1969 Treatment: Bough C - 9902 - 04, 9917 - 23
(Log Measurements)

Bridge Plug set at 9932, pulled up to 9387(bottom of packer).

Perforated .21", 1 shot per foot: Schlumberger HyperJet 9818' - 20'-22'

9902' - 03'-04'

9725' - 26'-27'

9499' - 9500' - 9501'

Ran tubing to 9918', spotted acid over perfs

Ran tubing to 9918', spotted acid over perfs 9918' - 20' - 22, 9902' - 03' - 04'
Raised tubing and set packer @ 9878'.
Injected 500 gallons BDA acid, pumped in with oil, 1 BO flush (used 2 BO in front of acid), Max. pressure 6500#.
Average injection pressure 6300#.
Immediate shut in pressure 5500#.
Shut in pressure 15 min. - 1800#.
Average injection rate 8/10ths barrel per minute.
Shut down for darkness.

February 19, 1969 255# pressure on tubing, commenced swabbing @ 8:30 a.m.

Swabbed back 39 barrels oil, started swabbing back sulphur water.

Fluid level stood @ 2,000' while swabbing.

Shut down for lunch and fluid level rose to 1400' from surface.

Unseated packer, picked up bridge plug, moved up to 9735', and set bridge plug.

February 20, 1969 Treatment: Bough C 9725-27! (Log Measurements) 500 gallons BDA acid; plug set @ 9735' Spotted acid over perforations 9725-26-27'. Raised tubing and set packer @ 9685', started injecting acid @ 8:15 A.M. Formation broke @ 3000%; pressure continued to rise while pumping acid. Maximum pressure 5400#. Average pressure 5250#. Final pressure 5400#. Immediate shut in pressure 5400#. 15 min. shut in pressure 5000#. Stopped pumping @ 9:51 A.M. Total fluid injected 13 barrels. Started swabbing 10:15, swabbed until 4:00 P.M., last swab pulled off bottom; recovered a total of 55 barrels oil with only a trace of acid water and very little acid gas. 39 barrels oil pumped behind acid. 55 barrels oil minus 39 barrels oil - 16 barrels oil in approx. 6 hours. 16 barrels new oil in 6 hours swabbing. This indicates formation gave up fluid at approximately 2-1/2 barrels per hour or 60 barrels per day. Well making fair amount of gas.

Second treatment - same zone: 500 gal., BDA acid.

OLEN F. FEATHERSTONE NO. 1 CAROT STATE Sec. 29, T 15S, R 32E, N.M.P.M., Lea County, New Mexico

TREATMENT: Bough C - 9725'-27' (log measurement) February 20, 1969 500 gallons BDA; plug set @ 9735. Spotted acid over perforations 9725'-26'-27'. Raised tubing and set packer @ 9685'. Started injecting acid @ 8:15 a.m. Formation broke @ 3000#. Pressure continued to rise while pumping acid. Maximum pressure 5400#. Average pressure 5250#. Final pressure 5400#. Immediate shut in pressure 5400%. 15 min. shut in pressure 5000#. Stopped pumping @ 9:51 a.m. Total fluid injected 13 barrels. Started swabbing 10:15 a.m., swabbed until 4:00 p.m. Last swab pulled off bottom. Recovered a total of 55 barrels oil with only a trace of acid water and very little acid gas. 39 barrels oil pumped behind acid. 55 barrels oil minus 39 barrels oil - 16 barrels oil in approx. 6 hours. -16 barrels new oil in 6 hours swabbing. This indicates formation gave up fluid at approximately 2-1/2 barrels per hour or 60 barrels per day.

Well making fair amount of gas.

### SECOND TREATMENT

Same zone: 500 gal. BDA.

With packer set as above started injecting
500 gallons BDA followed by oil.

When 39 barrels total fluid injected,

well began to pressure up.

Formation broke at 3000#.

Average pressure 4400#.

Maximum pressure 4600#.

Final pressure 4600#.

Immediate shut in pressure 400#.

Average injection rate 1.7 barrels per min.

Total fluid injected - 12 barrels acid and
42 barrels oil.

Started swabbing back. Swabbed back 15

barrels and shut in due to darkness.

OLEN F. FEATHERSTONE
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February 21, 1969 Well on vacuum. Fluid level 6,000' to 6,500' from surface. Swabbed until noon and recovered —31 barrels oil with no sign of acid water, acid gas or gas. Fluid level at 8,000'.

At 12:00 noon had swabbed 31 BO - no sign of acid water, acid gas and no gas. Fluid standing at 7,000'.

Well beginning to make fluid.

4:45 p.m. swabbed back 50 BO.

Swabbing off bottom about 1" per swab.

Last three pulls had a little acid water.

