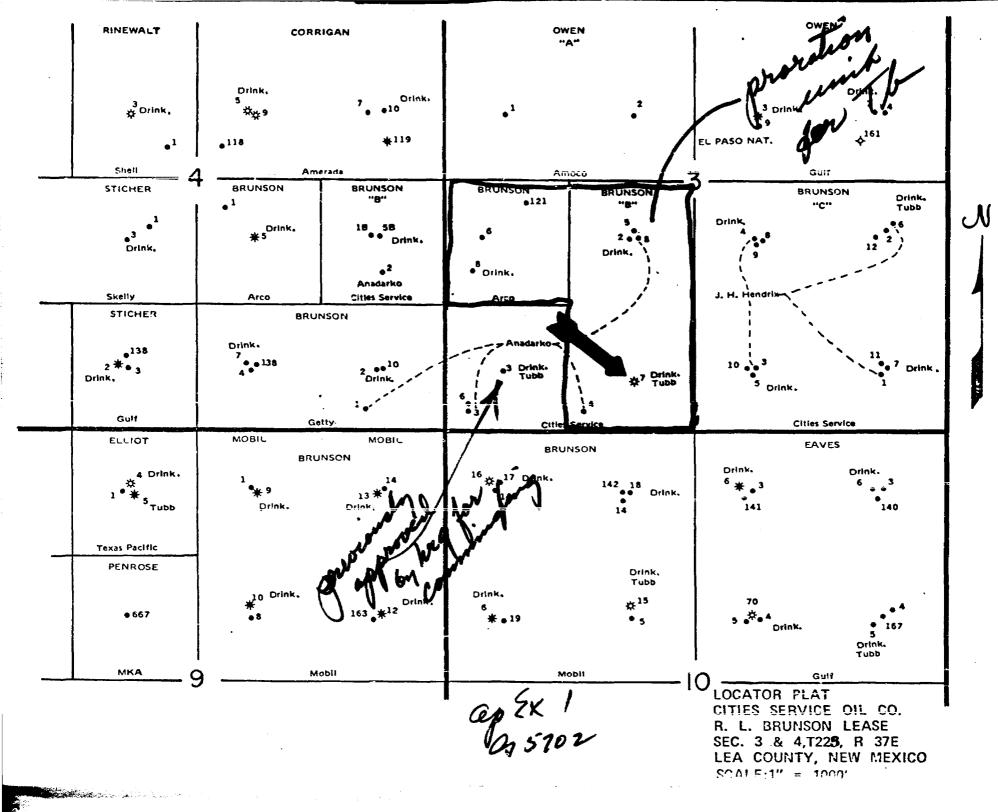
CASE 5702: CITIES SERVICE OIL CO. FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO

## CASE NO.

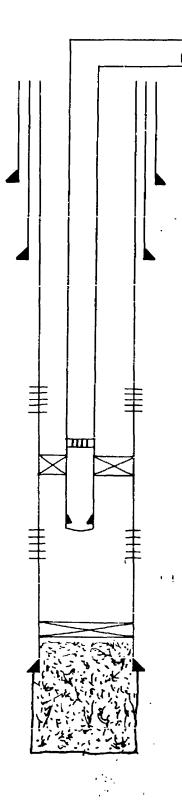
5702

APPlication, Transcripts, Small Exhibits,

ETC.



CITIES SERVICE OIL CO. BRUNSON - B No. 7 CURRENT DRINKARD - TUBB DUAL COMPLETION



2" EUE Tubing

13" Csg. @ 305' Cem. W/300 SXS

8 5/8" CSG @ 2800' Cem. W/600 SXS.

Tubb perfs. 5887-6138' & 6181'-6270'

Sliding Sleeves @ 6276' Packer @ 6279'

SN @ 6289'

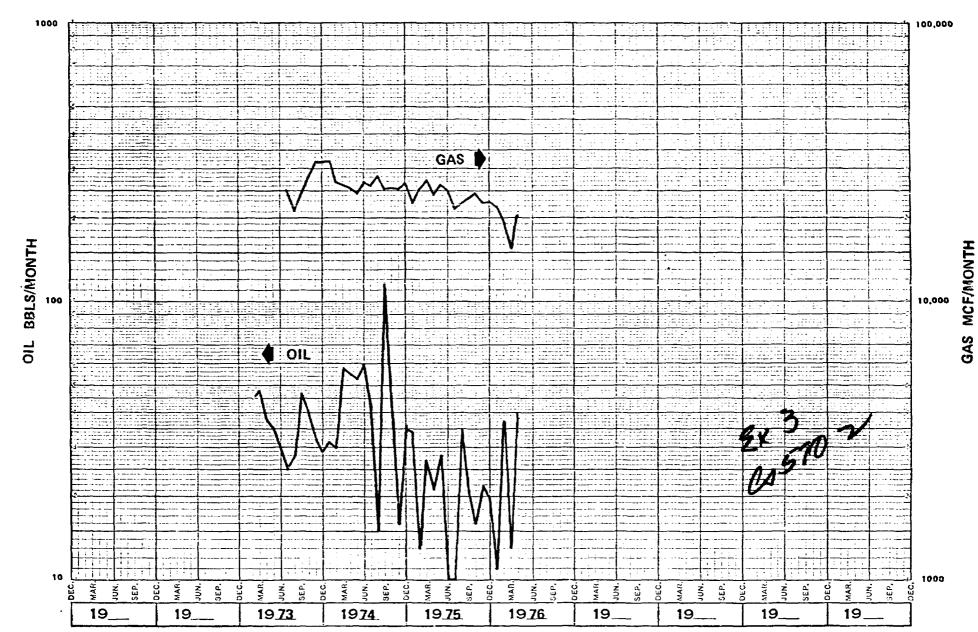
Drinkard perfs. 6290'-6465'

CIBP 6470'(PBTD)

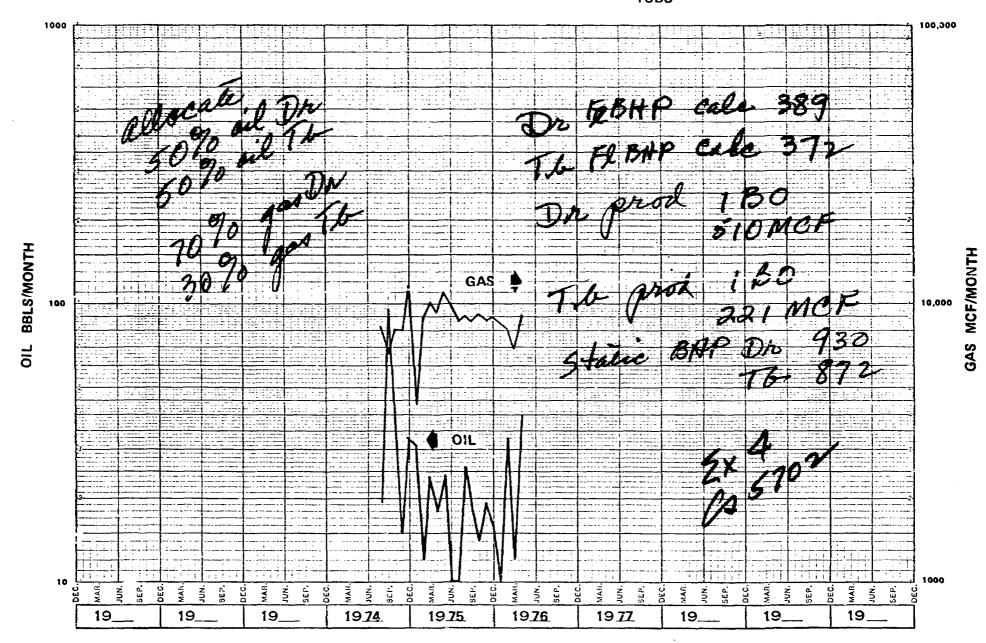
5%" Csg. @ 6476' Cem. W/350 SXS

TD 6548'

