

CASE 4502: Appli. of SAMEDAN OIL  
CORP. FOR SPECIAL POOL RULES AND  
POOL EXTENSION, LEA COUNTY.

Case Number

4502

Application  
Transcripts.

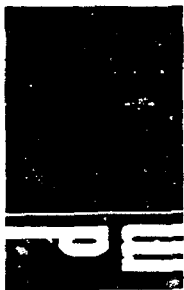
Small Exhibits

ETC.

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IN THE DISTRICT COURT OF THE STATE OF NEW MEXICO  
Santa Fe, New Mexico  
JANUARY 21, 1971  
February 21, 1971

IN THE MATTER OF:

Application of Samelan Oil  
Corporation for special pool  
rules and pool extension,  
Lea County, New Mexico.

Case 4502

REPORT BY: JAMES A. MEIER, EXAMINER

TRANSCRIPT OF HEARING

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1 MR. UTE: Call Case 4502.

2 MR. HATCH: Call Case 4502. Application of Samedan  
 3 Oil Corporation for special pool rules and pool extension,  
 4 Lea County, New Mexico.

5 MR. KELLAHIN: If the Examiner please, Jason  
 6 Kellahin, Kellahin and Fox, Santa Fe, appearing for the  
 7 Applicant.

8 We have one witness I would like to have sworn.

9 (Witness sworn)

10 MR. UTE: Are there other appearances? Have  
 11 you got some exhibits to mark, or are they all marked?

12 MR. KELLAHIN: They are all marked. Here they  
 13 are. We put them up on the board here.

14 MR. UTE: Now is that all of them, both of  
 15 them? Have you got more in here?

16 MR. KELLAHIN: Yes, sir.

17 MR. HATCH: These haven't been stamped.

18 MR. KELLAHIN: Yes, they have. Those you have got  
 19 have been.

20 JOEL T. BLANKENSHIP

21 having been first duly sworn, testified upon his oath as  
 22 follows:

23 DIRECT EXAMINATION

24 BY MR. KELLAHIN:

25 Q Would you state your name, please, sir?

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1 A My name is Joel P. Blankenship. I am employed as  
 2 a geologist by Samedan Oil Corporation in Midland,  
 3 Texas.

4 Q Have you ever testified before the Oil Conservation  
 5 Commission?

6 A No, I have not.

7 Q For the benefit of the Examiner, would you briefly  
 8 outline your education and experience as a  
 9 geologist?

10 A I graduated from Virginia Polytechnic Institute in  
 11 1960 with a B. S. in geology. I worked as a  
 12 petroleum geologist for eleven years, and I have  
 13 worked in New Mexico for the past seven years.

14 I was employed by Amarada Petroleum Corporation  
 15 for five years, and then with Samedan for the last  
 16 year and a half, two years.

17 Q In connection with your work for Samedan Oil  
 18 Corporation, have you done any work in what has been  
 19 designated as the east Norton Wolfcamp Pool area?

20 A Yes, I have.

21 MR. KELLAMIN: Are the witness' qualifications  
 22 acceptable?

23 MR. PUE: Yes, they are.

24 Q (Mr. Kellamin continuing) Mr. Blankenship, would you  
 25 state briefly what is proposed by the applicant in

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1 This case?

2 A We are proposing field rules to be established for the  
 3 East Norton field with eighty acre well spacing and  
 4 vertical limits to be designated from 10,300 feet  
 5 as to 10,646, that is penetrated by the Samedan  
 6 Number 1 Gulf State Well.

7 Q Now, referring to what has been marked as the  
 8 Applicant's Exhibit Number 1, would you step over  
 9 to the board here and discuss the information shown  
 10 on that exhibit?

11 A Exhibit Number 1 is a structure map drawn on top  
 12 of the lower Wolfcamp Reef Zone, showing the  
 13 location of the Norton Field, and the lower left-  
 14 hand side of the map, the North Norton Field and  
 15 the East Norton Area.

16 All three of these area produced from the  
 17 lower Wolfcamp Reef, and there appears to be  
 18 adequate separation between this area and the other  
 19 two areas by virtue of dry holes drilled in between  
 20 here and here and here and here.

21 MR. UZZ: Now, what section is this "here and  
 22 here" in --

23 Q (Mr. Kellahan continuing) Would you designate  
 24 those locations please?

25 A Well, there is -- let's see, okay. There is a dry

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1 hole between the North Morton area and the East  
 2 Morton.

3 It is in -- southwest -- northwest of southwest  
 4 of Section 32, 14 South, 35 East.

5 There is a dry hole in Section -- northwest  
 6 of the northeast of Section 7 and 15 south, 35  
 7 east.

8 This well was structurally low and encountered  
 9 water in the reef zone.

10 MR. UFF: You had one more in there, didn't  
 11 you? One other section?

12 THE WITNESS: This was a producer at one time.  
 13 It is abandoned. This well in Section 6 here, the Texas  
 14 Crude Well was at this time in the reef zone, no verocity.

15 Q (Mr. Kellahin continuing) Basically the three areas  
 16 are producing from the same formation?

17 A Yes. The same stratigraphic interval.

18 Q It is your opinion they are effectively separated?

19 A Yes, sir.

20 Q And the well which has been drilled by the  
 21 applicant in this case has been located in the East  
 22 Morton Pool; is that correct?

23 A The Union Oil Company drilled the Number 1 Owens,  
 24 Section 34, 14 South, 35 East, and it was originally  
 25 designated as the East Morton Pool.

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- 1 Q And a well which has subsequently been drilled by  
 2 Samedan?
- 3 A The Number 1 Gulf State in the northeast northeast  
 4 of Section 4, 15 South, 35 East, and also the Number  
 5 1 Carter, drilled by Samedan, and southwest of the  
 6 southeast quarter of Section 33, 14 South, 35 East.
- 7 Q Did the Commission put them into the East Morton  
 8 Pool?
- 9 A Not as yet.
- 10 Q In your opinion, are they a part of the East Morton  
 11 Pool?
- 12 A We feel that they may be. This Union Number One  
 13 Owens is possibly on a separate cumulation by virtue  
 14 of the different chlorides of the water, at least  
 15 in this well, and the water from the two Samedan  
 16 wells.
- 17 Q And you will give information on those chlorides?
- 18 A Yes, sir. The chlorides that is measured on it  
 19 produced water from the Union well is on the order  
 20 of 12.5 to 13.5 possible different chlorides, sir.
- 21 And the chlorides from the two Samedan wells  
 22 is on the order of thirty-five to forty thousand,  
 23 forty-five thousand.
- 24 Q And that would indicate they are at a separate  
 25 source of supply, in your opinion?



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- 1 A It doesn't prove conclusively, but it is a good
- 2 indication.
- 3 Q Does Samedan have any objection, however, to being
- 4 included in the East Morton Wolfcamp Pool?
- 5 A I don't believe so.
- 6 Q It's not a material point, as far as Samedan is
- 7 concerned?
- 8 A No, it is not.
- 9 Q Now, does that complete your testimony with Exhibit 1?
- 10 A Yes.
- 11 Q Would you turn now to what has been marked as
- 12 Exhibit Number 2, and would you identify that
- 13 exhibit?
- 14 A Exhibit Number 2 is a cross section from the two
- 15 wells labeled One and Two, located in the Morton
- 16 Field.
- 17 Wells Three and Four are located in the North
- 18 Morton Field.
- 19 Wells Five and Six are located -- that is --
- 20 Five is the Samedan Carter Well.
- 21 Six is the Samedan Gulf State Well right here,
- 22 and Seven, Eight and Nine are located -- Seven is
- 23 the Union Number 1 Owens.
- 24 The well designated as Eight is the side track
- 25 hole of the Union Number 1 Owens Eight Whinstock

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1 to the southeast 420 feet.

2 And Well Number 2 that is labeled on the cross  
 3 section is the Union Number 2 Owens, which was a  
 4 dry hole.

5 This cross section shows the -- it is hung on  
 6 a datum of minus 6,000 feet subsea, and it shows  
 7 the relative position of the producing zones in  
 8 the Morton area here, the North Morton area here,  
 9 and the East Morton area over here.

