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1 **MR. MARTIN:** Okay.
2 Q. (By Mr. Martin) While we were off the
3 record, Ms. Hedges, you noted that this does not
4 include every feature of the Rosebud Mine, notably
5 you said it doesn't identify the Big Sky Mine, it
6 doesn't have the cumulative impact area and it
7 doesn't include, I will also say for the record,
8 every single feature that one might identify with a
9 map; is that right?
10 **A. Correct.**
11 Q. Let's go ahead and mark the document.
12 (Deposition Exhibit 5 marked for
13 identification.)
14 Q. (By Mr. Martin) Again, referring to
15 Exhibit 5, the map that we've been talking about.
16 What it does identify is the different areas,
17 doesn't it?
18 **A. It identifies the different areas of this,
19 of Western Energy's Rosebud Mine.**
20 Q. And we have Area B; is that correct? Do
21 you see that on the map?
22 **A. I do.**
23 Q. And you see Area F on the map?
24 **A. Yes.**
25 Q. And Area C is in between. Do you see

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1 those features identified on the map?
2 **A. Yes.**
3 Q. And do you have any reason to believe that
4 this map is inaccurate with respect to the
5 identification of those areas?
6 **A. I have no way to tell one way or the other
7 without spending more time with it.**
8 Q. So at least as you sit here today, you
9 can't identify a deficiency in terms of where those
10 areas are located; is that right?
11 **A. Right.**
12 **MR. SULLIVAN:** And I would object on the
13 basis of asked and answered.
14 Q. (By Mr. Martin) And, again, just for
15 purposes of the record, if you don't mind, based on
16 this map and looking at its legend, can you say for
17 the record how far away Area F is from Area B?
18 **A. A mile or two. I can't tell. I mean, I
19 see a legend but, you know, that's...**
20 Q. Is it fair to say it's over four miles
21 away?
22 **A. It's -- yes. No, it's -- I don't know. I
23 can't tell you for sure. Possibly.**
24 Q. Based on this map, isn't it apparent that
25 it's more than four miles away from Area B?

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1 **A. More than four miles? No. I don't think
2 that's apparent.**
3 Q. Would you say about four miles?
4 **A. It could be, uh-huh.**
5 Q. Okay. And Area C is between Area B and
6 Area F; is that correct?
7 **A. That's correct.**
8 Q. In response to my question about the
9 interface between Area F and Area B, you recounted
10 the regulation that governs material damage under
11 the Montana Surface Mining Act, didn't you?
12 **A. Correct.**
13 Q. And how would that apply vis-a-vis Areas B
14 and F?
15 **A. Because Area B is -- Area B and Area F are
16 within the cumulative hydrologic impact, or
17 cumulative impact area that has been determined for
18 the mine and they both affect some of the same
19 watersheds, which are outside the permit boundary.**
20 Q. And you're talking now about surface
21 waters; is that right?
22 **A. Surface and groundwaters.**
23 Q. And you're looking at the CHIA again. Can
24 you say for the record what document you're looking
25 at, that is to say what table or map that you're

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1 looking at from the CHIA?
2 **A. It's page 13-7 and it is Figure 5-1.**
3 Q. Is there a map in the CHIA that you would
4 take issue with?
5 **A. No. I'd have no reason to take issue with
6 them.**
7 Q. Was this concern about the interaction
8 between Area F and Area B addressed in MEIC's
9 comments?
10 **A. Yes, it was.**
11 Q. Can you show me where it was?
12 **A. It was a reference to our scoping
13 comments.**
14 Q. Can you describe that for the record?
15 **A. I'd have to see the scoping comments to
16 get them perfectly accurate. But it was a reference
17 to the fact that they needed to consider other areas
18 of the mine that were -- "where anticipated mining
19 could occur, which includes at a minimum the entire
20 projected lives through bond release of all
21 operations with pending applications and all
22 operations required to meet diligent development
23 requirements for leased federal coal for which there
24 is actual mine development information available."**
25 Q. Ms. Hedges, what did you just read from?

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1 knowledge?
 2 **A. To the best of my knowledge.**
 3 Q. To the best of your knowledge, yes?
 4 **A. Yes.**
 5 Q. Thank you.
 6 For purposes of the record, I'd like to
 7 clarify. I misspoke when I described our last
 8 exhibit and I indicated that all of the areas were
 9 areas of permitted mining. Am I right that Area F
 10 is a proposed area of mining as opposed to one
 11 that's been permitted?
 12 **A. It is an area where mining is anticipated.**
 13 Q. But no permit has been issued?
 14 **A. The permit has been applied for and is**
 15 **pending. DEQ is reviewing that now.**
 16 Q. And it's not been issued?
 17 **A. No.**
 18 **MR. MARTIN:** Off the record.
 19 (Discussion off the record.)
 20 (Deposition Exhibit 6 marked for
 21 identification.)
 22 Q. (By Mr. Martin) Ms. Hedges, we've laid
 23 out a map that's been marked for identification as
 24 Exhibit 6. You'll note in the bottom left-hand
 25 corner it has the designation Figure 8-5,

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1 Potentiometric Surface of the Rosebud Coal and
 2 Spoil. And I'll certify for the record that that is
 3 a document that was taken from the CHIA and I
 4 believe it's at page 13-21. And let's talk about
 5 where it came from.
 6 You have the CHIA in front of you, do you
 7 not, Ms. Hedges?
 8 **A. I do.**
 9 Q. And is this document the same map that
 10 appears within the CHIA at page 13-21?
 11 **A. Yes, it appears to be.**
 12 Q. I'll ask you, if you don't mind, if you
 13 would look at this map and review it. You'll see
 14 that there are certain lines that are drawn on the
 15 map. Do you know what those are?
 16 **A. This is the potentiometric surface of**
 17 **Rosebud Coal and Spoil plotted for monitoring well**
 18 **water levels at the Rosebud and Big Sky Mines in**
 19 **2012.**
 20 Q. And you know, don't you, what
 21 potentiometric contours are?
 22 **A. More or less. I am not a scientist. I am**
 23 **not an expert.**
 24 Q. But you're familiar with those sorts of
 25 contours, aren't you?

