

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION)
FOR PERMIT NO. 63-32573 IN)
THE NAME OF M3 EAGLE LLC)
_____) VOLUME XIII
(Pages 2883 through 3148)

BEFORE
HEARING OFFICER: GARY SPACKMAN

Date: July 9, 2009 - 9:00 a.m.
Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:
JEFF LaMAR, C.S.R. No. 640
Notary Public

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1 APPEARANCES:
 2
 3 For M3 Eagle LLC:
 4 GIVENS PURSLEY LLP
 5 BY MR. JEFFREY C. FEREDAY
 6 MR. MICHAEL P. LAWRENCE
 7 601 West Bannock Street
 8 P.O. Box 2720
 9 Boise, Idaho 83701-2720
 10 For North Ada County Groundwater Users
 11 Association:
 12 BY MR. JOHN THORNTON
 13 5264 North Sky High Lane
 14 Eagle, Idaho 83616
 15 For Eagle Pines Water Users Association and
 16 Individually:
 17 BY MR. ALAN SMITH
 18 3135 Osprey Road
 19 Eagle, Idaho 83616
 20 Appearing Individually:
 21 BY MR. NORMAN L. EDWARDS
 22 884 West Beacon Light Road
 23 Eagle, Idaho 83616
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1 APPEARANCES (Continued):
 2
 3 Also Present:
 4 Jason Smith
 5 Jean Hersley
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1 THE HEARING OFFICER: We are recording.
2 This is a resumption of the hearing for the M3
3 Eagle LLC application to appropriate water. The
4 date is July 9th. The hour is approximately 9:15.

5 And based on our discussion prior to
6 going on the record, the -- there is some evidence
7 that needs to be presented through Mr. Alan Smith
8 that we talked about at the close of the hearing
9 at the last session that we conducted, and there
10 were some revisions that would be made to a map.

11 And that map was offered as an exhibit
12 previously. And I think the Hearing Officer did
13 not allow it into the record at the time. But I
14 think there's been some reconstruction of the map
15 and exchange of the information between the
16 parties.

17 And, Mr. Smith, at this time I'll
18 allow you to present evidence with respect to the
19 map, and then -- and that would be new evidence or
20 direct testimony, and then I'll allow you to
21 present redirect evidence as well.

22 So you wish Mr. Jason Smith to be a
23 witness; is that correct?

24 MR. ALAN SMITH: Yes.

25 THE HEARING OFFICER: If you'll come

1 forward Mr. Smith.

2 JASON SMITH,
3 having been previously called as a witness by
4 Eagle Pines Water Users Association
5 and previously sworn, testified as follows:

6 THE HEARING OFFICER: Jason Smith, I'll
7 remind you you're under oath.

8 THE WITNESS: Yes, sir.

9 THE HEARING OFFICER: Okay. You may
10 examine, Alan Smith.

11 MR. ALAN SMITH: Thank you, Mr. Hearing
12 Officer.

13 We would, for the record, move at this
14 time to reopen the direct, only for the foundation
15 purposes on the bar graph and the map.

16 FURTHER DIRECT EXAMINATION
17 BY MR. ALAN SMITH:

18 Q. Mr. Smith, would you step to that bar
19 graph and map. And I don't know if you can reach
20 that up at the top.

21 Would you with the marker pen put
22 "replaced" or -- above the "dry wells." So it

1 will read "Replaced or dry wells." And also do
2 the same on the legend, the map legend.

3 A. Okay. I think this will help. So you
4 want this to say "Replacement or dry"?

5 Q. Yes, "Replaced or dry wells." And the
6 same with the map legend.

7 A. Okay.

8 (Draws.)

9 That should do it.

10 Q. Thank you.

11 One housekeeping matter I wanted to
12 take up before we go into the foundation here, I
13 believe you referred to those stick-on dots on the
14 map as "red dots."

15 A. Yes, sir.

16 Q. Mr. Lawrence referred to them as "pink
17 dots."

18 A. I think that's correct.

19 Q. And I believe I had referred to them
20 as "orange dots."

21 But those are all the same, those are
22 the replacement wells --

23 A. Yes.

24 Q. -- whether you call it a pink dot, an
25 orange dot, or a red dot?

1 A. Yes, sir.

2 Q. And those show the replacement wells,
3 according to the Department of Water Resources
4 records?

5 A. Yes. And that's only from 2005
6 through 2008.

7 Q. All right. And the green dots that
8 you've shown on the map, the green stick-ons,
9 those are all municipal wells?

10 A. Yes. Those are bigger wells, and
11 they're also in that same time frame, from 2005 to
12 2008 only.

13 Q. And the yellow or tan dots, those are
14 permitted wells, as far as you know, are not yet
15 producing or pumping?

16 A. Yes, and that's according to
17 Department of Water Source records as of -- that
18 was probably about the end of March, right before
19 when we had to have all our evidence in. So it
20 was spring of this year.

21 Q. All right. Would you go to the bar
22 graph.

23 You show one well there replaced in
24 2005?

25 A. Yes, sir.

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1 Q. And is that 2005A on the well
2 driller's reports?
3 A. Yes.
4 Q. Would you provide a copy of that for
5 the Hearing Officer, please.
6 A. That's not been given a number or
7 anything.
8 MR. ALAN SMITH: And I believe counsel has
9 a copy.
10 THE WITNESS: Yeah, that's the same as what
11 we dropped off to you, Jeff, Michael.
12 Q. (BY MR. ALAN SMITH): All right. That
13 one well was a Travis Reche well?
14 A. Yes, it was. That's 2005A.
15 Q. And that was a replacement well, or do
16 you know?
17 A. Yes, that was a replacement well for
18 his existing well. He is on Rush Lane, which
19 is -- that's about a half mile -- well, it's about
20 the center of the section between Floating
21 Feather, Beacon Light, Eagle, and Ballantyne.
22 He's off the end of Rush Lane off of Ballantyne.
23 Q. And that's marked as dot 200- --
24 2005A?
25 A. Yes, sir.

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1 Q. All right. Let's go to 2006.
2 A. Okay.
3 Q. 2006A, would you state what that well
4 is, please.
5 A. That is the Lonnie Morris well. This
6 is also a replacement well. He is off of 3875
7 North Ballantyne, which is about a half mile north
8 or so of Beacon Light on Ballantyne Lane, just to
9 the west of Ballantyne Lane.
10 Q. All right. Go ahead to the next one,
11 2007B.
12 A. 2006B?
13 Q. Or 2- -- no. Yeah, 2006B. I'm sorry.
14 A. Okay. That's the Bob Wood residence.
15 He's at 1380 Meander, which is just to the east of
16 the one we just pointed out.
17 Did you want me to point out each one
18 of these or --
19 Q. You can. Go ahead.
20 A. All right. Whatever you want.
21 There was the Lonnie Morris well
22 (indicating). Here's the Bob Wood well
23 (indicating). It's about a half mile north of
24 Beacon Light, and probably about a half mile
25 west -- or east of Ballantyne.

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1 Q. That's on Meander Street?
2 A. Yes, 1380 Meander.
3 Q. So there were two wells in 2006?
4 A. In that study area, the blue box, yes,
5 according to IDWR records.
6 Q. All right. Go to 2007. 2007A, what
7 well is that?
8 A. That's Robert Steele, he's out off of
9 Chaparral Road, which is just west of the M3
10 property. That's this dot here, 2007A
11 (indicating).
12 Q. 2007B?
13 A. No, A.
14 Q. No. Would you go to 2007B.
15 A. Yes.
16 Q. And point that well out, please.
17 A. Okay. This is the Jill Kohler well.
18 This is 4005 North Eagle Road. That is probably
19 about a mile north of Beacon Light just off of
20 Eagle Road, just right before you get to the
21 foothills.
22 Q. And 2007C?
23 A. Well, I can't say his name very good.
24 Arcoraci, Tom Arcoraci. He's on Prairie Road,
25 which is off of -- from Floating Feather and the

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1 old Highway 55, or what they call Horseshoe Bend
2 Road now, he's just maybe a quarter mile east of
3 there.
4 Q. 2007D?
5 A. D?
6 Q. D, as in dog.
7 A. This is Robert Jones off of 2183 Homer
8 Road. That is this one right here (indicating).
9 This is from just west of the intersection of
10 Ballantyne and Homer.
11 Q. Okay. 2007E?
12 A. E is the Harmons. They're off of 3660
13 Falcon Ridge Lane. And it's actually the
14 intersection of Valley High and Falcon Ridge,
15 which is just -- from the Kohler well, which was
16 right off Eagle Road, it's just maybe a quarter to
17 a half mile west, which would be, oh, about from
18 Beacon Light -- Beacon Light and Eagle would be
19 about a half mile north, and probably close to a
20 half mile west.
21 Q. 2007F?
22 A. That is Black Horse Construction, and
23 that's off of 10953 Hanley Place. And that's out
24 off Highway 16 just west of the M3 property.
25 Q. And 2007G?

1 A. 2007? This is Larry and Susan
 2 Overholser. They're also off of Prairie Road,
 3 which is just east of Floating Feather and old
 4 Highway 55 or Horseshoe Bend Road. They're
 5 actually right next door to the Arcoracis.
 6 Q. So that completes 2007 replacement
 7 wells in that study area that you did?
 8 A. Yes, sir.
 9 Q. And that's -- how many wells were
 10 replaced?
 11 A. In that year, I think it was seven.
 12 Q. Go to 2008.
 13 A. Okay.
 14 Q. 2008, well A?
 15 A. That's the Ilene Stinar well. She's
 16 just off of Beacon Light about halfway between
 17 Eagle and Ballantyne.
 18 Q. 2008B, B, as in boy?
 19 A. Boy. That's the Bill Lawton well.
 20 He's just about probably 300 yards, 400 yards
 21 north of the Stinars. He's off of Osprey Road.
 22 Q. And 2008C?
 23 A. That's the Larry Christensen well,
 24 3472 North Ballantyne. That is probably a little
 25 more than a quarter mile north of Beacon Light on

1 Ballantyne.
 2 Q. 2008D, as in dog?
 3 A. That is Rick Katucki. And he's off
 4 2070 West Homer Road. From the intersection of
 5 Ballantyne and Homer he's -- I don't even know if
 6 it's a quarter mile west of there on Homer Road,
 7 very close to the intersection.
 8 Q. 2008E, as in Evelyn?
 9 A. That's Chuck Roberts. He's one of the
 10 ones that came in and gave public testimony. He's
 11 at 2000 Homer Road, which is very close to the one
 12 we just looked at, real close to the intersection
 13 of Ballantyne and Homer Road.
 14 Q. 2008F?
 15 A. That is Cort Hanson off of 3477 Shadow
 16 Hills. From Beacon Light and Eagle Road, it's
 17 about a -- well, probably not quite a half mile
 18 north and about a quarter mile west. It's very
 19 close to the well that IDWR's been monitoring in
 20 this area. 32DBD, I think, is the -- part of the
 21 designator for it.
 22 Q. Okay. 2008G?
 23 A. That is the William George residence.
 24 He's at 2636 Edgewood, which is about a mile west
 25 of Highway 55, and then maybe a quarter mile south

1 on Edgewood.
 2 Q. 2008H?
 3 A. H? Raul Labrador, he's on Rush Road.
 4 He's not very far east of Ballantyne on Rush Lane.
 5 Q. 2008I?
 6 A. That is David O'Neal, 5735 North
 7 Willow Creek Road. That's the one -- it's
 8 probably about a mile and a half to 2 miles north
 9 of Beacon Light on Eagle Road. And Eagle Road
 10 turns into Willow Creek Road. It's basically the
 11 same road. It just changes names.
 12 Q. And 2008J?
 13 A. This is the Jacksons. They are at
 14 3953 Brookside. That is -- from the Chevron
 15 station in -- well, Beacon Light and Highway 55,
 16 they're probably about a half mile north. And
 17 they're actually maybe about a quarter mile west
 18 of there.
 19 Q. That completes the wells in that study
 20 area for 2008 that were replaced?
 21 A. Yes.
 22 Q. And how many wells was that in 2008?
 23 A. I believe that was ten.
 24 Q. And so your bar graph shows a total of
 25 20 wells through that study area in 2005 through

1 2008?
 2 A. Yes. All totaled up, yeah.
 3 Q. And are those the same as what's
 4 reflected on the red/pink/orange dots?
 5 A. Yes, sir.
 6 MR. ALAN SMITH: We would at this time move
 7 to admit Exhibit 421, the bar graph, and 424, the
 8 map.
 9 THE HEARING OFFICER: Okay. I have one
 10 question about the markings on the round dots.
 11 Are those markings, are they
 12 cross-references to the numbers that are --
 13 THE WITNESS: Yes, sir.
 14 THE HEARING OFFICER: -- here in this paper
 15 document?
 16 THE WITNESS: Yes. Like, for instance,
 17 2005A, the one you're holding up there, that on
 18 this dot says 2005-A.
 19 THE HEARING OFFICER: Okay.
 20 THE WITNESS: So each one of those
 21 corresponds to a dot up here.
 22 THE HEARING OFFICER: Okay. And so,
 23 Mr. Smith, you were moving for the admission of
 24 the map itself or --
 25 MR. ALAN SMITH: Both the bar graph and the

1 map, they coincide with each other.
 2 THE WITNESS: And also this contents needs
 3 to go with it too.
 4 THE HEARING OFFICER: This document is not
 5 yet marked, Mr. Smith.
 6 THE WITNESS: No.
 7 MR. ALAN SMITH: We could mark that as an
 8 exhibit. I'm afraid I've lost track on our
 9 exhibits. I think it may be 429, but I'm not sure
 10 of that.
 11 THE HEARING OFFICER: Jean, do you know?
 12 MR. ALAN SMITH: 429 or 430.
 13 MS. HERSLEY: Yes, 429.
 14 THE HEARING OFFICER: 429.
 15 THE WITNESS: 429.
 16 MR. ALAN SMITH: And that's identical to a
 17 copy that's been provided to the parties and
 18 opposing counsel.
 19 (Exhibit 429 marked.)
 20 THE HEARING OFFICER: Okay. So the
 21 document with well logs and the identifiers that
 22 cross-reference to the map, those -- that
 23 compilation of documents has been marked as
 24 Exhibit 429. And you have moved for the admission
 25 again of Exhibits 421 and 424, and I'm assuming

1 you're also moving for the admission of
 2 Exhibit 429, Mr. Smith.
 3 MR. ALAN SMITH: That's correct.
 4 THE HEARING OFFICER: Mr. Lawrence?
 5 MR. LAWRENCE: Yes, Mr. Hearing Officer.
 6 We have no objection to the admission of
 7 Exhibit 429, the well driller's reports.
 8 THE HEARING OFFICER: Okay.
 9 MR. LAWRENCE: However, Exhibit 421, the
 10 bar graph, we object to the title "dry wells"
 11 being included. There's been no foundation laid
 12 that any of these wells are so-called dry wells.
 13 So we would object to the admission of Exhibit 421
 14 on that ground.
 15 The -- as to the map, Exhibit 424, we
 16 also object to the admission of that exhibit to
 17 the extent that it says "Replacement or dry
 18 wells." And we object to the labeling of the pink
 19 dots as "Replacement wells." There was not
 20 adequate foundation laid that all of those wells
 21 depicted as pink dots were in fact replacement
 22 wells.
 23 I could ask some questions in aid of
 24 this objection if you would like. I believe the
 25 well logs show that there's only eight of the

1 wells depicted as pink dots that have original
 2 well logs and so-called replacement well logs.
 3 THE HEARING OFFICER: Well, Mr. Lawrence, I
 4 think I'll receive the exhibits into evidence with
 5 those qualifications, and I'll allow you to -- to
 6 explore the subject and the fact that there isn't
 7 a linkage. So I'll receive them into evidence
 8 with that qualification. I'll also ignore the
 9 reference that characterizes the wells as dry
 10 wells. We talked about that particular subject
 11 before.
 12 And I think there needs to be some
 13 information about the characteristics of those
 14 wells and whether there was actually water in the
 15 well or not to actually characterize them as dry
 16 wells. But we'll consider the label "Replacement
 17 well" again with the reservation that you've
 18 expressed, and I'll allow you to explore that
 19 subject on cross-examination.
 20 So the documents marked as 421, 424,
 21 and 429 are received into evidence with, again,
 22 those caveats.
 23 (Exhibits 421, 424, and 429 admitted.)
 24 MR. ALAN SMITH: We could strike the word
 25 "dry" from the bar graph and the map legend.

1 THE HEARING OFFICER: And that would be
 2 fine if we wanted to cross it out. Either way. I
 3 won't consider the label as being accurate.
 4 THE WITNESS: Do you want me to cross it
 5 out?
 6 MR. ALAN SMITH: No.
 7 THE HEARING OFFICER: It's fine.
 8 THE WITNESS: I need to write "Replacement"
 9 on this one, your copy.
 10 MR. ALAN SMITH: The Hearing Officer's
 11 indicated that he's not going to consider the
 12 label as part of the --
 13 THE WITNESS: Okay. All I'm doing is the
 14 copy that's going to Mr. Spackman, I'm just
 15 putting "Replacement" or --
 16 MR. ALAN SMITH: Yes, go ahead and do that.
 17 THE WITNESS: So his is the same.
 18 MR. LAWRENCE: Mr. Hearing Officer, we
 19 would prefer that if you were going to ignore the
 20 term "Dry wells," because this is going to be
 21 placed in the record, that that term just be
 22 stricken, crossed out from the exhibits.
 23 THE HEARING OFFICER: Yeah, and I think
 24 that good practice, because if there's a
 25 possibility of appeal or something else, it

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1 eliminates the confusion. I may understand that,
2 but somebody looking at it may miss that nuance.
3 So let's go ahead and strike the term.
4 THE WITNESS: Strike "dry" on this one and
5 this one?
6 THE HEARING OFFICER: Yeah.
7 THE WITNESS: Okay. And we're talking both
8 the map and the bar graph?
9 MR. LAWRENCE: Right.
10 MR. ALAN SMITH: Correct.
11 THE WITNESS: I'll just draw a couple lines
12 through it so we can see what was there.
13 THE HEARING OFFICER: So what do you intend
14 to do, Mr. Smith? Do you intend to give me the
15 copy that Jason Smith is rolling up?
16 MR. ALAN SMITH: Yes.
17 THE HEARING OFFICER: And then what, the
18 original of the bar graphs, but you will retain
19 the original of the map itself?
20 THE WITNESS: Well, the bar graph is copied
21 on here.
22 THE HEARING OFFICER: All right.
23 THE WITNESS: It's all copied just like
24 what you're seeing there.
25 THE HEARING OFFICER: All right.

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1 THE WITNESS: But it's all on one.
2 MR. ALAN SMITH: We can either provide you
3 with the map that's hanging up there or that copy,
4 whichever you'd prefer. We need to keep one.
5 THE HEARING OFFICER: Well, it's a little
6 odd to have one single document with two exhibit
7 markings on it, which I think also lends itself to
8 confusion. I mean then somebody will look at this
9 and say, "Which exhibit is this?"
10 I guess I'd almost rather have this
11 document that's hanging if the -- if the attached
12 dots will remain attached. I guess that's one of
13 my concerns.
14 THE WITNESS: They should now because I put
15 Scotch tape over them.
16 THE HEARING OFFICER: Okay.
17 THE WITNESS: If you want, I'll keep that
18 one, and then when we're done I'll roll this up.
19 THE HEARING OFFICER: I prefer to have two
20 separate documents rather than a single one with
21 two exhibit marks on it.
22 MR. ALAN SMITH: We can separate them.
23 THE WITNESS: Yeah, we can separate that
24 one there.
25 THE HEARING OFFICER: Okay. All right.

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1 Very good.
2 MR. ALAN SMITH: Separate those now.
3 THE WITNESS: Well, the ones I have to
4 separate is the one up there, and I was going to
5 leave that until I'm done. And then I can roll it
6 up, separate, and give it to Mr. Spackman.
7 MR. ALAN SMITH: Would you do that?
8 THE WITNESS: Do you want me to do that
9 now?
10 THE HEARING OFFICER: Well, why don't we
11 wait until we have a recess, and then we won't
12 take the time.
13 MR. ALAN SMITH: That concludes the direct,
14 I believe.
15 THE HEARING OFFICER: Okay. And you have
16 redirect?
17 MR. ALAN SMITH: Well, I -- I may have, but
18 I thought Mr. Thornton would go next.
19 THE HEARING OFFICER: Well, I thought what
20 we would do is have you go through your redirect,
21 and then have Mr. Thornton ask any questions he
22 may have, Mr. Edwards, and then we'd come back to
23 the applicants for final cross-examination,
24 Mr. Smith.
25 MR. ALAN SMITH: That will be fine.

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1 THE HEARING OFFICER: Okay.
2
3 REDIRECT EXAMINATION
4 BY MR. ALAN SMITH:
5 Q. Mr. Smith, I believe when you were
6 testifying the last day on June 23rd you were not
7 allowed to finish your answer regarding municipal
8 wells in the area that were shown on the map,
9 Exhibit 424.
10 Would you do that now.
11 MR. LAWRENCE: Objection. It's unclear
12 what the question actually is that the witness is
13 going to answer.
14 THE HEARING OFFICER: Well, overruled. I
15 think -- I mean I understand that he's attempting
16 to identify on the map what he thinks are
17 municipal wells.
18 Q. (BY MR. ALAN SMITH): As to the
19 location of those wells' cfs, I believe you've
20 already testified to that.
21 A. Yeah, you're talking about the green
22 dots?
23 Q. The green dots.
24 A. Okay. All right. Well, remember that
25 the green dots here only show the larger municipal

1 size wells in that 2005/2008 time frame that we
2 looked at. So there's other wells in here, such
3 as the Lexington Hills, the United Water well
4 that's on the Crandlemire -- old Crandlemire place
5 here off Floating Feather. There's also an old
6 Eagle well on Eagle Road about a half mile north
7 of State Street that was DeShazo's first well when
8 Eagle Ranch was first built.

9 There's also Redwood Creek, which is
10 out near Ballantyne, approximately Ballantyne and
11 Highway 44. There's a couple here on -- in the
12 Island Woods area of Eagle Island that aren't
13 shown because they were drilled before that time
14 frame.

15 If we go through, in 2005 the Trellis
16 subdivision, which is near Beacon Light and
17 Highway 16, that well was put in. And it was
18 granted a right at 3.9 cfs. In '06, we had Star
19 Water put in a 5 cfs well off of Floating Feather
20 about halfway between Star Road and -- I think
21 that one's Palmer, but it's about a mile northeast
22 of the city of Star.

23 We also had the Legacy and Eagle field
24 wells put in by Eagle. One of them is 4 cfs and
25 one's 4.9 cfs. And then there was another one put

1 in off -- just south of Highway 55 and Highway 44.
2 This should actually be a yellow dot.

3 After I talked to Mr. DeShazo, this is
4 a well that was -- that was punched, but they're
5 still building -- it's not pumping yet. They're
6 still building the building around it. I talked
7 to him probably six weeks ago, and it didn't sound
8 like it was even getting close to where it was
9 going to be pumping yet. So that's actually kind
10 of a mistake. That should be a yellow dot.

11 Q. Can you tell us where you're
12 indicating there on the map, for the record?

13 A. It would be just, say, a quarter mile
14 south of Highway 55 and 44.

15 Q. All right. Go ahead.

16 A. All right. And that was -- concludes
17 '06 in this area. And then in '07, they drilled
18 the Brookwood well, Eagle did. That was 3.25 cfs.

19 Then in '08 there was another well put
20 in. They -- it's about where the bypass
21 intersects back into Highway 44 out on the east
22 side of Eagle. That was a 3.5 cfs well that was
23 stuck in there.

24 Q. Is that Eagle City well?

25 A. Yes, I believe so.

1 Remember, too, that the yellow dots
2 are ones that have been -- and this is according
3 to IDWR records. These are wells that have been
4 granted permits but as of about the end of March
5 they showed that they had not been punched and
6 were pumping.

7 This is the Dry Creek -- I think it's
8 JMM Dry Creek at 5 cfs. That's been granted. It
9 is not pumping.

10 THE HEARING OFFICER: When you say "this
11 is," Jason --

12 THE WITNESS: This is off of Dry Creek
13 about a mile east of Highway 55.

14 The two Avimor wells that have been
15 granted but not drilled and pumping, this is kind
16 of -- this is a representative of where they're
17 at, but they're actually -- when they propose to
18 drill, they've got certain areas that they can
19 drill. And there's actually a pretty big area
20 that they can drill in. So these dots may not be
21 exactly representative of where those wells will
22 go, but it's in one of those sections.

23 And again, those are -- that's two
24 5 cfs, so 10 cfs total has been granted to Avimor,
25 but has not been punched and is not pumping.

1 We've got the High Plains Estates,
2 which is just west of the M3 property off of
3 Highway 16 that has one water permit of 1 cfs, and
4 then it has another one of 3.55 cfs.

5 Then we have Monarch Ridge, which
6 is -- well, if you go to the end of the panhandle,
7 what we've been calling the panhandle at M3, go
8 west about a mile, there's a 3.34 cfs well that's
9 been granted for that.

10 Now, what we -- I think is going on
11 here with all these red dots, these wells that
12 have needed replaced, is we've got a lot of
13 different wells here, half of which aren't shown
14 because they're before our time frame that we
15 looked at.

16 And I think that these overlapping
17 cones of depression --

18 MR. LAWRENCE: Objection.

19 THE WITNESS: -- between all these wells --

20 MR. LAWRENCE: The witness is --

21 THE HEARING OFFICER: Just a minute.

22 MR. LAWRENCE: The witness is providing
23 expert opinion. He's not qualified to do so.

24 THE HEARING OFFICER: Sustained.

25 Mr. Smith.

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1 Q. (BY MR. ALAN SMITH): All right.
2 You're giving your opinion as a layman?
3 A. Yes, sir.
4 Q. Go ahead, then.
5 THE WITNESS: What I believe is
6 happening --
7 MR. LAWRENCE: Same objection.
8 THE HEARING OFFICER: Sustained.
9 Alan Smith, I think he needs to be
10 qualified as an expert to testify regarding these
11 matters of hydrogeology.
12 Q. (BY MR. ALAN SMITH): Let's go to
13 Exhibit 42, figure 6. I believe that's the
14 cross-section that you started to testify to on
15 June 23rd.
16 A. Figure 5's.
17 Q. Figure 5, yes.
18 A. Okay.
19 Q. You were not allowed to finish your
20 answer or didn't get to finish your answer.
21 A. Well, if you look at figure 5, what
22 this is is a cross-section of --
23 THE HEARING OFFICER: Let me find this
24 again.
25 THE WITNESS: Oh, okay.

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1 THE HEARING OFFICER: I'm in 42?
2 THE WITNESS: 42 and it's --
3 THE HEARING OFFICER: 42 what?
4 MR. ALAN SMITH: Figure 5.
5 THE WITNESS: Yeah, it's just past tab 4 a
6 little ways.
7 THE HEARING OFFICER: Okay. So tab 4.
8 Okay.
9 THE WITNESS: What this is is this is an
10 HLI drawing, I believe. Yeah, it says down here
11 in the corner. And this is basically a cross-cut
12 of the aquifer we've been calling the Pierce
13 Gulch. And it is a cut from the southwest to the
14 northeast. And what that's showing is what
15 they -- they spoke to as how the aquifer drops
16 down deeper to the southwest.
17 So remember, we've got the fault line
18 that they show that comes through approximately
19 right here (indicating), and then we have a green
20 line that takes off and kind of takes off to the
21 north -- well, actually west and just a little bit
22 north. And what this does is, according to what
23 they've found, is it's deeper down here in the
24 southwest corner.
25 As it comes to the northeast, it gets

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1 shallower. And as it comes to this green line, it
2 either comes up to ground level or very close to
3 that. So the part in the north and northeast is a
4 shallower or higher elevation part than the part
5 down here in the southwest (indicating). So as we
6 increase demand --
7 MR. LAWRENCE: Objection. The witness is
8 attempting again to give expert testimony. He's
9 not qualified as an expert.
10 THE HEARING OFFICER: I think that's
11 probably the case. I'll withhold on the ruling.
12 But, Mr. Lawrence, I want you to jump in.
13 So proceed, Mr. Jason Smith, but my
14 guess is that you're testifying regarding
15 hydrogeology, and you're not qualified as an
16 expert. Proceed.
17 THE WITNESS: So continue? So from what
18 HLI has determined, the aquifer is deeper here
19 (indicating) and it trends --
20 Q. (BY MR. ALAN SMITH): Okay. You're
21 indicating where now on that map?
22 A. It would be the southwest, let's just
23 say towards the Star area. It's deeper in the
24 Star general area and along the river than it is
25 up in the M3 and the north Eagle area because it's

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1 kind of -- it swoops down to the southwest, I
2 believe is the term that they've been using.
3 Q. And that's according to that figure 5?
4 A. Yeah, figure 5, Exhibit 42.
5 That's why we believe that this is
6 showing up as a lot more replaced wells.
7 MR. LAWRENCE: Objection. Once again, the
8 witness is not qualified as an expert in
9 hydrogeology.
10 THE HEARING OFFICER: Sustained.
11 Mr. Alan Smith.
12 MR. ALAN SMITH: Could we have a moment,
13 please?
14 THE HEARING OFFICER: Sure.
15 MR. ALAN SMITH: I don't believe we have
16 any further redirect at this time.
17 THE HEARING OFFICER: Okay. Okay.
18 Mr. Thornton, questions?
19 MR. THORNTON: Yeah.
20
21 CROSS-EXAMINATION
22 BY MR. THORNTON:
23 Q. Mr. Smith, well log information, the
24 data about well logs, whether they're replacement
25 or not, and the amount of water associated with

1 those wells, where did you obtain that
2 information?
3 A. All of this comes off of -- everything
4 on this map comes off of and out of Idaho
5 Department of Water Resources records.
6 Q. And where did you obtain those records
7 from?
8 A. Partially the Internet, off their
9 website, and partially out of their files.
10 Q. So is that a public website?
11 A. Yes, sir.
12 Q. So any public person could access
13 that? It doesn't have to be just an expert; is
14 that correct?
15 A. That's correct.
16 Q. And so placement of those dots that
17 are -- identify either replacement wells or
18 potential wells that will start withdrawing water
19 in the future or the green dots, ones that are
20 existing, are all on the website; is that correct?
21 A. Yes, sir.
22 Q. Okay. Was that very hard to get? Was
23 it hard to access for an average person?
24 A. Access to the website isn't tough to
25 get. That's pretty simple. But the problem comes

1 when you're trying to line up new wells that have
2 been replaced -- replacement for an older well,
3 and then trying to line that up with the old well
4 logs.
5 Part of the problem is before roughly
6 1980 there were quite a few well logs that were, I
7 think, never done and never turned in, or if they
8 were turned in, they didn't make it into the
9 files.
10 Another problem is is now we have
11 addresses out there. But if you go back before
12 about the mid-1980s, it was all rural route, plus
13 there was even a lot of that in the Beacon Light
14 area that was actually even a Boise rural route.
15 So unless you have the name of the
16 person who originally drilled the well, whether
17 it's the owner or the builder, it's very difficult
18 to line those up.
19 Q. And the points you have identified on
20 the map, were those relatively, then, easy to line
21 up or accurate to the average person to put on the
22 map?
23 A. Oh, yeah, anybody could do it. If I
24 can do it, just about anybody can do it.
25 Q. And this data you gathered was just

1 for the time period from about 2005 through 2008;
2 is that correct?
3 A. Yes.
4 Q. Okay. On that map is what is
5 sometimes referred to as the Crandlemire well.
6 It's located just immediately to the west of Eagle
7 Middle School.
8 Is that on that map?
9 A. No, it's not. And it's not because it
10 was drilled before our time frame, our 2005 to
11 2008.
12 Q. Okay. So it is reasonable to expect
13 that there are quite a few more wells out in that
14 area that are currently withdrawing water that are
15 not identified as green dots; is that correct?
16 A. Yes, anything drilled before 2005
17 would not show up on that map.
18 Q. Okay. And you've been essentially
19 here every day of this hearing; correct?
20 A. Yes, sir.
21 Q. And then have you heard any evidence
22 provided by M3 where they themselves attempted to
23 do just as you have done, identifying where wells
24 have been replaced in association with water
25 withdrawals from larger type wells?

