

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MARCH 30, 1988 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
William L. Carr	Temple and Beck P.A.	Santa Fe
W. Perry Pearce	Montgomery & Andrews P.A.	Santa Fe
R. Duluc	Byrum	Santa Fe
Chad Dindeman	Dindeman, Fair & Vandier	Santa Fe
W. Kelbohin	Kelbohin Kelbohin Adams	Santa Fe
Carol M. Sledge	TXO Production Corp	Midland TX
Mark Asdale	TXO Production Corp	Midland TX
T. L. Hill	Mobil Prod. Tx + N.M. Inc	Midland TX
JOHN C. CORBET	Hixon Development Co	Farmington
Tommy Roberts	"	"
Ken Mueller	San F + P Co	Denver Colo
Paul W. Buschell	El Paso Natural Gas Co	El Paso, TX
James Bruce	Hinkle Law Firm	SF
Bill Lewis	Enron Oil & Gas Co.	Midland TX
Jim Borten	ENRON OIL & GAS Co.	MIDLAND, TX
LARRY SHANNON	PRESDIG/THE PETROLEUM CORP	DALLAS
Charles Dergue	Caulkins Oil Co	Farmington

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NAME	REPRESENTING	LOCATION
Mark C Poppendedt	Presidio Oil Co.	Dallas
JOHN F. NANCE	EL PASO NATURAL GAS CO.	EL PASO
CHARLES B. READ	READ & STEVENS, INC	ROSWELL

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

30 March 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Exploration and                   CASE  
Production Company for compulsory                   9326  
pooling, Rio Arriba County, New  
Mexico.

BEFORE: Michel E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Commission:                   Charles E. Roybal  
  Legal Counsel for the Division  
  Oil Conservation Division  
  State Land Office Bldg.  
  Santa Fe, New Mexico 87501

For the Applicant:                   W. Thomas Kellahin  
  Attorney at Law  
  KELLAHIN, KELLAHIN & AUBREY  
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  Santa Fe, New Mexico 87504

For Hixon Development:               Tommy Roberts  
  Attorney at Law  
  P. O. Box 129  
  Farmington, New Mexico 87499

A P P E A R A N C E S

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For Mesa Grande Limited: James G. Bruce  
Attorney at Law  
HINKLE LAW FIRM  
Post Office Box 2068  
Santa Fe, New Mexico 87504

I N D E X

STATEMENT BY MR. KELLAHIN 4

KENNETH MUELLER

Direct Examination by Mr. Kellahin 7

Cross Examination by Mr. Stogner 33

E X H I B I T S

Sun Exhibit One, Booklet 8

Sun Exhibit Two, Certificate of Mailing 32

1  
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MR. STOGNER: Call next Case Number 9326.

MR. ROYBAL: Application of Sun Exploration and Production Company for compulsory pooling, Rio Arriba County, New Mexico.

MR. STOGNER: If the Examiner please, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey. I'm appearing on behalf of the applicant and I have one witness to be sworn.

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

MR. ROBERTS: Mr. Examiner, my name is Tommy Roberts, attorney in Farmington, New Mexico, appearing on behalf of Hixon Development Company in this case.

We don't intend to call any witnesses.

MR. STOGNER: Are there any other appearances?

MR. BRUCE: Mr. Examiner, my name is Jim Bruce from the Hinkle Law Firm of Santa Fe, representing Mesa Grande, Limited.

We will not call any witnesses. We are just interested because of Mesa Grande's interest in

1 the Gavilan Mancos Pool.

2 MR. STOGNER: Will the witness  
3 please stand and be sworn at this time?

4

5 (Witness sworn.)

6

7 MR. STOGNER: Mr. Kellahin.

8 MR. KELLAHIN: Thanks, Mr. Exa-  
9 miner.

10 Mr. Examiner, by way of intro-  
11 duction, the applicant in this case is the current operator  
12 of the Wildfire Well in the Gavilan Mancos Oil Pool.

13 That well was drilled prior to  
14 the spacing change rule which was a result of Order R-7407-  
15 E, entered by the Division -- I'm sorry, -- the Commission  
16 back on June 1st, 1987.

17 The original dedication for the  
18 well was the 320 acres in Section 26. It would have been  
19 the west half of that section.

20 As a result of the spacing  
21 change to 640 acres there was an opportunity afforded to all  
22 Gavilan Mancos operators and working interest owners to re-  
23 form certain of the existing spacing units to 640 acres.  
24 That process has been started in several wells. The latest  
25 one to appear before the Examiner was the one heard by Mr.

1 Catanach on March 16th in Case 9327. That was an applica-  
2 tion by Dugan Production Corporation to reform the spacing  
3 unit for the Amoco operated Seifert Well just to the north-  
4 west of the subject well. The Seifert Well was in Section  
5 22.

6 What we propose to accomplish  
7 today is to use the mechanism of compulsory pooling to pro-  
8 vide the owners in the undeveloped east half an opportunity  
9 to participate in the Wildfire Well by paying their share of  
10 the cost of the Wildfire Well, which are \$511,000, plus  
11 their proportionate share of additional monies to be spent  
12 for the pumping unit, the equipment for the pumping unit,  
13 and the gathering or transmission lines for production of  
14 the well.

