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STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

CASE 9925

EXAMINER HEARING

IN THE MATTER OF:

Application of Siete Oil and Gas Corporation for a  
Waterflood Project, Eddy and Lea Counties, New  
Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO

May 2, 1990

**ORIGINAL**

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A P P E A R A N C E S

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY  
Attorneys at Law  
By: JAMES BRUCE  
500 Marquette, N.W.  
Albuquerque, New Mexico

\* \* \*

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E X H I B I T S

APPLICANT'S EXHIBITS:

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\* \* \*



1 New Mexico.

2 Q. And who are you employed by and in what  
3 capacity?

4 A. I'm employed by Siete Oil and gas as a  
5 reservoir engineer.

6 Q. And have you previously testified before the  
7 OCD as an engineer?

8 A. Yes, I have.

9 Q. And are you familiar with the matters related  
10 to Case 9925?

11 A. Yes, I am.

12 Q. And as part of your job, have you been in  
13 charge of the engineering related to the proposed East  
14 Shugart Cooperative Area?

15 A. Yes, I have.

16 MR. BRUCE: Mr. Examiner, is the witness  
17 acceptable?

18 EXAMINER CATANACH: He is.

19 Q. (By Mr. Bruce) Mr. Lee, what does Siete seek  
20 permission to do to implement the proposed waterflood?

21 A. We seek to convert the Geronimo Federal  
22 Number 2, Geronimo Federal Number 7 and Inca Federal  
23 Number 4 to water-injection wells in order to recover  
24 additional oil reserves that would otherwise be  
25 unrecoverable.

1 Q. Okay, what pool will the water be injected  
2 into?

3 A. The water will be injected into the Shugart  
4 Pool, which includes the Yates, Seven Rivers, Queen and  
5 Grayburg formations.

6 Q. Would you give a very brief discussion of the  
7 geology of that pool?

8 A. What you're looking at is a series of sand  
9 deposits in here that are productive of oil and gas in  
10 each of these horizons.

11 Q. Okay. Would you outline for the Examiner the  
12 production history of this portion of the Shugart Pool?

13 A. The initial wells were drilled back in 1983.  
14 We've been producing for about five years, and  
15 currently the wells are in a depleted state. Average  
16 production is less than ten barrels a day per well.

17 Q. And there has been marked Siete Exhibit  
18 Number 4. Is that the C-108 and some additional  
19 information that you've prepared --

20 A. Yes, it is.

21 Q. -- for submission to the OCD?

22 A. Yes, it is.

23 Q. And three pages from the back, does that set  
24 forth the cumulative oil production and current oil  
25 production of the wells in this portion of the pool?

1 A. Yes, it does.

2 Q. Okay. Now, with respect to this portion of  
3 the pool -- And maybe I should ask you this: The  
4 proposed waterflood does not include the entire Shugart  
5 Pool, does it?

6 A. No, it does not.

7 Q. Is this portion of the pool, in your opinion,  
8 in an advanced state of depletion?

9 A. Yes, it is.

10 Q. Have you calculated the amount of secondary  
11 reserves to be obtained from this waterflood?

12 A. Yes, I have.

13 Q. And what are they?

14 A. Secondary reserves should be in the 400,000-  
15 barrel range.

16 Q. Okay. And what were your calculations based  
17 on?

18 A. Based on our offset Blackhawk Waterflood.

19 Q. Now, what is the estimated life of the  
20 waterflood?

21 A. Thirteen to 15 years.

22 Q. In your opinion, will waterflood operations  
23 in this portion of the pool prevent waste and result in  
24 reasonable probability of increasing recovery of oil?

25 A. Yes, it will.

1 Q. Other than the three injection wells, is  
2 Siete installing other facilities for the injection and  
3 production system?

4 A. Yes, we will. We'll be increasing our  
5 existing waterflood facilities at the Blackhawk Lease,  
6 probably set about three more 500-barrel tanks, two  
7 more additional triplex pumps, additional lines and  
8 things of that nature.

