

1 STATE OF NEW MEXICO  
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
3 OIL CONSERVATION DIVISION  
4 STATE LAND OFFICE BUILDING  
5 SANTA FE, NEW MEXICO

6 10 May 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Benson-Montin-Greer to CASE  
10 amend Division Order No, R-8344, Rio 9671  
11 Arriba County, New Mexico.

12 BEFORE: Michael E. Stogner, Examiner

13 TRANSCRIPT OF PRE-HEARING DISCUSSION

14 A P P E A R A N C E S

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For Mobil Exploration and  
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and  
Charles B. Sanchez

1 MR. STOGNER: This hearing  
2 will come to order.

3 We're going to call now Case  
4 Number 9671 for a pre-hearing hearing.

5 Call for appearances in this  
6 case.

7 MR. CARR: May it please the  
8 Examiner, I'm William F. Carr, with the law firm Campbell &  
9 Black, P. A., of Santa Fe, appearing on behalf of  
10 Benson-Montin-Greer Drilling Corporation.

11 MR. STOGNER: Are there other  
12 appearances in this matter?

13 MR. KELLAHIN: Yes, Mr.  
14 Examiner, I am Tom Kellahin from the Santa Fe law firm of  
15 Kellahin, Kellahin & Aubrey. We appear in support of the  
16 applicant. I represent Dugan Production Corporation and  
17 Sun Exploration and Production Company.

18 MR. STOGNER: Thank you, Mr.  
19 Kellahin.

20 MR. LOPEZ: Mr. Examiner, my  
21 name is Owen Lopez with the law firm of Hinkle, Cox, Eaton,  
22 Coffield and Hensley in Santa Fe, appearing on behalf of  
23 the protestants, Mesa Grande Limited, Mallon Oil Company  
24 and Hooper, Kimball & Williams.

25 MR. STOGNER: Thank you, Mr.

1 Lopez.

2 MR. PEARCE: May it please the  
3 Examiner, I am W. Perry Pearce of the Santa Fe law firm of  
4 Montgomery and Andrews, P. A., and I'm appearing in this  
5 matter on behalf of Mobil Exploration and Producing, U. S.

6 We appear in opposition to the  
7 application.

8 As an additional matter, Mr.  
9 Examiner, we have a motion to make which I believe is  
10 properly part of these preliminary proceedings when the  
11 time is right.

12 MR. STOGNER: Thank you, Mr.  
13 Pearce.

14 Any other appearances?

15 MR. LUND: Yes, Mr. Examiner.  
16 My name is Kent Lund appearing on behalf of Amoco Produc-  
17 tion Company in association with Charles Sanchez of  
18 (unclear) New Mexico.

19 We also appear in opposition  
20 to the applicant.

21 MR. STOGNER: Are there any  
22 other appearances at this time?

23 Okay, at this time I'm going  
24 to ask for any motions or any remarks from Mr. Carr, Mr.  
25 Kellahin, Mr. Lopez, Mr. Pearce and Mr. Lund at this time.

1 Mr. Carr, you may go first.

2 MR. CARR: Mr. Stogner, I  
3 believe there is a motion that was delivered in the form of  
4 a letter. Although the letter was dated March 9 I think it  
5 was intended to be May 9, from Mr. Lopez. That, I think,  
6 is the first matter for you to decide and since he is the  
7 moving party, I would suggest he should speak to his motion  
8 and then we'll respond.

9 MR. LOPEZ: Mr. Chairman, Mr.  
10 Examiner, I would renew the motion that I contained in the  
11 letter. I think the letter is self-explanatory so I won't  
12 repeat it.

13 It seems clear that -- and I  
14 think if you were to hear the case the evidence would show,  
15 that the principal reasons for the application is as was  
16 represented in the letter from Mr. John Roe of Dugan Pro-  
17 duction Corporation to Kevin Fitzgerald of Mallon Oil and  
18 Larry Sweet of NM & O Operating Company, the -- he speaks  
19 in his letter to the fact that, as I have mentioned, our  
20 joint leasehold interest expires on July 31st, 1989. That  
21 is the leasehold interest in the east half of Section 12  
22 and our interest in adding this acreage to the unit is  
23 simply a matter of economics as it relates to the working  
24 interest owners in the east half of Section 12.

25 As I mentioned in my letter,

1 we believe that the case should be dismissed; that it's  
2 untimely and it's a collateral attack on the orders that  
3 were issued almost a year ago. There's -- it's common  
4 knowledge around the table here of the many days of testi-  
5 mony that went into the proper boundary between the Gavilan  
6 Mancos and the West Puerto Chiquito Pools. Therefore, we  
7 feel that the case should be dismissed as untimely and as a  
8 collateral attack on those orders.

9                   In addition, as we've request-  
10 ed in the letter, in the alternative we would request that  
11 this matter be set for a hearing before the full commission  
12 if it will not be dismissed on its face.

13                   As also was contained in the  
14 letter, additional reasons for its being dismissed on its  
15 face is that the Statutory Unitization Act in no way con-  
16 templates the protection of a leasehold interest, certainly  
17 of production under the lessor, to be a basis for expanding  
18 a unit particularly where the pool boundaries have been  
19 pretty well solidified after essentially months of  
20 hearings.

21                   But to continue in the alter-  
22 native, we requested that the matter be set before the full  
23 commission if it is not dismissed, as again we mentioned,  
24 because it's a matter of first impression, the first case  
25 we're aware of that involves the extension of a statutory

1 unit, but in addition, in a matter I didn't mention in my  
2 letter, it seems clear that whatever party does not pre-  
3 vail as a result of this Examiner hearing, the case will  
4 certainly be appealed. I've -- and the matter will be  
5 heard de novo.

6 Heretofore, at the request of  
7 any affected party, matters that were requested to be set  
8 before the full commission were done as a matter of course,  
9 so that the additional cost of witnesses and lawyers fees  
10 were not incurred since the matter would be heard de novo  
11 before the full commission.

12 This case is no different. It  
13 seems that it's a costly and wasteful exercise to go  
14 through a dress rehearsal for a case that would be heard de  
15 novo in any event.

16 So for those reasons I feel  
17 that, first, the case should be dismissed, but if not, it  
18 should be set aside for a full commission hearing.

19 Thank you.

20 MR. STOGNER: Thank you, Mr.  
21 Lopez.

22 Mr. Pearce?

23 MR. PEARCE: Mr. Chairman, at  
24 this time let me ask that I be allowed to consolidate my  
25 words in support of Mr. Lopez' motion with the motion which

1 I plan to make at the time.

2 My plan was to move to dismiss  
3 this case because I do not believe that the Oil Conserva-  
4 tion Division or Commission is authorized by statute to  
5 enter the order requested, and I therefore believe that to  
6 hear the substance of this case is a waste of everything  
7 involved and threatens to have the Division and Commission  
8 violate their statutory mandates.

9 Benson-Montin-Greer came be-  
10 fore the Commission in 1986 seeking statutory unitization  
11 of the Canada Ojitos Unit Area.

12 That request was granted by  
13 Order No. R-8344.

14 Paragraph 2 of the findings of  
15 that order finds that the acreage involved is a portion of  
16 the West Puerto Chiquito Mancos Oil Pool.

17 Looking at the New Mexico  
18 Statutory Unitization Act, that Act specifically refers to  
19 the pool. The Commission/Division is authorized to statu-  
20 torily unitize a single pool. Applicant in this case has  
21 filed an application seeking to extend the Statutory Unit-  
22 ization Act to include acreage within two pools as those  
23 pools have been defined by the Oil Conservation Division  
24 after very lengthy hearings, arguments, petroleum engineer-  
25 ing and petroleum geological testimony and dispute.

1                   If the applicant in this case  
2 believes that that is not the appropriate unit boundary,  
3 the applicant in this case knows how to draft an applica-  
4 tion to change the pool boundary in question and the unit  
5 boundary in question.

6                   It appears from the applica-  
7 tion that that is not what is sought by this matter; that  
8 the applicant seeks to extend the authorization set forth  
9 in the Statutory Unitization Act, amend a statutory uniti-  
10 zation order to include acreage within two separate oil and  
11 gas pools as they are defined. That is not authorized by  
12 statute.

13                   This agency is regulated by  
14 its statutory mandates and by its rules and regulations. I  
15 believe it is inappropriate for the Division's Examiners or  
16 for the Commission itself to hear a case which asks you to  
17 do something which the statute does not authorize you to  
18 do. It seems to me that the only appropriate disposition  
19 of this matter is to -- disposal of this matter is to dis-  
20 miss it on its face as being insufficient. The order  
21 sought cannot be legally granted. We can have a two or  
22 three hour hearing and we can listen to petroleum engineer-  
23 ing, petroleum geological evidence. An order could be en-  
24 tered. That order, if it grants the application, could not  
25 stand, in my opinion.





1 we believe that the only possible reason for these motions  
2 is related to timing. Mr. Lopez sits here and reads a  
3 letter from Mr. Roe explaining a lease problem. We will  
4 during the course of our testimony address that before you  
5 but the only reason they're here today is to delay, to try  
6 and push this back so that property which now should be  
7 included within this unit cannot be included with the unit  
8 because of an underlying leasehold problem.

9                   If you'll look at the motion  
10 it states that perhaps you shouldn't consider this because  
11 questions that set precedent should go to the Division and  
12 they're saying this is the first time there's ever been a  
13 case to expand a statutory unit. I think it would be ill-  
14 advised to buy an argument of that nature for every time  
15 anyone could construct any kind of a unique position on any  
16 case, they would say, oh, wait, it shouldn't go to the  
17 Examiner, it should go to the full commission, and here the  
18 statute is clear. You treat the old unit as one tract and  
19 the new acreage as others and that's the only difference.  
20 it isn't precedent setting. If it was a first statutory  
21 unitization case, yes, but the way it is before you it does  
22 not create any unique or unusual or original question that  
23 you're going to be called upon to decide.

24                   This isn't a collateral attack  
25 on a prior order. There were 17 days of hearing in that

1 case and now we aren't asking that anything in any of those  
2 orders be changed at all. We're simply showing you how  
3 within the framework established by the Commission when it  
4 decided those cases, that there is something else that  
5 needs to be done to protect correlative rights, to prevent  
6 waste as this reservoir is continued to be developed.

7                   Mr. Pearce and Mr. Lopez want  
8 to come in and talk to you about the Statutory Unitization  
9 Act and they say you have to -- have to unitize only a  
10 pool, but I'd like to read to you, and be the first one to  
11 read something from the Act, it says: "A pool means --"  
12 this is the definition of a pool -- "a pool means an under-  
13 ground reservoir containing a common accumulation of crude  
14 petroleum oil or natural gas, or both."

15                   Now, for the purposes of the  
16 Act that's the definition of pool. Now after 17 days of  
17 hearing the Commission entered an order and it found the  
18 preponderance of the evidence demonstrates that the Gavilan  
19 and West Puerto Chiquito Pools constitute a single source  
20 of supply. We submit to you that a single source of supply  
21 is synonymous with a common accumulation of crude petroleum  
22 oil or natural gas, or both.

23                   We are not here asking you to  
24 do something which we believe is outside your statutory  
25 authority. We're not asking you to do anything outside the

1 Statutory Unitization Act. We're asking you to take action  
2 which falls, we submit, squarely within the statute and the  
3 terms as defined therein.

4 Furthermore, Mr. Lund may come  
5 in and say to you, I don't think they can prove that the  
6 preconditions for a statutory unitization order can be met.

7 We ask you to give us a chance  
8 and for that reason we think that the motions to continue  
9 or to dismiss should be denied and we should be given an  
10 opportunity to come before you and present our case.

11 MR. STOGNER: Thank you, Mr.  
12 Carr.

13 Mr. Kellahin?

14 MR. KELLAHIN: Thank you, Mr.  
15 Examiner.

16 I'd like to specifically sup-  
17 plement what Mr. Carr has told you about the Statutory  
18 Unitization Act. We adopt and support his position with  
19 regards to the fact that any discussion about the pool  
20 boundary is extraneous to this particular application.

21 Specifically, on page 24 of  
22 the rule book, in Section 70-7-7, it says, "Orders provid-  
23 ing for unitization and unit operations", meaning statutory  
24 unitization, "of a pool or a part of a pool shall be upon  
25 terms and conditions that are fair and reasonable", and

1 then it goes on to outline the procedures.

2                   We don't even have to have all  
3 of a pool, it can be part of a pool. What I think is im-  
4 portant is the Commission statute under which it's obli-  
5 gated to perform specifically defines under the Statutory  
6 Unitization Act in 70-7-4 the definition of a pool. It's  
7 in the definition section, Sub-A, it says, "Pool is synon-  
8 ymous with common source of supply and with common reser-  
9 voir."

10                   The hearings on the admini-  
11 strative boundary between Gavilan and West Puerto Chiquito  
12 Mancos that established a boundary is a political boundary  
13 served for the convenience of administration and represents  
14 a unique situation, I think, in New Mexico, and particular-  
15 ly in the northwestern part of New Mexico. We're not ask-  
16 ing that any of those existing orders be changed; certainly  
17 not a collateral attack on any of those orders. There are  
18 specific findings in those orders that we -- we rely on and  
19 I will give you a copy of the order.

20                   Finding 13 on page 4 of Order  
21 No. R-6469 says, "The preponderance of the evidence demon-  
22 strates the Gavilan and West Puerto Chiquito Pools consti-  
23 tute a single source of supply which can continue to be  
24 regulated effectively as two separate pools with uniform  
25 rules and spacing allowables."

1                   We already have a finding that  
2 says notwithstanding the political boundary we're dealing  
3 with one common source of supply. We believe that is the  
4 only condition predicate upon which then we need to satis-  
5 fy you before we can go ahead with the statutory unitiza-  
6 tion case.

7                   I've got copies of the com-  
8 panion case for Mr. Greer's expansion. You'll find simi-  
9 lar findings in both of those orders that we believe serves  
10 as an adequate basis to go forward with the presentation of  
11 the case today.

12                   I concur with Mr. Carr that if  
13 every instance in which a party contended that you were  
14 faced with a unique circumstance as an examiner that you  
15 should simply defer that to the Commission. It would  
16 simply eliminate the need for an examiner. I think the  
17 examiner hearings serve a useful and material process in  
18 making decisions before this Commission. We have certainly  
19 come prepared to present the technical case for our posi-  
20 tion today. I am disappointed that the opposition did not  
21 provide us with the courtesy of making their motion before  
22 we went to the expense of bringing people here to Santa Fe  
23 from -- from other states, as well as northwest New Mexico,  
24 to present a case. They have known this case was before  
25 the examiner for a considerable period of time. We have

1 provided them with the courtesy of hand-delivered, personal  
2 service of our applications, and yet we don't receive the  
3 same.

4 I think their application for  
5 a continuance and for dismissal, notwithstanding the  
6 merits, are certainly untimely. We believe that those  
7 applications ought to be denied and we go forward with the  
8 presentation of the technical case, which we believe sup-  
9 ports the expansion of the unit.

10 MR. STOGNER: Thank you, Mr.  
11 Kellahin.

12 Gentlemen, anything further?

13 MR. PEARCE: If I may, Mr.  
14 Examiner.

15 MR. STOGNER: Mr. Pearce.

16 MR. PEARCE: We've had a dis-  
17 cussion of the definition of pool set forth set forth in  
18 the Statutory Unitization Act. And we have reference to an  
19 order from a previous set of Commission hearings which de-  
20 fines some pools, and I would suggest that in view of the  
21 definition of the pools under those cases that you read the  
22 definition of a pool set forth in the Oil and Gas Act  
23 itself.

24 The order on the West Puerto  
25 Chiquito - Gavilan dispute was entered under the Oil and

1 Gas Act and it defines pool. It says what those pools are  
2 and if you read the definition of a pool set forth in the  
3 Oil and Gas Act, you come to an entirely different con-  
4 clusion than has been suggested to you.

5                   The Commission has defined the  
6 pool, and we can play cutesy with the word "pool" if we  
7 want to and say, well, the Commission was only (unclear)  
8 because here are the findings, but after the Commission  
9 made its findings it entered an order establishing pool  
10 boundaries and the Statutory Unitization Act talks about a  
11 pool and the pool and despite what has been suggested to  
12 you, they are asking you to use the Statutory Unitization  
13 Act to include acreage in a statutorily unitized unit which  
14 has acreage from two pools as they are defined by the Com-  
15 mission under the Oil and Gas Act and under the Commission  
16 rules and regulations.

17                   The Commission and Division is  
18 not authorized by the Statutory Unitization Act or by the  
19 Oil and Gas Act to do that. After the findings which have  
20 been suggested to you by our opponents in this matter, the  
21 Commission found something. It established a set of pool  
22 boundaries. I suggest to you that if we read the pool de-  
23 finition in the Oil and Gas Act and the pool definition in  
24 the Statutory Unitization Act you'll come to the conclusion  
25 that you're just not authorized to do what they want you to

1 do. They can file an application for something else if it  
2 is something else they want but they cannot get under New  
3 Mexico statute now what they want from you. They're just  
4 not authorized by the statute to have it. I see no reason  
5 to go forward with six or seven witnesses and a couple of  
6 hours and then go do it again before the Commission. It  
7 doesn't make any sense. They can't have what they want on  
8 this application.

9 Thank you.

10 MR. STOGNER: Thank you, Mr.  
11 Pearce.

12 Anything further?

13 MR. CARR: Very short.

14 MR. STOGNER: Mr. Carr?

15 MR. CARR: We can all talk and  
16 find all sorts of definitions of the term pool. We're  
17 bringing an application under the Statutory Unitization  
18 Act. I submit to you that is the definition that applies,  
19 and I've read it to you.

20 Now we can talk about what the  
21 Commission has found and you can read that as well as any  
22 of us, and we've shown you in Finding 13 what they found  
23 and when you read those two together we think the conclu-  
24 sion is clear.

25 We're not talking about five,

1 six, seven witnesses unless Mr. Pearce has somebody he's  
2 holding back on, but what we're doing is asking you ini-  
3 tially to let us go forward under this Act, consistent  
4 with, we believe, the statute and findings and present our  
5 case.

6 MR. STOGNER: Mr. Lopez.

7 MR. LOPEZ: Mr. Examiner,  
8 I'll be very brief but I feel that I would like to remind  
9 you, as I pointed out in my letter, that there exists every  
10 opportunity for the applicant to form a standard proration  
11 unit within the Gavilan Mancos Pool itself and that they  
12 have not even attempted to do that. They can drill the  
13 offset 320 or they could join the existing well on the west  
14 half of the 640 and to my knowledge they have made no ef-  
15 fort to join, and as I've said, as a major working interest  
16 owner in the existing well in Section 12, we would have no  
17 objection to their joinder.

18 MR. STOGNER: Thank you, Mr.  
19 Lopez.

20 Mr. Carr, I assume you have  
21 something to say?

22 MR. CARR: I only want to res-  
23 pond to this point which has not been raised before about  
24 options to develop a 640 in Section 12, and I just want to  
25 advise the Examiner that that will be part of our case and

1 we will show you in that presentation why that is not an  
2 economically viable option. Nothing further.

3 MR. STOGNER: Thank you, Mr.  
4 Carr.

5 Gentlemen, anything further?

6 Thank you for this prehearing  
7 conference.

8 Having received this particu-  
9 lar letter from Mr. Lopez, I had conversations with Mr.  
10 LeMay, the Director of the Division, and Mr. Bob Stovall,  
11 General Counsel, who is not here today.

12 As far as the issue and the  
13 motion to continue this case to a Commission hearing, that  
14 motion is denied. There have been some very good points  
15 brought up whether to dismiss this case or not, points that  
16 need to be raised. I feel that we should go ahead and hear  
17 it today, therefor, your motions to dismiss are hereby  
18 denied.

19 We will continue and hear this  
20 case today. I might add at this point when we do hear this  
21 case we are looking at a very narrow portion that's in  
22 issue here. In other words, this will not be a continuance  
23 of all the Commission hearings that have been done. Those  
24 have already -- orders have already been issued. Let's  
25 look at why this particular 320 acres should or should not

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belong in the unit. Let's narrow down our witnesses and our cross examination and our examination direct to that issue.

Thank you, gentlemen.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9671, heard by me on 10 May 1959.

Michael J. Boyer, Examiner  
Oil Conservation Division

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

10 May 1989

EXAMINER HEARING

IN THE MATTER OF:

Application of Benson-Montin-Greer to amend Division Order No, R-8344, Rio Arriba County, New Mexico. CASE 9671

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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1 MR. STOGNER: The hearing will  
2 come to order.

3 We're ready now for Case 9671,  
4 which is the application of Benson-Montin-Greer Drilling  
5 Corporation to amend Division Order No. R-8344 has been  
6 called to hearing earlier today and at this time we're  
7 ready to accept witnesses.

8 Mr. Carr, do you have any  
9 witnesses?

10 MR. CARR: I have one witness,  
11 Albert R. Greer.

12 MR. STOGNER: Mr. Kellahin.

13 MR. KELLAHIN: Mr. Examiner, I  
14 have two witnesses to present.

15 MR. STOGNER: Mr. Lopez?

16 MR. LOPEZ: I have no  
17 witnesses.

18 MR. STOGNER: Mr. Pearce?

19 MR. PEARCE: No.

20 MR. STOGNER: Mr. Lund?

21 MR. LUND: No witnesses.

22 MR. STOGNER: Will all the  
23 witnesses please stand and be sworn at this time.

24

25

(Witnesses sworn.)

1 MR. STOGNER: Mr. Carr, since  
2 you're the attorney for the applicant would you like to  
3 start?

4 MR. CARR: Mr. Stogner, we'd  
5 prefer to have the witnesses for Dugan and Sun go forward.  
6 They'll be presented by Mr. Kellahin.

7 MR. STOGNER: Thank you, Mr.  
8 Carr.

9 Mr. Kellahin?

10 MR. KELLAHIN: Mr. Examiner,  
11 I'd like to give you three copies of Mr. Roe's exhibits.

12 MR. STOGNER: Mr. Kellahin,  
13 you were representing Dugan and Sun. Is Sun still known as  
14 Sun these days or are they changing from that?

15 MR. KELLAHIN: Well, for pur-  
16 poses of this hearing and for my memory, I cannot remember  
17 the new name ORYX is as close as I can get.

18 MR. STOGNER: Some kind of a  
19 deer, right?

20 MR. KELLAHIN: Or an African  
21 antelope of some kind. For sake of convenience I will pro-  
22 bably continue referring to them as Sun Oil Company and  
23 perhaps we might do the same for the balance of this hear-  
24 ing.

25 MR. STOGNER: Thank you, Mr.

1 Kellahin. They're probably going to change the name but  
2 for convenience sake we will refer to them as Sun today.

3 Mr. Kellahin.

4 MR. KELLAHIN: Thank you, Mr.  
5 Examiner.

6 I'd like to call at this time  
7 my first witness, Mr. John Roe.

8  
9 JOHN D. ROE,

10 being called as a witness and being duly sworn upon his  
11 oath, testified as follows, to-wit:

12  
13 DIRECT EXAMINATION

14 BY MR. KELLAHIN:

15 Q Mr. Roe, for the record would you please  
16 state your name and occupation?

17 A I'm John Roe and I am the Engineering  
18 Manager for Dugan Production Corporation in Farmington, New  
19 Mexico.

20 Q Mr. Roe, on prior occasions have you  
21 testified as a petroleum engineer before the New Mexico Oil  
22 Conservation Division?

23 A Yes, I have.

24 Q And where your qualifications as an ex-  
25 pert witness accepted and made a matter of record?

1           A           Yes.

2           Q           Let me ask you, sir, to turn, if you  
3 will, to what is marked as Dugan/Sun Exhibit Number Two.

4                        Within the area identified on this plat  
5 would you locate for us the 320-acre tract that is the  
6 subject matter of the application for expansion of the  
7 statutory unit?

8           A           Yes. The 320 acres that is the subject  
9 of this hearing is the east half of Section 12, Township 25  
10 North, Range 2 West, and I've identified it as -- I've out-  
11 lined it in a heavy dashed line that I've highlighted in  
12 pink.

13           Q           Would you describe for us what Dugan  
14 Petroleum -- Dugan Production Corporation's interest is in  
15 Section 12?

16           A           Dugan Production is a joint interest  
17 owner with Sun Exploration and Production in the northeast  
18 quarter of Section 12 and we have 12-1/2 percent interest  
19 in that lease, the balance of which is held by Sun.

20           Q           What type of lease is involved in the  
21 northeast quarter of Section 12, Mr. Roe?

22           A           It's a Federal lease.

23           Q           And was this a lease initially issued to  
24 Sun or to Dugan at some point in time?

25           A           Yes, it was issued August 1st of 1984.

1 Q And issued to what company?

2 A It was interest -- issued to Jerome P.  
3 McHugh and Associates, with Dugan Production being a joint  
4 owner upon the initial issuance.

5 Q Have you been involved with considering  
6 how the section, particularly the northeast quarter of  
7 Section 12 ought to be developed for potential production  
8 from the Mancos formation?

9 A Yes, I have.

10 Q And describe generally what period of  
11 involvement you have been active with regard to that par-  
12 ticular property.

13 A Well, I've been following the develop-  
14 ment of Gavilan Mancos Pool since the discovery well which  
15 was in the latter part of 1982; however, the specific (un-  
16 clear) we initiated the development efforts in the latter  
17 part of 1985.

18 Q Were you involved personally with re-  
19 gards to potential development of the east half of Section  
20 12?

21 A Yes, I was.

22 Q And have you been involved with watching  
23 and studying the production not only in Gavilan Mancos but  
24 in West Puerto Chiquito Mancos Pools?

25 A Yes, I have.

1 MR. KELLAHIN: At this time,  
2 Mr. Examiner, we tender Mr. Roe as an expert petroleum  
3 engineer.

4 MR. STOGNER: Are there any  
5 objections?

6 Mr. Roe is so qualified.

7 MR. KELLAHIN: Mr. Examiner,  
8 for the record I would move the introduction of Exhibit  
9 Number One, which is a copy of -- true and correct copy of  
10 Commission Order R-6469-F. We would like to have that made  
11 a part of the record in this case.

12 MR. STOGNER: Now Order No.  
13 R-7407-F is also Order No. R-6469-F, is that right, Mr.  
14 Kellahin?

15 MR. KELLAHIN: Yes, sir.

16 MR. STOGNER: Now attached to  
17 this there is some supplement, a nunc pro tunc Order  
18 7407-F-1 and 6469-F-1?

19 MR. KELLAHIN: That is  
20 correct, Mr. Examiner.

21 MR. STOGNER: And then there  
22 is an Order No. R-3401-B.

23 MR. KELLAHIN: 3401-B Is a  
24 companion case in West Puerto Chiquito Mancos. We would  
25 also ask that that attachment to Exhibit One be admitted

1 into the record.

2 MR. STOGNER: What is Order  
3 No. R-7407-F, Mr. Kellahin? That was the pool rules for  
4 the Gavilan Mancos Oil Pool?

5 MR. KELLAHIN: This is from  
6 the June, 1988, hearing, Mr. Examiner, I believe.

7 MR. STOGNER: I'm trying to  
8 tie the relevancy up, Mr. Kellahin, trying to make a record  
9 here.

10 MR. KELLAHIN: Certainly. The  
11 relevancy, Mr. Examiner, is reference to particular find-  
12 ings in the orders, specifically on page 4 of Order No.  
13 R-6469-F. You'll find in Finding 13 the language we dis-  
14 cussed this morning with regards to the preponderance of  
15 the evidence demonstrating that the Gavilan and West Puerto  
16 Chiquito Pools consist -- constitute a single source of  
17 supply. That is the relevance, Mr. Examiner.

18 MR. STOGNER: Okay, and, of  
19 course, the companion order R-7407-F-1 essentially nunc pro  
20 tunced (sic) that order.

21 What's the relevancy of Order  
22 No. R-3401-B?

23 MR. KELLAHIN: 3401-B, when  
24 you've looked at page 2 of that order and you find Finding  
25 No. 6, you'll see the two western -- it has language which

1 states the two westernmost rows of sections inside the unit  
2 area are in effective pressure communication with Gavilan  
3 Mancos Pool as demonstrated by shut-in pressure measure-  
4 ments.

5 That forms a factual basis for the ex-  
6 pansion of the statutory unit into the east half of Sec-  
7 tion 12.

8 MR. STOGNER: Now, these two  
9 westernmost rows of sections, this Section No. 12 is in-  
10 cluded in this description, is it not?

11 MR. KELLAHIN: No, sir, it  
12 would not be. If you'll --

13 MR. STOGNER: It would not.

14 MR. KELLAHIN: -- look on Ex-  
15 hibit Number Two, that refers to the two western rows of  
16 sections that lie immediately east of the vertical line  
17 that's shaded in the bright pink.

18 That is the two rows of sec-  
19 tions that finding describes and it is talking about those  
20 two sections being in pressure communication with the tier  
21 of sections immediately to the west of that line, which  
22 does, in fact, include the east half of Section 12.

23 MR. STOGNER: Okay. At this  
24 time I will take administrative notice of Orders Nos.  
25 R-7407-F, 7407-F-1, Order No. R-6469-F and Order No.

1 R-6469-F-1, and Order No. R-3401-B.

2 MR. LOPEZ: Mr. Examiner, if I  
3 may inject, as I recall, I don't have my file with me, but  
4 the orders had a dissenting opinion. If you're going to  
5 take administrative notice I hope you'll take administra-  
6 tive notice of the complete order, including the dissent-  
7 ing opinion.

8 MR. STOGNER: Which particular  
9 order number are you referring to, Mr. Lopez?

10 MR. LOPEZ: Well, unfortunat-  
11 ly I didn't bring my file with me, but I think 6409 --  
12 6469-F had a dissenting opinion. They probably both had a  
13 dissenting opinion, so I don't have the complete order with  
14 me.

15 MR. STOGNER: Mr. Kellahin, do  
16 you remember it?

17 MR. KELLAHIN: I honestly  
18 don't remember, Mr. Examiner. I think the relevant por-  
19 tion is the order that was entered and made effective by a  
20 majority of the Commission and it's those orders that we're  
21 seeking to incorporate into our case.

22 If -- if Mr. Padilla -- I mean  
23 if Mr. Lopez believes that he has other relevant exhibits  
24 to enter, he might tender them on his own behalf but we  
25 have brought forth what we thought were the relevant orders

1 for consideration.

2 MR. STOGNER: Mr. Lopez, until  
3 you can be more specific, I --

4 MR. LOPEZ: Well, Mr. Exa-  
5 miner, I think that if you're going to take administrative  
6 notice of the orders you have to take administrative notice  
7 of the complete orders, not just part of the orders and  
8 that's all I am requesting.

9 MR. STOGNER: Are you request-  
10 ing that I take administrative notice of just the order or  
11 the whole case file?

12 MR. LOPEZ: The order and the  
13 order that had attached to it a dissenting opinion. I  
14 don't have it with me but I would make it available after  
15 the hearing.

16 MR. STOGNER: Or sometime be-  
17 tween now and the end you could be more specific of which  
18 order number it is, because I'm not going to --

19 MR. LOPEZ: (Not clearly un-  
20 derstood) attached to both, Commissioner Brostuen upon  
21 admission of the orders filed a dissenting opinion, parti-  
22 cularly with respect to the facts on which Mr. Kellahin  
23 just referred to .

24 MR. STOGNER: But that was not  
25 an order number, was it not?

1 MR. LOPEZ: It was included as  
2 part of the order, a dissenting opinion to the order.

3 MR. STOGNER: Well, as I sug-  
4 gested earlier, when I talked to the attorneys in our pre-  
5 hearing, I am not going to make this a continuing case off  
6 of the Commission cases. This is relevant to this and I  
7 will only take administrative notice of these three or five  
8 orders and nothing more at this time.

9 So I'm going to deny your re-  
10 quest at this time, Mr. Lopez.

11 Mr. Pearce.

12 MR. PEARCE: Mr. Examiner, if  
13 I may at this time, to avoid some delay and confusion sub-  
14 sequently, it appears to me that we are going to be broach-  
15 ing some areas that are going to offend a number of people  
16 in the room. I would like to put an objection to certain  
17 materials on the record and would like to state it once and  
18 then it would be a continuing objection and I won't repeat  
19 it and I won't burden this record with hard feelings and  
20 people getting upset and squawking at one another.

21 I would like to object to the admission  
22 into this record of any evidence which is introduced to  
23 show that the Gavilan Mancos Oil Pool and the West Puerto  
24 Chiquito Mancos Oil Pool are one pool. The order of the  
25 Commission defines them as two separate pools. Any evi-

1 dence which tends to show they are one raises the specter  
2 of relitigating all of those Commission hearings that we  
3 had before.

4 I simply state that objection  
5 and I want to get it on the record and I do not believe  
6 that is relevant to the proceeding under consideration to-  
7 day. I do not believe that evidence should be admitted  
8 into this record. To save time and hard feelings, I just  
9 want that record -- objection in the record so that nobody  
10 misunderstands when I sit quietly while that evidence is  
11 talked about, that I'm agreeing that it's relevant or that  
12 it ought to go into this record. I do not and I want -- I  
13 would appreciate the Examiner agreeing that you recognize  
14 my continuing objection to all of that material whether you  
15 grant my objection or not.

16 MR. STOGNER; The objection is  
17 so noted on my records up here.

18 MR. PEARCE: Thank you.

19 MR. STOGNER: Mr. Lopez?

20 MR. LOPEZ: I would like to  
21 join in that objection.

22 MR. LUND: I join also.

23 MR. STOGNER: Your objection,  
24 Mr. Owen and Mr. Lund is so noted in the record.

25 MR. KELLAHIN: Exhibit One is

1 a true and complete copy of Commission Order R-6469-F; the  
2 Nunc Pro Tunc Order R-6469-F-1; and Commission Order R-  
3 3401-B.

4 To the best of my knowledge  
5 those are complete, total, and accurate reproductions of  
6 the entire orders in those two matters.

7 MR. LUND: With the exception  
8 of the deleted dissent, which is a part of those orders.

9 MR. KELLAHIN: If you'll show  
10 me where there is a reference to the fact that there's a  
11 dissent incorporated into the order, we might discuss that,  
12 Mr. Lund, but to the best of my knowledge there is abso-  
13 lutely nothing in this order that makes representations of  
14 a dissent.

15 MR. STOGNER: Mr. Lund, I'm  
16 only going to take administrative notice of the orders  
17 which I have mentioned.

18 MR. LUND: What's the proce-  
19 dure? I mean isn't a dissenting opinion made part of an  
20 order?

21 MR. STOGNER: Not that I'm  
22 aware of, Mr. Lund. At the end of this particular hearing  
23 I'm going to ask for legal briefs and you can bring it up  
24 at that point but I am not going to take administrative  
25 notice of anything other than these particular orders.