15 We have reached an agreement in  
16 principle with Hixon Development Company, which had filed a  
17 request in Case 9295 for a nonstandard unit in the east half  
18 of 26. They have dismissed their case and are agreeing to  
19 participate with us in the production from the Wildfire Well.

20 In addition, there are other  
21 working interest owners that are affected.

22 In addition to Hixon's interest  
23 in the east half of 26, Dugan Production Corporation also  
24 has an interest.

25 And, finally, there are working

1 interest owners in the developed west half that will have  
2 their share of production diluted because they now must  
3 share it with the east half owners.

4 Mr. Mueller will testify and  
5 present to you his engineering opinions and calculations on  
6 why we believe that the reformation of the 320 acres to a  
7 640 spacing unit is in the best interest of all owners, in-  
8 cluding working interest and royalty owners and overriding  
9 royalty owners, and that we are avoiding the drilling of an  
10 unnecessary second well.

11 We desire to have the compul-  
12 sory pooling format as a means by which we can remove the  
13 exemption on the existing Wildfire Well 320 and have you  
14 make appropriate findings to have that reformed on 640 bas-  
15 is.

16 The compulsory pooling mechan-  
17 ism gives us the opportunity to amend our communitization  
18 agreements with the BLM so that in the event we are unable  
19 to get all necessary signatures, the compulsory pooling or-  
20 der will form the basis to make that agreement complete. It  
21 also will serve as the means by which Hixon and Dugan can  
22 contribute their share of the actual costs within a 30-day  
23 period and should they choose not to do so, then after that  
24 election period we would request that the standard 200 per-  
25 cent risk factor penalty apply and we'll provide you with

1 the overhead charges for that portion of the pooling order.

2 That completes my introduction  
3 and if it's acceptable, we'll present Mr. Mueller, who is a  
4 petroleum engineer for Sun to make the technical presenta-  
5 tion on behalf of the applicant.

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

8  
9 KENNETH MUELLER,  
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. Mueller, for the record would you  
16 please state your name and occupation?

17 A Kenneth Mueller, Manager of Reservoir En-  
18 gineering for Sun Exploration and Production Company in Den-  
19 ver, Colorado.

20 Q Mr. Mueller, you spell your last name M-  
21 U-E-L-L-E-R?

22 A Yes, sir.

23 Q Mr. Mueller, have you previously testi-  
24 fied before the Oil Conservation Commission as a petroleum  
25 engineer?

1 A Yes, I have.

2 Q Have you provided testimony before the  
3 Commission with regards to the request by Mesa Grande to  
4 create a buffer allowable between the Lindrtih Pool and the  
5 Gavilan Mancos Pool last fall?

6 A Yes.

7 Q And you testified on behalf of your  
8 company with regards to the Sun - Mesa Grande forced pooling  
9 cases involving the Loddy Well in the Gavilan Mancos Pool?

10 A Yes.

11 Q And pursuant to that employment have you  
12 made a study of the facts surrounding the Sun Wildfire Well  
13 in Section 26?

14 A Yes, I have.

15 MR. KELLAHIN: We tender at  
16 this time Mr. Mueller as an expert petroleum engineer.

17 MR. STOGNER: Mr. Mueller is so  
18 qualified.

19 Q Mr. Mueller, if you'll turn to your  
20 exhibit book, which I have marked as Sun Exhibit One, and  
21 turn to the first display within that exhibit book, and for  
22 the benefit of the Examiner and for the record, would you  
23 identify, first of all, the approximate location of the Sun  
24 Wildfire Well?

25 A The Wildfire Well is noted there inside

1 Section 26, which is the darker outlined section. It's in  
2 the south half of the southwest quarter of Section 26.

3 Q What is the current dedication for the  
4 Sun Wildfire Well?

5 A It's the west half of Section 26. It's  
6 approximately 320 acres.

7 Q And has this well been completed and is  
8 it subject to the Gavilan Mancos Pool rules?

9 A Yes.

10 Q What is the current status of that well,  
11 Mr. Mueller?

12 A It is currently shut-in awaiting gas  
13 sale transmission line connection.

14 Q While we have this display, would you  
15 also identify for the Examiner where we find the Amoco  
16 Seifert Well?

17 A The Amoco Seifert Well is just to the  
18 northwest in Section 22. It's in the southeast quarter of  
19 that section.

20 Q Some of the other wells that you've used  
21 in your study are identified on this exhibit, also, are they  
22 not?

23 A Yes.

24 Q Would you take a moment and show the  
25 Examiner where those particular wells are located on this

1 display?

2           A           The Tapacitos 2 in Section 25 is located  
3 in the southwest quarter of Section 25.

4                       The Divide No. 1 Well is in the northeast  
5 quarter of Section 35.

6                       The Divide 3 Well is in the southwest  
7 quarter of Section 35.

8                       The Tapacitos 4 is in the southeast  
9 quarter of Section 36.

10           Q           Let's describe for the Examiner how you  
11 have organized your exhibit book by telling him what is the  
12 purpose of the information from the beginning of the exhibit  
13 book to the first blue page. What are we going to talk  
14 about in that section?

15           A           This is -- basically we'll lay out the  
16 land in the first few pages of it. Then we give the brief  
17 history of the well and then towards to the end we show the  
18 pressure measurements that have been made on this well.  
19 This is one of the observation wells in the last Order 7407,  
20 where we had to take pressures periodically during a high  
21 rate period and then during a low rate period.

