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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
CASE 10,711

EXAMINER HEARING

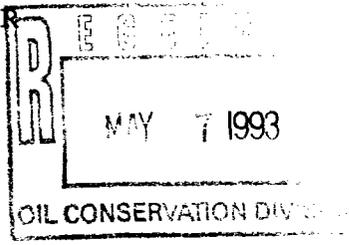
IN THE MATTER OF:

Application of Yates Petroleum Corporation for approval of a waterflood project and qualification for the recovered oil tax rate, Eddy County, New Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

ORIGINAL



STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

April 4, 1993

A P P E A R A N C E S

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ALSO PRESENT:

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105 South Fourth Street
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1 WHEREUPON, the following proceedings were had
2 at 5:03 p.m.:

3 EXAMINER CATANACH: At this time we'll call
4 Case 10,711.

5 MR. STOVALL: Application of Yates Petroleum
6 Corporation for approval of a waterflood project and
7 qualification for the recovered oil tax rate, Eddy
8 County, New Mexico.

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

11 MR. CARR: May it please the Examiner, my
12 name is William F. Carr with the Santa Fe Law firm of
13 Campbell, Carr, Berge and Sheridan.

14 I represent Yates Petroleum Corporation in
15 this case, and I have one witness who has been
16 previously sworn.

17 EXAMINER CATANACH: Okay. Go ahead.

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

21 DIRECT EXAMINATION

22 BY MR. CARR:

23 Q. Would you state your name for the record,
24 please?

25 A. Theresa Sloan.

1 Q. And where do you reside?

2 A. Artesia, New Mexico.

3 Q. By whom are you employed and in what
4 capacity?

5 A. Yates Petroleum as a petroleum engineer.

6 Q. Have you previously testified before this
7 Division?

8 A. Yes, I have.

9 Q. At the time of that testimony, were your
10 credentials as a petroleum engineer accepted and made a
11 matter of record?

12 A. Yes.

13 Q. Are you familiar with the Application filed
14 in this case on behalf of Yates Petroleum Corporation?

15 A. Yes.

16 MR. CARR: Are the witness's qualifications
17 acceptable?

18 EXAMINER CATANACH: They are.

19 Q. (By Mr. Carr) Could you briefly state what
20 Yates seeks in this case?

21 A. Yates is seeking approval of a waterflood
22 project on the Creek lease in the Penrose and Middle
23 Grayburg formations.

24 Q. Could you identify what has been marked as
25 Yates Exhibit Number 1?

1 A. Yates Exhibit Number 1 is a plat which shows
2 the Creek AL lease within the Shugart field.

3 Q. Let's move on to Exhibit Number 2, and would
4 you explain to Mr. Catanach what this exhibit shows?

5 A. Exhibit Number 2 is showing our proposed
6 injection pattern on the Creek lease.

7 The yellow outline shows the outline of the
8 complete Creek lease, and it will show that we're
9 proposing three injection wells and seven producers.

10 Q. Okay. Now, could you review those producers,
11 or proposed producing wells, for Mr. Catanach?

12 A. Okay, the -- Let me start from the beginning,
13 I guess, here.

14 The Number 3, 5 and 7 wells have been -- have
15 only penetrated the Penrose formation, so we're
16 proposing to deepen those wells to include the middle
17 Grayburg.

18 We plan to convert the Numbers 6, 7 and 9 to
19 injection wells.

20 The Number 3, 5 and 8 will be producers.

21 We plan to drill three additional wells as
22 producers, the Number 12, 13 and 14.

23 And the Creek Number 10, we're proposing to
24 re-enter it -- it's a temporarily abandoned well -- and
25 complete it as a producer.

1 Q. Now let's move to Exhibit Number 3. Would
2 you identify that, please?

3 A. Exhibit Number 3 shows the -- It's a plat
4 also. It shows the Creek AL lease in yellow and the
5 Hanson Unit area in green.

6 Q. Could you briefly review for Mr. Catanach the
7 background on this waterflood proposal and also
8 particularly give him an update on the status of the --
9 of Hanson Operating Company's plans for development of
10 the adjoining unit?

