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MR. CATANACH: Call next Case
9203 at this time.

MR. TAYLOR: The application of
Sun Exploration and Production Company for compulsory
pooling, Lea County, New Mexico.

MR. CATANACH: Are there
appearances in this case?

MS. AUBREY: Mr. Examiner, my
name is Karen Aubrey with the Santa Fe law firm of Kellahin,
Kellahin & Aubrey, representing the applicant. I have two
witnesses to be sworn.

MR. CATANACH: Are there any
other appearances?

Will the witnesses please stand
and be sworn in?

(Witnesses sworn.)

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

1 DIRECT EXAMINATION

2 BY MS. AUBREY:

3 Q Would you state your name for the record,
4 please?5 A My name is Nat Subramanium. I'm a
6 geologist with Sun Exploration and Production Company based
7 in Dallas, in their Exploration Division.8 Q And, sir, have you testified previously
9 before the Oil Conservation Division as a petroleum geolo-
10 gist?

11 A I have.

12 Q And have your credentials been accepted
13 before the Commission?

14 A It has been.

15 Q Are you familiar with the application of
16 Sun Exploration and Production in this case?

17 A Yes, I am.

18 MS. AUBREY: Mr. Examiner, I
19 tender the witness as an expert petroleum geologist.20 MR. CATANACH: He is so quali-
21 fied but can I get his name? I missed that.22 THE REPORTER: Nat Subramanium.
23 (Spelling)24 MS. AUBREY: Mr. Examiner, it's
25 also on Exhibit Two.

1 Q Would you look at Exhibit Number One,
2 please?

3 A Yes. I have in front of me Exhibit
4 marked Number One, which shows a structure -- subsurface
5 structure map drawn on the top of the solid line which is
6 virginian in age, usually in this area known as the Permo-
7 Penn.

8 Q An arrow on the exhibit indicates the lo-
9 cation of the proposed well, is that correct?

10 A Yes, it does. The proposed well is in
11 the southwest quarter of the southwest quarter of Section
12 22, Township 13 South, Range 34 East.

13 Q And what is the proposed completion for-
14 mation in this well?

15 A It will Bough D, which is part of the
16 Permo-Penn.

17 Q And can you tell us what proration unit
18 Sun Exploration and Production is proposing be dedicated to
19 this well?

20 A 160 acres, which would be the southwest
21 quarter of Section 22.

22 Q Let me have you look at the well which is
23 located in Section 27 to the south of the proposed well lo-
24 cation, which shows on the map as the Adobe Sanders Well?

25 A Yes.

1 Q Do you know whether or not that pool,
2 that well is within a designated pool?

3 A A Yes, it was designated in the
4 Cerca Pool, C-E-R-C-A.

5 Q And can you give your conclusions to the
6 Examiner as to the distance from that well to the proposed
7 Sun location?

8 A It will be less than a mile.

9 Q Is the proposed location in an area where
10 there are existing pool rules?

11 A Please repeat the question.

12 Q Is Sun's proposed location within any ex-
13 isting pool?

14 A If you want to take it as if it would be
15 a pool extension of what the Adobe Oil Sanders Well is at.

16 Q And that's the Cerca --

17 A The Cerca.

18 Q Okay. Do you have any other comments you
19 want to make about Exhibit Number One?

20 A The Exhibit Number One also shows to the
21 due southeast of the proposed location, the field develop-
22 ment is that of the Cerca Pool and the other structure which
23 is separated from the Cerca structure to the northwest of it
24 is the No Nombre Pool, both of which are on 160-acre spacing
25 units.

1 Q Do you have an opinion, sir, as to the
2 importance of porosity in this area?

3 A Yes. Porosity, this is not a structural
4 play, as such, it is structurally controlled stratigraphic
5 play in which porosity plays a very big role.

6 To qualify further, I would say that any-
7 where between 9 to 12 percent of porosity is needed to make
8 an effective economic completion.