22                       And then we also show the production from  
23 the offset wells that have caused this decrease in pressure  
24 in the Wildfire Well.

25                       The Wildfire did not produce during this

1 whole time period and has seen a decline in the pressure.

2 Q When we turn to the next section of the  
3 exhibit book between the second blue page and between the  
4 first blue page and the second blue page, what is the  
5 purpose of that portion of the book?

6 A This is our determination of a fair and  
7 reasonable well cost. It also lends support to that -- that  
8 cost and shows that there is no adverse economic effects on  
9 the west half owners or east half owners.

10 Q The third section of the exhibit book  
11 represents what, Mr. Mueller?

12 A It's a history of events that led up to  
13 this case.

14 Q It shows the efforts of Sun and Hixon to  
15 reach a voluntary agreement with regards to participation in  
16 the 640?

17 A Yes.

18 Q And then the following section, which  
19 will be the fourth section of the exhibit book, what is  
20 contained in that section?

21 A It is the communitization agreement. It  
22 is the first several pages, then the model form operating  
23 agreement, which are the 8-1/2 x 14 pages, and at the end  
24 there is the designation of operator.

25 Q All right, sir. All right, sir, let's go

1 back now to the first section of the exhibit book and turn  
2 past the display showing the spacing unit for the well and  
3 describe for us how the tabulation of information with re-  
4 gard to ownership in the section was prepared.

5 A This was done by Langenholdt (sic), a  
6 consulting land agency. It depicts the ownership in both  
7 the west half and east half of the section.

8 Q The next display shows what, Mr. Mueller?

9 A The next display is a plat of the pre-  
10 vious information. It shows that Sun owns 90 -- just over  
11 92 percent of the west half of Section 26 with Frank Pace  
12 owning just over 5.3 percent and Jeannette Kurtz owning just  
13 over 2.6 percent.

14 In the east half of Section 26 Hixon  
15 Development owns 60 percent and Dugan Production owns 40  
16 percent.

17 Q Let's go to the third -- I'm sorry, the  
18 fourth page of the exhibit book in which there is a summary  
19 now of the working interests ownership before and after pay-  
20 out on the west half, the east half, and then the reformed  
21 640.

22 Let's take a moment and have you identify  
23 what is -- or who are the current owners of the existing  
24 developed acreage in the west half of the section?

25 A Okay. As I said before, Sun, Frank Pace,

1 and Jeannette Kurtz are the current owners, and that's be-  
2 fore payout.

3 After payout Dugan Production and Hixon  
4 Development will come in for their share in the west half.

5 Q As we look to the east half, which has  
6 been classified as the undeveloped 320 acres, who are the  
7 working interest owners for that 320?

8 A Hixon and Dugan.

9 Q And then finally you have shown what the  
10 before and after payout ownership will be for the working  
11 interest when the spacing unit is reformed to 640?

12 A Yes.

13 Q Do you have a recommendation to the Exa-  
14 miner as to what the effective date of the reformation to  
15 640 should be?

16 A I would say June 8th. There has been no  
17 production from the well since June 8th, so you could either  
18 make it June 8th or the time that we have first sales from  
19 the well.

20 Q Be your recommendation to use the effec-  
21 tive date of the R-7407-E order?

22 A Yes.

23 Q All right, sir, let's turn specifically  
24 to the Wildfire Well itself and have you summarize the well  
25 history on the well. I believe that's shown on the next

1 display?

2 A Yes.

3 Q Okay.

4 A The well was spudded in October of '86.  
5 It reached TD in November of '86. Casing was set through  
6 the Dakota or to a depth of about 8605. It was perforated  
7 with 35 holes at various depths from 7348 to 7656. It was  
8 then fraced with 82,000 gallons of cross-link (sic) gel and  
9 90,000 pounds of sand. It was completed April 4th with a 3-  
10 hour production test of 10 barrels of oil, 15 MCF of gas,  
11 and 20 barrels of load water.

12 In May of that year a gas/oil ratio test  
13 was performed on the well and in 24-hours it made 50 barrels  
14 of oil, 315 MCF of gas, and 8 barrels of water.

15 During the June, November, and February  
16 pressure tests that were required by the Commission,  
17 pressures were measured on this well and they are shown here  
18 on the exhibit. The pressure has declined in this well  
19 without production from about 1190 pounds down to 970  
20 pounds.

21 Q Following that information, Mr. Mueller,  
22 what have you included in the exhibit book?

23 A The following, the next two pages  
24 basically are the well completion report and log that were  
25 filed with the Department of Interior. This shows where

1 casing has been set, the perforation, the frac treatment.

2 The following page was the request for  
3 allowable filed with the Oil Conservation Division.

4 And then the next page was the gas/oil  
5 ratio test that was filed with the Commission showing the  
6 50-barrel a day and 314 MCF per day test that was done in  
7 May of '87.

8 Q Following that is a display showing  
9 pressure decline in the Wildfire Well?

10 A Yes.

11 Q What is your opinion with regards to the  
12 pressure decline in the Wildfire Well?

13 A This clearly shows that the well was not  
14 on production during this time so this exhibit shows that  
15 drainage is occurring in this section from all the offset  
16 wells that have been previously mentioned.

17 Q Can you turn to the first display in the  
18 exhibit book and show us what, in your opinion, is the  
19 likely source of the pressure reduction in the Wildfire  
20 Well?