11 A. Well, there's been a joint effort by Hanson
12 and Yates to study the feasibility of a waterflood in
13 this area. And there was an engineering study done by
14 Williamson consultant out of Midland. This study was
15 offered as an exhibit, Exhibit 14 in the Hanson case,
16 Number 10,686, on March 18th.

17 We negotiated for two years and concluded
18 that we could effectively produce this as a cooperative
19 flood.

20 So Hanson had applications into the -- for
21 statutory unitization and approval of a waterflood
22 project, and these were heard by the Division on March
23 18th.

24 Q. And could you identify for Mr. Catanach the
25 formations that Yates proposes to waterflood?

1 A. They are the Penrose and the Middle Grayburg
2 formations.

3 Q. And based on your study of this area, do you
4 believe these formations can be effectively developed
5 with the proposed cooperative waterflood?

6 A. Yes, they can. They're the same formations
7 as Shenandoah, the Shenandoah flood to the east, and
8 also the same zones that Hanson is proposing to flood.

9 Q. If we look at this Exhibit Number 3, you've
10 reviewed the Yates plans for drilling additional wells
11 and converting certain wells to injection?

12 A. Uh-huh.

13 Q. There's acreage on the extreme eastern
14 portion of the Creek lease?

15 A. Uh-huh.

16 Q. In your opinion, is it appropriate to include
17 this acreage in the proposed cooperative waterflood
18 effort?

19 A. Yes, it is, because we've been discussing
20 this with Hanson. There's a potential of our
21 converting our Number 1 and Number 11 into injection
22 wells and potential of drilling an injection well or
23 two between the Hanson Number 3 and 4 and the Yates
24 Number 3 and 8 wells.

25 Q. And in the original Williamson study, it was

1 recommended also that this acreage be included in the
2 proposed waterflood --

3 A. Yes.

4 Q. -- these particular formations?

5 A. Yes.

6 Q. All right. Let's go to Exhibit Number 4.

7 Could you identify that, please?

8 A. Exhibit Number 4 is a C-108 application for
9 this waterflood.

10 Q. This is a new project?

11 A. Yes.

12 Q. Let's go to pages 9 through 11 of this
13 exhibit, and I'd ask you to identify those for Mr.
14 Catanach.

15 A. Okay. Pages 9 through 11 shows the lease
16 ownership within two miles of each injection well, and
17 it also shows the area of review for each injection
18 well.

19 Q. All right. And if we move to pages 12
20 through 15, what does this show?

21 A. Pages 12 through 15 show the well data
22 information on all the wells within the area of review
23 of each injection well.

24 Q. Are there any plugged or abandoned wells
25 within any of the areas of review?

1 A. No, there are not.

2 Q. Okay. Let's go back to pages 7 and 8, and
3 could you explain to Mr. Catanach what is shown on
4 these pages of the C-108?

5 A. Page 7 shows the schematic diagrams of the
6 present wellbore condition on each injection well, and
7 page 8 shows the proposed completion of each injection
8 well.

9 Q. At this time, could you identify Yates
10 Exhibit 5? It consists of the two cross-sections that
11 you've put on the wall --

12 A. Uh-huh.

13 Q. -- and then working -- Perhaps you should go
14 to the exhibits and simply review them for Mr.
15 Catanach.

16 A. Okay. Exhibit 9 incorporates our cross-
17 sections, which is from the west to the east on B-B',
18 and this basically shows the typical -- the zones that
19 will be flooded in the Penrose and also the Middle
20 Grayburg.

21 On a couple of these wells over here it
22 doesn't show up.

23 Q. When you say "over here", which logs are you
24 talking about?

25 A. Okay, this is our Creek Number 9, and there

1 is basically two zones that we would be flooding in the
2 Penrose.

3 And when you get down to the Middle Grayburg,
4 there's three good zones that we'd be looking at.

5 Q. And then if you move to the right on that
6 exhibit, which is --

7 A. -- to the east.

8 Q. -- to the east --

9 A. Uh-huh.

10 Q. -- some of the wells don't show those zones,
11 or some of the logs don't show them as well?

12 A. No, they do show them.

13 Q. Okay.

14 A. I'm sorry, when I was referring to this Creek
15 Number 8, this well, it's cased down to just below 3400
16 here, so there's a separate log which shows -- it will
17 look basically like this. I brought them along in case
18 there was some question.

