

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

IN THE MATTER OF THE HEARING CALLED BY)
THE OIL CONSERVATION DIVISION FOR THE)
PURPOSE OF CONSIDERING:)
)
APPLICATION OF PETROHAWK ENERGY) CASE NO. 13,891
CORPORATION FOR AUTHORIZATION TO) (Readvertised)
REACTIVATE A WATERFLOOD PROJECT,)
LEA COUNTY, NEW MEXICO)
)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, Jr., Hearing Examiner

March 15th, 2007

Santa Fe, New Mexico

2007 MAR 29 AM 8 06

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, Jr., Hearing Examiner, on Thursday, March 15th, 2007, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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March 15th, 2007
Examiner Hearing
CASE NO. 13,891

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A P P E A R A N C E S

FOR THE DIVISION:

DAVID K. BROOKS, JR.
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
110 N. Guadalupe, Suite 1
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 10:02 a.m.:

3 EXAMINER JONES: Okay, let's call Case Number
4 13,891, Application of Petrohawk Energy Corporation for
5 authorization to reactivate a waterflood project, Lea
6 County, New Mexico.

7 Call for appearances.

8 MR. CARR: May it please the Examiner, my name is
9 William F. Carr with the Santa Fe office of Holland and
10 Hart, L.L.P. We represent Petrohawk Energy Corporation in
11 this matter, and I have one witness.

12 EXAMINER JONES: Any other appearances?
13 Will the witness please stand to be sworn?
14 (Thereupon, the witness was sworn.)

15 ALBERTO A. GUTIÉRREZ,
16 the witness herein, after having been first duly sworn upon
17 h* oath, was examined and testified as follows:

18 DIRECT EXAMINATION

19 BY MR. CARR:

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

21 A. Yes, my name is Alberto A. Gutiérrez.

22 Q. Mr. Gutiérrez, where do you reside?

23 A. Albuquerque, New Mexico.

24 Q. By whom are you employed?

25 A. Geolex, Incorporated.

1 Q. And what is the relationship of Geolex with the
2 Applicant, Petrohawk Energy Corporation?

3 A. We are consultants to Petrohawk.

4 Q. And what were you asked to do?

5 A. We were asked to prepare an application for a
6 C-108, application for reactivating a waterflood project in
7 the Queen formation in the Eunice-Seven Rivers area.

8 Q. Have you previously testified before the New
9 Mexico Oil Conservation Division?

10 A. Yes, I have.

11 Q. At the time of that testimony, were your
12 credentials as an expert witness accepted and made a matter
13 of record?

14 A. They were.

15 Q. And you were qualified as an expert in petroleum
16 geology and hydrogeology; is that right?

17 A. That's correct.

18 Q. Are you familiar with the Application filed in
19 this case on behalf of Petrohawk?

20 A. Yes, we prepared it.

21 Q. And have you made a study of the area that is the
22 subject of this Application?

23 A. We have.

24 Q. Are you prepared to review your work with Mr.
25 Jones?

1 A. Yes, I am.

2 Q. Is a summary of your education and experience
3 marked as Petrohawk Exhibit Number 1 in this case?

4 A. Yes, it is.

5 MR. CARR: May it please the Examiner, we tender
6 Mr. Gutiérrez as an expert in petroleum geology and
7 hydrogeology.

8 EXAMINER JONES: Mr. Gutiérrez is an expert in
9 petroleum geology and hydrogeology.

10 Q. (By Mr. Carr) Would you briefly summarize for
11 Mr. Jones what it is that Petrohawk seeks with this
12 Application?

13 A. Yes, Petrohawk has acquired the producing
14 interests in a variety of wells in this area. The subject
15 wells of this Application were part of a former waterflood,
16 originally actually authorized as a waterflood, some
17 portion of these wells, back in 1967. It was operated for
18 a very short period of time, and then Sun re-applied and
19 obtained a permit to operate actually a larger number than
20 what is being proposed here, of these wells as waterflood
21 wells back in 1983 and 1984.