Swab rates:

1:45 to 3:15 - 2" - 5.5 BO

3:15 to 4:30 - 2" = 5.5 BO

Total - 2-3/4 hr. = 11 BO

Average 4 BO per hr = 96 BOPD rate.

OLEN F. FEATHERSTONE
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Lea County, New Mexico

February 22, 1969 Treatment - Bough 'B' (log measurement)
Perforations to treat - 9499'-9500'-01' 1 shot per foot .21" Hyperjet Set BP at 9636' Raised tubing to 9507' Spotted acid - raised tubing to 9475' and set packer. Injected 500 gallons BDA -Started taking acid at 2900#. Maximum pressure 3150#. Average pressure 3000#. Final pressure 3000#. Immediate shut in - 3000#. 15 min. shut in - 1400%. Average injection rate - 6 GPM. Injected fluids as follows: 2 BO 12 B Acid 38 BO Started swabbing 12:00 noon. At 4:15 p.m. had swabbed back 30 BO followed by 12 barrels acid water. At 4:55 p.m. had recovered 45.4 BO.

Shut in for darkness.

February 23, 1969 775 # tubing pressure.

Opened to flow on 14/64" choke @ 7:30 a.m.

7:30 a.m. to 9:15 a.m. - flowed 11 BO.

9:15 a.m. to 9:45 a.m. - flowed 5-1/2 BO.

9:45 a.m. to 10:15 a.m. - flowed 2-3/4 BO (240# TP)

10:15 a.m. tc 11:45 a.m. - flowed

11:45 a.m. - 4:45 p.m. - flowed (5 hr) 16.55 BO =

(3.31 BOPH - 160# TP)

4:45 p.m. to 5:15 p.m. - approximately 3 BOPH rate.

Left well flowing overnight.

February 24, 1969 7:45 a.m. (22-1/2 hrs.) well flowed 23.44 BO. Decided to re-treat with 1000 gallons regular acid - 20%.

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	and Marsa 56 bols, and died. Now swor,
22-5	
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SEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO.

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Wildcat, UNION OF CO. OF CALIF, #1-33 Union-State

Location: NW/part county, 7 mi NE/Maljamar; Sec 33-15S-32F, 1980' FNL 66C' FWL Sec; 5 mi W of S/Saunders Fld, 1/2 mi SE of 13,655' dry hole, 1-1/2 mi N of Anderson Ranch Fld

Spud: 3-26-60; Comp. 7-16-60; Elev: 4225' DF; TD: 13,502; PB: 10,227

Casing: 12-3/8" 801/700 sx, 9-5/8" 4175/700 sx, 5-1/2" 10,2277390 sx

Prod. Zone: (Wolfcamp) T/Pay 9823, Prod thru perfs 9952-80

IPF: 1,223.7 BOPD thru 30/64" ch, Grav 40, GOR 1550-1, TP 800#, CP pkr

Comp. Info: DST 9482-9555, op 2 hrs, rec 180' OEGCM, 240' MCO, FP 90-165#, SIP 1930#/30 min; DST

9742-80, op 30 min, rec 10' mud, FP 25#, SIP 40#/30 min; DST 9798-9856, op 2 hrs & 10 min, gas in 5 min, mud in 51 min oil in 53 min, flwd est 20 BOPH/l hr & 20 mln, rev out full string oil, FP 435-1305#, SIP 3315#/90 min; Crd 9856-9903' rec 38-1/2' li; Crd 9910-45' rec 21' white poro li, bldg OEG; DST 9862-9945, op 95 min, gas in 5 min, est 6.000,000 CFGPD, flwd 18 BO/30 min, rev out 98 BO, FP 2670-3320#, SIP 3590#/90 min; Crd 9945-88 rec 42-1/2' li, bldg OEG; DST 9948-88, op 2-1/2 hrs, flwd 64 BO/1 hr & 55 min thru 24/64" ch, rev out full string oil, rec 90' MCO, FP 1000-1135#, SIP 3640#/30 min; Crd 9988-10,039 rec 19' li & 30' dark gray sh; DST 9988-10,039, op 2 hrs, rev out 36 BO & 12 BSW, FP 1344-2444#, SIP 2747#/90 min; DST 10,148-161, op 2 ahrs, rec 150' muddy SW, FP 100#, SIP 160#/90 min; DST 10,906-11,012, op 2 hrs, rec 40' HO&GCM, FP 715#, SIP 1285#/30 min; DST 11,276-312, op 2 hrs, rec 10' mud, FP 620-1000#, SIP 1000#/90 min; Crd 13,470-502, rec 15' sh & 13' dolo; DST 13,482-502, op 4 hrs, rec 250' G&SWCM & 6600' SW, FP 1249-3000#, SIP 4623#/1 hr; A/1,000 gab; Tubb 6928, Abo 7635, Hueco 8966, Canyon 10,594, Chester 12,328, Miss. 12,710, Wdfd. 13,402, Dev. 13,480.