1 MR. LUND: Okay, I could be in  
2 the dark but I thought a dissent always was included as  
3 part of the order.

4 Thank you. We can address  
5 that later.

6 MR. STOGNER: Thank you, Mr.  
7 Lund.

8 Mr. Kellahin.

9 Q Mr. Roe, would you take a moment and  
10 identify and describe for us Exhibit Number Two?

11 A Okay. Exhibit Number Two is a repro-  
12 duction of a portion of a structure map that Dugan Produc-  
13 tion has maintained of the Gavilan Mancos, West Puerto  
14 Chiquito Mancos Pool areas.

15 The contour lines are contoured on top  
16 of the Niobrara A and on this map I've identified the east  
17 half of Section 12 of 25 North, Range 2 West, which is the  
18 acreage we are proposing be added to the Canada Ojitos  
19 Unit, which the western boundary I've identified with the  
20 line that I've highlighted in pink and this is also the  
21 western boundary of the Canada Ojitos Unit, so the acreage  
22 we're adding is adjacent to that boundary line. It is  
23 within the eastern boundary of the Gavilan Mancos Pool,  
24 which I've identified and highlighted in the blue.

25 Q What is the purpose of identifying cer-

1 tain of the wells with the yellow dots?

2 A The wells that I've identified with the  
3 yellow highlighting are wells that are both within the  
4 Gavilan Mancos Pool and the West Puerto Chiquito Mancos  
5 Pool that on a later exhibit we have some pressure infor-  
6 mation that -- to show as the basis for our particular  
7 attitude as to future development potential in the east  
8 half of Section 12.

9 I might also mention the lines that I've  
10 identified in green are areas in the -- they are wells that  
11 have been involved in pressure interference testing that  
12 prior records include a bunch of testimony with regards to  
13 communication as evidenced by pressure interference  
14 testing between the Gavilan Mancos wells and the West  
15 Puerto Chiquito Mancos wells.

16 Q What is the purpose of the orange out-  
17 lines of certain of the sections and half sections?

18 A The orange outlining is simply to delin-  
19 eate the established spacing units for the wells that are  
20 adjacent to the acreage we're looking at developing.

21 As you can see, there are existing spac-  
22 ing units in all directions from the east half of Section  
23 12. The east half of Section 12 is undeveloped at the  
24 current time.

25 Q When we look in Section 12 and look to

1 the northwest quarter, there is a well outlined by a yellow  
2 circle. What is that well in the west half of 12?

3 A Okay, I don't -- I might have messed up  
4 and got your outlined in -- oh, I'm sorry, that's the  
5 Johnson Federal 12 No. 5.

6 Q Who currently operates that well?

7 A It's operated by Mallon Oil.

8 Q Are you familiar with what has trans-  
9 pired with regards to Dugan's efforts to initiate develop-  
10 ment in the east half of Section 12 and in particular the  
11 northeast quarter of Section 12, for Gallup Mancos produc-  
12 tion?

13 A Yes, I am.

14 Q You've indicated previously that Dugan  
15 and McHugh acquired their interests in that lease approxi-  
16 mately August 1st of 1984?

17 A Yes, that is the date.

18 Q About that time what was the development  
19 occurring in Gavilan Mancos and where was it?

20 A The pool discovery well as drilled in  
21 1982, so we were in the early, early pool development. At  
22 the time in 1984 there -- it was the early stages of de-  
23 velopment and the primary development was in the south-  
24 western part of the pool, not in this immediate vicinity.

25 Q When was the Johnson Federal Well

1 drilled in the west half of Section 12?

2 A It was drilled during 1985 and it was  
3 placed on production during December of 1985.

4 Q Between August of '84 and the placing of  
5 the Johnson Federal Well on production in December of '85,  
6 what were your efforts, if any, to have the east half of  
7 Section 12 developed for Mancos production?

8 A Well, by December of 1985 we had pre-  
9 pared an APD to drill what we identified as the Continen-  
10 tal Divide No. 1, located in the northeast quarter.

11 Q What was the purpose of preparing the  
12 APD for that well?

13 A To develop that acreage in the Gavilan  
14 Mancos Oil Pool.

15 Q Turn to Exhibit Number Three, Mr. Roe,  
16 and have you identify and describe that exhibit.

17 A Okay, Exhibit Number Three is a copy of  
18 the application for a permit to drill that was prepared and  
19 is dated November 21st, 1985.

20 Exhibit Number Three consists of two  
21 pages. As you can see from the first page, its objective  
22 was the Gavilan Mancos Oil Pool and we've identified the  
23 location of Continental Divide in the northwest quarter of  
24 the northeast quarter of Section 12, and that is set out on  
25 page two of the exhibit.

1           Q           Do you have an opinion as to what was  
2 the first time that in your recollection it was appro-  
3 priate to locate a well in the east half of Section 12 for  
4 potential production from the Mancos formation?

5           A           Well, of course we followed the develop-  
6 ment of all wells within the Gavilan Mancos Pool very  
7 closely.

8                       The Mallon Oil had early development in  
9 this portion of the pool and his first well in this gener-  
10 al area was -- was during March of '85. It placed it on  
11 production. In July of '85 he placed two other wells on  
12 production. So during mid-'85 is about the time we really  
13 knew we needed to look at development.

14           Q           Having considered development and having  
15 filed your application for permit to drill as shown on Ex-  
16 hibit Number Three, what then is the next thing that oc-  
17 curred with regards to the development of the east half of  
18 Section 12?

19           A           Well, as -- as with any proposed devel-  
20 opment, AFE's and communitization agreements and all of the  
21 necessary paperwork to drill a well was initiated.

22           Q           Let's look at the C-102 attached as an  
23 attachment to Exhibit Number Three. At the time you filed  
24 the APD was that the general ownership arrangement of the  
25 working interest in the east half of 12?

1           A           It's a brief summary of the working  
2 interest ownership. There are additional working interest  
3 owners included in the -- in the -- in other words, we  
4 identify Mountain States Natural Gas as being the working  
5 interest owner in the northwest of the southeast.

6                       There are three other working interest  
7 owners in that tract.

8           Q           At this time was the decision to com-  
9 mence a well a sole decision among McHugh and Dugan with  
10 regards to the development of the east half of 12?

11           A           The initial proposal to drill a well was  
12 the sole effort of Dugan/McHugh. We were the joint owners  
13 of the northeast quarter; however, we did transmit the  
14 necessary paperwork to our partners. It was my under-  
15 standing that everybody in the east half of Section 12 did  
16 execute the AFE with the exception of one working interest  
17 owner, that being Mountain States Natural. Gas Corp.

18           Q           What efforts did you initiate to conso-  
19 lidate, then, on any basis the formation of a spacing unit  
20 for the east half of 12 for the Mancos formation?

21           A           At the time an AFE was transmitted to  
22 working interest owners a communitization agreement was  
23 also transmitted and as evidenced on the section -- on the  
24 Form C-102, we did indicate that at the time we submitted  
25 the C-102 it was not communitized but we would be commun-

1     itizing the east half.

2             Q             Did you have to initiate compulsory  
3 pooling action against any of the parties before the  
4 Division in order to consolidate the acreage in the east  
5 half of 12 for the well?

6             A             Yes, it was necessary to have a compul-  
7 sory pooling hearing, basically to deal with the interest  
8 of Mountain States Natural Gas Corp.

9             Q             Let me direct your attention to Exhibit  
10 Number Four, Mr. Roe.

11                             What's the purpose of introducing Exhi-  
12 bit Number Four?

13             A             Exhibit Number Four, it consists of  
14 three pages and the purpose of introducing it is it was a  
15 letter written by Jerome P. McHugh's landman, Kent Craig.  
16 It was dated November 14th, 1986, and it basically summar-  
17 izes the -- the efforts during the first year that we were  
18 attempting to get approval to drill a well as identified on  
19 the Exhibit Three.

20             Q             When you say "we", were you personally  
21 involved in that effort?

22             A             I -- yes. Dugan and McHugh had a fairly  
23 long-standing relationship where Dugan was fairly active.  
24 Now during this period of time McHugh was doing a lot of  
25 the work on his own but we were providing a lot of the sup-

1 port.

2 Q Is the information contained in Exhibit  
3 Number Four true and accurate to the best of your personal  
4 knowledge?

5 A Yes, as a matter of fact it's a very  
6 good summary of -- of the frustrations that were encoun-  
7 tered during the first year and -- and the blue highlight-  
8 ing pretty much is -- is my efforts to point out the fact  
9 that we not only had a compulsory pooling hearing, we had  
10 problems negotiating a road into the area. In a later  
11 exhibit I've got a topography map. You can see that the  
12 topography is a little rugged in this area. We -- about  
13 this time the Forest Service was becoming pretty picky on  
14 the kind of roads. As identified in the letter, we've got  
15 on a bid basis \$100,000 access road that's less than a mile  
16 long.

17 In addition to the compulsory pooling  
18 hearing that we initially had in January, '86, it was  
19 necessary to come back and ask for that compulsory pooling  
20 order to be continued or extended. We had two winters that  
21 we were trying to deal with. It was a very difficult ex-  
22 perience.

23 Q At what approximate point in time did  
24 you feel confident that you had sufficient surface approval  
25 from the necessary surface management authorities, plus the

1 consolidation of the acreage of the working interest owners  
2 interest in the east half of 12 to be in a position to com-  
3 mence the drilling of the Continental Divide 1 Well?

4 A Well, about the time that this letter  
5 was written was awful close to the time that we felt every-  
6 thing was in place, and as the last paragraph on page one  
7 summarizes, it -- we were coming up on winter months and  
8 this also was about the same time that the efforts to study  
9 the Gavilan Mancos Pool and West Puerto Chiquito Mancos  
10 Pool was -- was in full swing, and there was quite a bit of  
11 evidence being collected and developed, which I was privy  
12 to and involved with extensively, that we started pointing  
13 towards the fact that we really didn't need an additional  
14 well to develop the reserves. There was an increasing  
15 amount of evidence that points toward 640-acre spacing as  
16 opposed to the 320 that existed at the time.

17 Q At what point in time did you reach the  
18 engineering opinion that continuing further with the de-  
19 velopment of the east half of 12 with its own specific  
20 Mancos Well, the Continental Divide, was no longer appro-  
21 priate?

22 A Well, our efforts to do something with  
23 the east half of 12 have really never ceased. We've been  
24 interested in doing something with it for -- ever since we  
25 initiated efforts in 1985.

1           Q           My question was for a specific well on  
2 that 320 in the east half of 12, you have given us a se-  
3 quence of events showing that you're moving towards  
4 drilling the Continental Divide No. 1 Well. At what point  
5 did you change your mind as a professional engineer that  
6 you could no longer undertake that activity?

7           A           The real turning point was the March,  
8 1987, hearing at which the Commission adopted the 640-acre  
9 spacing, although prior to that, about the date of this  
10 letter, we had enough engineering evidence to definitely  
11 suggest to us that 320-acre spacing was much too dense and  
12 the development of this acreage with an additional well  
13 would be likely an economic catastrophe. In fact, there  
14 was a hearing in August of 1986 that McHugh approached the  
15 Commission and asked that the allowables within the Gavilan  
16 Mancos Pool be reduced because it was enough evidence, at  
17 least to McHugh and Dugan, that the wells were capable of  
18 draining much greater than 320 acre spacing.

19           Q           Well, I'm interested in your own person-  
20 al judgment as an engineer with regards to how to proceed  
21 specifically with the east half of 12.

22                       Now, at what point in time, gathering  
23 all the data that you're assimilating in the reservoir  
24 about what's occurring in spacing and draining, at what  
25 point then did you no longer have professional confidence

1 that you could drill this well and not have it be an un-  
2 necessary well?

3 A Well, I became very concerned about  
4 spending money to develop it in March of 1986.

5 Q Let's look at Exhibit Number Five, Mr.  
6 Roe. Would you identify that for us?

7 A Okay. Exhibit Number Five is the sundry  
8 notice that -- it -- it consists of two pages, the first  
9 page being a sundry that was prepared and sent to the  
10 Forest Service and the purpose of including this is just to  
11 identify that we, after spending a considerable amount of  
12 money for all of the engineering, the soil analysis, and  
13 all of the surveys, archaeological surveys that was re-  
14 quired, we felt that we had an agreement with the Forest  
15 Service that actually included a road base, 14 inches of  
16 gravel, and the purpose of this is just to show that we,  
17 after eight months of very extensive negotiations, we felt  
18 we probably had permission to build the road at over  
19 \$100,000.

20 Q Are there any constraints on the timing  
21 of when a road can be built in this type of terrain for  
22 access to the east half of 12?

23 A Yes. the Forest Service doesn't like  
24 this kind of construction during the winter months.

25 Q The construction of a wellsite and the

1 building of the roads is generally precluded from what  
2 period of time, Mr. Roe?

3 A The exact months I'm not real sure but  
4 it pretty much parallels the winter months.

5 Q Let's go now to the information that  
6 you've utilized as of the spring of 1986 going through the  
7 winter of '85, you're at that point where you are deter-  
8 mining that you're not going to proceed with the drilling  
9 of the well in the east half of 12. Would you describe for  
10 us the information contained in Exhibit Number Five with  
11 regards to that judgement you made? I'm sorry, it's Six,  
12 Exhibit Six.

13 A On Exhibit Number Six, this is -- con-  
14 sists of seven pages.

15 The first page is a map on which I've  
16 highlighted in yellow the wells in the Gavilan Mancos and  
17 West Puerto Chiquito Mancos that were producing as of  
18 November 1st of 1985, which is the timeframe that we were  
19 looking at our initial development efforts in the Gavilan  
20 Mancos Pool, and, as you can see, most of the wells that  
21 were producing at that period of time are in the south-  
22 western part of the Gavilan Mancos Pool.

23 The date of first production for the  
24 individual wells is also identified on this map as the  
25 month and the year.

1           The last six pages that are attached to  
2 this are reproductions of what was Dugan Exhibits Number  
3 Three, Four and Five in a case that was brought to the Oil  
4 Conservation Division in October 9th of 1985. That was  
5 Case 8713 and the primary reason for making these attach-  
6 ments is -- is to in retrospect show what the concept of  
7 development economics were at the time we were faced with  
8 should we or should we not initiate efforts to develop the  
9 east half of Section 12.

10           Q           In re-examining the judgment that you  
11 have made of not going forward with the Continental Divide  
12 Well in '86, give us specific information about the data  
13 contained in Exhibit Six that supports that judgement.

14           A           Okay. Well, in Exhibit Six, with refer-  
15 ence primarily to pages two and three, that is a summary,  
16 and again the reason for using an exhibit from a prior  
17 hearing is not to regenerate new data but to show the data  
18 that we had available at the time we were looking at de-  
19 velopment in the east half of Section 12.

20                       And from that on -- I've highlighted in  
21 blue general per well average production that existed --  
22 did exist during August of 1985. On a poolwide basis there  
23 were 22 wells producing during August of '85; an average  
24 production per well was 117 barrels of oil per day. Of  
25 course there were wells that were better than that but

1 looking at an overall average throughout the pool combined  
2 with the fact that we were beginning to become aware that  
3 the pool needed to be evaluated as a pool, not as an indi-  
4 vidual spot in the reservoir, this primarily is the basis  
5 for which I chose a production performance that I used in  
6 evaluating economics for the development of the Continen-  
7 tal Divide No. 1 back in November of 1985.

8 Q All right, and that economic analysis is  
9 shown on Exhibit Number Seven?

10 A Yes. Exhibit Seven is -- consists of  
11 four pages, the first two of which is economics that I have  
12 generated. Now these are economics that I just ran. Back  
13 in 1985 Dugan Production didn't even have an economic ana-  
14 lysis program. Economics were done quite a bit simpler  
15 although the results were basically the same as you see  
16 here.

17 Q All right, let me understand. You've  
18 gone back to 1985 and you have picked what would have been  
19 a realistic oil price and a gas price during that period of  
20 time?

21 A Yes, I've used prices that would have  
22 been used had I been making this evaluation in 1985.

23 Q And you used the costs involved for the  
24 well to be drilled about that time?

25 A Yes, sir. In fact I actually -- the

1 page number 3 is a copy of the AFE that was executed for  
2 drilling the Continental Divide Number One. I've used that  
3 cost plus I've added \$60,000 to that cost as an additional  
4 cost to reflect the exorbitant road building cost that we  
5 would have been faced with.

6 Q In order to run the economic calcula-  
7 tion have you also had to place a reserve number in the  
8 east half of Section 12?

9 A Yes, I have.

10 Q And did you generate that based upon a  
11 volumetric analysis of reserves or some other methodology?

12 A Well, primarily this reservoir does not  
13 lend itself to a volumetric type analysis and so my reserve  
14 number is generated basically the concept of law of cap-  
15 ture, more or less, that given an initial rate of 100 bar-  
16 rels of oil per day and identifying a rate of production  
17 decline that I believed realistic, you're basically going  
18 to competitively produce the reserves in that portion of  
19 the reservoir and what's going to restrict your rate is  
20 your offsetting wells.

21 Q Did you take the offsetting wells avail-  
22 able at the time in 1985 and extrapolate the time curves  
23 for those representative wells?

24 A Well, back in 1985 there were no offset-  
25 ting wells. That was the reason that I -- I used the data

1 similar to what was presented on -- on the prior exhibit.  
2 We did not have offsetting well production back in 1985 and  
3 what little we had in this general area was fairly, fairly  
4 new and short term, the first well being March of 1985.

5 Q Having recompiled that information from  
6 in 1985, the fall of '85, and run it through the economic  
7 program, what does that show you?

8 A This, primarily had we developed the  
9 east half of Section 12, we would have -- should have an-  
10 ticipated a recovery of approximately 69,000 barrels of oil  
11 and 240-million cubic feet of gas, and given the fact that  
12 our development costs were approximately \$690,000, we'd be  
13 looking at an undiscounted profit to investment ratio of  
14 1.7 and a discounted profit to investment ratio of 1.45,  
15 which, considering the risk that was involved in drilling  
16 these kind of wells, that would have been a marginal  
17 drilling venture at that time, although one we were willing  
18 to move forward with.

19 Q How does that compare to the economics  
20 and reservoir conditions now should you go forward with the  
21 drilling of the Continental Divide Well in the east half of  
22 12 at this point?

23 A Well, for some time I've been of the  
24 opinion that the economics of development in the east half  
25 of Section 12 did not exist. As we'll show in a following

1 exhibit, there is a tremendous amount of evidence to show  
2 that the east half of Section 12 is in sufficient commun-  
3 ication with the rest of the reservoir and that reservoir  
4 was approaching -- well, it was depleting at a fairly sig-  
5 nificant rate each day that the Gavilan Mancos Pool pro-  
6 duced.

7 Q Do you have any reservations or quali-  
8 fications at all as a petroleum engineer that the east half  
9 of 12 cannot now support the drilling of its own Mancos  
10 well?

11 A Yes, I have a very firm reservation that  
12 we could not drill an economic well at this point.

13 Q Let's go to Exhibit Number Eight, Mr.  
14 Roe, and describe that exhibit for us.

15 A Exhibit Number Eight is nothing more  
16 than an exact copy of what was Dugan Exhibit Number Four in  
17 the June, 1988, hearing by the full Commission of Case  
18 7980. The primary reason that I have used this as an ex-  
19 hibit now is it reflects a tremendous amount of work on my  
20 part that was incorporated in studying the reservoir. It  
21 resulted in the development of this graph and led to my  
22 feeling that the reservoir is in good communication and --  
23 and reserves from the reservoir were being produced and the  
24 reservoir was rapidly approaching a pressure depletion that  
25 rendering further development uneconomical.

1           Q           If at this point you have satisfied  
2 yourself completely that the drilling of the Continental  
3 Divide well in the east half of 12 is a unnecessary well  
4 that will not pay for the cost of drilling that well, what  
5 other alternatives have you examined, Mr. Roe?

6           A           Well, Dugan has evaluated what we feel  
7 are the only three options to do something with that  
8 acreage, short of letting it expire and then somebody else  
9 would be faced with one of these three options.

10                    The initial evaluation, as I've indi-  
11 cated, was can we develop it now and I firmly believe  
12 that's not an option and we will have some economics to  
13 reflect that at a later exhibit.

14                    The other option that we looked at was  
15 the formation of a conventional 640-acre unit within the  
16 Gavilan Mancos Pool, comprising all of Section 12 of 25  
17 North, 2 West, with Mallon's Johnson Federal 12 No. 5 being  
18 the producing well for that spacing unit.

19           Q           What have you concluded as an engineer  
20 with regards to the viability of forming a 640-acre spacing  
21 unit with the Johnson Federal Well?

22           A           Well, I -- I have discussed that option  
23 with some -- in depth with Mallon's engineer, Kevin Fitz-  
24 gerald. I've discussed it with some of the other owners in  
25 the west half of Section 12 and given the fact that during

1 March of 1989 the Johnson Federal 12-5 produced an average  
2 of 1.9 barrels of oil per day and 195 MCF per day, and we  
3 have evidence as presented on the earlier exhibit, my  
4 Exhibit Number Eight, the pressure in that well is well  
5 connected with the rest of the reservoir, as a party in the  
6 undrilled east half, we would be faced with going noncon-  
7 sent in a pooling order that probably would be necessary in  
8 order to form a 640-acre spacing unit, and so forming a  
9 640-acre spacing unit, it would be Dugan Production's only  
10 election or we would have no other option but to go noncon-  
11 sent in the production of the Johnson Federal 12 No. 5 be-  
12 cause it is approaching an economic limit by my estimation.

13 Q I direct your attention to Exhibit  
14 Number Nine, Mr. Roe, would you identify and describe that  
15 exhibit?

16 A Exhibit Number Nine is -- is nothing  
17 more than I've taken as of January 1st of 1989, I've taken  
18 a look at all 78 wells that have production within the  
19 Gavilan Mancos Pool and I've taken a look at 32 wells  
20 within the West Puerto Chiquito Mancos Pool and more speci-  
21 fically I've concentrated on the Canada Ojitos Unit because  
22 that's primarily what we are addressing an expansion of in  
23 this hearing.

24 And what I've done was the -- in Gavilan  
25 most of the wells are -- are approaching a point that the

1 ultimate recovery of oil is -- is approaching a point that  
2 that ultimate recovery will be pretty close to what cumu-  
3 lative recovery is right now, and so, although I'm not  
4 representing these as an indicator of what the ultimate  
5 recovery will be, it probably won't be far off, and as you  
6 can see, in Gavilan 53 of the 78 wells have recovered less  
7 than 50,000 barrels of oil per well with an actual average  
8 of 17,000 barrels of oil per well, which strongly suggests  
9 to me that 68 percent of the wells in Gavilan were unneces-  
10 sary. A lot of those wells are low recovery primarily be-  
11 cause they encountered a reservoir that had already exper-  
12 ienced some significant amount of pressure depletion at the  
13 time they were completed.

14 By contrast I've got a similar evalua-  
15 tion of the 32 wells in the Canada Ojitos Unit and nearly a  
16 third of the wells in the Canada Ojitos Unit are -- fall  
17 into the category that I've created for over 200,000  
18 barrels, and so this is something that brings to my atten-  
19 tion the -- the true or really evidences that we do not  
20 need additional wells in Gavilan or West Puerto Chiquito.  
21 This highlights the -- to me pretty much that wells are  
22 capable of draining larger than 320 acres or even 640 acres  
23 and that Gavilan has been over-drilled resulting in a great  
24 economic waste to somebody.

25 Q Do you have a engineering opinion as to

1 what ought to be done for the development of the east half  
2 of Section 12 at this point?

3 A Well, as a working interest owner in the  
4 east half of Section 12, our -- Dugan Production's only  
5 economically viable option is to ask that that acreage be  
6 placed into production by adding it to the Canada Ojitos  
7 Unit.

8 Q Have you initiated or did anyone ini-  
9 tiate a proposal to include the east half of 12 within the  
10 unit?

11 A Yes. I asked Mr. Greer if he would con-  
12 sider bringing this into the unit. Dugan has the unique  
13 position that we're also an interest owner in the unit, and  
14 I felt that if this acreage was placed in production with  
15 a well Dugan would have to pay our share of the well that  
16 was drilled in the east half of 12 and my evaluation said  
17 that would not be an economical well, plus knowing the  
18 general attitude towards protecting unit acreage from  
19 drainage that exists by the unit operator, I felt fairly  
20 certain that it would -- a well in the east half of 12  
21 would precipitate an offsetting well in the west half of  
22 Section 7 of Township 25 North, Range 1 West, and that well  
23 would not be necessary to develop unit reserves, but it  
24 would be necessary to offset productivity that would result  
25 from an additional well in Section 12.

1                   So the way I saw it is Dugan Production  
2 was going to put in a position that we were going to have  
3 to pay our share of two wells neither of which I felt would  
4 be necessary to develop the reserves.

5                   Q           What was your initial contact with Mr.  
6 Greer? Was it on behalf of Dugan?

7                   A           Well, actually, initially it was just  
8 almost an idle question. It was something that I had given  
9 a great deal of thought to. I knew what Mr. Greer's answer  
10 was going to be at the time I asked because at that time  
11 the turmoil, there were many other issues to deal with and  
12 he didn't want to even think about it.

13                  Q           Do you see any other choice at this  
14 point for the development of the east half of 12 for Mancos  
15 reserves other than than letting the lease expire?

16                  A           Well, I think even letting the lease ex-  
17 pire, that just takes care of Dugan's problem. Somebody  
18 will pick that lease up and somebody will drill a well and  
19 that will -- the only thing that's going to do for Dugan is  
20 we won't have to pay our share of that well but we will  
21 have to pay our share of -- of the well that would be the  
22 resulting well in Canada Ojitos Unit and I'd rather not,  
23 and so I -- we really would like to do something with the  
24 acreage that would protect as best we can the correlative  
25 rights of that acreage and minimize the additional

1 drilling. If one well is drilled in the east half of 12,  
2 that's going to result in a drilling expenditure of roughly  
3 a million and a half dollars and with my analysis of the  
4 reservoir, that is an unnecessary expenditure at this  
5 point.

6 MR. KELLAHIN: That concludes  
7 my examination of Mr. Roe, Mr. Stogner. We would move the  
8 introduction of Exhibits Two through Nine.

9 MR. STOGNER: Are there any  
10 objections?

11 MR. PEARCE: I have my con-  
12 tinuing objection, Mr. Examiner.

13 MR. STOGNER: So noted. Ex-  
14 hibits Two through Nine will be admitted into evidence.

15 Mr. Carr, your witness.

16 MR. CARR: I have no ques-  
17 tions.

18 MR. STOGNER: Mr. Pearce?

19 MR. PEARCE: Let's let Mr.  
20 Lopez proceed, if we may, please.

21 MR. STOGNER; Mr. Lopez?

22

23

#### CROSS EXAMINATION

24 BY MR. LOPEZ:

25

Q We meet again, Mr. Roe.



1 wasn't necessary that actually started much before that. I  
2 don't really have an exact date that I became concerned  
3 that we were over-drilling the reservoir but it was even  
4 before August of 1986 and that's when we came to the Com-  
5 mission and even though McHugh was the applicant, Dugan  
6 Production was involved in that case. In fact, I probably  
7 was actually -- the Commission itself in March 5th of 1986,  
8 I'm assuming they were becoming concerned themselves be-  
9 cause that is the day they called a hearing right here in  
10 Santa Fe and asked the operators to consider forming a unit  
11 study -- I didn't mean to use the word "unit" -- an evalua-  
12 tion of the reservoir to see if there wasn't going to be  
13 something we needed to do to efficiently develop the reser-  
14 voir given the fact that pressures were declining. It  
15 looked like we had a tremendous reservoir and, you know, in  
16 March of '86 the Commission themselves called a hearing or  
17 a meeting of operators and asked us to look at this, which  
18 basically initiated the engineering and geologic study ef-  
19 forts in March of 1986.

20 Q Well, when was 640-acre spacing adopted  
21 either temporarily or permanently? You said that after the  
22 March '87 hearing it was adopted permanently. Was it  
23 adopted temporarily prior to that time?

24 A No, it's my understanding that the --  
25 and as I read the order, and I do realize that there --

1 everybody doesn't read it the same, but the order that was  
2 resultant from the March, 1987, hearing, now that hearing  
3 was initially called as a result of the initial pool rules  
4 being for a temporary period of two years, and so at the  
5 end of the two years the Commission reopened the case,  
6 which initially had 320 acres. At the March, '87 hearing  
7 it's my reading of the order that the 640-acre spacing was  
8 the permanent spacing. Now, the Commission included pro-  
9 visions that the case would be reopened in another year  
10 following some testing that they asked the operators to do,  
11 and that testing was done, to address additional issues,  
12 but it's been my feeling that 640's has been the permanent  
13 spacing since the March, 1987, order, or order from that  
14 hearing and that the additional issues were primarily an  
15 allowable issue, not a spacing issue.

16 Q At whose request was the 640-acre spac-  
17 ing adopted?

18 A Well, Dugan Production was a very strong  
19 advocate of 640-acre spacing but it was also supported by  
20 the -- I don't remember whether Sun was involved at that  
21 time or not, but if they weren't, McHugh was the operator,  
22 they strongly supported it. We had Meridian that supported  
23 it and even though it wasn't strongly supported at that  
24 time, it's my feeling that the 640 was not near the issue  
25 with your clients as the allowable was.

1                   Later in the hearing that was reopened  
2 in June of 1988, your -- even your client supported the  
3 640-acre spacing.

4                   And Dugan continued to be a strong ad-  
5 vocate of 640, but by then we had quite a bit of evidence  
6 to suggest that maybe even that was too dense.

7                   Q               Since the June '88 hearing when the  
8 allowable restrictions were lifted, the wells in the Gavi-  
9 lan have never responded to where they were before the  
10 allowable restrictions were put in effect, have they?

11                  A               Well, Mr. Lopez, there's some of us that  
12 think the wells have actually performed just the way they  
13 should have in the reservoir that the pressure is declining  
14 anywhere from 30 to 45 pounds a month, and in a later  
15 exhibit we'll show you some evidence that the Gavilan  
16 Mancos Pool is at a pressure that a lot of reservoirs are  
17 abandoned at and that continued production is going to be  
18 just primarily because of its fractured productivity.

19                               I mean we're at an abandonment pressure  
20 right now.

21                               Did I answer your question?

22                  Q               I think you did. As I recall, or if I  
23 understand your Exhibit Four correctly, in November or on  
24 November 14th of '86, you were still communicating with  
25 other working interest owners in the east half of 12 with

1 respect to a proposal to drill a well in the east half of  
2 Section 12, is that correct?

3 A Well, that was the final communication  
4 and I probably wasn't real clear, but at that point the  
5 last paragraph on that page, it -- we suspended our plans  
6 at that point.

7 Now, again, I didn't point it out but  
8 the one other reason for including my Exhibit A was to show  
9 what was happening to the pressure at the time we proposed  
10 the well. In the latter part of 1985, as presented on this  
11 point, and it's a little hard to read in the (unclear) down  
12 copy but the dates are -- are written along the gas/oil  
13 ratio line and in 1985 when we proposed the well the pres-  
14 sure was 1620 pounds as evidenced on Exhibit Eight.

15 In the latter part of 1986 it had de-  
16 clined to 1310 pounds and it was declining at a rate of 30  
17 pounds a month and I -- I, among other engineers, were very  
18 concerned that our reserve base was very small and we had a  
19 tremendous number of wells competing for that reserve,  
20 which was why I presented Exhibit Number Nine to show that  
21 there are too many wells in Gavilan.

22 Q There was testimony at those hearings,  
23 though, was there not, that took a contrary view, that in  
24 fact that irreparable harm was being caused to the reser-  
25 voir by restricting the allowables and that the most effi-

1       cient way to recover the reserves within the pool was to  
2       allow the wells to produce at their maximum rate?

3               A               Yes, there was testimony to that effect,  
4       although I did not share that opinion.

5               Q               And the performance of the reservoir  
6       since the allowables were lifted hasn't changed your mind  
7       in the fact that irreparable damage was caused the reser-  
8       voir by the restrictions?

9               A               No, sir, as a matter of fact, Mr. Dillon  
10       will have an exhibit to show that the reservoir pressure  
11       continued to decline even during the early part of I forget  
12       exactly which month, but at the request of Mallon Oil the  
13       reservoir was produced rate unrestricted during October and  
14       November, or November and December, or there was a 60-day  
15       period the latter part of '87, early part of -- or latter  
16       part of '88, early part of '89, that -- it was '87-'99,  
17       wasn't it? Okay. That they -- basically, there was no  
18       allowables in Gavilan during that period of time. The  
19       wells were allowed to produce whatever they wanted and with  
20       the pressure history that Mr. Dillon presents you'll see  
21       that the reservoir continued to decline just as we had pre-  
22       sented here, and this wasn't a result of any rate restric-  
23       tion, it's what you should anticipate from a reservoir,  
24       high productivity, oil produced by solution gas drive, and  
25       limited reserves. It's, in my opinion, the reservoir has

1 produced just exactly like we should have expected it to.

2 Q Then why the need for restricted al-  
3 lowables?

4 A Well, primarily because with the reser-  
5 voir, this productivity, the reason the reservoir produces  
6 at all is because of the fracturing, the natural fractur-  
7 ing, and the -- to this very day, we've measured pressures  
8 in wells that are shut in that are affected by production  
9 as far as five miles away, and so if you have that kind of  
10 reservoir communication and that communication is further  
11 evidenced by the narrow band of -- that exists on this  
12 graph. With that kind of communication if you don't have  
13 some method of controlling the wells that are in the higher  
14 fractured areas, the wells that are in the lower fractured  
15 areas will be drained and their correlative rights will be  
16 violated. We've actually measured that event happening  
17 with pressures.

18 Q Well, let's -- let's discuss that a  
19 little bit and I'd like to refer to your Exhibit Two, and  
20 talk about some production statistics.

21 With respect to the Mallon Johnson Well  
22 in the northwest quarter of Section 12, what did you say  
23 that is currently producing?

24 A I said that based on the C-115 that  
25 Mallon filed with the Commission during March of 1989, the

1 barrel per producing day, not calendar day, but for each  
2 day it produced it was 1.9 barrels of oil and 195 MCF of  
3 gas.

4 And in a later exhibit Mr. Dillon will  
5 have -- he's going to have an extension to what I presented  
6 and he will deal with that particular well in more depth.