22 And basically the wells have been temporarily
23 abandoned for some time now, and Petrohawk is seeking
24 authorization to basically reactivate this waterflood and
25 essentially as a pilot project for what they ultimately

1 will apply for a larger waterflood in this area, if it
2 works out appropriately.

3 Q. Mr. Gutiérrez, is Petrohawk Exhibit 2 a
4 compilation of prior Division orders approving waterflood
5 operations in this area?

6 A. Yes, it is.

7 Q. And these orders actually have previously
8 approved injection in each of the five wells that are the
9 subject of today's hearing; isn't that correct?

10 A. That is correct.

11 Q. What is the current status of this project?

12 A. The wells currently -- like I said, the
13 injection, the last round of injection in these wells, was
14 done in the mid-1980s and completed in the mid-1980s. Some
15 of the wells have produced some small amounts since then,
16 but they have been temporarily abandoned for a number of
17 years.

18 Q. Did you prepare the geological portion of
19 Petrohawk's Application?

20 A. Yes, Mr. Hunter and I did.

21 Q. And that Application has been marked as Petrohawk
22 Exhibit Number 3?

23 A. That is correct.

24 Q. Is the geological information contained behind
25 Tab F?

1 A. It is.

2 Q. Could you refer to the information behind that
3 tab and generally describe the geology of the Queen
4 formation in the area that is the subject of this
5 Application?

6 A. I'd be happy to. Basically, the area here in
7 Township 22 South, Range 36 East, is a long-standing
8 producing area from the Seven Rivers-Queen formations, and
9 the local stratigraphy there is basically what we see in
10 the kind of back-reef deposits in this portion of the
11 Permian Basin. We have essentially the Rustler formation,
12 the Salado, and then the Artesia group which consists of
13 the Tansil, Yates, Seven Rivers, Queen, Grayburg, and then
14 underlain by the San Andres.

15 Those were really the only formations we looked
16 at for this project because the waterflood is injected --
17 is proposed strictly in the Queen formation. That's the
18 basic general stratigraphy.

19 The Queen formation itself is basically both
20 silicious kind of clastic reservoirs layered with
21 carbonates in this area, and it's underlain by the
22 Grayburg, which in this area has some both evaporites at
23 the very top and also some siltstones before you get into
24 the more permeable portion of the Grayburg.

25 Overlain -- As I mentioned, the Artesia group is

1 overlain by the Salado, about 1500 feet thick salt here,
2 and then the Rustler above it.

3 Q. And behind Tab F you have a written summary of
4 the geological presentation and the supporting exhibits; is
5 that right?

6 A. That is correct.

7 Q. Generally, what are your geological conclusions
8 as to the suitability of this formation for a waterflood
9 project?

10 A. There is a significant and massive regional salt
11 seal of the Salado formation. We have good porosity in the
12 Queen formation, and there are no real complicating
13 structures or faults in the area, so -- and as I mentioned
14 in this area, the Grayburg that underlies the Queen has
15 also got some permeability barriers, so my conclusion is
16 that the Queen will be a good target for this waterflood
17 project.

18 Q. Let's go now to the actual Application for
19 authorization to inject, and first could you advise Mr.
20 Jones what is the status of the land in which this project
21 will be conducted?

22 A. Well, really the land is a mixture of state,
23 federal and fee minerals, depending on the area, but the
24 area of -- these wells in particular are largely staked in
25 federal.

1 Q. Does Petrohawk have all necessary rights to use
2 the lands for this project, if approved by the OCD?

3 A. They do, and they are indeed operating wells on
4 these leases at the present time.

5 Q. Now Exhibit Number 3 is the C-108 Application.
6 Is this Application complete?

7 A. It is.

8 Q. Have you reviewed this proposed project with the
9 Oil Conservation Division?

10 A. Yes, I discussed this project with Mr. Catanach
11 when we thought originally that he would be the hearing
12 officer at this time, but he and I talked about this and
13 another Petrohawk project.

14 Q. And why is this Application -- why did this
15 Application actually come on for hearing?

16 A. Well, you know, under the OCD Rules this would
17 qualify for an administrative approval, but when I spoke to
18 Mr. Catanach he said that the policy currently at OCD is
19 that any waterflood that's been inactive for more than 15
20 months will -- is automatically set for hearing. So here
21 we are.