10 And this brown color indicates -- the base of  
 11 the brown color is the approximate oil water contact.

12 The approximate oil water contact for the  
 13 Morton Field is a minus 6350 subsea.

14 The North Morton is approximately 6420 subsea.  
 15 The East Morton, the two Samedan wells, it's  
 16 approximately minus 6536 on the subsea.

17 And then the Union Number 1 Owens here, it is  
 18 a minus 6560 on a subsea.

19 And it appears that going from here in the  
 20 Morton area to the North Morton to the Samedan wells  
 21 to the East Morton Union well, your oil water contact,  
 22 it progressively lowers stepping down to the east,  
 23 and indicating that you do have some separation  
 24 between these various producing areas.

25 Now, earlier you mentioned the vertical limits of the

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1 propose a new pool on the East Morton Pool as it would  
 2 be designated here.

3 What would those limits be?

4 A We are proposing that the vertical limits for the  
 5 East Morton lower Wolfcamp Pool be designated --  
 6 refer to Exhibit 3, please. This is a log of the  
 7 Gulf State Number 1.

8 We are proposing the vertical limits be set  
 9 from stratigraphic equivalent to 10,302 feet on  
 10 this well to 10,546 feet.

11 This well did not penetrate that deep, but the  
 12 second well did, and we were still in the reef at  
 13 that depth.

14 Q Now, referring to what has been marked as Exhibit  
 15 Number 4, would you identify that exhibit?

16 A Number 4 is an electrical log of the Samedan Number  
 17 1 Carter Well. It gives dual stem test data.

18 It has the top of the reef marked, and it also  
 19 shows the perforations from 10,540 to 544.

20 And the two wells, the Number 1 Carter and the  
 21 Number 1 Gulf State are producing from the same zone.

22 Q Now, in general, what is the nature of this  
 23 formation you are producing from?

24 A In our area, in our two wells, the pay zone is a  
 25 medium to coarse sand claystone and dolomite.

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- 1 Q Is it somewhat fractured or has cores in it?
- 2 A We cored above the pay, right above the pay zone,
- 3 in this Carter Well, and it was highly fractured.
- 4 Q All right. Just from the geological point of
- 5 view, Mr. Blankenship, is there any reason that you
- 6 know of that one well would not adequately drain in
- 7 excess of eighty acres?
- 8 A No, sir. It appears to have very good porosity and
- 9 permeability.
- 10 Q From the geological point of view, in your opinion,
- 11 does it make any difference how the wells are
- 12 located in this area?
- 13 Should you have flexible or fixed well locations?
- 14 A Well, we would, I believe, prefer flexible locations.
- 15 Q Is it the nature of this Wolfcamp formation in this
- 16 area to be rather small?
- 17 A Yes, sir, it is. I think they --
- 18 Q That is indicated by the other pools?
- 19 A The Morton and North Morton Pools are an example of
- 20 that.
- 21 Q And do you anticipate, say, from that information,
- 22 that the East Morton would also be quite small?
- 23 A Yes, we do.
- 24 Q Does that complete your discussion of the exhibit?
- 25 A Yes, sir, that completes my discussion.

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1 Q Were Exhibits 1 through 4 prepared by you or under  
 2 your supervision?

3 A Yes, they were.

4 MR. KELLANIN: At this time I would like to  
 5 offer in evidence Exhibits 1 through 4, inclusive.

6 MR. UTZ: Without objection, Exhibits 1 through  
 7 4 will be entered into the record.

8 MR. KELLANIN: That completes the direct  
 9 examination of the witness.

10 CROSS EXAMINATION

11 BY MR. UTZ:

12 Q Mr. Blankenship, you are requesting here an  
 13 extension to the East Morton Pool; is that correct?

14 A That is correct, sir.

15 Q Now, the pool as it is now constitutes -- well, I  
 16 can't read my own hieroglyphics here.

17 Is it three-quarters of Section 4, or all of  
 18 Section 4, one or the other?

19 A Let's see --

20 Q Is that as it originally --

21 A You're talking about the original --

22 Q I think it is all of Section 4. Do you remember?

23 A This well right here was originally designated as  
 24 East Morton.

25 MR. KELLANIN: What well are you pointing to?

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1 THE WITNESS: The Owens, the Union Owens.

2 Q (Mr. Utz continuing) You are asking for 15 South,  
 3 35 East and northwest quarter of Three, south half of  
 4 the northwest quarter of Four.

5 So the pool limits I looked at was only the  
 6 northeast quarter of Four. Does that jibe with --  
 7 then in Section 34, which is the section directly  
 8 above Section 3, you are asking for the northwest  
 9 quarter?

10 MR. KELLAHIN: Southwest quarter --

11 THE WITNESS: Northwest.

12 MR. KELLAHIN: Northwest? Oh, yes.

13 Q (Mr. Utz continuing) And that leaves a gap. Do you  
 14 follow me?

15 A Are you asking me a question?

16 Q Yes. I'm asking you --

17 A I'm sorry.

18 Q -- what it is that you are asking to be put into  
 19 the East Norton Pool.

20 A It's on the --

21 Q When I sketched these out I didn't come out too good,  
 22 so --

23 A Well, let's see. You're asking the southeast quarter  
 24 of Section 22 Township 14 South 35 East.

25 Q 33 Southeast, 33, that would be this in here?

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1 Q Okay. The southwest quarter of Section 21, 14  
 2 South, 25 East, all of Section 1 except the  
 3 southwest quarter of 15 South, 25 East.

4 Q Except the southwest?

5 A Except the southwest quarter. The northwest quarter  
 6 of Section 23, 15, 35.

7 Q Well, then, this advertisement is wrong.

8 MR. HATCH: No. I think some of this that you  
 9 read is already in the pool; correct?

10 MR. KELLAHIN: Correct.

11 THE WITNESS: Yes.

12 MR. HATCH: And the part that is advertised here,  
 13 I think would be the part you are asking to be put into the  
 14 pool that is not presently in the pool; is that correct?

15 THE WITNESS: Yes, sir.

16 MR. KELLAHIN: That is correct. That's correct.  
 17 I would qualify this based on the witness' testimony. We  
 18 are not really concerned whether this is put in the East  
 19 Morton Pool or in a new pool composed of the acreage  
 20 outlined by the witness as -- created as a new pool. One  
 21 or the other.

22 But we're not concerned, really, how you do it.

23 MR. UTZ: Well, then, I looked at the Long  
 24 nomenclature book. But if it's all contiguous, why, it's  
 25 all right with me.

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1 Are there other questions?

2 MR. HATCH: I would say the application is not  
 3 as it is here, so if we are wrong here I'll have to take  
 4 it, but I think this would cover --

5 MR. KELLAHIN: I think it would.

6 MR. HATCH: -- the area.

7 MR. UTZ: Other questions? Witness may be  
 8 excused.

9 MR. KELLAHIN: I would like to call the next  
 10 witness, Mr. Glenn Cope.

11 (Witness sworn)

12 GLENN COPE

13 having been first duly sworn, testified upon his oath as  
 14 follows:

15 DIRECT EXAMINATION

16 BY MR. KELLAHIN:

17 Q Would you state your name, please?

18 A Glenn Cope.

19 Q By whom are you employed and in what position, Mr.  
 20 Cope?

21 A I am employed by Sanedan Oil Corporation as an  
 22 engineer in the West Texas-New Mexico division.

23 Q Have you ever testified before the Oil Conservation  
 24 Commission and made your qualifications a matter of  
 25 record?



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1 A Yes, I have.

2 MR. KELLABIN: Are the witness' qualifications  
 3 acceptable?

4 MR. UTZ: Yes, they are. I don't have his name.  
 5 We were both gabbing here.

6 THE WITNESS: I'm Glenn Cope, G-l-e-n-n C-o-p-e.

7 Q (Mr. Kellabin continuing) Now Mr. Cope, you are  
 8 familiar with the application of Samedan Oil  
 9 Corporation in the case before the Commission at  
 10 this time. I refer you first to Exhibit Number 1,  
 11 which has already been introduced.