7 Q Now, over across the pool boundary in  
8 the Canada Ojitos Unit I notice there's a well that is  
9 located in the northwest quarter of Section 7, is that  
10 correct?

11 A Yes, sir, that's the Canada Ojitos Unit  
12 Well No. 38. Mr. Greer will refer to it as the F-7.

13 Q And could you tell me what that is cur-  
14 rently producing?

15 A Yes, I can. During March of 1989, again  
16 using the same source of information, it -- 72.6 barrels of  
17 oil per day and 939 MCF of gas per day.

18 Q That is considerably -- that's a consi-  
19 derable improvement over the Mallon Well, is it not?

20 A Well, yes, but you've got to bear in  
21 mind that that's one of the benefits you have by having an  
22 effort to maintain pressure to the east and doing every-  
23 thing you can to produce it on the western edge of your  
24 unit, trying to keep that oil from flowing into Gavilan and  
25 as a working interest owner in the Unit I'm very familiar

1 that there's a been a tremendous expenditure recently to  
2 maintain productivity in that western row of wells of the  
3 Unit, western two rows, because that is the point at which  
4 Unit production, and I think if -- if you looked at the  
5 production as a whole, the unit production is still holding  
6 up pretty well injecting gas to the -- in the gas cap area  
7 and producing oil in the western two rows of sections.

8                   If we were to shut the F-7 in I would  
9 suspect the Johnson Federal would -- would have a higher  
10 production and would benefit from gas injection.

11               Q           Do you know when the two wells were  
12 drilled?

13               A           The two wells, which ones?

14               Q           The Johnson Well and the No. 38 or I  
15 think you said you're going to refer to it as the F-7.

16               A           Well, if I could refer to my Exhibit  
17 Number Six, the -- this is not an exact answer to your  
18 question. I could get the drill dates but the date of  
19 first production is presented on Exhibit Number Six. The  
20 F-7 was placed on production during December, 1987, and  
21 that is on my Exhibit Number Six. That's the little num-  
22 bers in the handwriting.

23               Q           And the other was in December of '85.

24               A           Which?

25               Q           The Johnson.

1           A           The Johnson was, yes, sir, that's right.

2           Q           So the fact that there's two years dif-  
3           ference would not affect the rate of production.

4           A           Well, the -- it certainly would if there  
5           was no pressure communication between the wells but as I've  
6           evidenced on my exhibit that I had the pressure data, there  
7           is pressure communication. In fact the Johnson 12-5 and  
8           the F-7 is not one of the wells, but the Johnson 12-5 is on  
9           that pressure plot. In fact it is one of the wells I've  
10          highlighted in -- in -- I forget whether it's yellow or  
11          blue. The yellow is Unit wells and the blue is Gavilan  
12          wells, and the Johnson 12-5 is on that list.

13                         Now, with respect to the two years of  
14          additional production, the Johnson 12-5 has produced -- its  
15          cumulative as of April 1st is 31,206 barrels of oil,  
16          249,297 MCF of gas.

17                         The F-7, during the same period of time,  
18          or not during the same period of time, as you pointed out,  
19          it's been producing much less, but with the benefit of the  
20          pressure maintenance it's amassed a cumulative production  
21          of -- nearly equal to the Johnson 12-5, being 28,600 bar-  
22          rels of oil and 277-million cubic feet of gas.

23                         So cumulatives on the wells are about  
24          the same, and again, Mr. Dillon will have some production,  
25          actual curves on those two wells that will show you if the

1 F-7 is a better well now and it's our interpretation it's a  
2 result of the pressure maintenance efforts.

3 Q Isn't it true that the cumulative pro-  
4 duction of many wells within the Gavilan Mancos Pool vary  
5 considerably in terms of cumulative production? Many of  
6 the wells that may now be approaching their economic  
7 limits, and isn't the reason for that the fact that wells  
8 that were fortunate enough to penetrate the fracture system  
9 or get close enough have as a general rule been more suc-  
10 cessful wells than those that have not?

11 A I'm not sure I understood what you just  
12 asked.

13 Q I'll repeat it. Isn't it true that the  
14 cumulative production of many wells within the Gavilan  
15 Mancos Pool, wells that now are reaching their so-called  
16 economic limits, that the cumulative production varies con-  
17 siderably from well to well based on the location of the  
18 well near a fracture system within the reservoir?

19 A Well, yes, that -- that's true even in  
20 the Canada Ojitos Unit. We've got some low cum wells, the  
21 wells that are not influenced by natural fracturing have  
22 quite a bit lower cumulatives, but, as I indicated, we've  
23 got some of those wells that we use -- that we observed  
24 pressure in and even those wells are being drained by the  
25 higher productivity wells that are producing elsewhere in

1 the reservoir as a result of them being in a closer proxi-  
2 mity with the pool.

3                   One thing I didn't highlight on my  
4 Exhibit Number Nine is that -- is that on the average, the  
5 78 wells in Gavilan are putting in all of the good wells,  
6 or even looking at just the three wells that exceed 200,000  
7 barrels of cum. The point is that in -- since Gavilan came  
8 on production in 1982 it's basically depleted. The Unit,  
9 you're right, it's been producing since 1962. Prior to  
10 Gavilan there was a big effort to balance production rate  
11 versus gas injection. There's been a much longer produc-  
12 tion trend but that's not what's responsible for the cum-  
13 ulative production. Gavilan is -- what you see on Exhibit  
14 Nine is basically not going to be too far off from the  
15 epitaph that will exist when Gavilan's done.

16                   Q           Can you tell me what the production  
17 rates of the two wells to the north of the wells we've been  
18 discussing are; the well in the northeast quarter of Sec-  
19 tion 1 within Gavilan and the well in the northwest quarter  
20 of Section 6 in the Canada Ojitos Unit?

21                   A           Yes, I can.

22                   Q           Would you?

23                   A           I'd be happy to. The well in the north-  
24 east quarter that you identified, that's Mallon Oil's  
25 Howard Federal 1-8. The production statistics, it's

1 changing month to month, the ones that I have before me  
2 right now are not -- they're December, 1988, but during  
3 December that well averaged 37 barrels of oil per day and  
4 680 MCF of gas per day.

5 Now, --

6 MR. STOGNER; What was the  
7 gas? I'm sorry.

8 A 680.

9 MR. STOGNER: Thank you.

10 A Now, that is a very, very good well and  
11 it's been one of Mallon's better wells. It has a cumula-  
12 tive production of 179,000 barrels of oil as of January 1st  
13 of 1989.

14 I have a little more current data on the  
15 Howard 1-11 because it is one of the offset wells and again  
16 I will stress that Mr. Dillon's going to deal with that  
17 well in more depth than I did. I dealt with it. I just  
18 didn't see any sense in being redundant before the Commis-  
19 sion here today because Mr. Dillon has been very involved  
20 in this analysis, too.

21 But the Howard 1-11 during March of  
22 1989, using the C-115 data as my source of data, the C-115  
23 form, averaged 5.1 barrels of oil per day and 1325 MCF of  
24 gas per day.

25 Now --

1 Q Now that's the same well we're talking  
2 about ?

3 A That's the -- Mallon's -- no, I'm sorry,  
4 that's his Howard Federal 1-11.

5 Q Where is that located?

6 A That's the southwest quarter of Section  
7 1. It's specifically in Unit K.

8 Q Okay. Now how about the Greer well, or  
9 the -- it looks like Canada Ojitos Unit No. 29?

10 A The E-6, or 29, that's -- that's right.  
11 Again I -- I wasn't -- I have the data but if we could suf-  
12 fice with December, 1988 data --

13 Q That would be fine.

14 A That well averaged 79 barrels of oil per  
15 day and 674 MCF of gas per day during December of 1988.

16 Q How about the well to the -- in the  
17 southeast quarter of Section 6?

18 A Okay.

19 Q The No. 32?

20 A That's the Canada Ojitos Unit No. 32 and  
21 again using December, 1988, as my source, it was 6 oil and  
22 339 MCF per day, and again that would be evidence of a well  
23 that did not have the fracturing influence that the E-6  
24 has.

25 Q Now, let me understand your logic in

1 saying that if the option were taken to allow your lease to  
2 expire for failure to develop, or failure to join in the  
3 Mallon Johnson Federal Well in the northwest quarter of 12,  
4 that it would require another well to be drilled in the  
5 east half of 12, assuming someone would pick up the lease,  
6 but based on your testimony, it doesn't appear that Dugan  
7 would be bidding on it because you don't think it's econ-  
8 omic to develop the east half of 12 --

9 A I can assure you that Dugan would not  
10 bid on it.

11 Q But the logic I want to pursue is if in  
12 fact someone else did pick it up and were to develop it,  
13 betting on that they may be able to get closer to a frac-  
14 ture system than the well on the west half, maybe more like  
15 the well over in Section 7 in the Canada Ojitos Unit, why  
16 would -- would Greer be required to drill another well in  
17 7?

18 A Well, you've got to understand that the  
19 -- it's my belief that the reserves in this -- I am one of  
20 the people that believes this is one common pool, as evi-  
21 denced by the pressure communication that we've actually  
22 observed. So the reserves you're going to get out of that  
23 big tank is going to be totally dependent upon your ability  
24 to produce what is yours. The pressure maintenance efforts  
25 continue, although to a reduced degree, Mr. Greer is con-

1 continuing to inject gas into the gas cap to maintain a re-  
2 servoir pressure in the eastern part of this pool, and as  
3 Mr. Dillon will show, the pressure in Gavilan is -- is less  
4 than 500 pounds right now, and we have further evidence  
5 that Mr. Dillon will show, that the pressure in the vici-  
6 nity of Section 12 is in the range of 600 pounds now. So  
7 we're dealing with a reservoir in the area that Section 12  
8 is at is 2/3rds pressure depleted and -- and is continuing  
9 that pressure depletion every day.

10 Now, why Mr. Greer, I hope, would drill  
11 a well, and of course it would depend to some degree what  
12 kind of a well did result in Section 12, but assuming he  
13 did intercept a fracture and there was some concern that  
14 Unit reserves would migrate from Unit acreage into the  
15 Gavilan Pool, I would hope that we'd look at drilling an  
16 additional well to keep those reserves on the Unit side.  
17 It's kind of like a big sink. If you put a hole in the  
18 bottom of it the water is going to drain out of it and I  
19 view an additional wellbore as an extra place for that oil  
20 to move towards and so -- and for what it's worth, one of  
21 your clients has advised me he would like to pick up that  
22 lease and maybe drill a well there.

23 That's one of my concerns, is that even  
24 though I view the reservoir as uneconomical there may be  
25 somebody that would be willing to drill and as I think my

1 testimony in answering one of Mr Kellahin's questions, if  
2 the lease expires, the only thing that's going to happen to  
3 Dugan is we won't have to pay our share of drilling a well  
4 there.

5 We will probably go ahead and have to  
6 pay our share of drilling a Unit well and that in my mind  
7 is beyond any doubt economic waste. It's definitely not a  
8 well that's necessary to produce unit reserves with the  
9 higher productivity that exists and Mr. Greer's efforts to  
10 keep the artificial lift equipment operating at its peak,  
11 which includes installing the \$100,000 plus production  
12 units in the western edge of the Canada Ojitos Unit.

13 With that effort to keep production up  
14 those wells have the ability to produce Unit reserves given  
15 that they maintain a competitive parallel with the wells in  
16 Gavilan.

17 Q Do you have any pressure, bottom hole  
18 pressure figures for Section 7 and Section 12 at this  
19 point?

20 A At this point I don't, but on my exhibit  
21 we have pressures for wells in Section -- on both sides,  
22 and as you can see on my -- my Exhibit Number Two, I've  
23 shown you the wells that we do have pressure data on and we  
24 have wells, both Gavilan wells and Unit wells, both east  
25 and west and north and south of Section 12 that --

1           Q           Are these numbers 432 and 468 the pres-  
2           sure data?

3           A           No, I should have explained that. This  
4           is a structure map and those are the subsea elevations and  
5           in this instance they're above sea level. For instance,  
6           the 432 is at a +432 feet above sea level, is the point you  
7           find the top of the Niobrara A.

8           Q           So where is the pressure you mentioned?

9           A           I didn't present any pressure informa-  
10          tion. The wells that are highlighted in yellow are actual-  
11          ly the same wells that on my Exhibit Number Eight, that I  
12          have also highlighted in either yellow or blue. The pres-  
13          sure information is actually here. I didn't choose to bore  
14          the Commission with additional data but if you're inter-  
15          ested, I'd be happy to provide you with any of that pres-  
16          sure information.

17                        But -- but those wells, Mr. Lopez, are  
18          the wells that I've highlighted, the yellow being the wells  
19          that are on the Unit side. Those are the three Unit wells  
20          that we have good pressure information. And the wells that  
21          I've highlighted in blue are the Gavilan wells that we have  
22          good pressure information and quite a bit of this was taken  
23          under the direction of the Commission and basically was a  
24          cooperative effort for both pools to obtain reservoir pres-  
25          sure.

1           Q           So I guess your answer to my question is  
2 we don't have any current information with respect to any  
3 pressure differential between wells on the east and west  
4 side of the existing boundary separating the two pools.

5           A           Well, I didn't mean to say that. Mr.  
6 Dillon will present some of that information in one of his  
7 exhibits which will be an update of this exhibit.

8           Q           But it would appear, if I understood  
9 your testimony, is it not true that the pressure mainten-  
10 ance project, if you will, hasn't particularly benefitted  
11 the Greer well in the southwest quarter of Section 6.

12          A           No, I disagree. I'd say the productiv-  
13 ity of that well, given what little I know about it, I  
14 haven't spent the -- a large amount of time analyzing it,  
15 but without the higher pressure that exists as you move  
16 easterly in this direction in the reservoir, without the  
17 benefit of the pressure maintenance project the E-6 prob-  
18 ably wouldn't even be producing what it's producing now  
19 because of its lower productivity. So it's my -- my belief  
20 that you can see evidence of the pressure maintenance bene-  
21 fit even in that well.

22          Q           Could you give me the production infor-  
23 mation with respect to the wells down in Section 13 and the  
24 Section, what would that be, 18?

25          A           Sure. The well in Section 13, I assume

1 you're asking about the well in the northwest quarter.

2 Q Right.

3 A That's Mallon's Post Federal 13-6, and  
4 again, this will be a --

5 Q December, '88, right.

6 A No, actually I've got that March, '89.  
7 Like I say, Mr. Dillon and I both evaluated this. We have  
8 very parallel answers and our attorneys felt that there  
9 wasn't any need to drag this out and Mr. Dillon's present-  
10 ation should suffice, but I'll give you my numbers and they  
11 aren't too much different from Mr. Dillon's numbers.

12 During March of 1989 the Post, Mallon's  
13 Post Federal 13-6, which is located in Unit F of Section  
14 13, did produce 0.3 barrels of oil per day and 305 MCF of  
15 gas per day.

16 And just to keep you from asking it, or  
17 I mean -- I didn't mean -- I mean you're interested in re-  
18 serves.

19 Q I understand.

20 A It's a little better well than the  
21 Johnson Well. It produced 38,000 barrels of oil since it  
22 was placed on production in June of 1986. So it's actually  
23 had less producing time and got more oil.

24 Now the Unit well that you were asking  
25 about, which I believe is the Unit Well No. 33, and that I

1 will have to use December data for that well, did average  
2 237 barrels of oil per day and 364 MCF per day, and the  
3 interesting point in that well is it still has a fairly low  
4 gas/oil ratio. During December it was about 1500-to-1,  
5 which to me definitely demonstrates the fact that that well  
6 has a cumulative production of around 122,000 barrels of  
7 oil. It's had to have had some benefit from the pressure  
8 maintenance project or -- or it would be exhibiting gross-  
9 ly different production characteristics than it is, and --  
10 and for what it's worth, that is one of the wells that Mr.  
11 Greer's spent a ton of money to maintain productivity in  
12 view of the fact that reservoir pressure is declining in  
13 this area. He's had to shift from artificial lift by gas  
14 lift in order to get operating bottom hole pressure at a  
15 reduced level. He's installed a Kobe hydraulic pump in  
16 this well.

17 Q Is Mr. Greer injecting gas in the west-  
18 ern two tiers of the Canada Ojitos Unit now?

19 A No, actually he's injecting gas on the  
20 eastern side of the boundary that your clients profess  
21 exists.

22 Q Without all this additional information  
23 that we're going to hear just on its naked face, one would  
24 think that there's no pressure communication across the  
25 boundary based on the performance of the existing wells.

1           A           Well, unfortunately I didn't anticipate  
2 that question. The lines that I've shown in green, defi-  
3 nitely there's no doubt. I was involved in both of those  
4 pressure interference tests. The actual data has been en-  
5 tered into the record and I'd be happy to give you -- I  
6 can't right now, but I'd be happy to provide you with  
7 places in the record you can find that. I'd even be -- go  
8 further and I'd provide you with a personal copy, but  
9 there's no doubt that communication has been established  
10 between the western row of Unit wells and the eastern row  
11 of Gavilan wells, and to me, my Exhibit Number -- the one  
12 with the pressure, Exhibit Number Eight, is probably the  
13 best piece of evidence we have that pressure communication  
14 exists, because as you can see, I've got yellow wells and  
15 blue wells all tracking along the same line and if there  
16 wasn't pressure communication between there, there defi-  
17 nitely would be probably a pressure difference. It's not  
18 just a matter of coincidence that they're all tracking  
19 along the same line and we're dealing with an area that has  
20 an average cumulative production of 300,000 barrels per  
21 well compared to an area that the average cumulative is  
22 58,000 barrels per well, and they all are exhibiting the  
23 same pressure decline.

24           Q           Would you agree with me that we have  
25 discussed and debated at considerable length where the

1 proper boundary between the pools, two pools should lie and  
2 that after much consideration the Commission has estab-  
3 lished the boundary as the township line separating 1 West  
4 from 2 West?

5 A Well, I wouldn't disagree with you at  
6 all, that's a correct statement.

7 Q I'd like to hand you what's been marked  
8 Mesa Grande, et al's Exhibit Number One and ask you if you  
9 recognize it.

10 A Well, yes, I do recognize it. This is a  
11 letter that I wrote to Kevin Fitzgerald with Mallon Oil and  
12 to Larry Sweet with Mesa Grande Limited, which on this I  
13 identify as NM & O Operating, and I also telecopied a copy  
14 of this to Greg Owens with Hooper, Kimball & Williams, and  
15 I copied this letter to Al Greer, Bill Carr, Tom Kellahin,  
16 Richard Dillon, and Kirk Moore, and this letter was dated  
17 May 2nd. Now in all fairness it was not mailed from my  
18 office on May 2nd because I didn't have the blessing of Mr.  
19 Dugan on May 2nd, but it was ready to mail then. I believe  
20 that it should have been received on May -- I believe it  
21 would have been a Friday, I forget the date; it's May 4th  
22 or May 5th, and I did send it Federal Express and I person-  
23 ally put it in the mail.

24 Q Would you read the last sentence of the  
25 first paragraph?

1           A           Okay, starting with "As I have"?

2           Q           Yes.

3           A           "As I have mentioned, our joint interest  
4 expires on July 31st of 1989 and our interest in adding  
5 this acreage to the Unit is simply a matter of economics as  
6 it relates to the working interest owners in the east half  
7 of Section 12."

8                         Now I might stress that this letter fol-  
9 lowed prior phone conversations with both Larry Sweet and  
10 Kevin Fitzgerald and this was was effort on my part to, I  
11 felt, that during the phone conversations I had made a real  
12 honest effort to first let them know that this application  
13 was an effort of Mr. Greer's to accommodate a request that  
14 I had made of him.

15                         The Sun people agreed that it was a  
16 proper course of action based on their analysis of the re-  
17 servoir. In fact, without being completely aware that I  
18 had talked to Al, I think Mr. Dillon might have actually  
19 discussed this issue with Mr. Greer, too.

20                         I wrote this letter and I hope that, at  
21 least my concept of what that last sentence says is consis-  
22 tent with my testimony here, is as a working interest owner  
23 in the east half of Section 12, I don't feel we have an  
24 option other than to place this into the unit. I'm saying  
25 that as a working interest owner in 12 and I'm saying it as

1 a preferred course of action as a working interest owner in  
2 the Unit.

3 Q Have you made any effort to communitize  
4 the east half of 12 with the west half of 12?

5 A No, I haven't, because in one of the  
6 earlier phone conversations that I had with Larry Sweet I  
7 addressed that issue, plus I addressed that issue with  
8 Kevin Fitzgerald, and of course Kevin Fitzgerald said that  
9 to him it wouldn't be an important issue if we formed a 640  
10 or added it to the Unit because he felt that the economics  
11 of Gavilan were approaching a point that they -- there just  
12 wasn't any interest on their part in doing anything.

13 In talking to Larry I asked him what his  
14 concept of terms would be in the event we formed a 640-acre  
15 spacing unit and he was very adamant that he would insist  
16 that the terms would be parallel to what the Commission  
17 ordered at the time a 640-acre spacing unit was set up for  
18 the Loddy No. 1, which is a well that -- that Sun operates  
19 in Section 20 of Township 25 North, 2 West.

20 Primarily he said that his position  
21 would be that we should -- that non-drilling parties would  
22 be required or requested and I would -- I guess I should  
23 say required under the terms of the pooling order, to pay,  
24 in order to get into the Johnson Federal Well, the 12-5,  
25 they would be required to pay their share of the initial

1 drilling cost, which is approximately \$500,000, plus an  
2 additional amount that would be determined by applying a 12  
3 percent interest factor for I figured out assuming that a  
4 pooling order would be issued effective July 1st of 1989,  
5 from the completion date of the Johnson, which is in  
6 October of 1985, that 44 month period would equate to about  
7 \$260,000 worth of interest.

8           So the non-drilling east half would be  
9 required to pay roughly \$760,000 to buy into -- or their 50  
10 percent share of \$760,000 to buy into the Johnson Well and  
11 that well right now, as I testified, is around 2 barrels of  
12 oil a day and 195 MCF a day. I did evaluate the economics  
13 of that and I -- I wouldn't have any -- I would be embar-  
14 rassed to ask Mr. Dugan to participate in that well. We  
15 would have to go nonconsent, which means we would basic-  
16 ally -- the only thing we would accomplish would be to  
17 place our lease into production so that the correlative  
18 rights could be protected. Dugan Production would not  
19 benefit from that arrangement and that's basically what re-  
20 affirmed my position that as a working interest owner, and  
21 that was the intent of my saying that it's a matter of  
22 economics, the only economic avenue based on my analysis,  
23 we add this acreage to the Unit; we don't drill two wells;  
24 we don't spend our share of a million and a half dollars;  
25 these reserves continue to be produced by the wells that

1 are there; and we can pay out our inventory adjustment in  
2 the Unit, which is a lot better than exists in Gavilan  
3 because there've been fewer wells drilled, we can pay it  
4 out in somewhere -- it's a little uncertain but a maximum  
5 of 60 months and as quick as 28 months, dependent upon how  
6 much gas Mr. Greer sells and right now he's set up to sell  
7 any amount of gas he can get rid of.

8                   And, like I say, it's very difficult for  
9 me to tell Mr. Dugan he needs to go nonconsent in a well.  
10 He needs to drill a well that will never pay out and pro-  
11 bably will encounter a rate of around 2 barrels a day, or  
12 should he add it to the Unit and it would pay out somewhere  
13 between 28 and 60 months.

14                   That really was not a very difficult de-  
15 cision for me to make.

16                   Q           Is economics a basis for expanding a  
17 statutory unit?

18                   A           The basis for -- from the unit side  
19 economics need to be considered. There has to be benefit  
20 to the unit.

21                   Q           Is that any basis, in your opinion, for  
22 expanding a statutory unit?

23                   A           In the interest of unit operations it is  
24 a basis, yes, and the protection of correlative rights of  
25 the unit owners and royalty owners of the unit.

1           Q           With reference to the Statutory Uniti-  
2 zation Act, is not a statutory unit necessarily based on a  
3 common source of supply?

4           A           Yes, it is, and it's my opinion that --  
5 that this is a strong evidence of support, we're dealing  
6 with a common source of supply and the fact that the Com-  
7 mission agreed that at least the western two rows of the  
8 Unit and Gavilan were in communication. They found that in  
9 two different cases. That -- that falls into my concept of  
10 a common source of supply.

11          Q           Do you recall perhaps, it may have re-  
12 presented paranoia but do you recall the testimony of our  
13 clients that their concern from the outset as much as three  
14 or four years ago, was that the whole dispute was a veiled  
15 attempt of Mr. Greer to expand his Canada Ojitos Unit to  
16 include all the Gavilan and for that matter, of following  
17 his position to it's logical extreme, that the entire San  
18 Juan Basin should be one unit with one well drilling all of  
19 it?

20   MR. KELLAHIN: Objection, Mr.  
21 Examiner, that's argumentative. That's not a question for  
22 this witness.

23   MR. STOGNER: Restate your  
24 question, Mr. Lopez, or drop it.

25          Q           How, Mr. Roe, can you justify expanding

1 the unit from its present boundary which stops at a well  
2 established pool boundary line after months of -- of  
3 debate, at the east half of Section 12 and not include  
4 other -- the west half of Section 12 and the other sections  
5 surrounding this.

6           A           That probably is a question that Mr.  
7 Greer would be better able to address, but I'm not real  
8 sure Mr. Greer would be interested in bringing in -- well,  
9 it's not -- I'm not real sure, he's told me, in fact, that  
10 was in your Exhibit Number, that was one of the reasons I  
11 wrote this letter is because the Mallon people and the Mesa  
12 Grande people, I am not sure why, but they are still -- you  
13 properly described it -- are paranoid about the fact, and  
14 I'll quote Larry Sweet, in a phone conversation, he's going  
15 to do anything he can to keep Al Greer from sticking his  
16 big toe into Gavilan. That's why I wrote this letter, is  
17 to reassure Mr. Sweet and Kevin Fitzgerald that that's not  
18 the intent of this application at all. This application  
19 was initiated by me and the Sun people. We feel it was  
20 initiated in an effort to be in the best interest of all of  
21 the working interest owners in the east half, not just us,  
22 and it -- I -- I would venture to say, and I would  
23 encourage you to ask that of Mr. Greer, but I suspect he  
24 would not be at all interested in bringing any developed  
25 acreage in Gavilan into his unit right now.

1           Q           All right, just one last question, Mr.  
2 Roe. Isn't the sole basis for your application no more  
3 than a naked attempt to hold the east half of Section 12  
4 without developing it at no cost to you?

5           A           Mr. Lopez, it's a last ditch effort on  
6 our part to do something with our lease because we feel  
7 we've exhausted every other effort.

8                           MR. LOPEZ: Mr. Examiner, I  
9 would like to introduce our Exhibit Number One.

10                          MR. STOGNER: Is there any  
11 objection?

12                          MR. KELLAHIN: No.

13                          MR. STOGNER: Exhibit One --  
14 well, let me take look at it. Mr. Lopez, it says received  
15 May 9th, 1989, the Hinkle Firm. Is this your office?

16                          MR. LOPEZ: Yes. I, for the  
17 record, I'm sure Mr. -- we'd received it by May 3rd or May  
18 4th --

19           A           Well --

20                          MR. LOPEZ: May 4th, May 5th,  
21 anyway, prior to the hearing.

22           A           He received it, should have received it  
23 Federal Express Friday, I think it was May 5th. I know  
24 that I have a copy of that Federal receipt that I'd be  
25 happy to provide.

1 MR. LOPEZ: Well, that's fine.  
2 I don't think it's material.

3 MR. STOGNER: Exhibit Number  
4 One of Mesa Grande will be admitted into evidence at this  
5 time.

6 Mr. Pearce?

7 MR. PEARCE: Thank you, Mr.  
8 Examiner.

9

10 CROSS EXAMINATION

11 BY MR. PEARCE:

12 Q Mr. Roe, I'll try to be very brief.  
13 Moving along, I would like for you please to look with me  
14 at your Exhibit Number Two.

15 As I understand it, the 320 we're  
16 talking about is the east half of Section 12 shaded with  
17 dark hatches and a pink outline, is that correct?

18 A Yes, sir.

19 Q I notice that the north half of that 320  
20 is shaded darker, in gray?

21 A Yes, sir.

22 Q And that's Dugan's lease, is that cor-  
23 rect?

24 A Yes. The -- yes, that's correct, it's a  
25 lease that we have an interest in.

1 Q All right, and you're -- you have, I  
2 believe you said, a 12-1/2 percent interest in that lease.

3 A Yes, sir.

4 Q Is there other acreage covered by that  
5 lease?

6 A No, there is not.

7 Q That is just 160-acre Federal lease.

8 A That is correct.

9 Q And who owns the other 87-1/2 percent of  
10 that lease?

11 A Sun Exploration and Production or ORYX.

12 Q And when was that lease made by the Fed-  
13 eral government?

14 A It was a five year lease that was issued  
15 effective August 1st, 1984.

16 Q And to whom was that lease made?

17 A Jerome P. McHugh and Dugan Production as  
18 --

19 Q I'm sorry, at the time the lease was  
20 entered, Dugan picked up its 12-1/2 percent?

21 A Yeah. We -- we acquired the lease  
22 jointly with McHugh, 1/8th-7/8ths, which is a fairly common  
23 arrangement for our interest throughout Gavilan.

24 Q Okay. So for 4-1/2 years Dugan has held  
25 an interest in that acreage and has not drilled it, is that

1 correct?

2 A Yes, sir.

3 Q Looking at the Johnson Federal Well to  
4 the west of your lease.

5 A Yes, sir.

6 Q That well is now producing, you said,  
7 1.9 barrels of oil per day?

8 A That's what it averaged in March. It's  
9 actually probably less than that now.

10 Q Okay. Looking to the east of your ac-  
11 reage, the well marked No. 38, which, as I understand it,  
12 is also known sometimes as the F-7 Well?

13 A Yes, sir.

14 Q What's the latest cumulative daily oil  
15 production from that well you have?

16 A The latest that I had access to was the  
17 set during March of 1989.

18 Q And March of 1989, what was that?

19 A 72.6 barrels of oil per producing day.

20 Q And did I understand you to testify  
21 earlier in the day that you believe that that oil is being  
22 pushed towards that well from pressure maintenance further  
23 to the east?

24 A Yes, sir.

25 Q And did I understand you to say earlier

1 that you believe that the Gavilan Mancos Oil Pool is  
2 basically depleted?

3 A That is correct.

4 Q And did I understand you earlier to say  
5 that you did not believe a well could be drilled on the  
6 east half of Section 12 that would be economical?

7 A That's my position.

8 Q All right. What is the current spacing  
9 and proration unit for the COU 38/F-7 Well?

10 A It's a 640-acre unit comprising all of  
11 Section 7 of 25 North, 1 West, which -- which I -- was the  
12 purpose of my orange outline is to delineate that.

13 Q And the double blue and pink line is the  
14 pool boundary as defined by the Commission between the West  
15 Puerto Chiquito Mancos Oil Pool and the Gavilan Mancos Oil  
16 Pool, is that correct?

17 A Yes, that's our understanding.

18 Q Looking at what you marked today as  
19 Dugan/Sun Exhibit Number Eight, you testified that that was  
20 a reduced exact copy of an exhibit which you presented at a  
21 hearing held June 13th through 17th of 1988, is that  
22 correct?

23 A Yes, sir. It -- yeah, it's a reduced  
24 scale of what was the original.

25 Q And at that time when you presented this

1 exhibit, you presented it in support of your position that  
2 there was one common source of supply rather than two  
3 pools, is that correct?

4 A Yes, sir.

5 Q Subsequent to that hearing at which you  
6 presented that exact exhibit, and other testimony in sup-  
7 port of your position, did the Commission enter an order?

8 A Yes.

9 Q And did the Commission set the pool  
10 boundary between the Gavilan Mancos Oil Pool and the West  
11 Puerto Chiquito Mancos Oil Pool as the borderline between  
12 Townships 1 and 2?

13 MR. KELLAHIN: Objection, Mr.  
14 Examiner, that border speaks for itself and that's a judg-  
15 ment for the examiner to make and not this witness.

16 MR. PEARCE: Fine, if this  
17 witness does not know that, that's all right.

18 MR. STOGNER: Mr. Pearce, I  
19 take it you're dropping that question.

20 MR. PEARCE: Yes, Mr. Exa-  
21 miner, if Mr. Kellahin's concerned about Mr. Roe discussing  
22 it.

23 MR. KELLAHIN: That's an edi-  
24 torial comment by opposing counsel. That's inappropriate.

25 MR. PEARCE: Please strike

1 that from the record, and I meant my comment, not Mr.  
2 Kellahin's objection.

3  
4 (There followed comments by Mr. Pearce and  
5 Mr. Stogner off the record.)  
6

7 Q Mr. Roe, when you were testifying  
8 earlier you were talking about an amount of money which  
9 Dugan and Sun would have to pay if this 320-acre tract were  
10 included in the Canada Ojitos Unit. Do you remember that?

11 A I'm not sure I testified to the amount.

12 Q You didn't, I'm sorry, you didn't say  
13 what the amount was. You even named it by a phrase that I  
14 did not recognize and I didn't get a note down to myself.  
15 What did you call that?

16 A Well, I called it the interest invest-  
17 ment adjustment. It would be the number and that number  
18 happens to be approximately \$600 an acre that the people  
19 that would be -- have -- having no prior interest in the  
20 unit would be required to pay to the unit in order to  
21 equalize their interest in all of the investment that has  
22 occurred within the unit as of the date of their participa-  
23 tion, and it would equate to about an expenditure of  
24 \$192,000 for the working interest owners in the east half.

25 Q And you believe that if this acreage is

1 included in the unit that you would achieve pay out of that  
2 \$192,000 in between 28 and 60 months.

3 A Well, I -- I qualified the 28 because if  
4 Mr. Greer continues to sell gas at the rate he did in Feb-  
5 ruary and March, which is the most recent revenue data  
6 have, yes, the 28 month number would be a correct number.

7 Q And if -- if this 320-acre tract is  
8 added to the Canada Ojitos Unit, you do not expect another  
9 well to be drilled in the east half of Section 12 or in  
10 Section 7, is that correct?

11 A Not only would it not be drilled, in  
12 other words at a cost of roughly a million and a half  
13 dollars, it wouldn't be necessary.