9 The system will be a closed system in that  
10 there will be no air able -- contamination of our  
11 water.

12 Q. Okay, what is the cost of the facilities for  
13 the waterflood?

14 A. The estimated cost of the waterflood project  
15 is three hundred and -- I'm sorry, \$530,000.

16 Q. Okay. Would you please describe in more  
17 detail the proposed waterflood? And I refer you to  
18 Exhibit Number 4.

19 A. Enclosed in the -- This is the C-108, and  
20 what we have included here are some wellbore schematics  
21 of the three proposed injection wells, a schematic  
22 showing the current completion of the wells, and the  
23 proposed schematic once the work is completed.

24 What we'll do is open up some additional pay  
25 so that we will have all zones in vertical conformance,

1 and run in the hole with a Baker AD-1 packer with 2-3/8  
2 inch plastic-line tubing, set the packer about 50 feet  
3 above the top set of perfs and commence injection.

4 And included in the C-108, like I say, we  
5 have these wellbore diagrams and a sheet with the  
6 pertinent well data exhibited in a tabular form as  
7 required by the C-108.

8 Also included in the C-108 is a map of the  
9 area with a half-mile-radius circle drawn around each  
10 injection well, which sets up this project's area of  
11 review.

12 And then directly behind it is a list of the  
13 wells within that area of review, and some additional  
14 wells which were near the area of review that I  
15 included in the analysis just as a matter of prudence.

16 For the wells within the area of review, I  
17 detailed what type of well it is, where it's located,  
18 completion date, the casing programs, things of that  
19 nature, as required by the C-108.

20 Q. Are there any problem wells in the area of  
21 review?

22 A. No, there are not.

23 Q. And as part of your submission on Exhibit  
24 Number 4, did you calculate the top of cement for the  
25 wells in the area of review?

1 A. Yes, I did.

2 Q. And that's the final two sheets of this  
3 exhibit; is that correct?

4 A. That's correct.

5 Q. How many producing wells will there be in the  
6 cooperative area?

7 A. There will be four producing wells.

8 Q. Are there any plans at this time to drill  
9 additional producing wells or convert any wells to  
10 injection wells?

11 A. No, there's no plans to drill any additional  
12 producers or injectors at this time.

13 Q. Okay. In the future, might that need arise?

14 A. It may, depending upon how our flood works  
15 out. We may want to go to 20-acre spacing at some time  
16 in the future.

17 Q. As a result, does Siete request that the  
18 order in this matter contain an administrative  
19 procedure approving unorthodox well locations and for  
20 changing producing wells to injection wells?

21 A. Yes, we do.

22 Q. Okay. And would you please describe your  
23 proposed injection operations?

24 A. What we currently plan on is that initially  
25 we will inject about 300 barrels of water per day per

1 well, and our injection pressures should be around 500,  
2 600 p.s.i.

3 The 600 p.s.i. is well within the .2 p.s.i.-  
4 per-foot limitation set upon us by the state. And if  
5 at a later time we need to increase our injection  
6 pressure, we will run step-rate tests and request for  
7 additional pressure, injection pressures.

8 Q. Where is the injection water coming from?

9 A. It's produced water coming from our existing  
10 Delaware and Penrose Grayburg wells in the area.

11 Q. And is it compatible with the formation  
12 water?

13 A. Yes, it is. Nalco did a water analysis,  
14 which is also included with the C-108 data, and it  
15 shows that it is compatible.

16 Q. Okay. Are there any fresh-water sources  
17 within one mile of the injection wells?

18 A. No, there are not.

19 Q. To your knowledge, are there any faults or  
20 hydrologic connection between the Shugart Pool and any  
21 underground sources of drinking water?

