

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

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
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I N D E X

	Page Number
Appearances	2
Exhibits	3
ROBERT LEE	
Examination by Mr. Bruce	4
Examination by Examiner Catanach	12
GENE SHUMATE	
Examination by Mr. Bruce	14
Examination by Examiner Catanach	18
Certificate of Reporter	22

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2
3
4
5
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7
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14
15
16
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22
23
24
25

E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1	16
Exhibit 2	16
Exhibit 3	17
Exhibit 4	6

* * *

1 WHEREUPON, the following proceedings were had
2 at 8:26 a.m.:

3 EXAMINER CATANACH: Okay, we're going to skip
4 over Case 9922 for the time being and call Case 9925,
5 Application of Siete Oil and Gas Corporation for a
6 waterflood project, Eddy and Lea County, New Mexico.

7 Appearances in this case?

8 MR. BRUCE: Mr. Examiner, my name is Jim
9 Bruce from the Hinkle Law Firm in Albuquerque,
10 representing the Applicant, and I have two witnesses to
11 be sworn.

12 MR. CATANACH: Any other appearances?

13 Will the witnesses please stand to be sworn
14 in?

15 (Thereupon, the witnesses were sworn.)

16 MR. BRUCE: First I'll call Mr. Lee to the
17 stand.

18 ROBERT LEE,

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

21 EXAMINATION

22 BY MR. BRUCE:

23 Q. Mr. Lee, would you please state your full
24 name and city of residence?

25 A. My name is Robert Lee. I live in Roswell,

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

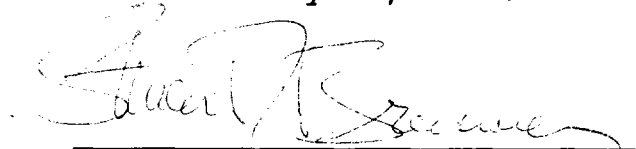
CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

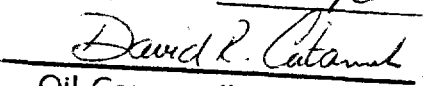
I, Steven T. Brenner, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

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

WITNESS MY HAND AND SEAL May 10, 1990.


STEVEN T. BRENNER
CSR No. 106

My commission expires: October 14, 1990

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9825, heard by me on May 2 1990.

_____, Examiner
Oil Conservation Division