19 But basically this log was done -- It's an
20 open-hole log but it went through casing here, so
21 there's some points where it's perforated, where it
22 doesn't show up across --

23 Q. And you're talking about the log for which
24 well?

25 A. The Creek Number 8.

1 Q. On these cross-sections you have shaded in
2 red what?

3 A. The zones that we'll be flooding.

4 Q. Okay. Now, is there anything else you want
5 to show on your B-B' cross-section?

6 A. Not necessarily, no.

7 Q. Okay. Now, the D-D', this is -- this runs
8 generally what direction across the Creek lease?

9 A. North to south. And it's just to show, you
10 know, that the zones are continuous.

11 This particular well, the Creek Number 7, is
12 only -- has only penetrated the Penrose, so this is one
13 of the wells that we're going to be deepening to
14 include the Middle Grayburg.

15 Q. And again, on this exhibit you've shaded in
16 red the zones that are the subject of the flood?

17 A. Yes.

18 Q. Okay, thank you. What is the source of the
19 water you propose to inject?

20 A. Presently we're going to be looking for a San
21 Andres source to use for -- to inject water into this
22 waterflood.

23 But because we're -- we prefer not to use
24 fresh water and we're also limited with the amount of
25 produced water we have in the area, we have negotiated

1 with the City of Carlsbad to use Ogallala fresh water.

2 Q. Now, will this water be used as a makeup
3 water supply, over and above whatever produced water
4 sources you were able to locate and use for injection?

5 A. Yes.

6 Q. And you will be re-injecting the Penrose and
7 Middle Grayburg water that is produced as part of this
8 waterflood project?

9 A. Yes.

10 Q. Have you reviewed -- Is the Creek lease a
11 federal lease?

12 A. Yes, it is.

13 Q. And have you reviewed this proposal with the
14 BLM?

15 A. Yes.

16 Q. And they know that you may be supplementing
17 the injection supplies with fresh water?

18 A. That's correct.

19 Q. And they have not objected?

20 A. No, they have not.

21 Q. What volumes do you propose to inject?

22 A. An average injection rate of 600 barrels of
23 water per day.

24 Q. And that is per well?

25 A. Per well.

1 Q. And what will be the maximum daily injection
2 rate?

3 A. A thousand barrels of water a day per well.

4 Q. And will this be an open or a closed system?

5 A. A closed system.

6 Q. Will you be injecting under pressure?

7 A. Yes.

8 Q. And what is the average pressure that you
9 anticipate using?

10 A. 1600 p.s.i.

11 Q. And the maximum pressure?

12 A. 2000 p.s.i.

13 Q. And now this exceeds the two-pound-per-foot-
14 of-depth limitation used by the oil companies, does it
15 not?

16 A. Yes, it does.

17 Q. Would Yates be willing to run a step-rate
18 test, witnessed by the OCD, to establish that use of a
19 maximum injection pressure of 2000 p.s.i. will not
20 cause the formation parting pressure to be exceeded?

21 A. Yes.

22 Q. Could you refer to page 16 of Exhibit Number
23 4 and identify that, please?

24 A. Page 16 shows a water analysis for both the
25 fresh water that would be injected from the Double

1 Eagle system, City of Carlsbad, and also the Creek
2 produced water that would be reinjected -- you know,
3 that would be injected.

4 Q. Are there freshwater zones in the area?

5 A. Yes, there are.

6 Q. And could you identify what they are?

7 A. They're produced from the Triassic Red Beds
8 above 275 feet.

9 Q. And you have confirmed this with information
10 from the State Engineer's Office?

11 A. Yes.

12 Q. Are there any freshwater wells within a mile
13 of any of the proposed injection wells?

14 A. There's only one freshwater well, and this is
15 located in the southeast corner of Section 26.

16 Q. And is that well identified on a plat which
17 is included as page 16 in Exhibit Number 4?

18 A. The plat is on page 17, I believe.

19 Q. Okay, and that's the Schneider Ranch well?

20 A. Yes, it is.

21 Q. And do you know from what interval it is
22 producing?

23 A. From the Red Beds, less than 275 feet.

24 Q. Is there also in Exhibit 4 an analysis of the
25 water from Schneider Ranch well?

1 A. Yes, it's on page 18, and it shows the water
2 analysis from this well.

3 Q. Are logs of the existing wells which will be
4 converted to injection on file with the Division?

5 A. Yes.

6 Q. Have you examined the available geologic and
7 engineering data on this area?

8 A. Yes.

9 Q. And as a result of that examination, have you
10 found any evidence of open faults or other hydrologic
11 connections between the injection zone and any
12 underground source of drinking water?

