

CASE NO. 5397: CITIES SERVICE OIL
CO. FOR POOL CREATION AND SPECIAL
POOL RULES, EDDY COUNTY

CASE No.

5397

Application,
Transcripts,
Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 4, 1976

EXAMINER HEARING

IN THE MATTER OF:

Case 5397 reopened pursuant to the
provisions of Order No. R-4949, which
order established the North Burton
Flats-Wolfcamp Gas Pool, Eddy County,
New Mexico and promulgated special pool
rules therefor, including a provision
for 320-acre spacing and proration units)

CASE
5397
(Reopened)

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & FOX
Attorneys at Law
500 Don Gaspar
Santa Fe, New Mexico

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1 MR. STAMETS: We will call next Case 5397.

2 MR. CARR: Case 5397, in the matter of Case 5397
3 being reopened pursuant to the provisions of Order No. R-4949,
4 which order established the North Burton Flats-Wolfcamp Gas
5 Pool, Eddy County, New Mexico, and promulgated special pool
6 rules therefor, including a provision for three hundred and
7 twenty acre spacing and proration units.

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

9 MR. KELLAHIN: Tom Kellahin, Kellahin and Fox,
10 Santa Fe, New Mexico, appearing on behalf of Cities Service
11 Oil Company and I have two witnesses to be sworn.

12 MR. STAMETS: Will they all stand and be sworn,
13 please?

14 (THEREUPON, the witnesses were duly sworn.)

15

16

ROD ANDERSEN

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

19

20

DIRECT EXAMINATION

21 BY MR. KELLAHIN:

22 Q Would you please state your name, by whom you are
23 employed and in what capacity?

24 A My name is Rod Andersen, I'm a development geologist
25 for Cities Service Oil Company.

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1 Q Mr. Andersen, have you previously testified before
2 this Commission?

3 A No, I have not.

4 Q For the benefit of the Examiner will you describe
5 for him when and where you obtained your degeee?

6 A I have a Bachelor of Science and Master of Science
7 from Wichita State University.

8 Q What years were those obtained?

9 A The Bachelors in 1972 and the Masters in '74.

10 Q And subsequent to your graduation where have you
11 been employed?

12 A Excuse me.

13 Q Where have you been employed subsequent to graduation?

14 A For Cities Service for a year and a half.

15 Q Are you familiar with the facts surrounding this
16 particular application and the cause in question?

17 A Yes.

18 MR. KELLAHIN: If the Examiner please, are the
19 witness's qualifications acceptable?

20 MR. STAMETS: They are.

21 Q (Mr. Kellahin continuing.) Mr. Andersen, would you
22 refer to what has been marked as Exhibit Number One and
23 identify that for us, please?

24 A Yes, this is a plat from portions of Township 20
25 South, Range 28 East and 19 South, 28 East. Cities Service

1 acreage in the area is indicated in yellow and the wells which
2 have been perforated in the Wolfcamp are indicated as starred
3 gas wells, also two lines of cross sections which are the
4 next two exhibits.

5 Q Which sections compose the horizontal limits for the
6 north Burton Flats-Wolfcamp gas pool?

7 A Fourteen and twenty-three.

8 Q Is it Cities Service Oil Company's desire to
9 continue the pool rules as they are currently in effect and
10 established by this Commission pursuant to Order Number R-4949?

11 A Yes, it is.

12 Q Please refer to Exhibit Number Two and identify that?

13 A Exhibit Two is a cross section seen from Exhibit
14 One along the east side of the field and covers six wells,
15 it extends from the Monsanto-Burton Flat 12 to the CSO Govern-
16 ment AB Number 2. For purposes of correlation, these have
17 been set to a common datum on a Canyon shale marker. You can
18 see along the east side of the field we have the Wolfcamp
19 marked as the lower line and the upper line. The lower line
20 is the most continuous in the cross section and the perforated
21 intervals are indicated on the cross section.

22 Q You show that the upper Wolfcamp zone begins to
23 pinch out as it approaches this Government R Number 1 Well,
24 is that right?

25 A Yes, that's true. It's present in the AB Number 2,

1 the T Number 1 and pinches out to the R Number 1. It is not
2 present in the AA, the Z or the Burton Flats 12.

3 Q Identify for the Examiner the three wells that
4 originally composed the pool in Sections 14 and 23?

5 A This is The Government Z, the Government AA and the
6 Government T.

7 Q Are all of those wells completed in the lower Wolf-
8 Camp?

9 A Yes, they are.

10 Q Are they completed and producing from the upper
11 Wolfcamp?

12 A No.

13 Q Please refer to Exhibit Number Three and identify
14 it?

15 Q Exhibit Number Three is indicated on Exhibit One,
16 it is a cross section across the western portion of the
17 pool and it indicates the presence of the upper line in all
18 of these wells. The upper line is only perforated in the
19 AB Number 2.

20 Q The Ab Number 2 is located in Section 10?

21 A Yes.

22 Q Okay. What conclusion do you draw from these
23 two exhibits, Mr. Andersen?

24 A By setting all of the wells here, the electric logs,
25 to a common horizon we have found that over the area there are

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1 a series of Wolfcamp limestone mounds which occur at varying
2 stratigraphic positions. However, here in Sections 10, 11, 14,
3 15 and 22 and 23, they all fall on a common horizon and we feel
4 are all of one large limestone mound complex. These are
5 separated, both from the wells which are started in the north
6 and south, away from this acreage.

7 Q Please continue by referring to what has been
8 marked as Exhibit Number Four?

9 A This is a gross thickness isopach of the lower
10 zone. You will note the zero contour by setting these wells
11 to the Canyon datum we feel that the mound to the north, which
12 is the Winchester field, indicated by the starred wells to
13 the north, is a separate mound from the one which we are
14 discussing here. Also it is a separate mound from the Great
15 Western Well in Section 28. These are different stratigraphic
16 positions and we feel that we have one isolated mound as seen
17 here on this gross thickness.

18 Q Exhibit Number Five, please refer to that?

19 A Exhibit Number Five indicates the porosities. The
20 porosity isopach on the lower mound as well and we feel that
21 there is a very strong correlation between the porosity and
22 the gross thickness. Even though the porosity does not extend
23 to the total limits of the lower mound, there is porosity
24 continuous through the inner portion of it. You will note
25 the zero contour line on the outside, indicating zero porosity

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1 at that point and outside.

2 Q Okay, Exhibit Number Six?

3 A Exhibit Number Six indicates the structure, again
4 using the Canyon as a datum and this indicates a general
5 southeast dip to the regional dip to the field, with the
6 reservoir being just tilted down dip to the southeast.

7 Q How would you compare this Wolfcamp pool with other
8 Wolfcamp pools in the area?

9 A The Wolfcamp in Eddy County is typically of low
10 porosity, low permeability and small isolated mounds. This
11 particular mound has a larger areal extent than most and also
12 has more continuous porosity throughout than any other Wolfcamp
13 mound I have studied there.

14 Q Do you have a geological opinion as to whether from
15 a geological standpoint you would anticipate that one well
16 could potentially drain an area of three hundred and twenty
17 acres?

18 A Yes, I think it would because of the porosity
19 continuity throughout the reservoir.

20 Q Were Exhibits One through Six either prepared by
21 you directly or under your supervision and direction?

22 A Yes, they were.

23 MR. KELLAHIN: If the Examiner please, we move the
24 introduction of Exhibits One through Six.

25 MR. STAMETS: These exhibits will be admitted.

1 (THEREUPON, Applicant's Exhibits One
2 through Six were admitted into evidence.)

3 MR. KELLAHIN: That concludes our geological
4 presentation for this case.

5 MR. STAMETS: I presume you have an engineering
6 witness?

7 MR. KELLAHIN: Yes, we do.

8 MR. STAMETS: Any questions of this witness? He
9 may be excused.

10 (THEREUPON, the witness was excused.)

11 MR. KELLAHIN: We would call Mr. Catron.

12
13 DON CATRON

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

16
17 DIRECT EXAMINATION

18 BY MR. KELLAHIN:

19 Q Would you please state your name, by whom you are
20 employed and in what capacity?

21 A My name is Don Catron, I'm a reservoir engineer,
22 I work in Midland, Texas for Cities Service.

23 Q Mr. Catron, have you previously testified before
24 this Commission and had your qualifications as an expert
25 witness accepted and made a matter of record?

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1 A Yes.

2 Q And did you testify on behalf of Cities Service
3 Oil Company in the previous hearing of this case upon which
4 Order Number R-4949 was entered?

5 A Yes.

6 Q Have you made a continued study of the area and are
7 you familiar with the facts surrounding this particular
8 application?

9 A Yes.

10 MR. KELLAHIN: If the Examiner please, are the
11 witness's qualifications acceptable?

12 MR. STAMETS: They are.

13 Q (Mr. Kellahin continuing.) Mr. Catron, would you
14 refer to Exhibit Number Seven, which is the first of your
15 exhibits, and identify it?

16 A This is another map of the North Burton Flats-
17 Wolfcamp area. Again it shows the Wolfcamp wells and we con-
18 toured on this map the porosity thickness using a permeability
19 index cut off, which is all of the pay that is shown as
20 having permeability on Coriband logs and this includes both
21 pay in the upper and lower mounds that Mr. Andersen talked
22 about.

23 Q Would you refer to Exhibit Number Eight now and
24 identify it?

25 A Number Eight is a cross section through Sections 11,

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1 14 and 23, starting with Government AB 1 and going through
2 Government Z-1 and the traces on this cross section are from
3 Coriband logs and on the right side on each well is a
4 permeability index trace and on the left side is a porosity
5 index trace and as a cut off we used for this isopach in
6 Exhibit One, we used what showed to have a permeability
7 greater than zero on the permeability index and in addition,
8 this cross section shows that the pay zones in these wells
9 fall in about the same stratigraphic position.

10 Q All right, would you refer to Exhibit Number Nine
11 and identify it?

12 A This is another cross section and it is through
13 Section 10, 15 and 22 from Government AB-2 to Government W
14 and this one shows the presence of an upper mound above the
15 lower mound, which is present in the eastern part of the
16 field.

17 Q Okay, Exhibit Number Ten, now, Mr. Catron?

18 A Exhibit Number Ten is the production record of the
19 four wells that we have producing from this field at the
20 present time and one of the important points shown by this is
21 the stable GOR's they produced at. Most of the wells had
22 fairly constant GOR's, GLR.

23 Q Okay, Exhibit Number Eleven.

24 A Exhibit Number Eleven is a fluid analysis and
25 recombined samples from the Government Z-1 and shows the

1 recombined reservoir fluid that have a gravity of about point
2 eight, oh, five. No, it's point six, nine, excuse me. And
3 we also have the same type of analysis for the 1 and the
4 Double A-1, which shows a recombined gravity to be about the
5 same for all four wells.

6 Q That is Exhibits Twelve and Thirteen?

7 A Right, and these analysis were made on fluids that
8 were recombined from separator samples, at the average GOR's
9 for those wells.

10 Q Okay, Exhibit Number Fourteen?

11 A Exhibit Number Fourteen is a windowed cell analysis
12 of recombined samples from the Government T-1 which we
13 recombined as gas and liquid production and an average GOR
14 and at reservoir temperatures and pressures and we found that
15 by expanding the cell and lowering the pressure a liquid
16 began to form at forty-six hundred and seventy pounds and as
17 the pressure was lowered further the liquid volume increased
18 until about thirty-three hundred and seventy pounds. At that
19 time the liquid began to vaporize again.

20 Q In your opinion, Mr. Catron, what type of reservoir
21 are you dealing with?

22 A This data shows it is retrograde condensate
23 reservoir initially in a gas phase and it develops a liquid
24 saturation as you lower the pressure.

25 Q Exhibit Number Fifteen?

1 A Exhibit Number Fifteen is a plot of the same data
2 that we have tabulated in Exhibit Fourteen. It shows the
3 liquid saturation building up and re-vaporizing as the
4 pressure is lowered.

5 Q Exhibit Number Sixteen?

6 A This is a similar type of analysis, except that
7 the pressure was lowered by withdrawing from the gas phase
8 instead of expanding the cells. We have referred to it as
9 a constant volume depletion test and this is more comparable
10 to what happens in a reservoir than the expansion test in
11 the preceding exhibits showed and the test was started at the
12 dew point of forty-six hundred and seventy pounds and lowered
13 in three hundred pound increments by withdrawing from the gas
14 phase only, then the gas that was produced from the cells
15 from these increments was analyzed and the gravity of the
16 liquids that could be separated from this produced gas and were
17 determined and a GOR was calculated by flash calculations
18 and it shows how the GOR would typically increase with lowering
19 the pressure below the dew point, the bottom line there, with
20 it going to as high as forty-eight thousand to one by the
21 time the pressure was lowered to a thousand pounds.

22 Q Okay, Exhibit Number Seventeen?

23 A Exhibit Number Seventeen shows the performance of
24 the well that you could expect as the pressure is lowered
25 from the dew point at forty-six hundred pounds, with the GOR

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1 rising to -- I left a zero off the GLR scale. That should be
2 twenty thousand, forty thousand and sixty thousand but the
3 GOR goes to greater than forty thousand, at the point where
4 liquid saturation has developed a peak in the reservoir and
5 then as the liquid starts re-vaporizing, we get a decrease
6 in GLR and finally that the pressure is lowered toward
7 abandonment it starts to rise again and the lower curve shows
8 the percentage of condensate in place that you could expect
9 to recover by volumetric depletion of the reservoir with a
10 peak of about fourteen percent of condensate originally in
11 place.

12 Q In your opinion, Mr. Catron, would this particular
13 reservoir be classified as a gas reservoir under the current
14 New Mexico Rules and Regulations?

15 A Yes.

16 Q In your opinion, Mr. Catron, will one well efficiently
17 and economically drain three hundred and twenty acres?

18 A Yes.

19 Q Were Exhibits Seven through Seventeen prepared by
20 you directly or under your direction and supervision?

21 A Yes.

22 Q Do you have a recommendation as to whether or not
23 the existing field rules for this particular pool be made
24 permanent or not?

25 A Yes, I think they should be.

1 Q That they should be made permanent?

2 A Yes.

3 MR. KELLAHIN: That concludes our direct examination,
4 and we move the introduction of Exhibits Seven through
5 Seventeen.