9 Q Anything else you'd like to add about Ex-
10 hibit Number One?

11 A That would be all. We can move to the
12 next one.

13 Q Let me have you look now at Exhibit Num-
14 ber Two, which is a stratigraphic cross section.

15 A This is a stratigraphic -- Exhibit Number
16 Two is a stratigraphic cross section running from south to
17 north. The line of section is marked on Exhibit, the fore-
18 going exhibit, Exhibit Number One.

19 This is mainly to show the stratigraphic
20 continuity of the expected pay horizons in Sun's well. Fur-
21 ther, to designate each of these porosity units it was nec-
22 essary to hang on a stratigraphic datum and this particular
23 cross section, as you can see, is hung on a datum which is
24 called the Wolfcamp XX marker, which is recognized among the
25 geologists in the area as to be a continuous horizon.

1 Further, this exhibit also shows the dis-
2 tinctive porosity horizons and the horizons marked the C and
3 the D, and the foregoing structure map was made on a marked
4 horizon called the top of the solid line which is also de-
5 marcated in this cross section.

6 And further, the well which we previously
7 mentioned, the Adobe Oil Sanders No. 1 in Section 27, Town-
8 ship 13 South, Range 34 East, is also designated within the
9 cross section and shows that the perforations were made in
10 what we designate as Bough D.

11 Q And do you have an opinion, sir, as to
12 whether or not that's the bottom of the Wolfcamp or the top
13 of the Upper Penn?

14 A It is generally considered here by geolo-
15 gists to be very nebulous as to call whichever would be the
16 top of the Pennsylvanian; hence, the whole unit, say from
17 the top of the solid line all the way down to the recogniz-
18 able Canyon Unit is either called Cisco or Permo-Penn as --
19 as an age designation.

20 Q The line of cross section which is shown
21 on Exhibit Two is shown from A to A' on Exhibit One, is that
22 correct?

23 A That is correct.

24 Q Any other comments you'd like to make
25 about Exhibit Two?

1 A It also shows that Sun has been producing
2 in the Cerca Field from the D horizon, which we expect to
3 produce from in the proposed well.

4 Q Is it your opinion then, sir, that 160-
5 acre spacing would be appropriate, then, for the proposed
6 Sun well?

7 A I think so. I do.

8 Q Let me have you look now at your Exhibit
9 Number Three, which is a production map and I'd like you to
10 go through this, sir, and explain to the Examiner what con-
11 clusions this map allows you to draw, particularly with re-
12 gard to the risk factor of 200 percent which Sun is seeking
13 in this case.

14 A Exhibit Number Three shows production of
15 the wells within the Township 13 South, Range 34 East. They
16 have been designated based upon what the New Mexico Oil and
17 Gas Conservation Commission has designated as Upper Penn,
18 Lower Penn, and Lower Wolfcamp production. Some of the de-
19 signations, the Lower Wolfcamp, could be also construed as
20 the Upper Pennsylvanian because the demarcation is so nebu-
21 lous.

22 Q Does that, excuse me, does that explain
23 your question mark on the --

24 A Yes.

25 Q -- designation on the --

1 A Yes, that is the reason the question mark
2 is there.

3 And further, the exhibit shows the
4 production is mainly contained to the south, the southern
5 side of 13 South, Range 34 East, whereas if you look at the
6 -- further south in the 14, 34, and the 12, 34, which has
7 not been included in this map, the concentration of wells
8 are much higher than in 13 South, 34. This is mainly due to
9 a stratigraphic facies change within the -- within the
10 Pennsylvanian horizon itself.

11 Q With regard to the risk factor, sir, can
12 you explain for the Examiner what risk factor Sun
13 Exploration and Production feels is appropriate in this
14 case?

15 A It -- usually our economics is calculated
16 based on a risk ratio of 5-to-1, one successful well for
17 every five wells drilled, but generally when you -- I would
18 like to refer you the next exhibit, which would be Exhibit
19 Number Four, which is computer generated bar graph of --
20 comparing the 12 South, 34 East, 13 South, 34 East, and the
21 14 South, 34 East; the number of wells, total number of
22 wells drilled and number of producing wells, number of
23 initial tests and successful initial tests.