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1 **A. I have some familiarity.**
 2 Q. And do they give you an indication as to
 3 the direction of groundwater flow?
 4 **A. I believe that that's the purpose.**
 5 Q. And you'll see designations of Areas A, B,
 6 C on this map. Do you see that?
 7 **A. Yes.**
 8 Q. And you also see, do you not, a
 9 designation for Big Sky Mine?
 10 **A. Yes.**
 11 Q. Do you have any reason to believe that
 12 these potentiometric contours are not drawn
 13 accurately?
 14 **MR. SULLIVAN:** And before you answer, I'm
 15 going to object both on the basis of foundation
 16 in terms of the witness as not being advanced
 17 as an expert and, second, I'm not sure as to
 18 where this fits into the 26 issues that you've
 19 specified an organizational representative to
 20 appear this morning.
 21 Q. (By Mr. Martin) Okay, you can answer the
 22 question.
 23 **A. Can you repeat it?**
 24 **MR. MARTIN:** Go ahead.
 25 (Previous question read.)

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1 **A. I am not an expert so I have no way to**
 2 **know one way or the other.**
 3 Q. (By Mr. Martin) So is it fair to say that
 4 on that issue MEIC/Sierra Club has no position?
 5 **A. No, it is not fair to say.**
 6 **MR. SULLIVAN:** And I would say that that
 7 also calls for a legal conclusion, object on
 8 that basis.
 9 Q. (By Mr. Martin) So the accuracy of
 10 potentiometric contours is not something that you're
 11 able to testify about at this point in time; is that
 12 right?
 13 **A. I am not. I am not a hydrologist.**
 14 Q. And the organizations are not prepared at
 15 this point in time to contest the accuracy of those
 16 potentiometric contours; is that correct?
 17 **MR. SULLIVAN:** And I would object as being
 18 beyond the basis of the 30(b)(6) deposition.
 19 Q. (By Mr. Martin) You can answer the
 20 question.
 21 **A. Can you repeat it?**
 22 **MR. MARTIN:** Go ahead.
 23 (Previous question read.)
 24 **A. To the best of my knowledge, no.**
 25 Q. (By Mr. Martin) Would you agree with me

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1 that potentiometric contours tend to provide
2 evidence of the direction of groundwater flow?
3 **MR. SULLIVAN:** And, John, do you mind if I
4 have a standing objection on the same grounds
5 if you're going to pursue this potentiometric
6 map? I've stated objections as being on
7 foundation --
8 **MR. MARTIN:** That's fine.
9 **MR. SULLIVAN:** -- and also as beyond the
10 scope of the 30(b)(6) --
11 **MR. MARTIN:** That's fine.
12 **MR. SULLIVAN:** -- deposition notice.
13 **A. Can you repeat the question?**
14 **(Previous question read.)**
15 **A. I believe that's what they indicate.**
16 **Q.** (By Mr. Martin) And I'll invite your
17 attention to Area B. Do you see that designation?
18 **A. I do.**
19 **Q.** And can you discern from the
20 potentiometric contours the direction of groundwater
21 flow?
22 **A. No. I am just not an expert in this arena**
23 **and if I tried to guess, I would probably be in**
24 **error and I don't want to be in error. I would**
25 **probably want to seek expert advice.**

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1 **Q.** Okay. And let's talk about that for a
2 minute. Are you aware of any scientific evidence
3 that groundwater would flow from Area B to the west
4 toward Area F?
5 **A. I believe there are certain areas in which**
6 **the drainages do flow into the same drainage.**
7 **Q.** And, again, I'll invite your attention to
8 Exhibit 6. Can you point to one of those drainages?
9 **A. The Area B, if you look at all of Area B**
10 **and you go beyond this -- I would like to stop and**
11 **say that was the purpose of our complaint is we do**
12 **not believe that you have adequately shown what**
13 **Area F is going to do in relation to the impacts**
14 **from Area B. They are both potentially going to**
15 **impact the same watersheds and it is your burden to**
16 **show what that impact will be. And we do not**
17 **believe that that has been done in the record.**
18 **Q.** And you would agree with me that this
19 document is from the record; is that right?
20 **A. That is correct.**
21 **Q.** And with potentiometric contours, it does
22 give you an indication of the direction of
23 groundwater, doesn't it?
24 **A. That's -- Yes, I believe so.**
25 **Q.** Is there any evidence, any credible