6 MR. STAMETS: These exhibits will be admitted.

7 (THEREUPON, Applicant's Exhibits Seven through
8 Seventeen were admitted into evidence.)

9
10 CROSS EXAMINATION

11 BY MR. STAMETS:

12 Q Mr. Catron, looking at Exhibits Number Fourteen and
13 Seventeen, if I understand these correctly, you could not
14 physically produce this reservoir without liquids dropping
15 out and reducing the final recovery of liquids to this fourteen
16 percent figure unless there was some way of keeping the
17 reservoir pressure above the dew point, is that correct?

18 A That is correct.

19 Q That would entail the injection of water or inert
20 gases or some such thing as that?

21 A That's right.

22 Q Would that be a practical way of producing the
23 reservoir?

24 A We are studying that very closely right now, as far
25 as to injecting gas, re-injecting crude gas and some

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1 maintenance gas?

2 Q What is the current producing pressure?

3 A Reservoir pressure?

4 Q Yes.

5 A The last pressure we had ranged from, the best I
6 remember, forty-three hundred pounds, forty-five hundred
7 pounds.

8 Q So you have already dropped below the dew point?

9 A Well, it would depend. We could be right at it in
10 some wells and we could be slightly below it in some. The
11 dew point we show in one dew point determination for one
12 well, we re-combined fluid from two other wells and they
13 showed a dew point slightly less than -- about three hundred
14 pounds lower than what we show on this exhibit. The dew
15 point we determined has varied from well to well.

16 Q If the current Rules and Regulations are continued
17 in this pool, will any waste occur?

18 A Well, if re-pressuring and pressure maintenance
19 turned out to be uneconomic there will be liquid left in the
20 reservoir.

21 Q I should have said economic, within economic limits.

22 A It would be an efficient way to deplete the reservoir,
23 that is correct.

24 Q Okay, so your answer then to my question is, no,
25 there would not be waste if these Rules were continued?

1 A. That's right.

2 Q. Within the economic limits?

3 A. That's right.

4 MR. STAMETS: Any other questions of this witness?

5

6 REDIRECT EXAMINATION

7 BY MR. KELLAHIN:

8 Q. Mr. Catron, how many wells are currently producing?

9 A. We have four wells producing now, making something
10 over five hundred barrels per day of condensate.

11 Q. Do you have any other wells that you anticipate
12 putting on the line shortly?

13 A. We have recommendations in for recompleting two
14 additional wells in the Wolfcamp, these are depleted Morrow
15 wells.

16 MR. KELLAHIN: That's all the questions I have.

17 MR. STAMETS: Any other questions of the witness?

18 He may be excused.

19 (THEREUPON, the witness was excused.)

20 MR. STAMETS: Anything further in this case?

21 MR. CARR: Mr. Examiner, we have received a letter
22 from Eddie Mahfood, petroleum engineer for the Yates Petroleum
23 Corporation. (Reading.) Yates Petroleum Corporation supports
24 the three-hundred-and-twenty-acre spacing, spacing and
25 special field rules on the North Burton Flats-Wolfcamp Gas

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1 Pool. If the Commission decides not to continue these
2 rules, Yates requests that the rules not be rescinded prior
3 to April 1, 1976. (End of reading.)

4 MR. STAMETS: Anything further in this case? We
5 will take the case under advisement.

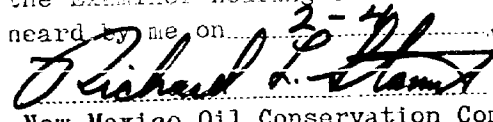
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REPORTER'S CERTIFICATE

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


Sidney F. Morrish, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5397
heard by me on 3-4-76, 1976
, Examiner
New Mexico Oil Conservation Commission

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BEFORE THE
CO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 8, 1975

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil
Company for pool creation and special
pool rules, Eddy County, New Mexico.

Case No.
5397

BEFORE: Richard L. Stamets, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil
Conservation Commission:

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Legal Counsel for the
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For the Applicant:

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E X H I B I T S

	<u>Marked</u>	<u>Admitted</u>
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MR. STAMETS: Call the next case, Case 5397.

MR. CARR: Case 5397. Application of Cities Service Oil Company for pool creation and special pool rules, Eddy County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Kellahin and Fox, Santa Fe, New Mexico, appearing on behalf of Cities Service Oil Company and I have one witness to be sworn.

MR. STAMETS: The Witness will stand and be sworn, please.

(Witness sworn.)

DONALD W. CATRON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name, by whom you are employed and in what capacity?

A I'm Don Catron, I work for Cities Service as a Reservoir Engineer in the Southwest Regional Office in Midland, Texas.

Q Have you previously testified before the Commission?

A No.

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Q What is your educational background, Mr. Catron?

A I have a Bachelor of Science in Petroleum Engineering from the University of Kansas.

Q When did you obtain that degree?

A 1969.

Q Since obtaining your degree, where have you been employed?

A I worked for a year as a Production Engineer in Russell, Kansas, and following that I worked for a year in the Research and Development Division in Tulsa, Oklahoma, and for a year and a half I was on the reservoir staff at the headquarters office in Tulsa and for the last year and a half I have worked as a Reservoir Engineer in Midland.

Q Have you made a study of and are you familiar with the facts surrounding this Application by Cities Service?

A Yes.

MR. KELLAHIN: If the Examiner please, are the Witness' qualifications acceptable?

MR. STAMETS: They are.

BY MR. KELLAHIN:

Q Mr. Catron, would you refer to what has been

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marked as Applicant's Exhibit No. 1, identify it, and state briefly what Cities Service is seeking?

A Well, the three wells inside the green square there are the wells we are applying for and the other wells circled in red are also Wolfcamp wells, and we're applying for temporary rules that would classify this as a gas field on 320-acre spacing.

Q What does the green line indicate?

A That's our Russell Unit.

Q Would you please refer to what has been marked as Exhibit 2 and identify it?

A This is production data from 2 of our 3 wells in the Russell Unit. I believe this shows that the wells are producing from a gas reservoir. The Government "T" Well was completed last May and has produced a GOR of around 4000 since then. Government "Z" was just put on in the middle of December and has produced at about the same GOR.

Q What conclusions do you draw then from this Exhibit, Mr. Catron?

A Well, this, together with our fluid analysis indicates to us that it's a gas reservoir.

Q Refer to what has been marked as Exhibit No. 3

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and identify it?

A These are the conditions under which we took our fluid sample from the Government "Z" Well. The sampling depth was at 8814, which was about 400 feet above the perforated interval. The temperature was 152 degrees and the sampling pressure was 4635 psi, and the gradient which extrapolated to the perforated interval is a formation pressure of 4825.

Q Would you refer to Exhibit 4 and identify it?

A Exhibit 4 is a fluid analysis of the sample we took from the well. It shows mostly methane and ethane in the gas and ethane and propane liquid. The gas gravity isn't entered on here -- I mean the oral gravity isn't entered here it's 52 degrees api and the translucent fluid is light yellow in color.

Q Again then, what conclusions do you draw from this Exhibit?

A This, together with some additional fluid studies we have done indicates that it's a condensate-type fluid --

Q (Interrupting) And therefore a gas reservoir?

A Well gas, and under initial conditions.

Q All right, sir. Would you refer to Exhibit No. 5 and identify it?

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A Exhibit 5 is a pressure analysis of the fluid samples on the Government "Z" Well and the second column there shows the percent liquid that present on the sample as the pressure was lowered from the sampling pressure. This is characteristic behavior of a condensate-type fluid. The initial reservoir pressure was slightly above this first pressure entered on this table and indicates that under initial conditions the reservoir fluid is a gas and it has a dew point.

Q In your opinion then these are characteristics of a retrograde condensate reservoir?

A Right.

Q How does this data compare with the characteristics of other Wolfcamp production?

A Other Wolfcamp wells, especially the ones to the north on the map, Figure 1, the Dorchester Well and the Penrock Well, have produced like a typical condensate reservoir.

A I would like to turn your attention now to the specific special rules that you would recommend to the Commission for this particular pool. First of all, let me begin by asking you if you have any preference for a designation or a name for the pool?

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A I believe we prefer the North Burton Flats Wolfcamp.

Q Your requested pool is in what relation to the Parkway West Field -- or let me say it the other way around -- where is the Parkway West Field in relation to the subject area here?

A It's north and east of the area we are talking about.

Q The Parkway West Field has rules for Atoka and Strawn production?

A Right.

Q Would it be your recommendation that the Commission should adopt similar rules as set forth in the Parkway West Field Rules?

A Yes.

Q And that includes the provision for 320-acre spacing?

A Correct.

Q What is your basis, Mr. Catron, for your recommendation of 320-acre spacing?

A We are asking for temporary rules and we want a year to study this and see if that's the optimum spacing.

Q The Parkway West Field has well locations designated in it of 660 and 1980. Those are also the state-wide rules. Would you recommend that that be the well locations for this new pool?

A Yes.

Q Do you have any recommendations with regard to this schedule for testing for GOR or bottomhole pressure tests of any kind? Do you have any preference of how they should be scheduled?

A We don't have any specific requests.

Q Would it be compatible with your thinking that tests should be taken within the next year so that when this temporary rules come up for hearing within the -- at the expiration of the one-year period you would provide the Commission with that data at that time?

A We have an opportunity coming up within the next two months to get bottomhole pressure data.

Q In addition to the rules suggested, the suggested rules as I just outlined them to you, Mr. Catron, do you have any recommendations as to production rates?

A We recommend 1500 cubic feet per day gas rate.

Q It's 1.5 million?

A 1.5 million, excuse me.

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Q Okay. 1.5 million cubic feet. In your opinion will this be the most optimum rate of production that would then give you the highest ultimate recovery?

A Yes.

Q In reference now to Exhibit No. 1, the green line indicated here is certainly not the extent of the proposed pool but it's rather the size of your Russell drilling unit, is that correct?

A That's right.

Q In your opinion, Mr. Catron, will the approval of this Application be in the best interests of conservation, the prevention of waste and protection of correlative rights?

A Yes.

MR. KELLAHIN: We move the introduction of Exhibits 1 through 5.

MR. STAMETS: Exhibits 1 through 5 will be admitted.

(Whereupon, Cities Service's Exhibits 1 through 5 were admitted into evidence.)

MR. KELLAHIN: That concludes our direct case.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Catron, did you have any tests which indicate communication between these wells?

A No, we don't.

Q Do you have any tests that don't indicate communication?

A We produced the Government "T" Well since last May and we haven't seen communication with either of the two new wells to the south. That's one of the things we can study during the 1-year period.

Q I don't believe you presented any geological evidence as to the potential extent of the formations; whether they covered 320 or 160 or 640. Would you anticipate presenting such information at the end of the year?

A We could, but I feel like our production data that we could gather during that period would be more valuable for that kind of purpose.

Q I believe that the record in other Commission cases would show, relative to the Penrock area in Section 35, 19, 28, that those Wolfcamp wells were completed in smaller isolated Wolfcamp reservoirs and they were -- they are being developed on 160-acre spacing because of the

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smallness of those. It would seem like some geological evidence would be appropriate in this case since it is so close to the south.

A Well, you say they did present evidence that the reservoirs were limited in size?

Q Yes.

A Well, we've looked at the production history of these wells and they did decline in production very rapidly and we're not sure that it wasn't because they drilled them too close together. That's one of the reasons we want time to look at it.

Q These wells are connected, or very soon will be, and so 1 year from the date of the Order will be a proper length of time for temporary rules?

A Yes.

Q And you're interested in having the prorationing and balancing rules essentially the same as the West Parkway Rules?

A Right.

MR. STAMETS: Any other questions of the Witness?

MR. KELLAHIN: If the Examiner please, I would like to call Mr. Motter as a witness to provide additional testimony on the question of 320-acre spacing.

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MR. STAMETS: Have Mr. Motter stand and be sworn, please. This Witness may be excused.

(Witness sworn.)

E.F. MOTTER

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name, by whom you are employed and in what capacity?

A I'm E.F. Motter, I am with Cities Service Oil Company, Engineering Manager of the Southwestern Region in Midland.

Q Have you previously testified before this Commission, Mr. Motter?

A Yes, I have.

Q And are you familiar with the facts surrounding this particular Application?

A Yes, I am.

MR. KELLAHIN: Are the Witness' qualifications acceptable?

MR. STAMETS: They are.

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BY MR. KELLAHIN:

Q Mr. Motter, I would like to direct your attention to the specific question of Cities Service's request for 320-acre spacing. Would you direct yourself to that question and provide us with your opinion as to why 320-acre spacing should be granted on a temporary basis?

A Yes, but, if I may, I would like to divert from that particular question for just a minute to answer a question that Mr. Stamets asked on the development of the Wolfcamp in this area. As you see, Mr. Catron has outlined in red the present wells that are producing or completed in the Wolfcamp. Now, our Government "AA" is dualled in that well, that's in Section 23, we're waiting on a gas connection at that point. If you look over in Section 15 and 22, the Government "T" and the Government "U" are both drillstem tested in the Wolfcamp; they are not dualled but we do have quite favorable Wolfcamp tests from drillstem tests and feel we can make wells there. Also, in Government "W" down here it was not drillstem tested, however, we think there is probably pay there from the electric log. But, as you come on down into these wells in the Burton Flats area, which Monsanto has drilled,

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these are Morrow wells, and the logs do not look favorable for production. So, it looks like it is perhaps a somewhat smaller area. Now, our Government "Y" to the north up in Section 11 is not drillstem tested. We drilled it, probably before we abandoned the Morrow, however, we will test the Wolfcamp. It does not look at this time like it's connected with the wells on to the north, and I don't believe, unless it has happened recently, that those wells up to the north have ever been classified into a field of any kind.

I might also, as a matter of information, say why we talked about this field thing. This is our Russell Unit, and this is what we refer to it as when we talk about wells. However, this has nothing to do with the Commission and personally I would like to have something we could tie it down to as an area, rather than just say "Burton Flats Wolfcamp." As you are aware, the Burton Flats is quite a large area and I believe if you look way down to the bottom there, I don't know if the section is in there, but the next township south below Section 2 -- I believe Monsanto Wilderspin is either completed; I'm not sure it is producing from a Wolfcamp -- but you can see there is some Wolfcamp pay so it would be rather broad if

you just say, "Wolfcamp," and that is the reason maybe if we tied it down as North Wolfcamp or North Burton Flats, you would have some idea.