13 A. No.

14 Q. What do you estimate the capital costs of
15 additional facilities to be for this project?

16 A. The costs, \$850,000.

17 Q. Could you refer to what has been marked as
18 Yates Exhibit Number 6, please?

19 A. Exhibit Number 6 shows the primary and
20 secondary recovery predictions for the Creek
21 waterflood.

22 Q. And does it show a total project cost for
23 this waterflood?

24 A. Yes, it shows a \$2.4 million project cost.

25 Q. And you have indicated that you anticipate --

1 Or have you told us how much additional oil you
2 anticipate recovering from this waterflood?

3 A. The additional oil we expect to recover is
4 862,000 barrels of oil, and of that amount of oil we
5 expect to recover an additional 232,000 barrels of oil
6 from primary production and an additional 630,000
7 barrels of oil from secondary operations.

8 Q. And what kind of a secondary-to-primary
9 recovery ratio does this result in?

10 A. Secondary-to-primary ratio of 1.5 to 1.

11 Q. And what do you base this recovery factor on?

12 A. This is based on the direct offsetting
13 Shenandoah flood east of the Creek lease.

14 Q. Let's go to Exhibit Number 7. Could you
15 identify that?

16 A. Exhibit Number 7 is a plat that shows the
17 location of the Shenandoah flood east of the Creek
18 lease, showing the location of all their injectors.

19 Q. And then Exhibit Number 8?

20 A. Exhibit Number 8 is a table that shows the
21 data on the primary and secondary recoveries from this
22 flood, lease by lease.

23 It also shows the zones that were flooded and
24 the secondary and primary ratios.

25 Q. What is the estimated value of the additional

1 production you hope to obtain from the Creek
2 waterflood?

3 A. 15.5 million.

4 Q. And what price did you utilize in computing
5 this figure?

6 A. \$18 per barrel.

7 Q. Was gas production a significant factor in
8 developing these economics?

9 A. No.

10 Q. Does Yates seek authority to commit
11 additional wells to injection by administrative
12 procedures?

13 A. Yes.

14 Q. In your opinion, will approval of this
15 Application and implementation of the proposed
16 waterflood be in the best interests of conservation,
17 the prevention of waste and the protection of
18 correlative rights?

19 A. Yes.

20 Q. What is the anticipated date for commencement
21 of injection?

22 A. Mid-summer.

23 Q. Now, in your opinion would -- will
24 application of the proposed enhanced recovery
25 techniques to the reservoir result in an increase in

1 the amount of crude oil that may ultimately be
2 recovered therefrom?

3 A. Yes.

4 Q. Has the project area been so completed that
5 it is prudent to apply enhanced recovery techniques to
6 maximize the ultimate recovery of crude oil from the
7 project area?

8 A. Yes.

9 Q. In your opinion, is this waterflood project
10 economically and technically feasible?

11 A. Yes.

12 Q. Has this Application been prematurely filed?

13 A. No.

14 Q. And why not?

15 A. Because we are late already in the life of
16 the reservoir, and to be most effective we should do
17 the waterflood as soon as possible.

18 Q. Has notice of this Application been provided
19 to offsetting operators in the center of the surface of
20 the land on which the injection wells are located, as
21 required by OCD rules?

22 A. Yes.

23 Q. And are copies of the confirmation of this
24 mailing included in a C-108, which is marked Exhibit 4
25 in this case?