14 Q I'm sorry, you would not expect a well  
15 to be drilled.

16 A That is correct.

17 Q Thank you.

18 MR. STOGNER: Thank you, Mr.  
19 Pearce.

20 Mr. Lund?

21

22 CROSS EXAMINATION

23 BY MR. LUND:

24 Q I'll try not to beat a dead horse but I  
25 just have a couple of questions.

1                   Mr. Roe, it's your opinion that the  
2 Canada Ojitos Unit should be expanded into the -- into  
3 Section 12 pursuant to the New Mexico Statutory Unitiza-  
4 tion Act, correct?

5                   A            It -- yes.

6                   Q            And tell me again how the east half of  
7 Section 12 will benefit from the pressure maintenance oper-  
8 ations in the Canada Ojitos Unit?

9                   A            Well, the east half of Section 12, just  
10 as Gavilan probably has, will benefit from pressure main-  
11 tenance. Again, we have a high pressure on the east side  
12 of the reservoir and a low pressure on the left side of the  
13 reservoir, the east side being a gas cap and the west side  
14 being Gavilan and maybe even into West Lindrith.

15                                So any time you have a pressure going  
16 from high to low you have a tendency of oil reserves to  
17 flow from high to low. Now the east half of 12 is going to  
18 benefit directly because those reserves, as I feel, exhi-  
19 bited on this graph are being produced right now with no  
20 well on it, and -- and the fact that we have a minimal  
21 amount of unit reserves flowing into Gavilan it is simply a  
22 result of an extensive effort of the unit operator to keep  
23 productivity in his western row of wells high, high enough  
24 to offset withdrawals in Gavilan and in a sense create a  
25 producing barrier. If he didn't maintain production, then

1 the reserves would flow from the high pressure area into  
2 the low pressure area, so immediately the royalty owners  
3 area going to start receiving the benefit because they will  
4 start participating in the reservoir production that is  
5 occurring, as evidenced here. Additionally, they aren't  
6 going to have to spend \$750,000 -- or my number back in  
7 1985 was \$690,000. I think Sun's estimate now is right at  
8 \$750,000 to drill a well to develop reserves that will  
9 never pay out.

10 So that's the second benefit to the east  
11 half of Section 12.

12 Q And I thought that you said that by pro-  
13 duction of the Canada Ojitos Unit 38 Well, I think you also  
14 referred to it as the F-7 Well.

15 A Yes.

16 Q That is going to prevent any benefits of  
17 the pressure maintenance project flowing into Section 12.  
18 Isn't that your testimony?

19 A It's the last effort, it's the last pos-  
20 sible chance the unit operator has to prevent that but if  
21 anything happens to the F-7 the pool goes down for any  
22 reason, during that time there's nothing in Section 7 to  
23 prevent unit reserves from migrating into Gavilan, and  
24 right now, as long as the F-7 Well is producing, it's my  
25 feeling that it's doing a fairly decent job of keeping unit

1 reserves on the unit acreage, yes.

2 Q So the answer to my question is that as  
3 long as the Canada Ojitos No. 38 Well, also known as the  
4 F-7, is producing, Section 12 will not gain any benefits  
5 from the pressure maintenance project, correct?

6 A No. As long as there's a pressure dif-  
7 ference there it's my feeling that the Johnson 12-5 may  
8 actually be -- there's no doubt in my mind that Mallon's  
9 1-8 up in the northeast quarter of Section 1, I feel  
10 there's a tremendous amount of data to show that well's  
11 benefitting from the pressure maintenance project.

12 I feel there's wells all along the  
13 boundary that are benefitting but that benefit is trying to  
14 be minimized by the (unclear) of the Unit operator.

15 Maybe I didn't understand your question.

16 Q I'm sorry, I'm confused. I thought you  
17 testified earlier that because of the production in the COU  
18 No. 38 Well in Section 7, that was preventing any benefits  
19 from the pressure maintenance project from flowing over  
20 into Section 12.

21 A It's minimizing the benefits of the  
22 pressure maintenance project, yes.

23 Q Minimizing, and what's the necessity for  
24 unit operations for the inclusion of the east half of  
25 Section 12 into the Canada Ojitos Unit?

1           A           The benefit to the Unit is that the Unit  
2 -- we -- I feel fairly certain that within Gavilan and  
3 within the Unit that there's more than enough wells to  
4 produce the reserves that are there. With -- with the  
5 pressure decline that we see, there's no doubt in my mind  
6 that anything in that reservoir is under production right  
7 now whether there's a well on it or not. The benefit to  
8 the Unit is somebody that puts that east half of Section 12  
9 into production somehow and there really is a burden on the  
10 working interests almost to do something.

11                   Dugan has been trying to do something  
12 since this area became an area that was being developed,  
13 which was in the latter part of 1985. We spent a lot of  
14 money and it's been a very frustrating experience to drill  
15 a well there. It's taken a long enough time that we've  
16 approached the point in the reservoir we don't think we can  
17 drill a well at.

18                   Now, I'm not sure that everybody has  
19 that concept and so whether we drill a well or not, if we  
20 don't do something with the lease it's going to expire and  
21 I feel I -- I have reason to believe there may be a well  
22 drilled there. In the event there is, then the Unit is  
23 going to have to spend its share, or not its share, the  
24 Unit will have to drill another well to better protect it-  
25 self from Unit reserves moving from a high pressure area to

1 a low pressure area, and that's a real dynamic situation.  
2 I mean the pressure in the reservoir is declining 30 to 40  
3 pounds a month and that's something that goes on every day  
4 whether we're pumping or not.

5 Q Let me try to ask it a little bit more  
6 directly.

7 How will the east half of Section 12  
8 contribute to the pressure maintenance project in the  
9 Canada Ojitos Unit?

10 A The -- it's kind of a negative way of  
11 thinking. It will contribute because if there isn't a well  
12 drilled there that I feel is not necessary to produce the  
13 reserves, and would be uneconomic if it was drilled, if it  
14 wasn't drilled, then the Unit's not going to have to drill  
15 another well and so its ultimate profit is going to be  
16 greater by \$750,000 by not having had to drill a well to  
17 meet an adjacent well that somebody might drill. And  
18 that's a pretty direct benefit to the Unit to just keep  
19 another \$750,000 in your bank account rather than spend it  
20 drilling a well that I know Mr. Greer thinks isn't neces-  
21 sary and I very definitely think it's not necessary.

22 Q So by including the east half of Section  
23 12 into the Canada Ojitos Unit that will prevent the Unit  
24 from drilling a protection well.

25 A Yes, sir, at a cost of roughly \$750,000,

1 using, I think, \$700,000 is Mr. Greer's last AFE.

2 Q Is the east half of Section 12 needed in  
3 the Canada Ojitos Unit to increase the efficiency of the  
4 pressure maintenance project in the Canada Ojitos Unit?

5 A It's my opinion that it is. In fact,  
6 when Gavilan first came under production it was my opinion  
7 Gavilan should have been included in the Unit and I ac-  
8 tually made that proposal at one of the hearings, I think.

9 MR. LUND: I have nothing  
10 further.

11 MR. STOGNER: Thank you, Mr.  
12 Lund.

13 Is there any redirect, Mr.  
14 Kellahin?

15 MR. KELLAHIN: No, Mr. Exam-  
16 iner.

17 MR. STOGNER: Mr. Carr?

18 MR. CARR: No.

19 MR. STOGNER: Mr. Lemay?

20  
21 QUESTIONS BY MR. LEMAY:

22 Q Mr. Roe, is it your testimony that what  
23 everyone in the area, maybe with the exception of the  
24 royalty owners, wants is no well to be drilled in the east  
25 half of Section 12?

1           A           Right, and the royalty owners really  
2 need to have something done to get that into production. I  
3 might -- I hope my testimony was that we recognize the need  
4 to get it into production since 1985. So they need some-  
5 thing to protect their correlative rights and the working  
6 interest owners are really pressed with what to do to put  
7 that into production.

8           Q           I'm trying to focus in this. We have  
9 320 acres no one wants to drill. They didn't want to drill  
10 it then, they don't want to drill it now, and they're  
11 afraid that if they let the lease go someone might come in  
12 there and make a stupid decision and drill a well.

13          A           Mr. Lemay, I've -- I've actually in con-  
14 versations with other operators in the reservoir, there are  
15 operators even with knowledge of this evidence that are of  
16 the opinion we need to drill more wells, and -- but your  
17 synopsis is fairly correct, yes.

18          Q           Well, then extending that kind of argu-  
19 ment one point further, what kind of nonconsent penalty  
20 could you anticipate if you force pooled your way into the  
21 Johnson Well and I would assume Mallon in that particular  
22 situation wouldn't want a well drilled because it might --  
23 it might drain some reserves from the 2-barrel of oil per  
24 day well, but that in essence would -- would provide the  
25 same thing that you are talking about by not getting a well

1 drilled in the east half of 12. Even though you wouldn't  
2 benefit economically you would provide what you're trying  
3 to do and that's not get a well drilled in the east half of  
4 12.

5           A           Well, not totally. That was one of the  
6 things in the many phone conversations I had with Mallon's  
7 -- it's my understanding maybe he's even their president  
8 now -- Kevin Fitzgerald, and Larry Sweet. The pool rules  
9 do allow for the drilling of an additional well within a  
10 640-acre spacing unit.

11                       Now, Kevin Fitzgerald told me he didn't  
12 care whether we drilled a well or not. If we wanted to on  
13 a 320, that would be something they wouldn't oppose, and he  
14 told me that they would not oppose the formation of a  
15 640-acre spacing unit being aware that if we joined the  
16 Unit, the well, he -- the drilling parties in the Johnson  
17 Well would immediately receive a front end cash payment  
18 from the non-drilling parties for their share of the well  
19 and the Johnson Well is never going to pay out unless it  
20 does it on gas production.

21           Q           You've kind of answered my question but  
22 I'm just trying to look at Mallon's position. The fact  
23 that Mallon is not going to get money for a marginal well,  
24 no one's going to go in there and pay that, but wouldn't  
25 Mallon be ahead by accepting a high nonconsent penalty from

1 -- from Dugan and Sun for communitizing that 640 acres,  
2 preventing this well that no one wants to be drilled from  
3 being drilled and in essence protecting of the fact that  
4 waste wouldn't occur because wells wouldn't be drilled.

5           A           Well, our concern is that -- I'm maybe  
6 not understanding which nonconsent penalty you're talking  
7 about -- in the Johnson well the non-drilling parties in  
8 the east half would probably -- and again I can speak for  
9 myself and I would think Sun would take the same election,  
10 and if anybody looked at the economics, they would prob-  
11 able elect to go nonconsent, so there would be no economics  
12 to the east half parties in participating in the Johnson  
13 well.

14                       Now, we've been advised by the working  
15 interest owners in the Johnson Well, which is Mesa Grande  
16 Limited, that they would expect the same terms of that  
17 640-acre spacing unit as exist on the Loddy No. 1 Well,  
18 which the drilling parties would be faced with paying their  
19 share of \$760,000, which, you know, would never pay out and  
20 so we'd go nonconsent. Now that would not eliminate Mr.  
21 Mallon, although at this time I feel fairly certain they  
22 wouldn't drill, but we don't know what they would elect to  
23 do. There's roughly 11 working interest owners in the east  
24 half of Section 12 and I know of at least two in the west  
25 half of Section 12 and any one of those parties could pro-

1 pose a well in the east half and some of these parties are  
2 people that have adamantly opposed the 640-acre (unclear)  
3 and there are employees of those companies that have told  
4 me they have plans for further development within the  
5 Gavilan Mancos Pool.

6                   So I know, I know that there's at least  
7 the concept that there are additional economics to be had  
8 by development drilling and so if we formed a 640, not only  
9 would Dugan have to elect to go nonconsent in the Johnson  
10 Well, we would have to elect to go nonconsent in the addi-  
11 tional well that the pool rules do allow in Section 12 in  
12 the event somebody drilled it and, again, I've been told by  
13 two people that -- that would have the right to propose a  
14 well under the operating agreement, and the pool rules  
15 would allow that well to be drilled, we'd have to go non-  
16 consent in that second well in 12 and then we'd be faced  
17 with paying our share of the protective well in the Unit.

18                   It's a pretty complex issue.

19           Q           I understand that, Mr. Roe. I'm trying  
20 to figure out your reasons. They do appear to be negative,  
21 that your objective is not to get a well drilled in Section  
22 12 and that you're looking for alternatives to pursue this  
23 objective and but you're also afraid that something else  
24 from outside will come in, someone will drill the well,  
25 someone will pick up the lease and drill a well, which the

1 name of the game in the oil business is no guts, no glory,  
2 or someone comes in and decides you're wrong, they're  
3 right, they could, you know, put their money where their  
4 mouth is?

5           A           Yes, sir, that -- that's exactly right,  
6 and that's -- that's the real basis for my concern, is be-  
7 cause I have been advised that there are those people that  
8 would do that and so I feel fairly certain that if Dugan  
9 and Sun aren't able to do something with the acreage, ul-  
10 timately a well will be drilled in the east half of 12 and  
11 we will be faced with having to drill a protective well and  
12 the abundance of reservoir information I have tells me that  
13 in the interest of preventing economic waste we're going to  
14 poop away a million and a half bucks.

15           Q           I understand that, Mr. Roe. I'm trying  
16 to look at alternatives to you pursuing your objective, one  
17 of which was suggested that you can force pool your way  
18 into that well. There's no guarantee that someone wouldn't  
19 step out and carry your interest, I guess, in whatever  
20 agreement, operating agreement you have in the east half of  
21 Section 12 that allows 300 percent or 500 percent of re-  
22 covery but at least what it would do would be under the  
23 major interest holders that would pursue and probably ac-  
24 complish your objective the same way.

25           A           Well, at least 50 percent of the people

1 involved in the east half would not -- would not feel that  
2 that was accomplishing our objective. It admittedly would  
3 put the royalty interest into production but it basically  
4 would serve no benefit to us as lessees. It has absolutely  
5 no chance for an economic development for us at all, and  
6 even though I can't speak for the people in the southeast  
7 quarter, their interest ought to parallel Dugan's inter-  
8 est very closely.

9                               So, you know, whatever applies for Dugan  
10 is going to really apply for the east half.

11               Q               I guess what I'm trying to get at is  
12 that if your conversations with Mr. Fitzgerald, is it --

13               A               Yes.

14               Q               -- your taking that to mean that those  
15 people would not let you in without paying your way into  
16 this 2-barrel a day well. That doesn't seem logical to me  
17 that they would expect you to pay for 2 barrels a day  
18 hundreds of thousands of dollars and yet it would be in  
19 their benefit if they saw the drainage situation the same  
20 as you would, it would be to their benefit to have you join  
21 because it's to their interest that they see the reservoir  
22 information the way you do. It's to their interest not to  
23 have a well drilled, too, so I would assume this would be  
24 parallel interest among all the people involved.

25               A               But -- but what would happen, and again

1 looking at it as a purely economics from the standpoint of  
2 the people in the east half, the working interest owners, I  
3 would agree we wouldn't be able to pay our share. We  
4 wouldn't be able to justify paying our share of any number  
5 that would be satisfactory to the drilling parties in the  
6 Johnson Federal Well.

7 So automatically we put our lease into  
8 kind of an indefinite suspense that the only people that  
9 would benefit from that is the royalty owners.

10 Q But you're assuming the drilling parties  
11 in the west half of Section 12 don't want you or your ac-  
12 reage in there?

13 A No, they've -- they've actually expres-  
14 sed that they would not oppose that. Kevin --

15 Q But they couldn't expect any money,  
16 logic dictates they wouldn't expect you to pay. It would  
17 be to their benefit to have you in there in a nonconsent  
18 provision and so they could protect the east half and not  
19 have any well.

20 A Sure. There's -- there's no reason that  
21 they would oppose us. In fact they said they would --  
22 would support forming a 640.

23 Again, the people in the east half,  
24 there's no benefit to them to form in a 640 because basic-  
25 ally the cash flow of the west half wouldn't change because

1 everybody in the east half would have two decisions, either  
2 to pay the west half people front end money or to go non-  
3 consent. With either case it would result in a negative  
4 cash flow to the people in the east half and it would re-  
5 sult in no change in cash flow or an increase in cash flow  
6 for the people in the west half, the increase being the  
7 front end money that they would pay to buy into the well,  
8 and that would be basically \$760,000.

9 Q Mr. Roe, I have to assume that these  
10 people are somewhat intelligent, that no one would pay  
11 their proportion of \$760,000 to join a well making 2 bar-  
12 rels of oil per day. Is that a fair assumption or am I  
13 putting words in your mouth?

14 A No, sir, in fact I think that's what I  
15 meant when I said that we would be faced with going noncon-  
16 sent, so there would be no economic benefit to Dugan Pro-  
17 duction to form a 640-acre spacing unit because our only  
18 option would be to go nonconsent. We wouldn't be able to  
19 justify paying for our share of the \$760,000 figure.

20 Q I guess what I'm trying to get, isn't  
21 that option like you're considering it not a very viable  
22 option, wouldn't that be the option that would benefit all  
23 parties, that you do go nonconsent, that all interest  
24 owners would see it the same way and go nonconsent?

25 A Well, no, again, the reason that I say

1 that is given that we have really three options, one being  
2 to drill, one being to form a 640, both of which I feel is  
3 noncommercial to the working interest owners, and the third  
4 option would be add that acreage to the Unit. Now, adding  
5 the acreage to the Unit, the working interest owners,  
6 that's the only option the east half working interest  
7 owners have that would result in positive economics to  
8 them, and the additional benefit is it's going to change  
9 anything in the Johnson Federal Well so nothing is going to  
10 change to those people. The royalty starts receiving pro-  
11 duction income and the real benefit is that the Unit is  
12 never faced with the exposure to somebody taking the op-  
13 portunity to develop the east half of Section 12 and it's  
14 my opinion that there are those that might do that simply  
15 to try to get into some of the Unit reserves. That being  
16 the case, it would precipitate an offset well in the Unit  
17 and nobody wins.

18 Q I understand that. Thank you.

19 MR. LEMAY: I have no other  
20 questions.

21 MR. STOGNER: Any other ques-  
22 tions of this witness?

23 He may be excused at this  
24 time.

25 Let's take about a five minute

1 break.

2

3

(Thereupon a recess was taken.)

4

5

MR. STOGNER: We will recess

6

this case until tomorrow morning at 8:15, same time, same

7

place.

8

Good night.

9

10

(Thereupon the evening recess was taken.)

11

12

13

(Thereafter, at the hour of 8:15 o'clock a. m. on the 11th  
14 day of May, 1989, the hearing was again called to order by  
15 Michael E. Stogner, Hearing Examiner, at which time the  
16 following proceedings were had, to-wit:)

17

18

19

MR. STOGNER: The hearing will

20

come to order. Today is May 11th, 1989. This is a contin-  
21 uance of Case Number 9671, which is the application of  
22 Benson-Montin-Greer Drilling Corporation to amend Division  
23 Order No. R-8344, Rio Arriba County.

24

Mr. Kellahin?

25

MR. KELLAHIN: Thank you, Mr.

1 Examiner.

2 At this time we'd like to call  
3 Mr. Richard Dillon. Mr. Dillon was sworn yesterday as a  
4 witness in this matter. He has also passed out to the  
5 parties in attendance, as well as the Division, his pro-  
6 posed exhibits, which are marked as Dugan/Sun Exhibits Ten  
7 through, I believe, Twenty-one is the last of his exhi-  
8 bits.

9

10

RICHARD G. DILLON,

11

being called as a witness and being duly sworn upon his  
12 oath, testified as follows, to-wit:

13

14

DIRECT EXAMINATION

15

BY MR. KELLAHIN:

16

Q Mr. Dillon, would you please state your  
17 name and occupation, sir?

18

A My name is Richard G. Dillon. I'm em-  
19 ployed by ORYX Energy Company with Sun Exploration and Pro-  
20 duction, as a staff reservoir engineer in Midland, Texas.

21

Q Mr. Dillon, have you on previous occa-  
22 sions testified either before the New Mexico Oil Conserva-  
23 tion Division or the Commission?

24

A Yes, I have.

25

Q And you have specifically testified

1 about various aspects of the Gavilan Mancos, West Puerto  
2 Chiquito Mancos controversies?

3 A Yes, I have.

4 Q With regards to your testimony today,  
5 Mr. Dillon, let me show you what is identified as Exhibit  
6 Number Ten and have you take a moment and simply identify  
7 that display for us.

8 A Exhibit Ten is a map of the subject  
9 area. It contains parts of the Gavilan Mancos Pool and the  
10 West Puerto Chiquito Pool.

11 Central to this -- in this map area is  
12 the expansion area, the subject today. It is shown by a  
13 diagonal hatching. It is the east half of Section 12,  
14 Township 25 North, Range 2 West.

15 Also shown in a dashed and dotted out-  
16 line which includes that area along with the four offset-  
17 ting wells to the northeast, south and west, is an area  
18 I've noted as the reservoir study area. The wells contain-  
19 ed within this boundary have been analyzed and we'll look  
20 at that in future exhibits in order to establish a reserve  
21 figure for the -- any possible new well in the expansion  
22 area.

23 Q Before we get into the specific details  
24 of your study, will you generally describe what you are at-  
25 tempting to investigate with your reservoir study?

1           A           The objective of this study and my  
2 analysis has been to evaluate the three options that we  
3 think we have here. One, of course, is to drill a new  
4 well in this area, the east half of Section 12. The second  
5 would be to pool that area with the Johnson Federal Well in  
6 the west half or to expand the Canada Ojitos Unit into the  
7 expansion area, as we've labeled it here.

8           Q           And have you completed that study?

9           A           Yes, I have.

10          Q           And based upon your study have you  
11 reached certain conclusions and recommendations with re-  
12 gards to what option you would recommend to the Division?

13          A           Yes, I have.

14                           MR. KELLAHIN: We tender at  
15 this time Mr. Dillon as an expert reservoir engineer.

16                           MR. STOGNER: Are there any  
17 objections?

18                           Mr. Dillon is so qualified.

19          Q           In commencing your study with regards to  
20 each of those three specific issues, what was the first  
21 thing that you wanted to find out?

22          A           The first thing that we needed to deter-  
23 mine was whether or not the first option, which may or may  
24 not be the most obvious, was to drill a new well, whether  
25 or not that was a feasible thing to do. In order to do

1 that we'd need to establish what the reserves would be from  
2 any well drilled there. That would be determined by a  
3 number of parameters, the first of which probably would be  
4 the, and most important, would be the reservoir pressure in  
5 that area.

6 Q In establishing a reserve for the Gavi-  
7 lan Mancos production in this immediate area, what is the  
8 method that you as a reservoir engineer choose in order to  
9 go about making the calculations and examining the data?

10 A First of all, an overall view of all  
11 data including the pressure and performance of the sur-  
12 rounding wells has been completed. That would be routine  
13 in any investigation. In this case in particular, as  
14 you'll see a little bit later, a review of the performance  
15 history and extrapolation of that data has been utilized  
16 to determine what reserves might be there.

17 Q In your opinion is it practical to ap-  
18 proach the reserve calculations based upon volumetrics?

19 A No, in this situation, particularly this  
20 pool, the volumetric calculations are something that do not  
21 lend themselves well to that type of analysis. This type  
22 of reservoir, being a fractured shale, a fractured shale  
23 sand, it's very difficult to determine porosity. The satu-  
24 rations at this point in a pretty well depleted state would  
25 be hard to determine in terms of gas saturation (unclear)

1 the well is actually left in place; thus it's better to  
2 rely on the actual performance data.

3 Q Is that an accepted method within your  
4 practice and profession for calculating and determining  
5 estimate of reserves within a given tract?

6 A Yes, it is.

7 Q All right, tell us how you began to  
8 study this and what you concluded, starting first with  
9 Exhibit Number Eleven.

10 A Exhibit Eleven is a modified portion and  
11 extrapolation of an exhibit that was shown earlier which  
12 was identified as Dugan Exhibit Four in the June, 1988,  
13 hearing with Case 7980.

14 Q This is also Mr. Roe's Exhibit Number  
15 Eight from yesterday afternoon's presentation?

16 A That's correct.

17 Q All right. Now, his -- his Exhibit  
18 Number Eight does not have some of the information that you  
19 have put on your Exhibit Number Eleven?

20 A That's correct.

21 Q What did you add to it and why?

22 A The data that I have added and as you  
23 can see as of late the pressure has gone below the scale  
24 which ended on his exhibit of 700 pounds, which is shown  
25 there. We have taken that on down to 350 pounds.

1                   Just in a somewhat rough draft fashion  
2 we've shown the extrapolation of the data that we have as  
3 of late taken, as you can see, on the lefthand and extend-  
4 ing to the bottom there, from the Native Son No. 1, we have  
5 a recent pressure from that well which is on the order of  
6 473 pounds.

7                   Also just above that we have the data  
8 extending on down shown in -- by plotted points with cir-  
9 cles around them from the Canada Ojitos Unit B-17, which is  
10 an observation well in the -- in the Unit which lies appro-  
11 ximately 1 to 1-1/2 miles east of the area that we're  
12 looking at. You can see it follows the extrapolation of the  
13 previous trend as shown by the -- the accumulation of data  
14 that John had shown earlier, Mr. Roe, and that data again  
15 plotted shows the continuation of that trend extends on  
16 down to the order of 600 pounds as of the latest data.

17                   Q           Having plotted that information on the  
18 display, Mr. Dillon, what purpose do you utilize that for?

19                   A           Well, first of all we recognize the  
20 continuation of the two trends that we saw before. In par-  
21 ticular, you'll see in the heart, if you will, of the  
22 Gavilan Pool where the Native Son is located, that the  
23 pressure at that point is -- in that part of the reservoir  
24 has dropped below 500 pounds, which indicates that that  
25 area is becoming very severely depleted.

1                   The upper trend, which is closer to the  
2 area that we're subject to today, shows again that the  
3 pressure has dropped, not quite as slow, but again it's on  
4 the order of 600 pounds, which is about 1/3rd of what the  
5 original reservoir pressure was.

6                   Q           What significance does that information  
7 have to you in purposes of making your investigation and  
8 study of the economics of the three options you've de-  
9 scribed earlier?

10                  A           Well, the pressure tells us that at this  
11 point the reservoir is in a very maturely depleted state.  
12 There certainly can be no expectation of obtaining original  
13 virgin reserves or recoveries that we might have, you know,  
14 at the point that the reservoir was originally developed.

15                               What would tell us to expect a substan-  
16 tially reduced reserve number from this portion of the  
17 reservoir simply because of the fact that we're looking at  
18 the fact that 2/3rds of the pressure that we believe to be  
19 present in the original reservoir is now gone and that with  
20 any reasonable abandonment pressure that we're looking at  
21 just a small fraction of the original reserve to be re-  
22 covered from this point forward.

23                  Q           In making your investigation and study  
24 did you specifically study the production history and per-  
25 formance of certain of the immediately offsetting wells to

1 the east half of Section 12?

2 A Yes.

3 Q Let's turn now, sir, to what is marked  
4 as Exhibit Number Twelve and it's the display showing the  
5 Johnson Federal 12-5 production history?

6 A That's correct.

7 Q All right, describe that for us.

8 A Okay. This is a production history plot  
9 for the Johnson Federal Well.

10 The -- as shown here to orient you, the  
11 bottom scale is time. Each vertical line represents one  
12 year. The lefthand scale represents barrels of oil per  
13 day, MCF per day, and GOR. Those various curves are  
14 plotted according to the legend you see on the lower left-  
15 hand side. The oil was a solid line; gas is represented by  
16 a solid line intermittent with two dashes; and the GOR is  
17 represented by a dashed line.

18 The data has been analyzed up to this  
19 point in history and from April of 1989 (unclear) has been  
20 extrapolated based on the pressure data and based on the  
21 past history to what we think would be a reasonable expect-  
22 tation of future production from the -- from the well.

23 The gas curve, which is the middle  
24 curve, was extrapolated and we expect somewhere on the  
25 order of a 38 percent decline from that -- from today for-

1 ward for the gas production from that.

2                   The oil production for this well has  
3 declined, as we discussed before, to below 2 barrels of oil  
4 a day, about a barrel and a half on the average. We as-  
5 sume that that well will continue to produce that minimum  
6 amount of oil for the remainder of its life.

7                   Q           When we look at the bottom tabulation of  
8 information in the lower righthand corner of the display it  
9 says "Remaining Reserves"?

10                   A           Correct.

11                   Q           It gives an oil and a gas number?

12                   A           Yes.

13                   Q           At what point in time have you calcu-  
14 lated the remaining reserves? That's from what date?

15                   A           That -- that is from April 1st.

16                   Q           April 1st of '89?

17                   A           Correct.

18                   Q           So from April 1st of 1989 forward that  
19 is your projection as a reservoir engineer as to the re-  
20 maining reserves to be recovered from the Johnson Federal  
21 12-5 Well?

22                   A           That is correct.

23                   Q           And the 1.5 would be 1,500 barrels of  
24 oil?

25                   A           That's right.

1           Q           And that would be recovered over what  
2 period of time, Mr. Dillon?

3           A           Over approximately 2-3/4 years. We anti-  
4 cipate that the economic limits of the well based on this  
5 projection would be reached about January of 1992.

6           Q           All right, did you examine the perfor-  
7 mance of any of the other wells in the immediate vicinity  
8 of the east half of 12?

9           A           Yes, the Johnson Federal is the closest  
10 well and it's on the west offset to the subject tract.

11                   The north offset is the Howard Federal  
12 1-11 and that's the next exhibit, Number 13. The axes are  
13 the same on this plot. Again extrapolation has been made to  
14 try to determine what future reserves, remaining re- serves  
15 might be for this well, again beginning at April 1st.

16                   The plot is a plot of MCF and barrels of  
17 oil per calendar day. This well has been produced in the  
18 past few months on a part-time basis; that is, only a por-  
19 tion, a number of days per month is somewhat less than the  
20 total month was how that well was produced so the poten-  
21 tial for the well is somewhat higher, so in determining the  
22 reserves I went back and used a number that approximated  
23 what the true potential of the well was, which is somewhere  
24 more in the order of 1-million cubic feet per day and I  
25 used that as my beginning point for my extrapolation.

1                   The same thing with the oil, probably  
2 it's capable of producing somewhere close to 10 barrels of  
3 oil per day, although the oil is probably going to decline  
4 around 90 percent, we're looking at about a 64 percent  
5 decline, again based on past history and its performance  
6 that we expect with the pressure that we see in the reser-  
7 voir today of about 64 percent.

8                   Q           And what do you conclude for the remain-  
9 ing reserves for this well from April 1st, 1989, forward?

10                  A           Again from this well we expect predomi-  
11 nantly gas reserves, somewhere in the order of 335.8 mil-  
12 lion cubic feet and about 1,600 barrels of oil.

13                  Q           Did you study any other wells in the  
14 immediate vicinity of the east half of 12?

15                  A           Yes, there's one more well that's --  
16 that is in the Gavilan Pool, the Post Federal 13-6, which  
17 is the south offset to the subject tract.

18                               Again the same procedure was performed  
19 for that well. It appeared to have a 65 percent decline  
20 for the gas. Again the oil reached a minimum level of  
21 somewhere on the order of 1 barrel of oil per day. Re-  
22 maining reserves for that well are somewhere in the order  
23 of 500 barrels of oil and about 70-million cubic feet of  
24 gas.

25                  Q           All right, sir, what other wells did you

1 study in this immediate area?

2 A One other well was studied and that was  
3 the east offset, which is the Canada Ojitos Unit F-7, the  
4 No. 38.

5 This well, as we'll see, is, as opposed  
6 to the three previous wells, is predominantly oil. We  
7 characterize it as true oil well as opposed to the high GOR  
8 wells that we see on the Gavilan side of the boundary.  
9 That's caused by a number of reasons one of which I would  
10 expect would be the support that it received from the gra-  
11 vity drainage of the structural position from the gas in-  
12 jection from the Canada Ojitos Unit.

13 This -- the reserves that we expect from  
14 this well are substantially higher and the decline rates  
15 are somewhat lower than we'd expect from the previous  
16 wells. This well should produce from this point forward,  
17 based on its present rate of around 70 barrels of oil per  
18 day, another 68.4 thousand barrels of oil and around 585.4  
19 million cubic feet of gas.

20 Q Having selected those four wells, then  
21 what did you do?

22 A Having looked at those four wells, at  
23 that point I, using a simple, straightforward analysis of  
24 making an analogy to these wells in order to determine what  
25 the east half of Section 12 would -- we'd anticipate would

1 produce, I initially made a table as shown in Exhibit  
2 Sixteen, which tabulates the data that I've previously  
3 described for the Johnson Federal, the Howard Federal, and  
4 the Post Federal. These three offsets are what I would  
5 expect to be analogous to what we would expect from a well  
6 drilled in the east half of 12.

7 Q Why would you expect that?

8 A The -- due to the proximity of the  
9 wells, the Howard Federal is in the same section, it's a  
10 matter of a few thousand feet away.

11 The other two wells are north and south  
12 on relatively the same structural position, you'd expect  
13 the same type of reservoir conditions to be present.

14 The exception to that, obviously, is the  
15 fact that the Canada Ojitos Unit Well is not included in  
16 this table in that I believe that it is subject to a dif-  
17 ferent set of reservoir conditions and that it's -- has the  
18 added benefit of the gravity drainage as well as the gas  
19 injection from the Unit operations.

20 Thus my first table here shows the  
21 analogies I think that exist. Looking at the -- what is  
22 labeled as the average remaining reserves for the oil,  
23 which is the data right in the middle of the page, we ex-  
24 pect somewhere on the order of 1200 barrels of oil to be  
25 remaining for this well, which is simply the sum of the

1 remaining reserves for the other four wells divided by 3,  
2 which is the number of those wells. This again is simply  
3 an analogy to these wells being the closest offsets; we'd  
4 expect similar performance.

5 Same thing we've done for gas, we would  
6 expect somewhere in the order of 170-million cubic feet.

7 Q Is this a standard, accepted, conven-  
8 tional way of attempting to analyze and determine remain-  
9 ing reserves within a given tract?

10 A Yes, it is.

11 Q All right, you've got Sixteen now that  
12 has the remaining reserve calculation without the Unit well  
13 in it and you came up with the east half of 12 having 1200  
14 barrels of oil left?

15 A Correct.

16 Q To be recovered. Those are recoverable  
17 remaining reserves?

18 A Correct.

19 Q All right, now what do we see with  
20 Seventeen?

21 A Seventeen, when the Canada Ojitos Unit  
22 well is added, we see an average per well that increases up  
23 to 18,000 barrels of oil. The gas increases, also, to  
24 274-million cubic feet. You can see the impact that the  
25 Canada Ojitos well has on the average expected from the

1 four wells. Again, this would probably be an up side sort  
2 of situation in that we would assume that Unit reserves  
3 would be to a certain extent produced by this well and that  
4 it would benefit from the gravity drainage, from the gas  
5 injection, as many of the wells along the Gavilan border  
6 have, as we've testified before.