12 Do you have any discussion of that exhibit?

13 A Exhibit 1 is a map of the area of interest, showing  
 14 the location of the Morton, the North Morton, and  
 15 the area which we are discussing today, the East  
 16 Morton Field, in which we have drilled and completed  
 17 two wells.

18 Q Do you have any information on the net feet of pay  
 19 on the two wells, the Number 1 Gulf State and the  
 20 Number 1 Carter?

21 A Yes, sir, I do. I would like to offer our Exhibit  
 22 Number 5, the porosity net pay and calculations  
 23 based upon the porimeters as we think they are at  
 24 this time.

25 Q Would you discuss the information that is shown on

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1 Exhibit Number 5.

2 The information shown on Exhibit Number 5 is data  
 3 which we have submitted to analysis of logs on the  
 4 wells that -- Gulf State Number 1 and the Carter  
 5 Well Number 1.

6 This shows an average porosity of approximately  
 7 twelve percent, net pay estimate of twenty-five  
 8 feet, water saturation from log calculations of 44  
 9 percent.

10 We assumed an initial formation volume factor  
 11 of 1.24, based upon the performance of the North  
 12 Morton Field to the Northwest and estimated a recovery  
 13 factor of sixteen percent.

14 Our calculations using these above parameters  
 15 indicate that we should recover in the order of 67.27  
 16 barrels per acre feet primary oil, and that for a net  
 17 pay thickness of 25 feet, our ultimate primary oil  
 18 recovery will be in the order of 1691.75 barrels per  
 19 acre.

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

22 A Exhibit Number 6 is an accumulation of the individual  
 23 well data from the two wells which Canadian Oil  
 24 Corporation has drilled in the East Morton Volcann  
 25 area, the Gulf State Well Number 1 and the Carter Well

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1 Number 1.

2 This information is the elevation of the two  
 3 wells, the total depth, plug back total depth, the  
 4 casing, producing interval which shows that the  
 5 Gulf State Number 1 is producing from open hole, and  
 6 that the Carter Number 1 is producing from perforation  
 7 at 10,540 feet to 10,544 feet.

8 The asterisk is a footnote to show that the  
 9 Carter Number 1 was tested through perforation at  
 10 10,574 to 10,578.

11 And from these perforations we recovered 823  
 12 barrels of water and no oil.

13 These perforations were squeezed with a hundred  
 14 sacks of cement, and in the interval from 10,540 to  
 15 10,544 was perforated, and it is from these  
 16 perforations that the well is presently producing.

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

19 A Exhibit Number 7 is the bottom hole pressure data  
 20 which we have acquired in the East Morton Wolfcamp  
 21 area.

22 The first bottom hole pressure information which  
 23 we have is from a drill stem test on the Gulf State  
 24 Well Number 1, at which we measured bottom hole  
 25 pressure of 4,041 pounds, corrected that to a datum

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1 of minus 6750, which indicated a bottom hole pressure  
2 at that depth of 4072 pounds.

3 On February the 13th, 1971, the two wells, the  
4 Gulf State Well Number 1 and the Carter Well Number 1,  
5 were both shut in, the bottom hole pressures allowed  
6 to stabilize, and the bottom hole measured at the  
7 pressures indicated, and corrected to a datum, showed  
8 a bottom hole pressure of 4039 pounds on the Gulf  
9 State Well Number 1 and 4,041 pounds on the Carter  
10 Number 1, which has a weighted bottom hole average,  
11 indicated a pressure drop of twenty-three pounds in  
12 the reservoir.

13 Q Now, based on that information, is that caused by  
14 cumulative production?

15 A Yes.

16 Q Would that indicate this is a rather small reservoir?

17 A Yes. This would indicate that the reservoir probably  
18 would not cover a large areal extent.

19 Q Now, referring to what has been marked as Exhibit  
20 Number 2, would you identify that, please?

21 A Exhibit Number 2 is a comparison of reservoir  
22 properties in the Norton field, the North Norton  
23 field, and the East Norton field, which we are  
24 concerned with, showing the depth to the top of the  
25 pay zone, average net foot of pay, the average porosity,

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1 the average water saturation, the average permeability  
 2 in millidarcies, the original reservoir pressure, the  
 3 saturation pressure as measured from bottom hole sample  
 4 analyses, the original solution gas oil ratio, the  
 5 initial formation volume factor, et cetera.

6 The data was assembled to show the similarity  
 7 between the fields in the area.

8 We feel like that our area of interest will  
 9 more closely approximate the recoveries experienced  
 10 in the North Morton fields, due to the similarity  
 11 between the unsaturated nature of the crude and the  
 12 gas oil ratio.

13 Q The gravity of the crude is substantially the same  
 14 in all three, is it not?

15 A That is true.

16 Q Now, you show that the permeability is not available  
 17 for the East Morton field.

18 Would you anticipate it would be substantially  
 19 the same as the North Morton?

20 A We feel that the permeability in the East Morton  
 21 area will probably be higher than that average in the  
 22 North Morton field, due to the performance of the wells.

23 Q The present history of the reservoir to date would  
 24 indicate a higher permeability; is that correct?

25 A That is correct.

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1 Q And is that permeability in your opinion -- without  
 2 regard to any other factors, would one well adequately  
 3 drain eighty acres just on the permeability?

4 A I feel that one well would adequately drain in excess  
 5 of eighty acres.

6 Q Now, what is the producing mechanism in this pool?  
 7 Is it a solution gas drive?

8 A Well, in all of the fields of this nature in the area  
 9 we find that all of the fields have produced by a  
 10 solution gas drive mechanism, and that most of  
 11 these fields are closed systems, and produced by  
 12 this solution gas drive.

13 And this is the recovery mechanism which we  
 14 anticipate in the East Morton Wolfcamp Pool.

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

17 A Exhibit Number 9 is a comparison of the economics  
 18 for various well spacing patterns, which the field  
 19 could be developed on.

20 The data given shows the actual value that we  
 21 have received for the oil, three dollars and twenty  
 22 cents per barrel, after production taxes, the net  
 23 interest of the average working interest lease in the  
 24 area, the production tax, the estimated lifting cost  
 25 and the well investments.

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1 Well investments that we list here is the average  
2 of the two wells which we have drilled and equipped  
3 so far, with an estimate of \$10,000 to replace the  
4 well on artificial lift.

5 Q Now, based on the information shown on this exhibit,  
6 would you recommend the development of this pool on  
7 a forty acre spacing?

8 A No, sir, I would not.

9 Q Would it be profitable to do so?

10 A No. Placing the wells on forty acre spacing would  
11 result in a dollar loss for the operator.

12 The three columns are calculated as the field  
13 is presently developed. In the first column were only  
14 two producing wells and one dry hole, or one hole that  
15 was low and non productive in the reef zone, showing  
16 the recoverable oil based upon the information that  
17 we have at present, and showing the profit to  
18 investment ratio under the present situation where  
19 we have two wells in the field.

20 The second column is based upon a well spacing  
21 of eighty acres, showing a profit to investment  
22 ratio of .44 to one.

23 The third column, of course, shows the economics  
24 for a forty acre spacing which results in a loss.

25 Q And your second and third columns are based on a

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1 calculation of Well Number 1 and Well Number 2?

2 A That's correct.

3 Q Therefore, your first column is considered as none  
4 wells would be drilled?

5 A That's true.

6 Q Now, referring to the next two exhibits together,  
7 Exhibit 10 and Exhibit 11, would you discuss the  
8 information that is shown on those two exhibits?

9 A Yes, sir. We have shown that to develop the field  
10 on any less than eighty acre spacings would result  
11 in a dollar loss, so the question arises, can we  
12 adequately drain eighty acre tracts with one well.

13 The Exhibit Number 10 shows the distance between  
14 the Carter Well Number 1 and the Gulf State Well  
15 Number 1.

16 I believe that in order to show that one well  
17 will drain 160 acres, it is necessary to show  
18 pressure communication for a distance of 1220 feet  
19 or so, and this plat is to illustrate that there is a  
20 distance of 1600 feet between the Carter Number 1 and  
21 the Gulf State Well Number 1.