1 A. No.
2 Q. Have you also heard testimony by
3 Mr. Ed Squires that he has never heard of a well
4 going dry other than two, I think, in the
5 southeast Boise area, perhaps by Micron? Did you
6 hear that statement?
7 A. Yes, something very similar to that,
8 if not exactly that.
9 Q. Have you ever heard anyone from Hydro
10 Logic or any of M3's experts at all talk to this
11 readily available data?
12 A. No, sir.
13 Q. Does it make you wonder why they
14 haven't talked to this data?
15 A. Yes.
16 Q. I'd like to, if I could -- we
17 discussed before the hearing Mr. Greg Taylor's
18 information that he submitted. And on that --
19 I'll hand this to you, because I don't know if
20 everyone -- you have a copy there?
21 A. Yes.
22 Q. All right.
23 A. I think, if we're talking the same
24 thing.
25 Q. It's dated June 29th of this year --

1 A. From Greg Taylor?
 2 Q. -- from Mr. Greg Taylor to
 3 Mr. Spackman.
 4 A. Yes.
 5 Q. If you'd turn to -- well, if you could
 6 identify where North Ballantyne Lane is where
 7 you've already identified many other wells on
 8 Ballantyne Lane. Could you give your -- point to
 9 that map approximately where that is.
 10 A. Yeah, he would be -- from Ballantyne
 11 and Beacon Light, he would be probably right
 12 between about where these two orange/pink/red dots
 13 are.
 14 Q. Okay. And then you were here during
 15 Mr. Taylor's public witness testimony?
 16 A. Yes, sir.
 17 Q. Okay. If you'd turn to page 2 on his
 18 document --
 19 A. Okay.
 20 Q. -- which is a well log done in 1955.
 21 And do you see where it states the
 22 depth of standing water from the surface?
 23 A. Yes. It says "90 feet."
 24 Q. Okay. And then the next several pages
 25 in that document are from Mr. Dennis Owsley with

1 the Department of Water Resource; is that correct?
 2 A. Yes, sir, the next four -- next four.
 3 Q. Yeah. So if you would turn to I
 4 believe it's the last letter from the Department
 5 of Water Resource dated March 26th, 2009.
 6 Do you see that letter?
 7 A. Yes, sir.
 8 Q. And do you see in the first paragraph
 9 where Department of Water Resource has been out
 10 measuring their -- his well for approximately four
 11 times, where it states "On March 24th, 2009, your
 12 irrigation well was dry"?
 13 A. Yes.
 14 Q. Do you see that?
 15 A. Yes, sir.
 16 Q. So we actually have one dry well out
 17 there?
 18 A. Apparently.
 19 Q. And then Mr. Owsley goes on to state,
 20 "We measured down to 125 feet below the casing and
 21 did not encounter water"; is that correct?
 22 A. That's correct.
 23 Q. So from 90 feet back in 1955 to
 24 125 feet in March -- March of 2009, does that
 25 represent roughly 35 feet of water table decline?

1 MR. LAWRENCE: Objection. Calls for an
 2 expert opinion.
 3 MR. THORNTON: I think, your Honor, it's
 4 just simple math.
 5 THE HEARING OFFICER: Overruled.
 6 THE WITNESS: It would be, yeah, 35 feet.
 7 125 deduct 90 is 35.
 8 Q. (BY MR. THORNTON): Okay. So is this
 9 similar information that a person could have
 10 obtained from the IDWR website other than this was
 11 in 2009 and not in 2008?
 12 A. Yes. Yeah, we only went through the
 13 end of 2008 because, as I stated, we were doing
 14 that in the spring. And, you know, trying to push
 15 anything into 2009 would not have been accurate.
 16 MR. THORNTON: Okay. All right. So what I
 17 would submit to you, Mr. Hearing Officer, is to
 18 see if we could have this officially identified as
 19 an exhibit with that information identifying this
 20 potentially as another dot on the map with
 21 background information and foundation.
 22 THE HEARING OFFICER: Okay. You know, I
 23 think -- well, let me look. I know I brought in
 24 some of them. I brought in Mr. Smith's motion, or
 25 at least his document. I thought I had that as

1 well. I don't see it immediately.
 2 Do you have a copy you want me to
 3 mark?
 4 MR. THORNTON: Yeah, I can give you this
 5 copy.
 6 THE HEARING OFFICER: Okay.
 7 THE WITNESS: Or I can give you my copy,
 8 too, John, if you'd like. Would you like this
 9 one?
 10 MR. THORNTON: I've got more. So thanks.
 11 THE WITNESS: Okay. All right.
 12 THE HEARING OFFICER: What number are we
 13 at? This would be -- wait a minute -- it would be
 14 Thornton's --
 15 MR. ALAN SMITH: Do you want to mark it as
 16 our Exhibit 430 or --
 17 THE HEARING OFFICER: Well, it wouldn't be
 18 his.
 19 MR. THORNTON: It doesn't bother me which
 20 number you want to use.
 21 THE HEARING OFFICER: Well, let's try to
 22 be -- now, yours were what? 800s?
 23 MR. THORNTON: 800s, yeah. And I've lost
 24 track of what number we're at.
 25 MS. HERSLEY: Last one here states 866.

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1 THE HEARING OFFICER: Okay. We had an 866.
 2 So at least we think the next one is 867.
 3 MR. THORNTON: 867.
 4 THE HEARING OFFICER: That would be
 5 consistent. Let's mark it as 867.
 6 (Exhibit 867 marked.)
 7 THE HEARING OFFICER: Okay. The document's
 8 been marked.
 9 Mr. Thornton.
 10 MR. THORNTON: Okay.
 11 Q. I'd like to provide you with a
 12 document and ask you a couple of questions. And
 13 this -- this document is titled "A distributed
 14 parameter water budget database for the Lower
 15 Boise Valley." And it was prepared by U.S. Bureau
 16 of Reclamation and State of Idaho Department of
 17 Water Resource, completed in January of 2008.
 18 Are you familiar with this document,
 19 Mr. Smith?
 20 A. I've read through it, yes.
 21 Q. And are you -- although not an expert
 22 opinion, this is a public document. Are you aware
 23 that this document was a model associated with
 24 looking at groundwater discharge and recharge in
 25 the Lower Boise Valley?

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1 A. Yes.
 2 MR. LAWRENCE: Objection. This witness is
 3 not qualified to identify what this document may
 4 or may not say. To the extent that the document
 5 is a public document, it speaks for itself.
 6 THE HEARING OFFICER: Overruled, at least
 7 for purposes of identification.
 8 Q. (BY MR. THORNTON):
 9 MR. THORNTON: Okay.
 10 Q. I've just got a couple of questions
 11 that I'd like to ask you. If you'd turn in this
 12 document to page 94. And it's referring to a
 13 figure 5-8 at the bottom of page 94.
 14 A. Yes.
 15 Q. Do you see where it states in that
 16 second paragraph where it identifies figure 5-8,
 17 where it says "Based on figure 5-8 over the course
 18 of an average year and in the Boise Valley as a
 19 whole there is an aquifer storage deficit of about
 20 73,000 acre-feet"?
 21 A. Yes, sir.
 22 Q. Okay. And if you'd go back to page 95
 23 in that same document.
 24 And the last paragraph on page 95, do
 25 you see where it says that "By comparison, net

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1 groundwater recharge discharge in most
 2 residential, commercial, and public recreation
 3 lands in quite small"?
 4 A. Uh-huh, yes.
 5 Q. And then it goes on to say that "On an
 6 annual basis, only a few hundreds of a feet of net
 7 recharge of discharge occurs on these lands."
 8 And then it goes on to say that "The
 9 major exceptions are the land parcels associated
 10 with municipal wells where groundwater discharge
 11 in urban centers is concentrated."
 12 Have you read that before?
 13 A. Yes, sir.
 14 Q. Do you see this information from both
 15 federal and state governmental agencies as being a
 16 legitimate concern?
 17 MR. LAWRENCE: Objection. Once again, the
 18 witness is not qualified as an expert in
 19 hydrogeology.
 20 THE HEARING OFFICER: Overruled.
 21 Q. (BY MR. THORNTON): In your layman's
 22 view, do you see this being a concern for as what
 23 has already been testified to somewhere in the
 24 order of 2,000 senior groundwater rights owners in
 25 north Eagle area to have a genuine or legitimate

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1 concern about potential injury associated with
 2 M3's municipal water right withdrawals?
 3 A. Yes.
 4 Q. Have you heard this document even
 5 brought up or identified by any of M3 expert
 6 witnesses?
 7 A. No.
 8 MR. THORNTON: I think that's all the
 9 questions that I have for him.
 10 Thank you, Mr. Smith.
 11 THE HEARING OFFICER: Okay.
 12 Mr. Edwards?
 13 MR. EDWARDS: I have no questions.
 14 THE HEARING OFFICER: Okay.
 15 Mr. Lawrence, cross-examination?
 16 Oh, before we go there,
 17 Mr. Thornton --
 18 MR. THORNTON: Yeah.
 19 THE HEARING OFFICER: -- we have at least
 20 one document that's been marked, one that's
 21 unmarked.
 22 Are you wishing to offer this as an
 23 exhibit, 867?
 24 MR. THORNTON: Yes. Yes. Yes, I do, your
 25 Honor.

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1 THE HEARING OFFICER: Okay. There was some
2 discussion about this document earlier,
3 Mr. Lawrence, and its character, and now it's
4 taken on a little different character. And so
5 it's been offered as an exhibit.
6 MR. LAWRENCE: Yes, Mr. Hearing Officer.
7 We object to the admission of this exhibit on
8 grounds of hearsay, also on the grounds that it
9 lacks foundation identifying the well log from
10 1955 under the name Strawn as being the same well
11 as Mr. Taylor currently had measured -- or had
12 measured by the Department in 2008 and 2009.
13 MR. THORNTON: If I could respond to that.
14 THE HEARING OFFICER: Sure.
15 MR. THORNTON: I think the foundation comes
16 from when Mr. Greg Taylor himself identified that
17 his well was constructed in 1955. We have the
18 Department's own experts going out and measuring
19 that well numerous times, and at one point finding
20 that it was dry. I don't believe that's
21 speculation. I think it's a good foundation.
22 It's probably the best information one
23 could get with Department of Water Resource
24 experts out there. And the current well owner
25 having the information in his hands is, I think,

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1 proof as well as it would be very easy for anyone
2 to go ahead and track that well log, if necessary,
3 back to that actual point.
4 MR. ALAN SMITH: Could I respond, too, sir?
5 THE HEARING OFFICER: Okay.
6 MR. ALAN SMITH: Hearsay has been allowed.
7 As to any question of hearsay about Mr. Owsley's
8 letter, I believe he's here and available to
9 testify. I think it's reliable, goes to the
10 weight rather than the admissibility, and it would
11 appear to me there is an adequate foundation for
12 the admission of that exhibit. That person has
13 already testified as a public witness. And this
14 letter is merely to supplement his testimony.
15 MR. LAWRENCE: Mr. Hearing Officer --
16 THE HEARING OFFICER: Yeah.
17 MR. LAWRENCE: -- these documents were not
18 available to us during Mr. Taylor's public witness
19 testimony. Therefore, he was -- we were unable to
20 cross-examine him regarding these documents.
21 There's simply no way of knowing that this well
22 log that's included in these documents is the same
23 well as Mr. Taylor's. At least through the
24 evidence that we've heard so far there's no way of
25 knowing that.

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1 As far as Mr. Owsley -- his concern,
2 Mr. Owsley is not, to my knowledge, going to be
3 recalled as a witness. He has been already
4 examined. He was not examined on these letters.
5 And so therefore, we have not had a chance to
6 discuss his conclusions in those letters.
7 THE HEARING OFFICER: Okay.
8 Mr. Lawrence --
9 MR. ALAN SMITH: Counsel's objection -- and
10 I think they have the burden to call Mr. Owsley as
11 a witness, not us, if -- to support their
12 objection.
13 THE HEARING OFFICER: Okay. I want to move
14 this along. I will allow this document into the
15 record. I think there's sufficient support to
16 determine that this document and the supporting
17 Department information is good information. So,
18 Mr. Lawrence, I'll allow it into the record.
19 (Exhibit 867 admitted.)
20 THE HEARING OFFICER: Okay. Now, we have
21 another document, Mr. Thornton.
22 MR. THORNTON: Yes, I would like to offer
23 up as an exhibit the document completed by the
24 Bureau of Reclamation, Department of Water
25 Resources titled "Distributed parameter water

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1 budget database for the Lower Boise Valley" into
2 the record.
3 THE HEARING OFFICER: This has a
4 handwritten number on it.
5 MR. THORNTON: That was a number that
6 NACGUA put on a document that we circulated to all
7 the parties. And this is one that's in the public
8 record. This is one that's on IDWR's own website
9 as well.
10 THE HEARING OFFICER: Okay. So this was
11 assigned, at least originally, a 217 number?
12 MR. THORNTON: Yes, it was.
13 THE HEARING OFFICER: And distributed to
14 the parties?
15 MR. THORNTON: Right.
16 THE HEARING OFFICER: And was it the full
17 document or just this excerpt?
18 MR. THORNTON: I'm sorry. I didn't hear.
19 THE HEARING OFFICER: Well, there's
20 apparently a larger document.
21 MR. THORNTON: Yeah. I have the full
22 document here, and it has a CD with it, and it is
23 on IDWR's website.
24 THE HEARING OFFICER: Okay. Mr. Lawrence,
25 the document that's been marked as Exhibit 217 has

1 been offered.
 2 MR. LAWRENCE: Mr. Hearing Officer, we
 3 object on the grounds that this is not the entire
 4 document. They want to offer this document into
 5 evidence. We believe it should be the entire
 6 document.
 7 MR. THORNTON: That's fine with me. We can
 8 do that.
 9 THE HEARING OFFICER: Okay. All right.
 10 Mr. Thornton.
 11 MR. THORNTON: Do I just give it to them?
 12 THE HEARING OFFICER: Well, it needs to
 13 come to us, I think.
 14 MR. THORNTON: Well, you've got a copy of
 15 this when we sent all of the documents around.
 16 But I can give you another one.
 17 THE HEARING OFFICER: Well, I need to dig
 18 and find it, I guess.
 19 MR. THORNTON: Yeah, we submitted this as
 20 part of our package of information to you. But if
 21 you'd like to have that for now, I can easily get
 22 another copy from the Department of Water
 23 Resource.
 24 THE HEARING OFFICER: Or we can exchange
 25 with you.

1 MR. THORNTON: Okay.
 2 THE HEARING OFFICER: So let's mark this
 3 217.
 4 (Exhibit 217 marked.)
 5 THE HEARING OFFICER: And it's received
 6 into evidence.
 7 (Exhibit 217 admitted.)
 8 THE HEARING OFFICER: I hate to be
 9 responsible for all that additional text, but...
 10 Okay. Further questions,
 11 Mr. Thornton? I think you were finished, were you
 12 not?
 13 MR. THORNTON: I'm finished. Thank you.
 14 THE HEARING OFFICER: Okay. Mr. Lawrence,
 15 do you want to begin cross-examination?
 16 THE WITNESS: Take a break.
 17 THE HEARING OFFICER: Do you want to take a
 18 break, folks?
 19 MR. LAWRENCE: Perhaps we could take a
 20 break.
 21 THE HEARING OFFICER: All right. Let's do
 22 that. Let's come back in ten minutes or so.
 23 (Recess.)
 24 THE HEARING OFFICER: Okay. We are
 25 recording again.

1 Mr. Lawrence, your turn to
 2 cross-examine Mr. Jason Smith.
 3
 4 CROSS-EXAMINATION
 5 BY MR. LAWRENCE:
 6 Q. Mr. Smith, you have no education or
 7 experience in hydrogeology, do you?
 8 A. No, sir.
 9 MR. ALAN SMITH: Objection. Asked and
 10 answered last June 23rd.
 11 THE HEARING OFFICER: Overruled. I
 12 recognize that there's been some discussion, but
 13 it's been -- the expiration of time is helpful --
 14 the refresh testimony is helpful to the Hearing
 15 Officer.
 16 Q. (BY MR. LAWRENCE): Nor do you have
 17 any education or experience in geology?
 18 MR. ALAN SMITH: Same objection.
 19 THE HEARING OFFICER: Overruled.
 20 THE WITNESS: I've had some geology courses
 21 in college, but they were lower level.
 22 Q. (BY MR. LAWRENCE): How long ago was
 23 that?
 24 A. You're dating me. About 30 years ago.
 25 Q. Who did you discuss the preparation of

1 your map with at the Department of Water
 2 Resources?
 3 A. I didn't discuss my map with anyone --
 4 Q. Who have you --
 5 A. -- at Water Resources. My father I
 6 discussed it with.
 7 Q. With whom at the Department of Water
 8 Resources have you discussed alleged dry wells or
 9 replacement wells in the north Eagle area?
 10 A. I don't believe I've discussed that
 11 with anybody at Water Resources.
 12 Q. Mr. Smith, turning to Exhibit 429,
 13 which is the packet of well drillers' reports you
 14 prepared.
 15 A. Yes, sir.
 16 Q. Could you please turn to 2005A.
 17 A. Okay.
 18 Q. In 2005A, there was only one well
 19 driller's report; correct?
 20 A. No. Actually, there's two. There's a
 21 Travis -- it should be Travis Reche, and then
 22 there's a Jerry Cluff that was the original well.
 23 MR. LAWRENCE: Mr. Hearing Officer, that is
 24 not what we have included in the packet that was
 25 delivered to us by Mr. Smith.

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1 THE WITNESS: We're talking 2005A?
2 Q. (BY MR. LAWRENCE): 2005A.
3 A. Should be Travis Reche, or Tavis, as
4 it says here, and there should be a Jerry Cluff.
5 No? I'll get you a copy of that. That's my
6 error. I put those together. I checked those.
7 That should have been there.
8 MR. LAWRENCE: Mr. Hearing Officer, do you
9 have one in your packet?
10 THE HEARING OFFICER: I do, yeah.
11 Do you want to review it?
12 THE WITNESS: I apologize.
13 MR. LAWRENCE: Perhaps not at this time.
14 THE HEARING OFFICER: Okay.
15 Q. (BY MR. LAWRENCE): Could you please
16 turn to 2006B.
17 A. 2006B. Yes.
18 Q. There's only one well driller report
19 contained in 2006B; correct?
20 A. That's correct.
21 Q. And that well driller's report is for
22 a well drilled in 2006?
23 A. Yes.
24 Q. And, Mr. Smith, it's your contention
25 that this is a replacement well?

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1 A. Yes, it is.
2 Q. Do you have any information regarding
3 the original well?
4 A. No. I tried to find some on the
5 Department website, but I could not link it up. I
6 even tried to go to the subdivision lot and block.
7 And I know that was done back in the late '70s,
8 mid to late '70s, but I cannot link it up with the
9 original -- and I don't know if there ever
10 actually was an original well log.
11 Q. So you have no information about the
12 depth of the original well?
13 A. No. I have no official document of
14 any kind for the original well.
15 Q. And do you have any information
16 regarding the nonpumping water level when the
17 original well was drilled?
18 A. The original well, no. Not the
19 original.
20 Q. For purposes of our testimony today,
21 I'll be referring to the earlier wells as the
22 "original wells" --
23 A. Okay.
24 Q. -- and so-called replacement wells as
25 "replacement wells."

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1 A. Okay.
2 Q. Could you please turn to 2007D.
3 A. D, as in dog?
4 Q. D, as in dog.
5 There's only one well driller's report
6 contained in this section; is that correct?
7 A. That's correct, sir. Again, the same
8 thing, I could not -- the current homeowner did
9 not know the original builder or owner. And he
10 believes this was done in that same -- like even a
11 little earlier, in the early '70s. And I don't
12 know if there was never a well log done or if it
13 was lost, but I can't link it up with the newer
14 one.
15 Q. And again, you have no information
16 regarding the original well depth or static water
17 level?
18 A. I have information -- some information
19 from the current owner, but nothing official
20 document from Water Resources.
21 Q. There's no information in the record
22 regarding the original well's depth or static
23 water level, is there?
24 A. In the record, no.
25 Q. Could you please turn to 2007E.

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1 A. E?
2 Q. E. Again, this is only a single well
3 driller's report contained in this section;
4 correct?
5 A. That's correct.
6 Q. Do you have any information regarding
7 the original well's depth or static water level?
8 A. Officially, no. All I have is what
9 the current owner told me about the old well.
10 Q. Would you please turn to 2007G.
11 A. I'm there.
12 Q. There was only one well driller's
13 report contained in this section; correct?
14 A. That's correct. Same thing. Couldn't
15 link that up with the original well. The current
16 owner doesn't know who the original builder or
17 owner was. That is also believed to be done in
18 that same time period, about the mid-'70s.
19 Q. Do you have any information regarding
20 the original well's depth or static water level?
21 A. No.
22 Q. Could you please turn to 2008B.
23 A. B, as in boy?
24 Q. B, as in boy.
25 There's only one well driller's report

1 contained in this section; correct?
 2 A. Yes, that's correct. This is one that
 3 I even know the original builder -- or owner, and
 4 I still can't link it up with the well log. I'm
 5 assuming that there was either never one done,
 6 which I guess was not that uncommon back in the
 7 '70s, or it was lost. I do know from knowing the
 8 original owner that this was a very -- very
 9 similar situation to Ilene Stinar's situation,
 10 which is 208A (sic).
 11 Q. Regarding 2008B as in boy again --
 12 A. Uh-huh.
 13 Q. -- you don't have any information
 14 regarding the original well's depth or static
 15 water level, do you?
 16 A. Officially, no.
 17 Q. Would you please turn to 2008E.
 18 A. E? Chuck Roberts' well?
 19 Q. That's correct.
 20 There's only one well driller's report
 21 contained in this section; correct?
 22 A. Correct. Chuck testified a little
 23 bit. He was one of the public testifying people.
 24 And he spoke a little bit to his original well and
 25 the dropping water level.

1 Q. Do you have any documentation
 2 regarding the original well's depth or static
 3 water level?
 4 A. No, nothing officially. We don't know
 5 who the original builder or owner was.
 6 Q. Please turn to 2008G.
 7 A. William George?
 8 Q. That's correct.
 9 There's only one well driller's report
 10 contained in this section of the exhibit; correct?
 11 A. That's correct, sir.
 12 Q. And do you have any information
 13 regarding the original well's depth or static
 14 water level?
 15 A. Nothing officially, only from William
 16 George, the current owner. And again, we don't
 17 know who the original owner or builder was, so
 18 it's hard to try to link up through the website.
 19 Q. Could you please turn to 2008H.
 20 There's only one well driller's report contained
 21 in this section; correct?
 22 A. Yes, sir.
 23 Q. And 2008I. Again, there's only one
 24 well driller's report; correct?
 25 A. Yes, sir. Same thing there, trying to

1 link them up when you don't know the original
 2 owner or builder is nearly impossible.
 3 Q. And in 2008J, there's also only one
 4 well driller's report?
 5 A. That's correct.
 6 Q. Regarding these last three, 2008H, I,
 7 and J, do you have any information regarding the
 8 original wells' depths or static water levels?
 9 A. H, I, and J? H, I have some
 10 information from the current owner, but I have
 11 nothing officially.
 12 From I, I don't really know much about
 13 that one, neither does the current owner.
 14 And J, Jacksons, I only have what the
 15 current owner has told me about the original well.
 16 Nothing official from any of those three.
 17 Q. All told, with your so-called
 18 replacement wells that you plotted on your map,
 19 there are 20 replacement wells plotted; is that
 20 correct?
 21 A. I believe that's correct.
 22 Q. And by my count, we just went through
 23 11 of the identified wells that only have the
 24 newer wells well driller reports in your
 25 Exhibit 429; is that correct?

1 A. Well, I wasn't counting. If you say
 2 there's 11, I believe you.
 3 Q. And that would leave nine of them
 4 where you have identified original well driller's
 5 reports as well as well driller's reports for
 6 replacement wells?
 7 A. If that 11 is correct, that should
 8 leave 9, yes.
 9 Q. So regarding the 11 where you have no
 10 information from the original well driller's
 11 reports, do you have any idea what aquifers those
 12 original wells were drilled into?
 13 A. No, not anything that's official.
 14 Q. You don't know how those original
 15 wells were constructed, do you?
 16 A. No, or by whom.
 17 Q. You don't know whether the static
 18 water levels in the replacement wells for those 11
 19 wells is lower than the static water level from
 20 the original wells, do you?
 21 A. Not officially, no.
 22 Q. Regarding the nine wells for which you
 23 have original well driller's reports --
 24 A. Uh-huh.
 25 Q. -- do you know what aquifer the

1 original wells were drilled into?
 2 A. Not for certain, no.
 3 Q. All of those original wells, of those
 4 nine that you have well driller's reports for, all
 5 were older than 30 years old when they were
 6 abandoned; is that correct?
 7 A. I'd have to go through and look.
 8 Well, the -- for instance, the Reche well, that
 9 one was actually -- the original was done in '86,
 10 so that would be about 23 years old. So that
 11 wouldn't be 30.
 12 Do you want me to go through them all
 13 one by one?
 14 Q. Again, that's the well driller's
 15 report that we were not provided a copy of the
 16 original well for?
 17 A. That's correct, yes. That's the one
 18 that I messed up on. And I'll get you a copy of
 19 that.
 20 The Morris well, which is 206A (sic),
 21 the original was in '74, so that would be a yes on
 22 that one.
 23 Robert Steele's well, which is 2007A,
 24 would be also in '74.
 25 Jill Kohler's replacement well, that

1 was in '55, so yes, that would be a 30 year.
 2 The Arcoraci well, that was '73, the
 3 original. That was 2007C. So that would be yes.
 4 That's more than 30.
 5 Ilene Stinar's replacement well, that
 6 was in '75, the original. So that would be a yes.
 7 Bill Lawton -- well, I don't have the
 8 second -- or the original well driller's, so that
 9 wouldn't fall into your criteria.
 10 Larry Christensen's replacement well,
 11 that was done in originally '73. So yes, that
 12 would be a 30-year well.
 13 Rick Takucki -- Katucki, his was
 14 originally done in '73, so yes, that would be a
 15 30-year well.
 16 The Cort Hanson well, which is 2008F,
 17 that was originally in '71. So that would be a
 18 30-year well.
 19 Did I get all of them?
 20 Q. Mr. Smith, are you familiar with the
 21 construction of the original wells for which you
 22 have well driller's reports?
 23 A. No, I've only got the information
 24 that's on the well driller's reports.
 25 Q. Did you inspect the original wells for

1 which you have well driller's reports?
 2 A. No, sir.
 3 Q. You don't know whether wells
 4 constructed in the manner that the original wells
 5 were constructed could be expected to last greater
 6 than 30 years, do you?
 7 A. I would hope they would, but I'm not
 8 an expert.
 9 Q. Mr. Smith, you don't know why these
 10 original wells for which you have well driller's
 11 reports were replaced, do you?
 12 A. I have talked to the homeowners, and I
 13 was given reasons that they had to do a
 14 replacement well.
 15 Q. But that's all you know, is that they
 16 had to replace a well?
 17 A. Well, based on what they told me, I
 18 know more than that. I didn't actually talk to
 19 the well driller, except in one instance.
 20 Everything else has come from the current
 21 homeowners.
 22 Q. Who told these homeowners to replace
 23 their wells?
 24 A. It was usually the pump or well
 25 drilling outfit that came out, most of them --

1 well, quite a few of them ran out of water, had a
 2 problem when the pump was pulled. That was when
 3 the determination was made that there was going to
 4 need to be a replacement well.
 5 Q. Who told them that they had to drill
 6 deeper if they were going to replace the well?
 7 A. It would have had to have been their
 8 well driller or pump person. It wasn't me.
 9 Q. These, of course, were the same well
 10 drillers who performed the work?
 11 A. I would assume so. They could have
 12 possibly got bids and went through somebody else
 13 too. I didn't ask any of those types of questions
 14 to the current homeowners.
 15 Q. Regarding the replacement wells -- I'm
 16 sorry. Regarding the original wells, do you know
 17 what the static water levels were in these wells
 18 when they were abandoned?
 19 A. When they were abandoned? No. I was
 20 told varying things that they were anything from
 21 dry -- quote, "dry," to there wasn't enough water
 22 left in the bottom of the well that they could
 23 pump water out of it.
 24 Q. Do you know whether measurements were
 25 taken of the wells before they were abandoned, of

1 the water levels?
 2 A. No, I didn't see anything -- you know,
 3 a document or anything from the well drillers, if
 4 that's what you're asking.
 5 Q. So you have no information regarding
 6 measurements of static water levels in the wells
 7 that were abandoned?
 8 A. Only what the homeowners told me.
 9 Q. Do you know whether any of the well
 10 owners who replaced their wells sought recourse
 11 from other well owners who may have caused their
 12 water levels to decline?
 13 A. That never came up. I never heard
 14 that from any of them.
 15 Q. Did you obtain any of the Department
 16 of Water Resources abandonment reports for the
 17 original wells that were abandoned?
 18 A. No, I don't believe so.
 19 Q. Mr. Smith, you testified earlier that
 20 it was difficult to match the well driller's
 21 reports for original wells with the new well
 22 owners; is that correct?
 23 A. If you don't have the original owner's
 24 name or the builder's original -- original
 25 builder's name, it's difficult.

1 Q. Regarding the nine wells for which you
 2 have original well driller's reports as well as
 3 replacement well well driller's reports, how can
 4 you be sure that you have matched the original
 5 reports with the correct owner?
 6 A. Well, on the vast majority of them,
 7 the names and dates, or approximate dates that
 8 they gave me, lined up with what was in Water
 9 Resources records.
 10 Q. And by names and dates they gave you,
 11 that was the new well owner?
 12 A. That was the original -- original
 13 builder or owner, and then they knew the
 14 approximate dates that that was put in, usually
 15 like a year or two.
 16 And I could go back, pull that name,
 17 and if there was a log actually done -- which that
 18 was part of the problem, I think a lot of them
 19 were never done -- that's how they were linked up.
 20 There was only one that I can think of
 21 that I matched up using subdivision, lot, and
 22 block. Everything else was they gave me the
 23 original owner's name.
 24 Q. Do you recognize that the well
 25 driller's reports that you've correlated -- the

1 original well driller's reports that you've
 2 correlated with replacement wells, at least five
 3 of them -- at least five of the original wells are
 4 located in different quarter-quarter sections than
 5 the replacement wells?
 6 A. That doesn't surprise me. I think
 7 that is probably one of the more inaccurate parts
 8 of that -- of those well logs.
 9 Q. Mr. Smith, do you contend that all of
 10 the wells that you have alleged were replaced had
 11 to be replaced because of water-level declines?
 12 A. From the information I got from the
 13 well owners, the water-level decline was at least
 14 the primary cause. There were other things. For
 15 instance, some of them had a water-level decline,
 16 they had to lower their pump, some of them more
 17 than once.
 18 It seemed that once they lowered their
 19 pump down towards the bottom of the well, many of
 20 them started picking up sand. So the -- how I see
 21 it from a layman's perspective, water-level
 22 declines in every one I can determine happened in
 23 all of these wells. But there were other factors
 24 late in the life of the well that also affected
 25 the replacement.

1 Q. Could you please turn to, in your
 2 exhibits, 429, the well driller's reports marked
 3 as 2007A.
 4 A. -7A. The Robert Steele well?
 5 Q. The newer well would be named Robert
 6 Steele, correct.
 7 A. Yes, correct.
 8 Q. In the original well driller's report
 9 from 1974, you see that the depth of the original
 10 well was 254 feet; correct?
 11 A. Yeah. And there is a notation here,
 12 too, it says, "The bit down to 254 feet," but it
 13 says, "The hole measures 199 feet." I'm not quite
 14 sure what that means there. That's right below
 15 the -- I don't know if you see it there. About
 16 two-thirds of the way down on the right-hand side.
 17 That's on the Bertha Kezar original -- original
 18 well report back in '74.
 19 Q. On the Steele well driller's report --
 20 A. The newer well, the replacement well.
 21 Q. Correct --
 22 A. Yes.
 23 Q. -- the replacement well. You see that
 24 the nonpumping water level is listed at 180 feet
 25 belowground?