CITIES SERVICE OIL CO. BRUNSON - B No. 7 DRINKARD



CITIES SERVICE OIL CO. BRUNSON - B No. 7 TUBB



GCCGE O



## **OIL CONSERVATION COMMISSION**

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

STATE GEOLOGIST EMERY C. ARNOLD

DIRECTOR JOE D. RAMEY

LAND COMMISSIONER PHIL R. LUCERO September 17, 1976

Mr. Jason Kellahin Kellahin & Fox Attorneys at Law Post Office Box 1769 Santa Re, New Mexico

5702 Re: CASE NO. ORDER NO. R-5277

Applicant:

Cities Service 011 Company

Dear Sir:

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

Yours very truly, JOE D. RAMEY Director

JDR/fd

Copy of order also sent to:

Hobbs OCC 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. 5702 Order No. R-5277

APPLICATION OF CITIES SERVICE OIL COMPANY FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

## ORDER OF THE COMMISSION

## BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 7, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of September, 1976, 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, Cities Service Oil Company, is the owner and operator of the Brunson "B" Well No. 7, located in Unit N of Section 3, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant seeks authority to commingle Tubb Gas Pool and Drinkard Oil Fool production within the Wellbore of the above-described well.
- (4) That from the Tubb zone, the subject well is capable of low marginal production only.
- (5) That from the Drinkard zone, are subject well is capable of low marginal production only.
- (6) That the proposed commingling may result in the recovery of additic all hydrocarbons from each of the subject pools; thereby preventing waste, and will not violate correlative rights.

-2-Case No. 5702 Order No. R-5277

- (7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (8) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Hobb's district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 30 percent of the commingled gas production should be allocated to the Tubb zone and 70 percent to the Drinkard, and 50 percent of the commingled oil production should be allocated to the Tubb zone and 50 percent to the Drinkard.

## IT IS THEREFORE ORDERED:

- (1) That the applicant, Cities Service Oil Company, is hereby authorized to commingle Tubb Gas Pool and Drinkard Oil Pool production within the wellbore of the Brunson "B" Well No. 7, located in Unit N of Section 3, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.
- (2) That 30 percent of the commingled gas production shall be allocated to the Tubb zone and 70 percent to the Drinkard, and 50 percent of the commingled oil production shall be allocated to the Tubb zone and 50 percent to the Drinkard.
- (3) That the operator of the subject well shall immediately notify the Commission's Hobb's district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. MINEY, Member & Secretary

ar/

### CITIES SERVICE OIL COMPANY



Box 1919 Midland, Texas 79701 Telephone (915) 684-7131

August 12, 1976

Engineeris sale

Atlantic Richfield Company P. O. Box 1610 Midland, Texas 79701

Gentlemen:

In New Mexico Oil Conservation Commission case No. 5702, Cities Service Oil Company proposed to commingle downhole the Drinkard and Tubb production in our Brunson B No. 7 well located SE4 of SW4 Sec. 3, T22S, R37E, Lea County, New Mexico. The Tubb zone is in a unit covering the 160 acres in the SW4 of Sec. 3 and in which Atlantic Richfield Company owns 42.85714% and Cities Service the remaining 57.14286%.

In the downhole commingling request, Cities proposed to split the Drinkard and Tubb production based on the most current well test which are 1 BO, no water, 510 MCFG per day from the Drinkard and 1 BO, no water, 221 MCFG per day from the Tubb. The split recommended for allocation of production is therefore 50-50 for the oil production and 30% Tubb and 70% Drinkard for the gas production.

Because Atlantic Richfield is part owner of this well, the New Mexico Oil Conservation Commission requires a waiver be signed by ARCO stating that you do not object to the proposed split of production for allocation purposes.

We respectfully request that you sign the "Waiver" that is attached. One copy will be sent to the New Mexico Oil Conservation Commission, one copy will be for Cities Service Oil Company, and the third copy may be retained for your files. If you have any questions regarding this proposal please advise.

Thank you for your consideration of our request.

Yours very truly,

Elmer Startz

Region Petroleum Engineer

Midland, Texas

ES/pg Attachment

xc: New Mexico Oil Conservation Commission, Santa Fe, New Mexico

## WALVER

Atlantic Richfield Company as part owner of the Tubb Gas Unit located in the SW4 Sec. 3, T22S, R37E, Lea County, New Mexico, has no objection to the proposed split by Cities Service Oil Company of Drinkard and Tubb production in the Brunson B No. 7 well. This well is located in the SE4 of SW4, Sec. 3, T22S, R37E, Lea County, New Mexico. The proposed production split for allocation purposes is as follows:

50% Drinkard and 50% Tubb 70% Drinkard and 30% Tubb

011:

Gas:

Atlantic Richfield Company

AUG 23 1976

Date

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BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico July 7, 1976

## EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil Company for downhole commingling, Lea County, New Mexico.

5702/& 5703

BEFORE: Daniel S. Nutter, Examiner

## TRANSCRIPT OF HEARING

## APPEARANCES

For the New Mexico Oil

William F. Carr, Esq.

Legal Counsel for the Commission Conservation Commission: State Land Office Building

Santa Fe, New Mexico

Jason W. Kellahin, Esq.

KELLAHIN & FOX Attorneys at Law 500 Don Gaspar Santa Fe, New Mexico

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

For the Applicant:

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## INDEX

Page ELMER STARTZ Direct Examination by Mr. Kellahin Cross Examination by Mr. Nutter Recross Examination by Mr. Nutter EXHIBIT INDEX Page Applicant's Exhibit One (5702), Plat Applicant's Exhibit One (5703), Plat Applicant's Exhibit Two (5702), Schematic Diagram Applicant's Exhibit Two (5703), Schematic Diagram Applicant's Exhibit Three (5702), Production Curve Applicant's Exhibit Three (5703), Production Curve Applicant's Exhibit Four (5702), Production Curve Applicant's Exhibit Four (5703), Production Curve Applicant's Exhibit Five (5702), Log Applicant's Exhibit Five (5703), Log 

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MR. NUTTER: We will call now Case Number 5702.

MR. CARR: Case 5702, application of Cities Service Oil Company for downhole commingling, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin & Fox, Santa Fe, appearing on behalf of the applicant in this case. We have one witness I would like to have sworn.

(THEREUPON, the witness was duly sworn.)

MR. KELLAHIN: Mr. Examiner, the witness says he can handle them both in one record so I would ask that you consolidate Case 5703 with 5702.

MR. NUTTER: We will now call Case 5703.

MR. CARR: Case 5703, application of Cities Service
Oil Company for downhole commingling, Lea County, New Mexico.

