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9	I N D E X				
10	CASE NUMBER 15309 CALLED				
11	CHEVRON U.S.A. INC. CASE-IN-CHIEF:				
12	WITNESS ROBERT (Rob) MORRISON				
13	By Mr. Feldewert	Direct 4	Redirect	Further	
14	-	DVAMINA	TON		
15	Examiner Dawson Examiner Jones	EXAMINAT 15 17	TON		
16					
17	WITNESS DR. ZAID PATRICK T	AHA		•	
18	By Mr. Feldewert	Direct 22	Redirect		
19		EXAMINAT	TON		
20	Examiner Dawson Examiner Jones	31 32			
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- 1 A. My name is Robert Bruce Morrison, Jr. I am
- 2 employed by Chevron as a land representative in the area
- 3 of Lea County, New Mexico.
- 4 Q. And how long have you been a land representative
- 5 with Chevron?
- 6 A. For two years.
- 7 Q. And do your responsibilities include the Permian
- 8 Basin of New Mexico?
- 9 A. Yes, they do.
- 10 Q. And have you previously testified before this
- 11 Division and had your credentials as an expert in
- 12 petroleum land matters accepted and made a matter of
- 13 public record?
- 14 A. I have.
- 15 Q. Are you familiar with the application filed in
- 16 this case?
- 17 A. I am.
- 18 Q. And have you conducted a study or -- are you
- 19 familiar with the status of the lands in the subject
- 20 area?
- 21 A. I am, yes.
- MR. FELDEWERT: I would tender Mr. Morrison
- 23 as an expert in petroleum land matters.
- 24 EXAMINER JONES: He is so qualified.
- THE WITNESS: Thank you.

- 1 O. Would you please turn to what has been marked as
- 2 Chevron Exhibit 1. First identify it and then explain
- 3 what it shows.
- A. Yes. Here we have a Midland map depicting the
- 5. east half of sections 29 and 32, which border the Texas
- 6 border and township 26 south, 33 east. Chevron is the
- 7 owner of all the working interests throughout these two
- 8 sections.
- 9 Q. Now we have the east half of 29 and then what is
- 10 essentially the east half of 32; is that right?
- 11 A. Essentially, yes.
- 12 Q. Section 32 sits right along the Texas, New Mexico
- 13 border?
- 14 A. Correct.
- 15 Q. How many leases are involved in what I'll call
- 16 the east half acreage?
- 17 A. There are three leases made up of two federal
- 18 leases and one state lease, the state lease being
- 19 located in section 32.
- 20 Q. If I turn to what has been marked as Chevron
- 21 Exhibit 2, does this identify for the Examiners the
- 22 three leases that you just identified?
- 23 A. It does. If you will notice the legend in the
- 24 left-hand corner, the lease at the top in the northeast
- 25 quarter of section 29, indicated in blue, is a federal

- lease; the lease in the southeast quarter of 29,
- 2 indicated in green, is another federal lease; and the
- 3 lease indicated with the color purple in the
- 4 northeast -- excuse me -- the north half of the
- 5 northeast of 32 and lots 1 and 2 of section 32 is a
- 6 state lease.
- 7 Q. I see that you have once again outlined the
- 8 proposed non-standard project area.
- 9 A. I have, indicated by the thick black line
- 10 outlining the east half of section 29 and 32.
- 11 Q. And then what is the significance of four lines
- 12 that we see within that outlined area?
- 13 A. So the four lines indicate the four wells. The
- 14 hard lines indicate the wells that have been drilled to
- 15 total depth across all six quarter, quarters. And the
- 16 dashed lines indicate the wells that are proposed to be
- 17 drilled.
- 18 All four wells -- the surface hole of all four
- 19 wells has been batch drilled, and we are moving onto --
- 20 forgive me -- if we move back, moving from west to east,
- 21 the wells are numbered 5H through 8H. We have drilled a
- 22 5H and the 8H, 2TD and we are moving back to the west to
- 23 drill the 7H and the 6H.
- Q. Is that part of the batch drilling?
- 25 A. It will be part of the batch drilling, yes.