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Subd 79 30 A 35 BH 24 brs. Swid 55 BO Swid 40 BO & 2 BH 21 hrs. Completion Status: Method			
Subd 79 30 A 35 BH 24 brs. Swid 55 BO Swid 40 BO & 2 BH 21 hrs. Completion Status: Method			CALIFER GAMMA NE
Subd 79 30 A 35 BN 24 brs. Swid 55 BO Swid 40 BO & 2 BN 21 hrs. Completion Status: Vethod			

1.

### CORY . CABOT CORPORATION BOX 1101 PAMPA, TEXAS

March 21, 1969

New Maxico Oil Convervation Complesion P. O. Box 2003 Santa Fe, New Merrico 87501

Attention Mr. A. L. Dorter

Contlomen:

Case 4001 - Applifered on or Olda F. Featherstone Lion Co of a sac of Thur Pool

Cabot Compart than, as into they exmess in Olen F. Peatherstone's Cabot-State Walk Wo. 1, Seculon 29-15-32, Loa County, New Maxico, and as least throat in the immediate area, hereby wishes to express its support of the application of Ohen F. Featherstone in Cash 4084. We understand Wr. Featherstone is requesting provisions for 160-acre spacing and provation units and the ennigment of 80-acre allowables. It is our belief these rules and required to provide orderly and economic development of the Well Jamp formation in this area.

Yours very truly,

W. M. Sangent, Jr. Chica Petroleum Engineer

MASJE: ma

co: Ohen F. Pasicherstone

REFORE EXAMINER UT

OIL CONCLURATION COMMISSI

## TENNECO OIL COMPANY · P. O. BOX 1031 · 1800 WILCO BUILDING MIDLAND, TEXAS 79701

Mr. A. L. Porter Oil Conservation Commission Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Porter:

The application of Olen Featherstone for the formation of a new pool, and adoption of a 160 acre proration unit surrounding their recent discovery, NE NW Section 29, T-15-S, R-32-E, will be heard March 26, 1969.

Tenneco Oil Company has no objection to this spacing unit.

Sincerely,

TENNECO OIL COMPANY\_

C. H. Madsen Geologist

CHM/lba

cc: Olen Featherstone Roswell, New Mexico

> William B. Barnbill Roswell, New Mexico

## NEW MEXICO OIL CONSERVATION COMMISSION

. BOX 1980 HOBBS, NEW MEXICO

	March 1	L969
	147	
NO		

### SUPPLEMENT TO THE OIL PRORATION SCHEDULE

ነን ለ ጥ ሮ	March	17,	1969	
DAID -				 

### PURPOSE: ALLOWABLE ASSIGNMENT FOR A NEW WELL

Effective March 1, 1969, an allowable of 168 barrels of oil per day or a total of 5208 barrels for the month is hereby assigned to the Olen F. Featherstone, Cabot State, 1-C, 29-15-32, Undesignated Lea Group 6-A.

NORTH ANDERSON RANCH WOLFCAMP EXTENSION.

80A c.

JDR/eb

Olen F. Featherstone

Permian

OIL CONSERVATION COMMISSION

OPERATOR'S COPY

## Olen F. Featherstone No. 1 Cabot State

B.T. Gouge Numbers			39	91	Ticket Number	149830	
Initial Hydrostati	c		4328	4338 ·	Elevation	-	
Final Hydrostatic			4323	4329	lst Flow	**	
1.4.51	Initial	Time	147	125	Production Total Flow	55.0	
1st Flow	Final	15	147	158	Drill Collar Length	569	
Initial Closed In	Pressure	60	3390	3394	Drill Colfor I.D.	2.5	
	Initial		216	175	Orill Pipe Factor 4개	0.01422 0.01084	
2nd Flow	Final	120	337	350	Hole Size	7.875	
Final Closed In P	Final Closed In Pressure		3348	3349	Footage Tested	77	
Extrapolated		Initial	•	•	Mud Weight	8.7	
Static Pressure		Final	3474	3480	Viscosity, Oil or Water	1.8	
Character and the second		Initial	-	-	Oil API Gravity	40°	
Slope <del>Rei/Rycl</del> e P-10	•	Final	3080	3086	Water Specific Gravity		

RESULTS AS SHOWN ARE COMPUTER CALCULATED...