24 I'll have to further enumerate that the
25 word number of initial tests means those wells which were

1 specifically drilled for the Pennsylvanian and which have --
2 the next category will be of those wells which have been
3 successful. To qualify a successful well would be a commer-
4 cial well. Based on our economics of the present day oil
5 prices, any well which is not capable of making 150,000 bar-
6 rels, plus 175,000 MCF per well is not considered economi-
7 cal.

8 Q And, excuse me, is that the definition
9 that you used in -- in deciding what made up a successful
10 initial test for purposes of Exhibit Four?

11 A That is correct.

12 Q Is it your opinion that the proposed well
13 that Sun will drill will meet or exceed those economic
14 limits?

15 A That is our hope. To further enumerate on
16 Exhibit Number Four, if you see the cluster for 13 South,
17 Range 34 East, which would be the township in which the
18 proposed well will be located, there is a ratio of 27-to-9
19 initial test to successful wells, and the successful wells
20 have been spread apart rather than clumped together.

21 Q And in your opinion, sir, is that one of
22 the factors that justifies the imposition of a 200 percent
23 risk factor?

24 A Yes, it does.

25 Q Let me have you look back for a moment at

1 Exhibit Number Three. Can you tell the Examiner what the
2 distance is to the nearest producing well to the north of
3 the proposed location?

4 A The nearest producing well is six miles
5 away in Township 12 South, Range 34 East, Section 34.

6 Q Were Exhibits One through Four prepared
7 by you or under your supervision and control?

8 A Yes.

9 MS. AUBREY: Mr. Examiner, I
10 tender Exhibits One through Four.

11 MR. CATANACH: Exhibits One
12 through Four will be admitted into evidence.

13 Q Will the granting of Sun's application in
14 your professional opinion protect correlative rights,
15 promote conservation of hydrocarbons, and prevent waste?

16 A Yes, I do.

17 MS. AUBREY: Mr. Examiner, I
18 have no further questions of the witness.

19

20 CROSS EXAMINATION

21 BY MR. CATANACH:

22 Q The wells that you show on your Exhibit
23 Number Two, the Cities Service Federal E and the Pennzoil
24 Humble Federal, are those not producing from --

25 A They were tested, drill stem tested.

1 They have free oil as well as mud and they -- in the log
2 calculations of porosities they projected less than 6 per-
3 cent.

4 They were designated as dry and abandoned
5 wells in classifications.

6 Q Okay, were they plugged?

7 A Yes, they were plugged.

8 Q All the colored areas you show on Exhibit
9 Two, are those -- are those the pay sections?

10 A Yes, porosity horizons and pay sections;
11 not necessarily within this field, but generally within the
12 area of the Upper Penn, of the Permo-Penn area.

13 Q Okay, and this would be within a mile of
14 the Cerca Upper Penn Pool?

15 A Yes.

16 Q That's a 160-acre oil pool?

17 A Yes.

18 Q Are there any other secondary targets or
19 anything else that you -- Sun intends to test?

20 A Yes. Up hole would be the Lower Wolf-
21 camp, what is designated as the Lower Wolfcamp, and the
22 Bough C, which is the green horizon in your cross section.

23 Those would be the secondary targets but
24 they are up hole.

25 Q Well, let me ask you this. What would be

1 included in the producing formation in the Cerca Upper Penn?
2 What's included in that?

3 A Both the C and the D.

4 Q So that's all one formation --

5 A Yes, it's designated as one formation.

6 Q Okay, and you intend to test the
7 Wolfcamp, you said?

8 A The Lower Wolfcamp, which would be
9 designated at the upper part of the top of the solid line.

10 Q Okay, that would not be included in the
11 pool, the Cerca Upper Penn Pool?

12 A It would be because that is one of the
13 reasons in Exhibit Number Two I have a question mark where
14 it says Lower Wolfcamp. I wanted to stick to New Mexico's
15 terminology.

