

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 10,015

EXAMINER HEARING

IN THE MATTER OF:

Application of Bird Creek Resources, Inc., for
Compulsory Pooling, Eddy County New Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

July 25, 1990

ORIGINAL

A P P E A R A N C E S

FOR THE DIVISION:

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ALSO PRESENT:

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* * *

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* * *

1 WHEREUPON, the following proceedings were had
2 at 10:11 a.m.:

3 EXAMINER CATANACH: At this time we'll call
4 Case 10,015.

5 MR. CARROLL: Application of Bird Creek
6 Resources, Inc., for compulsory pooling, Eddy County,
7 New Mexico.

8 EXAMINER CATANACH: Are there appearances in
9 this case?

10 MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin
11 of the Santa Fe law firm of Kellahin, Kellahin and
12 Aubrey, appearing on behalf of the Applicant, and I
13 have two witnesses to be sworn.

14 EXAMINER CATANACH: Are there any other
15 appearances?

16 Will the witnesses please stand to be sworn
17 in?

18 (Thereupon, the witness were sworn.)

19 MR. KELLAHIN: Mr. Examiner, before we start
20 with the presentation of the evidence in this case, I'd
21 like to request that the Order itself provide for an
22 operator other than the Applicant.

23 The testimony will be that one of the
24 majority working-interest owners has come to an
25 arrangement with Bird Creek with their concurrence that

1 they would like to operate this well, and that issue is
2 not in contention with any of the parties, and that
3 will be part of our testimony.

4 But to alert you ahead of time, we're seeking
5 to have Harken Exploration Company designated as the
6 operator and it's the first party listed on Exhibit
7 Number 1.

8 EXAMINER CATANACH: Okay.

9 LAWRENCE W. ROBINETTE,
10 the witness herein, after having been first duly sworn
11 upon his oath, was examined and testified as follows:

12 DIRECT EXAMINATION

13 BY MR. KELLAHIN:

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

16 A. Lawrence W. Robinette. I'm a land management
17 consultant employed by Bird Creek Resources basically
18 for filling the position of land management in Bird
19 Creek.

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

23 A. Yes, I have.

24 Q. And pursuant to your employment by your
25 company, have you as a petroleum landman attempted on a

1 voluntary basis to consolidate the working-interest
2 ownership for the drilling of the subject well?

3 A. Yes, I have.

4 MR. KELLAHIN: We tender Mr. Robinette as an
5 expert petroleum landman.

6 EXAMINER CATANACH: He is so qualified.

7 Q. (By Mr. Kellahin) Mr. Robinette, let me
8 direct your attention, sir, to what we've marked as
9 Exhibit Number 1, and would you identify for the
10 Examiner the various working-interest owners as you
11 have determined them to be, and what the status is as
12 of today of your efforts to get them to voluntarily
13 commit their interest to this well?

14 A. Yes. Of course, with Harken Exploration,
15 we've made an agreement with Harken, we named them the
16 operator of the well, so obviously they're going to
17 participate and be dismissed from the Order.

18 Quinoco Consolidated Partners and Concise Oil
19 and Gas Partnerships are two partnerships operated by a
20 company known as Hall-Wood-Quinoco. Now, they have
21 indicated that in all likelihood they will participate,
22 however they have not signed the AFE as of this time.

23 Read and Stevens and T.T. Sanders have
24 elected to participate and will be dismissed from the
25 Orders.

1 And CHL Energy, Inc., has failed to respond,
2 this being at least the third pooling in which we've
3 never heard anything from them. They have received the
4 letters. We've tried to call them numerous occasions.
5 They've never returned the phone call. I don't have
6 any explanation for why that is, but they've never --
7 We've never had any response from them whatsoever.

8 Q. Your efforts in order to consolidate the
9 acreage involved has been towards the drilling of a
10 well to commit all oil or gas production on a 40-acre
11 space unit from the surface to the base of the
12 Delaware?

13 A. That's correct.

14 Q. Would you describe for the Examiner, as you
15 understand it, what the acreage is involved for this
16 particular well?