22 Q Now, why did you put the Canadian Anarada State Number  
23 1 on that exhibit? What is the significance of that?

24 A Since there were three wells in the area of interest,  
25 in case anyone should be interested, we went ahead



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1 and put it on for --  
 2 Q Just to show the distance?  
 3 A Yes.  
 4 Q Actually, the well was not produced; is that correct?  
 5 A That is correct. It was nonproductive in the reef  
 6 zone.  
 7 Q So it would have no effect on the other two wells?  
 8 A That's correct.  
 9 Q Now you have shown the distance between the two wells  
 10 as being 1600 feet.

11 Did you run a pressure survey, then, on those  
 12 two wells?

13 A Yes.

14 Q That is shown on Exhibit Number 11?

15 A That's correct. Number 11 is a graph of the results  
 16 of an interference test which we conducted on the  
 17 two wells.

18 Both wells, the Gulf State Well Number 1 and the  
 19 Carter Well Number 1 were shut in and allowed to  
 20 stabilize.

21 The Gulf State Well Number 1 was produced with  
 22 a bottom hole pressure, bombed on bottom, and the  
 23 Carter Well Number 1 was left shut in with a bottom  
 24 hole pressure bomb at the bottom of the well, and  
 25 after four hours, the graph illustrates that the bottom

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1 hole pressure on the Carter Well Number 1, which was  
 2 shut in, began to decline, as the Gulf State Well  
 3 Number 1 was produced. Thus showing direct communica-  
 4 tion between the two wells.

5 Q Over what period of time did you run this test, then?

6 A This test was run over a seventy hour period. However,  
 7 we picked up communication, pressure communication,  
 8 within four hours.

9 Q And what pressure drop was ultimately achieved on it?

10 A Well, the Gulf State Well Number 1 was produced.  
 11 The bottom hole pressure on the Carter Well Number 1  
 12 dropped to a total of eleven pounds.

13 Q And does that to you, as an engineer, indicate  
 14 there was adequate communication indicating that one  
 15 well would drain in excess of eighty acres?

16 A That is correct.

17 Q Would it be Samedan's position that eighty acre  
 18 spacing should be instituted in this pool?

19 A Yes.

20 Q Would you possibly want to come back at a later  
 21 date, based on further information, and apply for even  
 22 wider spacing, possibly?

23 A Yes, we possibly would.

24 Q That would be a possibility? So you don't want to  
 25 foreclose that; is that correct?

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1 A That's correct.

2 Q Now, in the application filed with the Commission,  
3 it was proposed that pool rules be adopted.

4 Does Samedan have a recommendation on those  
5 pool rules?

6 A They recommend ---

7 Q They recommend pool rules similar to those in the  
8 North Morton, or the Morton pool, rather?

9 A Well, we recommend that we be granted eighty acre  
10 spacings with the option to drill on either end of  
11 the eighty acre tract.

12 Q Would you limit the direction in which the eighty  
13 acres would lie? Would they run north, south, east  
14 or west, or in any direction?

15 A At this time we are asking for flexibility.

16 Q Flexibility both as to the direction of the unit and  
17 the well location?

18 A That is correct.

19 Q And drill to either end of the eighty?

20 A Yes.

21 Q And that is similar to the rules adopted in the  
22 Morton pool?

23 A Yes.

24 MR. WHITMAN: If the Examiner please, we have  
25 drawn up some new tendations which are substantially

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1 similar to the Norton Decl. rules, which we don't need to,  
 2 I believe, offer as an exhibit. However, we would like to  
 3 leave them with you.

4 Q (Mr. Kellahan continued) Do you have anything to add,  
 5 Mr. Cone?

6 A No, sir, I do not.

7 MR. KELLAHAN: If the Examiner please, were  
 8 Exhibits 5 through 11 prepared by you or under your  
 9 supervision?

10 THE WITNESS: Yes, they were.

11 MR. KELLAHAN: At this time we would like to  
 12 offer in evidence Exhibits 5 through 11.

13 MR. WITZ: Without objection, Exhibits 5 through  
 14 11 will be entered into the record of this case.

15 MR. KELLAHAN: If the Examiner please, we do  
 16 have letters here from offset operators, the Perry R. Bass,  
 17 W. A. Moncrief, and the Ralph Lowe Estate. Copies of some  
 18 of these may already be in the Commissioner's files, but these  
 19 state positions in support of the application of Samadan Oil  
 20 Corporation, and we would like to leave them with the  
 21 Commission.

22 And that completes our direct testimony.

23 To correct my statement, Perry Bass and Moncrief  
 24 are joint owners with Samadan.

25

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CROSS EXAMINATION

BY MR. UZZ:

Q Mr. Cone, referring to your Exhibit Number 11, let's see if I understand this correctly. Was the Gulf State stabilized at the time you turned it on and started flowing it?

A Yes, sir. Both the Gulf State and the Carter were stabilized at the time we opened the Gulf State up.

Q Now, how much time had the Gulf State been shut in?

A Let me -- Gulf State had been shut in for fifty-five minutes.

Q And that is time enough to stabilize the well in this pool?

A Yes, sir, it is. This pool has excellent permeability, and the well stabilized within approximately ten minutes at that pressure.

MR. MATTHEWS: It might be of interest to you, just as -- we lost circulation in this reef zone in all three wells, and what we would say a very bad loss circulation condition in this reef zone in each well.

It was, as a matter of interest -- the bid actually dropped three feet in the Gulf State, dropped or drilled without weight for fourteen feet in the Anarada State, and three different occasions it drilled less than half a minute a foot for several feet through the Carter Number 1.

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1                   the well would have circulation comes  
 2 through the well.

3                   MR. WIT: Would you give the reporter your name?

4                   MR. MATTHEWS: Mr. Cliff Matthews with Saredar.

5                   Q           (Mr. WIT continuing) This communication test was run,  
 6 then, for a little over five hours?

7                   A           A total of seventy hours.

8                   Q           Seventy hours? Okay.

9                   A           The wells would stabilize before we could get the  
 10 bottom hole pressure bottom to top to shut them down.

11                   We checked both wells for thirty minutes to  
 12 assure that the wells had stabilized.

13                   Q           You're not asking for a temporary order on this.

14                   You're asking for a permanent order?

15                   A           That's correct.

16                   MR. KELLAMIN: That's correct. We feel that  
 17 the evidence is sufficient to support a permanent order.

18                   Any additional information, we feel, would  
 19 probably support wider spacing.

20                   MR. WATCH: Do you want this temporarily, then,  
 21 til you come back?

22                   MR. WIT: Til you come back to show us? Are there  
 23 other questions of the witness? Witness may be excused.

24                   Statements?

25                   Let's take a coffee break.

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25I N D E XWITNESSPAGE

JOHN T. PLAMENOWICZ

Direct Examination by Mr. Kellahin

2

Cross Examination by Mr. Utz

11

GLENN COPE

Direct Examination by Mr. Kellahin

14

Cross Examination by Mr. Utz

27

E X H I B I T S

Applicant's Exhibits 1 through 11

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1 STATE OF NEW MEXICO )  
 2 ) ss:  
 3 COUNTY OF BERNALILLO )

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

10 Linda Malone  
 11 COURT REPORTER

12 I do hereby certify that the foregoing is  
 13 a true and correct copy of the original.

14 4502  
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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. 4502  
Order No. R-4111

APPLICATION OF SAMEDAN OIL CORPORATION  
FOR SPECIAL POOL RULES AND POOL EXTEN-  
SION, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 24, 1971, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 2nd day of March, 1971, 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, Samedan Oil Corporation, seeks the extension of the horizontal limits of the East Morton-Wolfcamp Pool, Lea County, New Mexico, to include the following-described area:

TOWNSHIP 14 SOUTH, RANGE 35 EAST, NMPM  
Section 34: NW/4

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM  
Section 3: NW/4  
Section 4: S/2 and NW/4

(3) That the horizontal limits of the East Morton-Wolfcamp Pool should not be extended to include the above-described area as said area has not been developed.

CASE No. 4502  
Order No. R-4111

(4) That the applicant further seeks the promulgation of special rules and regulations governing the East Morton-Wolfcamp Pool, including a provision for 80-acre spacing and proration units.

(5) That the applicant has established that one well in the East Morton-Wolfcamp Pool can efficiently and economically drain and develop 80 acres.