S U	MMARY	Gauge No. 9 Depth	1/ 9542 <b>'</b>	Gauge No. Depth	89/ 9549'	
Product	Equation	Initial	Final	Initial	Finol	Units
Production	$Q = \frac{1440 R}{t}$		52.		55.	bbls. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6 \text{ Q}}{m}$		21.55		22,17	md. ft.
Indicated Flow Copacity	$Kh = \frac{Kh}{\mu} \; \mu$	-	38.79		40.89	md. ft.
Average Effective	$K = \frac{Kh}{h}  h = 4'$		9.698 <del>0.504</del>		0.223	md.
Permeability	$K_t = \frac{Kh}{h_t}$		44		_	md.
Damage Ratio	$DR = .183 \frac{Ps - Pf}{m}$		1.46		1.45	
Theoretical Patential w/Damage Removed	$Q_1 = Q DR$		76.0		80.0	bbls. day
Approx. Radius	$b \; \leftrightarrows \; \sqrt{Kt} \; or \; \sqrt{Kt_0}$		8.25		8.5	ft.
of Investigation	$b_1 \subseteq \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$		_		-	.ft.
Potentiometric :: Surface	Pot. = $EI - GD + 2.319 Ps$		-1486		-1479	ft.

NOTICE. These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warrantly express or implied as to the occuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.



B.T. Gauge Numb	T, Gauge Numbers		1516	1496	Ticket Number	0601.90
Initial Hydrostatic Final Hydrostatic		• 4525	4529	Elevation	4326 (1.	
		4513	4520	Indicated	bbls.	
1.4.5/-	Initial	Time	104	104	Production Total Flow	35 bbls.
1st Flow	Final	. 15	141	169	Drill Collar Length	590 n.
Initial Closed In	Pressure	60	2379	2386	Drill Collar I.D.	2.75 in
•	Initial		126	134	Drill Pipe Factor	0.01084 bbis
2nd Flow	Final	90	259	266	Hole Size	7.875 in
Final Closed In P	ressure	120	1636	1642	Footage Tested	4** 11.
Extrapolated		Initial		_	Mud Weight	8 8 lbs.
Static Pressure		Final	2020	2028	Viscosity, Cil or Water	1.5
Slope PUTEYUE -		Initial	_	_	Oil API Grovity	41°* -
		Final	606	614	Water Specific Gravity	

Remorks: \*This gravity was reported when calculation service was requested.
\*\*4¹ Net pay as reported by Mr. Hicks in Roswell, New Mexico.

SUM	Gauge No. Depth 1516	5/9770'	Gauge No. Depth 12	196/9774'	· · · · · · · · · · · · · · · · · · ·	
Product	Equation	Initial	Final	Initial	Final	Units
Production	$Q = \frac{1440 R}{t}$		34		35	bbis. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6 \text{ Q}}{m}$		3.91		4.03	md. ft.
Indicated Flow Copacity	$Kh = \frac{Kh}{\mu} \ \mu$		5.86		6.04	md. ft.
Average Effective	$K = \frac{Kh}{h}$		-			md.
Permeability	$K_r = \frac{Kh}{h_r}$		1,465		1,511	md.
Damage Ratio	$DR = .183 \frac{Ps - Pf}{m}$		0.3		0.3	
Theoretical Potential w/Damage Removed	$Q_1 = Q DR$		34		35	bbls, day
Approx. Radius	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$					ft.
Investigation	$b_1 \lesssim \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_6}$		12.4		12.6	ft.
Potentiometric :: Surface	Pot. = E1 GD +- 2.319 Ps		-759		-745	ft.

NOTICE: These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations lossed thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

OLEN F. FEATHERSTONE CABOT STATE NO. 1 Sec. 29, T15S-R32E - NMPM Lea County, New Mexico

### RESERVE CALCULATIONS

Zone T. - 9498' - 9502'

Oil Gr.: 39° API measured

GOR: 600 assumed

h: 5' Microlog
Ø: 12% Neutron
SW: 25% Dual Induction

Gas Gr.: 0.95 assumed

BHT: 128°F measured

FVF: 1.375 calculated

Stock Tank Oil-in-place is:

 $N = 7758 \quad 0.12 \quad (1.00-0.25)$ 

= 2,539 bbls/acre

Assuming a recovery factor of 25% for this reservoir, recoveries for various spacings will be:

a) At 40 acres:

25,388 bbls.

b) At 80 acres:

c) At 160 acres:

101,552 bbls. 00 160

II. Zone 2. - 9726' - 9728' h: 2' Microlog

Oil Gr.: 390 API measured

Ø: 7% Neutron

GOR: 600 assumed

. SW: 26% Dual Induction

Gas Gr.: 0.95 assumed

BHT: 129°F measured

FVF: 1.375 calculated

Stock Tank Oil-in-place is:

 $N = 7758 \ 0.07 \ \underline{(1.00-0.26)} \ 2' = 585 \ bbls/acre$ 

Assuming recovery factor of 25%, recoveries will be:

a) At 40 acres:

5,850 bbls.

b) At 80 acres:

11,700 bbls.

c) At 160 acres:

23,400 bbls.