21 A Most of it would be your -- the two  
22 Tapacitos wells and specifically the Tapacitos 4; then the  
23 two Divide wells and more specifically, the Divide 3, I  
24 believe, is the one with the higher rate.

25 Q When we look at the Tapacitos 4 Well,

1 that's located in Section 36 --

2 A Yes.

3 Q -- and it is something in excess of a  
4 mile from the Wildfire Well?

5 A Yes. Drainage -- drainage of over a mile  
6 is common in this fractured reservoir.

7 Q And when we look at the Divide No. 3  
8 Well, that's the well in the southwest quarter of 35?

9 A Yes.

10 Q Okay, and that well is also approximately  
11 a mile away from the Wildfire Well.

12 A Yes.

13 Q Based upon the pressure analysis, Mr.  
14 Mueller, do you have a conclusion as to whether or not a  
15 second well drilled in the east half of Section 26 will be a  
16 necessary well?

17 A No, it would be unnecessary. As we can  
18 see, this area is being drawn down just from the current  
19 development of the three offsetting sections there.

20 Q Following the display showing the  
21 pressure decline in the Wildfire Well, what have you plot-  
22 ted?

23 A This is the production curves for the  
24 Tapacitos wells and the Divide wells, the first one being  
25 the Tapacitos 4.

1           It began producing about February of '86  
2 and has made just over 70,000 barrels of oil and almost 55-  
3 million cubic feet of gas.

4           Q           All right, sir, and what's the next plot?

5           A           The next one is the Divide 1. This is a  
6 low rate well. It's only made 62 barrels of oil and 352 MCF  
7 of gas.

8           Q           Okay, and the next display?

9           A           The Divide 3 is a very good well, as we  
10 can see. It's making -- averaging probably over 100 barrels  
11 a day and since December of '86 it has made 29,000 barrels  
12 of oil and over 16-million cubic feet of gas.

13          Q           And this is one of the wells that you  
14 attribute the decline in pressure in the Wildfire Well to?

15          A           Yes.

16          Q           All right, sir, and the Tapacito 2 Well  
17 is the next display?

18          A           Yes. Tapacitos 2 has been on production  
19 since late '84. It's declining pretty rapidly right now but  
20 has made over 30,000 barrels of oil and over 45-million  
21 cubic feet of gas.

22          Q           Based upon your studies of Section 26 and  
23 the Wildfire Well in that section, Mr. Mueller, do you have  
24 an opinion as to whether or not a well in the east half of  
25 that section will develop and produce reserves that will not

1 be produced by the Wildfire Well?

2 A In my opinion, no. The Wildfire will  
3 produce the reserves in the east half of the section.

4 Q Let me direct your attention now to how  
5 you have reached an opinion with regards to the well costs  
6 that were -- that should be attributable to the undeveloped  
7 ownership for their participation in the Wildfire Well.

8 Would you take a moment and explain the  
9 methodology that you have employed to come to an opinion  
10 about what is a reasonable and fair cost for participation?

11 A Yes. What I've used here is determining  
12 what an average well cost, or what we expect the well cost  
13 on this well to be, is using an average of three Canada  
14 Ojitos Wells -- the Canada Ojitos lies directly east of the  
15 Gavilan Mancos; Sun participated in these wells and we knew  
16 what the AFE costs were and what their final report cost  
17 was.

18 We've taken these three wells that were  
19 drilled in '87 and come up with an average well cost of just  
20 over \$625,000.

21 Q Would you give Mr. Stogner the background  
22 as to why we are unable to give him the specific, actual  
23 costs on the Wildfire Well at this time?

24 A Sun purchased their interest in the  
25 Wildfire Well from Jerome McHugh and our records are too

1 sketchy and we just can't determine exactly what the actual  
2 well costs were for the well.

3 Q By referring to "our" records, what  
4 records are you talking about?

5 A Sun's records now that we did -- it's the  
6 well records we obtained from McHugh at the time of  
7 purchase.

8 Q How have you satisfied yourself that the  
9 costs you have calculated are going to be fair and  
10 reasonable costs for the Wildfire Well?

11 A As I said, these -- these are average  
12 costs of currently drilled wells and this would be an  
13 expected cost that Sun would expect to pay for drilling a  
14 well in that -- in that section now.

15 Q How have you taken that actual average of  
16 costs for those three wells and translated it into the cost  
17 for the Wildfire Well?

18 A On the next exhibit we've taken that  
19 estimate and just rounded it off to an even \$626,000. We  
20 have an AFE estimate for the 5000 foot gas gathering line  
21 that is, well, just under \$50,000.

22 Then we have an estimate for purchasing  
23 and installing the artificial lift equipment, which is just  
24 under \$70,000.

25 We subtract that from our \$626,000 and

1 came up with the net well cost to date is approximately  
2 \$511,000.

3 Q Have you reached an agreement in  
4 principle, Mr. Mueller, with representatives of Hixon Devel-  
5 opment Company as to whether or not the \$511,000 can be used  
6 as the reasonable, actual well costs to date?

7 A Yes.

8 Q And what have they told you?

9 A They have agreed to this cost.

10 Q Have representatives of Dugan Production  
11 Corporation also agreed to use the \$511,000 as the actual  
12 net well cost to date?

13 A Yes, I have talked to John Roe with Dugan  
14 Production and he believes the 511 is a fair cost.

15 Q Okay. In addition to that sum, then,  
16 there represents additional cost to be expended on the well  
17 in order to put it into production?