MR. NUTTER: Cases 5702 and 5703 will be consolidated for purpose of hearing.

MR. KELLAHIN: If the Examiner please, the two sets of exhibits have been marked as to each case and sequence so there may be a little confusion back and forth there but we will attempt to cover them as we go along here.

## ELMER STARTZ

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

## DIRECT EXAMINATION

BY MR. KELLAHIN:

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- 3	x.'*	noutu	you	Scace	your	manic ;	preuse.

- A. Elmer Startz.
- Q. By whom are you employed and in what position, Mr. Startz?
- A. Cities Service Oil Company in the Region, Petroleum Engineer, Midland, Texas.
- Q. And have you testified before the Oil Commission and made your qualifications a matter of record?
  - A. Yes.

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

MR. NUTTER: Yes, they are.

- Q (Mr. Kellahin continuing.) Mr. Startz, are you familiar with the applications of Cities Service Oil Company in Cases 5702 and 5703?
  - A. Yes, sir.
- Q Briefly what is proposed by the applicant in these two cases?
- A. We propose to seek Commission approval to commingle downhole the production from the Drinkard and Tubb formations.
- Number One in each of the two cases, would you identify those two exhibits please?
- A. They are plats showing the Brunson "B" lease and the State "S" lease of Cities Service Oil Company and the

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surrounding leases, as well as the surrounding well locations and completions.

- Q. Has production from either one of these wells been commingled within the two zones on the surface?
  - A. No, sir.
  - Q. You haven't used common tank batteries?
  - A Oh, yes, on the surface, yes, sir.
  - Q Do you have commingled production at the surface?
  - A. Yes, sir.
  - Q On both of them?
  - A. Yes, sir.
  - Q. Has it caused any loss in the value of the product?
  - A. No, sir.
- Q. Now, referring to what has been marked as Exhibits

  Number Two in the two cases, would you identify those

  exhibits?
- A. Those are schematic diagrams of the two wellbores in each case under the present conditions.
  - Q. These are as the wells are presently completed?
  - A. Yes, sir.
- Q. Well, now, with reference to Exhibit Two in Case 5702, the Brunson "B" No. 7 Well, what is the status of that well at the present time, have you had any problems with it?
- A. The well is commingled, in other words, there is communication between the two zones.

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Q. Is that because of a packer leakage or do you think there are other problems in the well?

A. We feel certain that it is communication behind the casing. A little over a year ago, or last year it was, we pulled the tubing and checked everything out and the tubing appeared to be in good condition and as a result of this we feel that the communication is behind the long string.

- Q. Now, this did show up on your latest packer leakage test?
  - A. Yes.
- Q Now, if this application is approved do you propose to do anything in the nature of recompleting this well?
- A. No, sir, we would propose to continue producing as it is.
- Q Would the production from this well justify a recompletion?
- A. In my opinion, no, considering the fact that the communication is behind the five-and-a-half casing.
  - Q Now, what is the status of the State No. 2 Well?
- A. The latest packer leakage test there showed communication between the two zones also and this is an extremely marginal well. However, in this case I believe the communication -- I don't know but it is probably in the tubing string.
  - Q. Now, would you propose to make any change in the

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present completion if this application is approved?

- A. No, sir.
- Ω In fact, the production is presently being commingled in this well?
  - A. Yes, sir.
- Q. Now, referring to Exhibits Three in the two cases, would you identify those two exhibits?
- A. These are production curves during the last three years of the Drinkard formation in each well.
- Q Now, in the Brunson "B" No. 7 that well is not at the present time a marginal well, is it?
  - A. No, sir, it is above marginal, I guess.
- Q. But is the production such that you would anticipate a long life if you recompleted the well as a dual completion, could you justify a dual completion?
- A. I don't believe wc could justify dually completing the well and eliminating the communication.
  - Q. That is because you think it is behind the pipe?
  - A. Yes, sir.
- Q. And would you run the risk of losing the well if you attempted to do that?
- A. I think we would lose considerable production if we did.
- Q. Now, how about the No. 2 Well, what is the status of that well, is it a marginal well?

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- Q. In 1974 there apparently was some increase in production, was that due to the well having been shut in for a period of time?
- A. Yes, it was curtailed there. I'm not real sure but I believe it was overproduced slightly.
  - Q And that would account for the sudden rise in it?
  - A. Yes, a sudden drop and then a sudden rise later on.

MR. NUTTER: You are talking about the Drinkard zone in the No. 2 Well, Mr. Kellahin?

MR. KELLAHIN: Yes, sir, the State "S" 2.

MR. NUTTER: You are talking about that increase in production in '74?

A. Yes, sir, the decrease and then the increase later in the year.

Q. (Mr. Kellahin continuing.) You say you think the well was shut in?

A. It wasn't completely shut in, I think it was curtailed due to being overproduced. I believe it was, I'm not real sure on this now.

MR. NUTTER: Mr. Startz, am I reading this exhibit right, the well currently would be producing about twenty-eight barrels a month?

A. Yes, sir. That's twenty-eight barrels of oil, yes, sir.

Q (Mr. Kellahin continuing.) Now, turning to Exhibits
Number Four on the two wells could you discuss these exhibits,
that would be the Tubb production curves?

A. These are production curves from the history during the last recent years of the Tubb formation, the oil and gas production.

- Q Does that show that the wells are declining?
- A. Yes, sir.
- Q. Now, on the basis of the present production, what are the bottom-hole pressures on these wells, do you have any information on that?
- A. In the Brunson now our flowing bottom-hole pressure is calculated. Now, we don't have any measured bottom-hole pressures in these but the Drinkard bottom-hole pressure flowing is calculated to be three hundred and eighty-nine psi and the Tubb flowing bottom-hole pressure is calculated to be three hundred and seventy-two psi.
- Q. What is the production from the wells from those two zones?
- A. The Drinkard is currently producing approximately one barrel of oil and five hundred and ten MCF of gas per day from the Brunson "B" 7 and the Tubb is producing approximately one barrel of oil and two hundred and twenty-one MCF of gas per day.
  - Q. Have you calculated the static bottom-hole pressure

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on the two zones?

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A. Yes, sir, the calculated static bottom-hole pressure in the Drinkard is nine hundred and thirty and the calculated static bottom-hole pressure in the Tubb is eight hundred and seventy-two psi.

Q And what is the flowing pressure as you have given it here for the two zones, would there be any danger that fluid or gas would migrate from one zone to the other?

- A. No, sir, I don't believe so.
- Q. Now, is the ownership in this well common throughout
- A. Yes, sir.
- Q. On what basis would you propose to allocate production from --

A. We would recommend allocating production, the oil would be fifty percent Drinkard and fifty percent Tubb based on the current tests and the gas based on current tests would be seventy percent to the Drinkard and thirty percent to the Tubb.

- 0. Now, on the State "S" No. 2 Well, what is the production from the two zones there and the pressures?
- A. The production from the Drinkard is approximately one barrel of oil and six MCF of gas per day and from the Tubb it's approximately one barrel of oil and thirty-three MCF of gas per day.
  - Q. Now, what is the flowing tubing pressure on those

## sid morrish reporting service

two zones?