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1 scientific evidence that would suggest to you that
2 groundwater from Area B would flow in the direction
3 of Area F?
4 **A. I believe that is your job to demonstrate.**
5 **Q.** And I appreciate the legal burden. But do
6 you know of any evidence that demonstrates to the
7 contrary?
8 **A. I'd have to look at the record. It's**
9 **possible that it is in the CHIA.**
10 **Q.** But you don't know?
11 **MR. SULLIVAN:** Objection, asked and
12 answered.
13 **MR. MARTIN:** She didn't answer the
14 question.
15 **Q.** (By Mr. Martin) You don't know, do you?
16 **A. The CHIA map indicates that there is a**
17 **hydrologic connection at some point, whether it's**
18 **ground or surface water, between these areas and**
19 **that was not analyzed in the CHIA.**
20 **Q.** Ms. Hedges, can you identify any map, any
21 place in the CHIA that even suggests that
22 connection?
23 **MR. SULLIVAN:** Objection, asked and
24 answered.
25 **A. Any map? I don't know of any, but I**

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1 **haven't looked closely at the maps because I am not**
2 **a hydrologist.**
3 **Q.** (By Mr. Martin) Ms. Hedges, if I
4 understood your testimony a moment ago, you
5 referenced what you described a, "a CHIA map," that
6 demonstrated a hydrologic connection between Area F
7 and Area B. Where is that map?
8 **A. That map -- well, the map -- Let me find**
9 **the map. Where is that map? These are my stickies.**
10 **The map is map 5.1, but it does not include Area F.**
11 **But Area F is within, as stated by DEQ in its**
12 **response to our interrogatories, their response**
13 **is -- if you'd like me to find them, I can -- there**
14 **is parts of Area F that are within the Area B**
15 **hydrologic impact areas.**
16 **Q.** Let me see if I understand your testimony.
17 I think your answer to my question is that Area B
18 and a part of Area F is within the cumulative impact
19 area; is that right?
20 **A. I believe that's stated correctly.**
21 **Q.** Okay. And so the basis for your testimony
22 that there is a hydrologic connection between Area F
23 and Area B is simply that a part of Area F is within
24 the cumulative impact area; is that correct?
25 **MR. SULLIVAN:** And I think that it

1 misstates the deponent's testimony.
 2 **MR. MARTIN:** And that's why I'm asking the
 3 question.
 4 Q. (By Mr. Martin) Answer the question.
 5 **A. DEQ in its response to our -- in**
 6 **Respondent's Response to Petitioners' First Set of**
 7 **Requests for Admissions and Requests for Production,**
 8 **there are a number of places in which DEQ identifies**
 9 **that portions of Area F are within the Area B area.**
 10 Q. And do you have any evidence anywhere in
 11 the CHIA or elsewhere that there is a hydrologic
 12 connection between Area B and Area F?
 13 **A. That is the purpose of a CHIA is to make**
 14 **that determination and that is not in the record.**
 15 **MR. MARTIN:** Read back the question.
 16 (Previous question read.)
 17 **MR. SULLIVAN:** And I object on the basis
 18 of asked and answered and argumentative.
 19 **A. There is a failure to meet your burden**
 20 **showing that there is no connection between the two**
 21 **of them.**
 22 Q. (By Mr. Martin) But am I right in saying
 23 that at this point in time you're not aware of any
 24 scientific information that there is a hydrologic
 25 connection between Area F and Area B?

1 **A. Oh, yes. Yes, it was.**
 2 Q. And you don't know at this point in time
 3 whether or not Exhibit 6 gives you an indication as
 4 to the direction of groundwater flow from Area B and
 5 specifically from AM4, do you?
 6 **A. Could you repeat that question?**
 7 Q. Why don't I rephrase it. I'm sorry.
 8 Do you know the direction of groundwater
 9 flow from the area that's designated as Area B
 10 and/or AM4?
 11 **A. I know that the CHIA, the written CHIA**
 12 **describes a lot of the groundwater flow as going**
 13 **towards East Fork Armells Creek, and there is a lot**
 14 **of places in the CHIA that describe groundwater flow**
 15 **in this area. Because I am not a hydrologist, I**
 16 **rely more on words than I do on potentiometric maps.**
 17 **I go to experts for that type of information.**
 18 Q. And have you been to an expert or seen
 19 words that would indicate to you that groundwater
 20 was flowing from Area B to Area F?
 21 **MR. SULLIVAN:** And I'm going to object to
 22 the form of the question on several bases.
 23 First, it's a compound question; second, it's
 24 confusing; and, third, we have not disclosed
 25 that we will be using any testifying experts in

1 **A. We have not seen any presented.**
 2 Q. I don't want to be argumentative. And I
 3 think what your testimony is is that there is not,
 4 to the best of your knowledge, any scientific
 5 evidence that demonstrates a hydrologic connection
 6 between Area B and Area F; is that right?
 7 **A. On the record? No, I don't believe there**
 8 **is any.**
 9 Q. Is there any elsewhere off the record?
 10 **A. Goodness sakes, I don't know.**
 11 Q. Okay. Have you worked at all with
 12 potentiometric contours?
 13 **A. No. I'm not a water, groundwater expert**
 14 **by any means.**
 15 Q. So is it fair to say you don't know the
 16 direction of the groundwater from the AM4 area
 17 within Area B; is that right?
 18 **A. It's listed in the CHIA, and I'd be happy**
 19 **to find it for you in the CHIA and read it back to**
 20 **you. That information, some of it is provided in**
 21 **the CHIA.**
 22 Q. And Exhibit 6 is taken from the CHIA as
 23 well; is that right?
 24 **A. Which one was Exhibit 6?**
 25 Q. It's this one.