1 A. Yes, towards the bottom of the
2 left-hand side. Yes, I do.
3 Q. Do you know which aquifer the original
4 well was completed into?
5 A. Not for certain, no.
6 Q. Do you know which aquifer the
7 replacement well was completed into?
8 A. Not for certain.
9 Q. Do you recognize that the static water
10 level in the replacement well is at 180 feet,
11 whereas the depth of the original well was
12 254 feet or 199 feet, depending on which notation
13 on the well driller's report you look at?
14 A. Yes.
15 Q. Can you explain why -- you don't know
16 why Mr. Steele would have to drill a deeper well
17 if the pumping -- nonpumping water level was at
18 180 feet and you already had a well that reached
19 down to 254 feet, do you?
20 A. No. I can tell you what he told me
21 why he had to replace his well, if you want to
22 hear that.
23 Q. But you don't know, do you?
24 A. Other than what he told me, no.
25 Q. Mr. Smith, if we could turn to your

1 Exhibit No. 867. This is the Greg Taylor packet.
2 This is the exhibit Mr. Thornton offered.
3 A. Uh-huh. I'm there.
4 Q. You said you had read through this
5 packet of information; correct?
6 A. Yes.
7 Q. And you are familiar with it?
8 A. Yes.
9 Q. On the second page, the well log for
10 the 1955 well --
11 A. The Strawn?
12 Q. -- you noted that the total depth of
13 well was listed at 116 feet; correct?
14 A. Yes, sir.
15 Q. And did you also note that on the
16 authorization to abandon the well, the well depth
17 is noted as 114 feet?
18 A. I didn't notice that.
19 Q. And in Mr. Owsley's March 26th letter
20 to Mr. Taylor, did you note that Mr. Owsley stated
21 that IDWR measured down to 125 feet?
22 A. Yes, and did not encounter water. My
23 understanding is part of the problem is is when
24 you lower that tape down, unless you hit water and
25 it gives you that beep, you can fold it up in the

1 bottom of the well, not knowing you're at the
2 bottom of the well.
3 So he could have had that 10 feet,
4 give or take, of tape folded up in the bottom of
5 the well. And I believe that's why Mr. Owsley
6 concluded that the irrigation well was dry.
7 Q. But you don't know how Mr. Owsley
8 measured 125 feet in a well that was only
9 116 feet, do you?
10 A. It would be -- what's been explained
11 to me is because when you lower that tape down,
12 that tape is not stiff or rigid, and that tape can
13 fold up in the bottom of the well. So you could
14 put a thousand feet of tape in a 100-foot well if
15 you don't realize it's folding up in the bottom.
16 Q. But you don't know whether it folded
17 up in the bottom or somewhere in between the top
18 and the bottom, do you?
19 A. I wasn't there when he did that, no.
20 Q. And you don't know why Mr. Owsley
21 measured the 125 feet, do you?
22 MR. ALAN SMITH: Objection. Asked and
23 answered.
24 THE HEARING OFFICER: Overruled.
25 THE WITNESS: Do I need to answer that

1 question?
2 Q. (BY MR. LAWRENCE): Mr. Smith --
3 THE HEARING OFFICER: No.
4 THE WITNESS: Okay.
5 Q. (BY MR. LAWRENCE): -- you recognize
6 on the original well driller's report this well
7 was drilled -- the original well was drilled in
8 1954?
9 A. Yeah. The Strawn, the name was
10 Strawn?
11 Q. That's correct.
12 A. Yes, 1954.
13 Q. And on that report it states a depth
14 of standing water from surface of 90 feet?
15 A. Yes.
16 Q. And did you also note that on the
17 authorization to abandon the well the static water
18 level is listed at 105 feet?
19 A. You would have to ask whoever measured
20 that, but it shows that on the -- the abandoned
21 well log.
22 Q. Do you know why Mr. Owsley measured
23 125 feet without encountering water on March 24th,
24 2009?
25 MR. ALAN SMITH: Objection. Asked and

1 answered.
 2 THE WITNESS: The --
 3 THE HEARING OFFICER: Just a minute.
 4 THE WITNESS: Sorry.
 5 THE HEARING OFFICER: Overruled.
 6 THE WITNESS: The only thing I can go by is
 7 what it states on Mr. Owsley's letter, March 26th,
 8 that says, "Your irrigation well was dry." That's
 9 what Dennis Owsley put in his letter to Greg
 10 Taylor.
 11 Q. (BY MR. LAWRENCE): And on April 24th,
 12 2009, the date of the authorization to abandon the
 13 well, the static water level was measured at
 14 105 feet; correct?
 15 A. I see the 105 feet. Yes, I see that
 16 date, 4/24/09.
 17 Q. You can't explain how Mr. Owsley
 18 measured no water at 125 feet below the casing
 19 where a month later the static water level was
 20 measured at 105 feet, can you?
 21 A. No, I wasn't there during either one
 22 of those measurements, so I don't know.
 23 Q. Okay. I may have already asked this
 24 question, Mr. Smith, but do you know what aquifer
 25 Mr. Taylor's 1955 -- 1954 well was completed into?

1 A. No, not for certain.
 2 Q. Turning to your map, which is
 3 Exhibit 424 --
 4 A. Uh-huh.
 5 Q. -- is it your contention that the
 6 wells depicted in green caused the other wells
 7 depicted on your map to be replaced?
 8 A. I think they had a factor in that,
 9 yes.
 10 Q. But you don't know?
 11 A. For certain, no.
 12 Q. Do you know whether the wells depicted
 13 in green are completed into the same aquifers as
 14 the wells that you have noted needed to be
 15 replaced?
 16 A. Not for certain.
 17 Q. Mr. Smith, also regarding your map,
 18 Exhibit 424, the yellow dots that you've noted are
 19 permitted water rights that have not yet been
 20 drilled, do you know whether those wells were
 21 completed into the same aquifer as the wells
 22 depicted in green?
 23 A. No. According to Department records,
 24 those wells have not been even drilled yet. So I
 25 have no way of knowing.

1 Q. I'll rephrase.
 2 Do you know whether those wells
 3 depicted in yellow are proposed to be completed
 4 into the same aquifer as the wells in green?
 5 A. No, I don't know that.
 6 Q. Are they proposed to be completed in
 7 the same aquifer as the same wells in pink, the
 8 replacement wells?
 9 A. Yeah, I don't know how deep they're
 10 anticipating drilling those wells.
 11 MR. LAWRENCE: No further questions.
 12 THE HEARING OFFICER: Okay. All right.
 13 Thank you, Mr. Smith.
 14 THE WITNESS: Thank you.
 15 Do you want me to do this map right
 16 now, or do you want me to do that like at the noon
 17 break?
 18 THE HEARING OFFICER: Yeah, let's do it at
 19 the break.
 20 THE WITNESS: Okay.
 21 MR. ALAN SMITH: You might leave it up
 22 there. Somebody might want to refer to it.
 23 THE HEARING OFFICER: Well, at this point I
 24 think it would be good to have our public witness
 25 testify. It's a good time for that break. And

1 then let's see how close we are to the lunch hour,
 2 and whether you want to launch into the -- Well,
 3 I'll ask Mr. Edwards. I think I haven't come to
 4 him to see if he wants to present testimony.
 5 But I'm assuming you don't have a
 6 direct presentation, Mr. Edwards.
 7 MR. EDWARDS: No.
 8 THE HEARING OFFICER: Okay. So why don't
 9 we call the public witness at this point.
 10 And Mr. -- and how do you say it? --
 11 Sorge --
 12 MR. SORGE: Sorge.
 13 THE HEARING OFFICER: How is it?
 14 MR. SORGE: Sorge.
 15 THE HEARING OFFICER: Sorge. Mr. Sorge, if
 16 you'd like to come forward, please, if you wish to
 17 testify.
 18 If you'd raise your right hand,
 19 please.
 20
 21 TOM SORGE,
 22 appearing as a public witness,
 23 was duly sworn and testified as follows:
 24
 25 THE HEARING OFFICER: Thank you.

1 Please be seated. And you may narrate
 2 your testimony for the record, and then you'll be
 3 subject to examination. So what we'll do is you
 4 can give your testimony, and then we'll go through
 5 the -- I assume you'd be testifying in opposition
 6 to this application --
 7 THE WITNESS: Correct.
 8 THE HEARING OFFICER: -- correct.
 9 THE WITNESS: Yes.
 10 THE HEARING OFFICER: And so you can
 11 testify, and then the protestants will examine
 12 you, and then the applicants will examine you.
 13 Okay?
 14 THE WITNESS: Okay.
 15 THE HEARING OFFICER: Thanks.
 16
 17 DIRECT NARRATIVE TESTIMONY
 18 THE WITNESS: My name is Tom Sorge. I live
 19 at 2532 North Edgewood, which is in Eagle at
 20 the -- it's near the intersection of Beacon Light
 21 and Edgewood Road.
 22 And our home was built in 1979. And
 23 the well was drilled approximately 50-foot deep.
 24 We actually bought and moved there in
 25 1990. And following that time there was

1 significant development around us.
 2 And in the late '90s, our well started
 3 sucking air and I had a pump company or well
 4 driller -- I don't remember exactly who it was --
 5 that came out, and they lowered our pump to within
 6 2 or 3 feet of the bottom.
 7 And then again in -- then in 2002, it
 8 started sucking air again. And at that point,
 9 then, I had to drill a new well, and that was
 10 drilled by Coonce Well Drilling. And they came
 11 out and drilled a new well, which is 137-foot
 12 deep.
 13 And so my concern is is that, you
 14 know, based on what's happened to me, is that the
 15 water table there has declined, and I would be
 16 very concerned that additional development would
 17 affect my water level in the same way.
 18 And that's all I have.
 19 THE HEARING OFFICER: Okay. Thank you,
 20 Mr. Sorge.
 21 Mr. Thornton, questions?
 22 MR. THORNTON: Yeah.
 23 ///
 24 ///
 25 ///

1 CROSS-EXAMINATION
 2 BY MR. THORNTON:
 3 Q. Mr. Sorge, could you point out on the
 4 map behind you generally where you are located
 5 on -- close to the intersection of Beacon Light
 6 and you say Edgewood?
 7 A. I can't see -- I would be right here
 8 (indicating).
 9 Q. Okay. And then you started having
 10 problems with your sucking air in what year again?
 11 A. It would be the late '90s.
 12 Q. Late '90s?
 13 A. It was probably two or three years
 14 before I had to drill the well.
 15 Q. Okay. And then it performed okay,
 16 enough water and stuff, for the next few years?
 17 A. It did.
 18 Q. Okay. And then in 2002, it sounds
 19 like you had to make a decision to drill your well
 20 deeper to redrill a well; correct?
 21 A. Correct.
 22 Q. Okay. That was in 2002. What -- can
 23 you put your finger on anything around you at all
 24 that seemed to cause this apparent water-level
 25 decline?

1 A. Just that I know a lot of new houses
 2 went up, but I don't know.
 3 Q. Okay. And do you have any information
 4 at all, the depth change in feet, perhaps where
 5 they reset your pump? Do you have any information
 6 at all in terms of your water level when they
 7 reset it the first time versus the decision to
 8 redrill the second time?
 9 A. Well, when they reset it the first
 10 time, I think they set it about 47 or 48 feet,
 11 which was -- they said they couldn't go clear to
 12 the bottom because it would pull sand or mud. So
 13 they went within 2 or 3 feet of the bottom.
 14 Q. Okay. And then the 47 feet, it was --
 15 the first time it was 47 feet down, or that was
 16 after they replaced --
 17 A. They reset it to that level.
 18 Q. To 47?
 19 A. Yes.
 20 Q. Okay. All right. And so based on
 21 that information, does that tell you that there
 22 was water-level decline in your well?
 23 A. Yes.
 24 Q. Okay. Was there any talk by Coonce
 25 Well Drilling that there was a problem with your

1 pump or problem with your well casing or anything?
 2 A. No.
 3 Q. Just that the water -- they were
 4 stating the water level had dropped?
 5 A. Water table had dropped.
 6 Q. Okay. Are you aware of any other
 7 people in your area -- you've got one dot close to
 8 you. But are you aware of anybody else that
 9 you've heard, neighbors or anything, with any
 10 apparent water-level drops concerning their well?
 11 A. Well, my neighbor has.
 12 MR. THORNTON: Okay. I don't have any
 13 further questions, Mr. Sorge. Thank you.
 14 THE HEARING OFFICER: Okay.
 15 Mr. Smith, questions?
 16 MR. ALAN SMITH: I have none.
 17 THE HEARING OFFICER: Okay.
 18 Mr. Edwards?
 19 MR. EDWARDS: (No audible response.)
 20 THE HEARING OFFICER: Mr. Lawrence, are you
 21 examining?
 22 MR. LAWRENCE: Yes.
 23 ///
 24 ///
 25 ///

1 CROSS-EXAMINATION
 2 BY MR. LAWRENCE:
 3 Q. Thank you, Mr. Sorge.
 4 Mr. Sorge, do you know what the depth
 5 to water was in your original well when it was
 6 drilled?
 7 A. I don't know exactly, but when they
 8 pulled the -- when they pulled the pipes out, it
 9 looked like it had been around 18 to 20 feet,
 10 based on the rust on the pipes.
 11 Q. Mr. Sorge, are you measuring the water
 12 levels in your new well?
 13 A. Me? No.
 14 Q. Do you know the static water level in
 15 your new well?
 16 A. I do.
 17 Q. What is that?
 18 A. It's somewhere around 47 feet.
 19 Q. How do you know that if you're not
 20 measuring your water levels?
 21 A. The Department of Water Resources is
 22 measuring it.
 23 Q. How often are water levels in your
 24 well measured?
 25 A. I don't know. They just started.

1 Q. Did you measure the water or have the
 2 water measured in the old well when it was
 3 abandoned?
 4 A. There was no water in it when it was
 5 abandoned. That's why I had to drill a new well.
 6 Q. Did anyone take a water-level
 7 measurement when it was abandoned?
 8 A. Well, Coonce told me it was dry. The
 9 well driller told me there was no water left.
 10 Q. Did the well driller take a
 11 water-level measurement?
 12 A. He did.
 13 Q. Did your old well produce sand?
 14 A. No.
 15 Q. Was your old well sealed throughout
 16 its depth?
 17 A. After -- after -- when they drilled
 18 the new one? After they drilled the new one?
 19 Q. Was your old well constructed so it
 20 was sealed throughout its depth?
 21 A. I don't know what you're referring to.
 22 Q. Do you know what aquifer your old well
 23 was completed into?
 24 A. By name or what?
 25 Q. Do you have any idea, any information,

1 any name?
 2 A. No.
 3 Q. Has anyone told you what aquifer your
 4 new well was completed into?
 5 A. No.
 6 Q. You mentioned other nearby wells that
 7 were constructed after your original well.
 8 Do you know the depth that those wells
 9 were completed to?
 10 A. I don't.
 11 MR. LAWRENCE: No more questions. Thank
 12 you.
 13 THE HEARING OFFICER: Okay. All right.
 14 Thank you, Mr. Sorge.
 15 Okay. All right. Have we concluded
 16 now the presentation of evidence by the
 17 protestants? I'm not sure I explored that
 18 adequately.
 19 Mr. Smith, you didn't have any other
 20 witnesses, did you?
 21 MR. ALAN SMITH: No.
 22 THE HEARING OFFICER: Okay. All right.
 23 Okay. I think we're at that juncture, then, where
 24 the applicants would then present rebuttal
 25 testimony.

1 Are we ready to start that
 2 presentation? Do you want a moment to organize?
 3 MR. FEREDAY: We are ready.
 4 MR. ALAN SMITH: We do have a motion first,
 5 your Honor --
 6 THE HEARING OFFICER: Okay.
 7 MR. ALAN SMITH: -- or Judge.
 8 THE HEARING OFFICER: Okay. Mr. Smith.
 9 MR. ALAN SMITH: This is another motion to
 10 dismiss based upon the failure of the applicant to
 11 submit the required financial information. Again,
 12 I would point out that that statute or rule of the
 13 Department of Water Resources states that "The
 14 Applicant shall submit a financial statement
 15 certified or a financial commitment letter or a
 16 statement of the lender showing that they have
 17 sufficient assets to complete the project and
 18 apply the water to a beneficial use proposed."
 19 This water appropriation rule uses the
 20 word "shall." That places a mandatory duty and
 21 requirement on the applicant to meet that
 22 obligation.
 23 They have not met that mandatory duty.
 24 I have provided the Hearing Examiner and counsel
 25 with just a few of the cases that deal with the

1 mandatory and it is a requirement.
 2 The applicant has not provided the
 3 financial information that the rule requires.
 4 They did not do so in their case-in-chief. They
 5 did not do so at the time they filed this
 6 application. And we feel it would be improper
 7 rebuttal for them to now attempt to present this
 8 financial information when they didn't do it in
 9 the case-in-chief.
 10 It's also apparent that there's some
 11 real question here as to whether M3 has the
 12 financial resources. They don't have the
 13 certified statement or a statement from the
 14 lender. All they've got is their employed
 15 accountant's figures.
 16 And we don't think we need another
 17 Avimor or Tamarack. And we would move to dismiss
 18 on those grounds.
 19 THE HEARING OFFICER: Okay.
 20 Mr. Fereday?
 21 MR. FEREDAY: Mr. Hearing Officer, if I
 22 could respond just briefly.
 23 THE HEARING OFFICER: Sure.
 24 MR. FEREDAY: It is quite a concern to us
 25 that Mr. Smith selectively recites from the very

1 word "shall" when used in the rule or a statute as
 2 placing a mandatory requirement upon even the
 3 courts themselves.
 4 I only cited cases under Rule 52(a)
 5 that requires the Court, when sitting without a
 6 jury, to make written findings of fact and
 7 conclusions of law. That rule says, "The Court
 8 shall make findings of fact and conclusions of
 9 law."
 10 It's been held that that's a mandatory
 11 duty placed on the Courts, as I cited two divorce
 12 cases, Merrill versus Merrill and Angleton versus
 13 Angleton where the Court recognized that mandate
 14 and said there was a requirement placed on the
 15 Court by the rule.
 16 And in fact, in Ramco versus HNR
 17 Contractors, 118 Idaho 108 794 Pacific 2d 1, a
 18 1990 case, the Court -- Appellate Court held that
 19 the trial court had erred for failing to make the
 20 findings of fact and conclusions of law required
 21 by the rule.
 22 If a person wanted to do extensive
 23 briefing on this, you could probably find more
 24 than a hundred Idaho cases that have held where a
 25 statute or a rule uses the word "shall," it is

1 rule that he himself includes in his brief. The
 2 rule does not say "along with the financial
 3 statement of the lender that it has sufficient
 4 assets to complete the project" or some similar
 5 phraseology. The rule says, "current financial
 6 statements certified to show the accuracy of the
 7 information contained therein, or a financial
 8 commitment letter along with the financial
 9 statement of the lender, or other evidence to
 10 show" -- what is all of this evidence to show? --
 11 "that the applicant -- that it is reasonably
 12 probable that the -- that financing will be
 13 available to appropriate the water and apply it to
 14 beneficial use proposed."
 15 We've been through this before. We
 16 are fully entitled, if we choose, to put on
 17 additional evidence in rebuttal on this or any
 18 other point that's been raised so far in this
 19 case.
 20 And Mr. Smith's -- in fact, it's not
 21 just Mr. Smith's, it's all -- these three
 22 protestants' motion is not well considered. It
 23 should be denied.
 24 THE HEARING OFFICER: Any quick response,
 25 Mr. Smith?

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1 MR. ALAN SMITH: I recognize that on page 3
2 that it says that the applicant can produce this
3 information during the conduct of the hearing.
4 That should be done in their case-in-chief. It's
5 not rebuttal evidence.
6 In fact, we don't think this thing
7 ever should have been set for a hearing in the
8 first place, because they never had the financial
9 information. And they've ignored that, the same
10 as they have the clear statutory language about
11 what's required of being a municipal provider.
12 If they don't like the provisions of
13 the law, they just ignore them. And I think it's
14 time that the Hearing Examiner and the Department
15 dismissed it.
16 THE HEARING OFFICER: Okay. Well, this
17 motion to dismiss anticipates or at least proposes
18 that the Hearing Officer address this issue at
19 this juncture of the hearing.
20 And I refuse to dismiss the
21 application at this point. As Mr. Fereday pointed
22 out, the rule allows flexibility in what is
23 submitted regarding financial resources. And that
24 flexibility is illustrated or is found in the
25 language where it says "or other evidence to show

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1 that it is reasonably probable that financing will
2 be available to appropriate the water and apply it
3 for the beneficial use proposed."
4 And so I'll deny the motion to
5 dismiss.
6 In that denial, Mr. Fereday, I will
7 mention, however, that I am concerned about the
8 information that was presented, and particularly
9 the discussion in cross-examination -- or
10 examination, I guess, of Mr. Brownlee and the
11 questions that were asked of him regarding the
12 financial statement and what it really means and
13 what's represented by that financial statement.
14 And I guess I would encourage some
15 further presentation of evidence and further
16 elaboration on that particular subject,
17 particularly where this -- this particular factor
18 is one that apparently is at issue in this
19 particular hearing. So I would encourage some
20 additional evidence presentation on this subject
21 as part of your rebuttal.
22 I recognize your argument, Mr. Smith,
23 that you feel that some of that should have been
24 brought in. I've allowed some latitude on both
25 sides on the subject.

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1 And my intent is to try to gather all
2 of the evidence that I can on the subject and not
3 have people trapped by rules of evidence that
4 would exclude them somehow from presenting that in
5 some fashion at this hearing. So I will allow
6 some latitude and additional presentation of
7 evidence on this subject. Okay.
8 MR. ALAN SMITH: We still take the position
9 that it should have been done in their
10 case-in-chief and not as rebuttal evidence, and we
11 are at the rebuttal stage of the hearing at this
12 time.
13 We would like the record to show a
14 continuing objection to any financial information
15 that they're now attempting to provide after we
16 pointed out a fatal flaw in their case.
17 THE HEARING OFFICER: Okay. The record
18 will so show your objection, Mr. Smith.
19 All right. Mr. Fereday?
20 MR. FEREDAY: Yes. As our first rebuttal
21 witness, we call Dr. Spencer Wood. And as I do
22 this, I would hand the Hearing Officer and the
23 other parties a document that we can mark it as an
24 exhibit -- it hasn't been marked as of yet -- that
25 is a reproduction of various pages from the

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1 transcript that we have obtained from our court
2 reporter in this case so that to the extent that
3 we refer to testimony that we are seeking to
4 rebut, the Hearing Officer can see what testimony
5 was. It's simply an aid for the presentation of
6 this rebuttal testimony.
7 THE HEARING OFFICER: Mr. Fereday, it seems
8 to me somewhat unusual to mark an exhibit that is
9 testimony from the record that we're now creating
10 because it will be part of the record. So I guess
11 my suggestion is that we use it -- I don't know
12 that there's any reason to doubt its accuracy --
13 and simply refer to it as part of the record. And
14 if we need to read portions of it, we can do that.
15 And I guess that would be my preference, but...
16 MR. FEREDAY: That is fine, Mr. Hearing
17 Officer. Our intent here is simply to make it
18 clear that when we're referring to what a previous
19 protestant witness said, for example, that we are
20 referring to what was actually said.
21 THE HEARING OFFICER: Right.
22 MR. FEREDAY: It's illustrative, for those
23 purposes.
24 THE HEARING OFFICER: Sure.
25 MR. FEREDAY: And it may make sense that it

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1 be marked and admitted as an exhibit, particularly
 2 because the record in this case is an audible
 3 record, at least at this point.
 4 We do intend to provide the Hearing
 5 Officer with a complete transcript for the Hearing
 6 Officer's use. But this is the written transcript
 7 that makes it, I believe, easier to follow along.
 8 THE HEARING OFFICER: Well, let's use it
 9 for illustrative purposes for now. And if there's
 10 a need or we all feel that it would be worthwhile
 11 to have it admitted, then let's do that.
 12 Okay?
 13 Mr. Wood, I would remind you that
 14 you're under oath.
 15 Mr. Fereday, you may question. And we
 16 can refer to this transcript literally from my
 17 perspective. If we need portions of it so that
 18 Mr. Wood understands what the statements are -- I
 19 suspect you want to contrast these statements with
 20 perhaps Mr. Wood's opinion of what was said.
 21 MR. FEREDAY: That's correct.
 22 THE HEARING OFFICER: Okay.
 23 MR. ALAN SMITH: We would object to the use
 24 of any of this transcript and this witness to try
 25 to impeach another witness if that is their

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1 intent. If they're merely rebutting, that's
 2 different. If they're attempting to impeach
 3 Dr. Ralston through this witness and his
 4 transcript testimony, we would like a continuing
 5 objection shown in the record that we object to it
 6 as improper impeachment.
 7 They had a chance to cross-examine
 8 Dr. Ralston, and I don't think they're now using a
 9 proper method of impeachment, if that's what
 10 they're trying to do.
 11 THE HEARING OFFICER: Why do you feel that
 12 it's an improper method of impeachment?
 13 MR. ALAN SMITH: He didn't ask the witness
 14 about it and give him a chance to explain his
 15 answer. Now you're coming in with another expert
 16 witness and trying to impeach his testimony.
 17 THE HEARING OFFICER: To me -- to me,
 18 Mr. Smith, that's the very nature of this rebuttal
 19 testimony. If there's a conflict in the
 20 testimony, the person who comes on can be asked
 21 whether they heard testimony of someone and then
 22 contrast that or rebut that testimony. And I
 23 think that's exactly what we're doing.
 24 MR. ALAN SMITH: If it's only rebuttal, we
 25 don't have any problem with it.

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1 THE HEARING OFFICER: All right. Let's
 2 proceed. At least right now, the objection's
 3 overruled.
 4 Mr. Thornton.
 5 MR. THORNTON: Clarifying question. So
 6 then is it potentially appropriate for us, based
 7 on how this rebuttal goes, that we could, in fact,
 8 recall Dr. Ralston, if necessary?
 9 THE HEARING OFFICER: Sure. Absolutely.
 10 MR. THORNTON: Okay.
 11 THE HEARING OFFICER: Yeah, that's okay.
 12 Yeah, you have a chance for rebuttal, or what I
 13 think they call is surrebuttal. I think that's
 14 the term for the protestants.
 15 MR. THORNTON: Okay.
 16 THE HEARING OFFICER: So anyway -- and you
 17 have that opportunity.
 18
 19 SPENCER WOOD,
 20 having been called as a rebuttal witness by M3
 21 Eagle LLC and previously sworn, testified as
 22 follows:
 23
 24 THE HEARING OFFICER: Okay. Mr. Fereday.
 25 ///

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1 DIRECT EXAMINATION
 2 BY MR. FEREDAY:
 3 Q. Dr. Wood, I would like to inquire
 4 about your response to Dr. Ralston's statement at
 5 page 2 of the document that I've given you here,
 6 which is on page 2238 of the transcript, that the,
 7 quote, "hydrological conceptual model is flawed,"
 8 close quote, because there's, quote, "inadequate
 9 information that indicates that the PGSA is
 10 laterally continuous on over into the Payette
 11 River area," close quote. I'd like to ask you a
 12 few questions about that, sir.
 13 First of all, conceptual model does
 14 not refer to a numerical computer model, does it,
 15 such as the M3 model or the Stacy Douglas model?
 16 A. That's correct, it does not refer to
 17 the computer model.
 18 Q. It refers rather to the geological and
 19 hydrological framework that we've been discussing
 20 in this hearing?
 21 A. That's correct. It concerns the
 22 geological and hydrological -- hydrogeological
 23 framework.
 24 Q. What is your response to Dr. Ralston's
 25 statement that the conceptual model is flawed

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1 because there is inadequate information that the
2 PGSA is laterally continuous to the Payette Basin?
3 Do you agree with Dr. Ralston on that?
4 A. No, I do not agree with Dr. Ralston.
5 It is laterally continuous. Every piece of data I
6 have examined has shown that it's laterally
7 continuous over to the Payette Valley, over to the
8 Letha area and on northwest to the New Plymouth
9 area.
10 When he says it's flawed, I just have
11 a hard time. There are no flaws. These concepts
12 of the hydrogeology of the Pierce Gulch Aquifer
13 have been in publication since 1994, although the
14 naming of the aquifer is more recent. But there's
15 no problem with the geological model that's been
16 presented, and I don't understand why -- why that
17 wording is used by Dr. Ralston.
18 Q. Moving over to the next page of this
19 illustrative exhibit, page 3, and page 2259,
20 Dr. Ralston makes a statement that you, Dr. Wood,
21 have produced a cross-section correlating the PGSA
22 through to the Ted Daws wells in the Payette
23 Basin, and he calls that speculative because of
24 the 18-mile distance involved.
25 What's your response to that statement

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1 by Dr. Ralston?
2 A. Well, there's no speculation involved.
3 There's no question that there's a very thick
4 mudstone unit overlain by sands within which is
5 the Pierce Gulch Sand Aquifer.
6 So I don't know -- these -- these have
7 been published scientifically. And we don't
8 publish information like this as speculation. It
9 is normally not even allowed by the reviewers of
10 the journals. If you're going to speculate, you
11 name it as speculation. This has never been a
12 speculation. There's no question about -- about
13 the correlation of the top of the mudstone base of
14 the sand across over into the Payette Valley
15 looking at the existing wells, and particularly
16 the geophysical logs, which are very, very clear
17 signature. We've known it since 1994.
18 Q. What kind of a depositional
19 environment -- you just mentioned mudstone, but
20 what kind of a depositional environment does
21 provide this signature that you can correlate
22 across those distances, Dr. Wood?
23 A. Okay. Well as we -- as these concepts
24 have involved, it's a very deep lake that produces
25 the mudstones. And then finally the lake finds an

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1 outlet through Hells Canyon and sands prograde out
2 over the basin.
3 And that's the situation that has
4 occurred here in the Western Snake River Plain.
5 It's a very widespread geological feature. And
6 it's not clear that Dr. Ralston appreciated the
7 ceilings of the larger geologic framework. We
8 correlate this major break from mudstone to sand
9 over most of the western plain down to the Snake
10 River south to Nampa and clear west to the New
11 Plymouth and on to the Weiser area, and even
12 across the border to wells over in Oregon.
13 Q. And is it your opinion that the
14 correlation of these cross-sections through the
15 Ted Daws wells is supported by a reasonable degree
16 of scientific certainty?
17 A. Yes, I'm -- there's a very reasonable
18 degree of scientific certainty that this
19 correlation to the top of the mudstone, base of
20 the sand is a good correlation and that the sand
21 unit -- and this correlation is continuous over
22 into the Payette Valley.
23 Q. Could you respond to Dr. Ralston's
24 statement at page 2259, again in this transcript,
25 that he, quote, "wouldn't have necessarily

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1 connected," close quote the signatures for the
2 Oroco Gas well and the El Paso Natural Gas well as
3 being geologically in the, quote, "same sequence"?
4 A. Well, I guess I wonder what we mean by
5 "wouldn't necessarily have done it." If I -- if I
6 saw this in a scientific review, then I would
7 require that somebody making that statement show
8 me all of his alternative lines of correlation.
9 But of course, that was not done, simply because
10 this is the most sound and defensible correlation
11 between wells.
12 Q. Were these correlations that you speak
13 of through to the Ted Daws well in the Payette
14 Valley and the Oroco Gas -- which is the Oroco Gas
15 well and the Webber State well, were those
16 correlations done as a result of your work for M3?
17 A. No. We made that correlation back in
18 1994. We indicated that the top of the mudstone,
19 base of the major delta sequence could be seen in
20 wells over in the Payette Basin. And that's been
21 recurring in all of our subsequent publications.
22 So this is way before M3. It was in a
23 1994 publication. It was in the work that I had
24 done for the Treasure Valley Hydrologic Project
25 back in the early '90s, and in publications in

1 2002 and 2004.

2 Q. Turning now to page 4 of this
3 illustrative document, this shows page 2014 of the
4 transcript. I'm focusing now on a statement by
5 Mr. Vincent on this page to the effect that,
6 quote, "There can be a shallow fault in the PGSA
7 that does not have any effect whatsoever on the
8 basement rocks," end quote.

9 Could you comment, please, on that and
10 give us your opinion of that statement with regard
11 to a shallow fault affecting only the PGSA.

12 A. Yeah, I don't believe I understand his
13 concept of geology here. But if a shallow -- say
14 an upper layer in the sedimentary sequence is
15 faulted, then it extends down. The original fault
16 also extends to great depth and down into the
17 basement rock.