22 Q. Now this is not technically an expansion of an
23 existing project, is it?

24 A. No, it is not.

25 Q. It's simply a reactivation of a portion of

1 previously approved injection -- an injection project?

2 A. That is correct.

3 Q. Let's go to the plats behind Tabs B and C in
4 Exhibit Number 3, and I'd ask you just to identify those
5 for the Examiner.

6 A. Yes, let's start with Tab B. Pursuant to the
7 requirements of the C-108 Application, the first figure in
8 Tab B is the wells that are identified within two miles of
9 the proposed waterflood. As you can see, there's many
10 wells in that area. Many have already been plugged, most
11 of them are wells that are producing out of a variety of
12 the formations, the Seven Rivers, Queen and some Grayburg,
13 but mostly Seven Rivers, Queen.

14 The second figure is the location of the proposed
15 water wells and all of the -- specifically all of the wells
16 located within half a mile of the proposed waterflood
17 wells. You can see it's kind of an odd-shaped circle,
18 because it's the confluence of the half mile of each of the
19 waterflood wells.

20 And behind Tab C we have the land status there.
21 You can see who has the leases and what the lease numbers
22 are for the leases in the area. And then -- for the half
23 mile.

24 And then the larger area, Figure 4, has the
25 location of leases within two miles. That is followed by a

1 detailed listing of the oil and gas leases and the surface
2 owners in those areas.

3 Q. Does Exhibit 3 contain the information required
4 by the Oil Conservation Division for each of the wells in
5 any of these areas of review that penetrate the injection
6 zone?

7 A. Yes, and the detailed information is located
8 behind Tabs D and E, where they are divided into wells that
9 are either plugged or just active or temporarily abandoned.

10 Attachment E1, for example, are all of the wells
11 that are active or temporarily abandoned in the area of
12 review, and then there's a yellow page separating that from
13 Attachment E2, which is the data on the wells that are
14 plugged in the area.

15 Q. Have you reviewed the data available on each of
16 the wells in the areas of review for this waterflood
17 project and satisfied yourself there's no remedial work
18 required on any of these wells to enable Petrohawk to
19 safely operate the project?

20 A. Yes, I have.

21 Q. Let's look at the injection wells. And the
22 information, I believe, is behind Tab A. Would you go to
23 that information and review the diagrammatic sketches and
24 the general construction of these wells with the Examiner?

25 A. Sure. Let me just step back for one moment and

1 just mention that what we have is a total of six wells that
2 we are applying for to use as injection wells as part of
3 this waterflood project. Those wells are listed on the
4 second page -- I'm sorry, the third page of the Application
5 -- and they are basically all on the State A A/C Number 2
6 lease, and they are Wells 61, 64, 65, 68, 69 and 71.

7 And those ar the wells that you will find behind
8 Tab A. We have the current wellbore diagram, as well as
9 some of the history of the wells, and this is -- the
10 wellbore diagram, how we intend to complete these wells as
11 injection wells.

12 I can go through each one if you would like, Mr.
13 Hearing Officer, but bottom line is that basically the
14 wells are all wells that are currently temporarily
15 abandoned but will have a packer placed immediately above
16 the Queen perms, and then have some inert fluid above the
17 packer, probably saltwater, and they'll be completed a
18 shown in this -- they are completed -- the casing string,
19 et cetera, and the perforations are as shown on these
20 diagrams. They currently are temporarily abandoned, so
21 they don't have a packer in there for injection, but they
22 will have injection tubing put in them and a packer.

23 Q. And all the casing will be cemented, surface, to
24 a depth to go through all the water zones in the area?

25 A. It already is, yes.

1 Q. And injection will be through plastic-lined or
2 -coated tubing?

3 A. That is correct.

4 Q. What is the composition of the fluid that's going
5 to be injected? And you may want to refer to Tab G.

6 A. Yes, behind Tab G is the composition of the fluid
7 that will be injected, and essentially these are analyses
8 that were taken just a couple months ago from wells in the
9 area where Petrohawk is producing the water that will go
10 into the formation.