18 A Yes. As I said before, the well is cur-  
19 rently shut in waiting on this gas gathering line and there  
20 is some pressure ont he wellhead now so it may flow for a  
21 very short period, but it will need artificial lift in the  
22 near future.

23 Q How accurate are the estimates on the  
24 \$47,500 for the gathering line?

25 A At the present, that's our best estimate.

1                   We had an AFE outstanding, I believe. It  
2 may have expired by now because it was done in the fall and  
3 we haven't even initiated this work yet, and at that time it  
4 was for \$55,000.

5                   Q                   And what's the basis for determining the  
6 \$67,500 is reasonable?

7                   A                   That was an estimate that our operations  
8 engineer had gave to me that he thought he could install the  
9 pumping unit on this well.

10                  Q                   For purposes of those additional sums to  
11 be spent, what is the proposed agreement in principle be-  
12 tween Dugan and Hixon about participation in those -- those  
13 amounts?

14                  A                   They will pay their proportionate share  
15 of those amounts. The east half will basically be paying  
16 one-half of each of those amounts.

17                  Q                   And they'll pay those amounts on an as-  
18 billed basis, will they not?

19                  A                   Yes.

20                  Q                   If they elect to execute the communitiza-  
21 tion agreement and the joint operating agreement.

22                  A                   Yes.

23                  Q                   So the sum you're requesting that the  
24 Examiner incorporate into the pooling order is the payment  
25 of their proportionate share of the \$511,000.

1 A Yes.

2 Q Okay, and by paying that sum within the  
3 election period, then they avoid any type of penalty on  
4 their share of production from the well.

5 A That is correct.

6 Q Okay. Let's go to the summarization on  
7 the next page of the operating agreement for the well. Have  
8 -- have you studied and analyzed the joint operating agree-  
9 ment that applies to the west half of Section 26?

10 A Yes, I've reviewed it and this is a brief  
11 synopsis of what are the major concerns in most operating  
12 agreements, the expenditure limit, overhead expenses, non-  
13 consent clauses, and all of that.

14 Q Go through the four items for the Exam-  
15 iner, if you please.

16 A Okay. The expenditure limit in the cur-  
17 rent joint operating agreement for the west half is \$20,000  
18 without consent of all the parties. Any amount over that  
19 would have to be AFE'd to the parties first and then once  
20 the AFE's are approved, we could work -- do any work that  
21 costs over \$20,000.

22 The district overhead expense is fixed  
23 rate. Drilling wells is \$3500; the producing wells is \$350.

24 Q That is in the existing operating agree-  
25 ment?

1           A           That's in our existing operating agree-  
2 ment.

3           Q           Is that a number in principle that Hixon  
4 Development Corporation has -- Development Company has  
5 agreed to?

6           A           Yes.

7           Q           Are those amounts less than the Ernst and  
8 Whinney annual summary for 1986 for overhead rates on a  
9 monthly basis for producing and drilling well rates?

10          A           Yes, they are.

11          Q           Skip number 3 and go to number 4. What's  
12 number 4?

13          A           Number 4 is a nonconsent provision that's  
14 in the joint operating agreement. It's basically a 300 per-  
15 cent drilling and completion and then 100 percent on surface  
16 equipment and 100 percent on operating expense.

17          Q           In the event either Mr. Dugan or the  
18 Hixon individuals change their mind and decide not to parti-  
19 cipate within the election period, what do you recommend to  
20 the Examiner for a risk factor penalty to be applied against  
21 their interest?

22          A           It would be 100 percent of the drilling  
23 cost plus a 200 percent risk factor penalty.

24          Q           And that equates to the 300 percent  
25 number in the drilling and completion costs?

1 A Yes.

2 Q And what is the basis for that opinion,  
3 Mr. Mueller?

4 A That's the maximum that's allowed.

5 Q Does it have any practical application to  
6 the type of risk factor penalties that the Division is uti-  
7 lizing in the Gavilan Mancos Pool for a risk factor penalty?

8 A Yes, I believe that's the way most of the  
9 operating agreements in the poolings have been stipulated so  
10 far.

11 Q All right, and that in fact represents  
12 the typical risk factor penalty applied by the Division with  
13 regards to compulsory pooling orders in the Gavilan Mancos.

14 A Yes.

15 Q Let's turn now, sir, to the economic ana-  
16 lysis based upon those cost numbers to determine whether or  
17 not you have reached an opinion as to the affect on the de-  
18 veloped acreage ownership in the west half.

19 A Okay. What I've plotted on the next page  
20 is the net cash flow versus expected oil recovery. Expected  
21 oil recovery that I had calculated would be in the range of  
22 like 40-to-120,000 barrels. The net cash flow is -- I've  
23 got to see, I should have reduced this a little -- goes from  
24 100,000 to over \$1,000,000.

25 The curve, the upper curve would be the

1 net cash flow for the current owners in the west half of the  
2 section.

3 The lower curve would be for the current  
4 owners in a 640-acre pooled unit.

5 We can see that at approximately about  
6 50,000 barrels the net cash flow is at a break even point.

7 Q When you analyze the net cash flow impact  
8 on conversion from 320 to 640, what do you find?

9 A We find that in the range of recoveries  
10 that we expect you will see a very diminished affect on the  
11 net cash flow for the west half owners.