18 So we can see faults in the basement
19 rock that won't necessarily propagate upward
20 because the faulting was over and new layers were
21 deposited over. But to run the process backwards
22 where you have the upper layers faulted and not
23 the lower layers is geologically incorrect.

24 Q. I recall that you prepared a figure
25 that was, I think, included in Exhibit 45. And

1 diagram.

2 And what I'm showing here is that we
3 have faulting, very clear faulting, in the Miocene
4 basement and some of the lower lake sediment, but
5 that that line shown as the Pierce Gulch Sand
6 Aquifer is a continuous line. It's not faulted on
7 this section.

8 Now, of course it's only this picture.
9 And we don't have data in the upper thousand feet
10 from these old Chevron lines because of the way
11 they were acquired. But I've looked through all
12 the seismic data to see if this contention that
13 there's faulting in the Pierce Gulch Sand Aquifer,
14 and it's just not there in basinwide, I would say.

15 Q. With regard to --

16 A. From the data that's available to us,
17 yeah.

18 Q. Thank you.

19 With regard to the four slanted lines
20 that depict faults in this figure 2, does this
21 accurately depict where those faults terminate as
22 they move upward?

23 A. Yeah, it certainly depicts where they
24 move upward on the -- on the three sort of slanted
25 black lines.

1 maybe you could turn to that. It's figure 2 of
2 Exhibit 45.

3 Do you have that there?

4 A. Yeah, I have that figure. I'm not
5 sure it -- are we ready to talk about it, or shall
6 we --

7 Q. Let's let the Hearing Officer find it.

8 A. Okay.

9 MR. THORNTON: What figure, Mr. Fereday?

10 MR. FEREDAY: Exhibit --

11 THE WITNESS: Exhibit 45, figure 2. That's
12 it.

13 Q. (BY MR. FEREDAY): Dr. Wood, you just
14 spoke about the deep faults in the basement rocks
15 that do not extend, I believe you said, to the
16 upper sections.

17 Is that again what this shows?

18 A. Yeah, let me clarify again. I went
19 through all of our seismic data that we've
20 accumulated over the years to see if anywhere we
21 have an imaging the Pierce Gulch Sand Aquifer.

22 And we do indeed have it as we go
23 north of Middleton toward the Josephson siding on
24 this seismic line. And that is about the Pierce
25 Gulch Sand Aquifer as it's labeled on this

1 The Middleton fault we're a little
2 uncertain about. It could propagate higher. It's
3 not clear from the data.

4 Q. Have you looked for faulting in the
5 shallow section, let's say the upper thousand feet
6 in the north Ada area?

7 A. Yeah, we take faulting in the shallow
8 section very seriously because of earthquake
9 hazards in examination of this region about Boise
10 for earthquake hazards. And if we see it, of
11 course, it has major implications.

12 And so we've looked at it, we've
13 looked at it responsibly, and we don't see major
14 faulting in the shallow section.

15 Q. Now, there can be slumps and other
16 minor offsets in shallow sections such as the
17 PGSA; isn't that correct?

18 A. Yeah, that's correct. I mean there
19 can be what are called growth faults or glide
20 faults, which are common in deltaic sands in the
21 Gulf Coast. That's a possibility to have sort of
22 landslide-type breaks in the -- in these sands.

23 I also want to clarify that we do see
24 very small offset, a few feet of offset in some of
25 the Pierce Gulch sands up in the Seaman's Gulch

1 Landfill and towards the foothills, and they may
2 be of that nature. We just have not seen a major,
3 significant fault that would have hydrogeological
4 implications in any of the Pierce Gulch Sand
5 exposures.

6 Q. Those shallow faults that you've seen
7 in the Seaman -- or offsets that you've seen in
8 the Seaman's Gulch area, those are in the order of
9 what, a few feet?

10 A. A few feet, yes.

11 Q. Would those cause any interruption at
12 all if they were at depth in the groundwater flow?

13 A. No, they're basically sand against
14 sand and would have no interruption or create any
15 kind of hydraulic barrier.

16 Q. Do you recall the staff's testimony
17 and their presentations in this hearing concerning
18 the fact that a fault was detected through
19 magnetometer survey in the deep section beneath
20 the M3 Eagle panhandle area? Do you recall that?

21 A. Yes, I do. In the staff's memo they
22 did make quite a bit about that fault that we
23 identified from the magnetometer data, but I think
24 they failed to realize that that's a fault in the
25 deep volcanic rocks. And that's the limitation of

1 the data.

2 And they all -- as I read through
3 their memo, they sort of lost sight of what
4 geological investigations are all about. And the
5 idea from Hydro Logic was to try to gather and
6 obtain as much data as we could about the geology
7 and find out if it has hydrogeological
8 significance.

9 And in the case of this fault, the
10 Kling well test right next to the projected idea
11 that this fault might propagate to the surface,
12 did not show any significant hydrologic barrier.

13 So the idea was to look for features
14 that might, but test them and see if they do. And
15 if they do not, then it's not a problem. So I
16 think that my impression was in reading the staff
17 memo they kind of lost sight of how this
18 geological investigation was designed and how we
19 would do such a thing.

20 Q. The staff indicated that the existence
21 of this deep fault below the panhandle in the
22 basement rocks creates an uncertainty as to
23 groundwater flow in this case.

24 What's your response to that,
25 Dr. Wood?

1 A. Well, there's no evidence that there's
2 a hydrogeologic barrier, and there is no
3 uncertainty. A lot of these -- the ideas about
4 faults and the ideas about continuity of the
5 aquifer to the Payette Basin are uncertainties
6 that just don't exist. The staff has raised
7 uncertainties that just aren't there, searching
8 for something, I guess, in the work that's been
9 done for an uncertainty.

10 Q. The fault beneath the M3 Eagle
11 panhandle lies -- it propagates up to
12 approximately what depth, Dr. Wood?

13 A. Well, we don't know how high it
14 propagates. We only know that it offsets the deep
15 volcanic rocks which are over 2,000 feet deep
16 beneath that panhandle area. And we really don't
17 have any information on how high it would
18 propagate. But there's no indication that it
19 propagates up into the Pierce Gulch Sand Aquifer.

20 Q. Do you see any uncertainty concerning
21 the proposition that the Pierce Gulch Sand Aquifer
22 is robustly recharged?

23 A. No, I -- it would appear that it is
24 robustly recharged by the regional aquifer system.

25 Q. Do you know of any evidence that the

1 PGSA is compartmentalized by fault boundaries?

2 A. No, no such fault boundaries have
3 been -- have been shown scientifically to form
4 major hydrogeologic boundaries on the Pierce Gulch
5 Sand Aquifer, certainly in the M3 areas and in the
6 areas that we're considering here.

7 Q. Do you think the compartmentalization
8 theory is the subject of reasonable uncertainty in
9 this case?

10 A. No, I don't believe there's been any
11 evidence showing that the Pierce Gulch Sand
12 Aquifer has major hydrogeologic boundaries due to
13 faulting.

14 Q. Have you seen anything in the record
15 of this case -- and I'd like you to answer this
16 with regard to your expertise as a hydrogeologist.
17 Have you seen anything in the record of this case,
18 including Dr. Ralston's or staff's testimony, to
19 suggest that sufficient groundwater supplies are
20 not available for the M3 Eagle project?

21 A. No. All the data that I've seen thus
22 far, including all the testimony, would indicate
23 that groundwater supplies are available beneath
24 the M3 site.

25 MR. FEREDAY: Thank you. No further

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1 questions.
2 THE HEARING OFFICER: Okay.
3 Questions, Mr. Thornton?
4 MR. THORNTON: Yeah.
5 Good morning, Dr. Wood.
6 THE HEARING OFFICER: Before you start in,
7 Mr. Thornton, we're about five minutes to noon,
8 and I'm just wondering how extensive your
9 questions might be, and Mr. Smith?
10 MR. THORNTON: I'm guessing I could have 20
11 minutes or so of questions.
12 THE HEARING OFFICER: Okay. Maybe it's a
13 good time to break for lunch.
14 MR. THORNTON: Okay.
15 THE HEARING OFFICER: Why don't we do that.
16 Come back about one o'clock.
17 MR. THORNTON: One o'clock?
18 THE HEARING OFFICER: Yes.
19 (Lunch recess.)
20 THE HEARING OFFICER: Okay. We've had a
21 discussion, and I apologize for that. We've had a
22 discussion about Mr. Whitney's appearing as a
23 witness.
24 Mr. Smith, do you wish to document
25 that or have that part of the record?

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1 MR. ALAN SMITH: Yes.
2 THE HEARING OFFICER: It's my neglect. Do
3 you want to voice your objection for the record?
4 MR. ALAN SMITH: Weren't we on the record?
5 THE HEARING OFFICER: Well, we were not. I
6 just came in, and I neglected -- Mr. Fereday
7 addressed me, and I started into that exchange and
8 didn't recognize we were not recording.
9 MR. ALAN SMITH: Yes, for the record, we
10 would object to the calling of this witness. We
11 don't find him on the expert witness list or any
12 other witness list. I realize he's being called
13 as a rebuttal witness, but I think he's going to
14 be being asked to give expert testimony.
15 THE HEARING OFFICER: Okay. And I have
16 already ruled off the record, and I'll rule here,
17 that Mr. Whitney can testify because he's a
18 Department employee and, second of all, this --
19 and the major reason is this rebuttal testimony
20 and witnesses for purposes of rebuttal, I've never
21 thought needed to be disclosed beforehand.
22 So if you'll raise your right hand,
23 Mr. Whitney.
24 ///
25 ///

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1 ROBERT WHITNEY,
2 having been called as a rebuttal witness by M3
3 Eagle LLC, was duly sworn and testified as
4 follows:
5
6 THE HEARING OFFICER: Thank you. Please be
7 seated.
8 Mr. Fereday, you may examine
9 Mr. Whitney.
10
11 DIRECT EXAMINATION
12 BY MR. FEREDAY:
13 Q. Please state your name, please, and
14 give your business address.
15 A. Robert Whitney with the Idaho
16 Department of Water Resources, western region,
17 2735 Airport Way, Boise.
18 Q. What is your position with the
19 Department, Mr. Whitney?
20 A. My position formally as a senior water
21 resource agent, and my area of responsibility is
22 oversight of the regional well construction,
23 administration, and enforcement program, and the
24 licensing of well drillers.
25 Q. What experience do you have with well

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1 drilling and inspection of wells?
2 A. I have been the Department's regulator
3 for well construction in this region, and also
4 partially on a statewide basis, since about 1989.
5 So I've been out in the field on well rigs for 20
6 years.
7 Q. Are you experienced in reading
8 driller's logs?
9 A. Yes.
10 Q. Are you experienced in various types
11 of well construction, including drill-and-drive
12 methods and other types of methods?
13 A. Yes.
14 Q. I want to ask you some questions,
15 Mr. Whitney, that pertain to the, among other
16 things, the phenomenon of the construction of a
17 number of wells in the Eagle area that are deemed
18 to be or alleged to be replacement wells in the
19 last few years.
20 Are you familiar with the process of
21 well replacement?
22 A. Yes.
23 Q. Before we get to the replacement well
24 question, could you describe how a well and well
25 bore actually looks and how a well is sealed? And

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1 if you'd like, you may -- you may illustrate on
2 the easel there or otherwise. I am interested in
3 the question of distinguishing between sealed and
4 unsealed wells, particularly wells that are sealed
5 throughout their depth and those that are not.
6 A. Yeah, if I may --
7 Q. Sure.
8 A. -- the best way for me to do that
9 would be on paper.
10 Q. Okay. And as you make your drawing,
11 could you narrate for the record what you're doing
12 and give an idea of what the various elements are
13 that you're drawing?
14 THE HEARING OFFICER: Yeah, bring the easel
15 and the tripod over here.
16 THE WITNESS: By the microphone?
17 THE HEARING OFFICER: Yeah, thank you.
18 THE WITNESS: Mr. Fereday, did you have
19 some specific drilling processes in mind, or you
20 would like kind of a general overview? I mean
21 when we're talking about sealing wells, there's
22 many ways to do that with different types of
23 equipment, depending on the hydrogeologic setting
24 that we're in. So --
25 Q. (BY MR. FEREDAY): Let's start with

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1 air rotary, drill-and-drive type wells, and as
2 they are being constructed in this valley.
3 And with regard to air rotary, air
4 rotary is a common method of drilling wells in
5 this valley; isn't that right?
6 A. Yes, it is.
7 Q. It's a common method in the Eagle area
8 as well; isn't that correct?
9 A. Correct.
10 Q. Also, the cable-tool method is common
11 in the Eagle area, to your knowledge, isn't it?
12 A. Yes, very common.
13 Q. Okay.
14 A. And the two processes employ what you
15 referred to as drilling and driving. So the real
16 difference is the action by which the hole itself
17 is created. However, the end product is very
18 similar between a cable rig or an air rotary and
19 drilling and driving.
20 Q. Could you draw what that end product
21 looks like with regard to this question of
22 sealing.
23 A. I'm going to kind of draw just a --
24 this is a fairly homogeneous geology for shallow
25 surface gravels near the river bottom in this

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1 particular area what I typically see as far as
2 geology and hydrology, which, you know, generally
3 we have a horizon of soil, which may vary between,
4 oh, 2 feet thick to perhaps 10 feet or better, and
5 then we'll have a shallow gravel aquifer, which
6 let's say this is sand and gravel. This will be
7 our well bore (indicating). Below the sand and
8 gravel, we may have some -- generally some
9 confining layers, so we'll just call that "C" for
10 clay or confining.
11 Q. And I note that you put TS in the very
12 top stratum, which is topsoil?
13 A. Topsoil.
14 Q. Uh-huh.
15 A. And depending on the target aquifer,
16 which could be this sand and gravel, generally
17 speaking, for residential wells, a lot of people
18 like to stay out of this because it's more
19 susceptible to contaminants such as nitrate
20 issues, bacteria issues, and that kind of thing.
21 But we do generally have a water table in this
22 sand and gravel.
23 And let's just for general purposes
24 say this sand and gravel generally -- let's just
25 say it's around 40 feet. It could be 20. It

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1 could be 60. It's about that variable throughout
2 the river corridor. And then the --
3 Q. From the surface down to the bottom of
4 the sand and gravel, about 40 feet, let's say, for
5 this example?
6 A. It would probably be a pretty good
7 average in this area.
8 Okay. So clay, sand, clay. And let's
9 say this is our target zone for a well.
10 Q. That's the lower zone that you've
11 marked with an "S" for sand?
12 A. Correct. So let's call that
13 production zone, into a confined aquifer likely.
14 It's overlain by clay layers, so the potential
15 would likely be different from that of the
16 unconfined surface gravels that are directly
17 connected to the river and the surface application
18 of irrigation water.
19 Q. When you say "the potential would be
20 different," by that do you mean that if you were
21 to drill 35 feet into the sand and gravel aquifer,
22 let's say that the water stands 10 feet below
23 ground level, just hypothetically, but if you were
24 to drill down into that production zone, the water
25 might actually stand above ground?

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1 A. Correct.
2 Q. Or it at least would stand often above
3 where it is encountered in the well bore; correct?
4 A. Yeah, in many cases, especially down
5 the river corridor, we see the potential actually
6 increasing with depth, where you get down towards
7 Star and Middleton at deeper depths than you have
8 actually artesian flowing conditions that are very
9 common.
10 We actually see that in Eagle, and I'm
11 speaking fairly close proximity to the river
12 bottom. As you get up on the bench, you may start
13 losing this water in the surface gravel. The
14 surface gravels may still exist up there, but
15 they're not saturated.
16 So as you go north, you see increased
17 depths of the wells and not as much, however there
18 can be, you know, where you have a lot of surface
19 application of irrigation water, these gravels do
20 have a tendency to get saturated.
21 Q. As you go north, you get higher
22 elevation, so it's a farther distance to
23 groundwater; right?
24 A. Right. And we don't up on the bench
25 see the flowing artesian conditions, however

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1 that's probably more due to elevation than the
2 water level still generally does rise.
3 Q. Okay. Thank you.
4 Now, can you describe how a cable
5 tool, let's say, well would typically look in
6 terms of a seal? And I'll represent to you that
7 most of the wells that we have discussed in this
8 hearing have surface seals only.
9 A. Yeah, as far -- and I guess for me to
10 differentiate between what constitutes a seal,
11 it's -- the industry has, in general, for many
12 years, even prior to me, may have looked at casing
13 as part of a seal. In other words, it is possible
14 to take a casing down in the ground and put it
15 somewhere and use that as an exclusive barrier of
16 a steel conduit to hold back some undesirable
17 water that they didn't want to produce from the
18 well.
19 But our rules speak to seals as the
20 placement of an impermeable material, a bentonite
21 or cement or some type of lower permeability
22 material, in an annular space. So as I talk about
23 sealing wells, I'm going to kind of be talking
24 about the actual placement of seal material in a
25 space around the casing.

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1 So this casing, generally speaking,
2 will be, let's say, 6 inch for your common,
3 household, domestic well.
4 And then we have what we term a
5 surface seal. The minimum standards until
6 recently have required 18 feet of surface seal.
7 So let's say this is 40. This is 8,
8 and so let's call that 18 feet for the surface
9 seal (indicating). And that's generally in this
10 environment created by a temporary casing that's
11 installed because of the instability of the sand
12 and gravels, which tend to cave unless they have
13 something holding them open physically, which is
14 this casing or this casing (indicating) in order
15 to place this let's just say cement or bentonite
16 around the well casing to prevent migration of
17 fluids from the surface down alongside the casing,
18 and that may influence the well or get into the
19 groundwater itself.
20 Q. Okay.
21 A. Now, in sedimentary conditions we
22 generally have unstable geologic units that tend
23 to cave if they're not held open, as I said. So
24 the process of drilling and driving to hold these
25 open, there's a simultaneous advancing of the

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1 casing with the drilling process.
2 So you have a drill stem that's inside
3 here (indicating) attached to the rig and a bit
4 attached that generally drills. And we'll have a
5 shoe, called a drive shoe, on the end of this pipe
6 (indicating).
7 The bit is small enough to fit inside
8 of this casing. It can't do all of the cutting.
9 Whether this is a rotary bit or a cable tool, it
10 has to fit inside the diameter of the casing. And
11 then the drive shoe is probably -- well, we call
12 this 5 and 7/8ths on a 6 inch, and then probably
13 7 inches on the outside of the drive shoe.
14 Q. So the drive shoe makes the hole
15 bigger than the casing itself so that the casing
16 can slip down the hole; correct?
17 A. Correct. The purpose of the drive
18 shoe, one, is to protect the end of the casing as
19 it's advanced through these gravels, sands, to
20 keep the end of the casing from getting damaged,
21 and also reduce the drag on the casing as it's
22 advanced. So that if it has to be advanced to a
23 depth, it -- doing the same thing without a drive
24 shoe, if you were able to get it through the
25 gravel, which it can be done, but your casing

1 tends to get tight the farther you have to go
2 because that -- that friction is more because it's
3 tighter around that pipe.

4 Q. So how would the completed well look
5 if it were done with that method and completed
6 with screens in that lowest production zone or an
7 open hole in the lowest production zone? Would
8 there be space between the casing and the
9 borehole?

10 MR. ALAN SMITH: Could we have a continuing
11 line of objection on this expert testimony?

12 THE HEARING OFFICER: Sure. So noted.

13 THE WITNESS: Many things can occur outside
14 of this casing that aren't very controllable
15 through the process. What we're doing is
16 injecting air down here in the air rotary scenario
17 to cause a pressure differential to get the
18 cuttings of the drilled hole to come out and allow
19 this casing to be advanced through driving.

20 So the drilled hole is made by a bit
21 that's 5 and 7/8ths, the rest of it may be cut
22 with this shoe as the casing is driven, either
23 with a cable tool or an air rotary. That -- you
24 know, the more stable layers of these clay layers,
25 they're not necessarily consolidated, but they

1 generally stand open pretty well.

2 So just for illustration purposes, we
3 may end up with a larger hole through the clay
4 than the bit created and that's larger than the
5 outside diameter of the 6-inch casing. While that
6 may be a half an inch, it could be a half an inch.

7 One of the other things that I have
8 concluded that happens over the years of being on
9 these machines is the more you -- if this is a
10 saturated sand and water, as you go through this
11 clay layer and you start evacuating material from
12 this zone as you go through, we tend to get
13 somewhat of a cone created by the evacuation of a
14 lot of material, perhaps between a couple of clay
15 layers, which in many cases I see this occur.

16 And my conclusion is that when you
17 lose the support underneath this clay and this --
18 at one point this casing was up here (indicating)
19 being supported by that clay because the casing
20 was advanced to it, and it wouldn't go through on
21 its own, it had to be driven through because it
22 was supported by this clay, what happens in many
23 cases, if this isn't very substantial, that
24 evacuation of the material below the clay and the
25 weight of the casing hammer and the casing string

1 on that, what you'll see is this casing just fall.

2 I've seen this many times over and
3 over again. And my conclusion is that that shows
4 a breakdown of this confining layer. You know,
5 this could fall off, and we could have less
6 confining layer.

7 Now, what does that fill in with in
8 the end? That -- there's no way to verify that
9 either direction, whether it's space, sand, both,
10 a little of one, a little of the other. Probably,
11 you know, could occur differently in each
12 situation.

13 But ideally what we have wanted to see
14 in the end, because our rules in artesian
15 conditions, we want to keep this water separate --

16 Q. The upper water -- upper zone's water?

17 A. -- unconfined. It's not the same,
18 because it has different potential. It's a water
19 table aquifer as opposed to a confined or artesian
20 aquifer.

21 And in order to really keep that
22 hydraulic connection from occurring, the only way
23 to do that is really put a seal in along that
24 casing that we can positively verify got placed.

25 Drilling and driving, you can't really

1 do that. The only thing you can depend on is the
2 very bottom here is this shoe being terminated in
3 this clay layer and hoping that it created enough
4 of a seal here to discourage influence from other
5 aquifers above this zone.

6 But if we carry this further through
7 many more zones like this, the same thing can
8 occur all the way down. And you may end up with
9 somewhat of an isolation by the drive shoe and the
10 casing in the terminal confining layer above the
11 production zone.

12 Everything else above has basically
13 been interconnected just through the process
14 because we haven't -- we just disturbed everything
15 on the way down, which, you know, is not the fault
16 of the process. It's just how the process works.

17 Q. Is it common in your experience to see
18 domestic wells drilled in this manner that allow
19 water to move up and down in the well bore outside
20 the casing?

21 A. Yeah, I believe it does. I don't
22 believe we've put anything in these types of wells
23 that we can definitely say prohibits that and
24 verified its placement.

25 Q. When we have a well that essentially

1 provides a conduit between an upper zone that has
2 a decreasing potential with depth, isn't it a fact
3 that water will run out of that upper zone along
4 the outside of that casing down into lower zones
5 where it finds some equilibrium?

6 MR. ALAN SMITH: Objection. Leading.

7 THE HEARING OFFICER: You're probably
8 correct, Mr. Smith. I'll allow a little bit of
9 leading here. So -- I guess one of the reasons
10 for this, too, is this information is not
11 unfamiliar to me.

12 Mr. Whitney actually has been a work
13 colleague of mine. We've discussed these subjects
14 together.

15 Overruled.

16 Go ahead, Mr. Fereday.

17 Or, Mr. Whitney, you may answer if you
18 recall the question.

19 THE WITNESS: If I do recall the question,
20 it was related to how do we establish some
21 hydraulic connectivity between, say, an unconfined
22 aquifer and a confined aquifer, whether this
23 confined aquifer may have a lower potential, which
24 is possible, a lower potential than this; in other
25 words, the water level when we encounter this

1 sand, maybe it stands 12 feet below land surface
2 and this one (indicating) stands 3 feet below land
3 surface in the saturated gravel. In that case, we
4 say this surface gravel had a higher potential, so
5 the impetus for -- if a hydraulic connection was
6 established through the breakdown of this clay
7 layer in the drilling process, well, certainly you
8 can establish an exchange of water, either one way
9 or the other, and it depends -- you know, high
10 pressure to low pressure. It's going to go that
11 direction.

12 And part of my investigations over the
13 years of being out in the field with these
14 drillers, my interest was -- it's always been
15 argued to me from the drilling community, people
16 that employ these methods of drilling, that by
17 advancing that casing down in the ground,
18 everything goes back just like it was. And this
19 casing itself is the seal.

20 But what I have come to conclude over
21 years and years of watching this and going into
22 well replacements, when we issue a permit for a
23 replacement well, we require decommissioning of
24 the well that's being replaced. So we have to
25 evaluate the condition of that well and figure out

1 what we need to do to put that subsurface back as
2 close to the way it was before the well was
3 drilled.

4 And the reason we do that is because I
5 assume that there's been quite a bit of
6 disturbance through this drilling and driving
7 process, which is the most common way to drill a
8 well in most of this country, always has been,
9 that we have ended up with a hydraulic connection
10 of some sort, whether the exchange is one way or
11 another.

12 And sometimes we can actually see that
13 when we go into a well and perforate the casing so
14 that we can inject grout to the outside of that
15 casing in a well decommissioning. And what we do
16 see is evidence on downhole videos, that kind of
17 stuff, some that we've done and outside
18 consultants, one of the real indicators is when
19 you punch holes in this casing, the well may start
20 to fill in with sand down at the bottom right
21 away, which suggests there is an exchange
22 occurring of water after you put the holes in the
23 casing, which fills up the bottom -- and we have
24 to be very careful we don't fill the well up
25 prematurely in the abandonment process.

1 So doing well abandonments and
2 investigating that stuff has also led to my
3 conclusions that we do end up with space on the
4 outsides of these casings that have very little
5 control over through the drilling process.

6 Q. What problems can unsealed wells cause
7 to the well owner?

8 A. Well, it can make the well more
9 susceptible to contaminants, because if it
10 actually carries a hydraulic connection back
11 towards the surface into waters that are more
12 susceptible to contamination or may have
13 contaminants, it's possible they could be
14 interconnected that way.

15 Q. Can it make the well less efficient in
16 producing water, such as through caving or
17 clogging of screens?

18 A. Yeah, it can. And the dependency in
19 the drilling industry on these, which I'll call
20 open-bottom, drill-and-drive wells, is landing and
21 getting some amount of seal, you know, by this
22 (indicating) clay layer at the bottom of that
23 pipe.

24 And the driller will know whether that
25 has occurred or not. If he gets down to this

1 layer with that casing and the hole will stay open
2 basically to this level (indicating), he's got a
3 pretty good idea that that casing has landed in
4 this clay, at least adequately enough for enough
5 time that he could actually install a screen out
6 the end here (indicating) or an intake.

7 Once that's in, if we have a breakdown
8 of this clay layer, we don't know. Now, if it's
9 an open-bottom well and we have a breakdown of
10 this clay layer, what tends to happen -- and this
11 can be several --

12 THE HEARING OFFICER: Just a minute. We
13 have a tape that needs to be changed out.

14 Okay. We are recording again. Sorry
15 for the interruption.

16 THE WITNESS: In an open-bottom scenario,
17 you depend on this (indicating) staying open to a
18 certain extent, minus this screen, and the water
19 enters just straight through the bottom of the
20 well.

21 Depending on the size of the sand, the
22 efficiency of the well, transmissivity of that
23 sand, our pumping rate is going to affect how this
24 acts down here (indicating). And the faster you
25 pump, the higher the velocity.

1 So what you actually see is sand that
2 starts moving up the casing. And this is
3 something that we also see out -- so let's say
4 this driller didn't get a good landing in this
5 clay layer when he took that casing down, the
6 reason he knows that is because this stuff that
7 has been interconnected has a tendency to come
8 around and push up. I may end up ruining my --

9 Q. So pumping the well tends to excavate
10 even more sand from outside the well casing;
11 correct?

12 A. Well, in the original construction if
13 this occurs, he can't make a well there really,
14 unless he can figure out how to keep that sand
15 from what they call heaving up the pipe.

16 And the conclusion with, you know,
17 many guys I've worked with, some of the old-time
18 well drillers out there, if you're landed good in
19 that clay, you won't have sand come past the
20 bottom of that pipe very much. I mean maybe a
21 couple inches or a foot where it could come up.
22 It's not problematic when you go to put a screen
23 out the end.

24 If it comes up way high in here
25 (indicating), what you end up with is so much

1 inefficiency because of the sand packed inside
2 that casing, that the well just won't pump.

3 Q. Do you see this with domestic wells in
4 the Treasure Valley, this problem?

5 A. Yeah, I've seen this occur for
6 numerous reasons, some of them just flat out
7 orneriness where a guy may know a guy drills an
8 open-bottom well and sticks too big of a pump in
9 there and sucks the bottom up just -- and honestly
10 that's occurred.

11 But what I also -- and I think where
12 you're going partly is related to when somebody
13 calls me and says, "I got to replace my well. Is
14 the well dry or is the well not?" What I try to
15 flush out is the difference between that question.

16 Q. How often when you receive that
17 question do you find that the well, in fact, is
18 dry in the sense that there's not available water
19 to move to the well? What kind of a percentage?

20 A. To a consumer, a dry well is something
21 that won't pump water. And so a dry well, if it's
22 not producing, it's dry for all practical purposes
23 in their mind. But what I want to know --

24 Q. Does that mean that the aquifer levels
25 have dropped?

1 A. Not necessarily. It could be a
2 combination of things. If an aquifer level does
3 drop to some extent, that means the stress on the
4 intake of this well may increase, an aquifer's
5 going to fluctuate year to year, sometimes even
6 day to day based on barometric pressure, all kinds
7 of influences.

8 But if we get in a condition where
9 we're pumping more than the well wants to yield
10 and we have to draw this water level down more to
11 get that same amount of water, it's a compounding
12 problem. More sand usually comes up inside the
13 casing to the point you're either pumping it out
14 the pump or the pump starts sucking air because it
15 won't pump water.

16 To a consumer, that's a dry well. If
17 it doesn't pump water, it's a dry well.

18 Q. To the consumer?

19 A. Sure.

20 For my purposes, you know, when
21 somebody says "I have a dry well," I actually kind
22 of want to know if -- you know, we want to know as
23 an agency if there are declining water levels to
24 the point where wells are actually physically
25 going dry and the water level is dropping that

1 far.
 2 Q. Have you seen this happen in the Eagle
 3 area?
 4 A. I have not.
 5 Q. How long should a well be expected to
 6 last, Mr. Whitney? There was some testimony
 7 earlier, I'll represent to you, about replacement
 8 wells, replacing wells that were -- recently that
 9 were drilled in the 1970s. How long do you
 10 usually reckon a well should last?
 11 A. I think a well's longevity has a lot
 12 to do with its physical environment: soil
 13 chemistry, water chemistry, how it's used, or not
 14 maintained properly. There's a lot of variables
 15 there.
 16 And obviously if a water table does
 17 drop -- and we have areas where water tables have
 18 dropped and wells had to either be deepened or
 19 replaced because of lack of access to water
 20 through that well. You know, being pretty
 21 speculative as far as, you know, what is the life
 22 expectancy of a well, but if I had to put a number
 23 on it in general, it's not uncommon to see wells
 24 last 20, 30, 40 years.
 25 I know of wells -- I was talking to a

1 gentleman yesterday that was working on a well
 2 that was drilled in 1950. However, he was working
 3 on it because it was failing. But that's, you
 4 know, quite a long life for a well, and other
 5 cases --
 6 Q. Do casing materials have anything to
 7 do with a well's longevity?
 8 A. I believe they do. And once again,
 9 that relates to how that geochemical environment
 10 acts on that particular casing. More and more
 11 we're seeing municipalities and entities going to
 12 casing wells with PVC because it's relatively
 13 inert to corrosive effects that can occur for many
 14 reasons, including stray voltage in the ground.
 15 You know, we don't generally have cathodic
 16 protection on wells, but we certainly do that with
 17 pipelines, gas pipelines and stuff. So we know
 18 that those corrode under the subsurface.
 19 Q. What kind of a maintenance program
 20 should a diligent well owner carry out,
 21 Mr. Whitney, in your experience?
 22 A. Well, there's only so much you can do.
 23 Generally, most of that is wellhead protection.
 24 Make sure nothing gets in the well, it's not in a
 25 hole that has standing water around it, and don't

1 overpump it.
 2 But, you know, wells tend to -- they
 3 may get fouled with things like iron bacteria over
 4 time, which is a whole other animal that fouls a
 5 well and reduces its efficiency and causes a pump
 6 to work more and the well not to yield water.
 7 Q. Do you know of iron bacteria problems
 8 in any wells in the Eagle area?
 9 A. Well, I think it could be -- you know,
 10 iron bacteria is a fairly common problem out
 11 there. It's a very common soil bacteria, so it's
 12 easily transported. It's -- and once you have it,
 13 you really don't get rid of it. You manage it
 14 through mechanical and chemical means of trying to
 15 keep it from producing slime, which is what fouls
 16 everything from the well itself to the pump, and
 17 even in the house.
 18 Q. Can you give us a feeling for the
 19 number of domestic and small irrigation wells in
 20 the Eagle area? I'm interested in knowing, is
 21 this a dense -- fairly dense well field out there
 22 in comparison, say, to other areas in the valley,
 23 such as within the city of Boise?
 24 A. I would say it -- out in rural areas,
 25 they would -- that the wells -- the density of

1 residential wells, small yard wells, that kind of
 2 thing, would be higher because there's less access
 3 to a municipal provider.
 4 Now, whether that was true before the
 5 municipalities came in, in comparing, you know,
 6 something in the city of Boise or on the outskirts
 7 with Eagle, I couldn't make a good comparison, but
 8 rural areas generally have higher densities of
 9 residential wells because of the lack of a
 10 municipal service of some sort.
 11 Q. And that would be true for the
 12 Eagle -- north Eagle area, would you say?
 13 A. Yeah, I think what we're seeing,
 14 though, is even out in Eagle the tendency towards
 15 municipal, such as in the case of this M3, we're
 16 not talking about individual wells out there,
 17 we're...
 18 Q. What percentage would you reckon that
 19 the domestic or small -- of the small irrigation
 20 and domestic wells in the Eagle area have
 21 full-depth seals outside their casing?
 22 A. It would be a very low percentage,
 23 less than 5 percent. Some of the larger diameter
 24 wells that -- municipal wells, irrigation wells
 25 that used to actually intend to create a

1 commingling of every water strata, from sometimes
2 even including a surface gravel from top to
3 bottom, that kind of construction went out the
4 window in probably the early to mid-'90s. So we
5 have more control of public water supplies and the
6 way they're constructed because of EPA and DEQ
7 regulations as well.