7 Q I assume we can conclude from Sixteen  
8 and Seventeen that you now have bracketed the range of  
9 possible recoverable remaining reserves in the east half of  
10 12?

11 A That's correct.

12 Q All right, now what did you do?

13 A From that point we took those reserve  
14 figures along with experience proven numbers for operating  
15 expense. We've used what are generic prices, \$17.00 per  
16 barrel of oil, \$1.70 per MCF. This doesn't represent what  
17 Sun or any other operator, to our knowledge, is receiving.  
18 It's simply a ballpark figure, something to use for con-  
19 venience in demonstration of what we're trying to show  
20 here.

21 The drilling cost --

22 Q That -- that's a real number, though, is  
23 it not?

24 A That is correct. It's generic but it's  
25 representative of what could be expected for the well to

1 receive.

2 Q For the oil as well as the gas price?

3 A Correct.

4 Q Okay.

5 A The -- again Exhibit Eighteen shows what  
6 we can expect from the analogy using the three offset  
7 Gavilan wells. The drilling cost which we have estimated  
8 to be \$750,000 is used; operating expenses, \$3000 per  
9 month; our net revenue interest is 87.5 percent for this  
10 tract. Those numbers were incorporated in the simple cash  
11 flow analysis that you see tabulated there by month. We  
12 show the oil production, the gas production, the revenue  
13 generated from those two, the operating expense, which was  
14 held constant along with the prices. It's -- nothing was  
15 escalated, nothing was discounted. It's again a simple,  
16 straightforward cash flow.

17 The investment is shown and the cash  
18 flow per month, along with the cumulative cash flow is  
19 shown there.

20 The important thing here is to show that  
21 again this is before taxes. The bottom line, the total  
22 column, the cumulative cash flow shows that we would be  
23 short \$541,000, short of the recovering pay out of this  
24 well if we were to go ahead and drill it and get these re-  
25 serves that we expect.

1           Q           Where did the new well price of \$750,000  
2 come from?

3           A           That's Sun's current estimate of what a  
4 well at this location would require. It is somewhat higher  
5 than an average well might cost due to the road conditions  
6 that we've discussed before. It's a number that I think is  
7 very representative of what could be expected.

8           Q           When we get to the total at the bottom  
9 of the display, after you have recovered the oil and the  
10 gas that you have calculated from your earlier study, and  
11 we value that production, you get over to the bottom right  
12 column and it still shows a loss of \$540,000?

13          A           Correct.

14          Q           What does that tell you?

15          A           That tells me that there's no question  
16 that this scenario is uneconomic. Not even one-third of  
17 the well costs are paid out by what we expect to be the re-  
18 maining reserves.

19                       This certainly tells me that this is not  
20 a viable option, not an economic option for Sun to pursue.

21          Q           All right. What then did you do, Mr.  
22 Dillon?

23          A           From that point I did a similar analysis  
24 as shown in Exhibit Nineteen for the reserves as would  
25 expect them, using the added benefit of the basis of the

1 F-7 Well, the Canada Ojitos Well; again reserves here of  
2 18,000 barrels of oil, 274-million cubic feet.

3 Q All right, when we look at Exhibit  
4 Nineteen, then, the only difference is that you have gone  
5 to the higher end of your range of expectation for reserves  
6 in the east half of 12 and you have put in the 18,000  
7 barrels of oil and the comparable gas volumes?

8 A That is correct.

9 Q And then you've run everything else  
10 using the same parameters?

11 A Yes.

12 Q And what does that show you?

13 A That shows me again, as shown by the  
14 bottom righthand figure there in the total under cash flow,  
15 that we would expect still to be short 169,000 barrels --  
16 excuse me, dollars, of obtaining pay out on this well;  
17 again a non-economic situation and this using our up side  
18 estimate of what reserves would be for this location.

19 Q All right, you -- you've discussed at  
20 this point the -- the economics of a well in the east half  
21 of 12. One of the other options was to consolidate the  
22 east half of 12 with the west half of 12 and participate  
23 then in the remaining reserves for the Johnson Federal  
24 Well?

25 A Correct.

1           Q           Have you reduced that study to a dis-  
2 play?

3           A           Yes. That's shown in Exhibit Twenty.

4           Q           Okay. This being our second option, the  
5 pooling with the Johnson Federal Well, this again is a  
6 simply straightforward, cash flow analysis. In this case  
7 the cost involved is the pooling cost which we would ex-  
8 pect to be on the order of \$758,000 for a 100 percent par-  
9 ticipation in the well. Of course we're talking about only  
10 one half the section participating; however, I've left the  
11 numbers in 100 percent so that we can -- we won't be con-  
12 fused by factoring the reserves by a factor of 2 or what-  
13 ever. We're looking at the remaining reserves for the well  
14 which would be shared by both halves of the section. So  
15 the bottom line results will be the same. We're simply  
16 looking at 100 percent cost.

17           Q           All right. Let's go back now to the top  
18 information. It says pooling costs. The first number is  
19 \$758,000?

20           A           Correct.

21           Q           What's the source of that numbers?

22           A           The source of that number is the basis  
23 that the precedent has been set in previous pooling cases  
24 that the -- those who are being pooled into a well that  
25 already exists would be responsible to pay the original

1 well cost for the well at the time it was drilled plus any  
2 interest and 12 percent per year is the number that has  
3 been ordered by the Commission, since that time up to the  
4 point that the pooling order is effective and this --

5 Q All right, approximately when was the  
6 Johnson Federal Well completed?

7 A It was drilled in October of 1985.

8 Q The \$500,000 represents what, sir?

9 A That's the drilling cost of that well in  
10 1985.

11 Q And where did you receive that informa-  
12 tion from?

13 A That information was received from other  
14 parties who were, you know, privy to that information of  
15 what the expected costs would be at that point. You know,  
16 we have experience of other wells that we've seen AFE's on  
17 and the costs are in that range.

18 Q All right.

19 A That was -- that number -- figure was  
20 taken and the interest was calculated on that. The interest  
21 from that point, cumulative would be \$258,000 that was  
22 added to come up with our pooling cost of \$758,000.

23 Q That analysis came as a result of the  
24 Commission's order in the Loddy, force pooling that Loddy  
25 Well?

1           A           That's correct.

2           Q           In the Gavilan Mancos Pool?

3           A           Yes, and that's -- that's what we would  
4 expect. That precedent has been set so we would assume  
5 that we would be responsible as an interest owner in the  
6 east half to pay our share of one-half of that amount in  
7 order to gain -- build our lease into production in order  
8 to pool with the Johnson Federal Well.

9           Q           Where does the reserves number come for  
10 the calculation for the remaining reserves for the Johnson  
11 Federal 12-5 Well?

12          A           The reserves come from the previous  
13 plots that we saw that showed the extrapolation of the  
14 performances we've seen.

15          Q           How do we read the display to see what  
16 the financial consequences of that solution are to simply  
17 the owners in the east half of the section as opposed to  
18 the owners of the entire section?

19          A           The owners in the -- this represents the  
20 impact on the owners in the east half. You would take the  
21 -- seeing as how we're talking about one-half of the sec-  
22 tion, we would take one-half of the pooling cost. As you  
23 can see, the cash flow, of course, would be negative in  
24 first month positive cash flow from the operations; how-  
25 ever, as you look at the bottom, the total cash flow that

1 would be expected again is negative, on the order of a  
2 negative \$662,000, which says that the east half owners  
3 negative one-half would be short again \$330,000 of having  
4 pay out that they will be pooled under this well.

5 Q All right, so in order to get the fin-  
6 ancial impact on the east half owners, I simply take the  
7 loss of \$662,000, divide that by half?

8 A Correct.

9 Q What do you conclude based upon your  
10 studies, Mr. Dillon, with regards to the option of conso-  
11 lidating the 640 together and dedicating it solely to the  
12 Johnson Federal Well?

13 A The result here tells me that without  
14 question that pooling at the rate that we'd expect in terms  
15 of pooling cost in dollars would not be anywhere close to  
16 being economic for the east half owners.

17 Q Have you completed your study on the  
18 economic consequences of exercising the third option you  
19 described earlier of expanding the unit and putting the  
20 east half of 12 into the unit?

21 A Yes.

22 Q And is that shown on Exhibit Number  
23 Twenty-one?

24 A Correct?

25 Q Describe for us what you've done.

1           A           Again these are the economics for the  
2 expansion of the Unit to include the subject tract of land  
3 In order to do that we first of all need to calculate what  
4 the potential benefit would be from the -- being added to  
5 the Unit. As we can see, I've labeled under the heading of  
6 Canada Ojitos Unit the data as we've taken it from the last  
7 12 months according to our books as an interest owner in  
8 the Unit, show that, skipping down to revenue over the last  
9 12 months for a 100 percent share of the unit, is on the  
10 order of \$12,000,000, this being the revenue from the sale  
11 of oil and gas.

12                       The average revenue, thus. is somewhere  
13 in the order of \$1,000,000 per month.

14           Q           Total revenue for the entire unit?

15           A           Correct.

16           Q           And 8/8ths --

17           A           Yes, 8/8ths.

18           Q           -- calculation. All right, then what  
19 did you do?

20           A           From that point we determined what our  
21 costs were that we had actually seen in the last twelve  
22 months. This includes operating expense, all the taxes  
23 and our on-going or maintenance capital. Again a (unclear)  
24 number for that figure is \$3.7-million for the last twelve  
25 months so our average cost for that's \$309,000 per month,

1 for those expenses.

2                   From that point I went down and iso-  
3 lated what the drilling capital by itself, that is the cost  
4 for drilling wells had been over the last year and on an  
5 average that has been \$49,000 per month. That figure com-  
6 bined with the other two figures shows that again the line  
7 labeled Cash Flow, we do not include the drilling capital,  
8 that is, if we were to complete development of the unit,  
9 which is expected, you know, we expect that the drilling  
10 outlays that we have seen in the past will be reduced over  
11 the next several years, we'd expect to see an average  
12 monthly cash flow, cash flow to the unit, of \$563,000 per  
13 month if we were to continue at the same rate of expendi-  
14 ture, and for drilling we expect to see \$514,000 per month.

15           Q           What's the purpose of that?

16           A           The actual range will be somewhere be-  
17 tween those two figures. It's not entirely possible to  
18 accurately estimate what those figures will be in terms of  
19 drilling capital from this point forward. Again this is a  
20 constant dollar, no escalation, no discount analysis, and  
21 we've assumed that our range of probable cash flow lies  
22 between those two numbers.

23           Q           What purpose does this portion of your  
24 study have in reaching a conclusion with regards to expan-  
25 sion of the Unit into the east half of 12?

1           A           Well, as we'll see as we get down to-  
2 wards the bottom of the page, this -- this shows us what  
3 kind of benefits we can expect being an interest owner in  
4 the Unit in term of cash flow to Section 12 east half  
5 owners.

6           Q           What's the procedure now for determining  
7 the benefit or the loss to the expansion area of including  
8 that acreage in the Unit acreage?

9           A           In order to be included in the Unit the  
10 expansion area will be required to pay what is called an  
11 investment adjustment, which is -- in a gross sense it is a  
12 pooling cost, if you will, in order to join the Unit. This  
13 is based on the, essentially, in rough terms again, the  
14 value of the Unit as it stands today. That number has been  
15 calculated and supplied to us, is on the order of \$600 per  
16 acre, as shown about halfway down the bottom of the page.

17          Q           Investment adjustment for participation  
18 in the unit is nothing unique, is it, Mr. Dillon?

19          A           No, that's a standard procedure.

20          Q           And did you apply a standard procedure  
21 for viewing expansion economics when you addressed the  
22 issue of the east half of 12 and its participation in the  
23 Canada Ojitos Unit?

24          A           Yes.

25          Q           All right, show us how you did it.

1           A           Well, in order to first calculate the  
2 benefits, we need to determine what interest we would  
3 actually have in the unit. The estimated working interest  
4 that we would have is simply a ratio of the number of  
5 acres, the area that we have in the area to be expanded and  
6 in the Unit as it would stand with the expanded area along  
7 with the present area. That number is calculated to be  
8 .6207 percent as shown by the first line there. This again  
9 results in the present unit area of 51,231 acres plus the  
10 additional 320 acres that we are going to add.

11           Q           And that represents all the working  
12 interest owners in the east half of 12.

13           A           Correct. This is for the east half, not  
14 just Sun, not just Dugan, it's for the entire east half.

15                       The estimated working -- excuse me, in-  
16 come interest is simply that number multiplied by the net  
17 revenue interest and for this lease we do have a 7/8ths in-  
18 come interest, which gives us a .5432 percent income acres  
19 to the unit.

20                       From those two numbers, along with the  
21 previous numbers from the actual data from the Canada  
22 Ojitos Unit, cash flow to the expansion area is simply the  
23 revenue times the income interest minus the expected cost  
24 times the working interest. That number, assuming no more  
25 drilling capital would be spent, is on the order shown as

1 \$3,500 per month to the east half owner. With the drilling  
2 capital that number will be reduced somewhat to around  
3 \$3,200 per month.

4           These numbers then would be applied to  
5 the pay out. Again we're looking at a simple pay out  
6 analysis of the investment adjustment, which again is \$600  
7 per acre. We're looking at 320 acres, so we're talking  
8 about \$192,000 in order to join the Unit.

9           The estimated pay out based on those  
10 numbers, the \$192,000, is between the figure of 55 months  
11 and 60.2 months as shown by the variance in the drilling  
12 capital, so we're talking somewhere between 4.6 and 5 years  
13 pay out for the east half owner as opposed to the -- which  
14 is a fairly reasonable time for the pay out for the  
15 investment, as opposed to the fact that none of the other  
16 options pay out at any time.

17           Q           In summary, Mr. Dillon, what is your  
18 ultimate conclusion as a reservoir engineer with regards to  
19 the viability of the three options that you have studied?

20           A           The conclusion is that, first of all,  
21 based on the reserves and the performance of the offset-  
22 ting wells, a new well was not necessary in the east half  
23 of Section 12, and it would not be an economic, success-  
24 ful venture if it were performed.

25                   The only option that returns anything

1 whatsoever to the east half owners is joining the, you  
2 know, this Unit; you know, there's no question, as I have  
3 recommended to management, that this is the option that we  
4 should proceed.

5 Q Were your Exhibits Ten through Twenty-  
6 one prepared by you, Mr. Dillon?

7 A Yes.

8 MR. KELLAHIN: We move the  
9 introduction of Exhibits Ten through Twenty-one, Mr.  
10 Stogner.

11 MR. STOGNER: Are there any  
12 objections?

13 What are those numbers again?

14 THE REPORTER: Ten through  
15 Twenty-one.

16 MR. STOGNER: Exhibits Ten  
17 through Twenty-one will be admitted into evidence at this  
18 time.

19 Mr. Carr, your witness.

20 MR. CARR: No questions.

21 MR. STOGNER: Mr. Pearce? Mr.  
22 Lopez?

23

24

25

## 1 CROSS EXAMINATION

2 BY MR. LOPEZ:

3 Q Okay. Mr. Dillon, you discussed that  
4 you'd taken some pressure studies in the area and I was  
5 wondering when and where and under what circumstances your  
6 pressure studies were conducted.

7 A I utilized data that had been for the  
8 most part presented at previous hearings. The data is  
9 shown on what is my Exhibit Number Eleven, Sun Exhibit  
10 Eleven, has been presented previously and was discussed in  
11 the June, '99 hearing.

12 The only data that I have added to this  
13 is data that was supplied to me by the Unit operator in  
14 Ojitos Unit for the B-17, which has been taken recently  
15 since the time of this -- the hearing that this exhibit was  
16 prepared for, plus Sun's own measurement of the Native Son  
17 No. 1 pressure, which was taken in March, I believe it was,  
18 when the March -- by a standard pressure bomb, shut-in type  
19 measurement.

20 Q Where is this Native Son Well, Mr.  
21 Dillon?

22 A The Native Son, if you'll look at the  
23 Dugan/Sun Exhibit Number Two, the Native Son No. 1 is in  
24 Section 22. I believe that's -- no, that's not section --  
25 what is that section -- well, the most lower lefthand sec-

1 tion that is visible in that exhibit. You'll see the  
2 notation there of the Native Son and the No. 1 well is in  
3 the northeast quarter.

4 MR. KELLAHIN: Section 34.

5 A Section 34. That's Section 34.

6 Q And this part of the reservoir is that  
7 are of the Gavilan Mancos that was earliest drilled and is  
8 the oldest and most depleted part of the reservoir, is it  
9 not?

10 A That is true.

11 Q And -- and you said that your Canada  
12 Ojitos D-17, where is that located?

13 A The D-17 is located, looking at that  
14 same exhibit, that's the No. 35 Well. That is in Section  
15 17 of Range 1 West.

16 Q And what was the pressure in this well  
17 and when was it taken?

18 A The last pressure -- I'm not sure of the  
19 exact date it was taken. It was in -- within the last  
20 month, two months. It is between 600 and 610 pounds.

21 Q Do you have any pressure information  
22 with respect to any wells farther to the east?

23 A No, I do not.

24 Q Were you aware of Mr. Greer's applica-  
25 tion for a commingling order in Case Number 9553 with res-

1     pect to a well, I was going to try and get the case num-  
2     ber, but it's in, I think, Section 26, Range 1 West, to the  
3     north. I think it's located in the same area as the pinch  
4     out that we discussed a year ago in June.

5             A             I'm vaguely familiar with the order. I  
6     don't know any of the details of it, no.

7             Q             But you don't know what the pressure in  
8     that well is?

9             A             No, I do not.

10            Q            What was the reason for limiting your  
11     reservoir study area to the area in question? I guess more  
12     specifically, why did you not include at least the south  
13     half of Section 6 and the north half of Section 18?

14            A            Those areas were excluded simply because  
15     at some point you reach a distance away from the subject  
16     area that the data is no longer relevant in terms of being  
17     analogous to it.

18                         I picked the four offsets which should  
19     under normal circumstances be representative of -- of a  
20     given well. If I were to start increasing the area that  
21     had been looked at, I believe the results would have been  
22     essentially the same. The numbers would have changed  
23     slightly, perhaps, in terms of the estimated ultimate re-  
24     covery, but I don't believe the conclusions would have been  
25     any different.

1 Q Is there pressure information with  
2 respect to wells to the east or in the decline area, where  
3 the pressure maintenance project is being conducted in the  
4 Canada Ojitos Unit?

5 A If the question is do I have that pres-  
6 sure with me, no, I don't.

7 Q No, is it available? Is there informa-  
8 tion available?

9 A There is information available, yes.

10 Q But you don't know what it is or what it  
11 shows?

12 A I haven't committed any of it to memory,  
13 no. I've looked at it.

14 Q Would it be fair to say that the  
15 pressures are considerably higher than those in the area  
16 we're discussing?

17 MR. KELLAHIN: I'm going to  
18 object to the question, Mr. Examiner. It's not relevant.  
19 We focussed our attention, at your request, to the imme-  
20 diate area of the east half of 12 and the adjacent sections  
21 and Mr. Lopez is going far beyond the scope of relevant  
22 matters before the Examiner.

23 MR. LOPEZ: Mr. Examiner, I  
24 would remind you that it seems that a basic part of the  
25 applicant's case is that they persist in insisting that

1 this two tier section, which we have all along agreed is in  
2 communication with the Gavilan Mancos Pool and shown by  
3 extensive testimony in the hearings a year ago June, is  
4 being affected by the pressure maintenance project con-  
5 ducted in the area to the east of the area in question, and  
6 at that time we had urged the Commission to adopt a pool  
7 boundary that more reflected the division between the two  
8 pools and pressures, which was along a -- the section line  
9 two tiers to the east of its present boundary.

10 We have heard testimony both  
11 from Mr. Roe and Mr. Dillon that these wells are being  
12 affected by not only the gravity maintenance from the con-  
13 siderable decline area to the east but also from the  
14 pressure maintenance project, and we have seen no evidence  
15 with respect to the pressures to the east of what we have  
16 always alleged is a pinchout area, and the area in ques-  
17 tion, and so I think the question is quite relevant.

18 MR. PEARCE: If I may, Mr.  
19 Examiner, I would point out the obvious. We began this  
20 proceeding with me making an objection to any information  
21 which was being utilized to demonstrate a common source of  
22 supply, which is not what this Commission ordered.

23 My objection was not sustained  
24 and almost everything that you have heard in the last four  
25 or five hours of testimony was covered by that objection.

1                   Almost every word that any  
2 witness has testified to has been to demonstrate a common  
3 source of supply.

4                   My objection was not sustain-  
5 ed. Now Mr. Kellahin makes the same objection and seeks to  
6 have it sustained.

7                   MR. KELLAHIN: Mr. Pearce,  
8 with all due respect, is absolutely wrong, Mr. Examiner.  
9 What we're looking at is not the buffer that they continue  
10 to maintain exists between the two tiers of sections with-  
11 in the unit and the major portion of the unit east of what  
12 you see on Exhibit Number Ten.

13                   The only issue is whether the  
14 east half of 12 is in effective communication with the  
15 Section 7. That's what we're talking about and that's what  
16 Mr. Dillon has focussed his study on and Mr. Lopez wants to  
17 talk about pressures over this extrapolated barrier that  
18 his side continues to try to argue despite the fact that  
19 the Commission has ordered otherwise. I think it's irre-  
20 levant.

21                   MR. LOPEZ: Well, I might  
22 further point out, Mr. Examiner, that we heard yesterday  
23 the grave concern that if a well were to be drilled in the  
24 east half of 12 under the theory of no guts, no glory, and  
25 maybe someone would have guts and commensurate glory, that



1 one at the Mesaverde, Pictured Cliffs, and others, that may  
2 or may not be, and I do not know specifically whether or  
3 not they're productive in this area.

4 Q So you've mentioned the Pictured Cliff  
5 and Mesaverde and the Dakota. What about the Gallup?

6 A I believe, if I'm not mistaken, the  
7 Gallup is just another nomenclature for the Mancos.

8 Q Is Hooper, Kimball and Williams an  
9 interest owner in the east half of Section 12?

10 A Yes, they are.

11 Q Were you aware that your company made an  
12 offer to purchase their Gallup rights only, which expired  
13 the day before yesterday, for \$300 an acre?

14 MR. KELLAHIN: Objection, ir-  
15 relevant, Mr. Examiner.

16 MR. LOPEZ: Mr. Examiner,  
17 we're trying to discuss the reserve potential of the area  
18 in question and the economics and as I understand it, the  
19 applicant's case is that the working interest owners would  
20 be far better served by having their east half of 12 in-  
21 cluded in Mr. Greer's Unit, and they've gone to great  
22 length in trying to demonstrate the economics.

23 Of course, the other side of  
24 the coin is what the potential of the nonproducing horizons  
25 are and if the depleted Gallup is worth \$300 an acre alone,

1 one wonders what the value at a bid if the lease were  
2 allowed to lapse would be with respect to the other po-  
3 tential horizons.

4 So I think it's very much  
5 relevant to this case.

6 MR. KELLAHIN: The general  
7 issue is the Gallup Mancos formation, Mr. Examiner.

8 MR. STOGNER: Objection sus-  
9 tained.

10 Q Well, Mr. Dillon, your lease from the  
11 BLM, does it include only the Gallup formation or does it  
12 include all the horizons?

13 A To my knowledge it includes all hori-  
14 zons.

15 MR. LOPEZ: Again I would re-  
16 new my question, Mr. Examiner, because I think it's clear  
17 that the lease includes all horizons and the other hori-  
18 zones are relevant.

19 MR. STOGNER: Mr. Lopez, this  
20 hearing today is only concerning the Mancos formation and I  
21 do not see the relevance to that question.

22 Would you please continue and  
23 move on?

24

25

## 1 CROSS EXAMINATION

2 BY MR. PEARCE:

3 Q Mr. Dillon, if you would, please, look  
4 at what you marked as your Exhibit Number Ten, which is the  
5 land plat.

6 A Yes.

7 Q A couple of things I want to check out  
8 with you.9 I notice in the east half of Section 12  
10 there is what appears to be a well spot, is that what that  
11 is?

12 A That's correct.

13 Q How was that placed?

14 A That was placed based on what the pre-  
15 vious location which had been applied for by McHugh and  
16 Dugan for the Continental Divide No. 1.17 Q I apologize if during some of your tes-  
18 timony I was shearing sheep and if I ask you to repeat  
19 something, I'm just going to have to do that.20 As I understand it, you do not or you do  
21 not have available to you today any pressure information on  
22 the 38/F-7 Well, is that correct?

23 A The current --

24 Q Updated information.

25 A That's correct.

1           Q           Likewise, you do not have any updated  
2 pressure information on any well in the Gavilan in what you  
3 call your reservoir study area, is that correct?

4           A           That's correct.

5           Q           Let's look, please, at what you marked  
6 as Exhibit Number Sixteen. That is, as I understand it, a  
7 remaining reserve calculation, your best guess of remain-  
8 ing reserves, basing the remaining reserves only on the  
9 wells in the Gavilan study area; Gavilan part of the study  
10 area, Exhibit Sixteen.

11          A           That's correct.

12          Q           Did I understand you when you were dis-  
13 cussing that exhibit to indicate that you believe that that  
14 was the most likely remaining reserve scenario?

15          A           That is based on -- is my interpretation  
16 that the fact that the structural position, the proximity  
17 to the other wells, that that is probably the most likely  
18 scenario, yes.

19          Q           So although Exhibit Seventeen shows a  
20 different reserve calculation and I believe Mr. Kellahin,  
21 when he was asking you questions, reserved (sic) to that as  
22 bracketing the range of reserves; your best engineering  
23 judgment is, as I understand it now, certainly closer to 16  
24 than 17.

25          A           I wish I could put that accuracy on it.

1 I hope that that is the situation. To (not clearly heard)  
2 there is no way to completely eliminate flow from the  
3 higher pressure area in the east to the west; thus there  
4 will be some migration of oil into this area likely from --  
5 from the east; thus there is some reasonable evidence to  
6 show that the Exhibit Seventeen shows what could be again a  
7 regional figure for the reserves. Again I would like to  
8 think that that migration could be eliminated, and yes,  
9 we'd (not clearly understood) at Sixteen.

10 MR. PEARCE: Mr. Examiner,  
11 before I ask the next question, I want to tell you that I'm  
12 not trying to get crosswise with the ruling which you've  
13 made with regard to the objection to Mr. Lopez' last set of  
14 questions. I don't understand something and I want to ask  
15 this witness. I am not going to get into the area (not  
16 clearly audible), but I do want to ask the witness.

17 Q When you say Gallup formation and Mr.  
18 Kellahin says Mancos, are you two talking about the same  
19 thing, in your opinion?

20 A Yes.

21 Q Are there productive intervals in the  
22 Gallup that are not called Mancos?

23 A Again not being a geologist, I'm not  
24 familiar with the nomenclature of each individual zone.  
25 There are local terms for the different horizons. My in-

1        interpretation is that what we're speaking about today is  
2        within the Niobrara; we're talking about the Mancos portion  
3        of that, which by some people in this area, but even speci-  
4        fically by the Commission in other areas of the Basin, it  
5        is called Gallup, however I believe we're talking about the  
6        same, same reservoir.

7                    Q            Thank you. Let me try to clarify some-  
8        thing else I don't understand, sir.

9                    If you would, please, look at Exhibit  
10        Eighteen and Exhibit Twenty-one together.

11                    A            Okay.

12                    Q            Now, under the column marked Net Revenue  
13        on Exhibit Eighteen, at the bottom, as I understand that,  
14        after 24 months if a well were drilled in the east half of  
15        12, you would expect the net revenue at abandonment to be  
16        \$209,000. Is that what that number means?

17                    A            That is correct.

18                    Q            You think that well would produce for  
19        two years, would produce \$209,000 in revenue and then would  
20        be abandoned.

21                    A            Yeah, and the key word there is "net".  
22        That would be excluding operating expense, not getting into  
23        the jargon of financial analysts, this is simply the num-  
24        ber that would represent a before tax number after you've  
25        taken out your operating expenses.

1 Q Okay, I'm looking -- I'm sorry if I  
2 interrupted, if I cut you off, I apologize.

3 A No, that's it.

4 Q In looking at the columns marked Oil  
5 Revenue and Gas Revenue and adding those together, that  
6 \$309,000 number is the gross number.

7 A Correct.

8 Q Looking at Exhibit Twenty-one, as I  
9 understand this, you are indicating that revenue of  
10 \$192,000 would be generated to the interest owners in the  
11 east half of 12 from unit operation in a period of approx-  
12 imately five years, 4-1/2 to 5 years. Is that what that  
13 means?

14 A Yes. That would be the cash flow to the  
15 unit after pay out of the taxes which were not included in  
16 the previous investment pay out analysis, along with the  
17 investment adjustment, et cetera, that would pay out again,  
18 yes, sir, in four to five years.

19 Q I'm looking now at what you marked as  
20 Exhibit Number Fifteen, which is the decline analysis of  
21 the F-7 Well.

22 A Yes.

23 Q When would you expect the F-7 Well to be  
24 abandoned?

25 A That point would be off the end of the

1 graph. We would expect that to be at the point that the  
2 economic limit, which is calculated here, is shown to be  
3 when we'd reached 3 barrels of oil a day. That, I hesi-  
4 tate to make a rough guess, but at 30 percent decline,  
5 we're looking at, I'd say it looks like at least 10 years  
6 out.

7 MR. PEARCE: That's all I  
8 have. Thank you, sir.

9 MR. STOGNER: Thank you, Mr.  
10 Pearce.

11 Mr. Lund?

12  
13 CROSS EXAMINATION

14 BY MR. LUND:

15 Q Mr. Dillon, just a couple of questions.  
16 Your discussion of the three options that you evaluated,  
17 that you talked about, the first option would be to drill a  
18 well in the east half of 12. The second option is to pool  
19 that 640 in Section 12. The third option, which you're re-  
20 commending, is to expand the Canada Ojitos Unit into the  
21 east half of Section 12.

22 Were all those options evaluated for the  
23 purpose of determining how you could hold your lease in the  
24 east half of Section 12?

25 A Those were evaluated in order to deter-

1 mine the best return for ourselves and, we would hope to  
2 reflect the other owners in the east half of Section 12.

3           The lease needs to be put in production  
4 and discussions have been going on for a number of months  
5 between Dugan, specifically, and Sun as to what to do with  
6 that and it was our conclusion that this -- this was our  
7 recommendation, this is what we should do.

8           Q           As I understand your testimony, it's  
9 economics strictly, is that right?

10          A           Economics, of course, there are other  
11 considerations that have to be taken into (unclear). From  
12 a reservoir standpoint there would be economic waste.  
13 There would also be waste to a certain extent of oil and  
14 gas reserves if an additional well was drilled, which again  
15 is what my impression would happen if -- if the present  
16 course of action is not taken.

17          Q           Well, isn't it fair to say that your  
18 recommendation is what is the most economic way to keep the  
19 east half of Section 12 lease in effect?

20          A           That's correct.

21          Q           Did you determine whether it was neces-  
22 sary to include the east half of Section 12 in the Canada  
23 Ojitos Unit in order to make the Canada Ojitos Pressure  
24 Maintenance Unit more effective?

25          A           Looking at the options or the scenarios

1 of what would happen if that were not the case, the case  
2 being if the well were drilled versus the case of the well  
3 not being drilled and it were expanded, yes, that would  
4 result in reduced recovery for the Unit.

5 Q I'm sorry, your conclusion is that if  
6 the east half of Section 12 is not included in the Canada  
7 Ojitos Unit that Canada Ojitos Unit will be less effective  
8 from a pressure maintenance standpoint?

9 A That is correct.

10 Q Okay, then why is it that -- maybe Mr.  
11 Pearce heard something I didn't.

12 In the answer to that last question, is  
13 a condition, or is part of your answer the fact that there  
14 would be a well drilled in the east half of Section 12?

15 A Looking at those options, yes, that's --  
16 that's what I'm saying, if a well was drilled in the east  
17 half of 12 that would be not conducive to the ultimate re-  
18 covery from the Unit.

19 Q Okay, putting aside that possibility, do  
20 you have an opinion as a reservoir engineer that the east  
21 half of Section 12 is necessary from a technical standpoint  
22 to contribute to the pressure maintenance project in the  
23 Canada Ojitos Unit?

24 A From a technical standpoint evaluating  
25 all the data that would be available, if there were never a

1 pressure sink in the form of a well in that section, then  
2 it would be difficult to determine what the benefit would  
3 be for the unit; however, the fact that it's been suggested  
4 by operators that would have the ability to propose a well  
5 there that they would indeed consider doing that. If there  
6 were additional pressure sinks in the east half of Section  
7 12, that would be a waste of the reservoir energy and econ-  
8 omic waste and the additional pressure sink provided by  
9 that well would drain reserves not only from the Unit but  
10 from the Howard Federal to the north, the Johnson Federal,  
11 and all the wells in the area would suffer. Those wells  
12 would be abandoned prematurely, thus the economic reserves  
13 or the ultimate recovery from the reservoir would be hurt  
14 as a whole.

15 Q Okay, just assume with me for a second  
16 that no well is drilled in the east half of Section 12.  
17 Would you assume that just for purposes --

18 A Okay.

19 Q Thank you. You don't see a technical  
20 reason, do you, to include the east half of Section 12 in  
21 the Canada Ojitos Unit, assuming that no well is drilled in  
22 the east half of Section 12, do you?

23 A If the return of the -- what is correla-  
24 tive rights of the owners of the east half of Section 12  
25 could be a technical argument, then -- then, I would say

1 that is correct. It is my impression that there will be  
2 oil that underlies that -- that tract or that will be moved  
3 to that tract from the Unit from the F-7 drainage area that  
4 the owners of Section 12 would not be compensated for if  
5 that area is not added to the Unit. So for a -- the tech-  
6 nical argument of correlative rights, if I can -- that  
7 would be necessary and that would cause me to recommend  
8 that this would be added so that those royalty owners and  
9 those interest owners who otherwise would be benefitting  
10 from -- from that migration of oil, would be compensated.

11 Q See, what I'm struggling with is that  
12 you're talking about economics and I'm trying to get to the  
13 bottom of the technical basis for the inclusion of the east  
14 half of Section 12 in the Canada Ojitos Unit. That's what  
15 I'm struggling with and my question to you, sir, is how  
16 does the east half of Section 12 contribute to the viabil-  
17 ity of the pressure maintenance project in the Canada  
18 Ojitos Unit?