11 And in fact, behind Tab H is a duplicate of the
12 same analysis because essentially the water is coming out
13 of the same formation that it's going to be injected into.
14 So it is both the injection fluid as well as the formation
15 fluid.

16 Q. Now before we go on with the injection, let me be
17 sure I understand your testimony. Each of the injection
18 wells is going to have the annular space filled with an
19 inert fluid?

20 A. Yes.

21 Q. It will have a pressure gauge on the surface so
22 you'll be complying with Federal Underground Injection
23 Control regulations?

24 A. That is correct.

25 Q. And will you also conduct any OCD-required

1 mechanical integrity tests on any of the wells?

2 A. Yes, and in fact, the wells have had mechanical
3 integrity tests done on them as part of the temporary
4 abandonment process, most of them in 2003 and one as
5 recently as 2005, so...

6 Q. What water injection volumes does Petrohawk
7 propose?

8 A. We're proposing an average injection volume of
9 about 1000 barrels a day for all six of the wells, with a
10 maximum of 2000.

11 Q. Will this be an open or closed system?

12 A. It's in a closed system.

13 Q. Will you be injecting under pressure or by
14 gravity?

15 A. Well, you know, some of the wells could
16 occasionally take some of the water by gravity, but I
17 envision that mostly they will be injecting under pressure.

18 Q. What is the pressure limitation that you propose
19 to use?

20 A. 750 pounds, 750 p.s.i.

21 Q. And will that pressure prevent water from
22 migrating out of zone?

23 A. Yes, that's well below the lithostatic pressure
24 of about 3800 p.s.i. at that location.

25 Q. Would an injection pressure limitation of .2

1 pound per foot of depth to the top of the injection
2 interval be satisfactory for Petrohawk, at least initially?

3 A. Yes, and that's in fact how we came up with the
4 750 p.s.i.

5 Q. And if a higher pressure is required, you would
6 justify that to the Division with a witnessed step rate
7 test; is that correct?

8 A. That is correct.

9 Q. Could you describe the formation water in the
10 proposed injection zone? And you may already have covered
11 this, because it is the injection fluid as well, is it not?

12 A. That is correct.

13 Q. And what were the TDS on that?

14 A. They range from about 10,000 to roughly 48,000.
15 So probably -- It does vary widely in the area, but I would
16 say a good average is somewhere in the 20,000 to 25,000.

17 Q. And you're reinjecting into the same formation,
18 so there are no compatibility issues for this proposal?

19 A. That's correct.

20 Q. Are there freshwater wells in the area?

21 A. There are.

22 Q. What is the -- Are there any sources of drinking
23 water?

24 A. There -- The Ogallala is the reservoir in that
25 area, and there are -- there are no really drinking water

1 wells located in the area.

2 Behind Tab J, actually, is a map that shows the
3 water wells in the area, and you'll see that within the
4 area of review there's actually three stock wells and then
5 one just outside the area of review, and we've shown those
6 on the map.

7 Q. In your opinion, will the injection of water as
8 proposed by Petrohawk pose a threat to any freshwater
9 supplies in the area?

10 A. No.

11 Q. Have you examined the available geologic and
12 engineering data on the reservoir, and as a result of that
13 examination have you found any evidence of open faults or
14 hydrologic connections between an injection interval and
15 any underground source of drinking water?

16 A. I have not. I mean, I have reviewed them, but I
17 haven't found any open faults or connections.

18 Q. Let's look at the notice that was provided. To
19 whom was notice of this Application actually provided?

20 A. It was provided to the operators as required by
21 the Rules, and they are shown -- there's a number of them,
22 and they are shown in Exhibit 4, and also the surface owner
23 of the property which, if I'm not mistaken here, is the
24 State of New Mexico Land Office.

25 Q. Is Petrohawk Exhibit 4 a compilation of return

1 receipts and notice letters that were sent to affected
2 parties concerning today's hearing?

3 A. Yes.

4 Q. Is Petrohawk Exhibit Number 5 an affidavit
5 confirming that notice of this Application has been
6 published in accordance with Division Rules?