8 But drill-and-drive wells don't
9 constitute wells that have full-depth seals. They
10 have an 18-foot seal, which keeps water from
11 traveling along the surface down alongside the
12 casing.

13 Q. Are you familiar with any wells that
14 have been replaced in the Eagle area? And if so,
15 could you describe what you know about those
16 replacements and reasons for them.

17 A. I deal with so many wells every year.
18 I don't know that I could put a finger on one
19 specific. I know there was along Beacon Light
20 Road, in proximity to the Idaho Feed Lot,
21 what's -- Harvey or Hartley is the street that
22 goes north off of Beacon Light, west of Ballantyne
23 and east of Highway 16, we had some water testing
24 that occurred out there for nitrates and some
25 carrying agents for herbicides and pesticides.

1 And I did deal with some replacement
2 wells in that vicinity that the purpose of those
3 replacements was to try to get better quality
4 water at deeper depth.

5 And one of the concerns we had is that
6 some of these water-quality issues with what was
7 obviously connected to land use, because of what
8 the chemicals were, the -- the indications were
9 that those chemicals had been migrating deeper
10 through the subsurface.

11 Now, did we specifically attribute
12 that to well construction in the end? I can't
13 answer that. I don't think we did either way, but
14 that's always suspect.

15 Q. But that well was replaced because of
16 contaminants, not because of efficiency?

17 A. Correct.

18 Yeah, the ones I can think of in that
19 vicinity, just that I can picture the house and
20 being there, were related to water-quality issues.

21 Q. Have you seen a replacement well in
22 the Eagle area that you believe was necessitated
23 by lowered groundwater levels?

24 A. I couldn't put my finger on one. It
25 wouldn't be out of the realm of possibility. I

1 couldn't say one way or another at this point.

2 Q. Okay. Have you worked with Mr. Ed
3 Squires of Hydro Logic, Incorporated?

4 A. Yes.

5 Q. Do you find him to be knowledgeable
6 and -- with regard to wells and well construction?

7 A. I do.

8 Q. Do you find his approach to well
9 construction and sealing of wells to be
10 professional?

11 A. I do.

12 MR. FEREDAY: No further questions.

13 THE HEARING OFFICER: Okay.

14 Mr. Thornton, questions for
15 Mr. Whitney?

16
17 CROSS-EXAMINATION

18 BY MR. THORNTON:

19 Q. Yeah, if you want, you can sit down.
20 Or if you'd like to stand up, that's fine. I
21 appreciate your information.

22 So in your position and, I guess, job
23 requirements with Water Resource Department, is
24 part of your job requirement to go out when people
25 are asking or requesting for a replacement well to

1 go out to every one of those, certain ones of
2 those, or what? I don't know if that's in your
3 job requirement, your job description.

4 A. I think that's something that I should
5 do and can do. And unfortunately, we're spread
6 thin as staff in this program. I try to keep up
7 with the drilling that's occurring in about 15
8 counties by myself. So I wish I could get to all
9 these jobs and know what was going on.

10 One of the things that we do do, we
11 have a drilling permit process, which we have to
12 authorize the construction of a well. Exempt
13 wells, which for most purposes are residential
14 domestic wells that don't require a water right,
15 we've employed a process of what -- it's called a
16 start card process so that a drilling contractor
17 can actually obtain a permit on behalf of the well
18 owner expeditiously.

19 So as long as they turn that start
20 card in -- and that start card has limited
21 parameters for use -- as soon as our office gets
22 it, they're authorized to drill.

23 On the start card or regular drilling
24 permit, we ask "Is this a replacement, a new well,
25 a modification of an existing well?" so that we

1 can kind of keep separate the types of work that
2 are being done. So one category is replacement.
3 On residential domestics -- and along
4 with a replacement well comes a condition on the
5 drilling permit that says "The well being replaced
6 must be properly abandoned." And that's mostly in
7 the event that it is going to be a liability and a
8 hazard if it's not maintained. If it doesn't
9 function anymore, we need it to go away.
10 What comes with that is,
11 unfortunately, a person has to kick a dead horse.
12 They have a well that's no good, they're staring
13 at a huge bill to replace that well, and then I
14 come and tell them they have to also put money
15 into the old well that doesn't work anymore to
16 plug it. So I get involved with a lot of
17 replacements to track whether or not the old well
18 is getting abandoned.
19 Now, do we go so far as to track what
20 exactly happened to that old well, why it doesn't
21 work? We ask for information on an abandonment
22 application that asks for the -- you know, the
23 well depth, the static water level, and that kind
24 of stuff. But -- and a reason for the
25 abandonment.

1 Sometimes it's, you know, the well
2 just doesn't work or sometimes it may be the well
3 went dry. But...
4 Q. Do you physically get out to all of
5 those sites?
6 A. To all of them?
7 Q. Yes.
8 A. No, sir.
9 Q. What percentage of domestic wells
10 might you get out to that are -- have a
11 replacement?
12 A. The numbers I can come up with -- I'll
13 start with the percentage of wells that I may be
14 able to look at during a year period. Let's say
15 that in a good year it's 250 to 350 wells, active
16 drilling sites is generally what I try and do. I
17 try to be there when they're constructing the well
18 because I can get a better feel for what's
19 happening.
20 You know, the percentage of
21 replacement wells I would be on would vary because
22 that depends on, you know, how many wells are
23 being replaced in that particular year.
24 Q. Do you go out to replacement sites for
25 domestic wells?

1 A. Yeah, fairly commonly I -- I do like
2 to make a contact when I get a drilling permit for
3 a replacement residential well at least with the
4 driller, even if it's via telephone, to find out
5 what the intentions are with the old well.
6 Now, there may be times where the
7 driller doesn't want to identify the well as a
8 replacement well because the owner doesn't want to
9 spend the money to get rid of the old well. So I
10 fight that battle too.
11 So I may end up being out on a job
12 that is obviously a replacement because it's an
13 existing house, and then we start asking the
14 questions, "Well, what's this well for?"
15 "Well, it's because that one doesn't
16 work."
17 So it's -- the majority of what I have
18 seen over the years are new residential wells,
19 just because there's probably more residential --
20 you know, new houses out rurally than we have old
21 houses.
22 Q. So on the map behind you on the wall,
23 are you generally familiar with -- it may be the
24 first time you've seen it, of the location of the
25 M3 property in Eagle? Could you find yourself,

1 Eagle on that map, by any chance? Or you can look
2 at Highway 44.
3 A. Okay. I'm assuming -- here's the
4 highway, yeah.
5 Q. Yeah. And you can see the Boise
6 River.
7 A. Linder. Okay.
8 Q. So you're somewhat -- if you see a
9 cluster of I guess you'd call red or --
10 A. Yeah.
11 Q. That is information that -- those dots
12 were obtained from looking at the Water
13 Resource -- Department of Water Resource website
14 getting information on wells that were redrilled.
15 Those dots represent a time period from I think
16 2005 to 2008 in terms of redrilling.
17 And have you been to any of those
18 locations scattered along Beacon Light,
19 Ballantyne, Homer, and that?
20 A. And these dates are the dates of the
21 replacement? Is that what these dates are?
22 MR. THORNTON: I would refer, if I could --
23 is it appropriate? -- to Mr. Smith.
24 MR. JASON SMITH: The year of
25 replacement --

1 THE HEARING OFFICER: Okay. Just a minute.
 2 Just a minute, Mr. Smith.
 3 MR. JASON SMITH: Sorry.
 4 THE HEARING OFFICER: You're not the
 5 witness at this point.
 6 MR. THORNTON: And I may have stepped out
 7 of line. I was trying to have Mr. Smith help
 8 answer --
 9 THE HEARING OFFICER: I didn't realize you
 10 were --
 11 MR. THORNTON: I asked Mr. Smith to answer
 12 that, because I'm not sure. I haven't looked at
 13 that map with the numbers on it. So I apologize
 14 if I stepped out of line there, Mr. Hearing
 15 Officer.
 16 THE HEARING OFFICER: Okay.
 17 Q. (BY MR. THORNTON): So the dots have
 18 numbers or dates on them?
 19 A. Yeah. I'm assuming that's the year
 20 that that well was -- the new well was drilled.
 21 MR. THORNTON: And if I could, Mr. Hearing
 22 Officer, ask Mr. Smith, is that correct, that
 23 those --
 24 THE HEARING OFFICER: No, I don't think
 25 that's appropriate.

1 MR. THORNTON: Okay.
 2 THE HEARING OFFICER: I think the
 3 appropriate way to ask the question, if you don't
 4 know it, is "Let's assume."
 5 MR. THORNTON: Okay.
 6 THE HEARING OFFICER: So pose it another
 7 way.
 8 MR. THORNTON: Okay.
 9 Q. I'll assume, and I believe I've heard
 10 testimony that those represent the year that they
 11 were redrilled.
 12 So have you been to any of those
 13 sites? And we've got the well driller's logs if
 14 you would like that to help you with knowing the
 15 well driller as well as the name of the people.
 16 A. I would suspect that -- I've been to a
 17 few of them. I can tell you that. Based on the
 18 dates, 2006, 2007, 2008, I was involved with the
 19 drafting of the new well construction standards,
 20 almost all of my time was dedicated to that
 21 process and was not -- didn't have an assistant
 22 and was not in the field for a couple of years
 23 very much.
 24 Now, I do recognize some of this area
 25 kind of out North Eagle Road where that -- what is

1 that? The ridge you go a quarter drive or the
 2 next one. Highlander? Highlander Estates?
 3 Q. Well, Highlander is the first -- I
 4 would contend is the first ridgeline to the north.
 5 A. Uh-huh. I was to a couple of newer
 6 wells up there. They weren't replacements because
 7 those were all new.
 8 Q. Okay.
 9 A. In that time frame those are the only
 10 ones I specifically recall.
 11 Q. So it appears that because of your job
 12 requirements and duties at that time, then, and
 13 work on the new well locations you didn't have a
 14 chance or opportunity to go look at those several
 15 wells occurring in that time period that were
 16 redrilled; is that correct?
 17 A. Off the top of my head, yeah, I
 18 couldn't positively ID one of those dots.
 19 Q. Okay.
 20 A. I may be able to do better off of a
 21 well log.
 22 Q. Okay.
 23 A. But I can almost assure you that it
 24 wasn't very many of those, and certainly not all
 25 of them.

1 Q. Okay. Are you familiar -- recently
 2 this April, I believe, in that area that's close
 3 to the intersection of Ballantyne and Homer Road,
 4 we had a public witness come in, Mr. Greg Taylor
 5 had a well -- an irrigation well, a 10-inch well
 6 redrilled by Coonce -- I mean by Dennis Phipps.
 7 Are you familiar with that one?
 8 A. Yeah, I remember the permit and the
 9 name Greg Taylor. That's fairly recent.
 10 Q. That's very recent.
 11 A. Yeah.
 12 Q. Did you have a chance to get out and
 13 observe that well?
 14 A. No, I did not. In fact, is that the
 15 one that's still working on.
 16 Q. Excuse me. I should wait until you
 17 answer. I'm sorry.
 18 So that is one that has recently been
 19 completed and their well abandoned, according to
 20 his testimony.
 21 Are you aware that Mr. Owsley was out
 22 there measuring that and dropped whatever
 23 equipment he has into the well to determine if
 24 there was any water left, and his statement in a
 25 letter to the well owner is that it was, in fact,

1 dry, no water at the bottom of the well?
 2 A. Your question was?
 3 Q. Are you aware of that?
 4 A. No, I'm not aware of that.
 5 Q. Okay. So it appears that you actually
 6 haven't had in the last few years much
 7 opportunity, because of volume of area you cover
 8 and many other tasks that you have, to get out to
 9 some of these replacement -- or many of these
 10 replacement wells to --
 11 A. That would be correct.
 12 Q. Okay. All right. Do you have any
 13 thoughts in terms of when you're drilling through
 14 a mixture of alluvial material -- sands, gravels,
 15 clays, whatever -- what depth of clay strata does
 16 it take to act as a -- either a sealer or an
 17 aquitard or a confining layer? Is it inches? Is
 18 it tens of feet, or...
 19 A. Well, I think many clays could be --
 20 are fairly impermeable. I think the bigger
 21 question is what is the extent horizontally of
 22 that clay layer in acting as a confining layer
 23 versus the thickness.
 24 Now, we may tend to think generically
 25 that a thicker layer may be more continuous

1 horizontally. You know, certainly the best ways
 2 to flush out true confinement are through, you
 3 know, hydraulic testing or comparisons of, you
 4 know, geologic cross-sections that are based on
 5 drill logs of the extent of those clay layers and
 6 the relative elevations.
 7 Q. So that's like a spatial extent is
 8 very important of those clay layers, is that --
 9 aerial coverage?
 10 A. Well, I think certainly that would
 11 give me a better impression if I knew the extent
 12 of that clay layer or at least of the hydraulic
 13 condition on one side or the other of how it may
 14 be acting as a confining layer.
 15 Q. And what about depth, though? And I
 16 understand areal extent or spatial extent of the
 17 clay layer is important to know. Can you offer
 18 any of your expert knowledge in terms of the depth
 19 of a clay layer? Is it an inch? Is it 3 inches?
 20 Is it 10 inches? When --
 21 A. When does it become significant?
 22 Q. Yeah.
 23 A. I'm sorry I interrupted you.
 24 Q. That's all right.
 25 A. I'll try to help you.

1 Q. So when does it become a barrier?
 2 MR. FEREDAY: I'm going to object here, at
 3 least to the extent that this (a), goes beyond the
 4 scope of direct and (b), asks for expertise
 5 outside of well construction and longevity issues.
 6 I'm not quite sure what the question is driving
 7 at, but it sounds like it's asking him to opine as
 8 to aquifer confinement and geologic matters.
 9 MR. THORNTON: I believe, Mr. Hearing
 10 Officer, he's provided information in terms of
 11 when a well is drilled and either an open hole or
 12 a casing goes into some confining layer. I'm
 13 interested in knowing basically how deep does it
 14 have to go into a confining layer so that it
 15 doesn't have impact from areas above or
 16 potentially below. It seems like he has that
 17 expert knowledge.
 18 THE HEARING OFFICER: That's where I
 19 thought the question was going. Overruled.
 20 THE WITNESS: If I understand your question
 21 correctly, you're wanting to know if I can tell
 22 you how thick a clay layer needs to be to prevent
 23 hydraulic connection on either side of it?
 24 Q. (BY MR. THORNTON): Yeah.
 25 A. This was an issue that we debated over

1 and struggled with through the process of creating
 2 these new well construction standards rules. It's
 3 really hard to put a number on that, that -- you
 4 know, it's -- there's a lot of variables there.
 5 How impermeable is that -- that clay? Is it more
 6 of a silt?
 7 To impede -- no clay layer is going to
 8 prevent migration of water. It all saturates.
 9 Water moves through those saturated clays at some
 10 rate. Now, we express those rates in, you know,
 11 very, very small numbers. In our actual
 12 regulations for a sealant material, a bentonite
 13 has to have a permeability of less than 10 to the
 14 minus 7, for whatever that means.
 15 Q. Very small.
 16 A. It's low permeability, but it's not
 17 impermeable.
 18 So a coarser silt layer may allow
 19 water to move through it at -- I still guess I'm
 20 going back to this -- you know, this horizontal
 21 effect. A few inches of bentonite material can
 22 slow the movement of water from one side to the
 23 other extremely well.
 24 So in other words, you know, the
 25 thickness of a layer of sealant -- and I'll just

1 talk about bentonite more because that's -- I
2 guess I have a lot of experience with that type of
3 clay. I know what it is, it's at the surface, and
4 we use it a lot. Two inches of bentonite, which
5 is an impermeable clay, can cut the flow of water
6 down to, you know, I would imagine to years from
7 one side to the other.

8 Q. And on your diagram that you've shown,
9 you show a mixture of topsoil, sand, gravel, clay,
10 and then you've got -- I'm not sure, I think it
11 was potentially the bottom of that well, not the
12 screen that you drew, is near a bottom of a clay
13 layer, I think; is that correct?

14 A. This (indicating)?

15 Q. Yeah, the layer above.

16 So what I'm wondering is how would a
17 driller know, how would you know what's thick
18 enough clay layer for that bottom of the well to
19 be in to say "Okay. It's not going to cause any
20 kind of leakage or seepage or draw water from the
21 well"? Not just bentonite, but an average clay
22 layer that is identified in a lot of these well
23 driller logs by Hydro Logic's own information,
24 types of clays? How do you know what's -- what
25 is -- what they call an aquitard or whatever,

1 impermeable? How thick? I understand the spatial
2 extent. I don't know for the clay, the natural
3 occurring clay. Is it a couple inches like
4 bentonite? Or is it a foot? Is it what?

5 A. I think the only way I can answer that
6 is relate back to these well construction
7 standards.

8 Q. Okay.

9 A. And what we ended up doing with them,
10 wrestling with the same issue, because we -- when
11 we say "Seal into a confining layer overlying the
12 artesian zone," that's language from our rules,
13 which means you got seal into this confining layer
14 overlying the artesian zone.

15 Well, if this (indicating) confining
16 layer is 20 feet thick, the driller asks me,
17 "Well, okay. Does that mean I have to seal
18 completely through it, or just so much into it?
19 What does that mean?"

20 So what we had to do is say "Okay.
21 Here's the number. 5 feet. We want you to seal
22 5 feet into that confining layer or through the
23 entire thickness," whichever is less, actually, in
24 this case.

25 So I don't know that we had some

1 specific scientific basis to establish that 5-foot
2 number, but in an area like this, you know, when
3 we have what I'd consider somewhat streaky
4 subsurface conditions where these -- you know, we
5 could look at these and these clay layers may be
6 20 feet thick, well, I think that looks
7 differently to me than if they're a foot thick.

8 And we do see conditions where we're
9 alternating, you know, a foot of clay, 2 feet of
10 sand, a foot of -- really streaky conditions. And
11 when I look at scenarios like that, I don't see a
12 lot of need, unless I have other information to
13 show differently, that those aren't probably
14 interconnected hydraulically somewhere within that
15 close proximity.

16 MR. THORNTON: Okay. I don't think I have
17 more questions. I appreciate your testimony.
18 Thanks.

19 THE HEARING OFFICER: Okay.
20 Mr. Smith?

21
22 CROSS-EXAMINATION
23 BY MR. ALAN SMITH:

24 Q. On this well construction that you
25 talked about on the diagram here -- give me that

1 microphone -- would that type of construction
2 allow the water from the more shallow aquifers to
3 communicate down with the water in the deeper
4 aquifers more so than what occur naturally?

5 A. Okay. To recap what I thought I heard
6 you say, is we're dealing with this particular
7 well and that type of construction here that has
8 an 18-foot seal; right?

9 Q. Correct.

10 A. And we're assuming this is saturated
11 surface gravel. Could this construction create a
12 hydraulic connection between this surface gravel
13 aquifer and these units below?

14 Q. Correct.

15 A. Or are you speaking specifically of
16 just between here and here (indicating)?

17 Q. Yes, with anything in the well, where
18 the water is flowing down on the outside of the
19 casing to any other aquifer below it, is it not
20 allowing communication between the aquifer?

21 A. I believe in many cases, at least from
22 here to here (indicating) -- well, actually to the
23 bottom of that, but this -- it's very likely that
24 this has been hydraulically connected through the
25 drilling process.

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1 Our hope as the regulator in meeting
2 the intent of our rules that the termination of
3 this pipe in this layer prevented the hydraulic
4 connection of this and this or this (indicating).
5 We've been counting on that for years, but have
6 come to conclude that it's not nearly as reliable
7 as what we were led to believe by the drilling
8 community in the past, that what's reliable is a
9 bigger hole around this casing and the pumping of
10 a grout material positively placed from this point
11 back to here (indicating).
12 So in answering your question, related
13 to how thick confining layers should be and what
14 happens on this side, what happens on that side
15 (indicating), what I have concluded over the years
16 is I don't know -- I end up with more questions
17 than I end up with answers. But there is an
18 ultimate answer in well construction, that kind of
19 solves all these problems is if you really want to
20 protect the subsurface you seal it from this point
21 back (indicating), because you know you've covered
22 everything that may or may not be a confining
23 layer that existed before the well was
24 constructed.
25 If we talk about, well, in this well

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1 we should seal here and we should seal here
2 (indicating) and the next well we should seal here
3 and here (indicating), that's always a moving
4 target for a regulator, but I don't -- if we seal
5 from the source to the surface, which would
6 actually be the optimum in well construction, in
7 my opinion, and some other, we don't have to know
8 what these conditions are because we know if they
9 are like this or aren't, we've sealed them by
10 placing seal material from here back to the
11 surface and put it back at least as good as it
12 was.
13 THE HEARING OFFICER: Okay. Mr. Whitney,
14 may I interrupt just for a minute. And as you
15 testify and narrate, would you please refer to, as
16 you did at least once, refer to the location that
17 you're talking about, for instance, source to
18 surface. If you're telling us from this to this
19 or from here to there, it's meaningless in the
20 record.
21 Do you understand what I'm saying?
22 THE WITNESS: I understand, uh-huh.
23 Q. (BY MR. ALAN SMITH): Do you want to
24 correct or expound on your answer there?
25 A. Well, to -- well, for the record, when

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1 I talk about sealing from the source to the
2 surface, the only thing that the consumer wants or
3 the driller wants in the end is good water from
4 the production zone. Everything else that he has
5 gone through and passed on the way from the
6 surface to the source obviously wasn't something
7 they wanted to produce, so there's no reason,
8 except for you just can't, through some types of
9 processes, drilling and driving, for example,
10 effectuate a seal from the source to the surface.
11 You intend to isolate the source from
12 the rest of what's above it, but that doesn't
13 necessarily account for any connection that's
14 occurred between the bottom of the surface seal
15 and let's call it the top of the formation seal
16 that theoretically was created by the termination
17 of the casing into that clay.
18 Q. Does the Department of Water Resources
19 have standards now that require sealing all the
20 way from the source to the surface?
21 A. The standards related to the
22 construction of artesian wells -- and an artesian
23 well being one that -- an aquifer that's
24 encountered that the water-level rises above the
25 level at which it was encountered. It doesn't

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1 necessarily have to flow, which this certainly
2 qualifies, if we're talking about production zones
3 below the surface gravel, as an artesian
4 condition, the existing rule requires that a seal
5 be placed, one, in the confining layer overlying
6 the producing interval and at every other
7 confining layer that separates aquifers.
8 And I'm sorry, I don't have my well
9 construction standards book with me. I could
10 reference the rule, but...
11 Q. Well, if there's drainage from the
12 upper aquifer down along the casing to a lower
13 area or lower aquifer, there's communication
14 between the aquifers, is the shallower aquifer
15 going to go dry first?
16 A. Not necessarily. It depends on the
17 direction of that exchange. I would tend to think
18 that a lot of the places I have seen up and down
19 the -- at least of the river corridor where we
20 have increasing potentials with depth, I'm more
21 suspicious of leakage from artesian zones up and
22 out in that direction than from these surface
23 gravels downward.
24 In many -- you have to know what those
25 potentials are. But as we get further down the

1 river bottom and we get into wells that flow at
2 land surface, well, many of them -- they may not
3 end up flowing at land surface because they're
4 actually leaking off -- and again, this is
5 something -- an opinion I have developed over many
6 years of seeing this, we may have water that's
7 actually leaked out into the surface gravel from
8 some lower zone, or maybe it's not even the
9 production zone.

10 One of the concerns is if it's leaking
11 from here up into here (indicating), that's a
12 waste of water by rules. It constitutes waste,
13 which our well construction standards are intended
14 to prevent.

15 Q. So the water flow could be either way,
16 then, upward or downward?

17 A. Yes. Just be from higher pressure to
18 lower pressure.

19 Q. Okay. How about up there in the north
20 Eagle area where all of those red, orange, pink
21 dots, whatever you want to call them, where
22 they're located, away from the river? What's the
23 situation there?

24 A. I would have to really be looking at
25 some drill logs and know where static water levels

1 were and where various waters were encountered,
2 but just at a glance, I would say the farther that
3 you went north off of the river where you have
4 such high water tables in the surface gravels,
5 that you might even get into a scenario where the
6 surface gravels were somewhat of a perched aquifer
7 that have been saturated by irrigation, the canals
8 and that kind of stuff, and out there we have a --
9 it seems to me that some of the water-level
10 contours I've seen, they kind of go up and down,
11 and that's influenced by the Farmers Union ditch
12 and some of those canals up there, which can
13 contribute to charging the surface gravels.

14 Well, if we have a confining layer
15 below the surface gravel and maybe some relatively
16 unsaturated sediments until we get to the next
17 water table, which may in fact be artesian, but
18 say in the surface gravel we had 15 foot static in
19 50 feet of gravel, and then some dry -- relatively
20 dry sediments, and probably somewhat saturated,
21 but then we got down to some of those coarse,
22 white sands that you see out there, say, oh, in
23 M3's little finger that comes out by the vet
24 clinic off Highway 16, some very coarse, white
25 sands down there 2- to 400 feet that are very

1 productive as far as water.

2 Certainly if we had a little perched
3 surface gravel aquifer that was underlain by
4 something that had a lower potential, you could
5 drain, if through the construction of wells you
6 created an avenue, or even through the
7 construction of sewer lines and lift stations. We
8 see a lot of excavations that go deep enough that
9 get below the surface gravels and may breach a
10 confining layer that we can't regulate because
11 it's not a well.

12 Q. So would you say the further you move
13 away from the river the more likely it is that the
14 flow would be from the shallower aquifer down,
15 that it wouldn't be from the deeper aquifer with
16 an upflow?

17 A. I don't know I have -- that would be a
18 question I'd --

19 MR. FEREDAY: I'm going to object to this.
20 I think it does go beyond the scope and, again,
21 asks for hydrogeology beyond the confines of the
22 well questions that we were asking.

23 THE HEARING OFFICER: Overruled.

24 Q. (BY MR. ALAN SMITH): You may answer.

25 A. The question once again, Mr. Smith?

1 Q. The further you move away from the
2 river, is it more likely that the shallow aquifers
3 are going to drain down than it is that the deeper
4 aquifers are going to have an upflow, as you move
5 north away from the river, or do you know?

6 A. I guess I decline to answer because
7 without seeing that specific hydraulic information
8 I can't say for sure. I do know that water would
9 tend to move from a higher static to a lower
10 static.

11 Q. Are you aware of the
12 Vincent/Owsley/McVay memo, Exhibit No. 50, are you
13 aware of that?

14 A. I'm aware of a staff memo from our
15 hydrology staff. I don't know that I've --

16 Q. And have you read it?

17 A. No.

18 Q. Are you aware that on page 4 of the
19 McVay memo attached to that Exhibit 50 --

20 A. Do we have --

21 Q. -- the statement is made that all
22 wells, with the exception of one, exhibit negative
23 water-level trends that range from 0.11 to
24 1.06 foot a year with an average trend for all
25 wells of minus 0.29 foot a year?

1 MR. FEREDAY: Objection. The witness
2 testified he hasn't read this. Furthermore, this
3 mischaracterizes, I believe, Mr. McVay's
4 testimony, which amended in some ways what he set
5 forth in the staff memo.

6 THE HEARING OFFICER: Okay. Well,
7 technically, the question as asked says "Are you
8 aware?" The previous question was "Have you read
9 the memo?" Mr. Whitney said he had not, so he
10 certainly would not be aware of the statement,
11 Mr. Smith.

12 So let's ask the question again and
13 see where we stand, and maybe we can refer to the
14 particular passage now that Mr. Whitney has the
15 Exhibit 50 there.

16 Q. (BY MR. ALAN SMITH): Do you have it
17 there?

18 Are you aware of that statement, or
19 not? It's item 2 on page 4 of the McVay memo, the
20 last memo attached to Exhibit 50.

21 MR. THORNTON: Is that in Attachment A?

22 MR. JASON SMITH: It's towards the back of
23 it.

24 THE HEARING OFFICER: I guess, again,
25 Mr. Smith, technically, if he hasn't read the

1 memo, he shouldn't be aware of the statement, I
2 would guess. So the question asks something
3 that's -- so I think I'd just make a direct
4 reference, let's look at the statement, and if he
5 has some comment related to it, let's see what it
6 is.

7 So does he know where you're looking?

8 Q. (BY MR. ALAN SMITH): Do you have
9 that, Mr. Whitney?

10 A. I have in front of me, which I'm
11 assuming is Exhibit 50, marked 50 in here --

12 Q. Correct.

13 A. -- a memo dated March 2, 2009 --

14 Q. Correct.

15 A. -- from Mr. Owsley and Mr. Vincent.

16 Q. And there's a McVay memo attached to
17 it.

18 A. Okay.

19 Q. It's Appendix A on page 4.

20 THE HEARING OFFICER: Page 4 of the
21 appendix?

22 MR. JASON SMITH: Yes, sir.

23 MR. ALAN SMITH: Correct.

24 THE WITNESS: Evidently, I'm not familiar
25 enough with the memo to find the page.

1 MR. JASON SMITH: You have to go clear
2 through the memo, page 26, 27, and then it goes to
3 Appendix A.

4 THE WITNESS: Okay. Mike McVay, March 4,
5 2009.

6 MR. JASON SMITH: There you go, page 4.

7 MR. FEREDAY: Mr. Hearing Officer, I'll
8 repeat my earlier objection. Beyond the scope.
9 Furthermore, it mischaracterizes, I believe, what
10 Mr. McVay's testimony is now, which was amended
11 from this, the date of this memo.

12 MR. ALAN SMITH: I believe the witness
13 testified to water-level trends in that area.

14 THE HEARING OFFICER: Well, I think there
15 was testimony in the direct examination about the
16 direction of water flow and the direction
17 dependent upon potentials. So I'll overrule the
18 objection on that basis.