1 this proceeding and to the extent the petition
 2 organizations have consulted with experts with
 3 their attorneys, that's attorney work product
 4 and otherwise privileged.
 5 Q. (By Mr. Martin) Well, let's clarify the
 6 question. Are you aware of any expert opinion that
 7 would suggest to you that groundwater flows from
 8 Area B to Area F?
 9 **A. I am not aware.**
 10 Q. And is there an indication someplace in
 11 the text that groundwater would flow from Area B to
 12 Area F?
 13 **A. I believe you are mistaken in how you are**
 14 **representing what you think is our position. Our**
 15 **position is that it is the area that is impacted, so**
 16 **it would be not that groundwater might flow**
 17 **underneath Area F from Area B, it is that the**
 18 **development of both areas has the potential to**
 19 **impact the hydrology in the area.**
 20 Q. Do they interact with one another?
 21 **A. They may.**
 22 Q. And what would make you say that?
 23 **A. Because they both lie within the**
 24 **cumulative impact area.**
 25 Q. And that's the only basis for that

1 testimony; is that right?
2 **A. It seems like a good reason.**
3 Q. But that's the only basis for your
4 testimony; is that right?
5 **A. That is what the law requires.**
6 Q. Is it correct that that's the only basis
7 for your testimony that these two areas at least in
8 part are within the cumulative impact area?
9 **A. Yes.**
10 Q. Let's go to the next exhibit.
11 **MR. SULLIVAN:** John, do you know where in
12 the CHIA it is, just to get our bearings?
13 **MR. MARTIN:** We will here in a moment.
14 (Deposition Exhibit 7 marked for
15 identification.)
16 Q. (By Mr. Martin) Ms. Hedges, we have a
17 document that's been marked for identification as
18 Exhibit 7. And if recollection serves, this is
19 actually a document, or I should say a map that you
20 referred to in your testimony a few minutes ago. It
21 is, according to the legend in the bottom left-hand
22 corner, Figure 5-1, locations and extents of surface
23 water and groundwater cumulative impact boundaries
24 and it is taken from page 13-7 of the CHIA. Could
25 you take a look at that document, please?

1 **hydrologic impact area that includes, based upon**
2 **DEQ's response to our interrogatories, it includes**
3 **portions of Area F. Both of those mine developments**
4 **could have an impact on the hydrology in the area**
5 **both surface and ground.**
6 Q. And I understand that that's the basis of
7 your testimony. Is it your position that DEQ did
8 not examine that issue?
9 **A. That is our position.**
10 Q. And as you sit here today, you don't know
11 whether Exhibit 6, the document that we looked at
12 just prior to this, really addresses that issue?
13 **A. It didn't appear to, because Area F wasn't**
14 **even marked on that map.**
15 Q. But there were potentiometric contours
16 that were drawn around Area F; is that right?
17 **A. DEQ declined in the record to analyze**
18 **Area F because it said that it was not anticipated.**
19 **We know that's part of the record.**
20 **MR. MARTIN:** Can you read back the
21 question?
22 (Previous question read.)
23 **A. Perhaps. I'd have to go back and look.**
24 Q. (By Mr. Martin) Let's do that.
25 **A. But DEQ did not identify Area F on the map**

1 **A. Yes.**
2 Q. Is this, in fact, a document that's taken
3 from the CHIA?
4 **A. Yes, it is.**
5 Q. And this was the document that you
6 referred to a few moments ago; is that right?
7 **A. Yes.**
8 Q. And just for clarity of the record, can
9 you explain what the red line depicts in this
10 exhibit?
11 **A. It's the groundwater cumulative impact**
12 **area.**
13 Q. And a few minutes ago you testified that
14 you believed that there were both surface and
15 groundwater connections between Area B and Area F.
16 Did I get that right?
17 **A. No, you did not.**
18 **MR. SULLIVAN:** And I'm going to object on
19 the basis of misstating the testimony.
20 **MR. MARTIN:** Fair enough.
21 Q. (By Mr. Martin) Is it fair to say that
22 you are uncertain as to whether or not there was a
23 connection between Area F and Area B?
24 **A. That is incorrect. I am certain that DEQ**
25 **has drawn a line on a map indicating the cumulative**

1 **or in the record because it declined to do so**
2 **intentionally.**
3 Q. All right. You see, don't you,
4 potentiometric contours that were drawn around
5 Area B, do you not?
6 **A. B, yes.**
7 Q. And do you see contours that were drawn
8 around the western portion of that exhibit?
9 **A. Yes.**
10 Q. And do they give you any indication as to
11 the direction of groundwater flow?
12 **MR. SULLIVAN:** I'm going to object on the
13 basis of foundation, and I'm also going to
14 object on the basis of a failure to identify
15 this as an issue in the notice, the 30(b)(6)
16 that was issued.
17 **MR. MARTIN:** Just for the record, we did
18 identify in Item 4 that the issue as between
19 Area B and Area F would be the subject of this
20 deposition.
21 **A. Uh-huh.**
22 Q. (By Mr. Martin) Now, going back to the
23 question, is there an indication as to the direction
24 of groundwater flow from the potentiometric
25 contours?