- 1 Q. Now, what is the significance of the yellow
- 2 square at the top of this exhibit?
- 3 A. The yellow square indicates the four-well pad
- 4 from which all four wells -- the surface holes for all
- 5 four wells have been located.
- 6 Q. Okay. If I turn to what has been marked as
- 7 Chevron Exhibit 3, does it comprise the approved C-102s
- 8 for each of the four wells?
- 9 A. Correct. All four wells located in the Bone
- 10 Spring Pool, yes.
- 11 Q. And they are all located in the same Bone Spring
- 12 Pool?
- 13 A. Yes.
- Q. So these APDs provide the Examiner with the
- 15 current pool name as well as the pool code?
- 16 A. For the guidance of Paul Kautz, yes.
- 17 Q. This particular pool is it subject to the
- 18 division of statewide rules?
- 19 A. It is. 40-acre oil spacing.
- Q. And each of these wells is currently dedicated to
- 21 roughly 257 acres, correct?
- 22 A. That's correct.
- Q. And in the event that this application is
- 24 granted, will these APDs be amended to reflect
- 25 dedication of all four wells to the proposed

- 1 non-standard project area?
- 2 A. Correct. The C-102s will indicate the dedicated
- 3 acres of 474.85, I believe.
- 4 Q. Again, corresponding to the total acreage
- 5 comprising the three leases that are involved?
- 6 A. Correct.
- 7 Q. And if I turn to what has been marked as Chevron
- 8 Exhibit 4, is this just simply the sundry notice
- 9 describing the approval of the batch drilling that you
- 10 discussed earlier?
- 11 A. Correct. This indicates the approval of the
- 12 batch drilling of the four surface hole locations. As
- indicated in the second page -- excuse me.
- The first well, the 5H was drilled 2TD. And
- 15 subsequently the 6H, 7H, and 8H surface holes were batch
- 16 drilled. And once we reached the 8H, the 8H was drilled
- 17 to TD in the six quarter, quarter.
- 18 Q. Okay. Now, given the uniformity of the leases
- 19 across the acreage and your desire to locate all the
- 20 facilities at one location, did Chevron have discussions
- 21 with both the BLM and the New Mexico State Land Office
- 22 about a communitization agreement for this east half
- 23 area?
- 24 A. They have. We did.
- Q. And what is -- and what was BLM's -- well, what's

- 1 the nature of the discussion with the BLM?
- 2 A. The BLM requested as large a communitization
- 3 agreement as possible. Due to the distribution of the
- 4 leases and the presence of state acres, they ended up
- 5 endorsing a path forward of an east half comm agreement.
- 6 However, such approval is subject to a completion report
- 7 of all four wells.
- Q. Have you had extensive discussions with the BLM?
- 9 A. We have.
- 10 Q. Over a long period of time?
- 11 A. Yes.
- 12 Q. And is this the path that they told you that they
- 13 wanted Chevron to proceed on?
- 14 A. It is.
- 15 Q. Did you also then have discussions with the New
- 16 Mexico State Land Office?
- 17 A. We did.
- 18 Q. And are they willing to approve an
- 19 communitization covering this east half acreage?
- 20 A. They are. And they have indicated by their
- 21 certificate of approval.
- Q. And has that been marked as Chevron Exhibit 6?
- 23 A. That is correct.
- Q. I skipped one.
- 25 If I turn to what has been marked as Chevron

- 1 Exhibit 5, is this a copy of the communitization
- 2 agreement that has been discussed both with the BLM --
- 3 extensively with the BLM and with the New Mexico State
- 4 Land Office?
- A. It is.
- O. Did the New Mexico State Land Office indicate
- 7 what would be necessary from an ONGARD standpoint to
- 8 implement this east half communitization?
- 9 A. They did. They indicated that in order to set up
- 10 multiple -- commit multiple wells to a communitization
- 11 agreement, the wells -- the acres dedicated to a given
- 12 well must reflect identical acres under a
- 13 communitization agreement.
- 14 Q. Is that why the company is here with the Division
- 15 seeking approval on a non-standard project that
- 16 corresponds with the communitized area?
- 17 A. Yes, that is correct.
- 18 Q. Looking at this communitization agreement, it
- 19 identifies -- first off, is this a form that you were
- 20 directed to use by the BLM and the state land office?
- 21 A. Yes, I was.
- 22 Q. And if I look down at paragraph 1, does it
- 23 reflect that it's limited to the Bone Spring Formation?
- 24 A. That is correct.
- 25 Q. If I then flip over to page 2, were there any