19 And I guess I don't recall,
20 Mr. Fereday, the correction to this particular
21 memo, at least this particular passage. So --

22 MR. ALAN SMITH: Did you state in your
23 direct, as I understood it --

24 THE HEARING OFFICER: So overruled at least
25 right now. Thank you, Mr. Smith. Go ahead.

1 Q. (BY MR. ALAN SMITH): All right.
2 Would you look at item 2 there, the last sentence
3 on page 4.

4 A. "All wells in the area except exhibit
5 negative water-level trends," is that the
6 statement you're referring to?

7 Q. Correct.

8 A. Okay.

9 Q. Do you agree or disagree with that?

10 A. I wouldn't have a basis to agree or
11 disagree with that specific to this situation,
12 having not -- I'm trusting our hydrology staff
13 knows what's occurring out there more so than
14 myself. That's why we have them.

15 So I think my testimony, in general,
16 was intended to be generalized that water will
17 move from high pressure to low pressure in between
18 those zones, depending on the hydrology of that
19 area. So I can't say definitively if Mr. McVay
20 says the water's going one direction. He has a
21 lot more reason to state that than I do.

22 THE HEARING OFFICER: Okay. Let me revisit
23 this objection because I misunderstood the nature
24 of this statement in the testimony.

25 As I understand this statement, it has

1 to do with water-level trends, not necessarily the
2 direction of groundwater flow and vertical flow.
3 And so consequently, this is beyond the scope.
4 And I'll revisit it and sustain the objection.

5 And then Mr. Whitney hasn't testified
6 about this and doesn't know anything about the
7 data that was used to develop it. So sustained.
8 I don't want any more questions on this,
9 Mr. Smith.

10 Q. (BY MR. ALAN SMITH): Did you not
11 testify on direct just a few minutes ago that
12 there were no declines in water levels in the
13 north Eagle area?

14 A. I believe my answer was I wasn't aware
15 of any specific declines.

16 MR. ALAN SMITH: I guess I misunderstood
17 your answer.

18 No further questions.

19 THE HEARING OFFICER: Okay.

20 Mr. Edwards?

21 MR. EDWARDS: No questions.

22 THE HEARING OFFICER: Redirect,
23 Mr. Fereday?

24 MR. FEREDAY: No questions.

25 THE HEARING OFFICER: Okay. Thank you,

1 Mr. Whitney.

2 Okay. Before -- let's see. We have a
3 witness that needs to come back up. Let's see.

4 Who is that? Mr --

5 MR. THORNTON: Dr. Wood.

6 THE HEARING OFFICER: Dr. Wood.

7 As you're coming up, Dr. Wood, maybe
8 it's time for a break.

9 MR. THORNTON: Yeah.

10 THE HEARING OFFICER: So I think it's an
11 appropriate time for a break. But I do want to
12 just address one subject here that has cropped up
13 and seems to continue to a little bit, and that
14 has to do with the discussion we had -- and I
15 believe it was the first day -- related to the --
16 whether certain expert witnesses identified by the
17 protestants could testify at this hearing or not.

18 And we had a discussion about whether
19 those witnesses were disclosed as experts and what
20 the record reflected regarding those statements
21 and attempted depositions.

22 And I ruled that they could not
23 testify as expert witnesses because the
24 protestants expressly stated that they would not
25 be called as experts, and consequently they were

1 not deposed.

2 At the same time, as I recall -- and
3 again, my memory is not always -- is not always
4 perfect -- I also stated, Mr. Thornton and
5 Mr. Smith, that if I knew what the subject matter
6 was that those witnesses were to testify about,
7 they may still be able to testify, given the
8 nature of their testimony. I didn't know what it
9 was. And that -- and that never came in to me.

10 Now, there were some allegations made
11 and some references made about the subject matter
12 that they might testify about.

13 So I guess what I want to clear up
14 with you is I did not say that those witnesses
15 could not testify. What I said was that they
16 could not testify as expert witnesses. And I -- I
17 think there may have been some misunderstanding on
18 the part of the protestants that I had somehow
19 said those witnesses cannot be witnesses at this
20 hearing.

21 And so that was used as an argument
22 that Mr. Whitney should not be called. And I
23 guess I just turn it around, so that there's no
24 misunderstanding on your part, what the nature of
25 my exclusion was. It was solely related to

1 whether they would be expert witnesses or not.
2 But the nature of their testimony, I didn't -- I
3 didn't know what it was. So anyway, I just wanted
4 to lay that out.

5 MR. ALAN SMITH: Well, let me ask you this:
6 Can we call them as witnesses on rebuttal as
7 expert witnesses as they've done with Dr. Wood?

8 THE HEARING OFFICER: If it's within the
9 scope of what -- of the questions that have been
10 asked, and I'll allow some latitude in that area.
11 In fact, my guess is that the nature of the
12 testimony is related to a particular concern that
13 I have.

14 But anyway, let's take a break and
15 we'll come back.

16 Yes, Mr. Fereday.

17 MR. FEREDAY: Mr. Spackman, just before we
18 do break, I just wanted to reiterate -- and we've
19 looked at our file -- what the history is for the
20 calling of Mr. Whitney.

21 He was not on our original expert
22 disclosure. But he was disclosed in discovery as
23 a potential witness for us as an -- on these
24 subjects. And we did obtain a subpoena for him,
25 and he was listed in our pre-hearing witness list.

1 We -- when we realized that we may
2 need him, we did disclose him. There was ample
3 time even to depose him if the protestants had
4 wished to do that.

5 We had no opportunity to depose their
6 experts who they haven't called because they
7 withdrew them, affirmatively withdrew them as
8 expert witnesses, therefore they were not deposed.
9 And we would not -- we would object to them being
10 called in any expert capacity.

11 THE HEARING OFFICER: Okay. And
12 Mr. Whitney was properly called. I don't think
13 there's a problem with that from my perspective.
14 It's just that I wanted to address the questions
15 that were raised about the fact that there was
16 unfairness in what was happening.

17 And I think, again, I properly
18 excluded them as expert witnesses because of that
19 nondisclosure, but that doesn't mean that they
20 were precluded from being called as witnesses at
21 the -- during the hearing. I needed to know what
22 the subject matter was so that I could determine
23 whether that was a subject requiring expertise or
24 not. And that was never done. And I thought that
25 was the nature of the discussion, as I recall it,

1 the first day.

2 Mr. Thornton?

3 MR. THORNTON: Yeah, I just -- I don't
4 believe that you have heard -- or NACGUA identify
5 that we think any of that was unfair. I don't
6 think we've ever brought that up since the time we
7 were trying to have them as expert witnesses, nor
8 beyond with Paul Drury. They were objected to
9 when we were trying to come up with the
10 information that they had done for us in terms of
11 water rights that were in the queue ahead of M3.
12 And so I remember that.

13 But we ourselves haven't brought that
14 up. So hopefully you were understanding that. I
15 just want to make sure it wasn't your
16 re-identification of what you stated earlier. We,
17 NACGUA, have not disagreed with that. We were
18 disappointed obviously, but you haven't heard us
19 disagree with that since then.

20 THE HEARING OFFICER: Well, again, I recall
21 specifically saying if they have knowledge within
22 their personal understanding or --

23 MR. THORNTON: Right.

24 THE HEARING OFFICER: -- that they are not
25 testifying as expert witnesses --

1 MR. THORNTON: Right.

2 THE HEARING OFFICER: -- then they can
3 appear as witnesses.

4 MR. THORNTON: Right.

5 THE HEARING OFFICER: Okay.

6 MR. ALAN SMITH: I do recall that M3 in
7 their discovery responses did list Rob Whitney as
8 a witness. They did not list him on their expert
9 witness list as a witness. He is called as an
10 expert here on rebuttal. Therefore, I think we
11 should be able to call our experts on rebuttal.

12 THE HEARING OFFICER: Well, let's see where
13 that goes. And again, I wanted to clear the air
14 so that the protestants understood at least what I
15 thought was the basis of that exclusion and
16 limitations.

17 Okay. Let's break for, what, 15
18 minutes. Let's come back about ten to the hour.
19 So that would be ten to 3:00.

20 (Recess.)

21 THE HEARING OFFICER: All right. We're
22 recording again.

23 Dr. Wood has resumed the witness
24 chair.

25 Mr. Thornton.

1 MR. THORNTON: Okay.

2
3 SPENCER WOOD,
4 having been previously called as a rebuttal
5 witness by M3 Eagle LLC and previously sworn,
6 testified as follows:

7
8 CROSS-EXAMINATION
9 BY MR. THORNTON:

10 Q. Dr. Wood, if you could turn to -- I
11 don't think it was -- it's not an exhibit, but it
12 was brought up by M3. I think you might have that
13 in front of your hands.

14 A. I have it.

15 Q. And if you could turn to page 2 of
16 that document where I believe this is testimony by
17 Dr. Ralston. And I believe you are -- are you not
18 familiar with Dr. Dale Ralston? You've worked
19 with him or you know of Dr. Dale Ralston?

20 A. Oh, certainly, yeah. I know Dale
21 Ralston, yes.

22 Q. Okay. Okay. And then on page 2 in
23 the yellow highlights, it states -- again, I
24 believe this is Dr. Ralston speaking -- "My
25 concern about the model is I believe that the

1 hydrogeologic conceptual model is flawed in the
2 fact that I don't believe that there's adequate
3 information that indicates that it is laterally
4 continuous on over into the Payette River area."

5 And just because we've had -- I don't
6 know, it's been maybe an hour and a half or even
7 two hours, could you identify why for me -- I know
8 you gave that in your testimony, but to help me
9 better understand what you said again, why you
10 disagreed with that statement of Dr. Ralston?

11 A. Well, yeah, I disagree with the
12 statement that the hydrogeologic conceptual model
13 is flawed because of continuity -- oh, I see --
14 adequate information over to the Payette River.

15 Well, we felt there was adequate
16 information back in 1994 and during the Treasure
17 Valley Hydrologic Project that it was continuous
18 over there.

19 The basis for showing it is very -- is
20 simple to challenge. It's the thick mudstone
21 sequence overlain by sands. And we have seen that
22 in many places. I would say we've seen it
23 throughout the Western Snake River Plain, and we
24 recognize that as a major geologic feature, and
25 have published on it. And that -- that geologic

1 concept indicates continuity over to the Payette
2 River area.

3 Q. And could you point to -- as you said
4 you've published, could you point me to or draw
5 upon --

6 A. Certainly, yeah.

7 Q. -- what document that is?

8 A. Yeah, Exhibit 19G, which is Wood 1994,
9 a publication in the American Association of
10 Petroleum Geologists Bulletin. And also in
11 Exhibit 19D, which is a publication by the Idaho
12 Geological Survey in 2002 on the Western Snake
13 River Plain.

14 Q. And could you pull out specifically
15 where they identify that?

16 A. Identify what, sir?

17 Q. Where it is cont- --

18 A. Oh, continuous over to the Payette?

19 Q. Yeah. Do you have that document in
20 front of you?

21 A. I have it in my briefcase over there.

22 Q. Okay. That would be good.

23 A. Let me run over there.

24 MR. FEREDAY: I think they're in the
25 binders there.

1 THE WITNESS: Yeah, okay. They're in
2 the -- so I'm looking for G and D. We can start
3 with G. Okay. If we go to Exhibit 19G, and it's
4 figure 2 of that paper.

5 Q. (BY MR. THORNTON): Okay.

6 A. On figure 2 is shown the wells in
7 which there's a very clear identification of the
8 top of the mudstone, base of the major sand
9 sequence. And let's see. At that time, which is
10 a good many years ago, the wells available, we can
11 start with -- what is it? -- HL1 where we see it
12 at an elevation of 1433 feet above sea level.

13 And then HLL1 also shown at 1433 above
14 sea level. And then over to the Ted Daws well at
15 1653 feet above sea level. And then I -- I only
16 show it there, although we also see it in the
17 Virgil Johnson wells and the Betty Carpenter well,
18 and another one across the river, I guess not
19 shown, which is the Bolus well over by Weiser.

20 That's where we identified it back in
21 1994 as a common feature, and then all the way
22 down to the Deer Flat well and so on, which is
23 down south of Nampa.

24 Now, do you want to go to the next
25 one --

1 Q. Yes.

2 A. -- which is Exhibit 19D?

3 Well, there's quite a lengthy
4 discussion as to why we get a sand aquifer over
5 the mudstones on -- yeah, starting on page 90 and
6 continuing on through -- well, including figure 16
7 of that paper where the concept is illustrated
8 with -- along with the well logs showing sandstone
9 over the -- over the pro delta muds and the
10 mudstone.

11 And, you know, I suppose just to
12 indicate that it was -- it's not at all legible,
13 but on the mudstone map of the Western Snake River
14 Plain, what we call top of the mudstone, that's
15 Exhibit 19F, there it very clearly showed it --
16 and this was the more recent compilation -- as
17 going over into the Ted Daws well over in the
18 Payette River drainage, and the Virgil Johnson
19 well. And, you know, actually projecting contours
20 out under Leatha over in the Payette River Valley.
21 Although we didn't have good information, it was
22 certainly or best geological inference at the
23 time, and still is, I should say.

24 Let me say it's also backed up -- Lee
25 Liberty and I from Boise State went and looked at

1 proprietary seismic data of Chevron. Very
2 expensive to buy, but we were allowed to look at
3 it. And we see a very thick sand section in the
4 Emmett all the way out to Leatha, going down
5 perhaps 2,000 feet beneath Leatha before it drains
6 into the mudstone.

7 Q. And is that information --

8 A. But every time I look at new data, we
9 see essentially that same concept.

10 Q. So the proprietary data that you're
11 identifying, is that in one of these documents?

12 A. No, no. Nobody's purchased it yet.
13 It's -- it's available for purchase at \$2,000 a
14 mile. It's over in the Payette River Valley, and
15 on -- it's an extensive seismic survey that had
16 been done by oil companies, but it's only for
17 sale, and it's also not -- not for release to the
18 public as such.

19 Q. Okay.

20 A. Only for-your-eyes-only kind of work.

21 Q. Okay.

22 A. And it's difficult to acquire.

23 Q. Okay. So if you could turn to
24 Exhibit 45. And this is the document from Hydro
25 Logic in response to IDWR's report. And if you

1 could turn to page -- it's not a page. It's about
2 halfway through. It's called figure 3. So it's
3 approximately not quite halfway through the
4 Exhibit 45 to figure 3, entitled "Deep well
5 locations and transect lines for hydrogeologic
6 cross-sections."

7 A. About what page is that?

8 Q. Well, unfortunately, it's not a page.
9 It's past all the page numbers, so you go all the
10 way past --

11 A. It's at the very end, are you saying?

12 Q. It's about halfway through the
13 document.

14 A. Oh, I see where it would -- it's with
15 the figures, then?

16 Q. Yeah.

17 A. Okay. Now, which --

18 Q. Figure 3.

19 A. Figure 3. All right. Figure 3, yeah.

20 It's a map; am I correct?

21 Q. Yeah, it is.

22 A. Yeah. Okay. Good. Yeah.

23 Q. And it's showing some of the locations
24 of some of the hydrogeologic cross-sections, does
25 it not?

1 A. Well, it shows a geologic
2 cross-section extending from the Swift well
3 through the M3 well to the Star wells out to the
4 El Paso Natural Gas, Webber State well, and on
5 over to the Ted Daws well, that's correct.

6 Q. Correct. So based on the two
7 documents -- actually, three documents that you
8 earlier identified -- 19D, 19G, and 19F -- is
9 there any additional information in those
10 documents that could help inform the extrapolation
11 of that cross-section on figure 3, Exhibit 45,
12 between the Ted Daws well and the El Paso Natural
13 Gas well?

14 A. There is additional information out
15 there. There's a Sundance Webber State well,
16 which lies southwest of that El Paso Gas well, and
17 there's wells in the -- at the Simplot facility
18 west of Caldwell, which was used in that original
19 1994 paper.

20 And there are also wells -- the Betty
21 Carpenter well out by the city of -- boy, it's
22 escaping me now -- Fruitland, out by the city of
23 Fruitland, that's right, off to the west. And
24 then over to Weiser, the Bolus well, which is
25 across the river. It's not shown on this map, but

1 these are other deep exploration wells that show
2 exactly that same geophysical signature.

3 Q. Okay. So do you have any more wells
4 that could be on figure 3 on this area represented
5 on figure 3 that would help better inform the
6 hydrogeologic cross-sections in that area as an
7 example between El Paso Natural Gas or the Ted
8 Daws well?

9 A. Well, no, to my knowledge, there's
10 been no other geophysical logs. There is a well
11 near, what, west of Emmett, and I can't tell you
12 exactly the name or the location where they had
13 nothing but sand for 400 feet beneath the Payette
14 River Valley. And that confirms what we've
15 seen --

16 Q. Okay.

17 A. -- in other data.

18 Q. And is it customary to -- in
19 hydrogeology to extrapolate over data points
20 anywhere from 12 miles to 23 miles and assume that
21 it's similar?

22 A. Well, you only use what data you have
23 that's reliable. And if the extrapolation looks
24 sound, yeah, I would say it's customary.

25 Certainly you would like to have wells spaced

1 every 4 or 5 miles, but you're talking about a
2 half million dollars per, or more.

3 Q. Sure.

4 A. And, you know, people haven't been
5 looking for natural gas that extensively in that
6 area in between, so we take what we can get.

7 Q. Okay. So does that not add
8 uncertainty when you're extrapolating over
9 12 miles to 23 miles?

10 A. Not in my view, simply because we see
11 it everywhere that we have available data. And
12 honestly, I've looked -- you know, if we've had
13 other indications of any kind, we would certainly
14 bring that forth.

15 Q. Okay. So what I believe I hear you
16 saying is do you have any additional information
17 to better inform this hydrogeologic cross-section
18 on figure 3?

19 A. Well, figure 3, and then I would also
20 back up and look at the top of the mudstone map.
21 And unfortunately, the copies that have been
22 reproduced are not good. But that was done back
23 in -- I don't know, '90 -- in the '90s, I believe.
24 About '97, something like that. If you had a good
25 map, you'd see that at that time, using the best

1 available data, which hasn't improved so far as
2 data availability, that's exactly the way we drew
3 it back then as extending over into the Payette
4 River Valley.

5 Q. And on Exhibit 45, if you would go to
6 figure 2, which is titled "Subsurface seismic
7 reflection profiles" from Wood.

8 A. Okay. I see that. I have it in front
9 of me.

10 Q. Are these profiles, are they
11 represented on figure 3 as the Chevron line -- or
12 perhaps I'm incorrect -- that is, on a north-south
13 direction orientation on figure 3?

14 A. That's right, they are shown on that
15 map, which is figure 3, yes, that's correct. It's
16 a north-south line. It's called Chevron line
17 IB-29 and Chevron line IB-25 --

18 Q. Okay.

19 A. -- that goes from a little south of --
20 south of Middleton on up to the Josephson siding.

21 Q. Okay. And does that Chevron line
22 extend into the Payette Basin topographically,
23 that --

24 A. No, that particular line does not. It
25 doesn't extend about, oh, a third of a mile north

1 of the last shot point that's available to us.

2 Because at the time Department of Water Resources
3 purchased that data, we only purchased it up to
4 that -- the north end at Josephson siding.

5 Q. Okay.

6 A. But it does extend another -- I don't
7 know -- third of a mile farther north.

8 Q. Okay. And on this figure 2, the
9 seismic reflections, can you describe the top
10 thousand feet or the belowground level a thousand
11 feet what that is showing us, from surface down
12 approximately a thousand feet?

13 A. Well, let me -- yeah, the first
14 thousand feet, roughly, is -- they have no data
15 shown on this line, because when Chevron processes
16 this -- well, when they originally lay it out and
17 they originally process it, they're not interested
18 in the first thousand feet. And it's not very
19 good data.

20 We did reprocess some of it at the
21 Colorado School of Mines. But that's the line
22 that extends from Hulls Gulch -- got Hulls Gulch,
23 but Stewart Gulch across the plain over to
24 Caldwell. And we didn't get much out of it. We
25 still didn't get very much data in the upper

1 thousand feet. So it's not a worthwhile process.

2 Q. So does figure 2 help describe the
3 Pierce Gulch Sand Aquifer's characteristics?

4 A. Yes, it does. I'll explain why.

5 On figure 2 if you'll notice on the
6 upper section, I've shown and labeled there the
7 approximate base of the Pierce Gulch Sand, and
8 that's --

9 Q. If you could hold on. I've got to
10 find that.

11 And that's on figure 2? Excuse me for
12 interrupting.

13 A. That's on figure 2, right.

14 Q. And you've labeled that?

15 A. That's been labeled on that upper
16 diagram.

17 Q. Oh, okay. I do see it now. Thank
18 you.

19 A. Do you see that?

20 Q. Yeah.

21 A. Okay. And it points to that line.

22 That's a very strong reflector that starts a
23 little below 2,000 feet and extends to the right
24 of that section to about a level of about 1,800
25 foot -- well, about 2,000.

1 And that is a strong reflector, which
2 we would indicate as being a sand unit. And then
3 below that reflectors are rather weak, and that's
4 very characteristic of the mudstone unit. We
5 don't get seismic reflectors from the mudstone
6 unit, unless they have sands within them.

7 And then that's been extended around
8 the basin to the various wells, such as the Webber
9 State No. 1 and the Sundance well and the
10 Richardsons wells, following that particular line.

11 So it does -- it projects in this case
12 up to the south to the point that we don't see it
13 anymore. But that's its characteristic when it
14 extends deeper down, as it does into that basin
15 north of Middleton.

16 Q. So -- and I -- maybe I'm not seeing
17 what you're trying to describe.

18 A. Well, look at the line that is -- when
19 I have that arrow that points to the approximate
20 base of the Pierce Gulch Sand, there's a black
21 line, then, that extends to the right of that
22 diagram, which would be to the north.

23 Q. And I do see that.

24 A. And then it projects to the 2,000-foot
25 depth axis.

1 Q. Uh-huh.

2 A. That shows the configuration, the
3 location of the top of the mudstone and the base
4 of the Pierce Gulch Sand, that line.

5 Q. Is approximately a thousand feet?

6 A. It's -- it's approximate -- well,
7 under Middleton it's approximately a thousand,
8 maybe 1200 feet deep, something like that.

9 Q. Okay. And that's going to the north?

10 A. That's going to the north, that's
11 right.

12 Q. Could you help me understand why it's
13 getting deeper going to the north when I believe
14 your publications talk about the basin dipping to
15 the southwest?

16 A. No, there it does not, because there's
17 a structural high that runs out in the middle of
18 the basin.

19 Q. Could you describe it? I'm not sure
20 what --

21 A. And if you want to get a feeling for
22 that, you know, out by Meridian, and that's why
23 the deep oil wells were drilled out there is
24 because the oil companies felt that structural
25 high might be an oil or gas trap.

1 Q. And if I could --

2 A. And if you want to flip back -- let's
3 see --

4 Q. And I'd like that. I'm just not sure
5 what a "structural high" is. If you could help
6 me.

7 A. Oh, sorry. Yeah. Good point.

8 THE HEARING OFFICER: Okay. In the
9 exchange, would the two of you -- one of you ask a
10 question and the other wait, because you're
11 crossing over.

12 Q. (BY MR. THORNTON): Okay.

13 A. Okay. Good. You would like to know
14 what a structural high is.

15 It's when the rocks are arched upward.
16 Okay? They're arched upward out in the middle of
17 the basin, and then they sink as we go north
18 through Middleton, Josephson siding, and
19 presumably on into the Payette River Valley, and
20 then they rise up to a shallower elevation as we
21 go north of the Payette River Valley.

22 So there's actually -- it's not just
23 one, great, big basin, the Snake River Plain, it's
24 got a configuration where there's a rise and an
25 up-arch in the middle of the basin, and then it

1 sinks down to another basin off to the north.

2 Q. And "off to the north" meaning the
3 Payette --

4 A. Meaning off to the Payette Valley.

5 Q. -- the modern Payette Valley?

6 A. Yeah. Yeah.

7 Q. And you have some evidence that we'll
8 see on that?

9 A. Let me -- evidence for what, sir?

10 Q. For that being deeper and the
11 structural high going up and then dropping back
12 down towards the --

13 A. Oh, yeah, that's really all laid out
14 in our 1981 report that was published by the
15 Department of Water Resources on geothermal -- the
16 geothermal evaluation of the Nampa/Caldwell area,
17 but it really covers the entire western plain.
18 And that structural -- what we say arching and so
19 on in the center of the basin, and then the deeper
20 basin off to the north is laid out in that --

21 Q. And is that --

22 A. -- publication.

23 Q. -- presented as an exhibit -- do you
24 know? -- that we could look at?

25 A. I don't know. I'm not sure if it was.

1 I'm not -- I don't know. I can flip through here
 2 and see if I see it, but it's a --
 3 Q. And if I could ask, that structural
 4 high, is that --
 5 A. It certainly is referenced -- it's
 6 referenced in all of my subsequent papers that are
 7 exhibits here.
 8 Q. And is that structural high, is that
 9 part of basement rock, then, the Miocene, the --
 10 A. That's right. We see it in the
 11 basaltic -- we see it in the Miocene basalt where
 12 it's faulted, and then we see some of the
 13 sediments are arched over it and are sagged down
 14 into the basin to the north. And then some of the
 15 sediments sag less -- okay? -- as the basin fills
 16 up.
 17 Q. Okay.
 18 A. Some of them actually lap up against
 19 the old basalt hills that lay out in the middle of
 20 the basin, and also lay on the north side of the
 21 basin.
 22 Q. And then are you aware of any of that
 23 discussion in any of Hydro Logic's information?
 24 A. You know, I think if you want my
 25 personal opinion, I think we're getting very far

1 afield. If you want to sit down, I would say, and
 2 read all of those papers that I have written in
 3 reference, and you'll get a clear idea of what the
 4 geology of the subsurface is. But it takes
 5 awhile, you know, it takes -- it's going to take
 6 you eight nights, late nights to read all that
 7 stuff. I've been working on it for 30 years,
 8 John.
 9 Q. While I believe that probably is very
 10 useful information, I guess, Dr. Ralston in his
 11 testimony identified which articles that he read
 12 and he did not have access or apparent knowledge
 13 of that. So I guess --
 14 A. Well, in scientific information, you
 15 do go -- you start with the earliest publications
 16 and read through to the very latest, and realize
 17 the very latest often -- you can't just publish
 18 everything in one report. Yeah. It's got to
 19 have -- if you really want to be knowledgeable in
 20 the subject, you have to go all the way back.
 21 Q. Okay.
 22 A. And I don't think Dr. Ralston had time
 23 to do that. You simply don't, under most
 24 circumstances, unless you want to become fully
 25 engaged in the geologic and hydrogeologic

1 investigation.
 2 Q. I would contend perhaps M3 hasn't
 3 presented that in theirs. But if we can turn to
 4 Exhibit 45 again on figure 4. And then when you
 5 have a chance to get there, if you could --
 6 A. Yeah, I have it now. It's the
 7 hydrogeologic cross-section?
 8 Q. Yeah.
 9 A. Yeah.
 10 Q. And those hydrogeologic cross-sections
 11 are -- the wells that have that information are,
 12 again, identified on figure 3 that we've talked
 13 about.
 14 Could you describe to me going from
 15 the right, I guess the southeast at the United
 16 Water Swift well going through the series of M3
 17 Eagle test well No. 1 and then eventually to the
 18 El Paso well and then the Oroco well, could you
 19 describe the lines that were drawn identifying the
 20 Pierce Gulch Sand Aquifer. And the main question
 21 I have is going from the El Paso Natural Gas well,
 22 why is that going up in gradient in elevation
 23 closer to the surface to the Oroco Oil and Gas
 24 well and Ted Daws well?
 25 A. I see what you mean, yeah. Well,

1 within that -- probably within that 18-mile
 2 stretch it likely does go down and then rise back
 3 up again. We don't -- I would have to -- let's
 4 see. I was trying to think where Webber State
 5 sits with respect to the structural high.
 6 Well, I guess to understand, my best
 7 understanding of that we would have to have that
 8 mudstone map more clearly displayed, because there
 9 there are actually structural contours, and by
 10 that I mean the actual surface of the top of the
 11 mudstone is shown on that map. And it does extend
 12 there from the Webber State all the way out to --
 13 to the Ted Daws/Virgil Johnson wells.
 14 And I'm going to go back to that
 15 exhibit, because I'd have to refresh myself as to
 16 what I was thinking when that map was -- oh, here
 17 it is right here. Okay.
 18 This is Exhibit 19F. And -- well, I
 19 guess the contours are there. And at the Webber
 20 State well we would show the top of the mudstone
 21 to be at about 1200 feet above sea level and
 22 extrapolating, yeah, over to the Ted Daws well, we
 23 don't -- I don't show many contours, but I do show
 24 that in fact it goes from 1500 feet above sea
 25 level -- it shows here to be rising from 1500 feet

1 to 1600 feet, and finally at about 1650 or
2 1700 feet above sea level at the Ted Daws well.

3 Q. And do you have some geological maybe
4 postulate for why there is that increase going
5 upslope? What I believe I just heard you testify,
6 that as it goes north it actually dips down again.

7 A. Yeah, it -- you know, the -- that
8 structural high that exists out and makes the
9 basin -- let me try to see if I could see that
10 basin. Well, it's tough to see here. It's very
11 hard to read.

12 No, I don't have a good reason. We're
13 only talking about a few hundred feet, and the
14 basin has slowly sagged and settled without
15 faulting, particularly those younger -- as we look
16 to the younger sediments, you'll just see broad
17 sagging of much of the basin, that doesn't
18 necessarily realize there's a structural high in
19 the deeper sediments. I couldn't -- not without
20 sitting down for an evening and trying to draw out
21 an exact answer to your question.

22 Q. Okay.

23 A. I'm sure there's a good one.

24 Q. So again on figure 4 in Exhibit 45,
25 the two red lines that denote the upper and lower

1 extent of the Pierce Gulch Sand Aquifer, were
2 those based largely on the resistivity logs that
3 are displayed for each one of those wells?

4 A. Yeah, those are based on resistivity
5 logs of those wells, that's correct.

6 Q. Okay. And I cannot remember if you
7 were here when Dr. Ralston was here or if you have
8 read any of the testimony similar to what was
9 provided by M3 earlier today where he was -- are
10 you aware he was asked, would he draw those lines
11 the same place, and his answer was, "No, I would
12 not necessarily draw those the same place."

13 Were you a part of that hearing?

14 A. I think -- my understanding is he
15 would not necessarily have drawn them in the same
16 place. Well, you can fiddle a little bit with
17 those lines, but not much. In other words, the
18 base of the -- the top of what I call the pro
19 delta mudstone in that figure is very clear on all
20 of them. I think he would be stuck with that.

21 Q. Okay.

22 A. If you wanted to draw the line on the
23 top of the Pierce Gulch Sand Aquifer, you know,
24 you could fiddle 50 feet here and there with that.
25 And, you know, I did the very best job I could to

1 see where there's a slight diminishment of high
2 resistivity, which is produced by the influx of
3 some clay and silt into the depositional thing.
4 But I mean -- yeah, I'm not sure why he would have
5 said that. I mean it's not a big deal.

6 Q. Is there some --

7 A. You can fiddle 20, 30, 40 feet here
8 and there. He can draw the lines as he likes.
9 But they're very precise. I don't think that the
10 lowermost orange line, that he can move that
11 10 feet.

12 Q. As I understand, then, the formation
13 of the pro delta mudstone, is that -- was that
14 likely placed when we had ancestral Lake Idaho, a
15 lot of materials came and settled out? Is that
16 largely what that is from?

17 A. Well, the pro delta mudstone means the
18 sand is coming. Okay? So what you have is
19 nothing but -- but a very thick sequence of
20 mudstone in which no sand is entering the basin.

21 Q. Okay.

22 A. Then as soon as the deltas start out,
23 they launch out in front of them a sort of very
24 low gradient dipping, maybe just a few degrees of
25 material that's settling out of suspension that's

1 a little more silty and contains fine sand.

2 That's the character of the pro delta mudstone.

3 And then you get the sand. Of course,
4 we're talking about things in time. But time is
5 looking upward through the geological section. So
6 first they see the pro delta muds, then the sand
7 is coming.

8 Q. Okay.

9 A. And then it overwhelms and deposits
10 throughout the basin.

11 Q. And the Pierce Gulch Sand was -- is it
12 your testimony that that was likely placed as the
13 lake was receding?

14 A. As the lake was receding, yeah.

15 Q. Okay. And then on top of the Pierce
16 Gulch there is the mudstone-dominated unit.

17 Would you characterize what the
18 mudstone-dominated unit is.

19 A. Well, the Pierce Gulch Sand seems to
20 be a large sand unit that extends out across the
21 plain. But there were fluctuations in lake level,
22 which apparently diminished the supply of sand.
23 And so you get a strong pulse of sand, and then
24 more silt coming in to have a lesser -- how would
25 I say? -- a lesser sand rich formation.