7 A. Yes.

8 MR. CARR: Mr. Examiner, you'll note there are
9 two notices of publication.

10 EXAMINER JONES: Okay.

11 MR. CARR: The first notice, the earliest notice,
12 contained an error. It described this as a saltwater
13 disposal well instead of a waterflood project. We caught
14 that, but it was too late to allow the full time period to
15 run from today.

16 We did renote it in the newspaper, correcting
17 that ad. We talked to Mr. Catanach about it, he suggested
18 we do it. That time will run in a few days, so at the
19 conclusion of the hearing we do have to ask that it be
20 continued for the two weeks to allow that notice period to
21 run.

22 Q. (By Mr. Carr) Mr. Gutiérrez, in your opinion
23 will approval of this Application and the reactivation of
24 this portion of the South Eunice Seven Rivers-Queen
25 waterflood project be in the best interest of conservation,

1 the prevention of waste and the protection of correlative
2 rights?

3 A. Yes, it will.

4 Q. Were Exhibits 1 through 5 either prepared by you
5 or compiled under your direction and supervision?

6 A. They were.

7 MR. CARR: May it please the Examiner, at this
8 time we would move the admission into evidence of Petrohawk
9 Exhibits 1 through 5.

10 EXAMINER JONES: Exhibits 1 through 5 will be
11 admitted to evidence.

12 MR. CARR: That concludes my direct examination
13 of Mr. Gutiérrez.

14 THE WITNESS: Mr. Hearing Officer, I wanted just
15 to clarify one issue. As Mr. Carr mentioned, there was
16 this error in the notice, and I want to explain kind of how
17 that came about, because it does bear on another case that
18 is pending before the Division for an administrative
19 approval of a saltwater disposal well in this area by
20 Petrohawk, and that was the confusion.

21 We submitted a separate -- after discussing with
22 Mr. Catanach -- Petrohawk has two objectives here. One is,
23 they want to reactivate this waterflood project for the
24 purpose, obviously, of evaluating and determining how it's
25 going to work for waterflood purposes.

1 Q. And do you intend for this -- through this
2 hearing and maybe the next hearing to actually qualify it
3 as a waterflood project with the ability to expand it in
4 the future, administratively? Is that your intention? Or
5 do you intend to come back and show the results of your
6 pilot project in a year or two years?

7 A. Well, Mr. Hearing Officer, that would be the
8 Division's pleasure. I mean, frankly, the results of this
9 initial reactivation are going to determine whether
10 Petrohawk is willing to implement the subsequent planned
11 phases of the waterflood.

12 We have done a general -- or -- "we", being
13 Petrohawk, has done general study of the waterflood
14 potential for this field, and the results are pretty
15 encouraging. However, the anticipated capital expenditure
16 of having to put in a variety of new additional wells to
17 implement the full project is substantial.

18 And so, since they have these wells that they
19 have currently, that they're operating, they thought --
20 their engineers thought, well, we can do essentially a
21 mini-pilot and figure out how well it's going to work and
22 then go back and -- and I think it would be their intent to
23 come back and apply for an expansion and then determine --
24 that would -- the Division would have to determine whether
25 that could be done administratively or whether it's

1 sufficiently different that it needs to go to hearing.

2 Q. Okay. Yeah, I think there's going to have to be
3 a lot more -- before it's qualified as a waterflood
4 project.

5 Now I guess we can work on this pilot project
6 concept right now, and you're going to come back in in two
7 weeks. I really like to see a lot more than just the --
8 basically the geology and the C-108 for something like
9 this, because you're talking about stimulating the
10 reservoir with enhanced recovery, and it's going to affect
11 the owners and the -- you know, we had some testimony about
12 you noticed everybody within the -- I guess the half-mile
13 radius.

14 But you know, you have things like unit
15 parameters and stuff to talk about when -- especially if we
16 -- you might need to help me out here a little bit, but
17 we're used to seeing a lot more when somebody comes in
18 for -- Now for a pilot, you know, maybe -- maybe something
19 like this can be -- it's a good idea. I think Petrohawk's
20 to be applauded for coming into an old flood, waterflood,
21 and resurrecting it.