19 A I -- my argument would be perhaps to --  
20 to remove ourselves from Canada Ojitos and go to any unit  
21 that would have an offsetting tract that had potential for  
22 development that had known productive reservoir underlying  
23 it and the argument would be that there would be no reason  
24 to exclude any known productive interval, whether or not  
25 it's economically productive or not, the fact that there's

1 oil in the ground underneath that tract in my judgment  
2 would be sufficient reason to include that in that unit.  
3 And that 's simply what we're doing here.

4 Q You're talking about a buffer concept,  
5 includes buffer acreage in a unit?

6 A I believe a buffer concept would be to  
7 prevent development along the border thereof. I'm not  
8 aware exactly what you're referring to as a buffer.

9 Obviously there's not exactly a buffer  
10 here in the fact that we've got development up to both  
11 sides of the boundary, but --

12 Q Well, typically what you do in forming a  
13 unit is try to define where the pool is and then have a  
14 little extra acreage outside the pool area to protect from  
15 that.

16 Do you understand that concept?

17 A Correct, I understand it, yes.

18 Q That's what I'm referring to as a  
19 buffer.

20 A Well, usually in that case you do not  
21 know what is outside the unit; however, in this case we  
22 have well defined the fact that there is productive acreage  
23 outside that unit so there is no reason to assume that this  
24 acreage is not productive, thus it should be included in --  
25 in the unit.

1           Q           Well, wouldn't your rationale then apply  
2 to all the land on the edge of the Canada Ojitos Unit now?

3           A           If it -- well, the land that is already  
4 developed, and it would be -- have to be taken on an indi-  
5 vidual tract by tract basis. You know, I can't speak to  
6 any of the rest of it; just knowing that the particular  
7 performance of these wells, you know, I can't really make a  
8 conclusion on that -- to that question. There is no reason  
9 for Unit operations to include all of Gavilan, no. There's  
10 no reason to include the Howard Federal lease, for example.  
11 It has wells on it, it's developed. Even though it's pro-  
12 bably benefitting from the unit there is no reason for unit  
13 operations to include it as opposed to the Section 12 where  
14 we could receive future harm in the future if it were de-  
15 veloped (unclear).

16           Q           If you go south from Section 12 in Sec-  
17 tion 13 and Section 24, there's no development on the east  
18 half of those sections, either, so is it your conclusion  
19 that Canada Ojitos out to be expanded to those sections, as  
20 well?

21           A           Again, I'd have to look at those tracts  
22 on an individual basis. You know, again confining to data  
23 the tract that Sun and Dugan both represent in our estima-  
24 tion we, you know, again have approached the Unit to do  
25 this, to my knowledge and there's been no previous efforts

1 on the part of the Unit to expand into those areas, so, you  
2 know, at this point my initial comment would be no. If the  
3 owners of those tracts would deem that to be beneficial,  
4 then I at this point in time would have no argument with  
5 it, but I hope that answers your question.

6 Q Well, I'm not sure that it does but let  
7 me ask you a couple housekeeping questions.

8 On your Exhibit Twenty-one --

9 A Okay.

10 Q -- the acreage figure that you've got  
11 for the Canada Ojitos Unit is about 51,000 acres?

12 A Correct.

13 Q Am I missing something? I thought it  
14 was bigger than that. I thought it was about 69,500.

15 A VOICE: Weighted acres.

16 Q I'm sorry?

17 A VOICE: Weighted acres.

18 A This --

19 MR. STOGNER: I'm sorry, --

20 MR. KELLAHIN: Let's not con-  
21 fuse the record.

22 MR. LUND: Right.

23 MR. KELLAHIN: Either answer  
24 the question that you know or don't know.

25 Q Do you know the answer to the question,

1 and let me direct it specifically. The order establishing  
2 the Canada Ojitos Unit by this Division indicates that the  
3 Unit area is about 69,567 acres and you've got a consider-  
4 ably smaller number of Exhibit Twenty-one.

5 A Yeah, the sixty-nine thousand comes from  
6 the total surface acres, to my knowledge. Now, hopefully we  
7 can clarify this with the next witness.

8 The 69,000 is the total surface acres  
9 which to my knowledge may or may not include all the "par-  
10 ticipating area" of the unit, of the Federal Unit. 51,231  
11 represents that acreage which is -- has been used in the  
12 past and is used in the calculations for determining what  
13 the participating -- of the participating area, and what  
14 the interests are of those parties in the participating  
15 area. Thus, this is the number that would be used in the  
16 calculations of the, you know, what the interest of this  
17 tract would be.

18 Q Maybe we can ask Mr. Greer about that.  
19 In this area that we're discussing, Mr. Dillon, aren't  
20 there different producing zones within the formation, I  
21 think sometimes referred to as A, B and C zones?

22 A That's correct.

23 Q And are you aware of the different parts  
24 of this particular reservoir produced predominantly from  
25 those different zones?

1           A           That's correct.

2           Q           What zone does the F-7 Well predom-  
3 antly produce from?

4           A           The F-7, now I would have to recall from  
5 memory, and I cannot recall from memory at this point, I'm  
6 sorry, what exactly -- whether or not it produces from all  
7 three zones or from only the C. That would have to be  
8 directed to the unit operator on that.

9           Q           Do you know what zones the Gavilan wells  
10 predominantly produce from?

11          A           Those wells in that area, the Gavilan,  
12 predominantly produce from the A and the B, to my knowledge  
13 although specifically I can't say whether the perforations  
14 in these wells cover those intervals.

15          Q           Are those zones, the A, B and C zones  
16 separate in a vertical sense?

17          A           That is a very good question and we've  
18 tried to answer that in a number of ways in the previous  
19 testing and work that's been done. In a given well that's  
20 been hydraulically fractured with perforations in the A, B  
21 and C, it's my impression that all three zones are going to  
22 be hooked up. In the reservoir there are portions, I'm  
23 sure, due to the natural fracturing, that all three zones  
24 are hooked up. I cannot tell you if it's happening in this  
25 area specifically or not. There are areas where that oc-

1 curs. There are probably areas where it may not occur. I  
2 cannot answer that conclusively.

3 Q Final question. Where is the gas being  
4 injected into in the Canada Ojitos Unit; that is, A, B or  
5 C, or all of those zones?

6 A Early on in the development period the  
7 gas was injected in the upper zones, the A and I guess to a  
8 certain extent the B. To my knowledge that has not  
9 changed; however, that's another question that would be  
10 best deferred to the unit operator.

11 Q Thank you, Mr. Dillon.

12 MR. LOPEZ: Mr. Stogner, with  
13 your indulgence I'd like to follow up with a question (not  
14 clearly audible.)

15

16 RE CROSS EXAMINATION

17 BY MR. LOPEZ:

18 Q Mr. Dillon, I believe that the last  
19 question Mr. Pearce asked you was with respect to the F-7  
20 Well and your estimate that it would have a 10-year remain-  
21 ing life. You heard Mr. Roe's testimony with respect to  
22 the well that's a direct north offset to that well, the COU  
23 Well 32, that that is currently producing 6 barrels of oil  
24 and 339 MCF. What would you estimate the remaining life of  
25 that well to be?

1           A           I can't do that given the date that I've  
2 looked at. I've not studied that well intensively yet. I  
3 don't know what condition that the 6 barrels of oil is  
4 being produced under. I'm sorry I can't answer you.

5           Q           That well's performance is much more  
6 similar to the Johnson Federal Well than it appears to be  
7 to the F-7 Well, is that not true?

8           A           I really can't -- can't make that state-  
9 ment not having studied that well extensively.

10          Q           Well, if the Johnson Federal is produc-  
11 ing 3 barrels of oil, or 1.5 barrels of oil a day now and  
12 150 MCF, and the COU 32 Well is producing 6 barrels and  
13 339, as compared to the F-7 Well, which is producing 72.6  
14 barrels and 937 MCF, isn't it on its face more like the  
15 Johnson Well than the F-7 Well?

16          A           Given the fact that that well has been  
17 shut in for a period of time due to the fact the unit oper-  
18 ator chose to produce the other well on the section, we  
19 don't have an extensive history on the production capabi-  
20 lity of that well, it would be very difficult to make an  
21 extrapolation in the future of what it might produce. The  
22 current rates, you know, give us an indication of what it  
23 might do, but again, depending on various reservoir para-  
24 meters may produce that for ten years at a flat rate and  
25 again it may be gone at any time. I can't answer that

1 question.

2 Q Well, if your estimate is that the  
3 Federal Johnson Well has a 2-3/4 year remaining life, and  
4 if we assume that you're correct that the wells in the  
5 western two tiers of the Canada Ojitos Unit are in effec-  
6 tive pressure communication and are producing from the same  
7 horizon as the wells in Gavilan, albeit they were drilled  
8 more recently, what basis is there to assume that the wells  
9 in the western two tiers of the Canada Ojitos Unit are  
10 going to have any longer effective remaining life than the  
11 wells in Gavilan?

12 A The basis for that again is the state-  
13 ment that I've made before concerning the fact that those  
14 wells are closer to the more steeply dipping part of the  
15 reservoir which you can see on the structure map, the  
16 Exhibit Two that you have before you. That alone would in-  
17 crease the recovery from those wells and prolong the life,  
18 plus the benefit of the gas injection, as I've mentioned  
19 before, to the east. There are a number of reasons why  
20 those wells might last longer. They're obviously hooked  
21 into the major fracture system. That system has not been  
22 as over-developed in the Canada Ojitos Unit; hence those  
23 wells should have a longer life and ultimately should re-  
24 cover more barrels per well, so all of those things would  
25 help explain why we see the performance we do and why we

1 expect what we expect.

2 Q Of course that answer does assume, does  
3 it not, that there is actually no effective permeability  
4 restriction between the eastern part of the connecting  
5 Canada Ojitos Unit line to the east of these two tiers of  
6 sections.

7 A That answer assumes that those wells are  
8 in communication in some form.

9 Q Would you care to estimate how much that  
10 form is or the (unclear) extent of the form?

11 A That data has been presented. I don't  
12 have any of it in front of me right now but it's been pre-  
13 sented extensively at previous hearings.

14 MR. LOPEZ: Nothing further.

15 MR. STOGNER: Any redirect?

16 MR. KELLAHIN: No, sir.

17 MR. STOGNER: Mr. Lemay?

18 MR. LEMAY: Thank you, Mr.

19 Examiner.

20

21 QUESTIONS BY MR. LEMAY:

22 Q Mr. Dillon, going back to your economics  
23 very briefly, Exhibit Number Twenty-one, your assumption  
24 was, I take it, that the gas flow from the Canada Ojitos  
25 Unit would remain constant and would not decline in terms

1 of calculating the pay out?

2 A That is correct.

3 Q Did you take into consideration at all  
4 -- would you assume that to be a valid assumption that  
5 there'd be no decline in cash flow here?

6 A Based on the -- of course it's difficult  
7 to tell with the changing allowables, but based on the past  
8 performance of the reservoir in the Unit area and the fact  
9 that the Unit is not fully developed, you know, there re-  
10 mains areas where a well can be drilled in the future to --  
11 it's difficult, and I don't think it is entirely unreason-  
12 able to assume that the oil production, and that's assuming  
13 constant prices, that the cash flow would remain constant  
14 for a number of years from the Unit, yes.

15 Q Your -- your only economic yardstick  
16 that you presented was pay out. Had you done return on  
17 investment or discounted cash flow rate of return calcula-  
18 tions for that investment of \$192,000?

19 A No, sir, I have not.

20 Q Would it be conceivable that if you took  
21 the \$192,000, put it at a secure investment at 10 percent,  
22 that you might make more money than you would by investing  
23 in the Canada Ojitos Unit?

24 A That is possible. I can't tell you  
25 whether or not that -- what kind of return it would have.

1 No, I did not perform that.

2 Q Again, you're looking at the expansion  
3 into the east half of Section 12, not necessarily as an  
4 investment in itself but as protection measure to prevent a  
5 well from being drilled in the east half of Section 12?

6 A I probably wouldn't word it such like  
7 that. That's -- it can be looked on like that to a certain  
8 extent and it would be a protection from seeing reduced  
9 recovery from the Unit, yes.

10 Q That's all I have.

11 MR. STOGNER: I have no ques-  
12 tions of this witness.

13 Are there any other questions  
14 of -- of Mr. Dillon?

15 MR. KELLAHIN: No.

16 MR. STOGNER: If not, he may  
17 be excused. Let's take about a 15 minute recess.

18  
19 (Thereupon a recess was taken.)

20  
21 MR. STOGNER: This hearing  
22 will come to order.

23 Mr. Kellahin?

24 MR. KELLAHIN: Mr. Examiner, I  
25 have an additional follow-up question with Mr. Dillon that

1 refers to his Exhibit Number Twenty.

2  
3 RICHARD G. DILLON,

4 being recalled to the stand and remaining under oath,  
5 testified as follows, to-wit:

6  
7 REDIRECT EXAMINATION

8 BY MR. KELLAHIN:

9 Q If I can ask you to find that display,  
10 Mr. Dillon.

11 A Exhibit Twenty again is the economics  
12 for forced pooling with the Johnson Federal 12-5.

13 Q One of the parameters in the first por-  
14 tion of that display was to attempt to anticipate the  
15 likely cost of investment to the east half owners to parti-  
16 cipate in the well for the consolidation of the 640-acre  
17 tract for the remaining future production from the Johnson  
18 Federal 12-5 Well.

19 My question for you, sir, is when you  
20 look at the bottom total and you divide the 662,000 by half  
21 so that the east half working interest owners is subject to  
22 a loss of \$331,000, to what extent would you have to adjust  
23 their costs of contribution or reduce it in order for that  
24 to result in a positive number within the period of the  
25 remaining reserves for the well?

1           A           For that number to be positive we would  
2 have to have a number that would be equal to the net re-  
3 venue that would obtained. The net revenue is shown being  
4 here the total \$95,000. Approximately half of that would  
5 be about --

6           Q           Excuse me 95,000 is operating expense.

7           A           Okay, if you move one column over, net  
8 revenue is 95.22 thousand dollars. That's the 100 percent.  
9 You have to take of that, or approximately \$47,000 for a  
10 pooling cost in order, simply, for the well to pay out the  
11 expected pooling cost.

12                        You would have to have some number less  
13 than that in order to obtain some reasonable rate of  
14 return.

15           Q           Thank you, Mr. Dillon.

16                               MR. KELLAHIN: I have no fur-  
17 ther questions.

18                               MR. STOGNER: Are there any  
19 other questions of this witness?

20                               He may be excused.

21                               Mr. Carr?

22                               MR. CARR: At this time, Mr.  
23 Stogner, we would call Mr. Albert R. Greer.

24

25

ALBERT R. GREER,

1 being called as a witness and being duly sworn upon his  
2 oath, testified as follows, to-wit:

3  
4 DIRECT EXAMINATION

5 BY MR. CARR:

6 Q Will you state your full name for the  
7 record, please.

8 A Albert R. Greer.

9 Q Mr. Greer, where do you reside?

10 A Farmington.

11 Q By whom are you employed and in what  
12 capacity?

13 A Benson-Montin-Greer Drilling Corp. I'm  
14 an engineer and officer of the company.

15 Q Have you previously testified before the  
16 New Mexico Oil Conservation Division?

17 A Yes, sir.

18 Q And at the time of your prior testimony  
19 were your qualifications as a petroleum engineer accepted  
20 and made a matter of record?

21 A Yes, sir.

22 Q Are you familiar with the application  
23 that was filed in this case on behalf of Benson-Montin-  
24 Greer Drilling Corporation?

25 A Yes.

1           Q           And are you familiar with the New Mexico  
2 Statutory Unitization Act?

3           A           Yes, sir.

4                           MR. CARR:    Are the witness'  
5 qualifications acceptable?

6                           MR. STOGNER:   Are there any  
7 objections?

8   Mr. Greer is so qualified.

9           Q           Mr. Greer, would you briefly state what  
10 Benson-Montin-Greer Drilling Corporation seeks with this  
11 application?

12          A           We seek to expand the Unit Area by 320  
13 acres, a very small expansion. There's approximately  
14 61,000 net acres in the Unit now. It would be about  
15 6/10ths of 1 percent, would be the expansion that we seek.

16          Q           And the expansion is limited to the east  
17 half of Section 12.

18          A           Yes, sir.

19          Q           Is Benson-Montin-Greer Drilling Corpor-  
20 ation the operator of the Canada Ojitos Unit?

21          A           Yes, sir.

22          Q           Does -- do you as Unit Operator have any  
23 interest in extending this unit into the developed portions  
24 of the Gavilan Mancos Pool?

25          A           No, sir.

1           Q           Could you explain to the Examiner how  
2 expansion of this Unit would work, and I would like you to  
3 relate your testimony to the conversations that have pre-  
4 viously transpired in this hearing concerning investments  
5 and adjustments, those questions that were directed both at  
6 Mr. Roe and Mr. Dillon.

7           A           Yes, sir. It was apparent, Mr. Exami-  
8 ner, yesterday that there's a lot of misunderstanding about  
9 units and expansions and perhaps the unit operator's objec-  
10 tives.

11                       Particularly Mr. Lopez asked about what  
12 -- what is an investment adjustment. I had just assumed  
13 that everyone understood what's -- what's involved and --  
14 but obviously they don't. And so these are reasons why  
15 they have concern about expanding the Unit beyond its ex-  
16 isting boundaries.

17                       The investment adjustment of \$600 an  
18 acre represents an investment in Unit lands which includes  
19 the drilling of wells, completing them, the installation of  
20 an oil gathering system, a gas gathering system, a gas in-  
21 jection system, a gas lift system, a gas injection well.

22                       On the other hand, in Gavilan the in-  
23 vestment approximates three times that, about \$2000 an acre  
24 for a developed well. This means that in Gavilan they have  
25

1 spent three times as much money as we have in the Unit per  
2 acre. They don't have a gas injection system. They don't  
3 have a gas lift system. They don't have a gas gathering  
4 system. They don't have an oil gathering system. They  
5 don't have a gas injection well.

6                   If we were to expand the unit to take in  
7 developed acreage in Gavilan, under a statutory unitization  
8 it would require recognition of the investment adjustment  
9 and the end result would be that we would have to pay in  
10 some fashion the excessive cost that the Gavilan operators  
11 have spent in over-developing Gavilan. The end result  
12 would be a down-grading of the Unit's economics, and so  
13 we're just not interested in that and I would hope that the  
14 people who oppose this little application, have made a  
15 mountain out of a molehill, would recognize that we're not  
16 trying to worm our way into Gavilan. We don't want in  
17 Gavilan. We don't want the Gavilan wells.

18                   If we can take an undeveloped tract like  
19 this and bring it in and protect the Unit and increase the  
20 Unit's otherwise ultimate recovery and do it on a basis  
21 that's economically feasible for those in the expanded  
22 area and to the Unit, makes infinitely good sense.

23                   Q           But to bring in developed portions of  
24 Gavilan would be imprudent from an economic point of view?

25                   A           Oh, yes. We -- we just -- the only way

1 that the developed portions of Gavilan could come into the  
2 Unit, and there are -- there are virtues still of unitiza-  
3 tion in Gavilan, it's unfortunate we didn't do it earlier,  
4 but there are things that can be accomplished in Gavilan.  
5 Right now they have -- a lot of wells are on -- when you  
6 move to gas lift from pumping units, you could get the same  
7 benefit by gas injection, but that could only be accom-  
8 plished on a voluntary basis, a negotiated basis in which  
9 the Gavilan owners would recognize that they --

10 MR. PEARCE: Excuse me, may I  
11 -- may I interrupt the witness, please, and object to that?  
12 I have been squashed several times in this hearing. Dis-  
13 cussion of the values of unitizing the Gavilan really un-  
14 necessarily extend this record and delay the proceedings.

15 MR. CARR: Mr. Stogner, we're  
16 attempting to simply respond to what was addressed, I  
17 think, as paranoia on the other side yesterday, by Mr.  
18 Lopez, and if at this point in time their fears are allayed  
19 or they don't want to hear, we're prepared to go to Exhibit  
20 One.

21 Q Mr. Greer, would you refer to Exhibit  
22 One, please?

23 A Yes, sir.

24 Q And would you identify what is contained  
25 behind the first tab in this exhibit?

1           A           This is an orientation plat. It shows  
2 the West Puerto Chiquito Pool, the Canada Ojitos Unit  
3 within the pool. It shows the East Puerto Chiquito Mancos  
4 Pool and in the center on the left boundary is the proposed  
5 expansion area outlined in red.

6           Q           This is just a general orientation plat.

7           A           Yes, sir.

8           Q           All right, let's go to Exhibit Number --  
9 the exhibit contained behind Tab B and I'd ask you to  
10 identify this and explain how this differs from the  
11 preceding plat?

12          A           This is an Exhibit A to the unit agree-  
13 ment. It shows the lands by classification, Federal, State  
14 and patented lands, and tract numbers within the Unit.

15          Q           And the area, with the exception of that  
16 tract outlined in red, is what has previously been unitized  
17 by the Oil Conservation Division.

18          A           Yes, sir.

19          Q           All right, let's --

20          A           A statutory unit.

21          Q           Let's go to Tab C, and I'd ask you first  
22 of all to identify the formations that you propose to unit-  
23 ize with this application.

24          A           We propose to unitize the West Puerto  
25 Chiquito Mancos Reservoir. As defined by the Commission

1 it's the Niobrara member of the Mancos and it's identified  
2 on this electric log.

3 Q And so this is basically a type log that  
4 will identify the formation that we're talking about.

5 A Yes, sir.

6 Q Has the portion of the reservoir which  
7 you propose to unitize been reasonable defined by develop-  
8 ment?

9 A Yes, sir.

10 Q All right. Let's go to Tab C, or I'm  
11 sorry, Tab D, and I'd ask you to identify the document con-  
12 tained behind that tab.

13 A This is a copy of the unit agreement  
14 covering the unit area and is the same unit agreement which  
15 was adopted and approved by the statutory unitization two  
16 years ago.

17 Q Now what are the yellow sheets that are  
18 contained behind this tab?

19 A The yellow sheets are amendments to the  
20 basic unit agreement developed in 1969.

21 Q Is this a basically standard form unit  
22 agreement?

23 A Yes, sir.

24 Q Does it provide for pressure maintenance  
25 operations in the unit area?

1           A           Yes, sir.

2           Q           And are presently -- are pressure main-  
3           tenance operations presently being conducted in this unit?

4           A           Yes, sir.

5           Q           All right, let's go to exhibit -- the  
6           document behind Tab E and I'd ask you to please identify  
7           that.

8           A           This is a copy of the unit operating  
9           agreement.

10          Q           Does this outline the supervision and  
11          management of the unit?

12          A           Yes, sir.

13          Q           And defines the rights and the duties of  
14          the respective parties to the unit -- in this unit?

15          A           Yes, sir.

16          Q           Are the voting procedures for taking  
17          unit action defined in the operating agreement?

18          A           Yes, sir.

19          Q           And what are those procedures?

20          A           Generally the 65 percent requirement of  
21          working interest owners to approve expenditure of unit  
22          funds; 75 percent requirement for pressure maintenance.

23          Q           Does the operating agreement also have  
24          attached to it accounting provisions which are followed in  
25          conducting unit operations?

1           A           Yes, sir, and the basic provision are a  
2 300 percent nonconsent provision for nonconsent commitment  
3 to unit operations. That's the way the Oil Division looks  
4 at penalties. That's 100 percent of cost plus 200 percent  
5 penalty. Except for investment adjustment the provision is  
6 150 percent, which is 100 percent of cost plus a 50 percent  
7 penalty.

8           Q           If the application for the Division to-  
9 day is approved, will unit operations in the present unit  
10 area and the expansion area be conducted under the unit  
11 agreement and the unit operating agreement that you've just  
12 identified?

13          A           That's our recommendation.

14          Q           Would you identify the table contained  
15 behind Tab F in Exhibit One?

16          A           This is just a simple schedule of the  
17 working interest and expense interest currently in the  
18 unit.

19          Q           Does this indicate how investments and  
20 costs are to be shared?

21          A           Yes, sir.

22          Q           Now, if we'll go to the information be-  
23 hind Tab G, first I'd ask you to identify what this indi-  
24 cates.

25          A           This shows the unit is divided into two

1 parts. We call sometimes the 12th expanded participating  
2 area and then the rest of the 3rd expanded area and I will  
3 sometimes refer to it as the 2nd expansion area covering  
4 most of the land. The land on the west is defined as the  
5 3rd expansion area.

6 The Department of the Interior has asked  
7 that we keep these two areas separate and we have under an  
8 order from the Department of Energy to keep production  
9 separate from the two areas.

10 Q Could you just generally explain the  
11 basis for the participation formula for the owners in the  
12 unit?

13 A Yes, sir. The participation essen-  
14 tially, a weighting factor of 1 for all lands except the  
15 gas cap area, which has a weighting factor of approximately  
16 1/6th. And the gas cap area all lies within the 2nd expan-  
17 sion area and this is the reason for the difference in the  
18 gross acres, as was earlier discussed this morning, of  
19 about 60-or-70,000, maybe 70,000 acres and a weighted  
20 acreage of 51,000 acres.

21 So in bringing the new tract in, it will  
22 have a weighting factor of 1 for each acre of the 320 acres  
23 and that will be weighted against the 51,000 acres in the  
24 unit now, approximately 51,000. The new expanded area  
25 would be approximately 51,550 acres. The 320 acres would

1 represent approximately .6207 percent of the expanded area.

2 Q Mr. Greer, in your opinion does this  
3 formula allocate production to the separately owned tracts  
4 in the unit, including the expansion area if this appli-  
5 cation is granted on a fair, reasonable and equitable  
6 basis?

7 A Yes.

8 Q Let's go to Tab H in Exhibit One and  
9 would you please identify the pink sheets contained behind  
10 that tab?

11 A This is simply an Exhibit C to the unit  
12 agreement for the 3rd expansion area lands which identified  
13 the different tracts and the ownership of the different  
14 tracts.

15 Q And this shows not only the working in-  
16 terest but the nonpaying interest owners overriding royalty  
17 as well as base royalty.

18 A Yes, sir.

19 Q All right, now let's go to Tab I and  
20 look at and identify what's contained behind behind that  
21 tab.

22 A Tab I shows the same thing for the  
23 second expansion area.

24 Q What efforts have been made to obtain  
25 voluntary joinder or commitment to the proposed new statu-

1 tory unit area, including the east half of Section 12?

2 A Sun has approached the owners in the  
3 east half of Section 12. We have also approached the  
4 owners in the east half of Section 12, and also contacted  
5 the unit owners.

6 Q Is what has been marked as Benson-  
7 Montin-Greer Exhibit Number Two a copy of communications  
8 between Benson-Montin-Greer and Sun to other interest own-  
9 ers concerning their voluntary participation in this pro-  
10 posed expansion?

11 A Yes, sir.

12 Q Do you believe that a reasonable effort  
13 has been made to obtain voluntary commitment?

14 A Yes, sir, we've had a good response.

15 Q And what response have you received?

16 A To date from the unit owners we've had  
17 89 percent approved the expansion; 10 percent have not yet  
18 answered; and we have 1 percent negative.

19 Q What about in the east half of Section  
20 12?

21 A In the east half of Section 12 we have  
22 81.25 percent have so far approved it; 6.25 percent, no re-  
23 sponse; and 12-1/2 percent, negative.

24 Q If the application is granted the rela-  
25 tionships between all those interest owners in the current

1 unit will remain unchanged. Isn't that correct?

2 A Yes, sir.

3 Q And that the east half of Section 12  
4 will be treated as a separate and independent tract.

5 A Yes, sir.

6 Q All right, let's go to the information  
7 behind Tab J and I'd ask you first to identify the plat on  
8 the gold sheet of paper.

9 A This is a sketch of the east half of  
10 Section 12 which we divided into three tracts, being the  
11 difference of the three existing Federal leases covering  
12 the east side.

13 Q All right, let's go to the next page and  
14 I'd ask you to review that, please.

15 A This shows the ownership of those tracts  
16 as they were identified 1, 2 and 3 on the previous plat.

17 Q And these are the tracts that will be  
18 subject to the -- the unitization proposed here today.

19 A Yes, sir.

20 Q Now if you'd refer to the plat behind  
21 Tab K in Exhibit Number One, I'd ask you to identify this  
22 and review it for the Examiner.

23 A This is simply a structure contour map  
24 which we wanted to show simply to locate the expansion land  
25 as being on the down dip or recovery side. We have

1 recovery wells in the western two tiers of sections and  
2 this -- this tract is well located in the recovery area for  
3 unit operations.

4 Q Mr. Greer, would you now turn to the  
5 pages behind Exhibit L, or Tab L, and first going to the  
6 two white sheets identify what they are.

7 A This shows the frac pulse test which was  
8 conducted in the area of the expansion lands. The expan-  
9 sion lands are shown on the plat outlined in red.

10 From the frac pulse test we determined a  
11 pore volume of about 1500 barrels an acre, a transmis-  
12 sibility, KH over mu of 125, and a KOH permeability to oil  
13 of 50 darcy feet. KH over mu is 125 darcy feet.

14 High -- high permeability, rather low  
15 hydrocarbon pore volume.

16 Q All right, anything else on those?

17 A No.

18 Q What is the graph that follows those?

19 A The graph that follows is simply a match  
20 of information by which we obtained the following -- the  
21 statistics for pore volume.

22 Q And have these exhibits been previously  
23 submitted to the Division?

24 A Yes, sir, these are just copies of ex-  
25 hibits presenting information in the hearing in March of

1 '88.

2 Q And these are the exhibits that relate  
3 to the area in close proximity to the east half of Section  
4 12?

5 A Yes, sir, these help us to analyze the  
6 reservoir characteristics of this area and (unclear).

7 Q All right, let's look at the documents  
8 behind Tab M and I'd ask you to explain those, please.

9 A This shows another frac pulse test and  
10 the are colored shows the approximate are of our informa-  
11 tion covered by the test.

12 Here again we get approximately 1500  
13 stock tank barrels an acre; transmissibility 50 to 80 darcy  
14 feet; KOH transmissibility or permeability to oil, 12 darcy  
15 feet.

16 Again, for a larger area still, high  
17 permeability, small volume of oil in place.

18 Q And behind that again we have a graph  
19 which is the supporting information for the prior pages?

20 A Yes, sir.

21 Q Let's go to the information behind Tab N  
22 in this exhibit.

23 A This is a multiple well interference  
24 test conducted at the time the Oil Conservation Commission  
25 ordered the shut-in pressures of the Gavilan and West

1 Puerto Chiquito Pools in November, 1987. The expansion  
2 area again is outlined in red and this again was presented  
3 to the Commission in June, 1988.

4 Now the overall average here we show  
5 approximately 1000 barrels an acre; KH over mu, 55 darcy  
6 feet; and the permeability to oil ranges from 2 to 16 darcy  
7 feet. At this time the gas/oil ratios were higher than for  
8 the other test, the permeability of oil is a little less,  
9 but still high -- high permeability.

10 Q All right. Are you ready to go to Tab  
11 O?

12 A Yes, sir.

13 Q Would you identify the material contain-  
14 ed on the first two pink sheets behind Tab O?

15 A This is an interference test run between  
16 the wells in Sections 1 and 2 and 12 of Township 25 North,  
17 2 West, and the observation well identified as our Canada  
18 Ojitos Unit E-6 in Section 6.

19 The two wells to the north, the Dugan  
20 Tapacitos 4 and the Unit N-31 Well have shut-in at this  
21 time, so all of the information at this time in this area  
22 was from just these wells.

23 This test was also reported to the Com-  
24 mission in June of '88. Here we show 1700 barrels an acre;  
25 KH over mu is 35 darcy feet, and permeability of the oil,

1 10 darcy feet.

2 Q And behind that you have a curve. What  
3 does that curve show?

4 A And this curve is simply the math by  
5 which we determined the information we just discussed  
6 (unclear).

7 Q And do you want to summarize that infor-  
8 mation?

9 A I think we should just summarize these  
10 last interference tests and frac pulse tests.

11 Mr. Examiner, what this shows generally  
12 is an oil in place volume in a range of 1500 to perhaps  
13 2000 barrels an acre; high transmissibility; good communi-  
14 cation throughout this area, and from this, as we had  
15 earlier analyzed, once the migration from outside areas are  
16 cut off, the wells will rapidly decline in productivity and  
17 rapidly deplete, and that's what we have seen in this area  
18 with the exception of the wells receiving pressure mainten-  
19 ance support.

20 Q All right, Mr. Greer, let's now go to  
21 the gray sheets behind Tab P. Would you explain what the  
22 plat is that has the large -- the area inside the large  
23 green plot?

24 A Yes, sir, this is a 24-section area.  
25 The 12 sections east of the boundary between West Puerto

1 Chiquito and Gavilan and the 12 sections on the other side.

2           Outlined in red is the proposed expansion  
3 area. The plot at the bottom that shows production  
4 rate are the averages for these tiers. I've taken as 1-1/2  
5 mile distance, a negative 1-1/2 mile distance from the unit  
6 boundary as being the tier which runs south from Section 5  
7 through Section 32.

8           The next tier is Section 6 through 31 is  
9 shown on this plot as being a -1/2 mile from the unit  
10 boundary.

11           On the other side, the same thing, dis-  
12 tances from the unit boundary.

13           The X's show the overall average of  
14 barrels per well for a 640-acre section.

15           The circles show the average barrels per  
16 day per well, and in making this analysis I've taken all  
17 the wells both shut-in and whatever to develop this plot.

18           Then it's clear from this how the move-  
19 ment from the pressure maintenance project across the  
20 recovery area, the volume of oil decreases. The first row  
21 of defense, in a sense, that the unit has to migration away  
22 from the pressure maintenance project are these wells I  
23 show a negative 1/2 mile from the unit boundary.

24           The second and last row of defense are  
25 those right next to the unit boundary and even though I've

1 taken as an average, and of course the wells vary within  
2 each tier, the averages, nevertheless, are fairly consis-  
3 tent, but I've taken a row of wells across the top and we  
4 can see how this relation exists even down to the two wells  
5 that are only 800 feet from the boundary, the E-6 on the  
6 one side and the Howard 1-8 on the other side.