1 question.
 2 (Previous question read.
 3 **A. That is a very broad question and it is**
 4 **quite possible that we did in newsletters. I mean,**
 5 **I'm unclear on whether you mean formal writing to**
 6 **DEQ or general writing, for example, alerts to our**
 7 **members or news articles or anything that BLM was**
 8 **considering. That is a difficult question to answer**
 9 **because it's really outside the scope of what you've**
 10 **asked here.**
 11 **If you want what's in the record, then I**
 12 **can just point to the comments that we have**
 13 **submitted. But outside the record, that's too**
 14 **broad.**
 15 Q. (By Mr. Martin) Let's talk then about any
 16 writing that you addressed to DEQ.
 17 **MR. SULLIVAN:** And I'm going to object
 18 also on the basis that it does exceed the scope
 19 of the matters identified in the 30(b)(6)
 20 notice, that it is inherently too broad and,
 21 therefore, it's an inherently ambiguous and
 22 confusing question. With those objections to
 23 form, the deponent may answer.
 24 **A. I believe that based on what I know today,**
 25 **we filed comments within the comment periods that**

1 **A. Okay. Yes.**
 2 Q. And according to the legend here, that is
 3 the area for groundwater CIA; is that right?
 4 **A. Yes.**
 5 Q. And CIA, do you understand that to mean
 6 cumulative impact area?
 7 **A. Uh-huh.**
 8 Q. The answer is yes?
 9 **A. Yes. Sorry.**
 10 Q. And the dotted line that is in I guess a
 11 purple color, do you see that dotted line?
 12 **A. I do.**
 13 Q. And that is the cumulative impact area for
 14 surface water. Do you see that?
 15 **A. Yes, I do.**
 16 Q. Okay. And do you know roughly where
 17 Area F would be on this document?
 18 **A. To the best of my knowledge, Area F is out**
 19 **here.**
 20 Q. And if you don't mind, if you could draw
 21 on that document roughly where you think it is.
 22 **A. I just want to go on the record saying I**
 23 **haven't seen a map of Area F. We are looking**
 24 **forward to the release of the draft environmental**
 25 **impact statement soon, which will give us more**

1 **are allowed by law and I don't believe that we put**
 2 **anything else in writing. The only written**
 3 **interactions I had with DEQ were something like a**
 4 **request for an extension.**
 5 Q. (By Mr. Martin) Thank you. Let's go back
 6 to the document that was marked for identification
 7 as Exhibit 7. And then just for clarity of the
 8 record --
 9 **A. Is this 7? I can't see. I still can't**
 10 **see.**
 11 Q. Just for clarity of the record, can you
 12 identify what this document is?
 13 **A. This is Figure 5.1 in the CHIA that's**
 14 **entitled Locations and Extents of Surface Water and**
 15 **Groundwater Cumulative Impact Boundaries.**
 16 Q. Okay. And in your prior testimony, if I
 17 understood you correctly, you did not dispute the
 18 boundary that was drawn for purposes of the
 19 cumulative impact area; is that right?
 20 **A. To the best of my knowledge, that's right.**
 21 Q. And can you see the red line that's on
 22 Exhibit 7? Do you see that?
 23 **A. The pink line? Is this the one you're**
 24 **referring to?**
 25 Q. Pink.

1 **detail. So this is just my guesstimate.**
 2 **MR. MARTIN:** Let's go off the record.
 3 (Discussion off the record.)
 4 Q. (By Mr. Martin) Let the record reflect
 5 that while we were off the record the witness
 6 examined Exhibit 5 and you've circled an area on
 7 Exhibit 7 roughly where you believe Area F would be;
 8 is that right?
 9 **A. Correct.**
 10 Q. And in your prior testimony you indicated
 11 that there would be interaction between Area B and
 12 Area F with respect to surface waters. Did I get
 13 that right?
 14 **A. There would be interaction, yes, between**
 15 **the hydrology of -- the drainage area basically of**
 16 **ground and surface water for Area B with the**
 17 **drainage area of groundwater and surface water for**
 18 **Area F.**
 19 Q. And Area B, can you point to the streams
 20 that interact with Area B?
 21 **A. Area B flows into East Fork Armells Creek**
 22 **and I believe part of it, maybe, I have to look back**
 23 **into the CHIA, flows into Lee Coulee, which affects**
 24 **Rosebud Creek. But Area B then flows all the way to**
 25 **East Fork Armells, where it combines with West Fork**

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1 **Armells Creek to form Armells Creek lower down.**
2 Q. Okay. Well, first let's talk about Lee
3 Coulee. Are you familiar with any indication that
4 groundwater would flow from AM4 into Lee Coulee?
5 **A. We are concerned with the cumulative**
6 **impacts from Area B. Amendment 4 is just one small**
7 **amendment to the Area B permit.**
8 Q. And are you familiar with whether or not
9 groundwater would flow from AM4 to Lee Coulee; do
10 you know?
11 **A. I don't know the answer to that. It's**
12 **Area B that is the subject of our concern. This is**
13 **an amendment to that permit. It is not a permit**
14 **that stands on its own.**
15 Q. So the answer is you don't know as you sit
16 here today about the flow of groundwater from AM4
17 toward Lee Coulee, do you?
18 **A. I do not know.**
19 Q. Okay. Let's go back to the two surface
20 waters that you mentioned in addition to Lee Coulee.
21 One was West Fork Armells Creek. I gather from your
22 testimony that you believe that Area F would have an
23 impact on West Fork Armells Creek; is that right?
24 **A. That's my prediction. I also believe**
25 **there is a potential for it to impact East Fork**