### BEFORE THE

### OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF OLEN F. FEATHERSTONE FOR FORMATION OF A NEW POOL, ADOPTION OF POOL RULES INCLUDING 160-ACRE SPACING, LEA COUNTY, NEW MEXICO

Vas 4084

### APPLICATION

Comes now OLEN F. FEATHERSTONE and applies to the Oil Conservation Commission of New Mexico for an order creating a new pool for the production of oil from the Wolfcamp Formation, and for the adoption of pool rules for the development and operation of said pool, and in support thereof would show the Commission:

- 1. Olen F. Featherstone has completed his No. 1 Cabot State Well for production from the Wolfcamp Formation, said well being located 660 feet from the North line and 1980 feet from the West line of Section 29, Township 15 South, Range 32 East, N.M.P.M., Lea County, New Mexico. The perforated interval in said well is from 9725 feet to 9727 feet, and from 9499 feet to 9501 feet.
- 2. Applicant proposes that said pool be drilled, spaced and developed on the basis of 160-acre spacing and proration units, with a flexible well location, but with allowables to be assigned on the basis of 80 acres.
- 3. Information presently available indicates that one well will efficiently and economically drain and develop not less than 160 acres in the Wolfcamp Formation in the area surrounding the above-described well. In order to prevent waste and prevent the drilling of unnecessary wells, 160-acre spacing and proration units should be approved for this pool on a temporary basis, until further information is available. The adoption of said order will prevent waste, and will not

DOCKET HALLED

Den 3-14-69

impair the correlative rights of owners in the pool.

Attached hereto and made a part of this application is a plat showing the proposed unit to be dedicated to the discovery well, information on the completion of the well, and a microlog of the Wolfcamp Formation in the subject well.

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 Commissionenter its order approving this application as prayed for.

Respectfully submitted,
OLEN F. FEATHERSTONE

KELLAHIN & FOX
POST OFFICE BOX 1769

ATTORNEYS FOR APPLICANT

SANTA FE, NEW MEXICO

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OLEN F. FEATHERSTONE NO. 1 CABOT STATE Sec. 29, T, 15S, R 32E, N.M.P.M., Lea County, New Mexico

February 20, 1969 TREATMENT: Bough C - 9725'-27' (log measurement) 500 gallons BDA; plug set @ 9735'. Spotted acid over perforations 9725'-26'-27'. Raised tubing and set packer @ 9685'. Started injecting acid @ 8:15 a.m. Formation broke @ 3000#. Pressure continued to rise while pumping acid; Maximum pressure 5400#. Average pressure 5250#. Final pressure 5400#. Immediate shut in pressure 5400%. 15 min. shut in presure 5000#. Stopped pumping @ 9:51 a.m. Total fluid injected 13 barrels. Started swabbing 10:15 a.m., swabbed until 4:00 p.m. Last swab pulled off bottom. Recovered a total of 55 barrels oil with only a trace of acid water and very little acid gas. 39 barrels oil pumped behind acid. 55 barrels oil minus 39 barrels oil - 16 barrels oil in approx. 6 hours. 16 barrels new oil in 6 hours swabbing. This indicates formation gave up fluid at approximately 2-1/2 barrels per hour or 60 barrels per day. Well making fair amount of gas.

### SECOND TREATMENT

Same zone: 500 gal. BDA. With packer set as above started injecting 500 gallons BDA followed by oil. When 39 barrels total fluid injected, well began to pressure up. Formation broke at 3000#, Average pressure 4400#. Maximum pressure 4600#. Final pressure 4600#. Immediate shut in pressure 400#. Average injection rate 1.7 barrels per min. Total fluid injected - 12 barrels acid and 42 barrels oil. Started swabbing back. Swabbed back 15 barrels and shut in due to darkness.

Pice 4084

OLEN F. FEATHERSTONE
NO. 1 CABOT STATE
Sec. 29, T, 15S, R 32E, N.M.P.M.,
Laa County, New Mexico

February 21, 1969 Well on vacuum. Fluid level 6,000' to 6,500' from surface. Swabbed until noon and recovered from surface oil with no sign of acid water, 31 barrels oil with no sign of acid water, acid gas or gas. Fluid level at 8,000'.

At 12:00 noon had swabbed 31 BO - no sign of acid water, acid gas and no gas.

Fluid standing at 7,000'.

Well beginning to make fluid.

4:45 p.m. swabbed back 50 BO.

Swabbing off bottom about 1" per swab.

Swab rates:

1:45 to 3:15 - 2" - 5.5 BO

3:15 to 4:30 - 2" - 5.5 BO

Total - 2-3/4 hr. - 11 BO

Average 4 BO per hr - 96 BOPD rate.