1 A. Yes.

2 Q. Were Exhibits 1 through 8 prepared by you or
3 compiled under your direction and supervision?

4 A. Yes.

5 MR. CARR: At this time, Mr. Catanach, we
6 would move the admission of Yates Exhibits 1 through 8.

7 EXAMINER CATANACH: Exhibits 1 through 8 will
8 be admitted as evidence.

9 MR. CARR: And that concludes my direct
10 examination of Ms. Sloan.

11 (Off the record)

12 EXAMINATION

13 BY EXAMINER CATANACH:

14 Q. Ms. Sloan, why was it that Hanson and Yates
15 couldn't agree to develop this as a single project, or
16 was it even attempted?

17 A. It was attempted. It was attempted, and --

18 Q. Just could not agree?

19 A. -- they simply couldn't come to an agreement,
20 and rather than -- I guess we have 30 percent, and so
21 they couldn't use the statutory --

22 MR. CARR: The percentages were such that
23 statutory unitization wasn't available.

24 Both parties desired to operate. They did
25 have a joint study performed, and after two years of

1 meetings, with the assistance of their consultant,
2 concluded that they needed to go forward, and the way
3 they could agree to do it was with a cooperative
4 waterflood.

5 THE WITNESS: So we both -- we got together
6 on that, and we came up with a pattern where we could
7 get the most recovery of oil, we agreed on it.

8 Q. (By Examiner Catanach) I see. What pool is
9 this?

10 A. It's the Shugart-Yates-Seven Rivers-Queen-
11 Grayburg.

12 Q. And with the Penrose portion of the Queen and
13 the Middle Grayburg being the -- are those the only two
14 productive intervals in the pool?

15 A. In this area, yes. It looks like the Queen
16 now. There's a potential, but it's pretty -- it's
17 lower porosity. It hasn't been effectively flooded.
18 You know, directly offsetting this. The Upper Queen, I
19 should say.

20 Q. Okay. Any plans to develop the undrilled
21 acreage in Sections 23 and 24?

22 A. Twenty-three and 24?

23 Q. Yeah, to the north of 10?

24 A. Oh, I see what you're saying, right.

25 Well, we plan to re-enter that -- or

1 basically complete the Number 10, run a production
2 string, and it looks like it's -- The logs look pretty
3 good. I think we can make a well out of it.

4 And I guess depending on that, as to whether
5 we go further north or north of the Creek Number 7 in
6 Section 24 there.

7 Q. What's the average current producing rate of
8 your wells?

9 A. They only produce ten -- Ten wells are
10 producing 17 to 20 barrels of oil a day, and roughly 50
11 to 60 barrels of water a day.

12 Most of that water is coming from the Number
13 1, 2 and 11 on the east portion, and we'll be shutting
14 those in.

15 Q. The ten wells produce a total of 17 to 20
16 barrels per day?

17 A. Yes.

18 (Off the record)

19 MR. BONEAU: It's not premature.

20 THE WITNESS: Pardon me?

21 MR. STOVALL: It's not premature; is that
22 what --

23 Q. (By Examiner Catanach) You mentioned earlier
24 that you had had some discussion with Hanson, I
25 believe, and you may convert the Number 1 and 11 wells

1 to injection?

2 A. Well, we've been discussing.

3 Right now what we're trying to do is to stay
4 in the best part of the field and see how the
5 waterflood goes.

6 And we have discussed possibly converting our
7 Number 1 and 11 to injection wells, and the Hanson 3
8 and 4 would be producers, and possibly drilling an
9 injection well like a five-spot pattern between the
10 Hanson Number 34 and the Creek Number 38 so we would
11 get additional support on that east side.

12 And the Creek Number 4 is also -- I mean,
13 there's a possibility of two additional injectors, you
14 know, we've been discussing it.

15 We both feel that we'd like to see how this
16 flood progresses, and once we've got that under --
17 well, you know, we discuss again.

18 MR. STOVALL: Mr. Examiner, just to fill you
19 in, since I sat in on the Hanson hearing as well, this
20 exhibit shows four Hanson injectors, but Hanson's
21 program actually calls for developing across their
22 acreage in Section 25 and 30 in the south of this unit,
23 as I remember. I don't remember exactly which wells,
24 but they were additional --

25 MR. CARR: That's right.

1 MR. STOVALL: And in fact, they requested
2 that the whole area be certified under the tax credit
3 at the time, because they anticipate doing it within a
4 couple of years.