(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, special rules and regulations providing for 80-acre spacing units should be promulgated for the East Morton-Wolfcamp Pool.

(7) That the special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

IT IS THEREFORE ORDERED:

That Special Rules and Regulations for the East Morton-Wolfcamp Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
EAST MORTON-WOLFCAMP POOL

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

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

-3-

CASE No. 4502

Order No. R-4111

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 comprising a governmental quarter-quarter section or lot, or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Land Surveys. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

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

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

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the East Morton-Wolfcamp Pool or in the Wolfcamp

-4-

CASE No. 4502  
Order No. R-4111

formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before April 1, 1971.

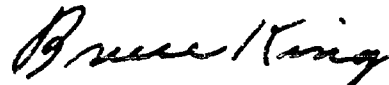
(2) That, pursuant to Paragraph A. of Section 65-3-14.5, MMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the East Morton-Wolfcamp Pool shall have dedicated thereto 80 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing 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 80 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the effective date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the East Morton-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.



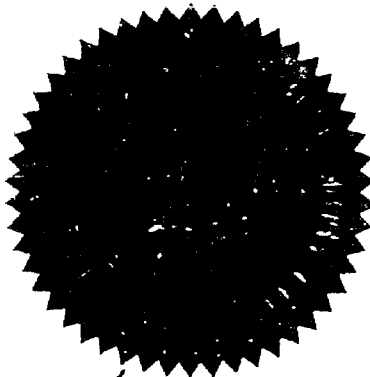
(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



BRUCE-KING, Chairman

  
ALEX J. ARMIJO, Member  
A. L. PORTER, Jr., Member & Secretary

esr/

Case 4502

Heard. 2-24-71

Rec. 2-25-71

Grant Samdani 80 Acres pool  
rules for the E. Morton - Wolfcamp  
Lease Horizontal Limitation they  
are as this includes all completed  
wells.

Use Morton - Lower Vol. Rules  
for this Pool.

Grant. Perm. order.



Ruska

ORDER OF THE COMMISSIONER

Lower Wolfcamp Pool  
Lea County, New Mexico

(1) That the applicant, Sunadon Oil Corporation, seeks the creation of a new oil pool for Wolfcamp production and the promulgation of temporary special rules and regulations governing said pool, including a provision for 80-acre spacing.

(2) That the applicant's Gulf State No. 1 Well located in Unit "A" of Section 4, Township 15 South, Range 35 East, N.M.P.M., Lea County, New Mexico, has discovered a separate common source of supply which should be designated the \_\_\_\_\_ Lower Wolfcamp Pool; that the vertical limits of said pool should be the zone encountered in said well between 79,311 and 10,646 feet; and that the horizontal limits of said pool should be as follows:

Township 15 South, Range 35 East, N.M.P.M.  
Section 33 - SW/4  
Section 34 - SW/4

Township 15 South, Range 35 East, N.M.P.M.  
Section 4 - All - **Except SW/4**  
Section 3 - NW/4

(3) That said separate common source of supply has previously been designated as an extension to the East Morton Pool. A new pool should be created as set out above and designated the \_\_\_\_\_ Lower Wolfcamp Pool as set out above.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 80-acre spacing units should be promulgated for the \_\_\_\_\_ Lower Wolfcamp Pool.

(5) That the Commission, created by the Department of Mines, should provide for limited well locations in order to prevent over-drilling of the pool and protect correlative rights.

(6) That the Commission, created by the Department of Mines, should establish for a separate pool a limited number of well locations for the subject pool to prevent over-drilling of the pool and protect correlative rights and to otherwise prevent waste and protect correlative rights.

(8) That a new pool in Lea County, New Mexico, classified as an oil pool for Lower Wolfcamp production is hereby created and designated the \_\_\_\_\_ Lower Wolfcamp Pool, with vertical limits comprising the zone encountered between 10,302 and 10,546 feet in the Samadan Oil Corporation Gulf State No. 1 Well, located in Unit "A", Section 4, Township 15 South, Range 36 East, N.M.P.M., Lea County, New Mexico and horizontal limits comprising the following lands:

Township 15 South, Range 35 West, N.M.P.M.  
Section 4 - All  
Section 3 - 15W/4

SPECIAL RULES AND REGULATIONS  
FOR THE  
WOLF CAMP POOL



Article 12 shall be amended to read: "The purpose of a proposed well shall be to produce oil or gas from the formation in which it is to be drilled."

Article 13 shall be amended to read: "The Secretary-Director may grant an exception to the requirements of Rule 4 with respect to the location of a well if it has been filed for an unorthodox location, necessitated by the geological conditions of the completion of a well previously drilled in the same horizon. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application."

RULE 6. A standard proration unit (79 through 81 acres) shall be assigned an 80-acre proportional factor of 5.67 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That any well presently drilling to or completed in the \_\_\_\_\_ Lower Wolfcamp Pool or in the Lower Wolfcamp formation within one mile thereof that will not comply with the well location requirements of Rule 4 is hereby granted an exception to the requirements of said rule. The operator shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before \_\_\_\_\_, 1971.

(2) That each well presently drilling to or completed in the \_\_\_\_\_ Lower Wolfcamp Pool or in the Lower Wolfcamp formation within one mile thereof shall operate a 40-acre allowable as if a 20-acre well if the 20-acre to the well has been filed with the Commission.

(3) That this case shall be argued at an executive hearing in February, 1972, at which time the operator shall be allowed to present evidence and show cause why the \_\_\_\_\_ Lower Wolfcamp Pool should not be developed as 40-acre proration units.

County \_\_\_\_\_ Pool \_\_\_\_\_

TOWNSHIP	Range				NMPM	
6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	
6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

THE SUPERIOR OIL COMPANY

P. O. BOX 1900  
MIDLAND, TEXAS 79701

February 19, 1971

*File*

Mr. D. S. Nutter  
State Land Office  
Chief Engineer NMOCC  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: East Morton-Wolfcamp Pool  
Pool Extension and Pool Rules (Case 4502)  
Lea County, New Mexico

Dear Sir:

The Superior Oil Company is lessee of certain lands located in Sections 33 and 34, T14S, R35E, and Section 3, T15S, R35E, Lea County, New Mexico, and we support Samedan Oil Corporation's application to develop the Wolfcamp Zone on 80 acre spacing with wells to be located in center of any quarter quarter section with the standard unit consisting of N/2, S/2, E/2, or W/2 of a governmental quarter section.

Yours very truly,

THE SUPERIOR OIL COMPANY

*Terry Clay*  
Terry Clay

TDC/es

File  
SAMEDAN OIL CORPORATION  
2207 WILCO BUILDING  
MIDLAND, TEXAS 79701

100-111000-22  
JAN 28 1971  
TDC

January 27, 1971

RECEIVED  
JAN 28 1971

Superior Oil Company ✓  
Attention: Raymond Parker  
P. O. Box 1900  
Midland, Texas 79701

THE SUPERIOR OIL CO.  
MIDLAND LAND DEPT.

Union Oil Company of California  
Attention: C. W. Curry  
300 Security National Bank Building  
Roswell, New Mexico 88201

RE: East Morton Wolfcamp Pool ✓  
Lea County, New Mexico

Gentlemen:

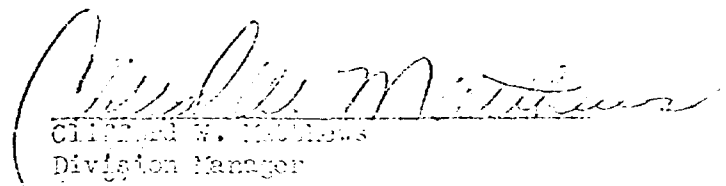
The New Mexico Oil Conservation Commission has set February 24 as the hearing date for rules and regulations pertaining to the East Morton Wolfcamp Pool. Samadan will be represented by Jason W. Kellahin of the Kellahin and Fox Law Firm in Santa Fe, New Mexico.

I have indicated earlier that it is our intention to request rules similar to the rules and regulations for the Morton Lower Wolfcamp Pool. If you concur with our recommendation, we would very much appreciate your informing the Commission either by having a representative present or by letter, stating your position to the Commission.