- 1 particular modifications to this agreement that the BLM
- 2 required?
- 3 A. Yes, there were.
- 4 Q. And where is that located?
- 5 A. That is located within provision 5, beginning
- 6 with "all proceeds" as it relates to unleased mineral
- 7 acres.
- 8 Q. And that was a provision that the BLM required to
- 9 be added to this form?
- 10 A. That is correct.
- 11 Q. And then if I look at page 3, does this identify
- 12 the effective date for the communitization agreement?
- 13 A. "September 1st or at the onset of production of
- 14 the communitized substances, whichever is earlier."
- 15 Q. And that is located in paragraph 10?
- 16 A. That is correct, paragraph 10.
- Q. And then, finally, we see towards the end of this
- 18 communitization agreement that you have an Exhibit A
- 19 that corresponds with your depiction of the east half
- 20 acreage; is that correct?
- 21 A. That is correct.
- Q. And then in Exhibit B, it identifies how the
- 23 production is to be allocated amongst the three leases?
- 24 A. That is correct.
- Q. And as you mentioned if I turn to Chevron

- 1 Exhibit 6, Commissioner Dunn has already provided final
- 2 approval of this communitization agreement as reflected
- 3 on Exhibit 6, correct?
- 4 A. Correct.
- 5 Q. And I believe -- kind of closing a loop on
- 6 this -- you've already discussed that the BLM indicated
- 7 that they would not approve it until we get completion
- 8 reports?
- 9 A. That's correct.
- 10 Q. Okay. But they have indicated to you that this
- is the path that they want the company to move forward?
- 12 A. It is the path that they wanted the company to
- 13 move forward with and that the agreement looked okay,
- 14 but approval in written form would not be provided until
- 15 the wells were completed.
- 16 Q. Who are you dealing with down there at the BLM?
- 17 A. Specifically related to the communitization
- 18 agreement, Ed Fernandez. But the matter was discussed
- 19 in early February at a meeting with Ed Fernandez, George
- 20 McDonnell, Steve Cathie, Duncan Witlock -- I believe
- 21 that was all.
- Q. And to your knowledge have there also been
- 23 discussions between the BLM and the state land office
- 24 about this acreage?
- 25 A. There has been some joint communication with the

- 1 state land office and the BLM Carlsbad office.
- 2 Q. Okay. You mentioned that the pool that's
- 3 involved here is subject to the statewide rules
- 4 requiring 40-acre spacing?
- 5 A. That is correct.
- Q. In preparation for this hearing, did the company
- 7 identify the effective parties in the 40-acre tracts
- 8 surrounding your proposed non-standard project area?
- 9 A. We have.
- 10 O. Turn to what has been marked as Chevron
- 11 Exhibit 7; is this an affidavit prepared by my office
- 12 with attached letters providing notice of this hearing
- 13 to these offsetting affected parties?
- 14 A. That's correct.
- 15 Q. Finally, Mr. Morrison, were Chevron Exhibits 1
- 16 through 6 prepared by you or compiled under your
- 17 direction or supervision?
- 18 A. They were.
- 19 MR. FELDEWERT: Mr. Examiner, I move Chevron
- 20 Exhibits 1 through 7, which includes my notice
- 21 affidavit.
- 22 EXAMINER JONES: Exhibit 1 through 7 will be
- 23 admitted.
- 24 (Whereupon, CHEVRON U.S.A. INC. Exhibits 1
- 25 through 7 were offered and admitted.)

