

EXHIBIT 4

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IN THE SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES

COORDINATED PROCEEDING) JUDICIAL COUNCIL
SPECIAL TITLE (RULE 1550 (b))) COORDINATION NO.4408
)
)
) FOR FILING PURPOSES
) SANTA CLARA COUNTY
ANTELOPE VALLEY GROUNDWATER CASES,) CASE NO.105-CV-049053
)
AND ASSOCIATED ACTIONS,)
-----)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

BEFORE THE HONORABLE JACK KOMAR, JUDGE
SANTA CLARA SUPERIOR COURT
HELD ON AUGUST 25, 2015

A P P E A R A N C E S:

LYNNE BRENNAN, ESQ.
RALPH KALFAYAN, ESQ.
MICHAEL MCLACHLAN, ESQ.
ROBERT KUHS, ESQ.
JUNE AILIN, ESQ.
MILES HOGAN, ESQ.
JEFFERY DUNN, ESQ.

OFFICIAL COURT REPORTER: PAMELA CARDIFF, CSR
CERTIFICATE NO. 11430

1 BY MS. AILIN:

2 Q. Mr. Harder, to your knowledge, is Phelan today
3 pumping from all six of these wells in the Antelope
4 Valley Groundwater Basin?

5 A. I don't know which wells they are pumping
6 currently. I do know they continue to pump from Well
7 14, and I do know that they rely on the Wells 10, 11,
8 and 12, but I don't know -- not for sure.

9 Q. Do you have any information on how much water
10 Phelan distributes to its customers who are located in
11 the Antelope Valley Groundwater Basin?

12 A. I do.

13 Q. And do you have a table that shows that
14 information?

15 A. Right. You are showing it there. Exhibit 53.
16 This is a distillation of a previous table that we
17 provided earlier. But it shows that the delivered water
18 to the connections in the Antelope Valley Groundwater
19 Basin within Phelan service area -- and I'm going to
20 look at my -- ranges from 579 acre-feet per year to
21 679 acre-feet per year.

22 Q. Is there a name that's commonly used for the part
23 of the Antelope Valley Groundwater Basin that Phelan's
24 wells are located in that basin?

25 A. Well, the groundwater basin has been -- has
26 various subunits. And the subunits that Phelan's wells
27 are located in are the Buttes subunit.

28 Q. And do you have a map that shows the Buttes

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CONTINUED DIRECT EXAMINATION

BY MS. AILIN:

Q. Mr. Harder, in your prior testimony in this case, you talked about the existence of a groundwater flow barrier on the west end of the Buttes subunit. How far are Phelan's wells located from that groundwater flow barrier?

A. Well, this is a map of the Buttes subunit here, and as you all know, this is Well 14 here on the county boundary.

THE COURT: Could you speak a little louder, please.

THE WITNESS: Sure. So here's Well 14 on the country boundary and the distance from Well 14 to the western boundary is about 20 miles.

BY MS. AILIN:

Q. And for the record, the exhibit you are referring to is Exhibit 27.

And how far are Phelan's wells from the wells on the S&J Rowan Ranch?

A. S&J Rowan Ranch is the area I'm pointing here near the Brady field just west of the county boundary and west of Well 14 and that distance is about 5 miles. There is a scale on the map as well you can see.

Q. And, again, in your testimony, you were referring to the Exhibit 27?

A. Yes.

Q. Sifting gears, Mr. Harder, to the subject of the

1 impact from Phelan's pumping, has Phelan's pumping in
2 the Antelope Valley Groundwater Basin resulted in
3 greater pumping lift for other pumpers?

4 MR. DUNN: Objection. Lack of foundation.
5 Mr. Dunn. Lack of foundation.

6 MR. KUHS: Relevance.

7 THE COURT: Lay a foundation, please.

8 MS. AILIN: Your Honor, that's what I've
9 been attempting to do and I was told it was done last
10 November.

11 THE COURT: Not all of it with regard to
12 particular points. If you are talking about new areas,
13 go ahead.

14 BY MS. AILIN:

15 Q. Mr. Harder, are you familiar with the term
16 "pumping lift"?

17 A. I am.

18 Q. And what do you understand that term to mean?

19 A. Pumping lift is the distance between the pumping
20 groundwater level in the well and the land surface or
21 the point of end-use.

22 Q. And have you done any work in connection with
23 this case that has enabled you to form an opinion about
24 whether Phelan's pumping results in greater pumping lift
25 for other pumpers?

26 A. Well, in any pumping well, there is a cone of
27 depression that forms. And the cone of depression
28 emanates out from the pumping well. And the point at

1 which that cone of depression intercepts another pumping
2 well, that could be considered interference. And that
3 would create additional pumping lift in the other well.

4 So we have looked at this in terms of the pumping
5 test data from Well 14 parameters -- the aquifer
6 parameters that were obtained from that. And when you
7 plug that into standard hydrogeologic equations, such as
8 the Jacob's equation, and do the math, the cone of
9 depression from Well 14 is pumping approximately 1,100
10 gallons per minute, would emanate -- it would be less
11 than a foot within a mile, and negligible within
12 two miles.

13 Q. And are there any wells other than Phelan's wells
14 close enough to Well 14 for some other pumper's well to
15 be within that cone of depression around Well 14?