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A. The flowing -- here again this is a calculated flowing bottom-hole pressures. The Drinkard is calculated to be seventy-eight psi and the Tubb fifty-nine psi.

- 0 And what is the static pressures?
- A. The static pressures are calculated to be bottom-hole in the Drinkard five hundred and sixteen psi and the Tubb four hundred and thirty-four psi.
- Now, with those pressures do you feel there is any danger of fluids migrating from one zone to the other in this well?
  - A. No, sir.
  - Q How would you allocate production on this well?
- A. Based on current tests the oil would be split fifty-fifty to each zone and the gas would be fifteen percent to the Drinkard and eighty-five percent to the Tubb.
- Q. And that would reflect the results of the current tests of the well?
  - A. Yes.
- Q. Now, is the ownership on that well common throughout as to both zones?
  - A. Yes, sir.
- Q As to both wells it is common as to royalty, overriding royalty and working interest?
  - A. Yes, sir.

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0. In all zones:	>

A. Yes, sir.

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- Now, referring to what has been marked as Exhibit
  Number Five in each of the cases, would you identify that
  exhibit?
- A. That's the well logs showing the current perforations and it shows the current perforations and well tops on the log.
  - Q. And that is as to each of the wells?
  - A. As to each of the wells, yes, sir.

MR. KELLAHIN: Does the Commission want more than one copy of that log? We have others here.

MR. NUTTER: I think one will be sufficient.

- Q. (Mr. Kellahin continuing.) Now, Mr. Startz, in your opinion will the approval of this application result in the prolonged productive life for these two wells?
  - A. Yes, sir, it will prolong it considerably, yes, sir.
- Q Will that result in the recovery of hydrocarbons from each of the wells that would not otherwise be recovered?
  - A. Yes, sir, definitely, sir.
- Q And would waste occur, in your opinion, if the application is not approved?
  - A. Yes, sir.
- Q. Will the correlative rights of any operator be impaired in any way by approval of this application?

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- Q. Have there been other commingling cases in this particular area approved by this Commission?
- A. The Brunson "B" No. 3 was approved earlier this year in the same two formations, in the Drinkard and the Tubb.
  - Q. Is that in the same section there as the No. 7?
  - A. Yes, it is a west offset to Well No. 7.

    MR. NUTTER: That is the No. 3, you say?
  - A. Yes, sir.

MR. NUTTER: What was the order number on that, do you know?

A. No, sir, I don't recall.

MR. KELLAHIN: We can get it for you.

MR. NUTTER: Do you know, Mr. startz, whether it was by hearing or administrative?

A. Hearing.

MR. NUTTER: There was a hearing?

A. Yes, sir.

MR. NUTTER: We can find that. Reference will be made to our files in this case.

Q (Mr. Kellahin continuing.) Were Exhibits One through
Five in each of the cases prepared by you or under your
supervision?

A. Yes, sir.

MR. KELLAHIN: At this time I would like to offer

the exhibits in the two cases.

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MR. NUTTER: Let's see, it's five in each, isn't it?

MR. KELLAHIN: Yes.

MR. NUTTER: Exhibits One through Five will be admitted in Cases Number 5702 and 5703.

> (THEREUPON, Exhibits One through Five in each case were admitted into evidence.)

## CROSS EXAMINATION

BY MR. NUTTER:

Mr. Startz, are each of these wells classified as a gas well or an oil well in the Tubb formation?

- As gas wells, yes, sir.
- They are both gas wells?
- Yes, sir.

Okay, now, what is the size of the proration unit that is assigned to the Brunson No. 7?

The Drinkard has a forty-acre allocation and the Tubb has a hundred-and-twenty acres.

- Q. Being that Brunson lease?
- It's a total of a hundred and sixty, excluding the location of the No. 3 Well. In other words, it is a hundred and twenty acres.
  - For purposes of the Tubb gas pool do you dedicate

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the Arco forty too?

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A. Yes, sir, those three forty-acre locations are dedicated to the No. 7 Well.

- Q And that well is classified as a marginal or non-marginal well in the Tubb gas pool?
- A. I believe it is marginal in the Tubb pool. I'm not real sure on that, two hundred and twenty-one MCF per day is the test.
- Q Okay, now, on the State "S", this well is also a gas well in the Tubb gas pool?
  - A. Yes, sir.
- Q. And I presume the proration unit that's dedicated to it would be eighty acres, being the south half of the northwest of 15?
  - A. That is correct and forty acres to the Drinkard.
  - Q. And forty acres to the Drinkard?
  - A. Yes, sir.
- Q. And is this unit classified as a marginal or nonmarginal unit?
  - A. Marginal.
- Q Now, both wells are producing through the annulus at this time as far as the Tubb is concerned, right?
  - A. Yes, sir.
- Q Now, the State "S", you said you think probably has a leak in the tubing string, how do you propose to continue

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to produce this, produce as much as it will make out of the annulus and also produce from the tubing?

A. Yes, sir.

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- Q Without disturbing the tubing or setting a packer?
- A Yes, sir.
- Q And you would handle the other well the same way then?
  - A. Yes.
  - Q Use the annulus and the tubing?
  - A. Yes, sir.

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

(THEREUPON, the witness was excused.)

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

MR. KELLAHIN: That's all we have, Mr. Nutter.

MR. NUTTER: Mr. Carr, do you have anything?

MR. CARR: Mr. Examiner, we have received a letter from Mobil Oil Corporation concerning the application in Case 5702. The letter is signed by J. A. Morris, Regulatory Engineering Supervisor, and reads in part: (Reading.) Recent wellhead shut-in pressure tests indicate that there could be as much as three hundred pounds per square inch differential existing between the zones proposed to be commingled. If this differential is found to exist in the well of this

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application we believe that the subject of the request for downhole commingling should be denied. (End of reading.)

MR. NUTTER: Thank you.

MR. KELLAHIN: If the Examiner please, I don't think the letter makes reference to any particular test and we don't know what test he is talking about. We haven't been able to find that that shows such a pressure differential.

MR. NUTTER: Ckay, Mr. Kellahin, he says a recent test run on Mobil's lease indicates that there could be as much as a three hundred psi differential existing between the zones. If this differential is found to exist in the well of this application he objects and should be denied.

Now, Mr. Startz, you are back under oath.

## RECROSS EXAMINATION

BY MR. NUTTER:

Q. Mobil has found a three hundred pound differential on the tests on their Brunson-Argo lease and they say if this kind of a differential is found on your lease, this subject well being the Brunson "B" No. 7, that your application should be denied. Do you find a three hundred pound differential on your lease?

A. No, sir, we don't find this now. We haven't measured the bottom-hole pressures but based on all of our available information we don't find this kind of pressure.

Now, you stated that you had a calculated flowing bottom-hole pressure on the Brunson "B" No. 7, which is the well that Mobil is talking about, you stated you had a calculated flowing bottom-hole pressure in the Tubb of three, seventy-two and a flowing bottom-hole pressure calculated in the Drinkard at three, eighty-nine, so there isn't apparently any three hundred pound differential there, is there?