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1 **Armells Creek, but that's -- we will see when they**
2 **come out with their draft environmental impact**
3 **statement what they think.**
4 Q. Okay. Well, let's stop there. As you sit
5 here today, are you aware of any evidence that
6 groundwater from Area F would flow to East Fork
7 Armells Creek?
8 **A. It has not been provided in the record.**
9 Q. And even outside the record, are you aware
10 of any evidence that would suggest that groundwater
11 or surface water from Area F would flow to East Fork
12 Armells Creek?
13 **A. Not being a hydrologist, I don't know the**
14 **answer to that. I don't know if it would or not.**
15 **That's the purpose of developing a record.**
16 Q. So the answer is you just don't know?
17 **A. I just don't know.**
18 Q. Okay. And let's also go back to Area B.
19 Are you aware of any scientific evidence that would
20 suggest that groundwater or for that matter surface
21 water from Area B would make its way to West Fork
22 Armells Creek?
23 **A. I'm not aware of any evidence.**
24 Q. And you mentioned that East Fork Armells
25 Creek and West Fork Armells Creek eventually meet to

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1 the north of the Rosebud Mine; is that right?
2 **A. Yes.**
3 Q. And do you know how far north?
4 **A. No. I'd venture a guess of probably ten**
5 **miles or so, but I could be right or wrong by quite**
6 **a few miles.**
7 Q. And you talked about or I asked for your
8 testimony concerning the surface water CIA; is that
9 right?
10 **A. Yes.**
11 Q. And do you see where the CIA is limited
12 with respect to East Fork Armells Creek and West
13 Fork Armells Creek?
14 **A. I do.**
15 Q. And that's well below the ten-mile
16 distance --
17 **A. That's well below. Can you repeat that?**
18 Q. I'm sorry. Let me rephrase that. That
19 boundary is well south of the point where East Fork
20 Armells Creek meets West Fork Armells Creek; is that
21 correct?
22 **A. Yes, but the water is the same and the**
23 **legal requirements for that water are the same when**
24 **it comes to impairment.**
25 Q. Am I right that you didn't dispute the

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1 boundary of the cumulative impact area; is that
2 right?
3 **A. I did not.**
4 Q. And the place where East Fork meets West
5 Fork of Armells Creek is well outside the cumulative
6 impact area; is that correct?
7 **A. Yes. According to this map, yes.**
8 Q. And that is in the record; is that
9 correct?
10 **A. Yes, that is in the record.**
11 Q. Ms. Hedges, just to refresh your
12 recollection, I'll refer again to Exhibit 5 which,
13 of course, is the map of the Rosebud Mine that
14 designates the different areas of existing or
15 proposed permits. Do you see where Area C is
16 located?
17 **A. Yes.**
18 Q. And can you describe where it's located
19 for the record?
20 **A. Just across East Fork Armells from Area B.**
21 Q. And is it fair to say that it's between
22 Area B and Area F?
23 **A. Yes.**
24 Q. And I think you indicated that you have a
25 copy of the CHIA in front of you; is that right?

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1 Q. (By Mr. Martin) Let's move on.
 2 Let's take a break here for just a few
 3 minutes, if you don't mind.
 4 (Break taken.)
 5 Q. (By Mr. Martin) Just a couple of
 6 follow-up questions. You indicated in your
 7 testimony that you were concerned with the entirety
 8 of Area B, not just AM4; is that right?
 9 **A. Yes.**
 10 Q. And we agree, don't we, that the
 11 evaluation that DEQ is required to conduct is with
 12 respect to AM4 and obviously it needs to consider
 13 cumulative impacts; is that right?
 14 **A. DEQ's obligation under the law is to look**
 15 **at the cumulative impacts and the burden is on the**
 16 **company to show that they will not have -- I can**
 17 **read you the text from the ARM.**
 18 Q. I'm not interested in --
 19 **A. Yeah. But the company has a burden to**
 20 **prove that they're not going to harm the waters in**
 21 **the area. I have to read this.**
 22 Q. Well, and let's --
 23 **A. But it's cumulative.**
 24 Q. Am I right that the evaluation that we're
 25 concerned with now is AM4 as opposed to past mining

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1 that may have occurred at Area B with the caveat
 2 that DEQ is obligated to consider cumulative
 3 impacts?
 4 **MR. SULLIVAN:** Well, I'm going to object
 5 because it calls for a legal conclusion.
 6 **MR. MARTIN:** Let me respond to that for
 7 purposes of the record. I'm reacting to an
 8 assertion from the witness and I think it's
 9 fair for me to walk through a door that she's
 10 opened. So for that reason, I'll continue on
 11 these lines when she's made an assertion of
 12 that nature. I think it's necessary that I
 13 react to it.
 14 **MR. SULLIVAN:** Well, without you and I
 15 becoming argumentative, we can each state our
 16 positions and objections. I believe that the
 17 question is objectionable and I've stated the
 18 basis.
 19 And I would also add that the further
 20 objection is, as I've stated before, that it
 21 exceeds the matters that have been identified
 22 in the 30(b)(6) Notice of Deposition.
 23 **MR. MARTIN:** Okay. Can you read back the
 24 question?
 25 (Previous question read.)