If any additional information is needed, please inform this office.

Very truly yours,

SAMEDAN OIL CORPORATION

  
Clifford W. Thomas  
Division Manager

CWM/vg

XO: D. H. Collins, Jr. ✓  
d. S. Machin

OIL PRODUCER

W. A. MONCRIEF, JR.

517 MIDLAND TOWER BUILDING  
MIDLAND, TEXAS 79701

February 18, 1971

TELEPHONE 682-1762

21 FEB 19 1971

*Cos*  
*1500*

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

Re: East Morton Wolfcamp Pool  
Lea County, New Mexico

Gentlemen:

By this letter you are hereby informed that the W. A. Moncrief Oil Interest accepts and concurs in the temporary field rules request to be presented by the Samedan Oil Corporation involving the Samedan Oil Corporation #1 Gulf-State located in Section 4, Township 15 South, Range 35 East, Lea County, New Mexico, and other producing or drilling wells in the immediate area.

Very truly yours,

W. A. MONCRIEF

*Richard A. Mendenhall*  
By: Richard A. Mendenhall  
Manager

RAM:bjg

3. A 480-acre non-standard gas proration unit comprising the W/2 and the NE/4 of Section 13, Township 23 South, Range 36 East, to be dedicated to Texas Pacific State "A" Account 1 Wells Nos. 20, 21, and 22.
4. A standard 640-acre gas proration unit comprising all of Section 11, Township 22 South, Range 36 East, to be dedicated to Texas Pacific State "A" Account 2 Wells Nos. 14, 36, and 42.
5. A 480-acre non-standard gas proration unit comprising the E/2 of Section 8, and the SW/4 of Section 9, Township 22 South, Range 36 East, to be dedicated to Texas Pacific State "A" Account 2 Wells Nos. 38, 43 and 56.

CASE 4504: Application of Humble Oil & Refining Company for the reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the general rules and regulations for prorated gas pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, to permit the reinstatement of underproduction accumulated by its Greenwood Well No. 11 located in Unit I of Section 9 and its Penrose Well No. 1 located in Unit B of Section 13, Township 22 South, Range 37 East, Blinbry Gas Pool, Lea County, New Mexico, and cancelled January 1, 1971.

CASE 4505: Application of Atlantic Richfield Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates-Seven Rivers formation in the perforated interval from 2978 feet to 3350 feet in its Federal Well No. 2 located in Unit N of Section 9, Township 20 South, Range 33 East, West Teas Yates-Seven Rivers Pool, Lea County, New Mexico.

CASE 4506: Application of Atlantic Richfield Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pennsylvanian formation in the perforated interval from 10,278 feet to 10,442 feet in its Eidson "C" WN Well No. 3 located in Unit F of Section 26, Township 16 South, Range 35 East, Shoe Bar-Pennsylvanian Pool, Lea County, New Mexico.

CASE 4507: Application of Atlantic Richfield Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the perforated interval from 13,690 feet to 13,726 feet in its Lea State 396 Well No. 3 located in Unit G of Section 35, Township 15 South, Range 36 East, Dean-Devonian Pool, Lea County, New Mexico.

CASE 4502: Application of Samedan Oil Corporation for special pool rules and pool extension, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the East Morton-Wolfcamp-Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units. Applicant further seeks extension of the horizontal boundaries of said pool to include the following:

(Case 4502 continued)

TOWNSHIP 14 SOUTH, RANGE 35 EAST  
SECTION 34: NW/4

TOWNSHIP 15 SOUTH, RANGE 35 EAST  
Section 3: NW/4  
Section 4: S/2 and NW/4

- CASE 4503: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Penroc Oil Corporation and all other interested persons to appear and show cause why the intentional deviation of Penroc Oil Corporation State Well No. 2, having a surface location 360 feet from the South line and 330 feet from the East line of Section 28, Township 17 South, Range 28 East, Empire-Abo Pool, Eddy County, New Mexico, to a bottom hole location 123 feet from the South line and 149 feet from the East line of said Section 28 should be approved and why the allowable assigned to said well should not be reduced to offset any advantage gained by said bottom-hole location over other producers.
- CASE 4508: Application of Continental Oil Company for the assignment of discovery allowable and promulgation of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of an oil discovery allowable to its SEMU Well No. 10 located in Unit F of Section 29, Township 20 South, Range 38 East, Warren-Devonian Pool, Lea County, New Mexico. Applicant further seeks the promulgation of special rules for said pool, including provisions for 80-acre spacing units.
- CASE 4509: Application of Continental Oil Company for an amendment of Order No. R-2016, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2016 to permit the commingling of Paddock oil production from its Mitchell A and B leases in Sections 17, 18, 19 and 20, Township 17 South, Range 32 East, Maljamar-Paddock Pool, Lea County, New Mexico, without first separately metering the production from said leases.
- CASE 4510: Application of Amerada Hess Corporation for amendment of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-510, which order established special pool rules for the Bronco Siluro-Devonian Pool, Lea County, New Mexico, to permit the assignment of allowable to wells in said pool on the basis of the statewide oil allowable rules and to no longer require the taking of bottom-hole pressure tests.

PERRY R. BASS

DIVISION LAND & GEOLOGICAL OFFICE

POST OFFICE BOX 171

MIDLAND, TEXAS 79701

February 22, 1971

Re: East Morton Wolfcamp Area  
Lea County, New Mexico

Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico 87501

Dear Sir:

This letter is to advise you Perry R. Bass concurs with Samedan Oil Corp. in their request of temporary field rules setting forth 80-acre spacing covering the above area.

Generally, we favor similar temporary field rules governing the Morton Lower Wolfcamp Pool.

Yours very truly,

*Bill Seltzer*  
Bill Seltzer

BS/sb

cc: Mr. Pat Duncan



February 18, 1971

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

Re: East Morton Wolfcamp Pool  
Lea County, New Mexico

Gentlemen:

By this letter you are hereby informed that the W. A. Moncrief Oil Interest accepts and concurs in the temporary field rules request to be presented by the Samedan Oil Corporation involving the Samedan Oil Corporation #1 Gulf-State located in Section 4, Township 15 South, Range 35 East, Lea County, New Mexico, and other producing or drilling wells in the immediate area.

Very truly yours,

W. A. MONCRIEF

*Richard A. Mendenhall*  
By: Richard A. Mendenhall  
Manager

RAN:bjg

*Ralph Lowe Estate*

*Phone 684-7441*

*Box 832 Midland, Texas 79701*

February 19, 1971

Samedan Oil Corporation  
2207 Wilco Building  
Midland, Texas 79701

Attention of Mr. Clifford W. Matthews

Field Rules Hearing  
East Morton Wolfcamp Pool  
Lea County, New Mexico

Gentlemen:

The Ralph Lowe Estate would go along with the field rules that  
Samedan Oil Corporation would favor for the above-mentioned pool.

Very truly yours,

RALPH LOWE ESTATE

  
Charles L. Morgan, Jr.

CLM:jl

EAST MORTON WOLFCAMP FIELD  
Lea County, New Mexico

VOLUMETRIC OIL RESERVE ESTIMATES

BASIC DATA:

Porosity	12 %
Net Pay	25
Water Saturation	44
Initial F.V.F.	1.24
Recovery Factor	16 %

CALCULATIONS:

$$\begin{aligned}\text{Ultimate Oil Recovery} &= \frac{7758(\phi)(1-S_w)(R.F.)}{Boi} \\ &= \frac{7758(.12)(1-.44)(.16)}{1.24} \\ &= 67.27 \text{ BBL/ACRE-FT.}\end{aligned}$$

For a Net Pay Thickness of 25'

$$\begin{aligned}\text{Ultimate Oil Recovery} &= (67.27 \text{ Bbl./Ac.-Ft.})(25') = 1681.75 \\ &= 1681.75 \text{ BBL/ACRE}\end{aligned}$$

BEFORE EXAMINER UTZ	
OIL COMPANY	5
CASE NO.	4562

EAST MORTON WOLFCAMP FIELD  
Lea County, New Mexico  
Individual Well Data

	GULF-STATE #1	CARTER #1
Elev.	4015 K.B.	4024 K.B.
T. D.	10,546'	10,838'
P.B.T.D.	10,546'	10,774'
Casing	5½" @ 10,510' w/450 sx.	5½" @ 10,824' w/450 sx.
Prod. Interval	Open Hole 10,490-546'	10,540' - 10,544'*
Treatment	Natural	250 Gal. 15% Acid
Date	--	1-20-71
Init. Pote.	309 B.O. & 50 B.W. GOR=427:1 18/64"A.C. F.T.P.=310 P.S.I.G. Gravity-45.3°	389 B.O. & 74 B.W. GOR=23:1 18/64"A.C. F.T.P.=270 Gravity-42.2° API
1-71 Prod.	11,993	1922 B.O. & 869 B.W.
Cum. Prod. 2-1-71	36,928	1922

TOTAL FIELD CUMULATIVE 2-1-71: 37,850 Barrels Oil

\* 10,574 - 578' - Rec. 823 B.W. & No. Oil

Squeezed Perfs w/100 sx.