- A. No, sir.
- And you stated that your calculated static bottom-hole pressure in the Tubb on that well was eight, seventy-two and your calculated static on the Drinkard was nine, thirty, so is there any three hundred pound differential there?
  - A. No, sir.
- Q Okay, how did you arrive at these calculated pressures, both flowing and static?
- A. This is a computer equation and calculation our reservoir engineer has set up based on the surface pressures and the fluid GOR's and specific gravities and things of this nature. They are all considered and this is the way we calculate these.
- Q. Okay, this is surface tubing pressure calculated down to the perforated interval or to the datum?
  - A. Yes, sir, to the mid perfs.
  - Q In each zone? Now, these aren't both taken to a

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common datum then?

- A No, sir, these are to the mid perfs.
- Q. The perforation in the Tubb is to the mid perfs of the Tubb?
  - A. Yes, sir.
- Q Of the calculation and the bottom-hole pressure calculation for the Drinkard is to the mid perfs of the Drinkard zone?
  - A. Yes, sir.
- Q And that is calculated from flowing tubing pressure and from shut-in tubing pressure?
  - A. Yes, sir.
- How long were your wells shut in in order to obtain
   your shut-in pressure?
- A. It was forty-eight hours on the shut-in tubing pressures and, of course, the flowing I really don't know how long those were.

MR. NUTTER: Okay, does anyone else have anything they wish to offer in Cases Number 5702 or 5703? We will take the cases under advisement.

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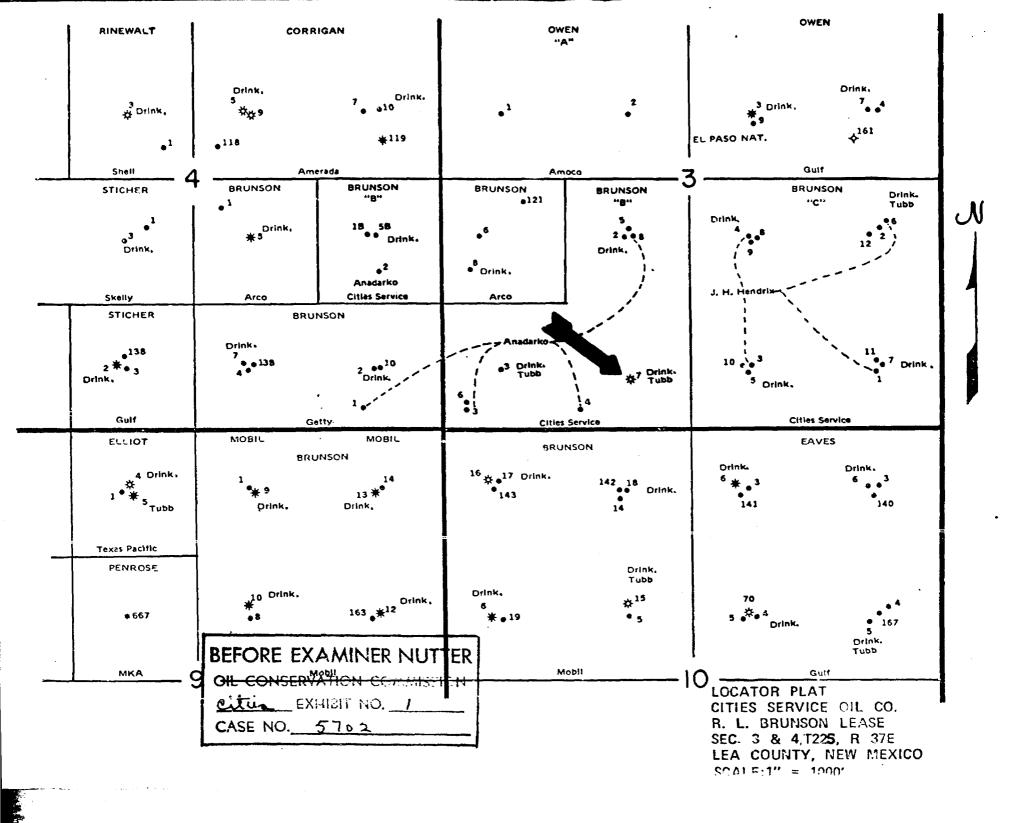
sid morris'h reporting service General Court Reporting Service 825 Calle Mejia, No. 122, Santa Fe, New Mexico 8750; Phore (505) 982-9212

## REPORTER'S CERTIFICATE

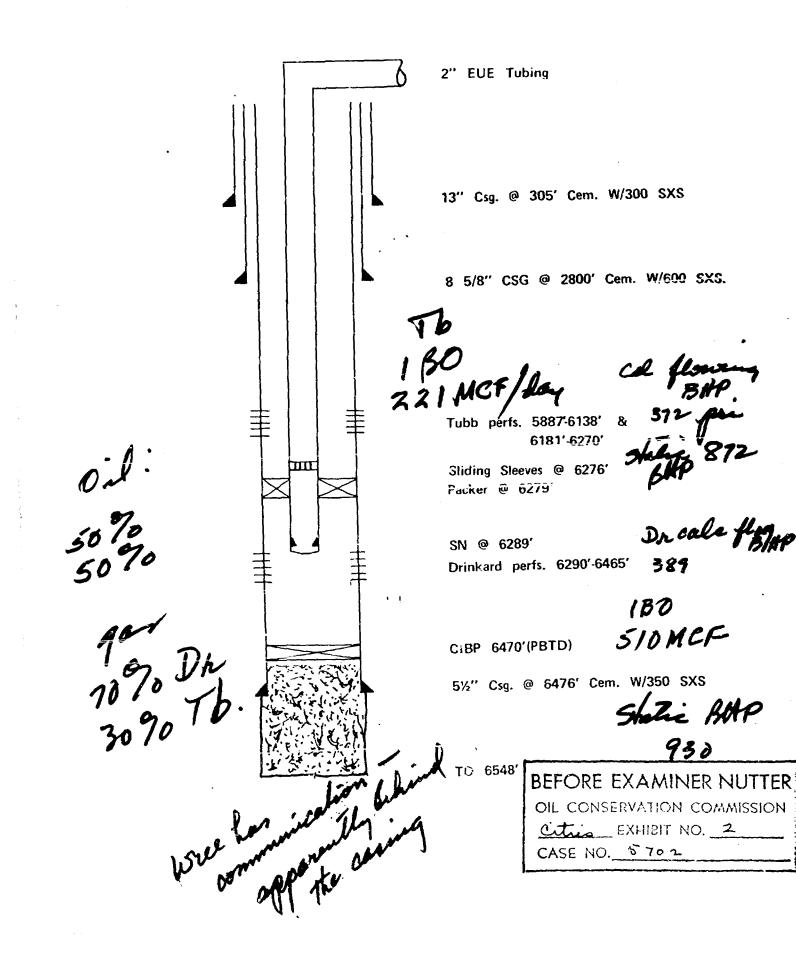
I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and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

I do hereby certify that the foregoing is a complete resemble of the proceedings in the Emerican hearing of Cases No. 5702-5703 heard by me on 7/7 , 1976.