Now, back to your question on 320-acre spacing, historically the Wolfcamp is not a very prolific producer. It comes pretty fast and it goes pretty fast. On this basis we do not think at this time with the knowledge that we have we could probably economically justify single completion to the Wolfcamp Formation. On that basis we would like to ask for 320-acre spacing. The proration units will coincide with the Morrow proration units. As Mr. Catron pointed out, we feel under an emergency contract out here right now. Unless that is renewed this will give us time to take more tests and financially we want to gain as much information as we can about this reservoir to see if other wells can be justified. But, at this point, I don't think that we, in good faith, could go out and drill another well to the Wolfcamp on 320-acres, and cut it to 160.

Q Do you have any other comments with regard to the proposed special rules as outlined in the previous testimony?

A No, except I might just briefly comment on our

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recommendation for maximum rate here. We feel that a retrograde condensate reservoir such as this can sometimes be damaged -- I'm not saying all of them will but if you pull them too hard they possibly can. If you will note we have produced this Government "T" No. 1 about as high as 1.9 million a day, but we feel perhaps that 1 and a half might be a more satisfactory rate during this temporary period.

I think you can see or look over Mr. Catron's data that came out of our Research Department. As you pull this bottomhole pressure down at first the condensate percentage gets greater but it rapidly decreases also as the pressure goes down.

MR. KELLAHIN: That concludes my examination of Mr. Motter.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Motter, the advertisement in this case may have referred to the Government "T" Well solely, but if we would create a 320-acre pool for the Government "T" that would put the boundary of that pool within a mile of the northern well in Section 23 and then that well would be within a mile of one in the South half of Section

23, and they would all be bound by the special pool rules you proposed. It would appear that the most logical creation would be a pool including all of Section 14 and all of Section 23?

A Well, Mr. Stamets, I don't know what transpired, but our Application included the 3 wells in the two sections.

Q Yes, I notice that looking at your Application. I don't foresee any problem since the end result would be the same.

A And I don't know why it was advertised that way for that was the way our Application was filed.

MR. STAMETS: Anything further in this Case?

MR. KELLAHIN: No, sir.

MR. STAMETS: The Witness may be excused. We will take the Case under advisement.

STATE OF NEW MEXICO)
)
COUNTY OF SANTA FE)

SS.

I, RICHARD L. NYE, Court 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.


RICHARD L. NYE, Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5397,
heard by me on 1-8-75, 1975.


Richard L. Nye, Examiner
New Mexico Oil Conservation Commission

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BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 5397
Order No. R-4949-A

IN THE MATTER OF CASE 5397 BEING REOPENED
PURSUANT TO THE PROVISIONS OF ORDER NO.
R-4949, WHICH ORDER ESTABLISHED SPECIAL
RULES AND REGULATIONS FOR THE NORTH BURTON
FLATS-WOLFCAMP GAS POOL, EDDY COUNTY, NEW
MEXICO, INCLUDING A PROVISION FOR 320-ACRE
SPACING AND PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4,
1976, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 17th day of February, 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 by Order No. R-4949, dated January 22, 1975,
temporary special rules and regulations were promulgated for
the North Burton Flats-Wolfcamp Gas Pool, Eddy County, New
Mexico, establishing temporary 320-acre spacing units.

(3) That pursuant to the provisions of Order No. R-4949,
this case was reopened to allow the operators in the subject
pool to appear and show cause why the North Burton Flats-Wolf-
camp Gas Pool should not be developed on 160-acre spacing units.

(4) That the evidence establishes that one well in the
North Burton Flats-Wolfcamp Gas Pool can efficiently and econom-
ically drain and develop 320 acres.

(5) That the Special Rules and Regulations promulgated by
Order No. R-4949 have afforded and will afford to the owner of
each property in the pool the opportunity to produce his just
and equitable share of the gas in the pool.

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Case No. 5397
Order No. R-4949-A

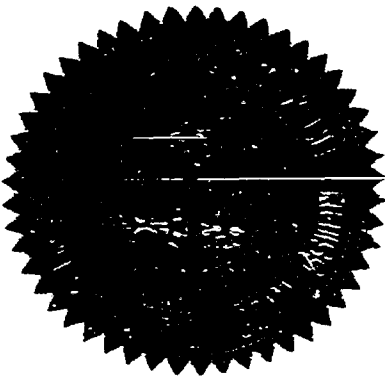
(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4949 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the North Burton Flats-Wolfcamp Gas Pool, Eddy County, New Mexico, promulgated by Order No. R-4949, are hereby continued in full force and effect until further order of the Commission.

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

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



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

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

S E A L

jr/



OIL CONSERVATION COMMISSION

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

I. R. TRUJILLO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

January 22, 1975

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

Re: CASE NO. 5393, 5396, 5397
ORDER NO. R-4947, R-4948, R-4949

Applicant:

Getty Oil, Continental, Cities Ser.

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.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC	<u>X</u>
Artesia OCC	<u>R-4949</u>
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. 5397
Order No. R-4949

NOMENCLATURE

APPLICATION OF CITIES SERVICE OIL
COMPANY FOR POOL CREATION AND
SPECIAL POOL RULES, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1975, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this 22nd day of January, 1975, 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, seeks the creation of a new gas pool for Wolfcamp production in Eddy County, New Mexico, and the promulgation of special rules and regulations governing said pool, including a provision for 320-acre spacing units.

(3) That applicant's Government "T" Well No. 1, located in Unit C of Section 14, Township 20 South, Range 28 East, NMPM, Eddy County, New Mexico, having its top perforations at 9206 feet, has discovered a separate common source of supply which should be designated the North Burton Flats-Wolfcamp Gas Pool; that the vertical limits of said pool should be the Wolfcamp formation and the horizontal limits of said pool should include all of Sections 14 and 23 in said township.

(4) That temporary special rules and regulations providing for 320-acre gas well spacing should be promulgated for the subject pool in order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the

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Case No. 5397
Order No. R-4949

augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise prevent waste and protect correlative rights.

(5) That the temporary special rules and regulations should provide for the limitation of production from wells in the subject pool to a maximum of no more than 1,500 MCF per day.

(6) That the temporary special rules and regulations should establish proration rules for gas wells in order to prevent waste and protect correlative rights.

(7) That this case should be reopened at an examiner hearing during February, 1976, to permit the operators in said gas pool to appear and show cause why the North Burton Flats-Wolfcamp Gas Pool should not be developed on 160-acre spacing and proration units.

IT IS THEREFORE ORDERED:

(1) That effective February 1, 1975, a new pool for the production of gas from the Wolfcamp formation is hereby created and designated as the North Burton Flats-Wolfcamp Gas Pool with horizontal limits comprising the following described area:

EDDY COUNTY, NEW MEXICO
TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM
Section 14: All
Section 23: All

(2) That effective February 1, 1975, Special Rules and Regulations for the North Burton Flats-Wolfcamp Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
NORTH BURTON FLATS-WOLFCAMP GAS POOL

RULE 1. Each well completed or recompleted in the North Burton Flats-Wolfcamp Gas Pool or in the Wolfcamp formation within one mile thereof, and not nearer to or within the limits of another designated Wolfcamp pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. (a) Each well shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental 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 and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a standard proration unit for the well under the applicable provisions of Rule 2 above and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the standard proration unit for the well in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 660 feet to the nearest side boundary of the tract nor nearer than 1980 feet to the nearest end boundary of the tract.

RULE 5. A gas well in the North Burton Flats-Wolfcamp Gas Pool shall be permitted to produce no more than 1,500 MCF of gas per day during the effective period of these pool rules.

RULE 6. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well. Any well which is shut in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 7.

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Case No. 5397
Order No. R-4949

RULE 7. Gas-liquid ratio tests shall be taken on all wells during the months of March and September of each year. The initial gas-liquid ratio test shall suffice as the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. The Commission District Supervisor may grant exceptions to the above test requirements where it is demonstrated that wells produce no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 8. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 9. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the appropriate Commission district office of Commission Forms C-104 and C-116, properly executed. The District Supervisor of the Commission's district office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the amounts set forth in Rule 5 of these rules.

RULE 10. The initial balancing date shall be 7 o'clock a.m. April the first, 1975. Subsequently, the date 7:00 a.m. April the first of each year shall be known as the balancing date, and the twelve months following this date shall be known as the gas proration period.

RULE 11. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 12. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

RULE 13. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equalling three times its current monthly allowable, it shall be shut in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 14. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 15. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well or reservoir.

RULE 16. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 17. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the appropriate proration schedule.

RULE 18. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of

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Order No. R-4949

the well and purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 19. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the North Burton Flats-Wolfcamp Gas 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 appropriate district office of the Commission in writing of the name and location of the well on or before February 15, 1975.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the North Burton Flats-Wolfcamp Gas Pool shall have dedicated thereto 320 acres, in accordance with the foregoing pool rules or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this cause shall be reopened at an examiner hearing during February, 1976, to permit the operators in said pools to appear and present evidence to clearly establish the nature of said reservoirs, proper rates of production for wells therein, and special rules therefor.

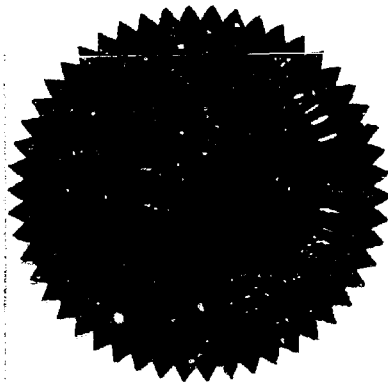
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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Case No. 5397
Order No. R-4949