BEFORE EXAMINER UTZ
OIL COMMISSION
<i>San Antonio</i> 11-1-6
CASE NO. 4502

EAST MORTON FIELD  
LEA COUNTY, NEW MEXICO

Bottom Hole Pressure Data

<u>WELL</u>	<u>DATE</u>	<u>MEASURED BHP @ -6550 DATUM</u>	<u>CALCULATED RESERVOIR BHP</u>
Gulf State No. 1	9-16-70	4041 PSIG	4,073
	DST No. 2 Gauge @ 10,476'		
	2-13-71	4000 PSIG	4,039
Carter No. 1	2-11-71	3986 PSIG	4,041

BEFORE EXAMINER UTZ  
OIL CONSERVATION DIVISION  
CASE NO. \_\_\_\_\_

BEFORE EXAMINER UTZ  
OIL CONSERVATION DIVISION  
*Smith* EXHIBIT NO. 7  
CASE NO. 4502

EAST MORTON WOLFCAMP FIELD  
LEA COUNTY, NEW MEXICO

Comparison of Reservoir Properties

	<u>MORTON FIELD</u>	<u>N. MORTON FIELD</u>	<u>E. MORTON FIELD</u>
Depth to Top of Pay	10,364'	10,435'	10,408'
Net Pay, Ft.	40'	12'	25'
Porosity, %	9.6	10.7	12
Water Saturation, %	21%	30%	44%
Permeability, Mo.	34	41.7	N.A.
Original Reservoir Pressure, PSIG	4,054' (-6290')	4,044' (-6400')	4,073' (-6550')
Saturation Pressure, PSIG	2,552	858	N.A.
Original Solution GOR SCF/STB	1,555	377	N.A.
Initial Formation Volume Factor, Bbl./Bbl.	1.899	1.236	N.A.
Stock Tank Oil Gravity, API @ 60° F.	45.1	44.8	44
Gas Specific Gravity	.976	0.78	N.A.
Reservoir Temperature, F.	154	157	157
Initial Reservoir Oil Viscosity, CP	0.253	0.709	N.A.

BEFORE EXAMINER UTZ	
OIL CONSERVATION	
Sample Examined	8
CASE NO.	45072

EAST MORTON WOLFCAMP FIELD  
LEA COUNTY, NEW MEXICO

Economics for Various Spacing Patterns

DATA

Net Oil Value After Production Taxes - \$3.20 per barrel

Net Interest After Royalty - 76.7%

Production Taxes - .07087

Lifting Costs - \$6,000 per year - Well flowing  
\$9,600 per year - Well artificial lift

Well Investment - \$201,790 - Drill and Equip  
10,000 - Artificial Lift Equipment  
\$211,790

\$105,000 - Dry Hole Cost

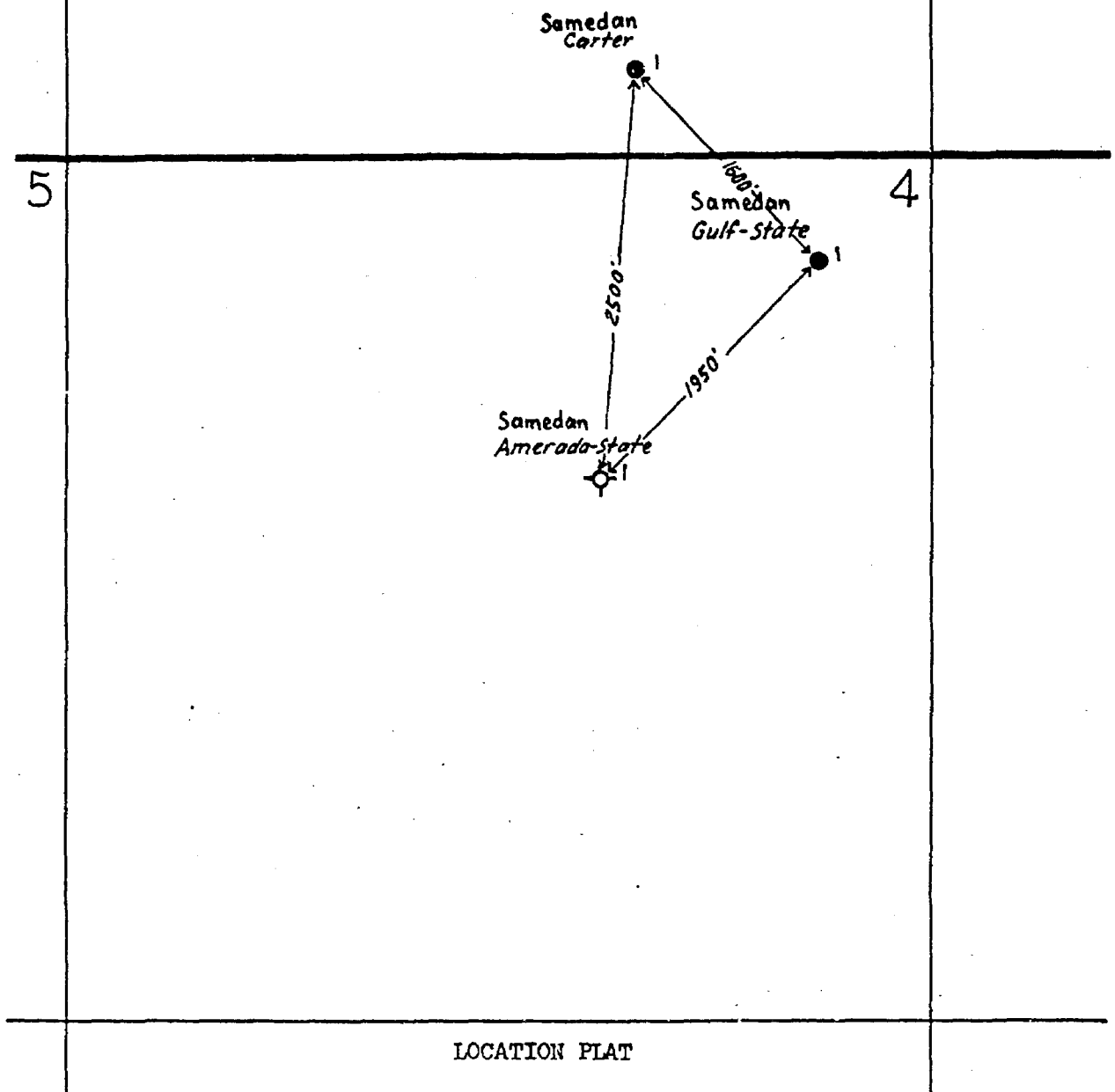
ECONOMICS

	<u>Present</u>	<u>WELL SPACING</u>	
		<u>80 Acre</u>	<u>40 Acre</u>
1. Recoverable Oil (Barrels)	379,431	126,476	63,238
2. Net Oil Revenue (2.45)	\$929,606	\$309,866	\$154,933
3. Operating Costs	\$ 67,200	\$ 48,000	\$ 38,400
4. Net Operating Revenue, After Taxes and Royalty	\$862,406	\$305,066	\$116,533
5. Investment	\$211,790	\$211,790	\$211,790
6. Profit or Loss	\$650,616	\$ 93,276	(\$ 95,257)
7. Profit to Investment Ratio	3.07	0.44:1	(Loss)

BEFORE EXAMINER UTZ
OIL COMMISSION
<i>Davidson</i>
CASE NO. <u>4502</u>

R-35-E

T  
14  
S



T  
15  
S

LOCATION PLAT

SAMEDAN OIL CORPORATION  
EAST MORTON-WOLFECAMP POOL  
Lea County, New Mexico

scale 1" = 1000'

BEFORE EXAMINER UTZ	
OIL CONSERVATION	
<u>Samedan</u>	EXHIBIT <u>10</u>
CASE NO.	<u>14502</u>



JASON W. KELLAHIN  
ROBERT E. FOX

KELLAHIN AND FOX  
ATTORNEYS AT LAW  
54 1/2 EAST SAN FRANCISCO STREET  
POST OFFICE BOX 1769  
SANTA FE, NEW MEXICO 87501

TELEPHONE 982-4315  
AREA CODE 505

January 21, 1971

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

*Case 4302*

Gentlemen:

Enclosed is the application of Samedan Oil Corporation for adoption of pool rules for the East Morton pool, Lea County, New Mexico.