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will be completed simultaneously, with completions

25

- 1 commencing in late July. So the onset of production is
- 2 anticipated sometime in late August, early September.
- 3 EXAMINER DAWSON: And you have already
- 4 drilled the 5H and the 8H?
- 5 THE WITNESS: Correct.
- 6 EXAMINER DAWSON: Because I notice that that
- 7 state lease had an April 1st expiration date, so you
- 8 commenced drilling before April 1st on those wells?
- 9 THE WITNESS: We had. In fact, we had
- 10 another well that was drilled and producing prior to
- 11 that April 1st date.
- 12 EXAMINER DAWSON: Okay. Are there any other
- 13 existing wells within that acreage now?
- 14 THE WITNESS: Within the east half acreage?
- 15 EXAMINER DAWSON: Yes.
- 16 THE WITNESS: No, sir.
- 17 EXAMINER DAWSON: It looks like there's a
- 18 well down in the southeast quarter of 29 on this map on
- 19 Exhibit 2?
- THE WITNESS: There is no production.
- 21 EXAMINER DAWSON: That well is not producing
- 22 anymore?
- THE WITNESS: Correct.
- 24 EXAMINER DAWSON: And then that well looks
- 25 like it was dry-holed up in the northeast quarter?

- 1 THE WITNESS: That's correct.
- 2 EXAMINER DAWSON: Again, you guys will
- 3 notify us if there are any interwell communication
- 4 issues?
- 5 THE WITNESS: Absolutely.
- 6 EXAMINER DAWSON: That's all the questions I
- 7 have.
- 8 EXAMINATION BY EXAMINER JONES
- 9 EXAMINER JONES: Mr. Morrison, who pays for
- 10 these wells? Who's the cost interest people, just
- 11 Chevron?
- THE WITNESS: Yes, that's it. 100 percent
- 13 Chevron U.S.A.
- 14 EXAMINER JONES: And the lessees of record
- in the project area, all Chevron?
- 16 THE WITNESS: The record title for the
- 17 state -- excuse me -- for the southeast of 29 has been
- 18 filed with the BLM. It's before the Fluidstine for
- 19 review and we anticipate the approval of the assignment
- 20 of record title within the next month.
- 21 But Chevron has had 100 percent working
- 22 interest and 100 percent operating rights for over a
- 23 year now. Just some clean up work.
- 24 EXAMINER JONES: Yeah. So in the southeast
- 25 of 29, who is the record title owner right now before

- 1 this assignment happens?
- THE WITNESS: So EOG was the record title
- 3 owner. They have actually signed --
- 4 EXAMINER JONES: They have signed it?
- 5 THE WITNESS: Yes, and it has been sent to
- 6 the BLM for approval.
- 7 EXAMINER JONES: Okay. So the BLM is
- 8 recording it?
- 9 THE WITNESS: Yes, sir.
- 10 EXAMINER JONES: And on the comm agreement
- 11 that's -- by that time -- the state land office comm
- 12 agreement required the record title owners to sign. So
- 13 they required EOG to sign?
- 14 THE WITNESS: No, they did not.
- 15 EXAMINER JONES: They didn't?
- 16 THE WITNESS: No, as it was indicated that
- 17 we are the 100 percent record title owner. At the time
- 18 it was prepared, we had the executed record title --
- 19 assignment of record title from EOG, but it had been
- 20 filed of record with the BLM at the time.
- 21 EXAMINER JONES: Okay. Are there any
- 22 overrides in this?
- THE WITNESS: Yes, sir, there are. And they
- 24 will be -- until the approval by the BLM, they will have
- 25 to be paid identical to that of the BLM per the

- 1 reserving -- or the creating document.
- 2 They will be paid basically unreduced until
- 3 the BLM approves the comm agreement, which allows us to
- 4 pay override and royalty owners in the same manner with
- 5 which we pay the federal government.
- 6 EXAMINER JONES: I think I understood a
- 7 little bit of that. Everything mainly on the federal
- 8 leases or --
- 9 THE WITNESS: They are only located in the
- 10 northeast guarter of section 29. The remainder of the
- 11 leases, the federal lease in the southeast of 29 and the
- 12 state lease in section 32 are free of burdens.
- 13 EXAMINER JONES: So they are listed in the
- 14 comm agreement --
- 15 EXAMINER DAWSON: Yes.
- 16 THE WITNESS: Yes, sir.
- 17 EXAMINER JONES: So they know about this --
- 18 THE WITNESS: They --
- 19 EXAMINER JONES: They know about this or
- 20 they are contractually covered by this?
- 21 THE WITNESS: Correct.
- 22 EXAMINER JONES: Okay. Are there any other
- 23 Division permits pertaining to this area that's already
- 24 been obtained by non-standard locations, non-standard
- 25 spacing, any of that stuff; in the east half here