17 A. Okay, the acreage involved is the southeast
18 of the northeast quarter of Section 15, 23 South, 28
19 East, which is located just to the -- a couple miles
20 east of the town of Loving, New Mexico.

21 It's in the -- what's know as the East
22 Delaware pool or field, the undesignated Delaware
23 field. Most of the wells -- the original in that field
24 was drilled down in Section 23 in the southeast. Most
25 of the current development has been in the west half of

1 Section 14, which is to the east of this location.

2 Q. Let's turn your attention now, sir, to
3 identifying and describing your efforts to obtain the
4 voluntary commitment of the various working-interest
5 owners, and in that regard, let me have you identify
6 and describe what is marked as Exhibit Number 2.

7 A. Yes, these are letters that were sent on the
8 1st of May to all the working-interest owners in the
9 southeast of the northeast quarter of Section 15.

10 We sent these out to each of the owners by
11 certified mail. They were all received.

12 In the Case of CHL, sent by registered mail,
13 since certified is not delivered in Canada.

14 Q. Did your letters include the AFE that's
15 marked in the exhibit package as Exhibit Number 7?

16 A. Yes, it did, it had two copies of the AFE
17 included.

18 Q. And what, if any, response did you receive
19 from CHL Energy?

20 A. None.

21 Q. Direct your attention now to Exhibit Number
22 3. Identify and describe your efforts with regards to
23 that working interest.

24 A. The same thing. It's a letter dated May 1,
25 1990, to Concise Oil and Gas Partnership in Denver, the

1 same letter sent to CHL, along with two copies of the
2 AFE for the well in the southeast of the northeast.

3 Q. Quinoco, Exhibit Number 4?

4 A. Again, the same letter with the same AFE sent
5 to Quinoco, and as I indicated before, Concise and
6 Quinoco are -- These are two different partnerships
7 operated by Hall-Wood-Quinoco out of Denver.

8 They have talked to me by phone. They had
9 sent an AFE in, however their AFE with the letter
10 indicated that they were signing it to participate for
11 their 2.5-percent working interest.

12 I called them and advised them that their
13 interest was more like 30 percent. And they said,
14 Well, we'll take another look at it and let you know in
15 a few days.

16 However, Quinoco and Concise were both
17 participants in a well north offset to this location
18 and are fully expected to participate in this test.

19 Q. Identify and describe Exhibit Number 5.

20 A. This is a letter, the same letter dated May
21 1, 1990, sent to Harken Exploration Company.

22 Subsequent to this letter, we made an
23 agreement with Harken. They indicated that they wanted
24 to participate, would like to be named operator. They
25 have a majority interest in this 40 acres, and we

1 worked out an agreement where they will be named the
2 operator.

3 Q. Is that your recommendation or request to the
4 Examiner, that Harken Exploration Company be in fact
5 designated as the operator --

6 A. Yes.

7 Q. -- pursuant to this pooling Order?

8 A. Yes, it is.

9 Q. Identify and describe Exhibit Number 6,
10 please.

11 A. Copy of the same letter dated May 1, 1990,
12 sent to Read and Stevens, Inc. Read and Stevens, Inc.,
13 has -- At the time the letter was sent, the interest,
14 to our knowledge, according to Read and Stevens, was in
15 their name. However, it was subsequently split between
16 them and T.T. Sanders, however both of those parties
17 are going to participate, have elected to participate,
18 and will be dismissed.

19 Q. Identify and describe Exhibit Number 7.

20 A. This is the AFE for the Delaware test to be
21 located in the southeast of the northeast of Section
22 15, 23 South, 28 East.

23 Q. This is the same AFE that you circulated to
24 all the working-interest owners?

25 A. That's correct.

1 Q. And have you received any objection or
2 complaint with regards to the proposed cost of the
3 well?

4 A. No, we have not.

5 Q. How do these estimated costs compare to
6 actual costs for other Delaware wells that your company
7 has drilled or participated in, in this plan?