Case 4084

OLEN F. FEATHERSTONE
NO. 1 CABOT STATE
Sec. 29, T 155, R 32E, N.M.P.M.,
Lea County, New Mexico

February 22, 1969 Treatment - Bough 'B' (log measurement)
Perforations to treat - 9499'-9500'-01' 1 shot per foot .21" Hyperjet Set BP at 9686' Raised tubing to 9507' Spotted acid - raised tubing to 9475' and set packer. Injected 500 gallone BDA Started taking acid at 2900#. Maximum pressure 3150#. Average pressure 3000#. Final pressure 3000#. Immediate shut in - 3000#. 15 min. shut in - 1400#. Average injection rate - 6 GPM. Injected fluids as follows: 2 BO 12 B Acid Sparted swabbing 12:00 noon. At 4:15 p.m. had swabbed back 30 BO followed by 12 barrels acid water. At 4:55 p.m. had recovered 45.4 BO.

Shut in for darkness.

Shut in for darkness.

775 # tubing pressure.

Opened to flow on 14/64" choke @ 7:30 a.m.

7:30 a.m. to 9:15 a.m. = flowed 11 BO.

7:30 a.m. to 9:45 a.m. = flowed 5-1/2 BO.

9:15 a.m. to 10:15 a.m. = flowed 2-3/4 BO (240# TP)

9:45 a.m. to 10:15 a.m. = flowed

10:15 a.m. to 11:45 a.m. = flowed

10:15 a.m. = 4:45 p.m. = flowed (5 hr) 16.55 BO =

11:45 a.m. = 4:45 p.m. = approximately 3 BOPH rate.

4:45 p.m. to 5:15 p.m. = approximately 3 BOPH rate.

Left well flowing overnight.

February 24, 1969 7:45 a.m. (22-1/2 hrs.) well flowed 23.44 BO.

Decided to re-treat with 1000 gallons regular acid - 20%.