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



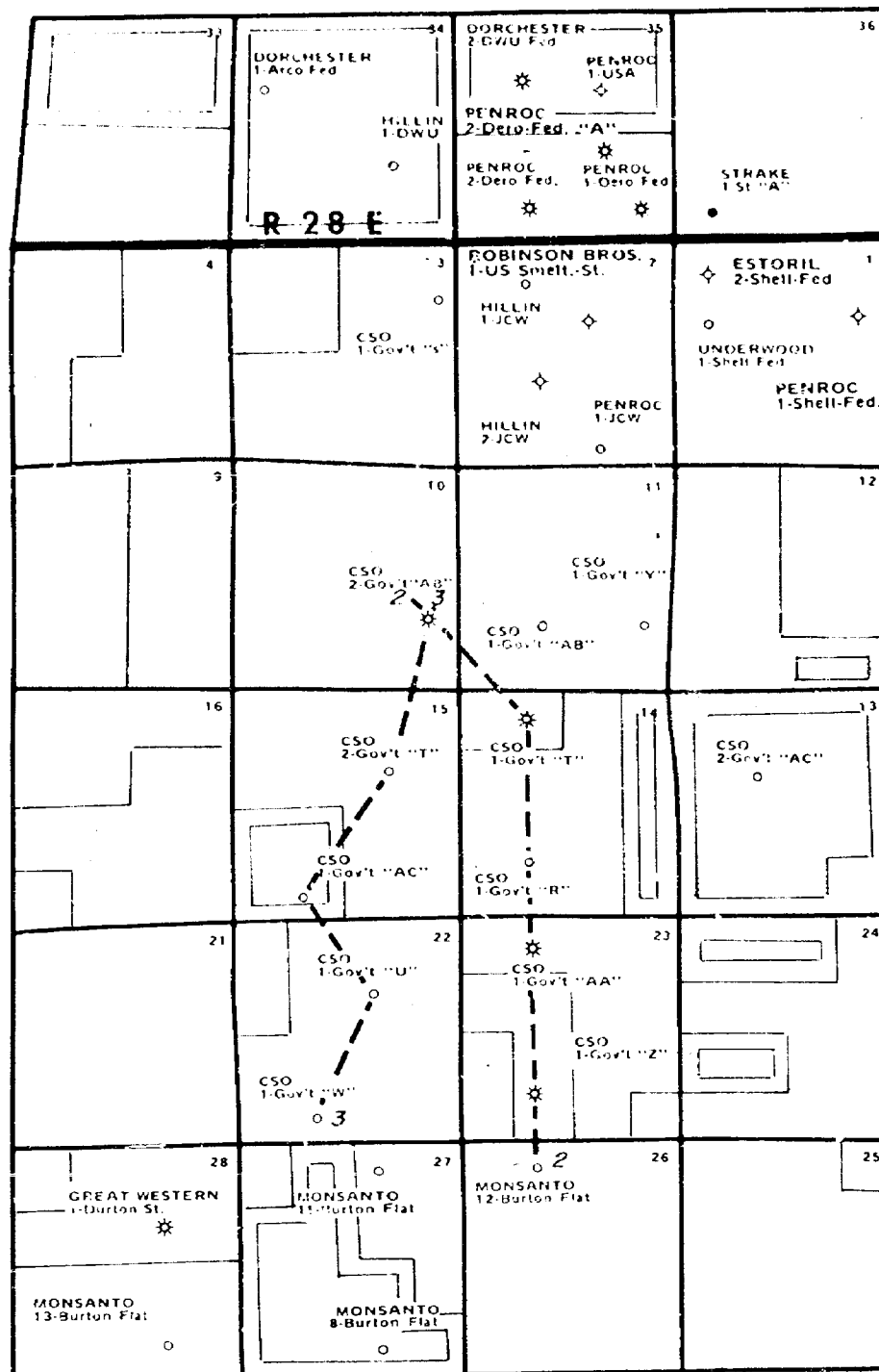
I. R. TRUJILLO, Chairman

Phil R. Lucero
PHIL R. LUCERO, Member

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

S E A L

dr/



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

Cases EXHIBIT NO. 1 LOCATION MAP

CASE NO. 5397

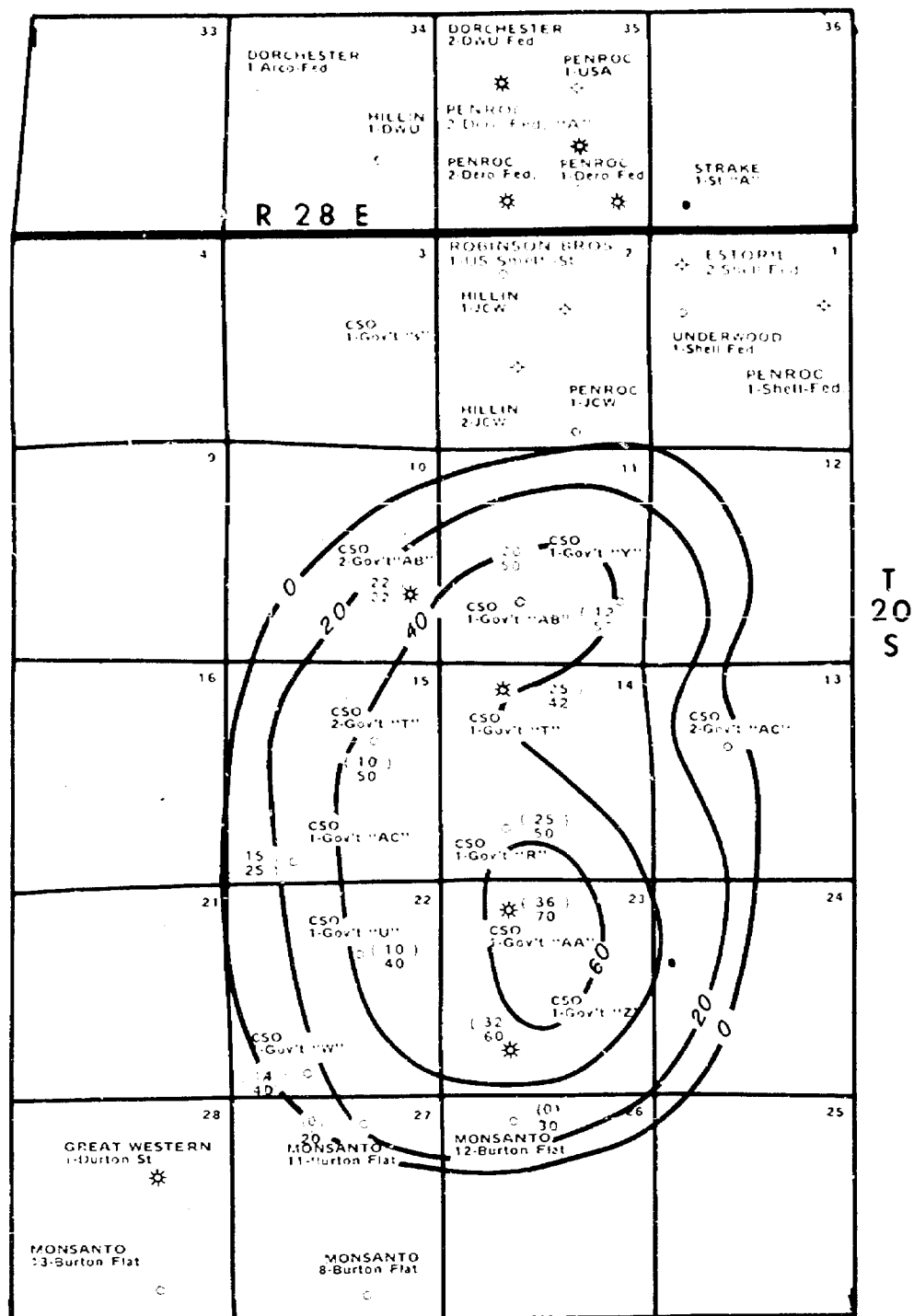
Submitted by Anderson EXHIBIT 1

Hearing Date 4 Feb 76

Geol. By: R. Andersen

SCALE:

1 MILE



NORTH BURTON FLAT WOLFCAMP

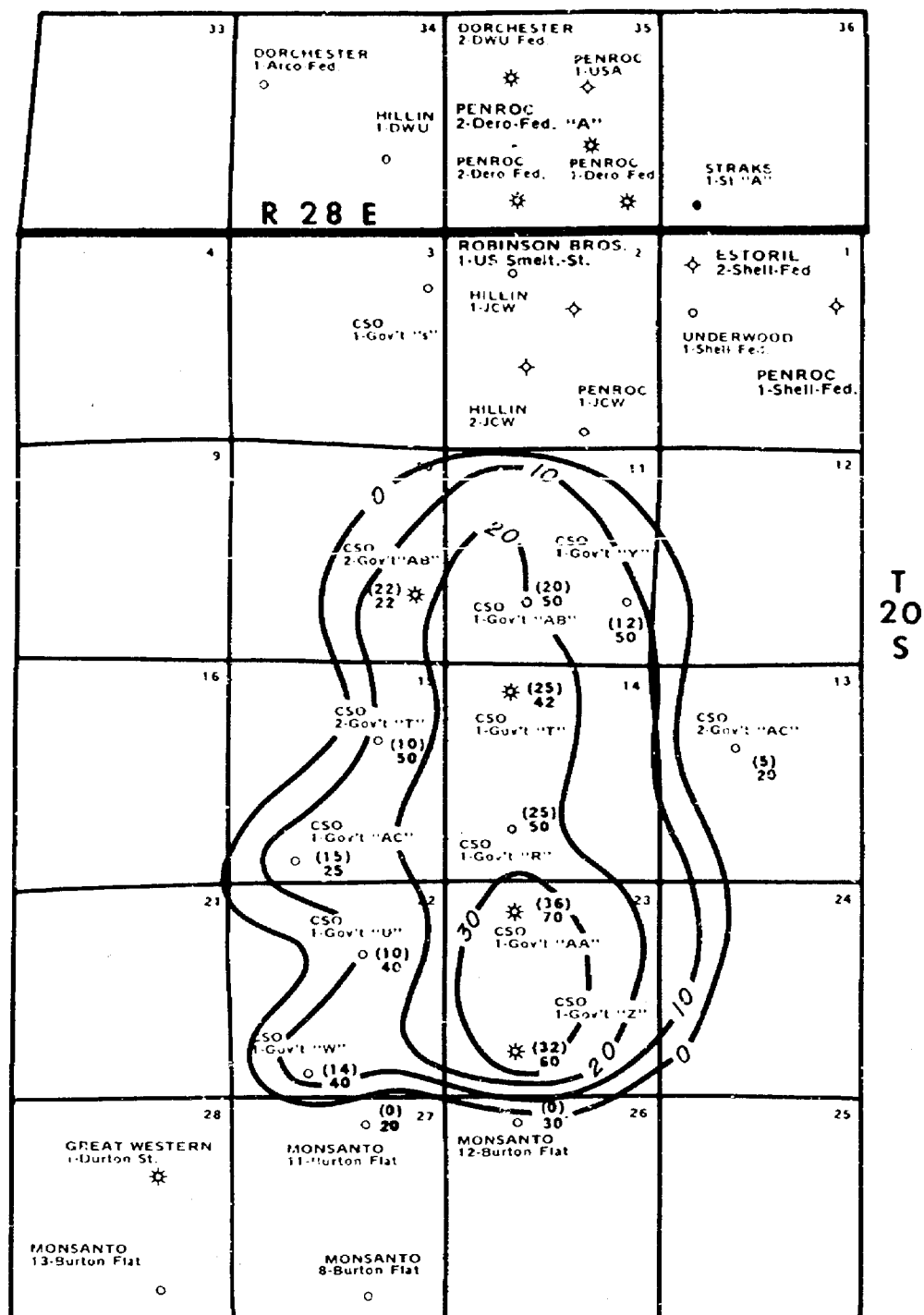
BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
CIVILS EXHIBIT NO. 4
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76

Geol. By: R. Andersen
C.I. 20

Example;
(32) Feet of Porosity
60 Gross Thickness

SCALE :

1 MILE



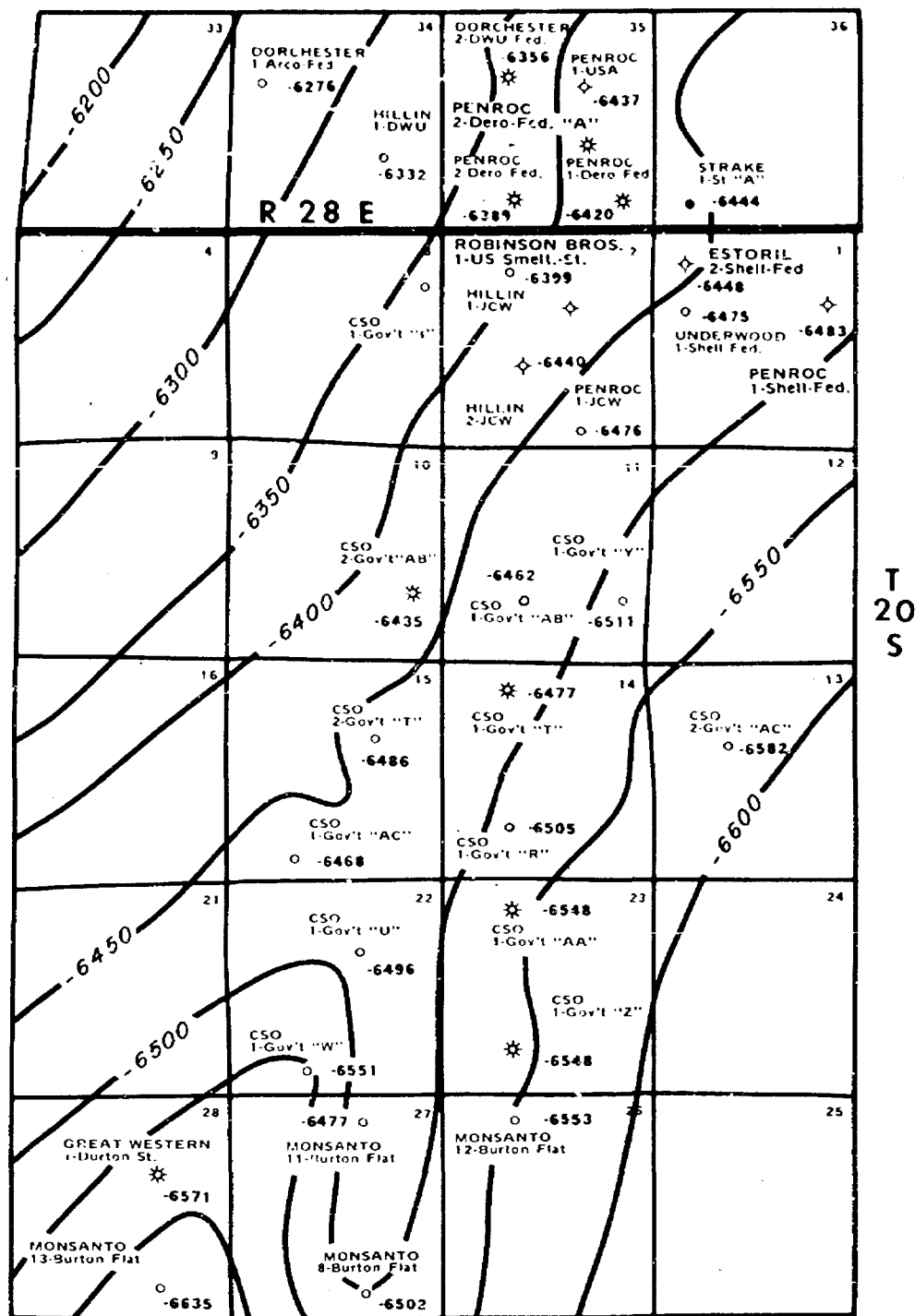
BEFORE EXAMINATION
OIL CONSERVATION COMMISSION
NORTH BURTON FLAT WOLF CAMP
POROSITY ISOPACH LOWER MOUND
C.I. 10'
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76

Geol. By: R. Andersen
C.I. 10'

Example;
(32) Feet of Porosity
60 Gross Thickness

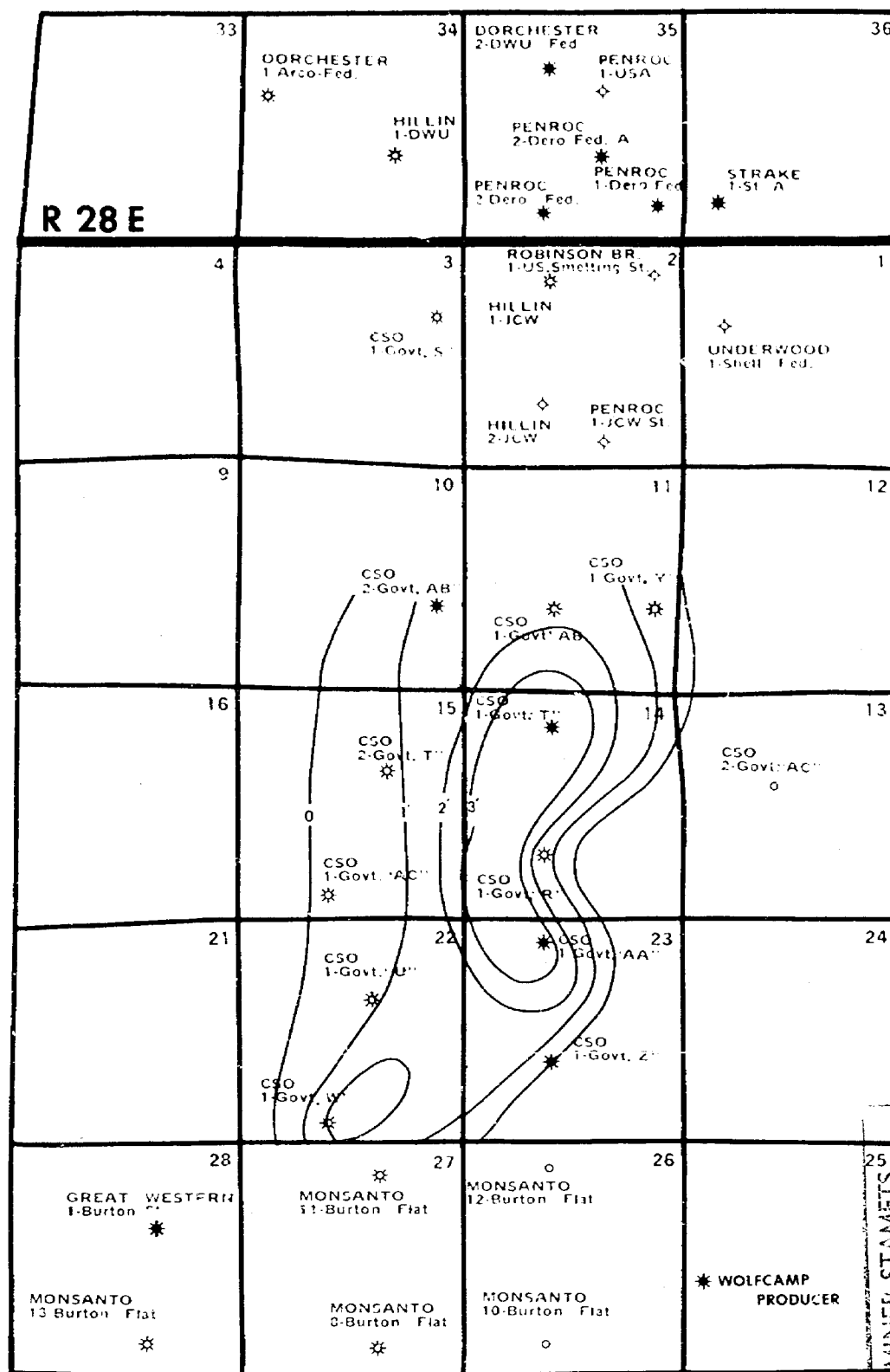
SCALE :