16 Q Okay.

17 A To call it Lower Wolfcamp.

18 Q So that would be all one pool anyway.

19 A It would be one pool.

20 Q Do you have any other target zones up
21 hole from the Wolfcamp?

22 A No.

23 Q Okay.

24 MR. CATANACH: That's all I
25 have of the witness at this time. He may be excused.

1 MR. SUBRAMANIAM: Thank you.

2
3 RICHARD H. EVERETT, III,

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

6
7 DIRECT EXAMINATION

8 BY MS. AUBREY:

9 Q Would you state your name for the record,
10 please?

11 A My name is Richard H. Everett, III.

12 Q Where are you employed?

13 A I'm a petroleum landman for Sun Explora-
14 tion and Production Company out of our Midland office.

15 Q Mr. Everett, have you testified previous-
16 ly before the Oil Conservation Division?

17 A Yes, I have.

18 Q Have your qualifications as a petroleum
19 landman been accepted?

20 A Yes, they have.

21 Q Are you familiar with the application of
22 Sun Exploration and Production in this matter?

23 A Yes, I am.

24 MS. AUBREY: Mr. Examiner, I
25

1 tender Mr. Everett as an expert petroleum landman.

2 MR. CATANACH: He is so quali-
3 fied.

4 Q Mr. Everett, would you look at Exhibit
5 Number Five --

6 A Uh-huh.

7 Q -- and explain to the Examiner what the
8 various colors on that map mean?

9 A The yellow acreage indicates land that
10 has been leased by Sun, which is primarily made up of fee
11 lands and/or severed mineral rights. Acreage in the south-
12 east quarter -- well, it would be the south half southeast
13 quarter and the northeast of the southeast is a Federal
14 lease. That is of Section 22 I'm talking about. And then
15 the acreage marked in pink is a Texaco lease, a Federal
16 lease.

17 Q Now what is the black outline around --

18 A The black outline is the initial prora-
19 tion unit for which we're asking for today. The red outline
20 is just basically a prospect outline.

21 Q So that's not an outline that's relevant
22 to the compulsory pooling case today?

23 A No, it's not.

24 Q Can you explain for the Examiner what
25 your research has shown with regard to Texaco's interest in

1 this proration unit?

2 A Texaco owns 120 acres in Section 22 of
3 which 40 fall within our proposed proration unit. Our re-
4 cords indicate that it's a long -- it's a lease that was
5 formerly owned by Skelly, then Getty, now subsequently ac-
6 quired by Texaco. It is an hbp lease held by production in
7 other areas and has been for many years.

8 Q And does the blue dot on Exhibit Number
9 Five show the proposed location?

10 A Yes, it does.

11 Q Are there any other comments you want to
12 make about Exhibit Number Five?

13 A No, I think that's all.

14 Q Let me have you look at Exhibit Number
15 Six, which is -- consists of two documents. One is a letter
16 from Sun to Texaco and one is a letter from Texaco to Sun,
17 is that correct?

18 A This is correct.

19 Q Will you go through those for the Exam-
20 iner?

21 A Our June 4th, 1987 letter from Sun to
22 Texaco was a proposal to form a small working interest
23 unit which would consist of the west half of Section 22 by
24 which Sun would own a 62-1/2 percent interest and Texaco
25 would own 37-1/2 interest. We proposed that Texaco join and

1 enclose an AFE for them to review.

2 We also asked for the option or in the
3 alternate, if they did not wish to join, to grant Sun a
4 farmout under terms that were -- that are outlined in this
5 letter.

6 The next letter is a subsequent reply
7 from Texaco, which is -- declines to participate or farmout
8 in any test.

9 Q Mr. Everett, in your opinion is Sun's
10 June 4th letter to Texaco a fair and reasonable offer to
11 voluntarily participate in the unit?