5 They have basically three phases, but they're
6 treating it as a single project to bring the injection
7 development across their whole unit, so it is a more
8 complete flood than it appears to be in this --

9 THE WITNESS: Right.

10 MR. CARR: That's correct.

11 MR. STOVALL: -- this exhibit.

12 THE WITNESS: The only thing that I showed is
13 on Exhibit 3, if you'll look, I showed Hanson's and --
14 They're going to drill with three injectors and then
15 convert their 17 well to injection.

16 That's for the Penrose-Middle Grayburg flood,
17 whereas the flood in the southern portion of 25 and
18 then also the southwest quarter of 30, that's going to
19 be in the Seven Rivers. That's a pilot, I believe, is
20 how they're treating it; is that not correct?

21 MR. STOVALL: I believe that's correct, yeah.

22 THE WITNESS: Yes.

23 MR. STOVALL: I remember they did switch
24 formations as they moved east.

25 THE WITNESS: Yes.

1 MR. CARR: And Mr. Examiner, I also
2 represented Hanson in that waterflood, and I can tell
3 you there was a Seven Rivers flood in the southern
4 portion.

5 By OCD definition they're all grouped
6 together, but the Seven Rivers doesn't extend under the
7 Creek lease, and that's why you've got this kind of
8 hybrid situation. You've got a Seven Rivers area, you
9 have a Middle Grayburg area, and they simply don't
10 overlap. They don't appear to. So --

11 MR. STOVALL: Mr. Carr, I recommend that
12 we --

13 MR. CARR: -- incorporate that --

14 MR. STOVALL: -- what you're requesting,
15 incorporate in that record, because this is only half a
16 picture, and --

17 MR. CARR: That's really true.

18 MR. STOVALL: -- we got the other half at the
19 other hearing.

20 THE WITNESS: Uh-huh.

21 MR. CARR: And at this time I would request
22 that the record in the Hanson case, which was Case
23 10,686, which was presented to the Division on March
24 18, be incorporated into the record of this proceeding.

25 EXAMINER CATANACH: 10,686?

1 MR. CARR: Yes, sir.

2 EXAMINER CATANACH: Okay, that record will be
3 incorporated into this case.

4 (Off the record)

5 MR. STOVALL: I don't think -- I mean, Yates
6 has been through this before, so I'm not going to go
7 through the lesson on the enhanced oil tax credit.

8 But I do want to find out -- First off, you
9 said you intend to start injection this summer, so
10 immediate certification upon approval would be
11 appropriate, I assume.

12 Would you agree, Mr. Carr, probably --

13 THE WITNESS: Is that correct? Yeah.

14 MR. STOVALL: Dr. Boneau is indicating that
15 he thinks it would be at this time, and I believe he is
16 familiar with the process.

17 And I don't think we need this to be sworn,
18 so Dr. Boneau, go ahead and answer, since we're asking
19 just what you want us to do.

20 MR. CARR: I think if I might state the
21 question, do you anticipate that you would receive a
22 response or see a response to the waterflood in less
23 than five years?

24 DR. BONEAU: Yes, sir.

25 MR. CARR: Is five years' time frame -- Do

1 you anticipate being close to a five-year time frame?

2 DR. BONEAU: No.

3 MR. CARR: It would be all right, then, to
4 commence the five-year period for the tax credit
5 purposes now? That means you have to see a positive
6 production response within five years.

7 DR. BONEAU: Yes, that would be perfectly
8 acceptable.

9 MR. STOVALL: That would be consistent with
10 -- I believe Hanson's testimony is they expected to
11 see it within a couple of years, so that would be --

12 Now, the second question -- and Dr. Boneau,
13 you're familiar enough with -- I've said it enough
14 times and you've heard it a few times on how to go
15 about and all the steps that have to be followed -- is
16 that correct? -- on the credit?

17 DR. BONEAU: Yes, sir.

18 MR. STOVALL: We don't need to go through
19 that here?

20 DR. BONEAU: No, you don't need to go through
21 that.

22 MR. STOVALL: The only thing I would ask is,
23 on your Exhibit Number 2, the one with 107 dots, it
24 appears that your project area is really confined. But
25 when you combine it with the Hanson project area,

1 conceivably, if your Number 1 and 11 turn into
2 injectors, would that kind of become part of the
3 project?