12 Q The reduction in the net cash flow to the  
13 west half owners, is it reduced to a level that it is no  
14 longer economically attractive for those owners to share  
15 their production with the east half owners?

16 A Oh, no, it does not represent that sort  
17 of financial burden.

18 Q All right. Let's turn now to see what  
19 analysis you've made of the net present value to the west  
20 half owners.

21 A The net present value in this case is  
22 probably a more representative number to use because in this  
23 economic analysis I did include the \$255,500 payment up front  
24 to the west half owners, and that is a net present dollar.

25 So a net present value analysis, once

1 again, was done and it shows the life of the 320-acre exist-  
2 ing unit and then the line for the 640-acre pooled unit  
3 from various ranges of oil recovery.

4 And we can see that on a net present  
5 value basis that break even point is closer to 70,000 bar-  
6 rels, which is well within the range of what we expect as  
7 recovery from this well, and therefor, in that range you can  
8 see that there would be -- it's less than \$50,000 that we're  
9 trying to -- that -- that would be reduced to the working  
10 interest owners in the west half. That \$50,000, I'd say,  
11 is, you know, probably within just judgement and all of  
12 that, and is basically just negligible in an analysis of  
13 this type.

14 Q What is your conclusion about the finan-  
15 cial impact on the west half ownership if they share their  
16 production with the entire section?

17 A There's -- there's no -- there's not a  
18 place under any financial burden that is a fair and reason-  
19 able action and since the \$255,500 payment was included,  
20 this shows that it is a fair and reasonable cost to be  
21 assessed for the well.

22 Q All right. Let's direct your attention  
23 now to the impact on the undeveloped working interest owners  
24 in the east half of the section. What conclusion have you  
25 reached from an analysis of the economics for those owner-

1 ship interests?

2 A Okay, on the next plot I've combined the  
3 net cash flow curve and the net present value curve for the  
4 east half owners of the section.

5 And once again, if you look in the range  
6 of recoveries in the 60-to-80,000 barrel range, you can see  
7 that the net present value dips below zero at about 70 -  
8 75,000 barrels of recovery. That means that as long as re-  
9 covery is in that range the east half would be experiencing  
10 at least a 15 percent rate of return.

11 If recoveries are higher than that, and  
12 in fact may go up to 100-or-120,000 barrels, the east half  
13 owners could actually be seeing a 31 percent rate of return  
14 on their money.

15 Q Do you have an opinion, Mr. Mueller, of  
16 whether or not your analysis of the east half ownership  
17 economics allows those owners to participate in the Wildfire  
18 Well on a basis that allows them to avoid the expense of  
19 drilling a second well in the section?

20 A Yes. Once again these curves show that  
21 this took into account the east half paying the \$255,500  
22 payment and since the net cash flow curve is positive above  
23 about 50,000 barrels and the net present value curve is pos-  
24 itive above about 70,000 barrels, this shows us that payment  
25 is fair and equitable plus it makes it such that they would

1 be paying just half the cost of a well for their half of the  
2 reserves in the section, thereby avoiding having to drill a  
3 well in the east half at full cost.

4 Q We've discussed now the impact on the  
5 working interest owners in both the west half and the east  
6 half. Do you have an opinion as to whether or not approval  
7 of this application will result in the adverse impact upon  
8 any royalty or overriding royalty owners in either the west  
9 half or the east half?

10 A The royalty owners and overriding royalty  
11 owners in the west half would see a diminished -- diminish-  
12 ment of their (unclear) right now up front but if a second  
13 well is drilled in the east half, their actual total value  
14 would probably diminish faster because you'd have two wells  
15 competing for the same amount of oil.

16 Q As we look to the royalty and overriding  
17 royalty owners in the east half of the section, does that  
18 same opinion hold true for those owners?

19 A Yes. As we can see from the pressure  
20 plots, this whole section is being drained now by wells off-  
21 setting the section; therfor, royalty owners in both halves  
22 are seeing a diminishment of what they should be getting now  
23 and we need to get this well on in order to develop both  
24 east and west half reserves.

25 Q Turn now to the next section. Without

1 going through the details of all the correspondence and com-  
2 munications shown in this section, Mr. Mueller, will you  
3 simply summarize what in principle is the agreement between  
4 Sun and Hixon Development Company on participation in the  
5 well?

6 A Yeah. There's -- basically, the final  
7 agreement that we came to is the \$255,500 payment from the  
8 east half owners to the west half owners and the east half  
9 would contribute their acreage to the proration unit and  
10 they would in turn get 50 percent of the interest in the  
11 well.

12 Q In addition to that payment, is there  
13 agreement on executing a joint operating agreement and a  
14 communitization agreement?

15 A Yes.

16 Q Let's turn now to the next section. The  
17 first portion of the next section contains the existing com-  
18 munitization agreement on the west half?

19 A Yes. This is the existing agreement.  
20 This is why we need a spacing and pooling order so that a  
21 new communitization agreement can be made.

22 Q What is the proposed agreement with re-  
23 gards to Hixon participation -- well, let me start over, Mr.  
24 Mueller.

25 The -- to reform the 640 you will execute

1 a new communitization agreement that will be substituted for  
2 the existing communitization agreement and it will follow  
3 the same type of format used in this agreement here?