- 1 there's nothing, right?
- THE WITNESS: No.
- 3 EXAMINER JONES: Okay. And so Paul Kautz or
- 4 the Hobbs district office knows about this; is that
- 5 correct?
- 6 THE WITNESS: Paul Kautz was made aware of a
- 7 previous plan to create a whole section super-comm and
- 8 an enlarged project area. We have not revisited the
- 9 issue since we reduced it from 949 to 474.
- 10 EXAMINER JONES: Okay. So there's no --
- 11 they are going to wait for all wells to file a
- 12 completion report and then they will go ahead and ratify
- 13 the comm agreement?
- 14 THE WITNESS: Correct.
- 15 EXAMINER JONES: Record it, I guess.
- 16 THE WITNESS: Examiner, could you re-ask
- 17 your question regarding the overriding royalty owners?
- 18 I want to make sure that we have an understanding.
- 19 EXAMINER JONES: Okay.
- 20 Are they aware -- and in what method would
- 21 they be made aware of the combination of the acreage
- 22 that they have interest in with this other acreage?
- 23 THE WITNESS: They will receive notice of
- 24 that by division order, internal division order to the
- 25 owners of interest, and will be paid unreduced until the

- 1 approval of the -- the approval of the communitization
- 2 agreement by the deal in Carlsbad, at which time another
- 3 division order will be submitted that shows their
- 4 proportionally reduced interest per the approved
- 5 communitization agreement.
- 6 EXAMINER JONES: Thank you.
- 7 THE WITNESS: Yes, sir.
- 8 EXAMINER JONES: Just trying to build a
- 9 record here.
- 10 THE WITNESS: Good. I wanted to make sure
- 11 we got that built.
- 12 EXAMINER WADE: Want to take a break --
- 13 EXAMINER JONES: No questions?
- 14 EXAMINER WADE: -- before I ask any
- 15 questions?
- 16 EXAMINER JONES: Yes. If it is okay, we
- 17 will take a ten-minute break.
- 18 (Brief recess.)
- 19 EXAMINER JONES: Let's go back on the
- 20 record. And I don't think we have any more questions
- 21 for this witness.
- MR. FELDEWERT: Okay. We will call our next
- 23 witness.
- 24 ZAID PATRICK TAHA
- 25 having been first duly sworn, was examined and testified

- 1 as follows:
- 2 DIRECT EXAMINATION
- 3 BY MR. FELDEWERT:
- 4 Q. Good morning.
- 5 A. Good morning.
- 6 Q. Would you please state your name and identify by
- 7 whom you are employed and in what capacity?
- 8 A. Sure. My name is Zaid Patrick Taha and I'm
- 9 employed by Chevron. I am a geologist.
- 10 Q. How do you spell your last name?
- 11 A. T-a-h-a, Taha.
- 12 Q. And, Mr. Taha, how long have you been a
- 13 geologist?
- 14 A. With Chevron eight-and-a-half years.
- 15 Q. Have you had the opportunity to previously
- 16 testify before the Division?
- 17 A. No, I haven't.
- 18 Q. Would you provide the examiners with your
- 19 educational background.
- 20 A. Sure. The last degree I got was a Ph.D in
- 21 geology at Rice University.
- 22 Q. And when was that?
- 23 A. It was 2007 when I finished.
- Q. So you have been employed with Chevron since that
- 25 time?

- 1 A. Yes.
- Q. As a geologist?
- 3 A. Yes.
- Q. Have your responsibilities included the Permian
- 5 Basin?
- 6 A. They have.
- 7 Q. And are you a member of any professional
- 8 affiliations or associations?
- 9 A. Yes. The Geologist Society of America on and off
- 10 for the last ten years; continuous for the last three
- 11 years.
- 12 Q. Okay. Are you familiar with the application
- 13 filed in this case?
- 14 A. Yes.
- 15 Q. Have you conducted a geologic study of the
- 16 subject area?
- 17 A. Yes, I have.
- 18 MR. FELDEWERT: I tender Mr. Taha as an
- 19 expert witness in Petroleum geology.
- 20 EXAMINER JONES: Are you a member of the
- 21 Society of Petroleum Geologists?
- 22 THE WITNESS: In the past, I have been a
- 23 part of the AAPG.
- 24 EXAMINER JONES: And are you in the labs
- 25 with Chevron or are you in a team?