16 A. Not that I know of.

17 Q. Based on the work you have done in this case, has
18 Phelan's pumping caused other pumpers to have to lower
19 their pumps?

20 MR. KUHS: Objection.

21 MR. DUNN: Objection. Beyond the scope of
22 designation of this expert witness.

23 THE COURT: Overruled.

24 THE WITNESS: Not to my knowledge.

25 BY MS. AILIN:

26 Q. Based on the work you have done in this case, has
27 Phelan's pumping caused other pumpers to have to deepen
28 their wells?

1 A. Not to my knowledge.

2 THE COURT: When you say not to your
3 knowledge, does that mean you have not investigated or
4 the answer is no?

5 THE WITNESS: The answer is when we've done
6 the analysis, it would not result in a deepening of
7 their water table. And so, no, we have not investigated
8 if other wells have been required.

9 THE COURT: Okay. Thank you.

10 BY MS. AILIN:

11 Q. Based on the work you have done in this case, has
12 Phelan's pumping increased subsidence?

13 A. Again, given that cone of depression analysis,
14 the expected impact -- direct impact from pumping would
15 be expected to be negligible on the area where this
16 subsidence has occurred.

17 MR. KUHS: Objection.

18 THE COURT: Tell me what you mean by
19 negligible.

20 THE WITNESS: Well, in the cone of
21 depression, it extends out asymptotically, if that makes
22 sense, such that the drawdown approaches the original
23 horizontal line, but never gets there. It's infinity.
24 It's bit of a calculus term. But, basically, a
25 negligible -- there will always be some impact, it's
26 just going to be negligible -- if that makes sense.

27 THE COURT: Measurable?

28 THE WITNESS: Probably not measurable.

1 THE COURT: Okay.

2 BY MS. AILIN:

3 Q. Mr. Harder, assuming Phelan's pumping continues
4 at the levels that it has been in the past, would you
5 expect the impacts on other wells to be any different
6 from what you have testified they have been to date?

7 MR. DUNN: Objection. Lack of foundation.
8 The witness has not done the work.

9 THE COURT: He can answer if he has done the
10 work.

11 THE WITNESS: Well --

12 THE COURT: It's kind of a hypothetical
13 question. Go ahead.

14 THE WITNESS: Okay. When we look at the
15 hydrographs, Phelan's has been pumping from the Antelope
16 Groundwater Basin since the late 1980's. And they've
17 been pumping as much as -- greater than a thousand
18 acre-feet as early as the mid-90's and into the 2000's.
19 So, under that pumping regime, we have not seen any
20 significant impact on the hydrographs. In other words,
21 under that pumping regime, there has not been any
22 unsustainable downward decline in the hydrograph in the
23 Buttes subunit.

24 All things being equal or unchanged, I would
25 expect that -- if that condition conditioned into the
26 future, I would have no reason to think that it wouldn't
27 continue.

28 THE COURT: Even with the impact of an

1 ongoing drought?

2 THE WITNESS: Well, I might point to -- if I
3 could -- an exhibit for Phelan's Well 14, it's the
4 hydrograph. I'll have to find it. It's Exhibit 35
5 hydrograph. This is the hydrograph for Phelan's Well
6 14, and this was provided in prior testimony. The blue
7 line is the static non-pumping groundwater level, and
8 the red line is the pumping groundwater level.

9 And as you can see, since 2009, the static
10 groundwater level has been very stable. And that has
11 occurred through 2012, 2013, and into 2014, which is
12 after the 2011 wet year, so -- yes.

13 MS. AILIN: I have no additional questions
14 for Mr. Harder at this time.

15 THE COURT: Cross-examination?

16 MR. DUNN: Just briefly, Your Honor.

17 CROSS-EXAMINATION

18 BY MR. DUNN:

19 Q. Mr. Harder, the well operation by Phelan for Well
20 Number 14, when water is pumped from Well Number 14,
21 does that intercept any groundwater flow that would
22 otherwise reach into the Antelope area of adjudication?

23 MS. AILIN: Objection. Outside the scope of
24 direct.

25 THE COURT: I'll overrule.

26 THE WITNESS: It does.

27 BY MR. DUNN:

28 Q. And would that be true for the other Phelan

1 STATE OF CALIFORNIA)

2) SS.

3 COUNTY OF SANTA CLARA)

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6 I, PAMELA CARDIFF, DO HEREBY CERTIFY THAT THE
7 FOREGOING IS A FULL, TRUE AND CORRECT TRANSCRIPT OF THE
8 PROCEEDINGS HAD IN THE WITHIN-ENTITLED ACTION;

9 THAT, I REPORTED THE SAME IN STENOTYPE BEING
10 THE QUALIFIED AND ACTING OFFICIAL COURT REPORTER OF THE
11 SUPERIOR COURT OF THE STATE OF CALIFORNIA, IN AND FOR THE
12 COUNTY OF SANTA CLARA, APPOINTED TO SAID COURT, AND
13 THEREAFTER HAD THE SAME TRANSCRIBED INTO TYPEWRITING AS
14 HEREIN APPEARS.

15 DATED THIS 15TH DAY OF SEPTEMBER, 2015.

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PAMELA CARDIFF, CSR
CERTIFICATE NO. 11430

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