1 MILE



BEFORE EXAMINATION
OIL CONSERVATION DEPARTMENT
NORTH-BURTON FLAT-WOLFCAMP
STRUCTURE MAP ON CANYON DATUM
Cities DEPT. NO. 6
CASE NO. 5397
Submitted by Anderson
Hearing Date 4 Feb 76

Geol. By: R. Andersen
C.I. 50'
Example;
(32) Feet of Porosity
60 Gross Thickness
SCALE:
1 MILE

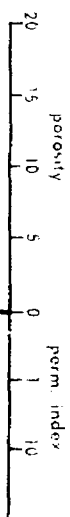


NORTH BURTON FLAT WOLFCAMP NET PERMEABLE ISOPACH

EXHIBIT —

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE NO. 5397
Submitted by CATAN
Hearing Date 4 Feb 76

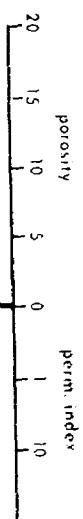
AB#1



UPPER LIME
LOWER LOWER

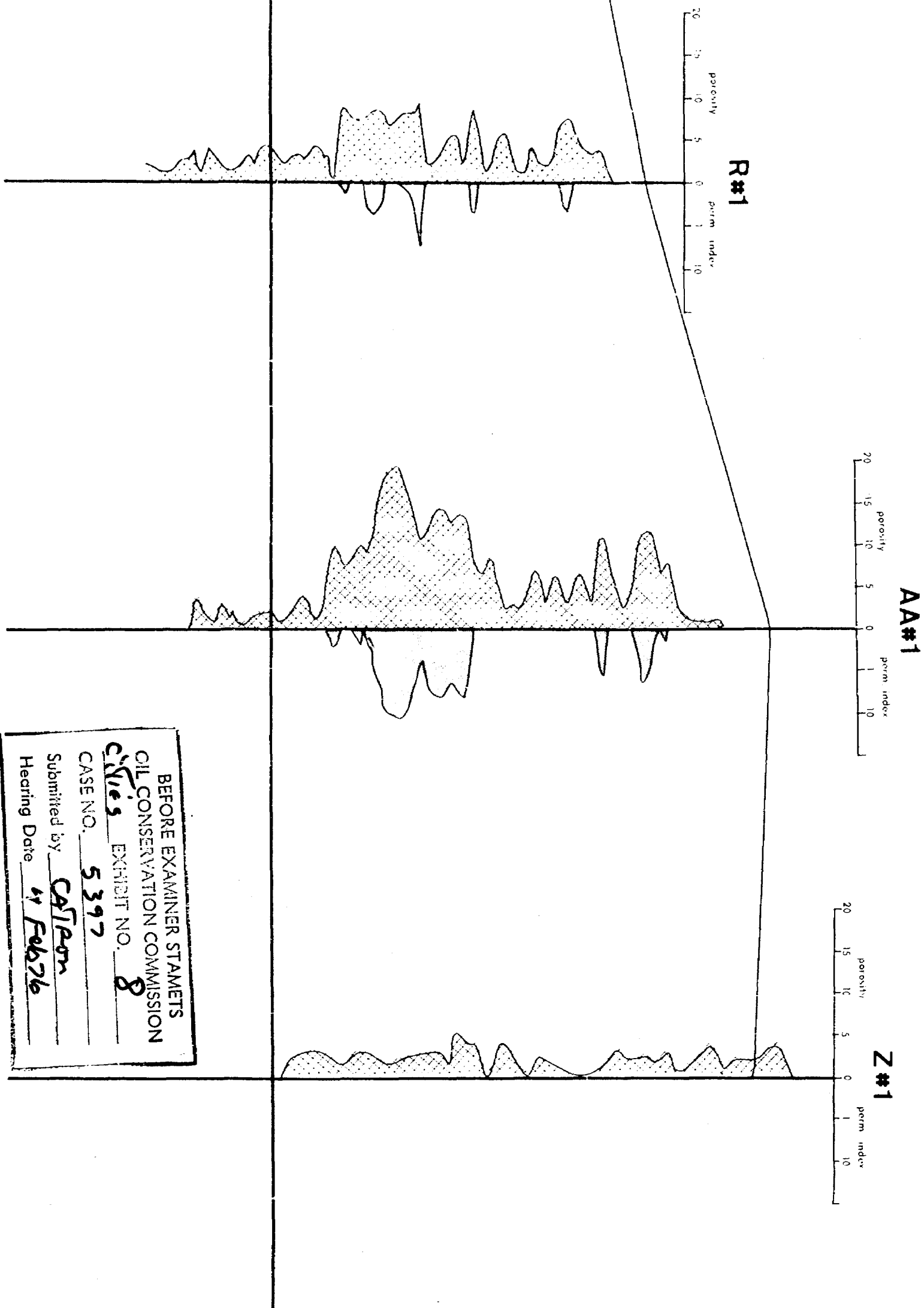
LOWER LIME BASE

T#1



N-S CROSS SECTION (1)

CORIBAND LOGS



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

CASE NO. 5397 EXHIBIT NO. 8

Submitted by CAI 200

Hearing Date 4 Feb 76

NORTH BURTON FLAT WOLFCAME MONTHLY PRODUCTION

		<u>GOVERNMENT T-1</u>		<u>GOVERNMENT A-1</u>		<u>GOVERNMENT AA-1</u>		<u>GOVERNMENT A-1</u>	
		<u>CONDENSATE</u>	<u>G/L RATIO</u>	<u>CONDENSATE</u>	<u>G/L RATIO</u>	<u>CONDENSATE</u>	<u>G/L RATIO</u>	<u>CONDENSATE</u>	<u>G/L RATIO</u>
		<u>STB</u>	<u>SCF/STB</u>	<u>STB</u>	<u>SCF/STB</u>	<u>STB</u>	<u>SCF/STB</u>	<u>STB</u>	<u>SCF/STB</u>
1974	April	996	3,891						
	May	7,849	3,973						
	June	6,628	3,871						
	July	6,139	3,928						
	August	5,868	3,981						
	September	-	-						
	October	-	-						
	November	900	4,093						
	December	4,149	4,606						
1975	January	6,996	3,600	2,353	3,140				
	February	1,533	4,228	1,041	3,316	2,199	1,619		
	March	-	-	-	-	5,297	1,089		
	April	3,607	4,278	2,169	3,683	5,117	2,374		
	May	4,991	4,498	2,432	2,982	6,404	2,883		
	June	5,952	4,002	2,324	3,037	6,793	2,683		
	July	4,939	4,502	2,378	3,376	5,955	3,136	4,599	6,689
	August	5,160	4,143	2,332	3,349	6,395	1,942	5,090	7,313
	September	4,730	4,066	2,211	3,300	5,847	586	4,827	7,037
	October	4,547	4,204	2,235	3,233	5,690	2,752	4,814	6,936
	November	4,664	4,038	2,185	3,477	5,370	2,989	4,533	6,702
	December	4,388	4,446	2,210	3,463	5,237	2,998	4,862	6,391
Cumulative 1/1/76		84,036		25,259		60,304		28,765	
Field cum. 1/1/76		198,364							

OIL COMPANY
 CASE NO. 5397
 Submitted by CATMAN
 Hearing Date 4 Feb 76

TABLE 6^a
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Company Date Sampled 6/24/75 Lab Report No. _____
Well Government AA Field _____ Type of Sample Separator Report Date 9/16/75
County Eddy State New Mexico Country USA

	Field Separator Samples ^a				Reservoir Fluid ^b Samples at Saturation Conditions			
					Experimental ^c		Calculated	
Pressure (psig)								
Temperature (F)								
Gas-oil Ratio (cf ³ /bbl ^o)	2900							
Specific Gravity (Air=1.00) Measured								
Specific Gravity (Air=1.00) Calculated	0.6879							
Method of Analysis	Podbleiniak Gas Distillation Chromatography							
Component	Liquid		Gas		Mol %	Vol % ^f GPM	Mol %	Vol % ^f GPM
	Mol %	Vol %	Mol %	GP%				
Nitrogen	0		1.45				1.02	
Carbon Dioxide	0.09		0.20				0.17	
Hydrogen Sulfide	0		0				0	
Methane	17.36		80.48				61.80	
Ethane	11.56		12.12				11.95	
Propane	11.79		3.09				6.16	
Isobutane	2.25		0.34				0.91	
Normal butane	6.74		0.85				2.59	
Isopentane	2.29		0.14				0.78	
Normal pentane	3.46		0.14				1.12	
Hexanes	4.95		0.19				1.60	
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier ^g	40.20						11.90	
Total	100.00		100.00				100.00	

Density, Heptanes

and Heavier, gm/cc at 60 F 0.8056

0.8056

Mol Wt. Heptanes and Heavier^g 79

170

^a A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.

^b For bubble-point oil or dew-point gas.

^c Indicate type of sample; i. e., recombinant or bottom-hole.

^d Base conditions: pressure 14.70 psia, 60 F.

^e Indicate whether separator oil _____, or stock tank oil X.

^f Vol % for bubble-point oil, GPM for dew-point gas. Cross out abbreviation which does not apply.

^g Enter name of appropriate component.

REPORT EXAMINER OF OILS
OIL CONSERVATION COMMISSION
Cities EXHIBIT NO. 11
CASE NO. 5397
Submitted by CASPER
Hearing Date 4 Feb 76

TABLE 2
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Date Sampled 6/24/74 Lab Report No. _____
Well Government Z-1 Field _____ Type of Sample Separator Report Date 8/14/75
County Eddy State New Mexico Country USA

	Field Separator Samples ^a				Reservoir Fluid ^b Samples at Saturation Conditions			
					Experimental ^c		Calculated	
Pressure (psig)	620							
Temperature (F)	80							
Gas-oil Ratio (cf ^d /bbi ^e)	3000							
Specific Gravity (Air=1.00) Measured								
Specific Gravity (Air=1.00) Calculated	0.6901							
Method of Analysis	Podbielniak Gas-Liquid Distillation Chromatograph							
Component	Liqu'd		Gas		Mol %	Vol % ^f GPM	Mol %	Vol % ^f GPM
	Mol %	Vol %	Mol %	GPM				
Nitrogen	0		1.54	--			1.12	
Carbon Dioxide	0.07		0.18	--			0.15	
Hydrogen Sulfide	0		0	--			0	
Methane	15.24		89.18	--			62.45	
Ethane	11.82		12.23	3.45			12.12	
Propane	11.54		4.21	1.22			6.21	
Isobutane	2.28		0.37	0.12			0.87	
n-Butane	3.05		0.87	0.29			2.83	
Isopentane	2.78		0.14	0.05			0.86	
n-Pentane	3.63		0.14	0.05			1.09	
Hexanes	3.56		0.19	0.03			1.11	
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier ^g	41.03		0	0			11.19	
Total	100.00		100.00	5.26			100.00	

Density, Heptanes

and Heavier, gm/cc at 60 F

0.8055

0.8055

Mol Wt. Heptanes and Heavier

172

172

^a A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.

^b For bubble-point oil or dew-point gas.

^c Indicate type of sample; i. e., recombined or bottom-hole: Recombined

^d Base conditions: pressure 14.70 psia, 60 F.

^e Indicate whether separator oil _____, or stock-tank oil X

^f Vol % for bubble-point oil, GPM for dew-point gas. Cross out abbreviation which does not apply.

^g Enter name of appropriate component.

Cities Service REPORT NO. 12
CASE NO. 5397
Submitted by CAVAM
Hearing Date 4 Feb 76

TABLE 6T3
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Company Date Sampled 6/24/75 Lab Report No. _____
Well Government T-1B Field _____ Type of Sample Separator _____ Report Date 9/16/75
County Eddy State New Mexico Country USA

	Field Separator Samples ^a		Reservoir Fluid ^b Samples at Saturation Conditions			
			Experimental ^c		Calculated	
Pressure (psig)						
Temperature (F)						
Gas-oil Ratio (scf/bbl ^d)	4500					
Specific Gravity (Air=1.00) Measured						
Specific Gravity (Air=1.00) Calculated	0.5899					
Method of Analysis	Fodbielrak Distillation		Chromatography			
Component	Liquid		Gas		Mol %	Vol % ^e GPM
	Mol %	wt %	Mol %	GPM		
Nitrogen	0		1.35			1.05
Carbon Dioxide	0.05		0			2.17
Hydrogen Sulfide	0		0			0
Methane	17.86		85.50			66.36
Ethane	11.95		12.50			12.14
Propane	8.53		4.24			5.20
iso-Butane	2.18		0.77			3.77
n-Butane	7.97		1.00			2.46
iso-Pentane	1.53		0.14			0.45
n-Pentane	1.53		0.14			0.45
Hexanes	5.29		0.17			
Heptanes						
Octanes						
Nonanes						
Decanes and Heavier ^f	43.17		0			64
Total	100.00		100.00			100.00

Density, Heptanes

and Heavier, gm/cc at 60 F

Vol Wt., Heptanes and Heavier

0.7910

153

0.7910

153

^a A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.