22 A. No, there is not.

23 Q. What project allowable does Siete request?

24 A. We would request the -- our allowable set at  
25 whatever the wells can produce.

1 Q. Were the surface owners and the offset  
2 operators notified --

3 A. Yes, they were.

4 Q. -- as required by C-108?

5 A. Yes, they were.

6 Q. And are certified return receipts also  
7 attached to Exhibit Number 4?

8 A. Yes.

9 Q. In your opinion, will the granting of this  
10 Application be in the interests of conservation, the  
11 prevention of waste, and the protection of correlative  
12 rights?

13 A. Yes, it will.

14 Q. And was Exhibit Number 4 prepared by you or  
15 under your direction?

16 A. Yes, it was.

17 MR. BRUCE: Mr. Examiner, at this time I move  
18 the admission of Exhibit Number 4.

19 EXAMINER CATANACH: Exhibit Number 4 will be  
20 admitted as evidence.

21 (Off the record)

22 EXAMINATION

23 BY EXAMINER CATANACH:

24 Q. Mr. Lee, I need for you to detail the exact  
25 project area that this flood will encompass.

1           A.    Okay.  The flood will include the southwest  
2           quarter of the southwest quarter of Section 18, the  
3           northwest quarter of the northwest quarter of Section  
4           19, the entire northeast quarter of Section 24, and the  
5           northeast quarter of the northwest quarter of Section  
6           24.

7                   MR. BRUCE:  Our next witness will have a map  
8           for you, Mr. Examiner.

9           Q.    (By Examiner Catanach)  Mr. Lee, what's the  
10           main producing zone in this pool?

11           A.    The Penrose and the Grayburg formations.

12           Q.    So your injection will be more or less  
13           limited to the Penrose and Grayburg?

14           A.    Initially, yes.  We would like to ask for  
15           permission to inject into the Seven Rivers and the  
16           Yates also, since it is part of the pool, in case later  
17           on we want to go uphole.

18           Q.    You say that you have an offset waterflood  
19           project in this area?

20           A.    Yes.

21           Q.    In the same pool?

22           A.    Yes, it's our Blackhawk Waterflood Project.  
23           It's located in the southwest quarter of Section 24,  
24           directly offset of our other leases.

25           Q.    You say you've got some good response in that

1 waterflood?

2 A. Yes, we have. Estimated secondary-primary  
3 ratio there is a little over 1.1 to 1.

4 Q. I just want to make sure I understand your  
5 schematics here, like on your Geronomo Federal Well  
6 Number 2, you propose to perforate from 3770 down to  
7 4330; is that right? Select intervals within that --

8 A. No, the only proposed perforations, we are  
9 going to perforate the Penrose zone from 3770 to 3780  
10 and then another Grayburg zone from 4300 to 4330, that  
11 30-foot zone in the Grayburg and then the 10-foot zone  
12 in the Penrose.

13 Q. Mr. Lee, is there any fresh water in this  
14 area that you have been able to find?

15 A. No, there's not. In fact, this is a desert  
16 open-pit disposal area.

17 EXAMINER CATANACH: That's all the questions  
18 I have of the witness at this time.

19 GENE SHUMATE,  
20 the witness herein, after having been first duly sworn  
21 upon his oath, was examined and testified as follows:

22 EXAMINATION

23 BY MR. BRUCE:

24 Q. Would you please state your full name and  
25 city of residence?

1 A. Gene Shumate, Roswell, New Mexico.

2 Q. And who are you employed by and in what  
3 capacity?

4 A. Vice President of Land, Siete Oil and Gas  
5 Corporation.

6 Q. Have you previously testified before the OCD  
7 as a landman?

8 A. No.

9 Q. Would you please give a brief discussion of  
10 your educational and work background?

11 A. I graduated in 1976 from Texas Tech  
12 University, BBA. Employed by Conoco, 1977 to 1987.  
13 Primary areas of responsibility were southeast New  
14 Mexico and west Texas. And from 1987 to present, I've  
15 worked with Siete Oil and Gas.