1 Nevertheless, even that
2 mudstone-dominated unit has a good many sands in
3 it, and there's some very productive aquifers
4 within the so-called mudstone-dominated unit
5 that's above it.

6 Q. Okay. If you go back to figure 3, I
7 believe in your earlier testimony, now several
8 weeks ago, did you identify that the Pierce Gulch
9 Sand Aquifer wasn't just from the Pierce Gulch
10 outside of Boise, but it was a geologic feature
11 along the margins of the ancestral lake? Is that
12 correct?

13 A. Well, it's not just along the margins.
14 It extends out in the subsurface out under the
15 plain.

16 Q. Okay.

17 A. But it's a tradition in geology when
18 you define a geologic unit to find a place where
19 it outcrops rather well and can be observed, and
20 you give it the name of that geographic location,
21 which is Pierce Gulch, yeah.

22 Q. Okay. And if you could turn to
23 Exhibit -- I have it as 68, in fact it may be 67,
24 and I apologize, it's titled "The hydrogeologic
25 framework of the Boise Valley of southwest Idaho."

1 I'm thinking -- I believe it's 68, possibly 67.

2 A. Well, I've got a gap here. No, over
3 here. 68? I don't have that. It must be
4 another --

5 THE HEARING OFFICER: These documents --

6 THE WITNESS: -- exhibit.

7 Q. (BY MR. THORNTON): This is the
8 document.

9 A. Well, I know that, certainly, yeah.
10 But I don't have it as an exhibit here.

11 Q. Okay. That was one that I believe
12 IDWR actually submitted, so it may not be in this
13 group here.

14 THE HEARING OFFICER: This is marked as
15 Applicant's Exhibit 68. I'll deliver this to
16 Dr. Wood.

17 MR. THORNTON: Okay.

18 THE WITNESS: Okay. All right.

19 Q. (BY MR. THORNTON): So if you go to
20 page 4, and there's a figure 3 on page 4. And
21 then I believe kind of on the right-hand side
22 going from southeast to northwest, there's some
23 horizontal -- short, horizontal lines with an
24 arrow down the middle of the page pointing, saying
25 "The boundary of sediment sequence modified from

1 Whitehead."

2 A. Yeah. I see that, yes.

3 Q. I had written down from your earlier
4 testimony, is that kind of margin a general
5 description of, say, the Pierce Gulch Sand?

6 A. No, it -- I think this is a very
7 loosely drawn map to show where the granite
8 outcrops, and then it subsequently is buried by
9 sediments. And there should be perhaps the Chalk
10 Hills formation beneath that, and also the
11 Terteling Springs sand or mudstone facies that
12 extends off to the west of that line.

13 Q. Okay.

14 A. But that really is the edge of the
15 granite outcrop.

16 Q. Okay. Thank you for that
17 clarification.

18 If you were to draw an approximate
19 boundary of the Pierce Gulch Sand that was, one,
20 on the lake margin as well as you said extending
21 out into the lake, where would that -- where would
22 that go? Maybe if you would look at figure 1 on
23 page 2, where would that -- the origination of the
24 Pierce Gulch Sand be, this kind of depicting Lake
25 Idaho? Where would that be located?

1 A. Are you asking me where would the
2 northwestern edge of the Pierce Gulch Sand be
3 according to this diagram?

4 Q. Yeah. Yes. If you could --

5 A. Okay.

6 Q. -- in a general sense give us, where
7 would the source of that be prior to the lake
8 dropping?

9 A. The source of -- where would the
10 source of the sand be? Is that what you're
11 asking.

12 Q. Yeah. And let me try to refine that
13 question. The source meaning the location -- as I
14 understand your testimony and the papers read, is
15 it not that that sand came down both in the
16 alluvial fashion from rivers and small streams,
17 and basically with the lake there it kind of -- it
18 got deposited on the lake margin, some obviously
19 alluvial into the lake, but it was kind of -- I
20 think I remember you saying it was kind of around
21 the lake margins, that later as the lake dropped
22 it got washed into the lake, protruded out; is
23 that correct?

24 A. Well, there's two ways it -- and these
25 are really hypothetical. One is that the sand is

1 caused by erosion of some of the higher lake
2 deposits around the margin that were sand that was
3 trapped there because the lake was rising. In
4 other words, you can't transport sand out into the
5 middle of quiet water.

6 Q. Okay.

7 A. And then as the lake fell, those
8 eroded. But we also had continued delivery of
9 sand from the -- from whatever the earlier
10 drainage systems were, which, of course, are now
11 the Boise and the Payette Rivers and the creeks,
12 but there's an enormous amount of sand even today
13 that's coming down both of those rivers and, of
14 course, filling our irrigation reservoirs. Yeah.

15 Q. So in the Emmett area, if you go back
16 to -- let me find it here -- right in here, back
17 it Exhibit 45, figure 3.

18 Did you have a chance to get there?

19 A. Yeah, I have that map in front of me
20 now.

21 Q. Okay. And that, does it not, show at
22 least the Boise River, not up to Barber Dam or --
23 but -- and then also the Payette River coming out
24 of the -- just above Emmett out of the canyons
25 there?

1 A. Yeah. That's shown on this map, yeah.

2 Q. So is the Pierce Gulch Sand, is it not
3 true that the Pierce Gulch Sand, a lot of it came
4 from the Boise River system as well as the Payette
5 River system?

6 A. That's my belief, yes.

7 Q. Okay. And is there any information to
8 suggest that the water flow to the Pierce Gulch
9 Sand goes from Boise to the Payette when it is
10 very likely these two river systems were producing
11 large amounts of alluvial material to a lake that
12 was at the same elevation, is there anything
13 really to suggest that water, based on that
14 layering of sediment, should go from the Boise
15 River to the Leatha area, the hydrologic gradient?
16 Not the sand, the hydrologic gradient.

17 A. You mean is there at the present time
18 a hydrologic gradient that drives water from the
19 Boise River Valley to the Payette River? Is that
20 the question?

21 Q. That would be one, yes.

22 A. Simply by looking at the -- simply by
23 looking at the elevation of the two
24 recharge/discharge areas, one would conclude that
25 water does move from the Boise River Valley to the

1 Payette River Valley via those sand aquifers.

2 Q. And what is that based on?

3 A. That's simply based on elevation of
4 the -- of the Boise River Valley and the Payette
5 River Valley.

6 Q. And that is based on the modern-day
7 elevation of those valleys; is that correct?

8 A. That's correct, yes.

9 Q. When the layer was deposited in Pierce
10 Gulch Sand, did it not follow the receding lake
11 line?

12 A. How do I explain that? Did the
13 layer -- well, the water edge -- well, what are
14 you saying? The water edge was, of course,
15 migrating to the west or northwest as the basin
16 filled in. Maybe you should -- if you could
17 rephrase your question or tell me what you're
18 driving at here.

19 Q. I'm driving at --

20 THE HEARING OFFICER: I want to interrupt
21 for just for a minute, Mr. Thornton.

22 MR. THORNTON: Okay.

23 THE HEARING OFFICER: I want to go back and
24 think about the scope of the examination that
25 Mr. Fereday engaged in, and I guess I want to ask

1 the question: What is the relationship between
2 the subjects that we are exploring now and the
3 questions that Mr. Fereday answered and the
4 answers -- or asked, and the answers that Dr. Wood
5 gave? I'm lost in the examination now.

6 MR. THORNTON: Okay.

7 THE HEARING OFFICER: I don't know where
8 we're going with it, but we're spending a lot of
9 time replowing areas that we talked about before.
10 So I want you to explain to me where you're
11 intending to go with this line of questioning
12 before we just continue on.

13 MR. THORNTON: Mr. Fereday was asking about
14 the lateral continuity of the Pierce Gulch Sand
15 Aquifer, as identified by Dr. Ralston, as a flawed
16 conceptual model. There was not adequate data to
17 suggest that. And that is what I'm trying to go
18 ahead and identify through Dr. Wood, what
19 information is there to support that.

20 And ultimately, even if -- what I'm
21 after, even if the sand goes there, I think we
22 already heard Dr. Wood testify sand came from the
23 Payette River, it came from the Boise River, it
24 came from the Weiser River. What suggests that
25 water flows that way through that aquifer that was

1 placed there tens or hundreds of thousands of
2 years ago with a receding lake is because the
3 surface layer in Emmett is lower than Boise has
4 nothing to do with the elevation of the Pierce
5 Gulch Sand and water flow that occurred when the
6 lake was receding and everything was placed
7 relatively at the same elevation.

8 MR. FEREDAY: Objection. We have held off
9 making an objection with regard to scope because
10 my question did ask about the connection over the
11 Ted Daws well and Dr. Ralston's statement that he
12 would not necessarily have drawn the connection
13 between the two.

14 But now Mr. Thornton really appears to
15 be testifying about his theories here and going
16 quite far afield. And I guess I, too, am lost as
17 to where this is going.

18 So we would interpose that objection.
19 I have held off. I felt that there was no reason
20 to try to keep this line of questioning under
21 wraps, but it doesn't seem to be going anywhere
22 with regard to my questions of Dr. Wood.

23 THE HEARING OFFICER: Well, Mr. Thornton,
24 unless you can convince me that Dr. Wood testified
25 in his rebuttal testimony about direction of

1 flow -- and I don't recall testimony on that
2 subject.

3 MR. THORNTON: No.

4 THE HEARING OFFICER: It was related to
5 continuity of the aquifer. So any questions
6 related to direction of flow, which I think we're
7 now approaching or talking about, I want to
8 exclude them. I've got to narrow the scope of
9 this, or we won't get done.

10 And, you know, to the extent that you
11 can discredit his assertions of continuity, I'll
12 allow you to explore that some more. But I need
13 to sense where we're going with those attempts. I
14 don't right now.

15 MR. THORNTON: Okay.

16 THE HEARING OFFICER: I'm lost in the
17 questions.

18 And so go ahead.

19 MR. THORNTON: Okay.

20 Q. So the lateral continuity of the
21 Pierce Gulch Sand Aquifer is continuous; is that
22 correct?

23 A. Yes, I believe it is a continuous sand
24 sheet -- or at least many sheets of sand that are
25 interconnected that make it a continuous sand unit

1 over to the Payette -- well, let's put it this
2 way: From the Boise River Valley over to the
3 Payette River Valley.

4 Q. Okay. So if you'd go to Exhibit 12,
5 the reanalysis of 16 aquifers, and if you go way
6 towards the back, we have some geophysical logs.
7 And if you would go -- and it is very close to the
8 back, about less than a half inch from the back,
9 Dr. Wood, geophysical log of the M3 Eagle test
10 well No. 3.

11 A. Yeah, I have that in front of me.

12 Q. Okay.

13 THE HEARING OFFICER: Okay. What is it?
14 I'm looking.

15 THE WITNESS: Is it test well No. 3? Is
16 that the one you want?

17 Q. (BY MR. THORNTON): Yeah, test well
18 No. 3.

19 A. Okay. So it's somewhere back --

20 Q. Yeah, it would be way in the back,
21 Dr. Wood. It's a half inch from the very back,
22 just before Appendix B --

23 A. Here's test well 3.

24 Q. -- in case you see that.

25 A. Just back of the blue page.

1 THE HEARING OFFICER: Well, there's several
2 blue pages.

3 Q. (BY MR. THORNTON): So it's this
4 particular one.

5 A. Oh.

6 Q. I think you're close. Keep going.
7 This is M3 Eagle test well No. 3.

8 THE HEARING OFFICER: Spring Valley Ranch.

9 Q. (BY MR. THORNTON): Yeah, so this is
10 the one here.

11 A. Test well No. 3?

12 Q. Yeah, test well No. 3.

13 THE HEARING OFFICER: These are paginated,
14 I assume. This is under Appendix A, well
15 information?

16 MR. THORNTON: I can't state if it's No. 3
17 or not. That, I'm not sure of.

18 THE HEARING OFFICER: Is this in
19 Appendix A?

20 THE WITNESS: Yes, it is. Yeah, and it's
21 the last page before --

22 MR. THORNTON: It's just before Appendix B.

23 THE WITNESS: Just before Appendix B.

24 THE HEARING OFFICER: Okay.

25 THE WITNESS: Okay. M3 test well --

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1 THE HEARING OFFICER: I have a reduced copy
2 of that.
3 THE WITNESS: Yeah, I have a reduced copy
4 also. Yeah. Okay.
5 THE HEARING OFFICER: Okay. Mr. Thornton.
6 Q. (BY MR. THORNTON): Okay. And
7 underneath the "Lithology," if you will, column,
8 if you would look at about an elevation somewhere
9 maybe around 260 feet, I believe in that area is
10 identified the top of the Pierce Gulch Aquifer,
11 when you look to the far left, you will see that
12 resistivity diagram. It shows the Pierce Gulch
13 Sand Aquifer, the top and the bottom.
14 Do you see that, Dr. Wood?
15 A. I see that. You referred to
16 elevation, but these numbers are with respect to
17 depth below the ground surface.
18 Q. Thank you. Yeah, it would be depth
19 below the ground. I'm sorry.
20 MR. FEREDAY: Mr. Hearing Officer, we're
21 going to have to object that this line of inquiry
22 into the lithology or seismic -- or excuse me, the
23 geophysical logs of this test well is beyond the
24 scope. If he could show that it relates to the
25 question of continuity, I suppose it's

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1 permissible. But we would like to interpose an
2 objection.
3 THE HEARING OFFICER: Well, let's see where
4 the question goes. So overruled right now.
5 Mr. Thornton.
6 Q. (BY MR. THORNTON): When you, I
7 believe, identified now, just recently, that the
8 Pierce Gulch Sand was largely just that, sand, and
9 what I'd like you to look at through that layer on
10 the lithology, two things, if you'd look about the
11 elevation of -- well, even starting out at the
12 elevation of about 200 -- 200 and, I guess, maybe
13 70 feet. It appears to be in an area that's
14 identified as fine gray sands and sticky, dark
15 gray clays. You go down in depth 300 feet, let's
16 say, to -- all the way down to 500, the
17 characterization for the lithology says medium --
18 and I'm not sure what "CRS" is, if it's coarse,
19 I'm not sure -- light gray sands and tacky dark
20 gray clays, minor siltstone. And then it says,
21 "Gravel inferred by Hydro Logic, but not reported
22 by drilling contractor or evident in cuttings."
23 That's suspect to me.
24 And then below that it goes, "Fine,
25 medium, weakly cemented sandstone." And then down

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1 at the bottom it identifies "Fine, sandy, sticky,"
2 I guess, "dark green gray clay."
3 So where is this solid sand identified
4 in the Pierce Gulch Sand Aquifer?
5 A. You're saying "solid sand"?
6 Q. Yeah, continuous sand, as I believe
7 what you stated.
8 A. Continuous sand? Well, let's talk
9 about any geological outcrop of sand that you see.
10 You might see 20 or 30 feet of almost continuous
11 thick sands, then some interbeds of silt and clay,
12 and then some more sand on top of it. Geology at
13 times does deposit several hundred feet of sand,
14 sometimes it deposits 30 feet, and then a few feet
15 of silt, and more sand. That's just the nature of
16 deltaic deposition.
17 So there's nothing unusual about the
18 description here. And the sands are very clearly
19 shown by the excursions to the right of -- the
20 thick sands, that is, of -- of the resistivity
21 log.
22 The gravel, you know, could well be
23 anything that's 4 millimeters or so in size. And
24 that's very common in the Pierce Park (sic) Sand.
25 We do get 4-millimeter granule size materials.

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1 Q. 4 millimeter is identified as gravel,
2 then, in engineering standards?
3 A. That's identified as a granule-size
4 material, and many people would call it gravel.
5 Q. Okay. So is it true that this
6 lithology for that section of the Pierce Gulch
7 Sand identified is that -- is a mixture of sands
8 and gravels and clays, some sand gravels, clays,
9 and mixture?
10 A. Well, I'd say mud, mud being
11 internally a mixture of silt, sand. I'm not sure
12 what you're driving at. Yeah, this is typical of
13 the geological section. You bet.
14 Q. Okay.
15 A. However, it does change as we go out
16 into the basin. We get finer sands. We've
17 covered this before, yeah.
18 Q. Yeah. Okay. I guess the last
19 question I have -- and I apologize if I'm asking a
20 similar question that I was identified not to.
21 I'm trying to rephrase it somewhat -- is the
22 surface elevation expression, a difference in that
23 from the Boise River, current modern-day Boise
24 River, Boise Valley to the Leatha area, does that
25 provide complete certainty that the groundwater

1 flows that direction?
 2 A. Well, the complete certainty is if you
 3 have a line of piezometers into the aquifer.
 4 That's the complete certainty.
 5 Q. Right.
 6 A. But there's certainly a very high
 7 likelihood that just the elevation between the two
 8 rivers is enough to indicate to a hydrogeologist
 9 that flow should go that way. If you find a
 10 piezometer to the contrary that's clearly
 11 completed into that aquifer, well, then, that
 12 would be information contrary to that concept.
 13 But certainly what we see in the --
 14 Q. Are you aware --
 15 A. -- in the physical situation.
 16 Q. And last question, are you aware of
 17 any piezometer in the Pierce Gulch Sand Aquifer in
 18 the Emmett area that identifies that?
 19 A. I have not reviewed any of the water
 20 levels in the Payette River Valley.
 21 MR. THORNTON: Okay. That's all my
 22 questions.
 23 THE WITNESS: Yeah.
 24 MR. THORNTON: Thank you.
 25 THE HEARING OFFICER: Okay.

1 Mr. Smith?
 2
 3 CROSS-EXAMINATION
 4 BY MR. ALAN SMITH:
 5 Q. I just have one question Dr. Wood.
 6 Are you aware that Glanzman and
 7 Squires found no PGSA water in the Payette area?
 8 A. I'm not aware of that conclusion.
 9 MR. FEREDAY: Objection.
 10 THE HEARING OFFICER: Just a minute.
 11 THE WITNESS: That sounds like a pretty
 12 broad statement.
 13 THE HEARING OFFICER: Just a minute.
 14 MR. FEREDAY: Objection.
 15 THE WITNESS: Yeah.
 16 MR. FEREDAY: That mischaracterizes the
 17 Glanzman/Squires report, and I will object on that
 18 basis.
 19 MR. ALAN SMITH: Mischaracterizes it in
 20 what way, Counsel?
 21 MR. FEREDAY: In the first place, it's --
 22 it mischaracterizes it to say that it wasn't found
 23 in the Payette area. That report, as the Hearing
 24 Officer knows, showed tests from wells in Emmett,
 25 not the Payette area.

1 MR. ALAN SMITH: Okay.
 2 MR. FEREDAY: And not the Payette Valley,
 3 generally. Emmett, as has been shown in this
 4 record, is outside of the area where the testimony
 5 has shown the PGSA to extend. Therefore, it's a
 6 mischaracterization, sir.
 7 MR. ALAN SMITH: I'll rephrase the
 8 question.
 9 THE HEARING OFFICER: Okay. Let's try it
 10 again.
 11 Q. (BY MR. ALAN SMITH): Let me change
 12 that question to the Payette River.
 13 A. Would you phrase the full question
 14 again, sir, please.
 15 Q. Well, I'm just asking if you're aware
 16 that Glanzman and Squires found no PGSA water in
 17 the Payette River?
 18 A. You know, I haven't read that report.
 19 It's -- that --
 20 Q. You're not aware of it?
 21 A. That conclusion is not something I'm
 22 familiar with, if it was a conclusion of theirs.
 23 No.
 24 MR. ALAN SMITH: No further questions.
 25 THE WITNESS: Okay.

1 THE HEARING OFFICER: Mr. Edwards?
 2 MR. EDWARDS: No questions.
 3 THE HEARING OFFICER: Okay.
 4 Redirect, Mr. Fereday?
 5
 6 REDIRECT EXAMINATION
 7 BY MR. FEREDAY:
 8 Q. Dr. Wood, you were asked questions
 9 about Exhibit 19G, which I believe was the Wood
 10 and Clemens paper; is that correct?
 11 A. Well, 19G is the 1994 paper. 19D is
 12 Wood and Clemens paper --
 13 Q. Sorry. Excuse me.
 14 A. -- of 2002.
 15 Q. The 19G, the 1994 paper, was that a
 16 peer-reviewed paper?
 17 A. Yes, that was peer reviewed and
 18 published by the Idaho Geological Survey.
 19 Q. Do you know whether Dr. Ralston's ever
 20 produced a peer-reviewed paper on north Ada
 21 geology?
 22 A. I believe early in his career he and
 23 Cheryl Chapman did write some reports on --
 24 perhaps not focused on Ada -- north Ada, but
 25 somewhere in Ada County and down into Canyon

1 County, reports back in the -- what would it
 2 be? -- '60s, '70s, something like that.
 3 Q. Do you recall Mr. Thornton pointing
 4 out that -- or asserting that the geothermal
 5 investigations report that you referenced was not
 6 made available? Do you recall that?
 7 A. Yes, I do recall that. Yeah.
 8 Q. Would you refer to Exhibit 19H,
 9 please.
 10 A. Yes, I have that in front of me.
 11 Q. Is Exhibit 19H the 1981 paper that you
 12 were referencing and that Mr. Thornton indicated
 13 had not been provided?
 14 A. That's correct, that is the paper I
 15 was referring to.
 16 Q. Dr. Wood, are you aware of any
 17 evidence to suggest that the groundwater flow in
 18 the Pierce Gulch Sand Aquifer does not include
 19 flow, in part, to the Payette River Basin?
 20 MR. ALAN SMITH: Object to that. I don't
 21 know what the qualifier "in part" means.
 22 THE HEARING OFFICER: Overruled.
 23 THE WITNESS: Mr. Fereday, if you would
 24 rephrase that -- or not rephrase, but just state
 25 the question again so I can be sure we're saying

1 yes or no.
 2 Q. (BY MR. FEREDAY): Are you aware of
 3 any evidence to contradict the conclusion that
 4 water in the Pierce Gulch Sand Aquifer flows to
 5 the Payette River Basin?
 6 A. Well, let me say, the evidence I'm
 7 aware of shows that it flows toward the Payette
 8 River Basin.
 9 MR. FEREDAY: No further questions.
 10 THE HEARING OFFICER: Okay.
 11 Mr. Thornton?
 12 MR. THORNTON: Yeah.
 13
 14 **RE-CROSS EXAMINATION**
 15 **BY MR. THORNTON:**
 16 Q. Dr. Wood, did you not state that just
 17 the -- when I was asking you questions that you
 18 had not reviewed any data to determine -- like
 19 well-log data to determine which way the water
 20 flows?
 21 A. Let me explain. Well-log data will
 22 not tell you which way the water flows. It will
 23 only show similar sand units. It will show you --
 24 and from that, one can connect, and it will show
 25 the continuity of the sand units. But it gives no

1 information on the pressure level, in other words,
 2 the height to which water will rise in the well.
 3 Q. Did you review any of the -- the well
 4 information identifying the pressure heads for
 5 wells?
 6 A. I looked at it briefly, simply to see
 7 that a map that had been produced by Hydro Logic
 8 showing the direction of piezometric level
 9 decrease towards the Payette River Valley to see
 10 that -- see what -- what it was based on. That's
 11 correct, yeah.
 12 Q. And if I could just have -- I got to
 13 pull out one document here to ask you a question.
 14 A. Okay.
 15 Q. If I could have just a minute.
 16 If you could go to Exhibit 47. And
 17 that is a document completed by Dr. Ralston titled
 18 "Hydrogeologic analysis of the M3 Eagle site."
 19 And it's on the very last page, I believe,
 20 figure 9. And that identifies it as figure 9,
 21 2,000 measurements of water-level elevation placed
 22 on the contour map from Squires' work in 2008,
 23 which is the figure 1 in his.
 24 Do you see that?
 25 A. I see that, yeah.

1 Q. And if you'd look to the north and
 2 west at a red dot which represents a well
 3 identified as 2412.
 4 A. That's right.
 5 Q. Have you examined that information for
 6 that well, the pressure head?
 7 A. No, I have not.
 8 Q. Are you aware that in testimony
 9 Mr. Squires, Mr. Utting stated they do not know
 10 what -- if that's in Pierce Gulch Sand Aquifer or
 11 not?
 12 A. I'm not aware of that testimony
 13 either.
 14 Q. Do you see perhaps how Dr. Ralston is
 15 concerned with some of this when that dot
 16 represents an important point in terms of turning
 17 the water to the north, and yet M3 does not even
 18 know the construction of that well, whether that
 19 is in the resistivity log to suggest it's in the
 20 Pierce Gulch? Are you aware of that?
 21 A. You know, I haven't really followed
 22 that reasoning. I -- interesting that just
 23 looking at this I see that the elevation actually
 24 of the valley beyond there is around about 2340 or
 25 so. Is that right? Yeah.

1 So the shallow system out in the
2 Payette River Valley is certainly below the water
3 level shown in that well. And I have just -- I
4 have not looked at that well. I don't know how
5 deep it is. I know nothing of its well
6 construction. You know, it's sort of beyond my
7 level of investigation.

8 Q. Okay.

9 A. So if you'd like --

10 Q. So would it be true to say you're not
11 really sure which way the water flows with any
12 certainty?

13 A. No, I'm not saying that I don't know
14 which way the water flows. I'm saying that what
15 I've seen from the work that Hydro Logic's done,
16 they've taken the best available data and
17 contoured it, and they've shown that it's very
18 reasonable to show what were the blue line
19 contours on that map.

20 Q. Does using best available data if it's
21 in error represent good analysis results?

22 MR. FEREDAY: Objection. Foundation.

23 THE HEARING OFFICER: Just a minute.

24 THE WITNESS: You're saying that --
25 you're --

1 THE HEARING OFFICER: Just a minute,
2 Dr. Wood.

3 THE WITNESS: -- implying that there's some
4 erroneous data in there. And I have no way of
5 knowing what the data is, whether it's an error.
6 But sure, you obviously don't use erroneous data
7 to make a conclusion, yeah.

8 MR. THORNTON: No further questions.

9 THE HEARING OFFICER: Mr. Smith?

10 MR. ALAN SMITH: No, no questions.

11 THE HEARING OFFICER: Mr. Edwards?

12 MR. EDWARDS: No questions.

13 THE HEARING OFFICER: Thank you, Dr. Wood.

14 Next witness, Mr. Fereday?

15 MR. FEREDAY: We'd call Ed Squires.

16 THE HEARING OFFICER: Mr. Squires. I'll
17 remind you, Mr. Squires, you're under oath.

18
19 ED SQUIRES,
20 having been called as a rebuttal witness by M3
21 Eagle LLC and previously sworn, testified as
22 follows:

23
24 THE HEARING OFFICER: You may examine
25 Mr. Squires, Mr. Fereday.

1 DIRECT EXAMINATION

2 BY MR. FEREDAY:

3 Q. Mr. Squires, I'd like to ask you some
4 questions about the testimony of Jason Smith this
5 morning.

6 With regard to the exhibits that
7 Mr. Smith presented, such as the map and bar chart
8 behind you, do any of the driller's logs or other
9 information presented in support of that exhibit
10 provide any evidence that any of these replaced
11 wells were unable to produce water due to declines
12 in aquifer water levels?

13 A. Not in my opinion, no.

14 Q. Did you investigate any of the wells
15 included on this map or any other wells that might
16 be relevant to Mr. Smith's testimony?

17 A. I investigated all the wells that he
18 presented exhibits for.

19 Q. What did you do?

20 A. I drew -- I examined the well logs. I
21 drew cross-sectional diagrams of the -- to depict
22 the wells and the lithology of each one of those,
23 looked at the water levels, looked at the well
24 construction, located them on a map, my own map,
25 and generally looked at all the available data.

1 On the -- what we received, I think it
2 was 17 total wells, eight of those had couplets,
3 that is, they had the original well and the
4 replacement well. On those wells we drew a
5 cross-section showing both of them together. The
6 rest of the wells only had one well. We drew
7 those as single cross-sections.

8 Q. I believe we have -- did you produce
9 an exhibit or an analysis with those drawings,
10 Mr. Squires?

11 A. I also produced an Excel spreadsheet
12 showing the significant information from my
13 evaluation.

14 Q. I'd like to hand you a document which
15 is an Excel spreadsheet.

16 Is this the one you're referring to?

17 A. Yes, it is.

18 Q. Can you tell us what this is and how
19 it was prepared, please?

20 A. Well, it's a simple tabulation of the
21 significant aspects of the wells that were
22 presented aimed at trying to determine whether or
23 not the water-level declines and/or well
24 construction are behind the need to replace these
25 wells.

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1 Q. Could you take us through this
2 spreadsheet and tell us some salient features of
3 it so that we can understand what you have looked
4 at and what you might have concluded with regard
5 to the reasons for replacement in these wells?
6 A. Okay. Well, the spreadsheet is
7 divided into two main sections, an upper and lower
8 section. The upper section is a tabulation of
9 one, two, three, four, five, six -- of eight wells
10 for which Mr. Smith submitted us well logs for
11 both the original well and then the well that
12 apparently or allegedly replaced it.
13 The -- in the left-hand side of the
14 upper tabulation highlighted in yellow, those data
15 are the data from the original wells that were
16 replaced.
17 The green tabulated data is
18 information from the -- the wells that replaced
19 the original wells.
20 At the end there's three columns that
21 are just a note on comparisons between the two.
22 Of interest on the yellow data, if you
23 come across three -- well, there's the "Exhibit"
24 column, "Well owner," "Location of the original
25 well," the "Year drilled."

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1 In the "Year drilled," you will see --
2 you will note that all the wells were drilled
3 earlier than 1975, and they range back to 1995.
4 Under the column captioned "Drilling
5 method," they were all drilled cable-tool,
6 drill-and-drive technique. And in the "Depth"
7 column you will see that they are arranged in a
8 decreasing depth -- or an increasing depth from
9 70 feet, 97, 121, and so on, down to 254 feet.
10 Next to that are the nonpumping water
11 levels recorded on the driller's report.
12 Surface seal of the well, surface seal
13 type. Surface seal type in all of the recorded
14 wells were sealed very shallowly by well cuttings.
15 Q. So these do not have full-depth seals,
16 any of these wells?
17 A. No.
18 Q. I note that you state that the -- over
19 in the last yellow column that the construction of
20 each is poor.
21 Is that your professional opinion?
22 A. That's my judgment, yes.
23 Q. And what would characterize poor well
24 construction in your analysis here?
25 A. Partially the fact that the seals are

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1 practically nonexistent, sealed with cuttings from
2 the well in a slurry that was just bailed from the
3 well during cable-tool drilling. Generally
4 speaking, the casings are thin wall, steel
5 casings. Most of them don't have -- are open-hole
6 completions without screens. Some have
7 perforations. In many cases the perforations are
8 above the water table. There's just a lot of
9 aspects to these wells that are not the best.
10 Q. Mr. Squires, I'm having handed out to
11 you a second exhibit. And I'd like you to
12 identify that, please.
13 A. This exhibit is the cross-sectional
14 diagrams that we drew of the well couplets
15 presented by Mr. Smith in the upper portion of my
16 Excel spreadsheet.
17 Q. So there would be eight of these; is
18 that correct?
19 A. Yes.
20 Q. And I note that these are noted as
21 Exhibit 2006A, 2007C, and so on.
22 Do those numbers refer to the well
23 couplet exhibit numbers that Mr. Smith used this
24 morning?
25 A. Yes, they do.