^b For bubble-point oil or dew-point gas.

^c Indicate type of sample; i.e., recombined or bottom-hole.

^d Base conditions: pressure 15.70 psia, 60 F.

^e Indicate whether separator oil or stock-tank oil. ☒ X

^f Vol % for bubble-point oil, GPM for dew-point gas. Do not abbreviate on which does not apply.

^g Enter name of appropriate component.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
CITY OF S. EXHIBIT NO. 13
CASE NO. 5397
Submitted by CAJ Ron
Hearing Date 4 Feb 76

EXHIBIT —

BLE 4

RECOMBINED RESERVOIR FLUID BEHAVIOR AT 152°F

(RESERVOIR TEMPERATURE), GOR = 4500

GOVERNMENT T-?

EDDI COUNTY, NEW MEXICO

<u>Pressure, psig</u>	<u>Volume Percent Liquid</u>
4670 (Dew Point Pressure)	--
4650	0.8
4560	13.8
4470	22.1
4340	24.4
4220	28.8
4025	29.9
3780	31.7
3570	33.8
3370	34.0
3170	32.8
2910	31.0
2670	29.1
2320	25.2
1880	20.1
1440	16.2
1240	11.6
1030	9.1
860	7.3
730	5.9
670	5.2

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Cities	EXHIBIT NO. 14
CASE NO.	5397
Submitted by	Matron
Hearing Date	4 Feb 76

GOVERNMENT T-1

Constant Composition Expansion at 152°
Recombined Fluids at 4500 GLR

BEFORE EXAMINATION
OIL CONSERVATION COMMISSION

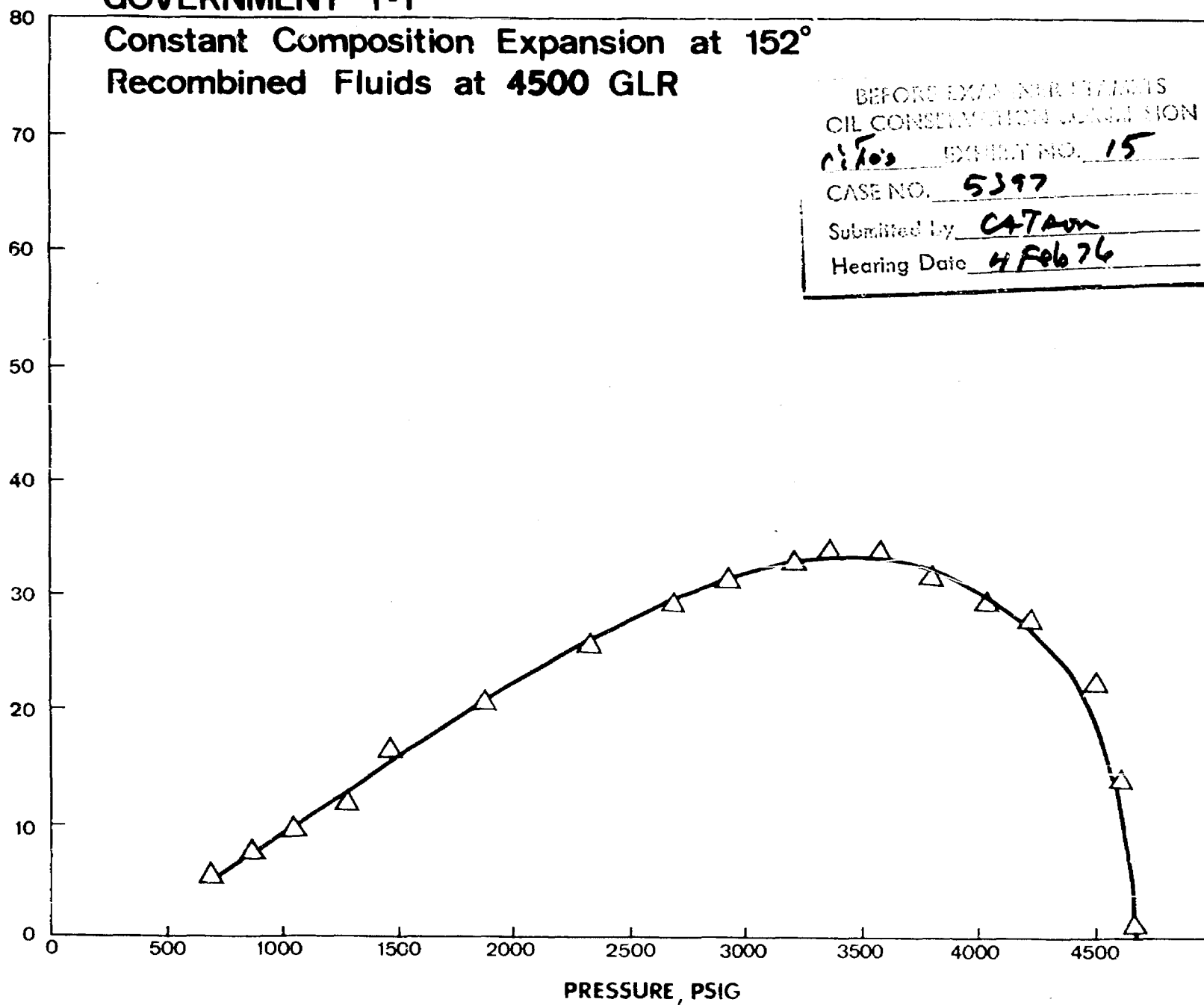
EXHIBIT NO. 15

CASE NO. 5397

Submitted by CATAM

Hearing Date 4 Feb 76

VOLUME PERCENT LIQUID



EXHIBIT

BEFORE THE DISTRICT COURT
OF THE COUNTY OF SUTTER, CALIFORNIA
Case No. 5397
Submitted by CATRON
Hearing Date 4 Feb 76

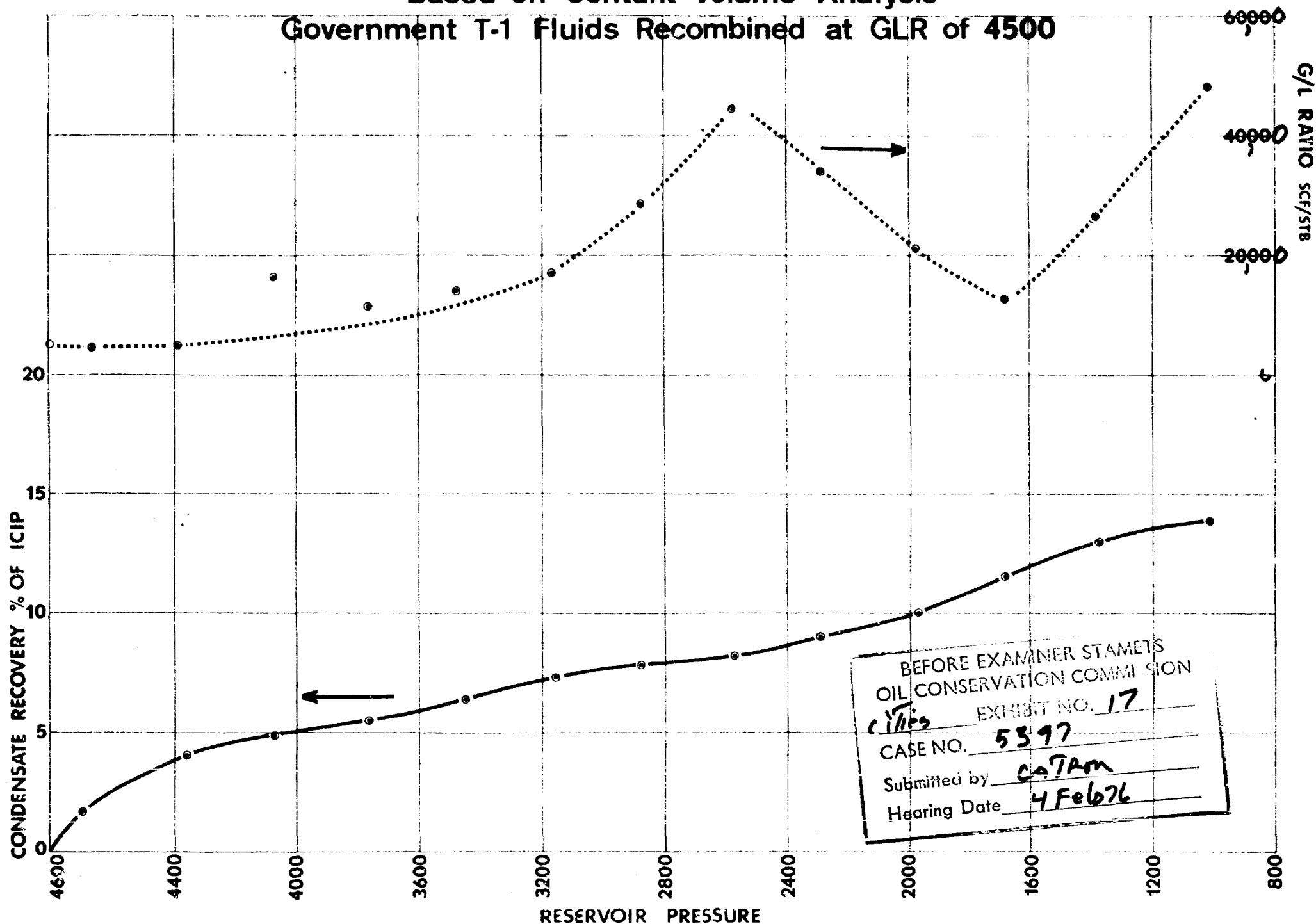
TABLE 2
ANALYSIS OF GASES REMOVED FROM WINDOWED CELL
CONSTANT VOLUME DEPLETION DATA, 152°F
(4670-1000 psig)
RECOMBINED RESERVOIR FLUIDS, GOR = 450%
GOVERNMENT T-1, EDDY COUNTY, NEW MEXICO

Component	Gas Removed @ 4370 psig Mole % GPM	Gas Removed @ 4070 psig Mole % GPM	Gas Removed @ 3770 psig Mole % GPM	Gas Removed @ 3470 psig	Gas Removed @ 3170 psig Mole % GPM	Gas Removed @ 2870 psig Mole % GPM	Gas Removed @ 2570 psig Mole % GPM	Gas Removed @ 2270 psig Mole % GPM	Gas Removed @ 1970 psig Mole % GPM	Gas Removed @ 1670 psig Mole % GPM	Gas Removed @ 1370 psig Mole % GPM	Gas Removed @ 1070 psig Mole % GPM	Gas Removed @ 770 psig Mole % GPM	Gas Removed @ 470 psig Mole % GPM
N ₂	0.75 --	1.34 --	1.37 --	no analysis	1.54 --	1.54 --	1.62 --	1.57 --	2.02 --	1.39 --	1.39 --	1.50 --	1.50 --	1.50 --
CO ₂	0.17 --	0.46 --	0.22 --		0.10 --	0.10 --	0.10 --	1.54 --	0.10 --	0.10 --	0.14 --	0.13 --	0.13 --	0.13 --
C ₁	53.84 --	68.47 --	69.99 --		73.37 --	74.30 --	75.22 --	75.22 --	77.74 --	72.10 --	77.39 --	76.57 --	76.57 --	76.57 --
C ₂	15.83 4.46	12.01 3.32	12.69 3.56		12.41 3.60	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48	12.41 3.48
C ₃	9.64 2.80	11.08 3.21	5.99 1.74		5.38 1.56	5.30 1.54	5.15 1.49	4.85 1.41	4.49 1.30	5.43 1.58	4.48 1.30	5.14 1.58	5.14 1.58	5.14 1.58
i-C ₄	1.58 0.54	0.65 0.22	0.78 0.27		0.79 0.27	0.70 0.24	0.64 0.22	0.58 0.20	1.63 0.56	0.70 0.24	0.51 0.18	0.56 0.18	0.56 0.18	0.56 0.18
n-C ₄	3.49 1.16	1.07 0.36	2.26 0.75		1.94 0.64	1.97 0.65	1.73 0.57	1.65 0.55	4.03 1.34	1.89 0.63	1.40 0.47	1.40 0.47	1.40 0.47	1.40 0.47
i-C ₅	1.25 0.48	0.42 0.16	0.78 0.30		0.29 0.11	0.51 0.2	0.40 0.15	0.37 0.14	0.25 0.10	0.46 0.16	0.31 0.1	0.31 0.1	0.31 0.1	0.31 0.1
n-C ₅	1.58 0.60	0.42 0.19	0.69 0.25		0.38 0.13	0.69 0.25	0.48 0.17	0.43 0.16	0.39 0.15	0.57 0.2	0.35 0.13	0.35 0.13	0.35 0.13	0.35 0.13
C ₆	1.08 0.47	0.32 0.14	0.39 0.17		0.36 0.16	0.36 0.16	0.30 0.13	0.27 0.12	0.35 0.15	0.55 0.24	0.34 0.15	0.34 0.15	0.34 0.15	0.34 0.15
C ₇	10.79 6.68	3.67 2.27	4.84 3.04		3.44 2.15	2.12 1.15	1.27 0.75	1.71 1.04	2.66 1.58	4.49 2.66	2.25 1.35	2.25 1.35	2.25 1.35	2.25 1.35
* Mole. Wt.	135	135	137		136	120	128	132	128	128	129	129	129	129
* Mole. Wt.	0.900	0.845	0.811		0.770	0.760	0.768	0.758	0.727	0.71	0.809	0.809	0.809	0.809
Specific Gravity	1.3253	0.9085	1.017		0.9404	0.8876	0.8876	0.8760	0.9460	0.9460	0.8741	0.8741	0.8741	0.8741
BTU/cu ft	2192	1562	1615		1482	1391	1333	1333	1461	1273	1359	1359	1359	1359
MLF Gas Removed per Reservoir bbl	35.7	38.45	22.84		45.5	41.80	51.48	88.52	63.48	54.63	118.34	120.44	120.44	120.44
1. GPM, gallons of liquid per MSLF gas														
2. gas compressibility														
API° of C7+	50.97	50.97	50.31		50.64	56.60	53.43	52.0	53.43	53.43	53.06	53.43	53.43	53.43
Calculated GOR	4600	16287	11417		17054	28267	44821	34255	21163	13058	27103	48453	48453	48453

NORTH BURTON FLAT WOLFCAMP PERFORMANCE

Based on Contant Volume Analysis

Government T-1 Fluids Recombined at GLR of 4500



(WEST PARKWAY-STRAWN GAS AND
WEST PARKWAY-ATOKA GAS POOLS - Cont'd.)