22 And you're their sole representative here today;
23 is that correct?

24 A. That's correct. Unfortunately, the production
25 manager, Mr. Chris Morrow, wanted to be here today, but he

1 had a family emergency so he just couldn't be here. But --

2 Q. Yeah.

3 A. -- the issue is that, I think -- and this is what
4 we discussed with Mr. Catanach when we originally talked
5 about this with the Division, and that was that because
6 this had been a previously approved waterflood project,
7 that was indeed what Petrohawk's intent was, was to
8 reactivate it essentially as a pilot, because it was
9 never -- when it was a previously approved waterflood, it
10 didn't -- it really wasn't operated, I don't -- at least
11 our records don't show sufficient information to be able to
12 really evaluate what its potential will be.

13 So they have done a significant investigation and
14 kind of thought behind an overall waterflood of this field,
15 but they really wanted to have some more effective and
16 timely data as to how the formation responds to injection
17 and that kind of thing before they expend the resources to
18 do that.

19 And we understand that there will be
20 significantly more required by the Division for an overall
21 waterflood project, including, you know, calculations of
22 the oil recovery and the migration of the fluid and all of
23 that.

24 But I think, in part, the purpose of this is to
25 be able to develop a reliable database on which to present

1 that to the Division.

2 Q. Okay. So 66, is that near the other wells?

3 A. It is.

4 Q. Is it considered part of the pilot --

5 A. No, it is just a straight saltwater disposal
6 well.

7 Q. Okay, okay. So what we're going to be talking
8 about here, I guess, is a pilot project with a limited time
9 frame before you can come back in with your full-blown
10 presentation with an engineer, a landman, the participation
11 parameters, the unit- -- you know, if you need to do
12 unitization you do that, and the geology with the cross-
13 sections and --

14 A. That's correct.

15 Q. -- and the whole bit.

16 A. That's correct. Yeah, we have provided some
17 basic cross-sections in this area that are included as part
18 of the Application, but you are absolutely correct. I
19 mean, the intent is -- We have a significant amount of that
20 information developed already, but it is not -- I don't
21 think it's sufficiently well developed to be able to
22 present to the Division as an overall project.

23 And so the purpose again is to do this, get some
24 real data, kind of test out the assumptions of the models
25 that have been run for the oil recovery, and then to, as

1 you suggest, come in with a much more complete application
2 for the overall project.

3 Q. Okay. Did you look at their models that they've
4 run so far?

5 A. I haven't examined them in detail, but I have
6 looked at, you know, some of the general information that
7 they've developed.

8 Q. As far as the time frame on the -- on this
9 pilot --

10 A. Oh, I would imagine that they are looking at
11 operating this thing for, you know, maybe a year to 18
12 months at the most as a pilot before -- you know, and I
13 think much sooner than that they will have either
14 encouraging or discouraging results.

15 Q. Yeah. But basically, they need these wells
16 anyway because they put the producers back on line; is
17 that --

18 A. They have been producing wells, a number of well,
19 in this area. And they are producing some oil, but there
20 is significant potential for enhancement, we believe.

21 Q. Okay. When you went through all these wells and
22 the wells in the area of review, how old are these wells?

23 A. You know, many of them are from the late 1960s,
24 early 1970s, and then there is kind of -- almost like two
25 generations. Then there's a number of them that are kind

1 of from the early to mid-1980s.

2 Q. Okay. So they're not 1920s or '30s, so in other
3 words -- I notice the order that was issued March of '67,
4 Dan Nutter, that's before we had -- I'm sure they were
5 looking at things pretty close, but that's before we had
6 our UIC -- Safe Drinking Water Act, UIC program --

7 A. Right.

8 Q. -- the whole bit, so --

9 A. Right.

10 Q. -- we'll have to look at the wells and the
11 surrounding wells real closely, as far as their cement
12 and --

13 A. Correct.

14 Q. -- everything.

15 A. Correct.

16 Q. And when we do issue order like this, we would
17 issue conditional orders, that they would need to fix any
18 problems that were found or do more investigation, either
19 prior to injection or soon thereafter, with that being a
20 condition of the permit being valid. So just in case
21 Petrohawk needs to know that --

22 A. Well, I appreciate that, Mr. Hearing Officer.
23 Also I will mention, though, that one of the things that we
24 did note when we looked at a number of the wells -- as you
25 could see from the map, it's like a pincushion. There are

1 a lot of wells in that area. A significant number of those
2 wells are already saltwater disposal wells. So I mean,
3 there is a lot of injection going on into that formation
4 already, from a whole variety of wells.