16 Q. And you've been a landman all during that  
17 time?

18 A. Eight of the 12 years.

19 Q. Okay. And were you in charge of the land  
20 matters involved in Case 9925?

21 A. Yes.

22 MR. BRUCE: Mr. Examiner, is the witness  
23 acceptable?

24 EXAMINER CATANACH: He is.

25 Q. (By Mr. Bruce) Mr. Shumate, would you state

1 briefly what Siete seeks in this case and describe the  
2 exact project area?

3 A. Siete seeks approval for a cooperative  
4 waterflood project in the Shugart Pool.

5 The area covers Lot 4, Section 18; the  
6 northwest quarter of the northwest quarter of Section  
7 19, Township 18 South, Range 32 East, Lea County, New  
8 Mexico; the northeast quarter of Section 24, the  
9 northeast quarter of the northwest quarter of Section  
10 24, Township 18 South, Range 31 East, Eddy County, New  
11 Mexico.

12 Q. Now, this is not a unit; is that correct?

13 A. No, it is not.

14 Q. You're just operating the leases  
15 cooperatively?

16 A. Yes.

17 Q. Would you please refer to Exhibits 1 and 2  
18 and describe their contents for the Examiner?

19 A. Exhibit 1 is a land plat which shows the area  
20 of the unit boundary, covering four separate leases,  
21 the Conoco Federal Lease, the Inca Federal Lease,  
22 Geronimo Federal Lease and the Arco Federal Lease.

23 Q. And does Siete operate all leases?

24 A. Yes.

25 Q. And what type of leases are these?

1           A.    They're all federal leases with a fixed  
2           12-1/2 percent royalty rate.

3           Q.    Now, would you please refer to Exhibit Number  
4           3 and discuss it briefly for the Examiner?

5           A.    Exhibit 3 is our operating agreement covering  
6           our proposed waterflood unit.  It's a standard AAPL  
7           1982 form providing for overhead rates of \$300 per  
8           month per well.  Exhibit A to the operating agreement  
9           describes the lands and the interests of the parties.

10          Q.    And this is a voluntary agreement, is it not?

11          A.    Yes, it is.

12          Q.    How will production be allocated between the  
13          four leases?

14          A.    Production will be on a lease basis.  It will  
15          not be shared among the leases.

16          Q.    And have you discussed cooperative agreements  
17          such as this with the BLM?

18          A.    Yes.

19          Q.    And what was their response?

20          A.    When dealing with 12-1/2 -- Where the  
21          royalties were all the same, 12-1/2 percent fixed rate,  
22          they had no objection.

23          Q.    And they did not require unitization?

24          A.    No, they did not.

25          A.    In your opinion, will the granting of this

1 Application be in the interests of conservation, the  
2 prevention of waste, and the protection of correlative  
3 rights?

4 A. Yes.

5 Q. And were Exhibits 1 through 3 prepared by you  
6 or under your direction?

7 A. Yes.

8 Q. One last question I did forget, Mr. Shumate,  
9 is, of the working-interest owners, approximately what  
10 percent have agreed so far to join in the unit -- or in  
11 the area?

12 A. Today we have approval from 89 percent  
13 working-interest owners. We have verbal approval from  
14 approximately 98 percent.

15 MR. BRUCE: Okay, thank you. I have no  
16 further questions, Mr. Examiner.

17 EXAMINATION

18 BY EXAMINER CATANACH:

19 Q. Mr. -- Shumate, is it?

20 A. Shumate, yes.

21 Q. Siete is the operator of all the subject  
22 acreage; is that right?

23 A. Yes.

24 Q. Where does the various working-interest  
25 owners come into play? I mean --

1           A.    They were all partners with Siete in the  
2 drilling of the original wells.

3           Q.    How many working-interest owners are there?

4           A.    Oh, a quick guess, I would say 30 to 35.

5           Q.    Exhibit 2 covers --

6           A.    These are all the working-interest owners,  
7 yes, and their percentage on a well basis and in the  
8 total unit.