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1 **A. That is a caveat that we perhaps disagree**
 2 **on the scope of what that means. Your caveat seems**
 3 **to be the exception that swallows the rule.**
 4 **The law says, "The Department may not**
 5 **approve an application submitted unless the**
 6 **application affirmatively demonstrates and the**
 7 **Department's written findings confirm the hydrologic**
 8 **consequences and cumulative hydrologic impacts will**
 9 **not result in material damage to the hydrologic**
 10 **balance outside the permit area." And that includes**
 11 **existing and previous mining impacts from on the**
 12 **hydrology of the area.**
 13 Q. (By Mr. Martin) I'm not trying to make
 14 this more difficult than it sounds. I'm just trying
 15 to clarify for purposes of the record that the
 16 evaluation that DEQ was required to do and for which
 17 we submitted a PHC was for AM4 as opposed to past
 18 mining that might have occurred in Area B; is that
 19 right?
 20 **A. I believe that an amendment to an existing**
 21 **permit needs to consider the impacts from that**
 22 **permitted area, including the amendment.**
 23 Q. Okay. When you said it must include the
 24 impacts from that permitted area, am I to understand
 25 that in terms of the cumulative impact analysis, one

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1 must consider the area that was previously
 2 permitted; is that right?
 3 **A. Yes. The impacts from the area that is**
 4 **previously mined.**
 5 Q. But you're not suggesting that either
 6 Western Energy or DEQ was obligated to go back and
 7 reevaluate a permit that was granted and acted upon
 8 many years ago?
 9 **A. They are required to analyze the impacts**
 10 **of the activity from that permitted activity that**
 11 **could have a cumulative impact on the hydrology in**
 12 **the area when combined with the impacts from the**
 13 **amendment to that same permit.**
 14 Q. But it's not as if you're suggesting that
 15 DEQ is required to redo its permit analysis for the
 16 balance of Area B; is that right?
 17 **A. DEQ doesn't have to act as if Area B has**
 18 **never been mined, but DEQ does have to analyze the**
 19 **impacts for mining in Area B.**
 20 Q. And that's in terms of the cumulative
 21 impact analysis; is that right?
 22 **A. Yes.**
 23 Q. I look at Exhibit 5 and I see Area C is
 24 between Area B and Area F and from the passages that
 25 we just discussed a few minutes ago, DEQ also sees

1 that as something that deserves some consideration.
 2 As a layperson would you disagree with the notion
 3 that for there to be an impact from Area B on
 4 Area F, there would also have to be an impact on
 5 Area C?
 6 **A. No. I would disagree with that.**
 7 Q. And then just as the testifying witness on
 8 behalf of MEIC and the Sierra Club, do you know of
 9 any science that would support that disagreement?
 10 **A. Common sense would support that**
 11 **disagreement.**
 12 Q. And tell me what that common sense is.
 13 **A. Because they only share -- Area F and**
 14 **Area C only share a very small boundary. The**
 15 **remainder of Area F, according to the map that he**
 16 **has provided, has a much larger boundary that is not**
 17 **bounded by Area C, and so there is the possibility**
 18 **that water could flow off Area F either via ground**
 19 **or surface water and not have any interaction with**
 20 **Area C.**
 21 Q. Okay. And why don't we clarify this
 22 testimony. Where are you suggesting that the
 23 groundwater would come from Area B to make its way
 24 to Area F?
 25 **A. To clarify the testimony, I never said**

1 to the notice. The notice specifically
 2 addresses the interaction between Area B and
 3 Area F. I don't have another witness to ask.
 4 You've not designated an expert. This is the
 5 only witness testifying on behalf of your
 6 client. I have to ask the question of her.
 7 **MR. SULLIVAN:** Well, first of all, if we
 8 can get back to the protocol of making sure
 9 that when you're examining the designated
 10 witness that we're sure as to what matter
 11 you're examining her on, that would, I think,
 12 be a useful and required procedure, number one,
 13 and, number two, I haven't seen specifically
 14 where this item is included in your notice of
 15 deposition and, number three, she has no
 16 foundation and qualification for her to be able
 17 to be doing hydrogeological analysis.
 18 **MR. MARTIN:** And, you know, obviously
 19 she's the only witness that you've designated;
 20 is that right?
 21 **MR. SULLIVAN:** She is the witness and if
 22 you -- and certainly, John, if you want to
 23 ground this in the matters that you've
 24 identified as the representative of the
 25 organizations appearing here this morning, you

1 **groundwater from Area B would move to Area F.**
 2 Q. Well, let me ask the question then. Would
 3 groundwater make its way from Area B to Area F?
 4 **MR. SULLIVAN:** And I'm going to object on
 5 the same grounds as I've objected before, one,
 6 foundation for this witness in terms of her
 7 training and expertise, and also as beyond the
 8 scope of the matters identified in the 30(b)(6)
 9 deposition notice.
 10 **A. Water flows downhill and around obstacles**
 11 **and then water combines with water from other areas,**
 12 **and that could happen in this instance where water**
 13 **from Area B and water from Area F are both**
 14 **contaminated and enter the same hydrologic area.**
 15 Q. (By Mr. Martin) Can you draw on Exhibit 5
 16 where groundwater might potentially come from Area B
 17 and flow to Area F?
 18 **MR. SULLIVAN:** And I'm going to object on
 19 the same grounds and I'm also going to instruct
 20 the witness not to respond because it is beyond
 21 the scope of the 30(b)(6) deposition notice and
 22 it's beyond the scope of her training and
 23 qualifications, as the witness has stated.
 24 **MR. MARTIN:** Let me remind you that this
 25 is the witness that you designated in response