5 It's just that the intent here is to do kind of a
6 more controlled injection, varying injection, perhaps, from
7 -- varying injection volumes in the different -- in the six
8 wells that we have and just doing some different tests, if
9 you will, to just kind of see how they respond, with the
10 existing producers that are already in the vicinity.

11 Q. Okay. So the -- but the packer -- You said
12 earlier that the packer will be set above the Queen. Did
13 you really mean the Seven Rivers on the injection wells?

14 A. No, it is really -- if you look at the -- behind
15 Tab A -- we could take the wells one at a time, but the --
16 mainly, the packer is intended to be set at about, in these
17 wells, just in the 3700 to 3780 or so range, which is just
18 above the perms in the Queen sand.

19 Q. Okay, so basically the Queen is the target?

20 A. That is correct.

21 Q. Okay.

22 A. That is correct.

23 Q. And is this Petrohawk Operating Company or
24 Petrohawk Energy Corporation, because I couldn't find an
25 OGRID for Petrohawk Energy Corporation. It was Petrohawk

1 Operating Company that I found the OGRID for. I'm sure
2 they wouldn't quibble over that, because that's --

3 MR. CARR: No, we'll check that for you.

4 THE WITNESS: We'll check that. I've always
5 known it as Petrohawk Energy Corporation --

6 EXAMINER JONES: That's probably the --

7 THE WITNESS: -- Mr. Hearing Officer.

8 EXAMINER JONES: -- Corporation, okay.

9 Okay, that's -- Mr. Brooks?

10 EXAMINATION

11 BY MR. BROOKS:

12 Q. Yeah, Mr. Jones raised a question about
13 unitization. I take it this area already is unitized, this
14 is a unit, correct?

15 A. Yes.

16 Q. And Petrohawk is the operator of that unit?

17 A. Yes.

18 Q. And everybody that has working interest has
19 joined in the operating agreement?

20 A. That is correct.

21 Q. Okay, and the notice criteria you used, was that
22 all operators in the Queen formation within a half mile?

23 A. That is correct. Well, all operators, period,
24 within a half mile.

25 Q. Okay, all operators of any wells within --

1 A. That is correct.

2 Q. -- a half mile?

3 A. That is correct.

4 Q. And this is fairly intensively developed, so
5 there are probably going to be wells in most of the units
6 that would be around there, right?

7 A. Yes.

8 MR. BROOKS: Okay, thanks.

9 EXAMINER JONES: It's a good thing I've got Mr.
10 Brooks here with me.

11 And I think that's all I've got, all the
12 questions I have. Thanks a lot, Mr. Gutiérrez.

13 THE WITNESS: Thank you, Mr. Hearing Officer.

14 MR. CARR: Two weeks from now we're not planning
15 on presenting anything, just asking at that time that the
16 case be taken under advisement.

17 EXAMINER JONES: Okay, we will continue this case
18 until March the 29th.

19 THE WITNESS: And also, Mr. Hearing Officer, just
20 if I may request that if the -- if the Division -- if it is
21 possible that we could have some movement on the saltwater
22 well, that would be really appreciated because they need to
23 get that going.

24 EXAMINER JONES: Yeah. Does next week sound
25 okay?

1 THE WITNESS: Sounds fantastic, thank you very
2 much.

3 EXAMINER JONES: Okay.

4 MR. CARR: Thank you.

5 (Thereupon, these proceedings were concluded at
6 10:40 a.m.)

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13 I do hereby certify that the foregoing is
14 a complete record of the proceedings in
the Examiner hearing of Case No. _____,
15 heard by me on _____.

16 _____, Examiner
Oil Conservation Division
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CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court 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 March 20th, 2007.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 16th, 2010