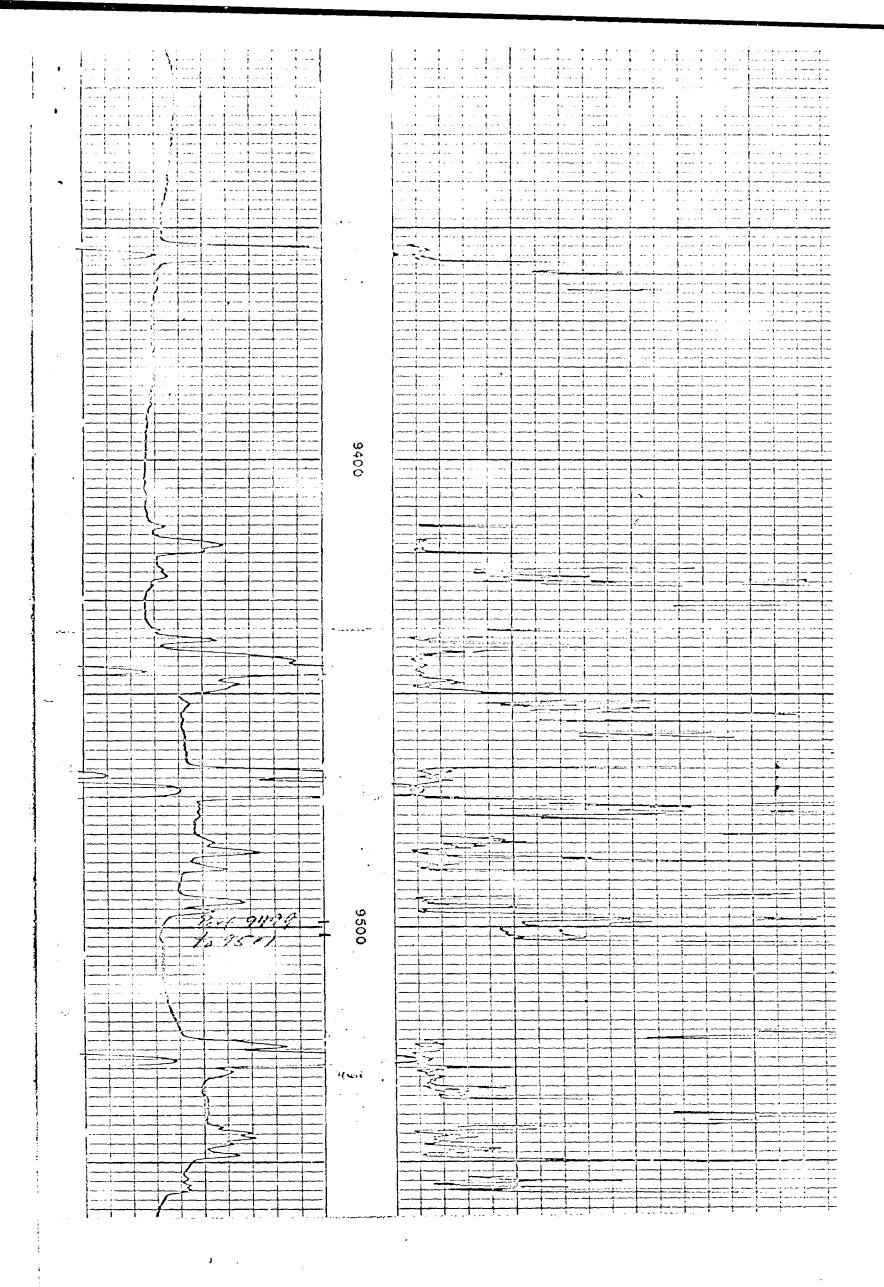
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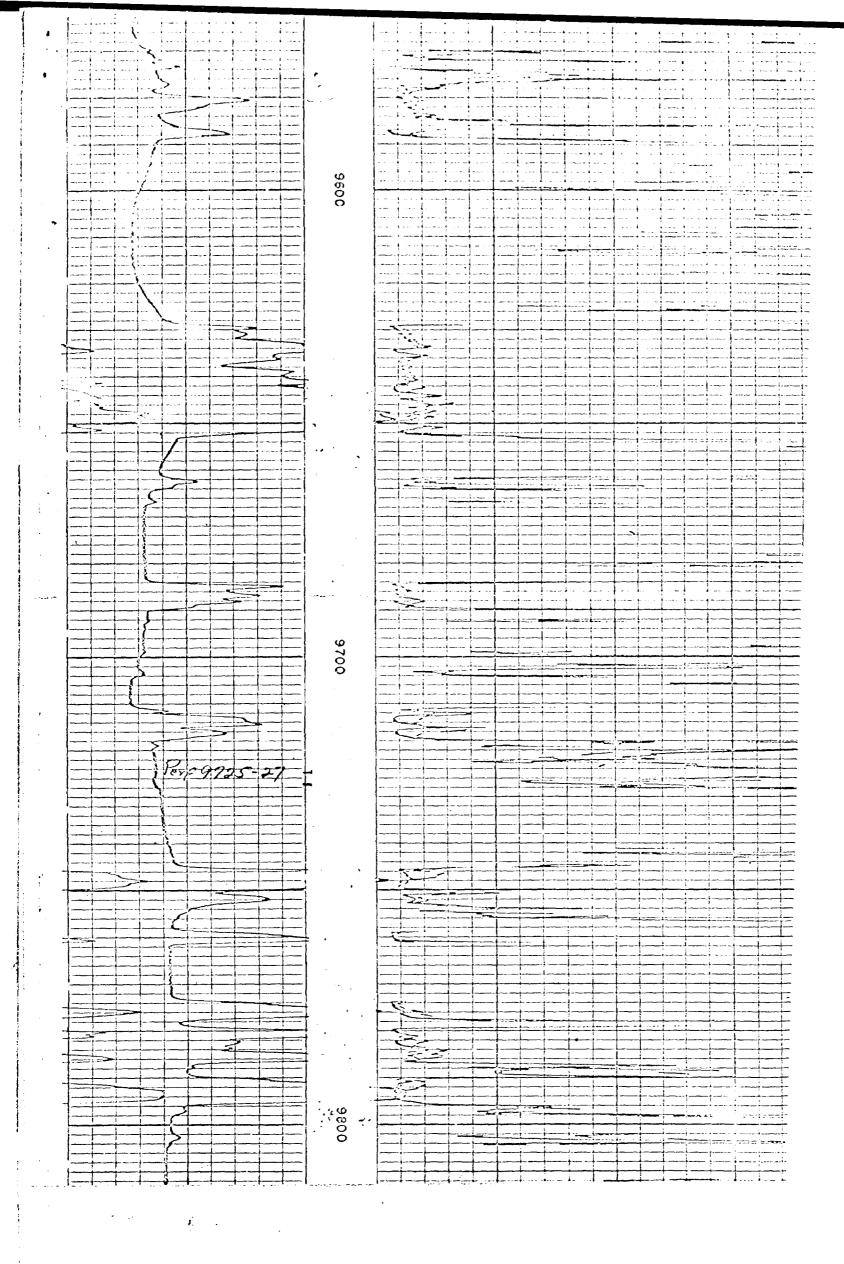
# Millian (Millian)

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Run No.	ONE			
Depth-Driller	10290			
Depth-Logger	10291			
Btm. Log Interval	10289			
Top Log Interval	8800			
Casing—Driller	85/2 @ 4105 @	@		@
Casing—Logger	4105			
Bit Size	77/8			
Type Fluid in Hole	FRESH GEL	<del></del>		
Dens. Visc.	9.0 52	• •		
pH   Fluid Loss	7.5 8.2 ml ml		ml	ml
Source of Sample	GILLULATED			
Rm @ Meas. Temp.	1.14 @ 61 °F @ °F	@	°F	@°F
Rmf @ Meas. Temp.	.88 @ C1 °F @ °F	@	٩F	@°F
Rmc @ Meas. Temp.	1.43 @ L1 °F @ °F	@	٥F	@ °F
Source: Rmf Rms	m n			
R <sub>m</sub> @ BHT	.56 @132 °F @ °F	@	°F	@ °F
Time Since Circ.	7 HK			
Max. Rec. Temp.	137 °F °F		°F	°F.
Equip. Location	3722 HOOBS			
Recorded By	BECK '			
Witnessed By	MR. BAINHILL & MR. HICKS			