Examiner New Wexico Oil Conservation Commission



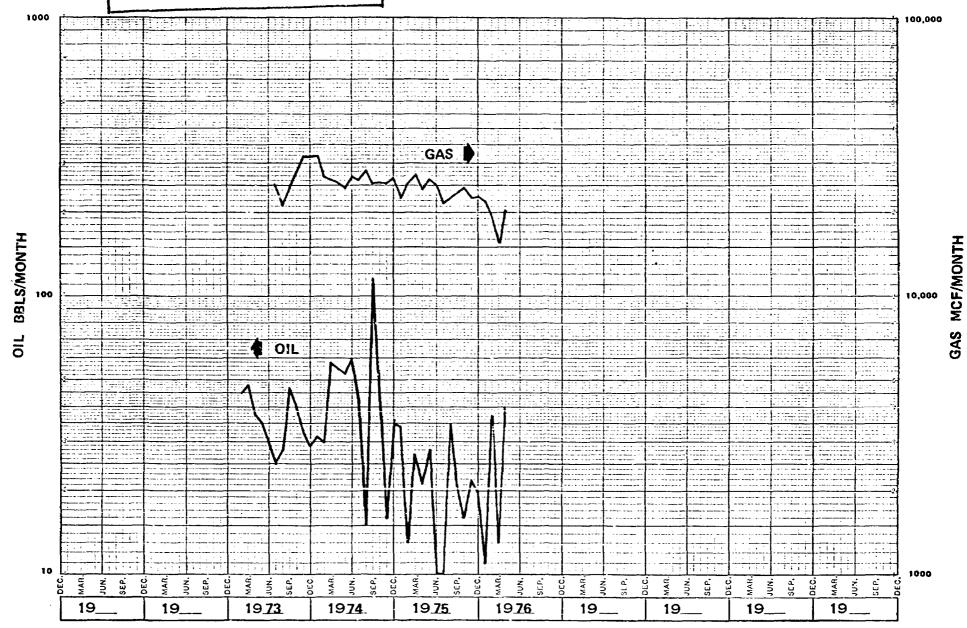
CITIES SERVICE OIL CO. BRUNSON - B No. 7 CURRENT DRINKARD - TUBB DUAL COMPLETION



OIL CONSERVATION COMMUSION EXHIBIT NO. 3

CASE NO. \$702

CITIES SERVICE OIL CO. BRUNSON - B No. 7 DRINKARD



## **Mobil Oil Corporation**

P O BOX 633 MIDLAND TEXAS 79701

June 30, 1976

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

Attention: Mr. J. D. Ramey

CASE 5702 | APPLICATION OF CITIES SERVICE OIL COMPANY FOR DOWNHOLE COMMINGLING BRUNSON "B" WELL NO. 7 SEC. 3, T22S, R37E LEA COUNTY, NEW MEXICO

## Gentlemen:

Mobil Oil Corporation has reviewed the applicant's proposal to commingle Tubb Gas Pool and Drinkard Oil Pool (gas) production in the wellbore of the Brunson "B" Well No. 7, located in Unit N of Section 3, T22S, R37E, Lea County, New Mexico.

Recent wellhead shut-in pressure tests run on Mobil's Brunson Argo lease, offsetting the Cities Service Brunson "B" lease, and other shut-in pressures in the vicinity, as reported to the Commission, indicate that there could be as much as a 300 p.s.i. differential existing between the zones proposed to be commingled. If this differential is found to exist in the well of this application, we believe that the subject request for downhole commingling should be denied.

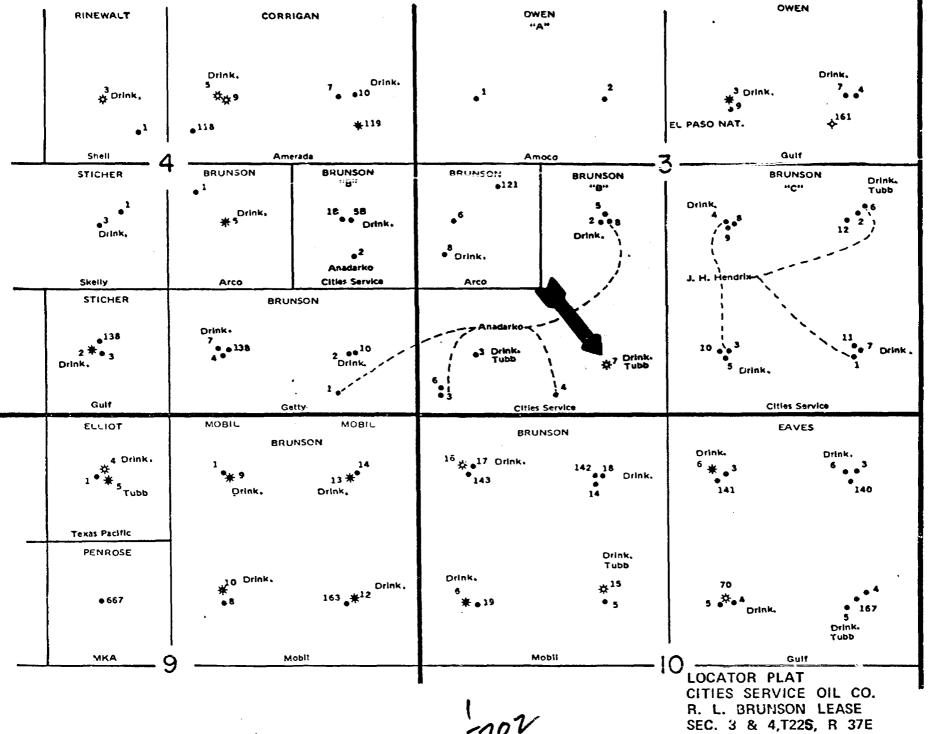
Yours very truly,

J. A. Morris

Regulatory Engineering Supervisor

JHSeerey/amb

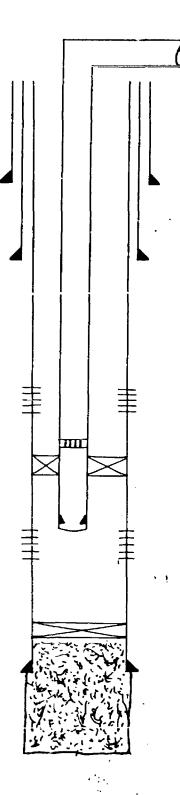
Citgo - Midland NMOCC - Hobbs cc:



SEC. 3 & 4,T225, R 37E LEA COUNTY, NEW MEXICO SCALE:1" = 1000"

N

CITIES SERVICE OIL CO. BRUNSON - B No. 7 CURRENT DRINKARD - TUBB DUAL COMPLETION



2" EUE Tubing

13" Csg. @ 305' Cem. W/300 SXS

8 5/8" CSG @ 2800' Cem. W/600 SXS.