12 A Oh, yes.

13 Q Did you receive any counter-proposals or
14 additional proposals from Texaco --

15 A No.

16 Q -- with regard to that?

17 A No, we did not. We received a flat turn-
18 down with no reason.

19 Q Have you had an contact with Texaco since
20 receiving their July 24th, 1987, letter?

21 A The only contact I've had was day before
22 yesterday in which they asked how they were going to be
23 force pooled or whether it was going to be on field rules or
24 what (unclear.)

25 Q Let me have you look now at Exhibit Num-

1 ber Seven. It appears to be an AFE. Is that the AFE which
2 was submitted to Texaco --

3 A Yes, it is.

4 Q -- with your June 4th letter?

5 A Yes, it is.

6 Q Can you review taht for the Examiner and
7 tell him whether or not in your opinion that continues to be
8 an accurate AFE for this well?

9 A Well, the AFE calls for a dry hole cost
10 of \$334,000 and a fully completed producer would cost, we
11 estimate to be \$580,000.

12 Because of the -- this AFE is dated in
13 February 23rd, 1987. As you may know, industry has recently
14 seen a dramatic rise in tubular goods and we estimate that
15 actual cost could be within 10 to 15 percent greater than
16 this cost, which is primarily due to the escalation of
17 tubular goods.

18 Q Other than that is it your opinion that
19 the AFE continues to be accurate?

20 A Yes.

21 Q Is it your opinion that the AFE
22 represents a fair and reasonable estimate of the cost of
23 drilling the well?

24 A Yes, we do.

25 Q Let me have you look now at Exhibit Num-

1 ber Eight, which appears to be an operating agreement. Is
2 this the operating agreement which was proposed to Texaco in
3 this case?

4 A No, but it is similar. We changed the
5 contract area to provide for the southwest quarter only
6 instead of of the west half. Otherwise this is -- this is
7 Sun's standard form. There are standard reprinted pages in
8 here, but this is the form that Sun uses and basic terms are
9 identical. The only changes, we removed the spud date be-
10 cause we obviously don't know what it's going to be yet, and
11 we changed the contract area to provide for the southwest
12 quarter for the purposes of this hearing.

13 Q Can you tell the Examiner what effect
14 changing the proposal from the west half of Section 22 to
15 the southwest quarter has on Texaco's net interest?

16 A Well, Texaco's interest is basically re-
17 duced from a unit interest of 37-1/2 to a proration unit in-
18 terest of 25 percent.

19 Q Let me have you look now at Exhibit Num-
20 ber Nine and would you discuss that exhibit with regard to
21 your opinion as to what a fair and reasonable overhead
22 charge is?

23 A Okay. This is a copy of a front page of
24 an agreement which Sun recently received as a proposed
25 agreement from Texaco, located in another part of Lea

1 County, and we refer to the rates. If you'll check our Ex-
2 hibit Number Eight on the white page of the COPAS, Sun has
3 asked for a drilling well rate of \$5700 and a producing well
4 rate of \$570. As you can see, the proposed Texaco rates are
5 \$300 and \$330 higher respectively in each category.

6 Q Mr. Everett, do you know whether or ot
7 the Texaco proposal was for a well of substantially similar
8 depth?

9 A The well that Texaco is proposing was
10 deeper; however, we -- we feel that 6000 is a number that
11 they use consistently throughout the area. It's a practice
12 of major companies when they set their rates that they
13 generally apply to all wells drilled at that time.

14 Q Do you know whether Texaco takes the
15 position that this would be an appropriate drilling well,
16 drilling and producing rate, for a well such as the one that
17 Sun has proposed?

18 A Oh, I think, I think if Texaco was
19 operating this well that the \$6000 would appear as their
20 overhead rates.

21 Q Could you tell me again what rate Sun is
22 asking the Examiner to approve in this case?

23 A Sun is asking for \$5700 drilling well
24 rate and a \$570 producing well rate.

25 Excuse me, it's 5720 and 572.

1 Q In your opinion are those fair and
2 reasonable rates for the area --

3 A Yes.

4 Q -- and the depth of the well?

5 A These rates are based on a quarterly
6 statement issued by Sun that an internal deal that we have
7 calculated our actual costs (inaudible).