- 1 THE WITNESS: I'm in a team. I'm in the
- 2 development team here. So I'm a development geologist
- 3 imbedded with the team that's developing the Salado Draw
- 4 acreage.
- 5 EXAMINER JONES: He is so qualified.
- 6 Q. (By Mr. Feldewert) And by the Salado Draw
- 7 acreage, you're talking about the subject acreage of the
- 8 testimony here today?
- 9 A. This is a portion of the larger Salado Draw
- 10 development acreage.
- 11 Q. Okay. What is the target of the wells that have
- 12 been discussed here today?
- 13 A. The target is the upper Avalon unit; that's our
- 14 current development in this area.
- 15 Q. And that's within the Bone Spring Formation?
- 16 A. That is. It's at the very top. You will see, if
- 17 I can direct your attention to where I think you are
- 18 going, that we have BSGL at the top, Bone Spring line.
- Q. So we are going to move to Chevron Exhibit No. 8.
- 20 A. And just below that, we start at the upper
- 21 Avalon. There just wasn't enough space to put "Upper
- 22 Avalon" there, to kind of orient you.
- Q. Why don't you describe for the record Chevron
- 24 Exhibit 8, and then identify what is shown on this
- 25 particular exhibit.

- 1 A. Sure. It's difficult to put an A and A Prime
- 2 when you are designating a cross section. And,
- 3 unfortunately, I left those out here. So let me orient
- 4 you another way.
- We have the Porter Brown well to the northwest
- 6 and Madera Malcolm well to the southeast. These are the
- 7 two closest wells to the cross -- to the subject area.
- Q. And one of those wells is actually in Texas,
- 9 right?
- 10 A. Yes, one of those wells is just across the border
- 11 in Texas. It is in section 5.
- 12 The Porter Brown well is drilled by Chevron,
- 13 2012; and the Madera Malcolm well is an older well
- 14 drilled in '81. In terms of logs we have here, we were
- 15 missing the density log for the Madera Malcolm well. So
- 16 for continuity, I just indicated a gamma ray log on the
- 17 left-hand side and the neutron log, neutron porosity log
- 18 on the right-hand side.
- 19 And what I want to show here is continuity of the
- 20 stratography across the subject area.
- 21 Q. Okay. Starting at the -- if I am looking at the
- 22 left-hand side, starting at the top, why don't you just
- 23 describe what the lines indicate.
- A. Sure. So the Bone Spring line is the top of the
- 25 Bone Spring. 20 to 40 feet below that you get into the

- 1 Upper Avalon.
- 2 The Upper Avalon net pay interval in this case is
- 3 about 220 feet thick across the entire area.
- Q. So you have a line there that is BSGL, and that's
- 5 the Upper Bone Spring?
- 6 A. Right, correct.
- 7 Q. And then you have a line here in green, and that
- 8 is the Lower Avalon?
- 9 A. That is another development target for us.
- 10 Another 200-to-250 feet of net pay for a second
- 11 development target. And below that, we have the first
- 12 Bone Spring. And we have yet another target there.
- At the very base, you'll see WFMP, the Wolfcamp.
- 14 So that's the base of the Bone Spring.
- Q. And based on your analysis, what do you observe
- 16 about the continuity of these target formations across
- 17 the proposed non-standard project area?
- 18 A. They appear to be continuous, based upon the
- 19 stratography, based upon the wire line logs and based
- 20 upon seismic data.
- 21 Q. Have you also examined the structure of the Bone
- 22 Spring in this area?
- 23 A. I have.
- Q. Have you observed any faults or pinch-outs or
- 25 other geologic impediments that will prevent this