It is requested that this application be set before the Commission's examiner at the next available examiner hearing.

Yours very truly,

*Jason W. Kellahin*  
Jason W. Kellahin

jwk;ls

DOCKET MAILED

Date 2-11-71

81  
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BEFORE THE  
OIL CONSERVATION COMMISSION OF NEW MEXICO

IN THE MATTER OF THE APPLICATION  
OF SAMEDAN OIL CORPORATION FOR  
ADOPTION OF POOL RULES, EAST  
MORTON-WOLFCAMP POOL, LEA COUNTY,  
NEW MEXICO

*Case 4502*

A P P L I C A T I O N

Comes now Samedan Oil Corporation and applies to the Oil Conservation Commission for and order adopting pool rules for the operation of the East Morton-Wolfcamp Pool, Lea County, New Mexico, with a provision for 80-acre spacing and proration units, and in support thereof would show the Commission:

1. Applicant has completed its Gulf State Well located 660 feet from the North and East lines of Section 4, Township 15 South, Range 35 East, N.M.P.M., and is currently completing a well located 510 feet from the South line, and 1830 feet from the East line of Section 33, Township 14 South, Range 35 East, for production from the East Morton-Wolfcamp formation.

2. Applicant proposes the adoption of pool rules for the development and operation of the East Morton-Wolfcamp Pool, such rules to include a provision for 80-acre spacing and proration units with the assignment of an 80-acre proportional factor for the assignment of allowables, with each well to be located on a standard unit consisting of the N/2, S/2, E/2 or W/2 of a governmental quarter section, wells to be located within 150 feet of the center of a governmental quarter-quarter section or lot, provided that the drilling of

a well on each of the quarter-quarter sections in the unit should not be prohibited. Any wells drilled or drilling that will not comply with the well location requirements should be granted an exception to the requirements of the well location rule.

3. Applicant proposes that the East Morton-Wolfcamp Pool consist of the following lands:

Township 14 South, Range 35 East, N.M.P.M.

Section 33 - SE/4

Section 34 - N/2, SW/4

Township 15 South, Range 35 East, N.M.P.M.

Section 4 - All

Section 3 - NW/4

and such other lands heretofore included in the Pool.

4. The evidence available indicates that one well will efficiently and economically drain and develop not less than 80 acres in the East Morton-Wolfcamp Pool.

5. To prevent the loss caused by the drilling of unnecessary wells, to prevent waste, and protect correlative rights, special rules and regulations providing for 80-acre spacing and proration units should be adopted for the East Morton-Wolfcamp Pool.

Wherefore, applicant prays that this application be set for hearing before the Commission or before the Commission's duly appointed examiner, and that after notice and hearing as required by law, the Commission enter its order adopting pool rules for the East Morton-Wolfcamp Pool, as prayed for.

Respectfully submitted,  
SAMEDAN OIL CORPORATION

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

ATTORNEYS FOR APPLICANT

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

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

RECORDS CENTER

CASE No. 4502

Order No. R- 4111

~~NOMENCLATURE~~

APPLICATION OF SAMEDAN OIL CORPORATION  
FOR SPECIAL POOL RULES AND POOL EXTENSION,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 24, 1971,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 24 day of February, 1971, 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, Samedan Oil Corporation, seeks the  
extension of the horizontal limits of the East Morton-Wolfcamp  
Pool, Lea County, New Mexico, to include the following-described  
area:

TOWNSHIP 14 SOUTH, RANGE 35 EAST, NMPM  
Section 34: NW/4

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM  
Section 3: NW/4  
Section 4: S/2 and NW/4

(3) That the horizontal limits of the East Morton-Wolfcamp  
Pool should <sup>not</sup> be extended to include the above-described areas <sup>as</sup>  
*said area has not been developed by the*

(4) That the applicant further seeks the promulgation of special rules and regulations governing the East Morton-Wolfcamp Pool, including a provision for 80-acre spacing and proration units.

(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, ~~temporary~~ special rules and regulations providing for 80-acre spacing units should be promulgated for the East Morton-Wolfcamp Pool.

(7) That the ~~temporary~~ special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

~~(7) That the temporary special rules and regulations should be established for a one-year period in order to allow the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.~~

~~(8) That this case should be reopened at an examiner hearing in March, 1972, at which time the operators in the subject pool should be prepared to appear and show cause why the East Morton-Wolfcamp Pool should not be developed on 40-acre spacing units.~~

IT IS THEREFORE ORDERED:

(1) That the horizontal limits of the East Morton-Wolfcamp Pool in Lea County, New Mexico, are hereby extended to include the following-described area:

TOWNSHIP 14 SOUTH, RANGE 35 EAST, NMPM  
Section 34: NW/4

(5) That the applicant has submitted that one well in the East Morton-Wolfcamp Pool can efficiently and economically drain and develop 80 acres.

~~TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM~~  
~~Section 3: NW/4~~  
~~Section 4: S/2 and NW/4~~

~~That temporary~~ Special Rules and Regulations for the  
East Morton-Wolfcamp Pool, Lea County, New Mexico, are hereby  
promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
EAST MORTON-WOLFCAMP POOL

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

RULE 2. Each well shall be located on a standard unit  
containing 80 acres, more or less, consisting of the N/2, S/2,  
E/2, or W/2 of a governmental quarter section; provided, however,  
that nothing contained herein shall be construed as prohibiting  
the drilling of a well on each of the quarter-quarter sections  
in the unit.

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  
comprising a governmental quarter-quarter section or lot, or the  
unorthodox size or shape of the tract is due to a variation in  
the legal subdivision of the United States Public Land Surveys.  
All operators offsetting the proposed non-standard unit shall be  
notified of the application by registered or certified mail, and  
the application shall state that such notice has been furnished.  
The Secretary-Director may approve the application upon receipt  
of written waivers from all offset operators or if no offset  
operator has entered an objection to the formation of the non-  
standard unit within 30 days after the Secretary-Director has  
received the application.

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

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

RULE 6. A standard proration unit (79 through 81 acres)  
shall be assigned an 80-acre proportional factor of 5.67 for  
allowable purposes, and in the event there is more than one well  
on an 80-acre proration unit, the operator may produce the allow-  
able assigned to the unit from the wells on the unit in any  
proportion.

The allowable assigned to a non-standard proration  
unit shall bear the same ratio to a standard allowable as the  
acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the East Morton-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before April 1, 1971.

(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 East Morton-Wolfcamp Pool shall have dedicated thereto 80 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 80 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the effective date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the East Morton-Wolfcamp Pool or in the Wolfcamp formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

~~(3) That this case shall be reopened at an examiner hearing in March, 1972, at which time the operators in the subject pool may appear and show cause why the East Morton-Wolfcamp Pool should not be developed on 40-acre spacing units.~~

(3) ~~That~~ 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

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

S E A L

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

esr/

CASE 4503: SHOW CAUSE HEARING,  
PENROC DIRECTIONAL DRILLING,  
EDDY COUNTY, N.M.

*De Novo Hearing on 6-16-71*