8 Q So this is reflective of your actual
9 costs?

10 A Yes.

11 Q Let me have you look now at Exhibit
12 Number Ten. It's a photocopy of the pool rules for the
13 Cerca Upper Pennsylvanian Pool.

14 A Yes.

15 Q Is it your understanding that because of
16 its proximity to the Cerce Upper Pennsylvanian Pool Sun's
17 proposed well would be governed by those pool rules?

18 A Yes, it is.

19 Q And what is the spacing in that area?

20 A 160-acre spacing.

21 Q Do you know, Mr. Everett, whether or not
22 the location which Sun has proposed is a standard location
23 under the Cerca Upper Penn Pool rules?

24 A Yes, it is. It's 660 from the south and
25 the west lines of Section 22.

1 Q Mr. Everett, were the Exhibits Five
2 through Ten prepared either by you or under your direction
3 and supervision?

4 A Yes, they were.

5 MS. AUBREY: Mr. Examiner, I
6 offer Exhibits Five through Ten.

7 MR. CATANACH: Exhibits Five
8 through Ten will be admitted into evidence.

9 Q Mr. Everett, in your opinion will the
10 granting of this application protect correlative rights,
11 promote conservation, and prevent waste?

12 A Yes, it will.

13 MS. AUBREY: Mr. Examiner, I
14 have no more questions of the witness, although I do have
15 one thing I'd like to add. We have a copy, the original of
16 the green certified mail card here, which we didn't photo-
17 copy. I'd like to mark that now as Exhibit Number Eleven
18 and return it to the Examiner after photocopies are made.
19 Would that be acceptable?

20 MR. CATANACH: What -- what ex-
21 hibit is that?

22 MS. AUBREY: It will be Exhibit
23 Number Eleven, the certified copy mail card, showing notice
24 under the Commission's rules to Texaco, of the hearing.

25 MR. TAYLOR: That's just what

1 we were talking about.

2

3

CROSS EXAMINATION

4 BY MR. CATANACH:

5 Q Mr. Everett, has Sun drilled a well in
6 this area recently?

7 A Not in the past two or three years.

8 Q How did you obtain your estimated
9 drilling costs?

10 A They're calculated -- our estimate, it
11 was prepared by our drilling manager.

12 Q And that reflects more or less current
13 prices?

14 A Right, except for the recent escalation
15 in tubular goods.

16 Q Okay. You said Exhibit Number Nine was
17 submitted to you from Texaco?

18 A Yes.

19 Q Did Sun sign that agreement?

20 A No.

21 Q They did not?

22 A Not that -- in its present form. There
23 were several partners to it. It was changed. We have now
24 signed it. But it was, it's been altered considerably by
25 the suggestions of several parties.

1 Q Were the overhead rates changed?

2 A Yeah, they were lowered.

3 Q They were?

4 A Yes.

5 Q Do you know to what?

6 A To about \$5500.

7 Q \$5500.

8 A However, we have seen the consistency
9 between, you know, every company has their different
10 overhead rates proportionate to their cost, but we've seen
11 from \$5500 to \$6100 to be a common number used by large
12 independents and major companies.

13 Q This was a, what, a deeper well?

14 A This is a deeper well, yes, but on 10,000
15 foot wells and deeper, your costs are usually -- your
16 overhead costs usually are about the same.

17 We wouldn't, Sun internally wouldn't make
18 a distinction nor would we see a big one between other
19 companies proposing wells to us.

20 MR. CATANACH: I think that's
21 all I have at this time. This witness may be excused.

22 Is there anything further in
23 Case 9203?

24 If not, it will be taken under
25 advisement.

(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. 9203, heard by me on August 26, 1987.

David R. Catanzano, Examiner
Oil Conservation Division