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1 Q. And you prepared these cross-sections,
2 you and your staff?
3 A. Yes, that's correct.
4 MR. FEREDAY: Mr. Hearing Officer, I would
5 like to offer these two as exhibits, and as our
6 next two exhibits, with the spreadsheet being
7 numbered first and the cross-sections being
8 numbered second.
9 If I could get the next number,
10 please?
11 MR. LAWRENCE: Let's go to, I think, 72.
12 MR. FEREDAY: We offer the spreadsheet as
13 Exhibit 72.
14 THE HEARING OFFICER: So these are unused
15 numbers, Mr. Lawrence?
16 MR. LAWRENCE: Yeah, by my count 72 would
17 be the next logical number for M3 to use.
18 THE HEARING OFFICER: Okay. So 72. And
19 the next would be 73, which is the cross-section?
20 MR. FEREDAY: Correct.
21 (Exhibits 72 and 73 marked.)
22 MR. FEREDAY: And we would move admission
23 of these two exhibits.
24 THE HEARING OFFICER: Mr. Thornton,
25 Mr. Smith, Mr. Edwards, do you need a moment to

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1 look at these?
2 MR. THORNTON: Yeah, I would like a moment.
3 THE HEARING OFFICER: Let's take a short
4 break.
5 MR. THORNTON: Okay.
6 THE HEARING OFFICER: Let's take five.
7 (Recess.)
8 THE HEARING OFFICER: We're recording again
9 after a brief recess allowing the protestants to
10 review the documents marked as Exhibits 72 and 73.
11 And they've been offered into evidence.
12 Mr. Thornton, do you object to the
13 admission of these documents?
14 MR. THORNTON: No objections.
15 THE HEARING OFFICER: Mr. Smith?
16 MR. ALAN SMITH: No objection.
17 THE HEARING OFFICER: Mr. Edwards?
18 MR. EDWARDS: No objection.
19 THE HEARING OFFICER: Documents marked as
20 Exhibits 72 and 73 are received into evidence.
21 (Exhibits 72 and 73 admitted.)
22 THE HEARING OFFICER: Mr. Fereday, you may
23 continue your examination of Mr. Squires.
24 Q. (BY MR. FEREDAY): Mr. Squires, with
25 regard to Exhibit 73, the cross-sections, could

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1 you just quickly take us through those and tell us
2 what we see there.
3 And I note just at the outset that on
4 the right of each of the cross-sections we have
5 the original well, on the left we have the well
6 that was deemed or asserted to be a replacement
7 well; is that correct?
8 A. That's correct.
9 Q. And what did you do in preparing
10 these?
11 A. We reviewed the individual well
12 driller's reports for the two wells that were
13 submitted coupled together as original and
14 replacement. And this is a very routine exercise
15 that all groundwater professionals go through.
16 And it's much easier to see the
17 as-built details of well construction and the
18 drilled lithology and other aspects of well if
19 it's presented in a schematic cross-sectional way,
20 rather than trying to search across the form, the
21 actual well driller's forms.
22 Q. With regard to the original wells,
23 what aquifer were they typically -- were they
24 completed into, or can you tell us whether they
25 were completed into various aquifers? What can

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1 you tell us about that?
2 A. Well, on -- I should -- to answer that
3 question, I'll point out that on five of the eight
4 couplet wells -- I'll refer to the two well pairs
5 as couplets -- on five of eight of them, the
6 locations didn't match. So there's some question
7 whether they're the same wells that were on the
8 site.
9 And as Jason Smith testified, it's a
10 difficult task to find those and to make sure that
11 they are.
12 But as Spence Wood said, we take what
13 we have and we do the best job with what we have.
14 On five of the eight couplet wells,
15 the lithologies didn't match very well either. So
16 that lends some --
17 Q. By that do you mean that the lithology
18 of the original well was not a good match to the
19 lithology reported for the very nearby replacement
20 well?
21 A. That's correct.
22 Q. And what does that tell you?
23 A. Well, I think that that is a -- that's
24 a difficulty that we run into a lot because
25 it's -- there's a -- in this case almost every one

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1 of these wells was drilled by a different well
2 driller. And well drillers often do not receive
3 formal education in geological identification.
4 So it can be -- you know, it's very
5 common to find discrepancies in wells that are
6 drilled very close by, by different drillers. But
7 some of the lithologies in these couplets are
8 pretty radically different. So I'm not sure what
9 to make of that.
10 Q. What can you tell us about the
11 aquifers that the original wells were completed
12 into?
13 A. Well, they were shallow, for one
14 thing. I think the -- in general, if I calculate
15 the average depth of the original wells, it was
16 somewhere around 180 feet.
17 And if you calculate the average depth
18 of the replacement wells, it's somewhere around
19 363 feet. And, you know, there's very few data,
20 and there's a few wells in there that are in
21 different sections, and it throws things off.
22 But in general, as you'll see on the
23 cross-sections, the younger -- the earlier wells
24 were shallow and the -- all about the same depth,
25 actually. And the replacement wells are

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1 significantly deeper. You'll see that on all the
2 couplet cross-sections.
3 And I think the Hearing Officer
4 pointed that out when Mr. Smith was drawing a
5 similar cross-section on the whiteboard.
6 Q. Can you tell whether any of the
7 original wells were completed into the Pierce
8 Gulch Sand Aquifer?
9 A. No, they were not.
10 Q. They were not?
11 A. They were not.
12 Q. How about the replacement wells, are
13 they completed into the Pierce Gulch Sand Aquifer?
14 A. Some may be. I did not evaluate for
15 that.
16 Q. With regard to the construction of
17 these wells, you've testified already that they --
18 none of them were sealed.
19 In your opinion, would this allow
20 water to escape around the outside of the casing
21 between the casing and the well bore and move up
22 and down in those wells -- in the original wells?
23 A. I believe what I testified to was that
24 none of the original wells were properly sealed,
25 in my opinion. But I think if you look at the

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1 green data, the newer wells, I think I'm somewhat
2 impressed that things have improved a lot over the
3 years.
4 And I think that the well construction
5 in the new wells, in my opinion, ranges from okay
6 to good, and some of the wells have full depth
7 seals drilled by Coonce using a mud-rotary method,
8 so...
9 Q. Referring to Exhibit 72, what's the --
10 what are the most important points, in your
11 opinion, Mr. Squires, about the information
12 presented there? And I want to focus first and
13 ask you, what about the age of these wells? Is
14 there anything about the age of these original
15 wells as shown on Exhibit 72 that's important to
16 question of replacement?
17 A. Well, I think they're quite old. You
18 know, they're 35 to 55 years old. So they served
19 a purpose for a very long time.
20 Q. Do you agree with the testimony of
21 Mr. Whitney that wells 20, 30, maybe 40 years old
22 are reaching their life expectancy?
23 A. I agree with Mr. Whitney that there's
24 a lot of variables that have to do with chemistry,
25 et cetera. But I would consider those very old

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1 wells.
2 I know that when I worked for United
3 Water Idaho, the only real definitive information
4 that I have about judging the age or the
5 usefulness of a well is that the Public Utilities
6 Commission used to allow -- or they still allow
7 United Water, and all public utilities, to earn on
8 a well for about 20 years. After that, they
9 consider them fully depreciated.
10 Q. You note in your Exhibit 72 that --
11 over in one of the right-hand yellow columns that
12 there is a notation for available drawdown in
13 feet, ranging here, I see, from 17 feet to 75 feet
14 to 0 feet.
15 What does that tell us?
16 A. That is an indication of the amount of
17 water drawdown in the well available to make water
18 to flow toward the well.
19 Q. Is it accurate to say that that's the
20 amount of water that would be over the pump bowls?
21 A. It could be the amount over the pump
22 bowls, or it could be the amount that could get
23 drawn down to a reduction, or it could be to draw
24 the water level down to a perforated interval.
25 But in my opinion, that's the -- the water level

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1 in the well shouldn't be drawn down below that
2 amount.
3 Q. And what do these numbers in the
4 yellow section of Exhibit 72 for available
5 drawdown tell you about the efficiency or reasons
6 for replacement of these wells?
7 A. Well, I think what that column tells
8 me is that originally 30 -- 30 to 50 years ago
9 that there wasn't a lot of water available at that
10 time in the well. There was a very small amount
11 of water in the bottom of the well.
12 Q. So are you saying that the available
13 drawdowns in these wells originally was minimal?
14 Is that what you're saying?
15 A. Well, they apparently worked all these
16 years, but yeah, I would consider it pretty
17 minimal.
18 Q. Does it surprise you that these wells
19 needed replacement?
20 A. No.
21 Q. What about the replacement wells?
22 You've testified that some of them are well
23 constructed. What about the water levels in the
24 replacement wells? I note, for example, on the
25 first page of Exhibit 73 that the nonpumping water

1 level in the replacement well for the Lonnie
 2 Morris well is just a few -- appears to be a few
 3 tens of feet below -- in fact, about maybe 20 feet
 4 below that of the original well. Could you
 5 explain to me why that would be?
 6 A. Well, this is a -- this is an area
 7 where -- and I think Mr. Whitney referred to this.
 8 This is an area where the deeper the well, the
 9 deeper the water level. And so one of the reasons
 10 I arranged this spreadsheet over on the yellow
 11 portion where it has "Depth in feet," the seventh
 12 column over, it starts at 70 feet and gets
 13 progressively deeper, if you compare the next
 14 column, the nonpumping water level, also sometimes
 15 referred to as static water level -- we prefer
 16 nonpumping water level -- you'll see that with the
 17 depth so increases so does the water level, even
 18 back when the wells were originally drilled.
 19 So it's not surprising to me that as
 20 you're referring to the Lonnie Morris well, which
 21 has now been replaced down to 218 feet when
 22 originally it was 162 feet, that the water level
 23 would be deeper because the well is deeper.
 24 Q. So what does this tell you about where
 25 the Lonnie Morris replacement well is completed?

1 What aquifer is it completed into?
 2 A. As I said, I haven't identified which
 3 aquifers they're completed into. It's completed
 4 at a lower depth.
 5 Q. Could it be a different aquifer than
 6 the original well?
 7 A. Well, I think it was. I think it is.
 8 You asked about -- I guess there is one thing I
 9 could point out about the original well
 10 completions. One thing that rings consistent
 11 through many of these couplets in the exhibits is
 12 that very frequently you'll see a gravel layer
 13 down in the hundred foot range.
 14 As you flip through them, you'll see
 15 that it's common in more of the wells than not.
 16 In fact, it's common in most of them. And I
 17 believe that that is a terrace gravel, a
 18 floodplain gravel of the Boise River that's
 19 covered over with some fan materials that came out
 20 of the foothills here. And so it's a very thin
 21 aquifer unit.
 22 And I think that these original wells
 23 were able to be sustainable for a long period with
 24 just a small amount of drawdown because it's --
 25 it's not as confined -- it's not a very confined

1 aquifer. And so you don't -- you have a higher
 2 storitivity and less drawdown per volume pumped.
 3 So I think that many of these earlier wells were
 4 completed into this gravel layer because it was
 5 cheaper to go down there and the wells worked.
 6 Q. Mr. Squires, I'd like to shift gears
 7 just slightly here and show you Exhibit 867 that
 8 was admitted earlier today. This is a series of
 9 documents which includes a letter from Mr. Owsley
 10 and also a driller's log for the -- a well that
 11 dates back to 1955, the Strawn well -- or 1954,
 12 perhaps.
 13 Do you recognize that?
 14 A. Yes.
 15 Q. Have you had a chance to evaluate this
 16 exhibit? And give us your opinions about why that
 17 well may have been replaced or whether there was
 18 water available in that well.
 19 A. Well, I think from the information
 20 available, this well fits pretty close with the
 21 category of these other couplet wells. I'd point
 22 out that the well log presented is only half
 23 there. On this style of well log, of this vintage
 24 of well log, there's typically a second page that
 25 discussed the lithology, and that's not present

1 here.
 2 It was a 116-foot well. It was
 3 drilled and driven as Rob talked about, 10-inch
 4 diameter, down to 114 feet. And then it was
 5 apparently 2 feet of open-hole drilling below
 6 that.
 7 The original -- they call it here
 8 "standing water level" -- that corresponds to my
 9 "nonpumping water level" -- was 90 feet back in
 10 1954.
 11 Q. Did you hear the testimony from I
 12 believe it was Mr. Smith noting that Mr. Owsley
 13 measured this well and went to 125 feet and
 14 reported that there was no water in the well? Do
 15 you recall that?
 16 A. I read his letter to Mr. Taylor.
 17 Q. And what can you tell us about that?
 18 Do you feel that the water was not -- that water
 19 was not available in that well or that the well
 20 was somehow dry? Or do you have another view of
 21 that?
 22 MR. ALAN SMITH: Objection. There's no
 23 foundation laid to show that this witness has any
 24 knowledge about this or that he's ever visited
 25 this well or made any measurements.

1 THE HEARING OFFICER: Mr. Fereday, why
2 don't you lay a little foundation with
3 Mr. Squires.

4 Q. (BY MR. FEREDAY): Well, Mr. Squires,
5 would you be able to offer an opinion as to why
6 the Owsley letter refers to "dry well" based on
7 what you see in the well log and in the other
8 information in that exhibit?

9 A. Yes.

10 Q. And what is that opinion?

11 A. Well, this might be a place to -- just
12 having looked at this very briefly, but this might
13 be an actual place to tie together some of the
14 questions that you had. And that may be by way of
15 the foundation that the Hearing Officer is looking
16 for.

17 And what I looked at was the well
18 construction of the original well. And when I
19 spoke earlier about that I deemed the well
20 construction poor, this would be an example of
21 that type of construction, because the water level
22 of 90 feet in 1954 was well below the
23 perforations.

24 I thought I saw -- yeah, I thought I
25 saw -- yeah, they start -- said the bottom 40 feet

1 of the well was perforated. So the water level
2 was already 20-some feet down below the top of the
3 perforations. So this well would have cascading
4 water in it when it was drawn down.

5 But when I also spoke about the
6 available drawdown in the well -- so this well was
7 originally drilled to 116 feet. It was open hole
8 below 114, and in this river gravel I would expect
9 the gravels to cave in back into 114, and that is
10 exactly what the abandonment report for -- that
11 Phipps well drilling said that he measured the
12 bottom at 114 feet. So that fits with what I
13 would expect.

14 Then moving up from there, you have to
15 have room for your pump. And you often don't put
16 your pump right at the bottom of the well because
17 the motor would be in the mud. And so you would
18 want to hold your pump up a little bit.

19 And I'm assuming that this is a
20 submersible pump, pumping plant, so you would have
21 the motor and the pump assembly. And the motor
22 might be at least 2 feet long.

23 So if you held it up above the bottom
24 of the well at 114, and you'd be up to 112, and
25 the motor is 2 feet long, you're up to 110 feet,

1 you have to have what's called net positive
2 suction head, which is water above the intake, to
3 prevent the well from breaking suction. So now
4 you're somewhere above 110 feet.

5 And the water levels have been
6 measured by Dennis over the last few years around
7 109 feet as a pumping water level, and as high as
8 101 feet. So there really wasn't very much water
9 in this well to make water flow to the well,
10 originally, and certainly not now.

11 Q. Was this well a good candidate for
12 replacement, in your opinion?

13 A. I think it's amazing it lasted as long
14 as it did. If it's provided water that time, a
15 meager supply of water, I think I'd be pretty
16 happy with it.

17 Q. Why do you think Mr. Owsley
18 measured -- what was it? -- 125 feet in this well?

19 A. Yes.

20 Q. Could you offer an opinion as to why
21 that could happen?

22 A. Well, I don't know the means that he
23 measured the well. I don't know if the pump was
24 in the well or out of the well or -- oftentimes in
25 these types of small-bore wells, which we're

1 talking about a 6-inch casing -- or this is an
2 8-inch casing. You've got the pump column in
3 there and the submersible pump plant situation,
4 you also have the power cable that's going down
5 the well. It's a cable-tool well. It may not be
6 that straight.

7 So there's a lot of obstacles to
8 getting a well tape down the well. And so it
9 could be that the well tape, you know, hung up on
10 something up above. Could -- I've had them hang
11 up even on perforations.

12 And then, as I think it was Jason
13 Smith indicated, that you can have a belly in your
14 line and the electrical beads don't go down. Only
15 the well tape goes down. And that would be one
16 way that I could explain measuring below the depth
17 reported for the well, because I see that the --
18 in the abandonment report, Phipps measured the
19 well at 114, which makes sense, and he also
20 measured the water level at 105, which makes sense
21 with the other -- you know, it's in the same range
22 as all the other measurements that we have.

23 And it looks -- I would say that if
24 you can believe -- if you believe, and there's no
25 reason not to, the 90-foot water level 55 years

1 ago, that, you know, you might be able to suppose
2 that there's been maybe 100 feet of -- or 10 feet
3 of water-level decline in this well over that time
4 period.

5 Q. Would you consider 10 feet of decline
6 since 1954 or '55 to be alarming?

7 A. Certainly not. And not in this well
8 either, which I would expect to be prone to
9 seasonal variations in precipitation. And we know
10 that at least for the last few years the
11 precipitation has been in decline.

12 (Exhibit 74 marked.)

13 Q. (BY MR. FEREDAY): Mr. Squires, I'm
14 handing you what I've marked as Exhibit 74, which
15 is an 11-by-17 map, which has wells of the
16 protestants and other wells marked on it.

17 Could you describe what this is,
18 please, and describe who prepared it and from what
19 data?

20 A. This is a map showing well locations.
21 It's an iteration of a map we produced earlier of
22 the protestants' wells. They're shown in blue,
23 and their names are next to it, also in blue.

24 And on that map we superposed the
25 two -- what we'll call two groups of wells, one

1 being the -- what I'm calling the Smith group.
2 And to answer your question, we prepared this in
3 my offices. We prepared it using a number of
4 databases: The questionnaires that were sent out
5 to the protestants in the early stages of this
6 water right case, and from searching the IDWR
7 website and well report database, from the
8 exhibits that Mr. Smith passed out, and also from
9 our own files at Hydro Logic.

10 So the blue wells are the locations of
11 the original protestants. The sort of burnt amber
12 or red wells are the wells submitted by Jason
13 Smith, including the couplet wells and the
14 individual wells.

15 And there's another group that's
16 black. We're calling those the Owsley group. And
17 that's the group of wells that Dennis testified to
18 in his testimony of wells that he had measured and
19 identified as having declining water levels.

20 Then there's a fourth group depicted
21 by green circles. And those green circles are
22 some wells that we obtained off the IDWR well
23 driller report database. And they are older wells
24 that were drilled deeper at the -- in the same --

25 THE HEARING OFFICER: Okay. We need to

1 switch a tape again.

2 Okay. We are recording.

3 THE WITNESS: I was saying that the green
4 circles indicate wells that we obtained from the
5 IDWR database that represent wells that, even back
6 30 to 50 years ago, were drilled to the same depth
7 as the deeper wells in the Smith couplet.

8 Q. (BY MR. FEREDAY): As the replacement
9 wells?

10 A. As the replacement wells.

11 Q. And what did you find from your review
12 of those old 1960s to '79 deep wells in terms of
13 their water levels compared with the newly drilled
14 replacement wells?

15 A. We found that even in the deeper wells
16 that were drilled to the same depth as the
17 replacement wells nowadays, that the deep wells
18 then had similar deep water levels as the
19 replacement wells have now.

20 Q. I've just handed you another exhibit,
21 which I'll mark as Exhibit 75.

22 (Exhibit 75 marked.)

23 Q. (BY MR. FEREDAY): Can you describe
24 what that is, please.

25 A. I'm unsure as to which exhibit I just

1 got.

2 Yeah, this is a group of well
3 driller's reports that I'm referring to that are
4 represented by the green circles on this map.
5 These are the deeper wells drilled back in the
6 '70s to similar depths as the replacement wells in
7 the Smith group.

8 Q. And these well driller's reports,
9 Exhibit 75, are also something that you have
10 compiled and evaluated and commonly used in your
11 profession; is that correct?

12 A. That's correct. Our basic line of
13 questioning or our basic line of investigation was
14 that we're trying to determine, I think here,
15 whether water levels declined in these wells.

16 And as Mr. Smith has alleged, that
17 these wells had to be deepened because of
18 declining water levels, and, in fact, I think as I
19 understood his testimony to say, that he compared
20 the water levels in the shallow wells to the water
21 levels in the deep wells, and indicated that the
22 deep wells were an indication that the water level
23 had dropped 1 foot per year for 30 years. So --

24 Q. What is your opinion of that?

25 A. My opinion of that is that there's

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1 really no good evidence for that. I can't find
2 any.
3 Q. Any good evidence for what?
4 A. For water-level declines being behind
5 these shallower wells being replaced.
6 And so to prove that point what we did
7 is we looked in these same areas. And I think
8 you'll see that the green circles, which are the
9 old wells that we're talking about here, they're
10 right in the same neighborhoods as the Smith
11 wells, as the couplets, as the shallow wells that
12 needed to be replaced. And in many cases they're
13 right door by door, next door.
14 And what we found was that the same
15 deeper water levels were present in -- back in the
16 '70s in wells that were drilled to that depth.
17 Then as further evaluation, we then looked at some
18 of the shallow wells.
19 Q. You mean the original wells?
20 A. The original shallow wells that are in
21 existence today. And one of those would actually
22 be Norm Edwards' wells -- well. And we drew a
23 cross-section, I believe, of Mr. Edwards' well.
24 And he returned a questionnaire from our original
25 sending out of the well questionnaires.

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1 And what we found was -- and also
2 Mr. Edwards' well is a well that is in this
3 cluster of wells in question, and it is a well
4 that is also being measured by Dennis now as part
5 of the north Ada County study. And we find that
6 there's no evidence of water-level decline in that
7 well.
8 Q. In Mr. Edwards' well?
9 A. That's correct.
10 MR. FEREDAY: Mr. Hearing Officer, we offer
11 Exhibits 74 and 75.
12 THE HEARING OFFICER: Okay.
13 MR. ALAN SMITH: The well driller's reports
14 are marked as Exhibit 75?
15 MR. FEREDAY: Correct.
16 THE HEARING OFFICER: And the map should be
17 marked as 74. I don't see a marking on this one
18 right now.
19 MR. ALAN SMITH: We don't have one. He
20 marked it.
21 THE HEARING OFFICER: This will be 74.
22 This is 75.
23 Mr. Fereday has offered these
24 documents into evidence.
25 Objections, Mr. Thornton?

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1 MR. THORNTON: No.
2 THE HEARING OFFICER: Mr. Smith?
3 MR. ALAN SMITH: No.
4 THE HEARING OFFICER: Mr. Edwards?
5 MR. EDWARDS: No.
6 THE HEARING OFFICER: Documents marked as
7 Exhibits 74 and 75 are received into evidence.
8 (Exhibits 74 and 75 admitted.)
9 THE HEARING OFFICER: Mr. Fereday, we've
10 reached the five o'clock hour. Do we want to
11 discontinue, or is there something else in the
12 thread of thought we have about this that we need
13 to talk about?
14 MR. FEREDAY: I would appreciate going for
15 just a few more minutes so I can discuss the
16 cross-section to the Edwards well that Mr. Squires
17 just referred to.
18 THE HEARING OFFICER: Okay. Is that fine
19 with everybody? I think --
20 MR. JASON SMITH: How long?
21 MR. FEREDAY: Just a few minutes.
22 THE HEARING OFFICER: Well --
23 MR. ALAN SMITH: How few?
24 MR. JASON SMITH: Five?
25 MR. FEREDAY: Five.

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1 MR. ALAN SMITH: Okay.
2 THE HEARING OFFICER: Yeah, I think we're
3 fine. I think when we originally talked about
4 this date, I wanted everybody to ensure that they
5 could stay a little longer anyway. So --
6 MR. EDWARDS: Do we get to question
7 Mr. Squires?
8 THE HEARING OFFICER: Well, I think there
9 are significant, probably, additional questions
10 that will be tendered to Mr. Squires. I don't
11 think Mr. Fereday will come close to finishing
12 with him.
13 MR. FEREDAY: That's correct.
14 THE HEARING OFFICER: So we'll come back on
15 the 21st for those questions.
16 Okay. Go ahead, Mr. Fereday.
17 Q. (BY MR. FEREDAY): Mr. Squires, I
18 refer you to a bound document with numbered tabs
19 numbered 1 through 46.
20 Could you tell us what that is,
21 please.
22 A. Yes. This is a tabulation of the
23 protestants' questionnaire responses that we sent
24 out early in the -- early in the water right
25 process. We had a good response. And the

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1 cover -- the first two pages are a listing of the
2 people who returned questionnaires. And their
3 questionnaires are tabbed in this document by the
4 number on this table of contents, is what I'll
5 refer to it. And then also coupled with each of
6 the respondent's questionnaire is the well log
7 that we were able to pair with it. And if my
8 staff developed a cross-sectional diagram to go
9 with it, that is also included underneath each of
10 the individual tabs.

11 Q. So where there was a well log
12 available, you included that, and in any event,
13 you included a cross-section diagram of each of
14 these protestant's wells; is that correct?

15 A. We didn't draw a cross-section of each
16 and every protestant's well, no. But for those
17 wells -- for some of the wells we did draw
18 cross-sectional diagrams. And if the
19 cross-sectional diagrams are available, we
20 included them in this tabbed document.

21 Q. And with regard to tab 4, is that the
22 Edwards domestic well cross-section included there
23 that you were just testifying about?

24 A. That is correct.

25 Q. And could you tell the Hearing Officer

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1 what is the important information with regard to
2 water levels that you see in this cross-section?

3 A. Well, on the -- for the Edwards well,
4 we don't -- we couldn't couple that to a well
5 driller's report, so there's not one included
6 there -- or at least there's not one included
7 there. And I'm not sure why there isn't one
8 included there. That seems to be an oversight
9 because we clearly had one to be able to draw this
10 picture. So I say that that's an omission. Maybe
11 it's in my --

12 MR. JASON SMITH: It might be under tab 2.
13 It looks like there's one that's out of place
14 there for Lamar Walker. Does that look right?
15 Tab 2, kind of towards the back of tab 2, about
16 the second page from the back.

17 THE WITNESS: I think you're right, Jason.

18 MR. JASON SMITH: It just got out of order.

19 THE WITNESS: Yeah, it just looks like
20 that's out of place.

21 And perhaps, if I may speak up
22 Mr. Hearing Officer, perhaps Mr. Edwards could
23 identify that as his well log.

24 THE HEARING OFFICER: Well, I've got
25 Mr. Smith offering an opinion.

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1 THE WITNESS: Okay. I'm sorry.

2 THE HEARING OFFICER: I've got Mr. Edwards
3 possibly in line, and none of them are at least
4 witnesses at the present time.

5 Q. (BY MR. FEREDAY): Mr. Squires, have
6 you noted under tab 2 whether the driller's report
7 there could be the out-of-place driller's report
8 for the Edwards domestic well?

9 A. I'm certain it is now, yes.

10 Q. What can you tell us about the water
11 levels in the Edwards domestic well that you see
12 here that are relevant to the question of
13 declining water levels or not in this area?

14 A. Well, if I can direct your attention
15 to our cross-section, we show the nonpumping water
16 level as 60 feet in 1972. And that's in April of
17 1972.

18 If we look at the questionnaire that
19 was returned, we see that there is a depth to
20 water in item 6 in the questionnaire of 68 feet
21 in --

22 Q. On what date?

23 A. In September of '08.

24 So in my opinion, that -- and I direct
25 you back to the well construction cross-section

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1 again, in this particular well, from 60 to
2 130 feet, which would be the available drawdown,
3 there would be 70 feet of available drawdown in
4 that well.

5 So in my opinion, the difference
6 between 60 and 68 feet is not an appreciable
7 decline over the period of some 55 years,
8 especially since the 2008 measurement was measured
9 in September, which is toward the -- you know, we
10 would expect to have more drawdown at the end of
11 the irrigation season than you would in April.

12 So -- but either way, it just doesn't
13 look like there's an appreciable amount of
14 drawdown, certainly not enough to cause the well
15 to be -- have to be deepened for a water-level
16 decline.

17 MR. FEREDAY: Mr. Hearing Officer, at this
18 time I would like to end our examination of
19 Mr. Squires -- or suspend it, I should say, until
20 the next hearing date.

21 And I would like to retrieve this
22 exhibit from the protestants and from the Hearing
23 Officer so that we can make sure that it is put
24 together correctly when we come back.

25 And I would also appreciate retrieving

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1 our M3 Eagle slides from all parties at this
2 point, because we anticipated being able to use
3 this throughout Mr. Squires' testimony, and we
4 haven't been able to. And we would like to
5 retrieve those as well so that we can make
6 corrections there.
7 THE HEARING OFFICER: Okay.
8 MR. FEREDAY: So if we can have those back,
9 please.
10 MR. ALAN SMITH: We object to this. We
11 don't have any time to look over any of these
12 documents before they're going to be talking about
13 them again on the 21st.
14 MR. FEREDAY: This document was not offered
15 as an exhibit.
16 MR. ALAN SMITH: You've already done direct
17 examination on the witness about the documents.
18 When do we get to see it?
19 MR. FEREDAY: It was simply an illustrative
20 document entitled --
21 MR. ALAN SMITH: Mr. Fereday, when do we
22 get to see these documents? You want them all
23 back.
24 THE HEARING OFFICER: All right. Let's --
25 MR. FEREDAY: Well, these documents I want

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1 back for the reasons I just stated. They haven't
2 been offered yet.
3 MR. ALAN SMITH: We had to deliver you
4 documents on Monday so you'd have time to go
5 through. Now you don't want us to have any time
6 to look at any of this stuff before you come back
7 with it all on the 21st.
8 THE HEARING OFFICER: All right. Let's go
9 off the record a minute.
10 (Discussion.)
11 THE HEARING OFFICER: Okay. We're
12 recording again after a conversation.
13 And we've discussed the retrieval and
14 then distribution or review by the parties of
15 documents. One is the partial transcript of
16 portions of testimony that was at least
17 distributed this morning. Mr. Fereday asked that
18 that be retrieved and handed back to him, and I've
19 granted that particular request. The parties have
20 submitted that back to the applicants.
21 And with respect to the compilation of
22 information from the survey of the protestants and
23 any information produced related to their wells,
24 we have found at least some error in that
25 document. And the applicants have committed to

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1 correcting that document and distributing it to
2 the protestants no later than Wednesday of next
3 week. I think that's -- is that the 15th?
4 MS. HERSLEY: Yes.
5 THE HEARING OFFICER: I believe that's the
6 15th. So by the end of the day on the 15th if you
7 can distribute that in some form, Mr. Fereday.
8 MR. ALAN SMITH: What day is next
9 Wednesday?
10 THE HEARING OFFICER: 15th.
11 MR. ALAN SMITH: It's the 15th?
12 THE HEARING OFFICER: Yeah.
13 MR. ALAN SMITH: By 5:00 p.m.?
14 THE HEARING OFFICER: Well, or by the end
15 of the day. You know, that could come in if it's
16 by e-mail or some sort of submittal. I don't know
17 what's best or easiest. If the parties can work
18 that out, I'd appreciate it.
19 Okay. We'll --
20 MR. THORNTON: Question, if I could,
21 before --
22 THE HEARING OFFICER: Yes.
23 MR. THORNTON: I've got a phone call from
24 another person that is interested if they still
25 have the opportunity to be a public witness on

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1 either the 21st or the 22nd.
2 Is that still an option if they were
3 to be here for, typical of Mr. Sorge, maybe five
4 or eight minutes or something like that, or not?
5 THE HEARING OFFICER: I don't object to
6 that. Take a short amount of time.
7 MR. THORNTON: Okay.
8 THE HEARING OFFICER: Like I say, I don't
9 want to have a large parade of people.
10 MR. THORNTON: Okay. Yeah, I don't
11 perceive that.
12 THE HEARING OFFICER: Okay. We'll close
13 and resume on July 21st --
14 MR. THORNTON: Okay.
15 THE HEARING OFFICER: -- here. Thank you.
16 (Proceedings adjourned at 5:22 p.m.)
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REPORTER'S CERTIFICATE

I, JEFF LaMAR, CSR No. 640, Certified
Shorthand Reporter, certify:

That the foregoing proceedings were taken
before me at the time and place therein set forth,
at which time the witness was put under oath by me.

That the testimony and all objections made
were recorded stenographically by me and transcribed
by me or under my direction.

That the foregoing is a true and correct
record of all testimony given, to the best of my
ability.

I further certify that I am not a relative or
employee of any attorney or party, nor am I
financially interested in the action.

IN WITNESS WHEREOF, I set my hand and seal
this 17th day of July, 2009.



A handwritten signature in black ink, appearing to read "Jeff LaMar", written over a horizontal line.

JEFF LaMAR, CSR NO. 640

Notary Public

Eagle, Idaho 83616

My commission expires December 30, 2011

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abandon 2953:16 2955:17 2956:12	3079:10 3117:21 3128:13	3056:7	2915:12,15	alluvial 3032:14 3087:16,19 3089:11
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