1 know, we can certainly take a look at that.
 2 **MR. MARTIN:** Okay. Let's look at Item
 3 Number 1 and I'll read it into the record.
 4 "The hydrologic interaction, including surface
 5 and groundwater impacts between Area B and
 6 Areas F or G." Now isn't that the subject
 7 matter that we're discussing right now?
 8 **MR. SULLIVAN:** That is.
 9 Q. (By Mr. Martin) Okay. Then let me ask
 10 the question. As the designated witness on that
 11 subject, can you point me in the direction -- can
 12 you write on this exhibit where it is that
 13 groundwater would make its way from Area B to Area F
 14 even hypothetically?
 15 **A. First, the burden is on you to show that**
 16 **this is not the case. Second, there is a map that**
 17 **draws a circle, as you have shown, around the**
 18 **cumulative impact area that shows that these two**
 19 **areas are affecting the same water bodies**
 20 **potentially, and you have failed to provide any**
 21 **analysis in the record regarding whether or not**
 22 **Area B and Area F water interacts with each other.**
 23 **Whether it's flowing towards the other or**
 24 **not is irrelevant. It is how they interact when**
 25 **they do combine and where they occurs. Your**

1 **definition of anticipated uses, it does not include**
2 **Area F and on page 7, number 4 --**
3 Q. You know, I'm going to interrupt you and I
4 have to ask that you answer the question. Are you
5 unable to even describe or draw on this exhibit a
6 hypothetical groundwater connection between Area F
7 and Area B?

8 **MR. SULLIVAN:** I object to the
9 interruption of the answer. The answer was
10 being responsive and it was describing as best
11 this witness with her qualifications could her
12 response to your question. And I would like to
13 have at least the courtesy of her being able to
14 make her response and you can follow up with
15 whatever questions you care to, but the
16 deponent should be allowed to fully answer a
17 question that's proffered.

18 **MR. MARTIN:** And in fairness, it was not
19 responsive to the question. It was a statement
20 of the general position that your client has
21 made.

22 Now, look, I don't like to interrupt
23 witnesses and I'm not going to make that a
24 practice, but this is unusual. I asked a
25 question. I'm not getting an answer.

1 **hydrologist, is what is in the record and DEQ's**
2 **record admits that it did not analyze this. So I**
3 **could give you an opinion and it would be**
4 **meaningless because I am not a hydrologist, I**
5 **haven't looked at the raw data, and it hasn't been**
6 **provided in the record.**

7 Q. And, Ms. Hedges, then is it fair to say
8 based on what you just described that as you sit
9 here today, you don't know of a way that groundwater
10 would interact between Areas B and F?

11 **A. It is not included in the record, so no.**

12 **MR. MARTIN:** Read back the question.

13 **A. So, no, it has not been included in the**
14 **record.**

15 Q. (By Mr. Martin) So the answer is you
16 don't know of any potential hydrologic impact
17 between Areas F and B?

18 **A. I don't know whether there is a potential**
19 **or not a potential because it hasn't been included**
20 **in the record.**

21 Q. Okay. Let's move on.

22 In various documents Sierra Club/MEIC has
23 indicated a concern for the impact of AM4 on Rosebud
24 Creek and its tributaries; is that right?

25 **A. Yes.**

1 **MR. SULLIVAN:** I object to the objection
2 to the answer. You know, you and I, John, can
3 sort this out, but I think the best way to do
4 it is to allow the witness to finish. It then
5 allows you to follow up with your questions --

6 **MR. MARTIN:** All right.

7 **MR. SULLIVAN:** -- and then we can move
8 forward with an appropriate record that we can
9 do with what we feel is appropriate.

10 Q. (By Mr. Martin) And, Ms. Hedges, if you
11 want to finish your answer, by all means, go ahead.

12 **A. Thank you. I would like to.**

13 **If you look on DEQ's response to our**
14 **interrogatories, our requests for response, if you**
15 **look on page 4, Request for Admission Number 3,**
16 **Number 4, and Number 6, Interrogatory Number 6, all**
17 **of those say that, "DEQ admits that the proposed**
18 **Area F permit areas are within the cumulative**
19 **hydrologic impact area, but DEQ's CHIA for**
20 **Amendment 4 did not address any of the potential**
21 **hydrologic impacts expected from the proposed**
22 **Area F. A portion of the currently proposed Area F**
23 **operation is within the cumulative hydrologic impact**
24 **area identified in DEQ's CHIA."**

25 **All I can go off of, because I am not a**

1 Q. What is that concern?

2 **A. The concern is that you failed to consider**
3 **the impacts from Area B, which you are amending the**
4 **permit on Rosebud Creek. It is that it's not**
5 **Amendment 4 per se, it is the cumulative impacts**
6 **from Area B that are impacting Lee Coulee and other**
7 **tributaries that go into the Rosebud.**

8 Q. And is it fair to say, without going
9 through what we've been through with respect to
10 Area F, you don't, as you sit here today, know the
11 direction of groundwater flow from AM4?

12 **A. I'm sure it's in, you know, there is some**
13 **evidence of that in the record and I could find it**
14 **for you if you're interested.**

15 Q. And in terms of the maps that we've showed
16 you with the potentiometric contours, that doesn't
17 tell you even the direction of the groundwater; is
18 that right?

19 **A. It gives some information regarding the**
20 **direction of the groundwater, but the hydrology in**
21 **that area is complex, as is the geology. And so the**
22 **potentiometric map is helpful but it is not a**
23 **complete analysis.**

24 Q. But you don't know as you sit here today
25 whether or not, for example, groundwater could make