8 A. They've come in within five percent one way
9 or the other. We've had one well where they were five
10 percent over and we've had other wells where they were
11 approximately five percent under. It depends on the
12 specific circumstances of the well.

13 You know, if we had one well that had some
14 trouble with some drill pipe and so forth which caused
15 us a couple problems, it caused the cost to be a little
16 higher. But basically the AFE is, I think, quite
17 accurate.

18 Q. Estimate for the Examiner the number of wells
19 that your company has operated in this particular play.

20 A. In this particular play we have drilled and
21 completed eight wells.

22 Q. And how many more wells have you planned as
23 operator?

24 A. We have planned as operator -- Let's see,
25 currently -- probably about 7 in this immediate area.

1 Q. Based upon your experience and that of your
2 company, do you recommend to the Examiner that the
3 proposed AFE is fair and reasonable and should form a
4 basis for participation, then, pursuant to the pooling
5 Order if entered by the Examiner?

6 A. Yes.

7 Q. Do you have a recommendation to the Examiner
8 with regards to overhead rates to be assessed under the
9 pooling order, Mr. Robinette?

10 A. Yes, we recommend the same overhead rates
11 that we've previously recommended, which were the
12 overhead rates that came out in the last quarterly
13 survey from Ernst and Whinney, which are \$4539
14 drilling-well rate and \$438 producing-well rate.

15 MR. KELLAHIN: Mr. Examiner, let me show you
16 what is Division Order R-9206. It's one of the recent
17 orders the Division has entered for Bird Creek
18 Resources in this area and sets forth the overhead
19 rates.

20 We would request that you take administrative
21 notice of that Order as applied to this case.

22 EXAMINER CATANACH: Administrative notice
23 will be taken of Order Number R-9206.

24 MR. KELLAHIN: That concludes my examination
25 of Mr. Robinette.

1 We would move the introduction of Exhibits 1
2 through 7.

3 EXAMINER CATANACH: Exhibits 1 through 7 will
4 be admitted as evidence.

5 EXAMINATION

6 BY EXAMINER CATANACH:

7 Q. Mr. Robinette, did you say you had sign-up
8 from Read and Stevens and T.T. Sanders?

9 A. Yes.

10 Q. You do actually have --

11 A. Yes.

12 Q. -- agreements in hand?

13 You don't have agreements from Quinoco or
14 Concise, but you expect them to?

15 A. I expect them. And in our previous poolings,
16 what we have out here is, we have farmout agreements
17 throughout the east half of 15 in which we have
18 continuous-drilling clauses.

19 Two reasons for pooling: One is to keep the
20 wells on -- keep the wells within a schedule so that we
21 don't get outside of our options on our farmout
22 agreements. And the other, of course, is CHL has
23 failed to respond in every pooling we've ever had, and
24 this is at least the third one in which they've been --
25 they have an interest in, albeit small; you know, we

1 can't leave an interest -- you know, we don't feel we
2 can leave an interest just hanging out there.

3 So that's the two reasons for the pooling.
4 So regardless of what Quinoco had done, we'd have to
5 pool it anyway because of CHL.

6 Q. Okay. Have you ever had any verbal
7 communications with CHL?

8 A. None. I've tried to call them by phone,
9 never had a phone call returned from them. I've
10 reached their, like, secretary and so forth, and no one
11 has ever returned the call.

12 CHL was a company that was originally in
13 Midland, and these people are Canadians that purchased
14 the stock of the company several years ago, and for
15 some reason I think that they think that we're going to
16 tell them CHL owes money or something, you know.

17 I can't understand why they won't respond. I
18 mean, the letters are clear as to what we're asking
19 about. But they've failed to respond anyway. I don't
20 have any good explanation for it. I just tell you that
21 I can not get a response out of them.

22 Obviously, the interest is such that, you
23 know, I'm not going spend the money personally to fly
24 personally to Vancouver to go knock on their door. If
25 they won't return a phone call or respond to the

1 communications, that's...