4 A Yes, I believe so.

5 Q When we look to the last page of that  
6 agreement, just before the first page of the joint operating  
7 agreement, there's a pooling clause addendum?

8 A Yes.

9 Q All right. The use of a compulsory pool-  
10 ing order entered by the Commission will allow us to com-  
11 plete any missing signatures for purposes of getting the  
12 communitization approved by the BLM?

13 A Yes.

14 Q All right. Then the last document in the  
15 exhibit book is the existing joint operating agreement for  
16 the west half?

17 A Yes, it is.

18 Q There appears not to be all of the ac-  
19 reage included in -- in the west half contained within this  
20 joint operating agreement. Is there another joint operat-  
21 ing agreement?

22 A Yes. Since there was two base leases in  
23 the west half and there was some farmouts that were (un-  
24 clear) contained differently to the two leases, the west  
25 half currently now has two operating agreements that it

1 operates under. One pertains to approximately 240 acres of  
2 the west half and the other pertains to approximately 80  
3 acres of the west half.

4 Q Both operating agreements are -- utilize  
5 the same form?

6 A Yes, and the terms in both of them are  
7 the same.

8 Q And you would propose that Hixon and Du-  
9 gan will be afforded the opportunity to execute an operating  
10 agreement identical to this for the formation of the 640?

11 A Yes, sir.

12 Q I believe Hixon Development Company has  
13 an expiring lease concern with regards to a certain of their  
14 interests in the east half of the section?

15 A Yes, they do. There's a 40-acre tract  
16 that will expire July 1st of this year.

17 Q In order to accommodate Hixon to pres-  
18 serve its interest in that lease, we want to see if we can't  
19 expedite the -- all the necessary paperwork, not only before  
20 the Division but before the BLM, to get this finally done?

21 A Yes. It needs to be completed before  
22 that date.

23 MR. KELLAHIN: That concludes  
24 my examination of Mr. Mueller, Mr. Stogner.

25 The Sun Exhibit Number Two,

1 which we have submitted to you is our Certificate of Mail-  
2 ing. The mailing is done in two parts and the way this is  
3 put together, it's not clear and I need to explain that the  
4 initial mailing to Hixon and Dugan for the forced pooling  
5 case was made on February 9th.

6 In addition, there was a sup-  
7 plemental notice given which you'll find in terms of a  
8 second certificate halfway through the packet and it is just  
9 before March 9th letters, and there are three letters.  
10 Those are letters set by Sun on March 9th notifying three  
11 additional parties. Those three parties are interest owners  
12 in the existing developed acreage and we wanted to provide  
13 them notice that this case was taking place.

14 The substance of the letter ad-  
15 vises them that their interest in the existing developed 320  
16 will be diluted if the east half participates.

17 The certificates show the re-  
18 turn receipt cards attached to the front, showing that each  
19 of those three parties have received notification of today's  
20 hearing within the time frame of the rules of the Division.

21 Neither Sun nor I have received  
22 any objection from any party as to the pool.

23 We would request the introduc-  
24 tion of Sun Exhibit One and Two for introduction in this  
25 case.

1 MR. STOGNER: Sun Exhibits Num-  
2 ber One and Two will be admitted into evidence at this time.

3 MR. KELLAHIN: Finally, there  
4 is one further detail I failed to mention to you and that is  
5 Sun desires to retain operations of the Wildfire Well for  
6 the 640-acre unit, and I believe that is an item that also  
7 has been agreed to by Hixon Development Company.

8 That concludes our presenta-  
9 tion.

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

12

13

#### CROSS EXAMINATION

14 BY MR. STOGNER:

15 Q Mr. Mueller, if I go to the third page of  
16 your Exhibit Number One, that the plat of the interest own-  
17 ers.

18 A Yes.

19 Q Now the present dedication is or was the  
20 west half, is that correct?

21 A Yes, it's the west half.

22 Q So that I'm reading that right, now it  
23 shows up in the northwest quarter that Hixon and Dugan own a  
24 60 and 40 split, but that is ownership of acreages or forma-  
25 tions below 8,605 foot, is that right?

1 A Yes.

2 Q So that would be below the Gavilan Man-  
3 COS.

4 A Yes, that's below the Dakota, you mean.

5 Q So in that particular quarter section it  
6 would be 92.04 percent Sun, and then the split out between  
7 the Frank Pace and Jeannette Kurtz, as shown, is that cor-  
8 rect?

9 A That, yes. The -- it's actually the 240  
10 ares. It's the northwest quarter plus the north half of the  
11 southwest.

12 Q Okay, my mistake. Thank you. Then the  
13 split out is very similar for the -- for that lower tract  
14 down in the south half of the southwest quarter.

15 A Yes. The only difference there, and this  
16 is why there's two joint operating agreements, is that it  
17 doesn't have that depth limitation on that southern 80.

18 Q Okay. Now, you mentioned a 200 percent  
19 risk pealty should also follow this well, is that correct?

20 A Yes.

21 Q Although the well is down.

22 A There -- Dugan and Hixon both have not  
23 paid their money as of yet and if they don't pay within the  
24 thirty day period, then they will be held to that noncon-  
25 sent, so we do need that clause.

1 Q Okay, now why 200 percent if the well was  
2 already down? Would you explain a little more in detail?  
3 Why do you think this well deserves a 200 percent risk pen-  
4 alty?