4 In other words, what should the project area
5 be for purposes of the tax credit, is what I'm asking?

6 THE WITNESS: Well, we want to incorporate
7 the whole complete Creek AL lease.

8 Is that what your question is? Is that
9 correct?

10 MR. STOVALL: Well, you can get approval --
11 What you can do is, you can get approval from the
12 Division to operate that as a waterflood project for
13 the whole thing.

14 THE WITNESS: Uh-huh.

15 MR. STOVALL: The steps involved are,
16 recertify the project, and then when you get a positive
17 production response we reserve the right to say, Okay,
18 the area that got the positive production response is
19 something less than the full project that was
20 certified.

21 The concern in here is that eastern leg with
22 the Number 2, the Number 1 and the Number 11 wells.

23 THE WITNESS: Uh-huh.

24 MR. STOVALL: Based upon looking at Exhibit
25 Number 2, your kind of injection pattern that you have

1 shown there, those would not qualify because presumably
2 they would not really be influenced by this project.

3 However, because it is associated with the
4 Hanson project, you almost have to deal with them
5 together.

6 And it would appear to me that, given the
7 understanding that we may at the time of the positive
8 production response reduce the approved area that would
9 get the credit, include the entire Creek lease, the
10 entire project area as outlined in this map as the
11 initial certified area, and then look at what happens
12 at the time you get a positive production response.

13 MR. CARR: And Mr. Stovall, in view of this
14 unique aspect of this, i.e., it being cooperative,
15 waterflood two independent projects, I think it would
16 be appropriate to incorporate the entire Creek lease.

17 But as you've stated, I do think it is
18 appropriate, when a request is made of the Division to
19 certify a positive production response, at that time
20 you determine whether or not acreage on the extreme
21 eastern edge or perhaps even in the extreme
22 northwestern portion of the Creek lease would also
23 qualify for the incentive tax rate.

24 MR. STOVALL: Correct, and I believe the same
25 thing is being done with Hanson. We're certifying the

1 whole area with the understanding that --

2 MR. CARR: That is correct.

3 MR. STOVALL: -- that it may be contracted at
4 the time of the approval of the positive response.

5 That's it. I think we're covered, unless
6 they have any further questions about the process.
7 We've done it before.

8 EXAMINER CATANACH: You know what they want?

9 MR. STOVALL: I know what they want.

10 EXAMINER CATANACH: Okay.

11 Q. (By Examiner Catanach) Ms. Sloan, with
12 regards to this C-108, I was just looking at a few
13 things in here.

14 A. Uh-huh.

15 Q. You're going to regulate the flow of water
16 into each of these two zones?

17 A. That's what we're proposing to do, yes.

18 Q. Is there a specific ratio you're going to do
19 this on or --

20 A. We're going to have to test the wells to see,
21 you know, roughly how much water they're going to take.
22 And that's the only way that we're going to get some
23 idea of how much each zone will take.

24 Q. The production from the pool, is it -- Is
25 there one zone more prolific than the other?

1 A. That's really difficult to answer. Hanson
2 and Yates have -- We've discussed this, because the
3 offsetting flood that we both looked at, the Shenandoah
4 flood, it was just all produced together; it really
5 wasn't tested individually.

6 When we completed our wells we had the same
7 problem. You know, they were just produced together;
8 they weren't really swabbed separately. It's real
9 difficult.

10 Porosity looks good in both. They're fairly
11 close, you know, so you could estimate 50-50, but you
12 really don't know till you start testing these.

13 Q. Have you looked at area-of-review wells --

14 A. Yes.

15 Q. -- wells within a half mile of the injection
16 wells?

17 A. Yes.

18 Q. Have you found any that weren't cemented
19 across the injection zones?

20 A. No.

21 Q. Are there any P-and-A'd wells in this area?

22 A. No, there were not.

23 EXAMINER CATANACH: I think that's all I
24 have.

25 MR. CARR: We have nothing further in this

1 case, Mr. Catanach.

2 EXAMINER CATANACH: There being nothing
3 further, Case 10,711 will be taken under advisement.

4 (Thereupon, these proceedings were concluded
5 at 5:36 p.m.)

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