2 EXAMINER CATANACH: No further questions.

3 The witness may be excused.

4 MR. KELLAHIN: Mr. Examiner, I call at this
5 time Mr. Brian Powers. Mr. Powers is a petroleum
6 geologist.

7 BRIAN KENNETH POWERS,
8 the witness herein, after having been first duly sworn
9 upon his oath, was examined and testified as follows:

10 DIRECT EXAMINATION

11 BY MR. KELLAHIN:

12 Q. Mr. Powers, would you please state your name
13 and occupation?

14 A. Brian Kenneth Powers. I am employed by
15 Harken Exploration as a geologist for the purpose of
16 looking at the Permian Basin. Located in Midland,
17 Texas.

18 Q. Mr. Powers, on prior occasions have you
19 testified before the Division as an expert petroleum
20 geologist?

21 A. No, I have not.

22 Q. Would you tell the Examiner when and where
23 you obtained your degree, degree in geology?

24 A. I have a bachelor's and a master's from Texas
25 A&M University, 1976, 1980.

1 Q. Subsequent to that, would you summarize for
2 us your professional experience as a geologist and
3 concentrate on southeastern New Mexico and west Texas
4 for us?

5 A. I was employed by Cities Service Oil Company
6 from 1980 to 1984 as a geologist assigned to southeast
7 New Mexico specifically.

8 After that I went to work for a group out of
9 Oklahoma, Harper Oil Company. However, their offices
10 are located in Midland, and again I was assigned to
11 southeast New Mexico from 1984 to 1987.

12 Since that time I have been working on my own
13 for a couple of years, and the last year and a half
14 I've been with Harken exploration, again assigned to
15 the Permian Basin, including southeast New Mexico.

16 Q. Harken Exploration Company that you work for
17 is the same company that seeks to be designated as
18 operator in this case?

19 A. That is correct.

20 Q. Describe your own personal studies of the
21 geology for the Delaware play that's involved in this
22 pooling case.

23 A. In general terms, the Delaware in this area
24 is comprised of two factors to produce hydrocarbons.
25 Number one, it needs some type of structural anomaly,

1 subtle, but some type of structural anomaly, and it
2 needs reservoir-quality rock.

3 The area that Bird Creek is producing out of
4 has both those factors.

5 Q. In order to make a geologic study, have you
6 prepared a structure map to show the structure of the
7 reservoir in the Delaware and an isopach to show the
8 extent of that reservoir?

9 A. Yes, and these are the maps that you're
10 looking at right here.

11 Q. Based upon that study, are you able to reach
12 a conclusion with regards to a recommendation to the
13 Examiner for a risk-factor penalty to apply in this
14 case?

15 A. Yes, in the location that we're looking at in
16 the southeast of the northeast of 15, I would recommend
17 the maximum penalty.

18 MR. KELLAHIN: At this time, Mr. Examiner, we
19 tender Mr. Powers as an expert petroleum geologist.

20 EXAMINER CATANACH: He is so qualified.

21 Q. (By Mr. Kellahin) Let me have you take your
22 first display, Exhibit Number 8, which I believe is
23 your structure map --

24 A. Uh-huh.

25 Q. -- and give us your basis for that conclusion

1 insofar as structure is important.

2 But first of all, help us understand your
3 display and explain to us those items that are
4 important to you.

5 A. Okay. What you're looking at is the
6 structure map in the -- on the Exhibit 8, which is on
7 top of the Brushy Canyon, the lowest sedimentary
8 package in the Delaware mountain group. This structure
9 map is generated near the top of the pay section,
10 within a hundred feet or so. It represents very
11 closely what the pay section structure would look like,
12 and it's a marker that's easily followed throughout the
13 area.

14 Q. Identify for us the proposed location of the
15 well to be drilled pursuant to this pooling Order.

16 A. The location that we're looking at is in the
17 southeast of the northeast of 15.

18 Specifically in relation to the structure of
19 the area, you'll notice that there is a structural high
20 developed in Section 11 and Section 14. That
21 structural high has dip reversal, both to the east --
22 to the east half of 14, and to the west, and to the
23 east and west half of 15.