5 A Well, the west half did take all the risk  
6 in getting the well down, getting logs on the well, and get-  
7 ting the well completed, and therefor, if someone comes in,  
8 is now afforded the chance to pay just -- all we're asking  
9 for is one-half our estimated well cost from them, but if  
10 they refuse to pay that in a timely manner, then that is  
11 just like the first parties who may have or may not have re-  
12 fused to pay that in a timely manner, would be held to that  
13 same 200 percent penalty as in the agreement that everybody  
14 else is operating under.

15 Q Did you have any trouble drilling the  
16 well?

17 A Like I said, McHugh actually drilled the  
18 well and it seemed to be pretty trouble-free, just not know-  
19 ing all the details of the drilling but just from the time  
20 frame from spud to TD, that it -- I -- I assume that it was  
21 relatively trouble-free.

22 Q Are there any special problems that you  
23 can maybe relate to or elaborate on in drilling a well in  
24 the Gavilan Mancos?

25 A Yeah, there's -- the biggest problem, I

1 believe, would probably be you're drilling in a shale, a  
2 fractured shale, so you have lost circulation problems, so  
3 actually getting to TD, then getting logs in a formation  
4 like that, and then circulating and actually getting casing  
5 down is -- is probably the areas with the greatest risk.

6 Q And also in the nonconsent provision,  
7 that 200 percent, you talk about the drilling and completion  
8 cost, but 100 percent on the surface equipment and operating  
9 expenses.

10 A Yes.

11 Q Do I read that right?

12 A Yes.

13 Q Surface equipment being your pumpjack,  
14 your -- your tank batteries, and such?

15 A Tank batteries, and some of that equip-  
16 ment is out there. The equipment that's left to be put on  
17 the well is the pumpjack and the gas gathering line, and  
18 there may be some incidentals that I'm not aware of.

19 Q And those would be separated out in this  
20 provision that you have made.

21 A Yes.

22 MR. STOGNER: I have no further  
23 questions of Mr. Mueller.

24 Are there any other questions  
25 of this witness?

1 Mr. Kellahin, could you please  
2 provide me a rough draft order?

3 MR. KELLAHIN: Be happy to.

4 MR. ROBERTS: Mr. Examiner?

5 MR. STOGNER: Yeah, I'm sorry,  
6 yes.

7 MR. ROBERTS: I'd just like to  
8 make a statement for the record.

9 For the record, I'd like to  
10 verify that Hixon Development Company has agreed to  
11 participate in the Wildfire No. 1 Well on the terms as they  
12 have been described by Mr. Mueller.

13 I'd like to also state that  
14 Hixon does not necessarily concur with the economic data  
15 submitted, economic and engineering data submitted by Mr.  
16 Mueller, or the conclusions drawn from that data, and in  
17 addition, I think I should state for the record that Hixon  
18 does not necessarily concur that the methodology for  
19 balancing the equities in this case that have been adopted  
20 by the parties is appropriately used in all cases.

21 I just merely want to have the  
22 record reflect that there is agreement between the parties  
23 for this particular case.

24 MR. STOGNER: Thank you, Mr.  
25 Roberts.

1 Mr. Bruce, do you have anything  
2 that you'd like to add? I guess not.

3 Mr. Kellahin, do you have  
4 anything further?

5 MR. KELLAHIN: No, sir.

6 MR. STOGNER: Mr. Mueller may  
7 be dismissed.

8 Does anybody else have anything  
9 further in Case Number 9326?

10 This case will be taken under  
11 advisement.

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(Hearing concluded.)

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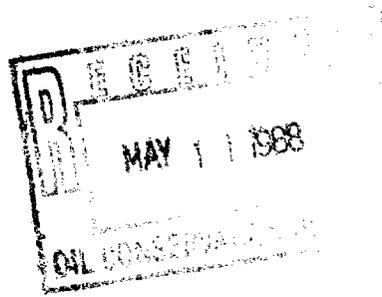
C E R T I F I C A T E

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 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. 9326 heard by me on 30 March 1988.

Michael Slogar, 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

16 March 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Exploration and                   CASE  
Production Company for compulsory                   9326  
pooling, Rio Arriba County, New  
Mexico.

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For the Applicant:

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MR. CATANACH: Call Case 9326.

The application of Sun Exploration and Production Company for compulsory pooling, Rio Arriba County, New Mexico.

The applicant has requested that this case be continued to March 30th, 1988.

(Hearing concluded.)

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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. 9326, heard by me on March 16, 1988.

David R. Costantini, Examiner  
Oil Conservation Division

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

4 2 March 1988

5 EXAMINER HEARING

6  
7 IN THE MATTER OF:

8 Application of Sun Exploration and CASE  
Production Company for compulsory 9326  
9 pooling, Rio Arriba County, New  
Mexico.  
10

11  
12 BEFORE: Michael E. Stogner, Examiner  
13  
14

15 TRANSCRIPT OF HEARING  
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18 A P P E A R A N C E S  
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20 For the Division:  
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23 For the Applicant:  
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MR. STOGNER: Call next Case Number 9326, application of Sun Exploration & Production Company for compulsory pooling, Rio Arriba County, New Mexico.

Upon request of the applicant this case is continued to the Examiner's Hearing scheduled for March 16th, 1988.

(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. 9326  
heard by me on 2 March 1988.  
Michael E. Hooper, Examiner  
Oil Conservation Division