7                   Mr. Examiner, all of the wells in cen-  
8 tral Gavilan now, and I refer to central Gavilan as being  
9 essentially that part of the Gavilan except Bear Canyon to  
10 the north and the really small wells to the south are --  
11 are essentially oil depleted. At the time that this infor-  
12 mation was developed was during the period of unrestricted  
13 production which the Commission ordered in the winter of  
14 '88-'89 and at that time there were two wells in central  
15 Gavilan on the down dip side receiving, apparently, gravity  
16 drainage and producing half of the oil of all of central  
17 Gavilan. When those two wells are eliminated, there is  
18 left 59 wells averaging 9.4 barrels per day per well,  
19 stripper production.

20                   The wells shown on the east side of the  
21 boundary that still have decent production rates, are in  
22 very close communication, as was shown by all of the tests  
23 the Commission had conducted in 1987 in the high allowable  
24 period and the shut-in and pressure tests. There's no  
25 reason for these wells on the east side of the boundary to

1 be any different from the 10 barrels a day on the Gavilan  
2 side except they're getting pressure maintenance support.

3 And so this is our concern, how --

4 Q Now, Mr. Greer, looking at that and the  
5 producing rates on the east side of this boundary, and also  
6 producing rates on the west and the information that you've  
7 plotted on the graph below the plat, could you explain to  
8 the Commission whether or not you believe there will be  
9 greater recovery to the Unit if in fact this tract is in-  
10 cluded.

11 A Oh, yes, sir, there will be an increased  
12 recovery to the Unit if this tract is brought in as com-  
13 pared to if it is not brought in.

14 Q And why is that?

15 A Well, there'll be a well drilled on Sec-  
16 tion 12 and although, as the earlier witnesses indicated,  
17 the Unit will probably have to drill a well to meet that.  
18 There's still no assurance that we can stop the drainage.  
19 It would be just like, if we look at this plat, the E-6 and  
20 the Howard 1-8, the E-6, although it directly offsets the  
21 Howard 1-8, cannot by itself completely stop the drainage.  
22 This is a typical drainage problem in which it takes from  
23 two to three rows of wells to stop migration to an offset  
24 tract.

25 And so whatever that well will make in

1 Section 12, and even if we offset it, there's going to be  
2 drainage from the Unit and there's going to be loss of oil  
3 not recovered.

4 Q Mr. Greer, in your opinion are either of  
5 those wells necessary to produce the reserves in the field?

6 A Oh, no, sir.

7 Q Have you -- are you able to quantify in  
8 any way the additional oil that could be recovered in the  
9 Unit as a result of including the east half of Section 12?

10 A Well, it's hard to put an exact figure  
11 to it. I think Richard Dillon properly analyzed it when he  
12 said that a reasonable estimate would be 18,000 barrels  
13 that that well -- that a well drilled there would produce  
14 assuming it's going to get about 17,000 of that 18,000 by  
15 drainage from the Unit.

16 But that's assuming, that's assuming  
17 that we're going to drill an offset well to -- to protect  
18 as best we can and whether we drill that offset well is  
19 going to depend on a number of things. If the well drilled  
20 in Section 12 does not produce enough oil such that an off-  
21 set well and the amount of migration that the offset well  
22 could induce, unless that amount that we can benefit by  
23 intercepting the oil to the new well is greater than the  
24 cost of the well, \$750,000, then -- then we don't -- we're  
25 not justified in drilling it, and so then the offset well

1 could produce more than 18,000 barrels from the Unit. It's  
2 -- it's hard to tell, but it could be significant, and the  
3 only -- the only protection the Unit has of there being a  
4 well drilled there is for that land to be in the Unit.

5 Q So is it your testimony that if this  
6 land is included there will be substantial additional pro-  
7 duction to the Unit?

8 A Yes, sir.

9 Q And this can be done without the drill-  
10 ing of unnecessary wells?

11 A Yes, sir.

12 Q Now let me ask you some general ques-  
13 tions concerning a statutory unitization application as it  
14 relates to this particular 320-acre tract.

15 Mr. Greer, in your opinion will approval  
16 of this application assure the pressure maintenance opera-  
17 tions can be continued without having to drill unnecessary  
18 wells in this area?

19 A Yes.

20 Q And that's what you have just previously  
21 reviewed?

22 A Yes, sir.

23 Q Do you believe that inclusion of this  
24 320-acre tract is necessary if you're going to carry on  
25 efficiently and effectively the pressure maintenance oper-

1 ations that you have been conducting in the Canada Ojitos  
2 Unit?

3 A Yes, sir, in addition to what we men-  
4 tioned about the oil production, a well there will produce  
5 substantial volumes of gas and it's particularly the gas  
6 production that lowers the pressure and reduces the effi-  
7 ciency of the pressure maintenance operation, and so an-  
8 other well there will exacerbate the problem that we have  
9 in trying to maintain pressure in this area.

10 Q Will the Unit incur additional costs if  
11 the application is granted?

12 A No, sir.

13 Q So the benefits that will be derived do  
14 not have to be measured against any additional expense.

15 A That's correct.

16 Q Are unitized methods in this area  
17 feasible?

18 A Oh, yes, sir.

19 Q You've proven that, have you not?

20 A Yes, sir.

21 Q Will increased efficiency in terms of  
22 your operations of the pressure maintenance project in your  
23 opinion result from the granting of this application?

24 A Yes, sir.

25 Q And will this efficiency result in

1 greater recovery of oil?

2 A Yes, sir.

3 Q Will approval of this application and  
4 continued pressure maintenance operations in the expanded  
5 unit area benefit the working interest owners and the  
6 royalty interest owners in both the existing unit and in  
7 the expansion area?

8 A Yes, sir.

9 Q And do you believe that continued unit-  
10 ized management and expansion of the area as you propose is  
11 necessary if you are going to effectively carry on second-  
12 ary recovery operations?

13 A Yes, sir.

14 Q And you've explained how that is pre-  
15 viously.

16 Would granting this application, in your  
17 opinion, prevent waste?

18 A Yes, sir.

19 Q And how is that?

20 A It's going to eliminate the drilling of  
21 at least one well, probably two. The production on the  
22 Gavilan side of this area has been primarily by solution  
23 gas drive and some inadvertent help of gravity drainage,  
24 and any oil that moves out of our gravity drainage pressure  
25 maintenance recovery area is looking to be recovered by

1 solution gas drive and it will be less efficient.

2 Q So you'll have a more efficient recovery  
3 operation?

4 A Yes, sir, in round numbers we are re-  
5 covering about four times as much of the initial oil in  
6 place in Canada Ojitos as is recovered in Gavilan.

7 Q Will granting this application protect  
8 the correlative rights of the working interest and the  
9 royalty interest owners in the present unit area and in the  
10 east half of Section 12?

11 A Yes, sir.

12 Q If this acreage is included in the Unit  
13 will the royalty interest owners in the east half of 12  
14 start sharing in the production from the area?

15 A Yes, sir.

16 Q Does Benson-Montin-Greer Drilling Cor-  
17 poration seek the imposition of a penalty against any owner  
18 who doesn't -- who is statutorily unitized and then who  
19 does not carry his share of Unit expense?

20 A The unit agreement provides for those  
21 who do not pay, that they are nonconsent participants and  
22 in this instance they would have a 50 percent penalty, that  
23 is 150 percent recovery of costs.

24 Q And you would expect that within the ex-  
25 pansion area they would be governed by the same provisions?

1           A           Yes, sir.

2           Q           Has notice of this application been  
3 given to all interest owners within the present unit and  
4 also in the expansion area?

5           A           Yes, sir.

6           Q           Is what has been marked as Benson-  
7 Montin-Greer Exhibit Number Three an affidavit stating that  
8 such notice has been provided?

9           A           Yes, sir.

10                           MR. CARR; Mr. Stogner, in ad-  
11 dition to Exhibit Number Three and I haven't made copies,  
12 although Mr. Pearce may want a set, of notice certifica-  
13 tion and I'd like to give this set to you as part of our  
14 Exhibit Number Three. These are the return receipts and  
15 since there are over 200 of them we didn't make additional  
16 copies.

17           Q           Mr. Greer, were Exhibits One through  
18 Three either prepared by you or compiled under your  
19 direction and supervision?

20           A           Yes, sir.

21           Q           Can you testify to the accuracy of these  
22 exhibits?

23           A           Yes, sir.

24                           MR. CARR: At this time we  
25 would move the admission of Benson-Montin-Greer Exhibits

1 One through Three.

2 MR. STOGNER: Are there any  
3 objections?

4 MR. PEARCE: I have a contin-  
5 uing objection, Mr. Examiner.

6 MR. STOGNER: So noted. Ex-  
7 hibits One through Three will be admitted into evidence.

8 Q Mr. Greer, does Benson-Montin-Greer re-  
9 quest that the Division expedite this order?

10 A Yes, sir, we would appreciate it if the  
11 Division could get an early answer on the application be-  
12 cause of the expiring lease date.

13 MR. CARR: Mr. Examiner, I  
14 would also at this time like to just offer into evidence  
15 two letters which we received in response to our mailing.  
16 One is from a Ted Findeiss, I believe it is, F-I-N-D-E-  
17 I-S-S, who is an attorney and also an interest owner in the  
18 Unit, and another one from Louise Wamel, W-A-M-E-L, Heston  
19 Ellis.

20 The reason I'm offering these  
21 is they were directed to me and each of these individuals  
22 expressed an interest that they be a party of record. I  
23 think they probably should have come to you but since the  
24 request has come to me I think it's appropriate that we  
25 include them in the record of the case. And they've been

1 marked Benson-Montin-Greer Exhibits Four and Five and I  
2 move their admission at this time.

3 MR. STOGNER: Are there any  
4 objections other than so noted?

5 Exhibits Four and Five will be  
6 admitted into the record.

7 MR. CARR: That concludes my  
8 direct examination of of Mr. Greer.

9 MR. STOGNER: Thank you, Mr.  
10 Carr.

11 Mr. Kellahin:

12 MR. KELLAHIN: No questions,  
13 Mr. Examiner.

14 MR. STOGNER: Mr. Pearce?

15

16 CROSS EXAMINATION

17 BY MR. PEARCE:

18 Q Mr. Greer, were you in the room when Mr.  
19 Dillon testified earlier in the day?

20 A Yes, sir.

21 Q And were you present when he expressed  
22 the opinion that a well in the east half of Section 12  
23 would perform more like the Johnson Well than the well in  
24 the Unit?

25 A Yes, sir.

- 1 Q Do you agree with that analysis?
- 2 A Yes, sir, absent the drainage from the  
3 Unit that's what would be expected.
- 4 Q All right, sir. I'm going to hand you  
5 what was marked as Exhibit Number Eighteen.
- 6 A I have a copy of that.
- 7 Q All right, thank you, sir. Mr. Dillon's  
8 presentation. That shows total expected oil recovery from  
9 a well if it were drilled in the east half of Section 12  
10 would be 1201 stock tank barrels. Do you see that?
- 11 A Yes, sir.
- 12 Q Do you agree with that estimate?
- 13 A Yes, sir.
- 14 Q Do you know, Mr. Greer, if this 320-acre  
15 tract is put into the Unit the total amount of production  
16 in the future that is going to be allocated to this Unit in  
17 barrels of oil from Unit production?
- 18 MR. CARR: Do you mean the ex-  
19 pansion area?
- 20 Q I apologize, the 320-acre expansion area  
21 holding a .627, is that what you said? How many barrels of  
22 oil will that result in being attributed to this acreage?
- 23 A It will be .627 percent of all the  
24 future production.
- 25 Q And what do you expect the future pro-

1 duction to be, that was my question?

2 A Well, that depends a lot on how the --  
3 efficiently we can carry on our pressure maintenance pro-  
4 ject and I can explain, you know, the pros and cons to  
5 that. The higher we maintain the pressure in the Unit the  
6 more effective the pressure maintenance project. The  
7 higher we maintain the pressure in the gas cap area, the  
8 more oil is pushed in the direction of the boundary and the  
9 more difficult to hold.

10 Q Do you have an estimate, a range of  
11 values that you would expect at this time?

12 A I wouldn't be surprised if we produce  
13 another 10-million barrels.

14 Q Am I correct that .6 percent of  
15 10-million barrels is 60,000 barrels or 60 --

16 A 60,000 barrels I imagine.

17 Q 60,000 barrels.

18 A Uh-huh.

19 Q So by putting this 320-acre tract into  
20 the Unit it's going to be allocated \$60,000 -- 60,000 bar-  
21 rels of oil production --

22 A Yes, sir.

23 Q -- versus the 1200 barrels that you  
24 would expect a well on the 320 to recover?

25 A Yes, sir.

1 Q Okay, thank you.

2 A While we're paused here could I note  
3 that our direct presentation took 33 minutes.

4 MR. STOGNER: I'm sorry, what  
5 was that?

6 MR. CARR: Our direct pre-  
7 sentation took 33 minutes.

8 MR. STOGNER: Nobody (not  
9 clearly understood.)

10 Q In your Exhibit Number One, Mr. Greer,  
11 behind Tab P, as in papa --

12 A Yes, sir.

13 Q Two gray sheets. Looking at the second  
14 gray sheet, the graphical presentation data, --

15 A Yes, sir.

16 Q -- is the Johnson Federal 12-5 reflected  
17 on that exhibit?

18 A I think it's due south of the -- well,  
19 it would lie between the Howard 1-11 and the Ribeyowids  
20 2-16 if we took a line south from -- north from the  
21 Johnson Well.

22 Q And if you were to plot that well's rate  
23 of production, where would you put that point?

24 A About like where the 2-16 is, (unclear).

25 Q About halfway between the 1-11 and the

1 2-16, if we'd have plotted the 12-5, we'd have another  
2 circle right down on the line?

3 A Pretty close to the --

4 Q Representing the 1-5 barrel.

5 A Well, yeah, 2 or 3 or 4, or something  
6 like that.

7 Q Okay. And if we were to plot the --  
8 well, let me ask the question first. Is the F-7 Unit 38  
9 Well represented on this graph?

10 A Yes, sir, it's one of the wells that  
11 form the X and the O at the distance shown as -1/2 mile  
12 from the boundary. It's one of the wells in that --

13 Q I'm sorry, those, the X and the O there  
14 are unit averages?

15 A Yes, those are averages.

16 Q And if you plotted that well by itself,  
17 where would it appear?

18 A It would appear just below the E-6. I  
19 believe it's currently making 80 barrels a day.

20 Q So looking at this scale it is slightly  
21 to the east of the E-6 so it would be --

22 A Slightly.

23 Q -- to the right of the E-6 and would be  
24 slightly lower than the E-6 well circle?

25 A Yes, sir.

1 Q Or on a line with that. I don't know  
2 what the E-6 rate is. Is it about 80 barrels, also?

3 A It's about 100.

4 Q Okay, so it's slightly below that.  
5 Thank you, sir.

6 Mr. Greer, during your examination by  
7 Mr. Carr he approached the area of increased recovery on a  
8 couple of occasions and I want to go back and visit that  
9 subject with you.

10 A Okay.

11 Q How will adding this 320-acre tract to  
12 the Unit increase the ultimate recovery of reserves? Would  
13 you explain that to me?

14 A Yes, sir. If it's not added to the Unit  
15 there will be a well drilled there and the Unit will lose  
16 reserves.

17 Q Okay. Has someone told you or submit-  
18 ted an AFE to you indicating that they're going to drill  
19 the east half of Section 12?

20 A No, Mr. Pearce, I can -- I can say that  
21 I know how the people in the industry operate and if you  
22 would be interested in why I think that, I can tell you.

23 Q Well, before we broach that, sir, I  
24 asked you earlier if you agreed with Mr. Dillon's analysis  
25 that a well drilled in the east half would recover about

1 1200 barrels of oil.

2           A           Oh, yes, sir. Yes, sir, and Mr. Dillon,  
3 to clear that point, Mr. Dillon and Mr. Roe are quite fami-  
4 liar with the reservoir mechanics in this area and they  
5 understand what is probably -- would be the probable re-  
6 covery from a well drilled there. They recognize the  
7 potential for drainage and what that might amount to but  
8 that's not the point. That's not why a well would be  
9 drilled there.

10                       When Bill Weiss last year did his work  
11 for the Commission he made a statement which was really the  
12 understatement of the year. He said that this formation  
13 was poorly understood. It's poorly understood even by  
14 operators that drill the wells. Some of the operators have  
15 thought that their wells have been damaged and they have  
16 gone to expensive remedial work to try to increase the pro-  
17 duction from them. The only thing that's happened, they've  
18 run out of oil, just as we had forecast, this was to be ex-  
19 ed, but not everyone understands that.

20           Q           Okay. Let me see if I can summarize.  
21 You believe that there are people who do not understand  
22 this reservoir the way Mr. Roe and Mr. Dillon do and  
23 therefore they would spend the \$750,000 and drill the well?

24           A           No question about it.

25           Q           All right, and as I understand it, what

1 you're suggesting to us is that you fully expect that if  
2 they spend that \$750,000 and get a well that they -- they  
3 will get a well that produces about 1200 barrels total, is  
4 that --

5           A           Well, they're going to get a well that  
6 will produce 1200 barrels from its 320-acre tract, but it  
7 probably will produce substantially more than that because  
8 of drainage from the Unit and the amount of additional  
9 drainage depends on effective a protective well would be  
10 and if we drill a protective well. But there'll be a well  
11 drilled.

12           Q           I'm sorry, perhaps I didn't understand  
13 the basis that we were discussing the economics with Mr.  
14 Dillon. You're suggesting that the economics of the Conti-  
15 nental Divide No. 1 Well are not the economics reflected on  
16 Exhibit Number Eighteen.

17           A           No, I think Mr. Dillon explained it  
18 quite clearly. There's a contribution from the 320-acre  
19 tract and that's about 1000 barrels and -- but there's also  
20 a good possibility that the well is going to drain oil from  
21 the Unit and the amount that it drains one can only esti-  
22 mate. We can estimate an average by taking the four wells  
23 and that assumes a protective well will be drilled, and so  
24 it's -- it's hard to tell exactly what would happen, but  
25 his analyses are reasonable and rational analyses for the

1 -- for this situation.

2 Q Were you present in the room when I  
3 asked Mr. Dillon specifically if he believed that a well  
4 drilled in the east half of 12 would perform more like his  
5 Exhibit Number Eighteen example than the Number Nineteen  
6 example you've just referred to?

7 A Yes, sir, and he's assuming that --

8 Q I'm sorry, you were present.

9 A Yes, sir, I was present.

10 Q And you heard him respond that in his  
11 opinion that well would perform more like the well reflect-  
12 ed on Exhibit Eighteen than the well reflected on Exhibit  
13 Nineteen.

14 A Yes, sir.

15 Q And now do I understand that you dis-  
16 agree with that analysis of Mr. Dillon's?

17 A No, sir. Mr. Dillon is assuming we're  
18 going to drill a real good protective well and stop that  
19 migration. I hope he's right if it comes to that. I sure  
20 hope it won't have to come to that.

21 Q And do I understand, Mr. Greer, your  
22 position on Mr. Dillon's testimony is that Exhibit Eighteen  
23 reflects what the well would produce if a protection well  
24 were drilled in the Unit and Exhibit Nineteen reflects what  
25 it would produce if a protection well were not drilled in

1 the Unit.

2           A           The protection well is assumed in both  
3 instances. In one instance it's more effective than the  
4 other. It's just that simple.

5                       We've looked at this plat which we were  
6 just referred to of a protective well, the E-6, and the  
7 Howard 1-8. The E-6 can stop a good part of the production  
8 but not all of it.

9                       Now, the location of the well in Sec-  
10 tion 12 cannot be as close to the boundary as the Howard  
11 1-8. It would have to be 1650 feet or twice as far away.  
12 So that makes that well, unless they can get an unorthodox  
13 location approved and crowd our boundary, which we hope  
14 they couldn't, then that puts it back farther away and that  
15 gives us a better chance to protect from drainage, so these  
16 are -- these are not things that can be determined exactly  
17 but his drainage was 18,000 and that's a reasonable number.

18           Q           All right, sir, let's go back to -- to  
19 the question again about ultimate recovery.

20           A           Okay.

21           Q           I think Mr. Dillon was indicating to me,  
22 and I think you've indicated that you agree with Mr.  
23 Dillon, that there are approximately 1200 barrels of oil  
24 recoverable in the east half of Section 12.

25           A           That the east half would contribute on

1 its own, yes, sir.

2 Q And your position on the increase in  
3 ultimate recovery by adding this 320-acres to the Unit  
4 depends on what?

5 A The well --

6 Q Tell me again, please.

7 A The well drilled there is going to drain  
8 Unit pressure maintenance generated oil, it's going to  
9 drain it. There's no question about that. The only ques-  
10 tion is how much is it going to drain, and the how much  
11 depends on a number of things and, Mr. Examiner, I might  
12 point out that there's no way that anyone can tell exactly  
13 what a well will produce at any one of these locations.  
14 There's a certain amount of what I call luck of the draw  
15 and if it happens to hit a good crack that's connected  
16 directly to the Unit, then it's going to produce a sub-  
17 stantial amount more than if it's not.

18 The risk that an owner, a knowledgeable  
19 owner on the east half of Section 12, the risk that would  
20 hit a crack that would be so well connected with the pres-  
21 sure maintenance project that they would get a commercial  
22 well is a risk that a prudent operator shouldn't take, a  
23 knowledgeable prudent operator.

24 On the other hand, the risk that that  
25 can happen is a great enough risk from the Unit's perspec-

1 tive that it should not be permitted.

2 Q And the ultimate recovery that you dis-  
3 cussed earlier with Mr. Carr, you were relying upon Mr.  
4 Carr's phraseology that it was the ultimate recovery to the  
5 Unit owners that we were talking about.

6 A Yes, sir, the --

7 Q And is that --

8 MR. CARR: Let him answer.

9 Q I'm sorry.

10 MR. CARR: All right, go  
11 ahead.

12 A The ultimate recovery to the Unit owners  
13 will be greater if this tract is already in the Unit than  
14 if it's not; no question about it.

15 Q If we delete the phrase "to the Unit  
16 owners", will putting this 320-acre tract into the Unit in-  
17 crease the total ultimate oil recovered?

18 A Than the Unit would otherwise receive --

19 Q I'm sorry, sir, I'm asking you to leave  
20 off the Unit part of that, that's what I'm trying to get  
21 at, ultimate recovery of stock tank barrels of oil by some  
22 well --

23 MR. CARR; From the pool, is  
24 that what you mean?

25 Q From what you call a pool and I call two

1 pools.

2 MR. CARR: Well, but what are  
3 you talking about? We'd like to have the question clari-  
4 fied to know -- you're striking a phrase, could you restate  
5 it so we know increased recovery from what.

6 Q All right, sir. You've indicated to me,  
7 Mr. Greer, that you expect the Unit in the future to pro-  
8 duce in the vicinity of 10-million additional barrels of  
9 oil.

10 A I think that's a good possibility.

11 Q Mr. -- I lost the thread -- we had an  
12 estimate of the total remaining recovery from the Johnson  
13 12-5 earlier in this proceeding. Is that Mr. Roe? No, I  
14 apologize, that was Mr. Dillon's Exhibit Number Twelve. He  
15 indicated that he believed the Johnson Well had 1.5 thous-  
16 and barrels of oil remaining.

17 Assume with me for a moment no new wells  
18 are drilled. How will those numbers change if the 320-acre  
19 tract in question is added to the Canada Ojitos Unit?

20 A They would not change. Mallon's produc-  
21 tion would not be affected, either that well or any other.

22 Q How would those -- let's assume, and  
23 tell me if I may assume this, that the 1.5 thousand barrels  
24 of oil is coming from Section 12?

25 A Oh, it's coming from 12 and 11 and the

1 Mallon wells have drained, although there are only six of  
2 them on this 320 acres, they've drained essentially six  
3 sections and -- and so it's hard to tell just exactly where  
4 oil may have come from, and they've drained oil from out-  
5 side those sections.

6 Q Okay, and Mr. Dillon indicated that if a  
7 well were drilled in the east half of Section 12, and as I  
8 understand your understanding, if it were offset by an ef-  
9 fective protection well, that well would produce 1200 bar-  
10 rels. Is that correct?

11 A Yes, sir.

12 Q How much of that 1200 barrels would come  
13 from the remaining reserves presently attributed to the  
14 Johnson 12-5?

15 A Well, as Mr. Dillon indicated, it would  
16 probably take some from all the surrounding wells. You'll  
17 have to realize when we're talking about 1200 barrels  
18 that's not very much from anything, you know, but it would  
19 -- it would have a effect all right, so if a well is  
20 drilled in the east half of 12 it would reduce the produc-  
21 tion from the others.

22 Q Do I gather from that that it's your  
23 position that the present Johnson Well 5 Well is to some  
24 extent taking reserves from the east half?

25 A Oh, yeah, no question about that. It has

1 for all its life.

2 Q Would the Canada Ojitos Unit increase  
3 its recovery by drilling an additional well whether or not  
4 there's a well drilled in the east half of 12, another well  
5 in Section 7?

6 A Say again now?

7 Q If you drill another well in Section 7  
8 do you increase ultimate recovery from the Unit?

9 A Well, it would -- it would help. The  
10 oil that we can see is moving over to the Howard 1-8. It  
11 would have an effect on that, and the issue we have here,  
12 Mr. Examiner, is does the additional amount of oil that  
13 we save by migration equate to the cost of another well.  
14 Without going into a lot of detailed analyses here, my  
15 present thinking is that it would not justify. We just  
16 have to recognize we're losing some oil but also the pres-  
17 sure maintenance project is -- is generating a lot of oil  
18 and we just to balance -- we could blow the gas cap down  
19 now and stop the migration but we would lose a tremendous  
20 amount of oil by doing it; probably 5,000,000 barrels at  
21 least, and so those are the issues we have to balance in  
22 confirming our operation, how it's conducted.

23 Q I think that's all I have. Thank you.

24 MR. STOGNER: Thank you, Mr.  
25 Pearce.

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Mr. Lopez?

MR. LOPEZ: Mr. Examiner, before I begin I'd like to introduce as Mesa Grande's Exhibit Number Two a copy of the dissenting opinion of Mr. Brostuen in Case Nos. 9412, 7890, 8946 and 8950, which directing affect Orders Nos. R-7407-F, which was received as evidence yesterday as Dugan's Exhibit One and Order No. R-6469-F.

MR. CARR; And we object to the admission of this exhibit. It doesn't directly affect the order; it isn't part of it.

If there is some relevance to it our reading of the dissenting opinion, which we did last night, doesn't discuss at all whether or not there's migration in the area that's the subject of this hearing. It talks about whether or not there's a barrier off to the east.

If Mr. Lopez in submitting this is willing to stipulate on the record that they concur that there is nothing that would preclude migration or affect migration in the area between the present unit boundary and the east half of Section 12, then I would withdraw my objection, for that's what that dissenting opinion also recognizes.

MR. STOGNER: Mr. Lopez, this

1 is exactly what it is, a dissenting opinion. As I said  
2 yesterday, I will not accept this into evidence, any part  
3 of that case. I will accept the order but not any part of  
4 the case, and I will not accept it as evidence in this  
5 case.

6 MR. PEARCE: May I ask a  
7 question?

8 I apologize, Mr. Examiner, may  
9 I ask a qualifying question?

10 Does that mean that it is the  
11 Division's opinion that when members of the Oil Conserva-  
12 tion Commission file dissenting opinions that they are not  
13 part of the order, is that --

14 MR. STOGNER: They are not  
15 part of the order.

16 MR. PEARCE: -- correct?

17 MR. STOGNER: That is my opin-  
18 ion.

19 MR. PEARCE: Thank you. I  
20 just wanted to (unclear).

21 MR. STOGNER: Mr. Lopez?

22 MR. LOPEZ: Well, Mr. Exa-  
23 miner, in light of your ruling I would like to express my  
24 legal disagreement that a dissenting opinion is not a part  
25 of the judgment or order. It is in other judicial bodies

1 with which I am familiar, but I would also like to express  
2 my dismay at being precluded from asking questions that  
3 seem to be directly relevant and pertinent to these pro-  
4 ceedings since the way I view Mr. Greer's testimony today  
5 is that in bulk it has been directed to the fact that the  
6 pressure maintenance project that he is conducting on the  
7 east side of the permeability barrier is directly affecting  
8 the two tiers of sections to the west of it, or the two  
9 tiers of sections that lie directly east of the present  
10 Gavilan Mancos Pool boundary, as well as other areas with-  
11 in the Gavilan Pool, and since the dissenting opinion, as  
12 well as, I think, the evidence goes to whether or not those  
13 pressures have any direct or relevant effect is material,  
14 although I've been precluded from inquiring into those  
15 issues. At least for the record I would like to express my  
16 objection again to the Examiner's ruling and reassert the  
17 statement that I made at the end of my letter that's in  
18 evidence in this case that was introduced into the record  
19 which would suggest that perhaps ironically if we were to  
20 review a year later the relevant data we would find that  
21 indeed the permeability barrier has been made more evident  
22 with the passing of time.

23 MR. STOGNER: Your objection  
24 and dismay of my judgment is so noted on the record, Mr.  
25 Lopez.

1 MR. LUND: Just for the re-  
2 cord, if I may add, I'd like to state for Amoco that we  
3 think the dissenting opinion should be part of the order  
4 and should be considered by the Examiner.

5 Thank you.

6 MR. STOGNER: That's so noted.  
7

8 CROSS EXAMINATION

9 BY MR. LOPEZ:

10 Q Mr. Greer, have you made application  
11 with the BLM to expand your unit --

12 A Yes, sir.

13 Q -- as requested in this case?

14 A The procedure with the BLM is to ask for  
15 preliminary concurrence. We've done that. And they're  
16 looking at it and expect to give us an answer probably in a  
17 week or two.

18 Q But so far you haven't received an an-  
19 swer.

20 A Oh, no, they haven't been able to get to  
21 to it. It will be treated just like any other royalty  
22 owner if the Commission reaches an order in this case, then  
23 we will poll each of the owners with the order, do they  
24 concur with the order. If we cannot determine anything  
25 other than unofficial or -- or positions prior to the time

1 the Commission issued its order and so we view that as no  
2 -- really of no concern at this time.

3 Q What if the BLM does not concur and  
4 denies your request? What would be the effect of that?

5 A That the order would not be approved.  
6 You see, the order requires, the statutory regulations  
7 require that 75 percent of the working interest owners and  
8 75 percent, a separate 75 percent of the nonpaying royalty  
9 owners approve the Commission's order and the -- in this  
10 instance the Federal lands constitute about 90 percent of  
11 the -- of the area, so if the Department of Interior re-  
12 presenting the Federal lands, if they refuse to approve the  
13 Commission's order, why, there is no statutory (unclear).

14 Q Well, do they need to approve the Com-  
15 mission's order or your request for expansion?

16 A They need to approve the Commission's  
17 order and in this instance where they knew that there would  
18 -- you see, if we could have done this voluntarily, then  
19 there was no need for anything other than the hearing  
20 simply to approve it, if all of the parties, 100 percent of  
21 them would voluntarily agree to do it, why, then we'd have  
22 a real simple case, but knowing that there would be some  
23 that would not approve it, we then just made concurrent  
24 application, an application to the Bureau of Land Manage-  
25 ment is in a sense a courtesy to them and let them know of

1 the drilling.

2 Q So do I understand you correctly that  
3 the BLM cannot act until the Commission issues an order?

4 A Correct. Under statutory unitization  
5 regulations no one can approve it. All we can do is get  
6 the -- come to this Commission, ask for approval of our  
7 application. Then the Commission issues its order but the  
8 order the Commission issues does not say this land is now  
9 statutorily unitized. It will say that the land is stat-  
10 torily unitized effective as of some date following the  
11 approval of 75 percent of the working interest owners and  
12 75 percent of the royalty owners.

13 Q So if the BLM were to withhold its con-  
14 currence or disapprove of the expansion or disapprove of  
15 the Commission's order, because they would prefer to re-  
16 ceive lease rental income rather than unit royalty income,  
17 all this hearing for the last two days is denied.

18 A Well, I would hope that the people in  
19 the Bureau of Land Management look a little deeper into the  
20 pros and cons than just that.

21 Q Now, I've heard your testimony this  
22 morning and think I understand it. As I understand, the  
23 east half of 12, with your estimate of an additional 10-  
24 million barrels of recovery in the Canada Ojitos Unit,  
25 should enjoy over the life of the unit royalties from an

1 additional approximately 60,000 barrels of oil that will be  
2 attributed to that 320-acre tract, yet it would only, ac-  
3 cording to Mr. Dillon's estimate if a well were drilled  
4 there, recover an additional, I think he said, 1200 bar-  
5 rels of oil.

6 I see under that scenario a tremendous  
7 advantage to the working interest owners in the east half  
8 of Section 12 --

9 MR. CARR: May I object. May  
10 we have a question instead of a closing argument?

11 MR. LOPEZ: Yes, I'm getting  
12 to that. I was just -- I just had to phrase the question.

13 Q Under that scenario and understanding  
14 the fact that Mr. Dillon's Exhibit Thirteen, he indicates  
15 that the -- well, maybe -- the Post Federal -- it's Exhibit  
16 Fourteen, sorry -- the Post Federal Well is only producing  
17 a half a -- or 1 barrel of oil per day, so it's not parti-  
18 cularly or much different than the Johnson Federal Well and  
19 there is an offsetting F-18 Well in Section 18, why --

20 MR. STOGNER: Mr. Lopez, do  
21 you have a question?

22 MR. LOPEZ: Yeah, right. The  
23 --

24 MR. STOGNER: I'm sorry, but  
25 I'm not getting it either.

1 MR. LOPEZ: Right.

2 Q Well, why is it that you haven't also  
3 included the east half of Section 13? It's an identical  
4 situation, as far as I can determine.

5 A Well, it's not quite identical. I think  
6 the north half of Section 13 is dedicated to the Post Fed-  
7 eral Well.

8 Q If that were not the case it would be  
9 identical, then, and you'd want to include it.

10 What about the southwest quarter?

11 MR. CARR: Well, was that a  
12 question? He should answer that if that was a question.  
13 If it was an identical situation, first of all maybe we  
14 should ask him if it is.

15 Q If it were an identical situation, you'd  
16 want to include that, too, as well, then.

17 A If the majority of the owners in the  
18 tract wanted to come into the Unit. We certainly don't  
19 want to impose our will over a tract in which a majority of  
20 the owners would prefer not to come in the Unit. In this  
21 instance more than a majority has asked to come into the  
22 Unit and I think that's the difference.

23 Q Mr. Greer, do you recall testifying re-  
24 cently in a Case Number 9553 on your application for a  
25 downhole commingling order?