24 Specifically, the location that we're looking
25 at would be subject to some risk of coming off of that

1 structure in relationship to the displays which we'll
2 get into. I feel that an oil/water is going to occur,
3 both to the east and the west of the section line
4 between Section 14 and 15.

5 Q. You've quantified that risk and reached the
6 conclusion that it justifies the maximum penalty?

7 A. Yes.

8 Q. Describe for us how you have determined the
9 oil/water contact as one of the criteria to evaluate
10 that risk.

11 A. If you will look at the structural elevations
12 in Section 15 and the structural elevations in Section
13 14, you will notice, for instance, in the center of
14 Section 15, there is a 2888 -- minus 2888. And if you
15 will note in the northwest of the northeast of 14,
16 similarly there is a minus 2890.

17 The well directly south of that, I do not
18 have a log on. I do not -- It is currently tight.
19 However, I do know that the initial potential of that
20 well, which is the southwest of the northeast of 14 --
21 the southwest of the northeast of 14 -- potential for
22 40 barrels of oil and some 100 barrels of water.

23 Now, that is approaching the oil/water
24 contact. I expect the performance of that well will
25 see some fairly high water cuts in the future.

1 We do not have the -- We do not have a firm
2 handle on the performance of the wells that are north
3 and south of our proposed location in 15, however it
4 would -- The way I have interpreted the map is rather
5 liberal.

6 If you can interpret it more conservatively,
7 that isn't a risk factor. Where our location lay, you
8 could get downdip enough that you would start to see
9 the same kind of water encroachment in the well life,
10 albeit that the initial potentials may look
11 satisfactory; I would expect the water would increase
12 rather quickly, and that's the way I assess the risk.

13 Q. When you look in Section 15, there are two
14 gas-well symbols in that section?

15 A. Yes.

16 Q. Were those wells drilled deep enough that you
17 have log information on the Delaware --

18 A. Yes.

19 Q. -- portion in those wells?

20 A. That's correct. Both of those wells with gas
21 are Morrow wells. We'll have log sweeps across both --
22 across the complete Delaware section.

23 Q. Do you have any drill-stem test information
24 or other data that give you any --

25 A. No.

1 Q. -- basis for understanding where that water
2 contact may be at those two well locations?

3 A. No drill-stem test data, no.

4 Q. Is there any way from log analysis that you
5 have available to you, to give you a handle on the --

6 A. Yes, the -- from the log --

7 Q. -- potential gas/water contact?

8 A. From the log analysis, the pay section is
9 similar but slightly lower ohm readings, slightly lower
10 ohm readings in the Delaware section pay.

11 But, however, that is tempered with the fact
12 that those are Morrow wells, and the log sweep was run
13 well after -- well after the -- well after the Delaware
14 section was penetrated, so therefore there would be
15 quite a bit of invasion, and that -- You could not
16 render an opinion one way or the other looking at the
17 logs, whether that would be -- Looking at the logs, you
18 couldn't render an opinion whether the ohm readings and
19 water calculations were valid or not, either pro or
20 con.

21 Q. So --

22 A. But I have -- I have information with regard
23 to pay thickness and reservoir section. If you'll look
24 at the other --

25 Q. Let's go to Exhibit --

1 A. Okay.

2 Q. -- Number 9 and have you describe the
3 reservoir.

4 A. Exhibit Number 9 is very similar to Exhibit
5 Number 8 in the fact that most of the -- the better
6 reservoir quality rock is developed to the north of our
7 proposed location, even though we're looking at
8 porosity, and this map that I've generated, Exhibit 9,
9 is a porosity isopach.

10 Even though the isopach thickness is similar
11 to some of the wells to the north, it is still slightly
12 less.

13 And this goes along with what I was saying
14 about falling offstructure. If we have a -- If we have
15 a structural anomaly and we have the sand sands draped
16 over it and we have good reservoir quality, then if we
17 come off of that structure we're going to see quite a
18 bit of water, more so than if the rocks were tighter,
19 early on in the well history.