9           Q.    And you've got verbal commitment from 98  
10 percent?

11          A.    Yes.

12          Q.    Do you have any idea what the other two  
13 percent might --

14          A.    I anticipate they will all approve the unit.

15          Q.    Now, you mentioned that production would be  
16 on a lease basis. Do you intend to keep all the lease  
17 productions separate --

18          A.    Yes.

19          Q.    -- from one another?

20          A.    Yes, we do.

21          Q.    Now, you've got three different leases  
22 involved here?

23          A.    Four.

24          Q.    Four different leases. Can you give me a  
25 breakdown of what those -- each of those leases

1 encompasses?

2 A. The tract covering the northeast quarter of  
3 the northwest quarter, this is our Arco Federal Lease.

4 MR. BRUCE: Section 24.

5 THE WITNESS: Excuse me, Section 24.

6 Q. (By Examiner Catanach) Section 24. That's  
7 the Arco Federal Lease. Okay.

8 A. The northeast quarter of Section 24 is the  
9 Geronimo Federal Lease.

10 Q. Okay.

11 A. Northwest northwest of Section 19, the Inca  
12 Federal Lease.

13 And Lot 4 of Section 18 is the Conoco Federal  
14 Lease.

15 Q. Now, in terms of those folks that don't sign  
16 up to join the cooperative unit, how are those  
17 interests treated?

18 A. Siete would be willing to carry those people  
19 in the unit, paying their share of the investment to be  
20 recouped out with no penalty.

21 Q. No penalty?

22 A. No penalty.

23 Q. Now, have the feds actually approved this  
24 cooperative unit?

25 A. Not this one, no. We've spoke to them

1 previously about a similar unit, and they had no  
2 objection.

3 Q. Well, will you be talking to the feds about  
4 this?

5 A. Yes.

6 Q. Mr. Shumate, how are the waterflood costs  
7 distributed to the various tracts?

8 A. Based on the working interests as shown on  
9 Exhibit 2.

10 Q. It's your opinion that all the interests on  
11 each of the leases are treated fairly --

12 A. Yes.

13 Q. -- according to your operating agreement?

14 A. Yes.

15 EXAMINER CATANACH: I have no further  
16 questions.

17 MR. BRUCE: I have nothing further in the  
18 case, Mr. Examiner.

19 EXAMINER CATANACH: Anything further in Case  
20 9925?

21 If not, it will be taken under advisement.

22 (Thereupon, these proceedings were concluded  
23 at 8:55 a.m.)

24

25

1 CERTIFICATE OF REPORTER

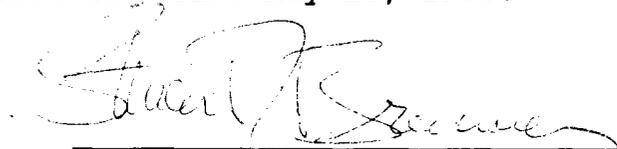
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3 STATE OF NEW MEXICO )  
 4 ) SS.  
 5 COUNTY OF SANTA FE )

6 I, Steven T. Brenner, Certified Shorthand  
 7 Reporter and Notary Public, HEREBY CERTIFY that the  
 8 foregoing transcript of proceedings before the Oil  
 9 Conservation Division was reported by me; that I  
 10 transcribed my notes; and that the foregoing is a true  
 11 and accurate record of the proceedings.

12 I FURTHER CERTIFY that I am not a relative or  
 13 employee of any of the parties or attorneys involved in  
 14 this matter and that I have no personal interest in the  
 15 final disposition of this matter.

16 WITNESS MY HAND AND SEAL May 10, 1990.

17   
 18 STEVEN T. BRENNER  
 19 CSR No. 106

20 My commission expires: October 14, 1990

21

22 I do hereby certify that the foregoing is  
 23 a complete record of the proceedings in  
 the Examiner hearing of Case No. 9825,  
 24 heard by me on May 1990.  
 25 David R. Catamul, Examiner  
 Oil Conservation Division