1 A Oh, yes, sir.

2 Q And maybe I should again refer to that  
3 plat under Tab --

4 A It would be only under plats A or B.

5 MR. CARR: I think it's K.

6 Q Was the -- as I understand it the sub-  
7 ject of that well, the subject of that case was Well No.  
8 F-20 in Section 20 in the township to the north of the area  
9 in question?

10 A Yes, sir.

11 Q And could you describe how that well was  
12 completed and how it (unclear)?

13 MR. CARR: I'm going to object  
14 to the question on relevance grounds. It's approximately  
15 5 to 6 miles away. Unless we can lay a foundation that  
16 shows some relevance for a downhole commingling application  
17 miles away, I think it's inappropriate. I think the first  
18 thing that should be established by way of foundation is to  
19 whether or not this is even a Mancos completion. I believe  
20 it is not.

21 MR. STOGNER: I'm not familiar  
22 with that case, Mr. Lopez, and I tend to agree with Mr.  
23 Carr.

24 MR. LOPEZ: Well, Mr.  
25 Examiner, I would refer you to Order No. R-8912 and Finding

1 Number Four where it is stated that in the West Puerto  
2 Chiquito Mancos Oil Pool the applicant expects marginal  
3 production only. The relevance of this case and this  
4 particular well is that we've heard at length testimony  
5 about the great benefits to be received from the pressure  
6 maintenance project as well as the gravity drainage in the  
7 Canada Ojitos Unit and this well has been determined al-  
8 ready by order of the Commission that it is a marginal  
9 well.

10 MR. CARR: And, Mr. Stogner,  
11 perhaps it would be easier to let Mr. Greer testify than  
12 Mr. Lopez, and I'll withdraw my objection and Mr. Greer can  
13 answer the question.

14 MR. STOGNER: Is that fair  
15 enough, Mr. Lopez?

16 MR. LOPEZ: Yes.

17 MR. STOGNER: Mr. Greer?

18 A Mr. Examiner, that well has been com-  
19 pleted only in the Dakota and the reference to marginal  
20 production is the Dakota production. The well makes about  
21 a barrel a day from the Dakota and maybe 20 to 50 MCF a day  
22 and that's the reference to marginal production. The well  
23 has not been tested in the Mancos.

24 MR. STOGNER: Are there any  
25 plans to downhole commingle that well, Mr. Greer?

1           A           Yes, sir. The -- we asked for a down-  
2 hole commingling order so that we would know before we make  
3 a completion in the Mancos as to whether we would be re-  
4 quired to dually complete the well or whether we could,  
5 just from a mechanical standpoint, we could commingle in  
6 the well.

7                           And so we have no idea of what the  
8 Mancos can make. I believe that's what I said at that  
9 hearing.

10           Q           Is the well producing at this time?

11           A           Producing from the Dakota only.

12           Q           And you would disagree with the finding  
13 of the order that you only expect marginal production from  
14 the West Puerto Chiquito Mancos?

15           A           Yes, sir. The marginal, reference to  
16 marginal production, which I think you'll find in the tes-  
17 timony, is to the Dakota, which is marginal. We haven't  
18 tested the Mancos so there's no way that I would know what  
19 the Mancos would make.

20           Q           Okay, well, maybe you would like to see  
21 the order (not clearly understood).

22           A           I think the -- well, okay, I disagree  
23 with that.

24                           MR. STOGNER: I'll take admin-  
25 istrative notice of that particular order, Mr. Lopez. What

1 is the order number?

2 MR. LOPEZ: R-8912.

3 MR. STOGNER: And when was  
4 that heard?

5 MR. LOPEZ: It was issued on  
6 April 13th and I think the case was heard February 1st at  
7 the Examiner Hearing before Mr. Catanach.

8 MR. CARR: Mr. Stogner, if we  
9 might, we'd ask that you also take administrative note of  
10 the transcript and testimony. That will put the whole  
11 matter before you.

12 MR. STOGNER: Would you be a  
13 little more specific, Mr. Carr?

14 MR. CARR: Yeah, I would re-  
15 quest that the transcript of Mr. Greer's testimony --

16 MR. STOGNER: No, I'm talking  
17 about making it a little more specific of which pages, per-  
18 haps.

19 MR. CARR: We'll be happy to  
20 provide it after we look at the transcript. Mr. Greer, I  
21 think, has clarified what he testified to. As to just  
22 taking the order, I think to have it all before you we  
23 would need to present that. We'll check and provide you  
24 with the page number.

25 Or if you prefer you may ac-

1     cept his testimony here today since you have the witness  
2     before you.

3                             MR. STOGNER:    I'd rather do  
4     that.

5                             MR. CARR:    All right, let's do  
6     it.

7                             MR. STOGNER:    I'll just take  
8     administrative notice of Order Number R-8912.

9             Q             Mr. Greer, do you know of any other  
10    instance where a statutory unit has sought to be expanded  
11    across pool boundaries without first at least -- well,  
12    period. I'll just stop with that question.

13            A             Has a statutory unit been expanded or  
14    amended, is that what your question is?

15            Q             No, across an established pool boundary.

16            A             No.

17            Q             In your opinion as an expert oil and gas  
18    expert and well recognized in our industry, wouldn't the  
19    preferable procedure be to change the pool boundaries be-  
20    fore trying to expand a statutory unit?

21            A             I think not. The -- the way I read the  
22    statute, which incidentally I helped write when it was  
23    first developed, is that it covers of part of a common  
24    source of supply. There's no question that that's the  
25    issue here.

1                   The pool boundaries, and we have no  
2 quarrel with the pool boundaries. We like the fact that we  
3 have 640-acre spacing in West Puerto Chiquito and the  
4 Gavilan portion of this same common source of supply they  
5 have the ability to drill two wells on a section, and we  
6 don't want that in West Puerto Chiquito, so -- so a poli-  
7 tical boundary serves a very useful purpose.

8                   MR. LOPEZ: No further ques-  
9 tions.

10                  MR. STOGNER: Thank you, Mr.  
11 Lopez.

12                  Mr. Lund?

13                  MR. LUND: I'll be very brief.

14  
15                                   CROSS EXAMINATION

16 BY MR. LUND:

17                  Q           Mr. Greer, on Exhibits Three and Four,  
18 they were speaking of the notice that you'd given and the  
19 approvals you've tried to reach voluntarily. Forgive me if  
20 I missed this, but what is the royalty interest approval  
21 that you obtained in both the expansion area and in this --  
22 in the Unit itself?

23                  A           The approval required, which we don't  
24 have yet, we can't get it until we get an order, is 75 per-  
25 cent of the royalty owners and 75 percent of the working

1 interest owners.

2 Q In both the expansion area and in the --  
3 Unit, correct?

4 A No, sir. In the expanded area.

5 Q That's based on your interpretation of  
6 the statute?

7 A I believe that's what it said.

8 Q And you've attempted to get working  
9 interest owner approval in the expansion area but not  
10 royalty interest owner approval, correct?

11 A Well, we've advised the royalty owners  
12 and Federal government that this is our proposal and  
13 they're reviewing it and people that handle it were -- have  
14 been out of the state for two weeks and expect to get on it  
15 next week.

16 Q The only royalty interest owner in the  
17 east half of Section 12 is the Federal government?

18 A Yes, sir.

19 Q Just to make sure I understand, I think  
20 you testified earlier that you have no interest in expand-  
21 ing the Canada Ojitos Unit into any developed area of  
22 Gavilan Mancos Pool, correct?

23 A Yes, sir, that's correct.

24 Q And so you may in the future expand the  
25 Canada Ojitos Unit into Sections 13, 24, 1 and 25?

1           A           I think not, sir. In 24 there's already  
2 two wells. In 25 there's already two wells. The only  
3 other possibility would be the south half of Section 13 and  
4 as for --

5           Q           Section 1 way to the south?

6           A           Section 1 to the south? Oh, down here.  
7 Yeah. I believe that area is so -- well, let's see, no,  
8 there's two wells in -- let's see, that's 36, the section  
9 south is 36. That appears to be essentially nonproductive.  
10 I wouldn't worry about that, a well in that tract drain-  
11 ing the Unit, so --

12          Q           So this is a one shot deal.

13          A           Yes, sir, this is a one shot deal.

14          Q           How is the gas injection credit in the  
15 unit implicated by the addition of the east half of Sec-  
16 tion 12?

17          A           It's not -- it's not affected.

18          Q           Why is that?

19          A           There is no gas injection credit given  
20 for wells west of the second row or second tier inside the  
21 unit. The second tier gets 50 percent credit and the west  
22 tier gets zero credit, which, incidentally, we have not  
23 used any of that to date.

24          Q           That's some thing I've been confused  
25 about. I just didn't know if it was impacted in this

1 application.

2 A No. No, it has no bearing on this.

3 Q Where is the nearest injection well to  
4 Section 12 or Section 7?

5 A It would be --

6 Q Which tab are you referring to?

7 MR. CARR: K.

8 A It will be approximately 6, 6 or 7  
9 miles.

10 Q Straight east?

11 A Pretty much due east, yes, sir.

12 Q Into what zone, A, B or C, is that well  
13 injecting gas?

14 A All three zones.

15 Q On the F-7 Well from what zones is it  
16 primarily producing?

17 A I would imagine primarily from -- well,  
18 it's a -- I would believe all the zones, A, B and C.

19 Q The F-7 Well in Section 7 is completed  
20 in all A, B and C zones?

21 A Completed in all three zones and I be-  
22 lieve all three zones are contributing.

23 Q Have you ever done an allocation as to  
24 the contribution of each zone?

25 A No, sir.

1           Q           Did you answer a question for Mr. Pearce  
2 by stating that the Johnson Federal Well in Section 12 is  
3 draining that whole 640?

4           A           I'm sure that it has drained part of the  
5 640, part of the section to the west of it, along with the  
6 other Mallon wells. They're all draining a fairly large  
7 area.

8           Q           To sum up, isn't it fair to say that  
9 what we're talking about here is -- is preventing the unit  
10 from drilling a protection well in Section 7?

11          A           No, sir, it's realizing additional ul-  
12 timate recovery in the Unit that it otherwise won't --  
13 won't receive.

14          Q           The additional ultimate recovery to the  
15 unit, though, is based on the fact that you're concerned  
16 about an additional well could be drilled in the east half  
17 of Section 12, thereby taking reserves from the unit,  
18 correct?

19          A           Yes, sir.

20          Q           Do you think it's fair to allocate  
21 60,000 barrels to the east half of Section 12 when there's  
22 only 1200 barrels under that tract?

23          A           It may save 60,000 barrels being drained  
24 from the -- but the exact allocation, and I think this is  
25 one of the good features of a -- of these Federal units, so

1 many units are stymied by trying to determine the exact  
2 contribution of each particular tract and in the Federal  
3 units when you expand the participating area now, it's acre  
4 for acre. It takes a special consideration where we have  
5 in this instance the difference in (unclear) for the -- for  
6 the gas cap, but here we've seen so many times all the  
7 interference tests, our frac pulse tests, the hydrocarbon  
8 pore volume just doesn't vary much over the area. The high  
9 recovery from the different wells depends on the -- the way  
10 they're completed and how they're hooked up to the fracture  
11 system, and particularly when you get gravity drainage,  
12 take advantage of it and add pressure maintenance.

13 And so it's an impossibility, and I  
14 think a mistake, to attempt to go through the unit and say  
15 this tract contributes so much and they're due to so much  
16 equity.

17 Q So in general you favor the surface acre  
18 basis for equity.

19 A Yes. Yes.

20 Q Even though you've got an adjustment due  
21 to the gas cap and non-gas cap --

22 A Right, we had to make that -- and the  
23 reason, you know, since this question is brought up, it  
24 take a minute to explain it, the earlier unit agreements  
25 provided only that participating areas could be expanded by

1 bringing into production lands "reasonable proven to be  
2 productive in paying quantities."

3                   We found that we needed lands in the gas  
4 cap area that were not productive, not commercially pro-  
5 ductive. We make about 5 barrels a day out of one of the  
6 better injection wells but that's all we make.

7                   So, we needed to be able to bring that  
8 land into the unit because it's necessary to carry on the  
9 unit operation and so that's the reason for the amendment  
10 which appears in here in the yellow pages in one of our  
11 sections, amendment to the unit agreement, which provides,  
12 then, that lands can be brought into participation if they  
13 are "necessary for unit operations."

14                   And so that's how that came about, and  
15 in this particular instance they're given an equity based  
16 upon what the Secretary of Interior determines to be a  
17 reasonable equity.

18                   Now the new agreements provide that land  
19 can be brought into participation if necessary for unit  
20 operations but they have avoided giving the Secretary the  
21 problem of determining the equity, they just put on a  
22 straight acreage basis, and so it's a more or less standard  
23 procedure to bring lands into participation now and in the  
24 standard unit agreement form that are not commercial  
25 substance and give them an equity, the same as though they

1 were commercial substance.

2                   So this is different from, say, a water-  
3 flood that you go in and try to give equity to each tract.  
4 This is a different -- different way, and I think it's a  
5 good one.

6                   Q           I guess my question is, as unit opera-  
7 tor of the Canada Ojitos Unit do you think it's fair to  
8 allocate 60,000 barrels to the east half of Section 12 when  
9 there's only 1200 underneath that section?

10                  A           Yes, sir, the Unit's going to receive  
11 additional ultimate recovery by virtue of it and I have no  
12 qualms in recommending it to the Unit.

13                  Q           The additional ultimate recovery to the  
14 Unit is based on the fact you won't have to drill a protec-  
15 tion well in the face of potential drainage problems, cor-  
16 rect?

17                  A           We won't have to face potential drain-  
18 age problems, yes, sir.

19                  Q           And you won't have to drill a protection  
20 well.

21                  A           Well, we might not even drill a protec-  
22 tion well depending on what the other well (unclear) but we  
23 would suffer drainage if we don't get this tract into the  
24 Unit.

25                  Q           You're just concerned about the migra-

1 tion problem?

2 A Yes, sir.

3 Q Thank you very much.

4 MR. PEARCE: May I ask just  
5 one question as part of the (inaudible) --

6 MR. STOGNER: Yes, Mr. Pearce,  
7 you may.

8

9 RE CROSS EXAMINATION

10 BY MR. PEARCE:

11 Q Mr. Greer, I apologize. I wanted to get  
12 back to something which I think I understood you to say and  
13 I just want to know if I understand the statute the way  
14 you do.

15 The statutory Unitization Act, if that  
16 is being used as in this case to expand a previously exist-  
17 ing unit, the statutory requirements of 75 percent of  
18 working interest and 75 percent of royalty, that's in the  
19 area to be included, the expansion area, not the combined  
20 area, is that correct?

21 A Well, it has been my thought that it's  
22 the entire area, but in this particular instance I don't  
23 think it makes any difference, both of them are going to  
24 have more than 75 percent.

25 Q That -- that is not what I thought you

1 said earlier and that's the reason I came back around to  
2 it.

3 Under the interpretation that you think  
4 is correct, and I believe I heard you say you helped draft  
5 this Act, you take an existing unit, figure out the acre-  
6 age, and that's -- so long as that's more than 75 percent  
7 of the total expanded area, you meet that statutory cri-  
8 teria, in your opinion.

9 A Yes, sir, it's -- I see no difference in  
10 bringing a tract at a later date or initially having that  
11 same outline. I see no difference in them.

12 Q Okay, and in that case if the Federal  
13 government does not agree to have this 320-acre tract put  
14 into the unit, you could bring it in anyway, couldn't you?

15 A Oh, no, no.

16 Q You would have more than 75 percent of  
17 the total acreage of the unit royalty voting to put it in.

18 A No, no.

19 Q Isn't that what the Statutory Unitiza-  
20 tion Act does?

21 A The Federal government, for reasons of  
22 their own, and it's probably correct, they make their own  
23 independent decisions on these things and -- and so the  
24 Federal government will, through the Department of Inter-  
25 ior, the Bureau of Land Management, will -- will make its

1 decision as to whether to approve the Commission's order.

2 Q Under that analysis am I correct that  
3 the Canada Ojitos Unit could just continue to grow, one  
4 step at a time?

5 A No, sir, you're incorrect. I believe  
6 you said that if the Bureau of Land Management disapproves  
7 that we could still expand it and that's not right.

8 Q All right, let's take a fee tract.  
9 Okay. So long as that tract is smaller than 25 percent of  
10 the combined total you could, under your theory, add that  
11 tract with the Statutory Unitization Act if no working in-  
12 terest owner and no royalty interest owner wanted to come  
13 into the unit, is that correct.

14 A In that particular tract.

15 Q Yes.

16 A I think that's the intent of the -- of  
17 the -- of the (unclear) statutory unitization law and  
18 there's no difference, as I view it, whether you do it ini-  
19 tially or at one time. The issues are the same.

20 Q Okay, and outside of the problem of  
21 Federal lands, which you say are treated differently --

22 A Oh, my --

23 Q -- the Canada Ojitos Unit --

24 A Oh, they're not --

25 Q I'm sorry.

1           A           -- they're not treated differently, it's  
2 just that they exercise their own judgment and the Federal  
3 people will make their own decision as to whether --

4           Q           Well, as I understand what you explain-  
5 ed to me earlier, they are treated differently because if  
6 they say you can't add my tract, you can't add it with the  
7 Statutory Unitization Act.

8           A           Oh, no, no, no, we're -- I'm sorry that  
9 -- that I'm not communicating with you. The Federal gov-  
10 ernment is a royalty owner.

11          Q           Yes, sir.

12          A           It requires 75 percent of the royalty  
13 owners to approve the -- any statutory unitization.

14          Q           Yes, sir.

15          A           Now, the Federal government has 90 per-  
16 cent and so that's the reason why I say that, not because  
17 it's the Federal government that they can deny the expan-  
18 sion or the approval to begin with, it's because they own  
19 such a small -- such a large percent of the royalties.

20          Q           And they own that, this 90 percent that  
21 you mentioned is the whole unit.

22          A           Yes, sir, 90 percent under -- well, I'm  
23 -- this is approximate, it may even be 95 percent under the  
24 main unit and 100 percent under Section 12.

25          Q           Okay, I --

1           A           But anyway --

2           Q           I want to pursue this because I want to  
3 understand your understanding of the statute. You've told  
4 us that you helped draft it.

5           A           Right.

6           Q           If the Canada Ojitos -- if 75 percent of  
7 the royalty owners in the total area including the proposed  
8 expansion area, want to add a tract, you can do it.

9           A           Yes, sir, just the same as we could have  
10 initially.

11          Q           All right.

12          A           Had it been included in the first go  
13 around.

14          Q           Perhaps -- perhaps I spoke "inartfully"  
15 before but as I understand what you're telling me is that  
16 if the present royalty and working interest owners want the  
17 Canada Ojitos Unit to grow it can grow indefinitely one  
18 step at a time.

19          A           Only if the proper percentage of owners  
20 approve the Commission's order.

21          Q           I'm sorry, proper percent of the owners  
22 and which owners are we talking about?

23          A           The total owners.

24          Q           Okay.

25          A           There's no difference as I see it in ex-

1 panding a unit or forming one in the first place.

2 Q Okay.

3 MR. PEARCE: Thank you, Mr.  
4 Examiner, I appreciate you allowing me to come back to it.

5 MR. STOGNER: Thank you, Mr.  
6 Pearce.

7 Are there any other cross  
8 examination questions of this witness?

9 Any redirect?

10 MR. CARR: No redirect.

11 MR. STOGNER: Are there any  
12 other questions?

13 Mr. Lemay.

14 MR. LEMAY: Yes, Mr. Examiner,  
15 thank you.

16  
17 QUESTIONS BY MR. LEMAY:

18 Q Assuming that the east half of 12 was  
19 added to the unit, Mr. Greer, could the unit drill a unit  
20 recovery well there?

21 A Yes. Well, let's see. Yes, sir.

22 Q Assuming that we add just one alterna-  
23 tive. There were three alternatives that Mr. Dugan laid  
24 out in his -- or at least -- I mean Mr. Roe for Mr. Dugan,  
25 confirmed by Sun, drill a new well, force pool their way

1 into the existing well, join your unit. Actually a fourth  
2 alternative would be to leave the lease expire or not do  
3 anything --

4 A Yes, sir.

5 Q -- which wasn't mentioned but I assume  
6 that's an alternative there, too.

7 A Right.

8 Q And you seem to support only the forced  
9 pooling or -- I mean the joining of the Unit. How do you  
10 feel about force pooling the Unit into the existing well?

11 A Well, the -- of course we don't have an  
12 interest in Section 12, but if I were an interest owner in  
13 Section 12, I would in fact feel the same way as Dugan and  
14 Sun, but first, my understanding is that -- that if it's  
15 pooled they're going to be faced with this \$750,000 cost,  
16 and although I realize that yesterday you mentioned that it  
17 would be unreasonable for an owner of that well to expect  
18 to see \$750,000 when the well will only produce a barrel or  
19 two a day.

20 But it's also my understanding that one  
21 of the owners under that well has insisted that on the  
22 pooling, that the treatment be exactly the same as what  
23 they went through when the Loddy was pooled and that's how  
24 they came up with the \$750,000 and so even though one would  
25 think that it's possible to negotiate something different

1 from that, a the present standing there's no way with this  
2 one owner adamantly requiring that as a condition, but even  
3 if -- even if that happened, that's not a very good solu-  
4 tion.

5                   The projection of -- Sun's projection,  
6 as I recall, shows only 2 or 3 years before the well  
7 reaches its economic limit and part of the land under the  
8 -- under the well is Federal land and when that happens the  
9 Federal government is going to require the well to be  
10 plugged and then the lease will be up for grabs again, and  
11 so -- so that's only a very temporary solution and not a  
12 very good one.

13               Q           Well, I guess I'm assuming that it's in  
14 everyone's best interest and maybe it's not, but not to  
15 have well drilled in the east half of 12. That's what all  
16 the strategy, that's what all the conversation's about.

17               A           Right.

18               Q           There are many ways to prevent a well  
19 from being drilled in Section 12, one of which would be  
20 forced pooling.

21               A           No, sir, that would not prevent it.

22               Q           That would not prevent it but then  
23 everyone would have to agree that a second well was neces-  
24 sary in that 640-acre --

25               A           No, sir. No, you see, once the forced

1 pooling order is in effect, then the owners, the under-  
2 standing among the owners in that expanded spacing unit,  
3 that 640 proration unit, is governed then by the operating  
4 agreement and any one owner only owning 1 percent of the  
5 tract can force a well to be drilled, and if the others  
6 want to -- the others -- you see, the Commission's order  
7 now, which is one of the reasons we -- we like the pool  
8 boundary where it is, in West Puerto Chiquito a well can be  
9 drilled only if you have 640 acres. Well, in Gavilan, even  
10 though the order says 640-acre spacing, it permits a second  
11 well to be drilled on that proration unit.

12 So, everyone is at risk that anyone that  
13 wants to drill another well can drill it and just within  
14 the last, I think, 3 or 4 weeks, when Frank Chavez had one  
15 of his meetings to discuss pool regulations in this area,  
16 one of the owners under that well pointed out that there  
17 were undrilled tracts in Gavilan and it was possible to  
18 drill a big well on those undrilled tracts and the only  
19 conclusion that one can come to is that if the price of gas  
20 or oil raises just a little bit, why, they're going to be  
21 out there doing just exactly that, and you see, it's just  
22 like, even if -- and this owner, as I understand, has 23  
23 percent of the west half, and say that's only 11-1/2 per-  
24 cent of the whole tract, but it's just like getting a lease  
25 for nothing where you have a -- if they can get a 300 per-

1 cent penalty, and so they could go in and promote a well to  
2 be drilled and I would say that there is no one in this  
3 room better knowledgeable or founded in how deals and  
4 trades and prospects are put together than the Chairman of  
5 this Commission, and what's going to happen, is analyses  
6 not like John Roe made and not like Richard Dillon made,  
7 they're going to go to the offset wells and diagonal offset  
8 wells, and they're going to the promoters, going to be able  
9 to show that those wells have produced from 100-to-200,000  
10 barrels cumulative, the offset wells to the east are cur-  
11 rently making 100 to 200 barrels a day, and that tract will  
12 get drilled.

13 Q Well, I guess my point is, Mr. Greer,  
14 that not only would they have to come up with the promo-  
15 tional money but isn't there a nonconsent penalty so if you  
16 had 1 percent and you had carry 99 percent on some kind of  
17 a basis of 3-to-1 or 500 percent, or whatever the operating  
18 agreement was, it would seem to be a ridiculous thing to  
19 do.

20 A Oh, no, no, no. A lot of people will  
21 drill for 300 percent or particularly if you've got 500  
22 percent. You only have to have 1 percent of the lease and  
23 if you're satisfied with the 300 percent return on your  
24 money, great. For 500, and I don't know what's in the  
25 agreement now, but a lot of them have moved from 300 to

1 400, some of them even 500, you know, and so it's just like  
2 getting a lease for nothing.

3 Q Well, I'm just trying to clarify the  
4 issue. The issue is fear, fear that a well will be  
5 drilled, that's why all this is going on.

6 A I think there's no question a well will  
7 be drilled; no question.

8 Q Well, can I pursue fear just a little  
9 bit further? If -- if everyone's afraid a well's going to  
10 be drilled and a well is drilled, how do you respond on the  
11 other side? Do you drill an offset for 5 barrels a day,  
12 for 10 barrels a day?

13 A Well, that's the issue that I tried to  
14 explain earlier. It depends on how -- how lucky the people  
15 are in the east half of 12 how well they get hooked up with  
16 our pressure maintenance project and how much oil the well  
17 makes.

18 If, in my analysis, that a protection  
19 well will save in oil more than the cost of drilling a  
20 well, then we'll drill a protection well.

21 But if not, then we might not do that.  
22 We know that we can't stop all of the drainage, as I have  
23 indicated on my exhibit, the last of my exhibits, between  
24 the E-6 and 1-8 Well, which are 800 feet from the eastern  
25 boundary. The E-6 cannot stop all of the drainage to the

1 Howard 1-8, and also I know a protection well would not  
2 stop all of that drainage.

3 So we would be faced with that -- that  
4 decision.

5 Q Right now do you have a number in mind,  
6 what it would take to -- to mobilize your forces and drill  
7 an offset to it?

8 A Yeah, we would have to see that the --  
9 have to analyze that the amount of migration that we would  
10 stop would be greater than the cost to drill a new well.  
11 And that's going to depend on -- partly on how big that  
12 well is and how successful we think the protective well.

13 So, it's -- it's a little bit difficult  
14 but it's -- it's a significant amount of oil that's going  
15 to be lost to the Unit if -- or from the Unit if we don't  
16 get that tract in the Unit.

17 Q Well, looking at the current wells  
18 there, that 2 barrels a day doesn't look like there's much  
19 oil going across that barrier now, is there, that you're  
20 losing from the Unit --

21 A I feel, Mr. Chairman, I really feel good  
22 about what we have managed to do to stop the migration, but  
23 it hasn't been easy. As John Roe indicated yesterday, we  
24 -- we made some mechanical changes, \$150,000 for artificial  
25 lift on one well. We have an AFE out now, \$190,000 on an-

1 other well. This is what we're faced with because of the  
2 -- of the drainage problem.

3 Now I'd sure hate to see another well go  
4 in there and be faced with another one of these.

5 Q Recognizing what -- what you say, you  
6 want to preserve the status quo and not have a well  
7 drilled, the fact that the east half of 12 would come in  
8 there and get, by some of these figures, if you got  
9 10-million barrels, 60,000 barrels to the east half,  
10 cranking that into some other projection, that's a lot of  
11 barrels of money to give away if you could preserve the  
12 status quo some other way.

13 A Well --

14 Q That's a lot of money to pay for fear,  
15 it seems like.

16 A The fear is well -- well founded. As I  
17 indicated, the Chairman of the Commission knows as well as  
18 anybody how deals are promoted and how prospects are gener-  
19 ated and the problem is that the people are going to be  
20 generating these prospects -- once this thing goes up for  
21 sale, then everybody in the United States can bid on it and  
22 they're not going to have the background that Richard  
23 Dillon has, they're not going to have the background that  
24 John Roe has, they'd going to look at these offset produc-  
25 tion records, 100-to-200,000 barrels of oil, currently

1 100-to-200 barrels a day, and people -- there's going to be  
2 people that are not knowledgeable of the area that are  
3 going to commit to buy the lease and drill a well, but it  
4 will be drilled.

5 Q Mr. Greer, according to these figures  
6 you supplied, that were supplied earlier, you could afford  
7 to pay \$700,000 for that lease and not drill it and be  
8 about a break even as far as allowing -- that's a lot of  
9 money. I don't many (unclear) who can buy a lease for  
10 \$700,000, but it is possible, I guess.

11 I mean I -- may I explain that just a  
12 little bit. That was taking 60,000 barrels that you would  
13 be giving to the -- to those folks at \$15.00 a barrel,  
14 currently it's higher, subtracting 192,000 entry fee,  
15 leaving a net of \$700,000 profit for those entering your  
16 unit which, if you're willing to preserve the status quo,  
17 it seems like you could pay \$700,000 for the lease and be  
18 roughly where you'd want to be for that to be --

19 A There are some risks in my estimate of  
20 10-million barrels, and also the 10-million barrels would  
21 not be produced tomorrow. At best it's going to be over 20  
22 years and so those figures, then, are -- are -- need to be  
23 reduced by the present worth and such as that.

24 Q Perhaps using \$15.00 a barrel might ac-  
25 company that, too, with the assumption that that's a stand-

1     ard fee -- price throughout the length of the production,  
2     so the balancing on this may be there. That's a rough --  
3     those were just rough figures that were supplied earlier.  
4     You could -- but it seemed like a lot of money that could  
5     be spent for the lease and accomplish the same thing.

6             A             Well, might I point out that we can't  
7     just buy the lease and do the same thing. Once we buy the  
8     lease how do we keep it from expiring? How do we get it  
9     into production? To put it in the Unit costs another \$600  
10    an acre, and so that's in addition, that's an additional  
11    cost.

12            Q            I'm sorry, I just wanted to pursue the  
13    options that were available in there, Mr. Greer, Mr. Exa-  
14    miner. Thank you very much.

15                           MR. STOGNER: Thank you, Mr.  
16    Lemay.

17

18

CROSS EXAMINATION

19    BY MR. STOGNER:

20            Q            Mr. Greer, when was the original statu-  
21    tory unitization for this sought, for the Canada Ojitos?

22            A            When was it effective, the statutory  
23    unitization, is that your question?

24            Q            When was it made effective and when was  
25    it sought by your company?

1           A           I believe we -- we filed the applica-  
2 tion in -- okay, it was heard in October, 1986 and became  
3 effective, let's see, the hearing was held October 24th.  
4 The order was issued, gracious, only 14 days later, and it  
5 was effective then January 1st of, what was that, the next  
6 year.

7           Q           Now, looking at Exhibit Number Six of  
8 Dugan/Sun, that was just a schematic of some of the wells  
9 surrounding it. The well in the west half of Section 12  
10 was first produced in December of 1985, 320 acres, the east  
11 half was open at the time you sought statutory unitization.

12                       My goodness, why didn't you include it  
13 at that time, Mr. Greer?

14           A           Well, Mr. Examiner, at that time we had  
15 already entered into discussions and negotiations. The  
16 Commission had called the operators together to point out  
17 apparent problems in Gavilan. The parties became kind of  
18 polarized in their positions and one of the big questions  
19 was where does the boundary belong and it was such a --  
20 everything was in such a turmoil that there's just no way  
21 we could have considered something like that at that time.  
22 I think it would have gone on to another hearing like we  
23 had last year.

24                       The difference now, if I might point  
25 out, is that the area is essentially oil depleted and we're

1 just not talking about very much from the standpoint of the  
2 Gavilan owners, so we would hope that that being the case,  
3 that they would not be so concerned about a little expansion  
4 of the unit.

5 Q Well, why is it taking 2-1/2 years for  
6 an expansion to be sought in this east half?

7 A Well, I think John Roe covered that  
8 pretty -- he covered most of the points that -- that were  
9 involved in that time period.

10 I personally know of some more that de-  
11 layed the people's plans to drill and that was the Forest  
12 Service and their requirement for roads. They first came  
13 to us and asked if we would object to a road and we said,  
14 no, we wouldn't, except when we found out where they wanted  
15 it. They wanted it to come around, they were -- the forest  
16 rangers were concerned about poachers and they didn't want  
17 additional roads that would give poachers a circle that  
18 they could escape from the -- from the rangers, and they  
19 wanted McHugh to come over I think it was 6 or 8 miles to  
20 go a 1 mile distance.

21 They finally, the final analysis and  
22 agreement that they came up with the Forest Service is  
23 shown on one of John Roe's exhibits. That was the final  
24 way that they managed to negotiate their trade, but there  
25 was a long time of trading with the Forest Service, and

1 McHughs representative asked us to intervene, to call our  
2 Congressman, to -- to do whatever we could to try to get  
3 the Forest Rangers to not be so picky about what they  
4 wanted to do.

5 And so there were a lot of adversities  
6 in trying to drill that second -- well, apparently -- well,  
7 not apparently, the landowners to the west would not permit  
8 them to build a road in from the logical direction from the  
9 west, so they had many adversities in trying to get a well  
10 drilled.

11 Q Now overcoming all these adversities  
12 you're ready to drill a well if this order is issued, is  
13 that correct?

14 A No, sir, we would hope that these orders  
15 would eliminate the drilling of an unnecessary well;  
16 perhaps two unnecessary wells.

17 Q In the east half.

18 A In the east half, yes.

19 Q So you have no plans for developing this  
20 portion of the unit if the unit was expanded.

21 A No, sir, there is no (unclear) in there.  
22 The drainage as we've determined by interference tests and  
23 frac pulse tests all show that the wells are draining tre-  
24 mendously wide areas.

25 Q So therefore we wouldn't see really an

1 increased recovery of Morrow oil in the -- in the unit.

2 A Yes, we will. The unit will realize  
3 additional recovery over what otherwise will happen if this  
4 tract is brought into the unit.

5 MR. STOGNER; I have no fur-  
6 ther questions of Mr. Greer.

7 Are there any other questions  
8 of this witness?

9 If not he may be excused.  
10 Let's take a thirty minute recess.

11 MR. LOPEZ: Mr. Examiner --

12 MR. STOGNER: We took a re-  
13 cess, Mr. Lopez.

14

15 (Thereupon a recess was taken.)

16

17 REPORTER'S NOTE: Following a period of recess Mr. Stogner  
18 requested that attorneys appearing in the case would  
19 present to him briefs and the hearing was adjourned.

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21 (Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9671 heard by me on 10 May 1989.  
Michael E. Stevens, Examiner  
Oil Conservation Division