Car 4084



Vane 4084

GMH/esr

## 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:

RECORDS CENTER & LAW LIBRARY

SM

CASE No. 4084

Order No. R-3732

NOMENCLATURE

APPLICATION OF OLEN F. FEATHERSTONE FOR THE CREATION OF A NEW POOL AND FOR SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

### ·

### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on <u>March 26</u>, 1969, at Santa Fe, New Mexico, before Examiner <u>Elvis A. Utz</u>.

ORDER OF THE COMMISSION

NOW, on this <u>day of</u>, 1969, 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, Olen F. Featherstone, seeks the creation of a new oil pool for Wolfcamp production in Lea County, New Mexico, including a provision for 160-acre spacing units and the assignment of 80-acre allowables.
- (3) That the evidence presently available indicates that the Olen F. Featherstone Cabot State Well No. 1, located in the NE/4 NW/4 of Section 29, Township 15 South, Range 32 East, NMPM, home is to perfective at 9499 Let.

  Lea County, New Mexico, has discovered a separate common source of supply which should be designated the feather.

  Wolfcamp Pool; that the vertical limits of said pool should be the Wolfcamp formation as found in the interval from 9499

feet to 9600 feet on the log of the aforesaid Olen F. Featherstone Cabot State Well No. 1; and that the horizontal limits of said pool should be the NW/Y of said Section 29.

- the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 160-acre spacing units and the assignment of 80-acre proportional factor of 4.77 should be promulgated for the Leather—Wolfcamp Pool.
- (5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.
- (6) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

### IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production, is hereby created and

## TOWNSHIP 15 SOUTH, RANGE 32 EAST, NMPM Section 29: NW/4

(2) That temporary Special Rules and Regulations for the —Wolfcamp Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
-WOLFCAMP POOL

- RULE 2. Each well shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square, which is a quarter section being a legal subdivision of the United States Public Land Surveys.
- RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting

the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center a governmental quarter quarter section or lat.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 160 acres.

### IT IS FURTHER ORDERED:

	(1) That the locations of all wells presently drilling to or	
	completed in the <b>Seath</b> ——-Wolfcamp Pool or	
	in the Wolfcamp formation within one mile thereof are hereby	
Manual Control	approved; that the operator of any well having an unorthodox loca-	
	tion shall notify the Hobbs District Office of the Commission in	
	writing of the name and location of the well on or before	
	- May 1 , 1969.	
State Chambers of the Control of the	(2) That each well presently drilling to or completed in	
ind officer and an individual	the <u>Glatha</u> -Wolfcamp Pool or in the Wolfcamp	
	formation within one mile thereof shall receive a 40-acre allow-	
en camana e	able until a Form C-102 dedicating 160 acres to the well has been	
	· · · · · · · · · · · · · · · · · · ·	水
R3"	And Tours of June 18 and 18 th and the first of the grant of	

- (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.

GMH/esr



## BEF RE 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:

RECORDS CENTER

CASE No. 4084

Order No. R-3732-A

APPLICATION OF OLEN F. FEATHERSTONE FOR THE CREATION OF A NEW POOL AND FOR SPECIAL POOL RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 13, 19670, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this <u>day of May</u>, 19670, 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 by Order No. R-3732, dated April 18, 1969, temporary Special Rules and Regulations were promulgated for the Feather-Wolfcamp Pool, Lea County, New Mexico, establishing 160-acre spacing units and an 80-acre proportional factor of 4.77 for allowable purposes for a period of one year.
- (3) That pursuant to the provisions of Order No. R-3732, this case was reopened to allow the operators in the subject pool to appear and show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.

- (4) That no operator in the subject pool appeared to show cause why the Feather-Wolfcamp Pool should not be developed on less than 160-acre spacing units and to show cause why the 80-acre proportional factor of 4.77 should or should not be retained.
- (5) That only one well is presently producing from the subject pool.
- (6) That it is not anticipated that additional wells will be drilled in the subject pool.
- (7) That the operators in the subject pool have not established that one well can efficiently and economically drain and develop 160 acres.
- (8) That no necessity exists for the continuation of the Special Rules and Regulations promulgated by Order No. R-3732 and that said rules should therefore be abolished.

### IT IS THEREFORE ORDERED:

- (1) That the Special Rules and Regulations governing the Feather-Wolfcamp Pool, Lea County, New Mexico, promulgated by Order No. R-3732, are hereby abolished.
- (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.