Tubb perfs. 5887-6138' & 6181'-6270'

Sliding Sleeves @ 6276' Packer @ 6279'

SN @ 6289'

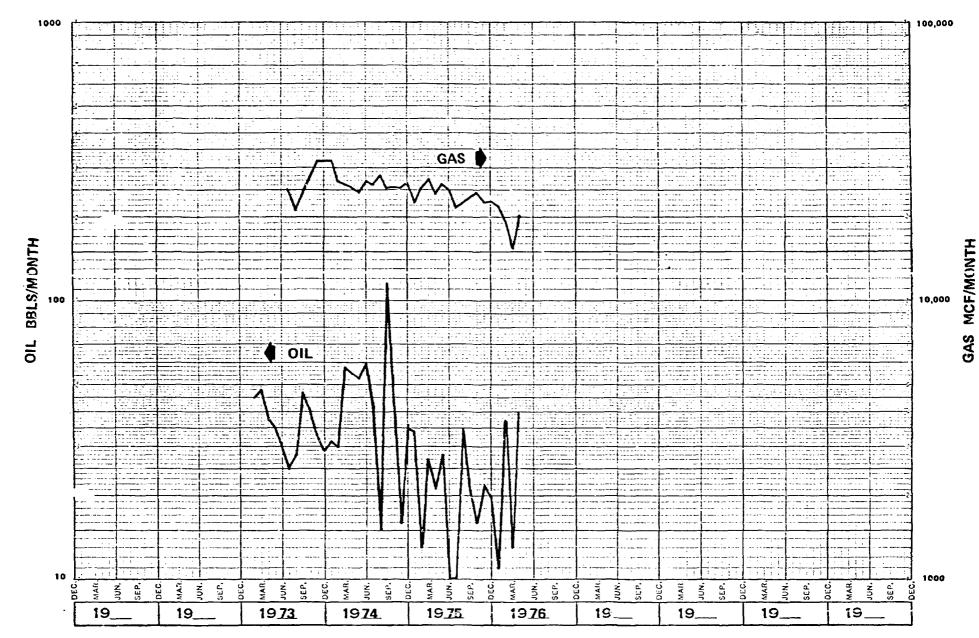
Drinkard perfs. 6290'-6465'

CIBP 6470'(PBTD)

 $5\%^{\prime\prime}$  Csg. @ 6476' Cem. W/350 SXS

TD 6548'

CITIES SERVICE OIL CO. BRUNSON - B No. 7 DRINKARD



19

19

19.74

19.75

19.76

19.77

19

19

19

GAS MCF/MONTH

Dockets Nos. 21-76 and 22-76 are tentatively set for hearing on August 4 and August 18, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: FXAMILIER HEAPING - WEIGHEDAY - JULY 7, 1976
7 A.M. - OIL OIN HAVAITH, COMMISSION CONFERENCE ROLM,
STATE LAND OFFICE BUILDING, SANTA FR, NEW MEXICO

The following cases will to heard before Daniel S. Natter, Examiner, or hichard L. Stamets, Alternate Examiner:

CASE 5704: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its H. T. Mattern (MCT-B) Well No. 16 located in Unit D of Section 31, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its H. T. Mattern (NCT-C) Wells Nos. 5 and 8, located, respectively, in Units I and A of Section 18, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

CASE 5706: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its William A. Ramsay (NCT-B) Well No. 6 in Unit H of Section 25, Township 21 South, Range 36 Fast, Lea County, New Mexico. Applicant further seeks an administrative procedure for approval of additional commingling authority on this lease.

CASE 5707: Application of Harrington Transportation Inc. For an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of its Llano Inc. Terry Well No. 1, to be drilled at a point 1650 feet from the North line and 1980 feet from the East line of Section 14, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico.

CASE 5708: Application of Roger C. Hanks for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through the approximate interval from 10,300 feet to 10,550 feet in his King Disposal Well No. 1 located in Unit C of Section 9, Township 20 South, Range 25 East, Eddy County, New Mexico.

Application of Tahoe Oil and Cattle Company for an exception to the provisions of Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to construct and operate an earthen salt water disposal pit in the NW/4 SW/4 of Section 2, Township 20 South, Range 30 East, Eddy County, New Mexico.

CASE 5710: Application of Benson-Montin-Greer Drilling Corporation for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the two following described non-standard gas proration units in Township 32 North, Range 13 West, Ute Dome-Dakota Cas Pool, San Juan County, New Mexico:

a 250.64-acre unit comprising the N/2 of Section 30 to be dedicated to applicant's La Plata F-30 Well No. 2, located 900 feet from the North line and 827 feet from the West line of said Section 30;

a 250.80-acre unit comprising the S/2 of Section 30 to be dedicated to applicant's La Plata K-30 Well No. 1 located 1503 feet from the South line and 825 feet from the West line of said Section 30.

CASE 5691: (Readvertised and Reopened)

Application of Hanson Oil Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 990 feet from the North line and 2600 feet from the West line of Section 25, Township 26 South, Range 31 East, North Mason-Delaware Pool, Eddy County, New Mexico.

CASE 5702: Application of Cities Service Cil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tubb Gas Pool and Drinkard Oil Pool production in the wellbore of its Brunson "B" Well No. 7 located in Unit N of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico.

Docketo Nos. 19-76 and 20-76 are tentatively set for hearing on Jany 7 and July 21, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

# DOCKFI: EXPERISH FRAMED - WELDISTMY - JUDE 23, 1976

9 A.M. - OH COMMENTATION COMMENTED COMMENTED FORM, STATE HARD CHYLCE BUILLING, MANUA ME, NEW MEXICO

The following cases will be heard before Fishard L. Stanets, Examiner, or Paniel S. Matter, Alternate Examiner:

CASE 5689: (Continued from June 9, 1976 Examiner Housing)

Application of Dalport Oil Corporation for an unorthodox oil well location, Chaves County, New Mexico. Applicant, in the above-ciyled cause, seeks approval for the unorthodox location of its Jones Federal Well No. 4 to be drilled 990 feet from the South line and 1477 feet from the West line of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Cueen Pool, Chaves County, New Mexico.

CASE 4843: (Reopened) (Continued from June 9, 1976 Examiner Hearing)

In the matter of Case 4843 being reopened pursuant to the provisions of Order No. R-4435-A, which order extended the special pool rules for the Southeast Chaves Queen Gas Area, Chaves County, New Mexico, including a provision for 320-acre spacing and proration units for gas wells. All interested parties may appear and show cause why said Order No. R-4435 should not be rescinded.

- CASE 5695: Application of Yates Petroleum Corporation for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its J Lazy J Well No. 13, to be drilled as the 5th well on the 40-acre tract, in the center of Unit G, of Section 22, Township 17 South, Range 25 East, Eagle Creek-San Andres Pool, Eddy County, New Mexico.
- CASE 5696: Application of Yates Petroleum Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Eagle Creek-San Andres Pool by the injection of water into the San Andres formation through its J Lazy J Wells Nos. 3, 6, 9, and 11, all located in Unit G of Section 22, Township 17 South, Range 25 East, Eddy County, New Mexico.
- CASE 5697: Application of Elk Gil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Northeast Kemnita Unit Area comprising 3520 acres, more or less, of State land in Township 16 South, Range 34 East, Lea County, New Mexico.
- CASE 5693: Application of El Paso Natural Gas Corpory for downhold commingle, Rio Arriba County, New Mexico.