20 Q. Is it fair to characterize the displays that
21 we now have pretty good geologic control in Sections 11
22 and 14?

23 A. Yes.

24 Q. But as we move to the west of your location,
25 particularly to the southwest, we have an absence of

1 data by which to minimize the risk?

2 A. That's correct.

3 Q. And as we move to the west then, we have no
4 assurance as to whether we'll encounter this water/oil
5 contact or not?

6 A. Well, we don't -- without -- there can be
7 structural -- There can be some structural changes that
8 we don't have a handle on right now, and that's where
9 my risk assessment comes from, is we know what control
10 points we have.

11 But we don't have the control points directly
12 to the west or to the northwest of our proposed
13 location to say that either we will or will not fall
14 offstructure enough to see water encroachment.

15 Q. In conclusion, then, Mr. Powers, based upon
16 your geologic study, you are of the opinion that the
17 200-percent maximum penalty is warranted in assessing
18 nonconsenting working-interest owners under this --

19 A. That is correct.

20 Q. Were Exhibits 8 and 9 prepared by you?

21 A. Yes.

22 MR. KELLAHIN: We move the introduction of
23 Mr. Powers' Exhibits 8 and 9.

24 EXAMINER CATANACH: Exhibits 8 and 9 will be
25 admitted as evidence.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Powers, could you discuss the well in the southeast quarter of Section 15, the one marked minus 2881?

A. In the southeast -- okay.

Q. Southeast.

A. Yeah. You're misreading. That's a 2851.

Q. -51.

A. -51. That didn't xerox very well.

That well was recently completed by Bird Creek. Its initial rates were on the order of 200 oil, 100 water.

Q. So are you estimating that that's still above the gas/water contact?

A. The oil/water contact?

Q. The oil/water contact.

A. Yes, yes. But it's -- the oil -- I can -- My opinion is that the oil/water contact is gradation on these pays, and you always produce some water with oil.

As you approach the north -- As you approach the northwest quarter of Section 14 there's very little water production in those wells, in the northwest quarter of 14.

However, I would expect to see increasing the

1 water cuts downdip. And in fact in Section 23 and
2 Section 22 where there has been some established
3 production out of these pays, they are seeing quite
4 high water cuts at this point, even from positions that
5 are similar structurally to some of the Bird Creek
6 wells.

7 So I think -- my concern is -- Like I said,
8 the interpretation that you see before you is fairly
9 liberal in that if we -- we may expect to see a -- We
10 may expect to see structural elevation similar to the
11 well that's in the southeast of 15.

12 If we drop off anywhere from 10 to 20 feet
13 then we may expect to see what I was referring to by
14 the Reading and Bates well in Section 14. That is
15 relatively low oil cuts initially, with relatively high
16 water cuts.

17 Even though the well may be commercial for
18 some time to come, the commercialities can be affected
19 by the water cuts and having to deal with that.

20 Q. The potential for that well was, you said, 40
21 barrels of oil per day?

22 A. Uh-huh.

23 Q. And how much water?

24 A. A hundred, one hundred. We understand that's
25 what they're -- We understand that their production

1 rates are along those lines also. Now, that well has
2 only been on for a short period of time.

3 Q. How about the well in the northeast quarter
4 of Section 15? Is that a pretty good well?

5 A. Yes, that's a pretty good well. The initial
6 rates and tubing pressure was slightly higher than the
7 well that's in the southeast quarter, by some 100
8 barrels of oil, the potential for nearly 300 with a
9 slightly higher tubing -- flowing-tubing pressure.

10 MR. MORROW: And the water?

11 THE WITNESS: And the water, the was
12 neither -- the water -- Both of those wells had a frac
13 on them, but the water in that one is relatively low.
14 It's -- I think it -- I'm going to say 80 barrels of
15 water, initial potential.