EDDY COUNTY, NEW MEXICO
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 28: N/2

(2) That, effective October 1, 1973, Special Rules and Regulations for the West Parkway-Strawn Gas Pool and the West Parkway-Atoka Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
WEST PARKWAY-STRAWN GAS POOL AND
WEST PARKWAY-ATOKA GAS POOL.

RULE 1. Each well completed or recompleted in the West Parkway-Strawn Gas Pool and/or West Parkway-Atoka Gas Pool or in the Strawn and Atoka formations within one mile thereof, and not nearer to or within the limits of another designated Strawn or Atoka pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. (a) Each gas well shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental 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 and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

(b) The non-standard unit lies wholly within a standard proration unit for the well under the applicable provisions of Rule 2 above and contains less acreage than a standard unit.

(c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the standard proration unit for the well in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

(d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 660 feet to the nearest side boundary of the tract nor nearer than 1980 feet to the nearest end boundary of the tract.

RULE 5. A gas well in the West Parkway-Strawn Gas Pool shall be permitted to produce no more than 1500 MCF of gas per day during the effective period of these pool rules and a gas well in the West Parkway-Atoka Gas Pool shall be permitted to produce no more than 2000 MCF of gas per day during the effective period of the rules.

RULE 6. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well. Any well which is shut in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 7.

RULE 7. Gas-liquid ratio tests shall be taken on all wells during the months of March and September of each year. The initial gas-liquid ratio test shall suffice as the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-115 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. The Commission District Supervisor may grant exceptions to the above test requirements where it is demonstrated that wells produce no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 8. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 9. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the appropriate Commission district office of Commission Forms C-104 and C-116, properly executed. The District Supervisor of the Commission's district office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the amounts set forth in Rule 5 of these rules.

RULE 10. The initial balancing date shall be 7 o'clock a.m. April the first, 1974. Subsequently, the date 7:00 a.m. April the first of each year shall be known as the balancing date, and the twelve months following this date shall be known as the gas proration period.

RULE 11. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 12. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

(WEST PARKWAY-STRAWN GAS AND
WEST PARKWAY-ATOKA GAS POOLS - Cont'd.)

RULE 13. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such over production shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equalling three times its current monthly allowable, it shall be shut in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 14. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 15. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well or reservoir.

RULE 16. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 17. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the appropriate proration schedule.

RULE 18. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 19. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the West Parkway-Strawn Gas Pool or the West Parkway-Atoka Gas Pool or in the Strawn or Atoka formations within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the appropriate district office of the Commission in writing of the name and location of the well on or before November 1, 1973.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the West Parkway-Strawn Gas Pool and West Parkway-Atoka Gas Pool shall have dedicated thereto 320 acres, in accordance with the foregoing pool rules or pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this cause shall be reopened at an examiner hearing during October, 1974, to permit the operators in said pools to appear and present evidence to clearly establish the nature of said reservoirs, proper rates of production for wells therein, and special rules therefor.

(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.

**SOUTH DAGGER DRAW-
UPPER PENNSYLVANIAN ASSOCIATED POOL
Eddy County, New Mexico**

Order No. R-4637, Creating and Adopting Temporary Operating Rules for the South Dagger Draw-Upper Pennsylvanian Associated Pool, Eddy County, New Mexico, October 1, 1973.

Application of Roger C. Hanks for Creation of a Pool and Special Rules Therefor, Eddy County, New Mexico.

CASE NO. 5048
Order No. R-4637

ORDER OF THE COMMISSION

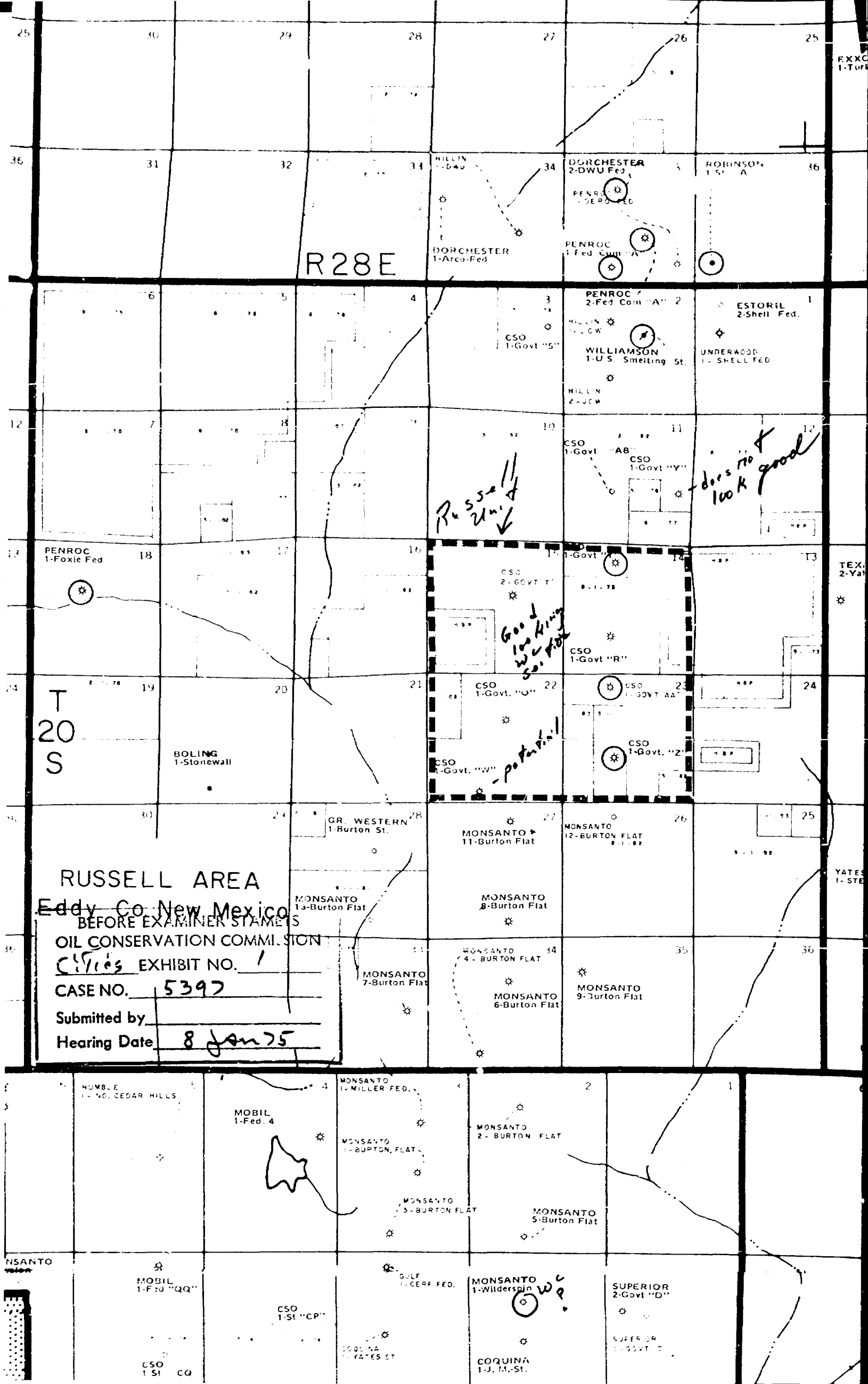
BY THE COMMISSION: This cause came on for hearing at 9 a.m. on August 22, 1973, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 26th day of September, 1973, 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, Roger C. Hanks, seeks the promulgation of special rules and regulations for the South Dagger Draw-Upper Pennsylvanian Pool, Eddy County, New Mexico, including a provision for classification of oil wells and gas wells, 320-acre spacing for all wells, a limiting gas-oil ratio of 8000 to one, and for the assignment of a special depth bracket allowable for oil wells of 267 barrels of oil per day.



RUSSELL UNIT WOLFCAMP PRODUCTION

1974

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. 2

CASE NO. 5377

Submitted by

Hearing Date 8 Jan 75

GOVERNMENT T-1

	MSCFD	BCPD	GOR	FTP
May	1005	253	3972	-
June	846	221	3828	-
July	778	198	3929	-
August	753	189	3984	-
September	S.I.			
December 21	1900	339	5605	1700
" 22	1635	374	4372	1700
" 23	1483	354	4189	1350
" 24	1830	420	4357	1025
" 25	1633	391	4176	1000
" 26	1534	435	3526	900
" 27	1400	390	3590	870
" 28	1235	266	4643	950
" 29	1222	317	3855	950
" 30	1200	240	5000	950
" 31	1200	266	4511	950
January 1	1200	240	5000	900
" 2	1040	348	2986	930
" 3	1126	270	4170	950

Cumulative gas - 133,223 MSCF
Cumulative cond.- 33,950 STB

GOVERNMENT Z-1

	MSCFD	BCPD	GOR	FTP
December 21	352	143	2462	700
" 22	350	98	3571	690
" 23	350	82	4268	690
" 24	-	85	-	750
" 25	338	-	-	800
" 26	338	74	4568	810
" 27	330	80	4125	825
" 28	340	128	2656	1000
" 29	370	72	5139	925
" 30	265	78	3397	1010
" 31	315	77	4091	875
January 1	325	72	4514	875
" 2	265	71	3732	900
" 3	265	56	4732	1000

Cumulative gas - 4,116 MSCF
Cumulative cond.- 1,162 STB

TABLE 1

RESERVOIR AND SAMPLING DATA

Well Name	Government Z#1
County, State	Eddy County, New Mexico
Perforated Interval	9219-9303
Formation	Wolfcamp
Well Completion Date	9-24-74
Sampling Date	11-21-74
Sampling Depth	8814 feet
Sampling Temperature	152°F
Sampling Pressure	4635 psig
Perforated Interval Pressure	4825 psig

OFFICE OF THE ATTORNEY GENERAL
OIL CONSERVATION COMMISSION

CITIZEN EXHIBIT NO. 3

CASE NO. 53987

Submitted by _____

Hearing Date 8 Jan 75

TABLE 2
RESERVOIR FLUID ANALYSIS
SAMPLE COMPOSITIONS

Company Cities Service Oil Date Sampled 11-21-74 Lab Report No. _____
Well Government Z#1 Field -- Type of Sample Bottom-hole Report Date 12-11-74
County Eddy State New Mexico Country USA

Pressure (psig)	Field Separator Samples ^a		Reservoir Fluid ^b Samples at Saturation Conditions					
			Experimental ^c		Calculated			
Temperature (F)			4635					
			153°F					
Gas-oil Ratio (cf ^d /bbl ^e)								
Specific Gravity (Air=1.00) Measured								
Specific Gravity (Air=1.00) Calculated								
Method of Analysis			Podbielniak Distillation					
Component	Liquid		Gas		Mol %	GPM	Mol %	Vol % ^f GPM
	Mol %	Vol %	Mol %	GPM				
Nitrogen					0.77	--		
Carbon Dioxide					0.02	--		
Hydrogen Sulfide					0	0		
Methane					54.10	--		
Ethane					11.51	3.24		
Propane					6.21	1.80		
iso-Butane					0.82	0.28		
n-Butane					2.67	0.89		
iso-Pentane					0.92	0.35		
n-Pentane					1.13	0.43		
Hexanes					1.59	0.69		
Heptanes								
Octanes								
Nonanes								
Heptanes and Heavier ^g					10.26	7.24		
Total					100.00	14.92		

52°
Gra

Density, Heptanes s

and Heavier, gm/cc at 60 F

0.8076

Mol Wt., Heptanes and Heavier^g

162.3

^a A page similar to this should be included for reporting the analysis of fluids from lower pressure stages of separation.

^b For bubble-point oil or dew-point gas.

^c Indicate type of sample; i. e., recombined or bottom-hole: bottom-hole

^d Base conditions: pressure _____ psia, 60 F.

^e Indicate whether separator oil _____, or stock-tank oil _____

^f Vol % for bubble-point oil, GPM for dew-point gas. Cross out abbreviation which does not apply.

^g Enter name of appropriate component.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
CITIES EXHIBIT NO. 7
CASE NO. 5397
Submitted by _____
Hearing Date 8 Jan 75

TABLE 4
RESERVOIR FLUID BEHAVIOR AT 152°F (RESERVOIR TEMPERATURE)

GOVERNMENT Z#1

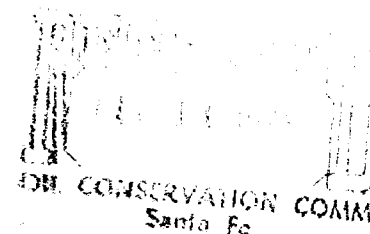
EDDY COUNTY, NEW MEXICO

<u>Pressure</u>	<u>Volume Percent Liquid</u>	<u>Bbl Separated Oil Per MMSCF Separated Gas</u>
4690 (Dew Point Pressure)	--	--
4680	7.4	57.3
4620	22.5	214.4
4540	26.4	271.5
4480	28.9	344.9
4350	31.3	361.7
4160	34.0	427.9
3960	34.7	464.2
3700	35.1	504.5
3480	35.2	535.1
3220	34.4	555.0
3000	33.8	575.0
2790	32.3	573.2
2570	30.5	567.7
2280	27.9	559.2
2010	24.1	513.6
1730	20.5	475.4
1470	16.5	424.4
1210	12.9	383.9
960	9.7	343.5
740	7.1	314.2
620	5.7	293.8

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
Cities	EXHIBIT NO. 5
CASE NO. 5397	
Submitted by _____	
Hearing Date 8 Jan 75	

BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION
OF CITIES SERVICE OIL COMPANY
FOR THE CREATION OF A POOL AND
POOL RULES FOR PRODUCTION FROM
THE WOLFCAMP FORMATION, EDDY
COUNTY, NEW MEXICO



A P P L I C A T I O N

COMES NOW Cities Service Oil Company, by and through its attorneys, KELLAHIN & FOX, and applies to the New Mexico Oil Conservation Commission for the designation of a new pool for production from the Wolfcamp formation and for pool rules therefor, and in support thereof would show the Commission:

1. Applicant is the operator of Wolfcamp production wells located in Eddy County, New Mexico as follows:

- (a) Government AA #1 Well, located 1980' from the North line and 1980' from the West line of Section 23, T20S, R28E;
- (b) Government T #1 Well, located 660' from the North line and 1980' from the West line of Section 14, T20S, R28E;
- (c) Government Z #1 Well, located 660' from the South line and 1980' from the West line of Section 23, T20S, R28E.