  Applicant, in the above-styled cause, seeks authority to commingle South Blanco-Fictured Cliffs and Blanco Mesaverde gas production in the wellbore of its San Juan 22-7 Unit Well No. 82 located in Unit A of Section 4, Township 27 North, Range 7 West, Rio Arriba County, New Mexico.
- CASE 5699: Application of Dalport Oil Corporation for an exception to the provisions of Order No. R-3221, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the provisions of Commission Order No. R-3221, permission to dispose of, into earthen pits, produced salt water from its Jones-Federal Well No. 3 located in Unit K of Section 22, Township 15 South, Range 29 East, South Lucky Lake-Queen Pool, Chaves County, New Mexico.
- Application of Morris R. Antwell for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 24, Township 20 South, Range 27 Hast, Eddy County, New Mexico, to be dedicated to a proposed gas well to be drilled at an orthodox location in the S/2 of said Section 24. Also to be considered will be the cost of drilling and completing said well and the allocation of the costs thereof, as well as antual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 570: Application of Arabo, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andreo, Abo and Paddock formations through the perforated interval from approximately 58/5 feet to 8/80 feet and the openhole interval from approximately 8528 feet to 8/900 feet in its State SWD Well No. 2, located in Unit F of Section 2, Township 17 South, Range 36 East, Lovington Field, Lea County, New Mexico.

Application of Cities Service Cil Company for downhole commingling, Lee County, New Mexico. Applicant, in the above-style, cause, seeks authority to commingle Tubb Cas Pool and Drinkard Cil Pool production in the wellhore of its Eruncon "B" Well No. 7 located in Unit N of Section 3, Township 22 South, Range 37 East, Lea County, New Mexico.

reads for July?

Care 5702

KELLAHIN AND FOX
ATTORNEYS AT LAW
SOO DON GASPAR AVENUE
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO 87501

JASON W. KELLAHIN ROBERT E. FOX W. THOMAS KELLAHIN

May 21, 1976

CH CONSERVATION FOR AREA CODE BOS

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

> Re: Brunson "B" Well No. 7 Section 3 T22S, R37E, NMPM Lea County, New Mexico

Dear Bill:

Please set the enclosed application for downhole commingling of production on the above referenced well for the next available examiner hearing on June 23, 1976.

Very truly yours,

W. Thomas Kellahin

CC: Mr. E. F. Motter

WTK:kjf

Enclosure

#### BEFORE THE

#### OLL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CITIES SERVICE OIL COMPANY FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

# APPLICATION

COMES NOW CITIES SERVICE OIL COMPANY and applies to the Oil Conservation Commission of New Mexico for approval of downhole commingling in its Brunson "B" No. 7 well located 622 feet from the South line and 1980 feet from the West line of Section 3, Township 22 South, Range 37 East, N.M.P.M., Lea County, New Mexico and in support thereof would show the Commission:

- 1. The subject well was completed as a dual completion producing from the Tubb Gas Pool and from the Drinkard Pool.
- 2. Subsequent to completion the well has experienced a packer leakage problem which is not economical to repair.
- 3. Applicant desires to produce the well as a downhole commingling of the Tubb and Drinkard production.
- 4. Approval of this application will result in the production of hydrocarbons that would not otherwise be produced, will prevent waste, and will not cause any damage to either the Drinkard or Tubb formations. Correlative rights including those of offset operators will not be impaired.

WHEREFORE applicant prays that this application be set

for hearing before the Commission's duly appointed examiner. and that after notice and hearing as provided by law, the Commission enter its order approving commingling as prayed for.

Respectfully submitted,

CITIES SERVICE OIL COMPANY

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

Attorneys for Applicant

MAY 21 1976

#### BEFORE THE

#### OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CITIES SERVICE OIL COMPANY FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

# APPLICATION

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Respectfully submitted,

CITIES SERVICE OIL COMPANY

KELLAHIN & FOX

P. O. Box 1769 Santa Fe, New Mexico 87501

Attorneys for Applicant

#### BEFORE THE

#### OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF CITIES SERVICE OIL COMPANY FOR DOWNHOLE COMMINGLING, LEA COUNTY, NEW MEXICO.

# APPLICATION

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- 1. The subject well was completed as a dual completion producing from the Tubb Gas Pool and from the Drinkard Pool.
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Respectfully submitted,

CITIES SERVICE OIL COMPANY

Y KELLAHIN & FOX

P. O. Box 1769 Santa Fe, New Mexico 87501

Attorneys for Applicant

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Page	L	

# BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico June 23, 1976

#### EXAMINER HEARING

IN	THE	MATTER	OF:	

Application of Cities Service Oil ) CASE Company for downhole commingling, Lea ) 5702 County, New Mexico.

BEFORE: Richard L. Stamets, Examiner

# TRANSCRIPT OF HEARING

# APPEARANCES

For the New Mexico Oil Conservation Commission:

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

sid morrish reporting service

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

•	<b>^</b>	
Page	2	

sid morrish reporting service

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

MR. STAMETS: We will call next Case 5702.

MR. CARR: Case 5702, application of Cities Service Oil Company for downhole commingling, Lea County, New Mexico.

Mr. Examiner, due to an error in the advertisement this case should be continued to the July 7th Examiner Hearing

MR. STAMETS: This case will be continued.

Page	3	

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

# REPORTER'S CERTIFICATE

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

Sidney F. Morrish, C.S.R.

I do hereby complete that the foregoing is a couple at the first the foregoing in the Examiner and the first of Care No. 5702, heard of the first that the foregoing is

New Mexico Oil Conservation Commission

# Memo

**Prom**D. S. NUTTER
CHIEF ENGINEER

J.

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(arco selves to the Tubb)
a piace of the Tubb)
April for waver
from Arco

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

dr/

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF MPW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE NO. 5702
Order No. R-
APPLICATION OF CITIES SERVICE OIL COMPANY  FOR DOWNHOLE COMMINGLING, LEA  COUNTY, NEW MEXICO.
BY THE COMMISSION:
This cause came on for hearing at 9 a.m. on July 7
19 76 , at Santa Fe, New Mexico, before Examiner Daniel S. Nutter
NOW, on this day of , 1976, 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, Cities Service Oil Company, is the
owner and operator of the Brunson "B" Well No. 7 , located
in Unit N of Section 3 , Township 22 South , Range
37 East , NMPM, Lea County, New Mexico.
(3) That the applicant seeks authority to commingle
Tubb Gas Pool and Drinkard Oil Pool production
within the wellbore of the above-described well.
(4) That from the Tubb zone, the
subject well is capable of low marginal production only.
(5) That from the Drinkard zone, the
subject well is capable of low marginal production only.
(6) That the proposed commingling may result in the recovery

of additional hydrocarbons from each of the subject pools, thereby

preventing waste, and will not violate correlative rights.

- (7) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (8) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the <a href="Hobb">Hobb</a>'s district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (9) That in order to allocate the commingled production to each of the commingled zones in the subject well, 30

  percent of the commingled gas production should be allocated and 10 percent to the Drinkard, to the Tubb zone, and 50 percent of the commingled oil production to the Ri Drinkard Tubb zone and 50 percent of the Drinkard Tubb

### IT IS THEREFORE ORDERED:

- (1) That the applicant, Cities Service Oil Company , is hereby authorized to commingle Tubb Gas Pool and Drinkard Oil Pool production within the wellbore of the Brunson "B" Well No. 7 , located in Unit N of Section 3 , Township 22 South , Range 37 East , NMPM, Lea County, New Mexico.
- production shall be allocated to the Tubb

  and 70 percent to the Prinkard,

  zone and 50 percent of the commingled

  oil production shall be allocated to the Drinkard Tuba

  Zone and 50 propose of to the Drinkard Tuba
- (3) That the operator of the subject well shall immediately notify the Commission's Hobb's district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Pe, Mew Mexico, on the day and year hereinabove designated.