16 Q. (By Examiner Catanach) Do you feel a
17 difference of 10 to 20 feet, you said, if you lose 10
18 to 20 feet structurally --

19 A. Yeah, I think -- I think what we're seeing is
20 basically we're at a structural elevation here which
21 liberally could be 2850, plus or minus.

22 I think any elevation below 2870 would be in
23 jeopardy of seeing some high water cuts, and that would
24 -- that will affect the well life and will also affect
25 the commerciality of having to deal with the water.

1 So I think any -- I think if we lose 20 feet
2 or more, then it's going to be a -- and that -- You can
3 see from the center of Section 14 that those kind of
4 changes can occur, can occur locally.

5 Q. In Section 14 there's a well that's at 2869.

6 A. Yes.

7 Q. Would that experience a high water cut?

8 A. It is -- It doesn't have a great deal of
9 water production at present, no.

10 Q. But that's about the same depth, you feel,
11 that the -- you'll get into water; is that correct?

12 A. That's -- That is correct. The reservoir --
13 the one handle that you don't -- The one handle that
14 you can't get on this is the quality of the reservoir
15 rock, and that is changes in porosity.

16 If we experience that particular -- That
17 particular well, if you'll look at the porosity
18 isopach, has approximately 50 feet of pay section. If
19 we were to experience -- And that 50 feet of pay
20 section is also related quantitatively to the quality
21 of the porosity.

22 For instance, a well which would have 60 to
23 70 feet of pay section would also have higher porosity.
24 That is an average of something -- This porosity map
25 that you're looking at is a 10-percent cutoff, for

1 instance.

2 Fifty feet, that well we're referring to in
3 Section 14 has 50 feet greater than 10 percent. If we
4 were to look at the wells with 60 and 70 feet of
5 porosity isopach, those wells also would have higher
6 porosity, in excess of 15 to 20 percent in some cases.
7 That is going to affect the amount of water production
8 that those wells make.

9 We are in Section 15, and we are seeing
10 generally higher porosities in and around our proposed
11 location than what we're looking at in Section 14. And
12 so at an equivalent structural depth, we might expect
13 to make more water than those wells in 14.

14 EXAMINER CATANACH: I see. I have no further
15 questions of the witness.

16 MR. MORROW: Does the AFE amount look about
17 right to you?

18 THE WITNESS: Yes, sir. In our experience --
19 we've been involved in Bird Creek with one other well
20 -- we were satisfied with their AFE and their
21 performance of that.

22 EXAMINER CATANACH: Okay, the witness may be
23 excused.

24 Mr. Kellahin, in terms of the requirement of
25 mailing out an additional AFE after the hearing, would

1 Bird Creek retain that responsibility?

2 MR. KELLAHIN: We'd be happy to. I think
3 it's an administrative task that either party can
4 accomplish, and if that's your desire that's what we'll
5 do.

6 MR. ROBINETTE: Whichever way you want to
7 go --

8 MR. KELLAHIN: In addition, Mr. Examiner, we
9 have our certificate of mailing. It's marked as
10 Exhibit Number 10. We'd request that that be admitted
11 into the record.

12 EXAMINER CATANACH: Exhibit Number 10 will be
13 admitted into evidence in this case.

14 Is there anything further?

15 MR. KELLAHIN: No, sir.

16 EXAMINER CATANACH: Case 10,015 will be taken
17 under advisement.

18 (Thereupon, these proceedings were concluded
19 at 10:43 a.m.)

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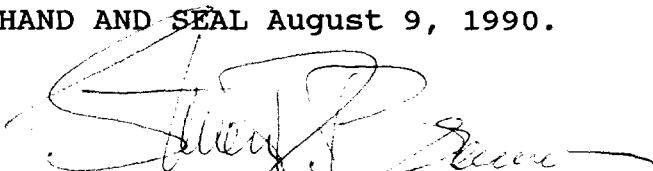
CERTIFICATE OF REPORTER

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 August 9, 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. 1005, heard by me on July 25 1990.


David R. Catanzaro, Examiner
Oil Conservation Division