WC
tested
11/9

WC
tested
3/4

WC
tested
9/24

2. Applicant seeks the creation of a new pool for production by subject wells from the Wolfcamp formation.

3. Applicant further seeks the promulgation of pool rules for said pool, including provisions for the location of wells, the size of proration and spacing units, and

DOCKET MAILED

Date 12-26-74


such other rules as the Commission deems appropriate.

WHEREFORE, Applicant respectfully requests that this application be set for hearing before the Commission's duly appointed Examiner and that upon hearing, an order be entered granting the Application as requested.

Respectfully submitted,

CITIES SERVICE OIL COMPANY

BY



KELLAHIN & FOX

P. O. Box 1769

Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

DRAFT

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:

*Application of Cities Service Oil
Company for Pool Creation and
Special Pool Rules, Eddy
County, New Mexico*

CASE NO. 5397

Order No. R- 4949
NOMENCLATURE
RECORDS CENTER

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1975
at Santa Fe, New Mexico, before Examiner RLS

NOW, on this January day of 1975, 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, seeks the creation of a new
gas pool for Wolfcamp production in
Eddy County, New Mexico, and the promulgation
of special rules and regulations governing
said pool, including a provision for 320-
acre spacing units

(3) That applicant's Government "T" Well No. 1 located in Unit C of Section 14, Township 20 South, Range 28 East, NMAP, Eddy County, New Mexico, having its top perforations at 9206 feet, has discovered a separate common source of supply which should be designated the North Burton Flats-Wolfcamp Gas Pool; That the vertical limits of said pool should be the Wolfcamp formation and the horizontal limits of said pool should ~~include~~ include all of Sections 14 and 23 in said Township.

(4) That temporary special rules and regulations providing for 320-acre gas well spacing should be promulgated for the subject pool in order to prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, prevent reduced recovery which might result from the drilling of too few wells, and otherwise prevent waste and protect correlative rights.

(5) That the temporary special rules and regulations should provide for the limitation of production from wells in ~~each of~~ the subject pool ~~to a maximum of no more than 1,500 MCF per day, should be produced from each well in the Strawn pool, and that a maximum of no more than 2,000 MCF per day should be produced from each well in the Atoka pool. in said Wolfcamp Pool.~~

(6) That the temporary special rules and regulations should establish proration rules for gas wells in order to prevent waste and protect correlative rights.

¹⁹⁷⁶
(12) That this case should be reopened at an examiner hearing during ~~October, 1974~~ ^{February, 1979} to permit the operators in said gas pool to appear and present evidence to clearly establish

and show cause why the North Burton Flats - Wolfcamp Gas Pool should not be developed on 160-acre spacing and proration units.

Effective February 1, 1975,

It Is Therefore Ordered:

(1) That a new ~~gas~~ pool for the production of gas from the Wolfcamp formation is hereby created and designated as the North Burton Flats - Wolfcamp Gas Pool with horizontal limits comprising the following described area:

EDDY COUNTY, New Mexico

Township 20 South, Range 28 East

Section 14: All

Section 23: All

(2) That effective ~~October~~ February 1, 1975, Special Rules and Regulations for the North Burton Flats - Wolfcamp Gas Pool, Eddy County, New Mexico are hereby promulgated as follows:

Special Rules and Regulations
North Burton Flats - Wolfcamp Gas Pool

Case No. 4976
Order No. R-4838

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

PROVIDED FURTHER, that the applicant shall conduct a packer leakage test annually on said well and shall file the results thereof with the Commission's Artesia office.

(2) That effective October 1, 1973, the Strawn and Atoka reservoirs in the subject well are hereby classified as gas reservoirs and designated the West Parkway-Strawn Gas Pool and the West Parkway-Atoka Gas Pool with vertical limits comprising, respectively, the Strawn and Atoka formations and horizontal limits comprising the following-described area:

EDDY COUNTY, NEW MEXICO
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 28: N/2

(3) That, effective October 1, 1973, Special Rules and Regulations for the West Parkway-Strawn Gas Pool and the West Parkway-Atoka Gas Pool, Eddy County, New Mexico, are hereby promulgated as follows:

~~SPECIAL RULES AND REGULATIONS
FOR THE
WEST PARKWAY-STRAWN GAS POOL AND
WEST PARKWAY-ATOKA GAS POOL~~

WC ~~RULE 1. Each well completed or recompleted in the West Parkway-Strawn Gas Pool and/or West Parkway-Atoka Gas Pool or in the Strawn and Atoka formations, within one mile thereof, and not nearer to or within the limits of another designated Strawn or Atoka pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.~~ NBF Well

RULE 2. (a) Each gas well shall be located on a standard unit containing 320 acres, more or less, comprising any two contiguous quarter sections of a single governmental 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 and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a standard proration unit for the well under the applicable provisions of Rule 2 above and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the standard proration unit for the well in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 660 feet to the nearest side boundary of the tract nor nearer than 1980 feet to the nearest end boundary of the tract.

RULE 5. A gas well in the ~~West Parkway Strawn Gas Pool~~ ^{NBF-WC Gas Pool} shall be permitted to produce no more than 1,500 MCF of gas per day during the effective period of these pool rules, ~~and a gas well in the West Parkway Atoka Gas Pool shall be permitted to produce no more than 2,000 MCF of gas per day during the effective period of the rules.~~

RULE 6. The operator of each newly completed well shall cause a gas-liquid ratio test to be taken on the well upon recovery of all load oil from the well. Any well which is shut in shall be exempted from the gas-liquid ratio test requirement so long as it remains shut in. The initial gas-liquid ratio test shall be taken in the manner prescribed by Rule 7.

RULE 7. Gas-liquid ratio tests shall be taken on all wells during the months of March and September of each year. The initial gas-liquid ratio test shall suffice as the first semi-annual test. Tests shall be 24-hour tests, being the final 24 hours of a 72-hour period during which the well shall be produced

at a constant normal rate of production. Results of such tests shall be filed on Commission Form C-116 on or before the 10th day of the following month. At least 72 hours prior to commencement of any such gas-liquid ratio tests, each operator shall file with the appropriate district office of the Commission a test schedule for its wells specifying the time each of its wells is to be tested. Copies of the test schedule shall also be furnished to all offset operators. The Commission District Supervisor may grant exceptions to the above test requirements where it is demonstrated that wells produce no liquids.

Special tests shall also be taken at the request of the Secretary-Director and may also be taken at the option of the operator. Such special tests shall be taken in accordance with the procedures outlined hereinabove, including notification to the Commission and offset operators.

RULE 8. An initial shut-in pressure test shall be taken on each gas well and shall be reported to the Commission on Form C-125.

RULE 9. Any well completed after the effective date of these rules shall receive an allowable only upon receipt by the appropriate Commission district office of Commission Forms C-104 and C-116, properly executed. The District Supervisor of the Commission's district office is hereby authorized to assign a temporary gas allowable to wells connected to a gas transportation facility during the recovery of load oil, which allowable shall not exceed the amounts set forth in Rule 5 of these rules.

RULE 10. The initial balancing date shall be 7 o'clock a.m. April the first, 1975. Subsequently, the date 7:00 a.m. April the first of each year shall be known as the balancing date, and the twelve months following this date shall be known as the gas proration period.

RULE 11. Any gas well which has an underproduced status as of the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

RULE 12. Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the underproduction carried into such period in determining the amount of allowable, if any, to be cancelled.

RULE 13. Any well which has an overproduced status as of the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be compensated for during such succeeding period. Any well which has not compensated for the overproduction carried into a gas proration period by the end of such proration period shall be shut in until such overproduction is compensated for. If, at any time, a well is overproduced an amount equaling three times its current monthly allowable, it shall be shut in during that month and each succeeding month until the well is overproduced less than three times its current monthly allowable.

RULE 14. The allowable assigned to a well during any one month of a gas proration period in excess of the production for the same month shall be applied against the overproduction carried into such period in determining the amount of overproduction, if any, which has not been compensated for.

RULE 15. The Commission may allow overproduction to be compensated for at a lesser rate than would be the case if the well were completely shut in upon a showing after notice and hearing that complete shut in of the well would result in material damage to the well or reservoir.

RULE 16. The monthly gas production from each gas well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 24th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the produced gas.

RULE 17. Each purchaser or taker of gas shall submit a report to the Commission so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. Such report shall be filed on Form C-111 with the wells being listed in the same order as they are listed on the appropriate proration schedule.

RULE 18. Failure to comply with any provision of these rules shall result in the immediate cancellation of allowable assigned to the affected well. No further allowable shall be assigned until all rules and regulations have been complied with. The Secretary-Director shall notify the operator of the well and purchaser in writing of the date of allowable cancellation and the reason therefor.

RULE 19. All transporters or users of gas shall file gas well-connection notices with the Commission as soon as possible after the date of connection.

IT IS FURTHER ORDERED:

- (1) That the locations of all wells presently drilling to

NBF-WC

or in the Wolfcamp

or completed in the ~~West Parkway Strawn Gas Pool or the West Parkway Atoka Gas Pool or in the Strawn or Atoka~~ formations within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the appropriate district office of the Commission in writing of the name and location of the well on or before ~~November 1, 1975~~, ^{February 10, 1975}.

NBFWC

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the ~~West Parkway Strawn Gas Pool and West Parkway Atoka Gas Pool~~ shall have dedicated thereto 320 acres, in accordance with the foregoing pool rules or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 320 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable.

(3) That this cause shall be reopened at an examiner hearing during ~~October, 1975~~ ¹⁹⁷⁶ to permit the operators in said pools to appear and present evidence to clearly establish the nature of said reservoirs, proper rates of production for wells therein, and special rules therefor.

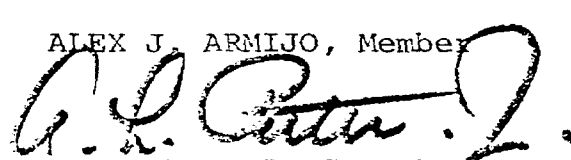
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member


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

S E A L

dr/

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 5397

Order No. R- 4949-A

IN THE MATTER OF CASE 5397 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R- 4949, WHICH ORDER
ESTABLISHED SPECIAL RULES AND REGULATIONS
FOR THE NORTH BURTON FLATS-WOLFCAMP
GAS POOL, EDDY COUNTY, NEW MEXICO,
INCLUDING A PROVISION FOR 320 -ACRE SPACING AND
PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 4,
19 76, at Santa Fe, New Mexico, before Examiner Richard L. Starnet

NOW, on this day of February, 19 76, the
Commission, a quorum being present, having considered the testi-
mony, 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-4949, dated January 22,
19 76, temporary special rules and regulations were promulgated
for the North Burton Flats-Wolf/Gas Pool, Eddy
County, New Mexico, establishing temporary 320 -acre spacing
units.

(3) That pursuant to the provisions of Order No. R-4949,
this case was reopened to allow the operators in the subject pool
to appear and show cause why the North Burton Flats-Wolfcamp
Gas Pool should not be developed on 160 -acre spacing units.

(4) That the evidence establishes that one well in the
North Burton Flats-Wolfcamp Gas Pool can efficiently and
economically drain and develop 320 acres.

Case No. _____

Order No. R-_____

(5) That the Special Rules and Regulations promulgated by Order No. R-4949 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) 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, the Special Rules and Regulations promulgated by Order No. R-4949 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the North Burton Flats-Wolfcamp _____ Gas Pool, Eddy County, New Mexico, promulgated by Order No. R-4949, are hereby continued in full force and effect until further order of the Commission.

(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.

CASE 5396: Application of Continental Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to convert its Lynn A Well No. 5, located in Unit A of Section 28, Township 23 South, Range 37 East, Jalmat and Langlie-Mattix Pools, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation through perforations in the overall interval from 3470 to 3679 feet.

CASE 5397: Application of Cities Service Oil Company for pool creation and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for Wolfcamp production for its Government T Well No. 1 located in Unit C of Section 14, Township 20 South, Range 28 East, Eddy County, New Mexico, and the promulgation of temporary special pool rules therefor, including a provision for 320-acre spacing and proration units.

CASE 5398: Application of Pennzoil United, Inc., for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Atoka and Morrow production in the wellbore of its Mobil 12 Federal Well No. 1, located in Unit B of Section 12, Township 23 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico.

CASE 5399: Application of Coastline Petroleum Company, Inc., for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of undesignated Gallup and Basin-Dakota gas production in the wellbore of its Schaik 94 Well No. 1, located in Unit A of Section 26, Township 32 North, Range 8 West, San Juan County, New Mexico.

CASE 5400: Application of Twinlakes Oil Company for amendment of special pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks amendment of the special rules and regulations for the Twin Lakes-San Andres Pool, Chaves County, New Mexico, to permit the drilling of oil wells on gas proration units, the simultaneous dedication of acreage to oil and gas wells, and to limit production from such wells.

CASE 5379: Southeastern New Mexico nomenclature case calling for the creation and extension of certain pools in Lea and Eddy Counties, New Mexico:

(a) Create a new pool in Lea County, New Mexico, classified as an oil pool for Paddock production and designated as the Spencer-Paddock Pool. The discovery well is the Aztec Oil & Gas Company State DS Well No. 3 located in Unit J of Section 24, Township 17 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM
Section 24: SE/4