- 1 acreage from being developed with full section
- 2 horizontal wells?
- 3 A. I have observed the fault. I haven't observed
- 4 any geologic pinch-outs or anything that would be an
- 5 impediment to development of all the acreage across
- 6 here.
- 7 Q. Now have you examined this fault?
- 8 A. I have.
- 9 Q. And in your opinion, is it going to be an
- 10 impediment or is it an impediment to the development of
- 11 this area?
- 12 A. It is not.
- 13 Q. Why don't we turn to what's been marked as
- 14 Chevron Exhibit 9. Would you please identify it and
- 15 explain how it relates to your opinion about what you
- 16 label on here as a minor fault.
- A. Sure. Let me describe this briefly, what we're
- 18 looking at here. We have a legend here showing depth at
- 19 TTV SubC. So we are looking at the eastern half of
- 20 section 29 and 32.
- 21 The highest -- structurally the highest point is
- 22 about 5,700 feet TTV SubC and the lowest is about
- 23 5,900 feet. So we have about 200 feet of structural
- 24 depth across this area, 1 to 3 degrees depending on
- 25 where you are at.

- 1 Q. To the south --
- 2 A. To the southeast.
- We have one fold. I know I have two little red
- 4 lines here -- it's an echelon fold. So there's a --
- 5 there's an overall fault in the northeastern section of
- 6 section 29, the eastern half of section 29 --
- 7 northwestern rather. And there's a little offset and
- 8 there's a second fault.
- 9 That second small fault has the greatest amount
- 10 of throw. We've drilled a well through there, the
- 11 Salado Draw 29 5H well, and we had no problems remaining
- 12 in zone the entire way.
- 13 Q. So you've actually drilled a well through the
- 14 fault that you label here as a minor fault?
- 15 A. Yes.
- 16 Q. And do you see any concerns with drilling the
- 17 remaining wells across this area?
- 18 A. No. In fact, we've drilled a second well. We've
- 19 drilled the 8H well on the eastern side. And we're
- 20 currently drilling the 7H well and going to follow that
- 21 up with the 6H well.
- 22 Q. Anything else with respect to this exhibit?
- 23 A. I guess the only other point I would make here is
- 24 the net pay in this interval is about 220-feet thick and
- 25 the maximum displacement longest fault is 110 feet.

- 1 Q. If I then turn to what's been marked as Chevron
- 2 Exhibit 10, is this a further exhibit that analyzes this
- 3 area, in particular the minor fault?
- 4 A. Yes.
- 5 Q. And why don't you identify this exhibit for us
- 6 and explain what it shows.
- 7 A. Sure. Let me orient you here. So the 29 5H well
- 8 that I mentioned, which is on the eastern side of
- 9 Exhibit 9 -- sorry -- rather, on the western side of
- 10 section -- the eastern half of section 29.
- 11 This is the seismic cross section indicating both
- 12 the entire stratography from the top to the base of the
- 13 Bone Spring. And it has the pilot hole for the 29 5H on
- 14 the far right, and we have the horizontal itself
- 15 crossing the entire -- the entire seismic interval here.
- In terms of color-coding this, the gamma ray --
- 17 according to the pilot hole, we encounter carbonate and
- 18 we confirmed that with mud logs. So we know we have
- 19 carbonate at the very base. At no point along the
- 20 horizontal did we encounter carbonates.
- So we never dipped out of the net pay interval,
- 22 highlighted here as the Upper Avalon pay zone on the
- 23 right-hand side.
- 24 The fault can be seen about 200 -- occurring at
- 25 about 2000 feet into the lateral. And the gamma ray

- 1 curve indicates continuity on one side and the other
- 2 side of the fault.
- And I guess the only other thing I would point
- 4 out here is, based upon the stratography -- because the
- 5 upper Avalon is not our only target -- we have pretty
- 6 continuous beds across the entire interval and no other
- 7 faults.
- 8 Q. And this then further reflects that despite this
- 9 minor fault your well remained in the zone along the
- 10 entire interval?
- 11 A. It did.
- 12 Q. Based on your analysis, Mr. Taha, would the
- 13 slight fault depicted on Chevron Exhibits 9 and 10
- 14 impact the ability of the wells drilled in this enlarged
- 15 project area to develop and produce the Bone Spring
- 16 Formation?
- 17 A. We do not believe it will.
- 18 Q. And in your opinion, will the leases that
- 19 comprise the proposed non-standard project area
- 20 contribute to production in proportion to the acreage
- 21 contribution of each of these?
- 22 A. We feel they will.
- Q. And in your opinion, will the approval of this
- 24 application be in the best interests of conservation and
- 25 the prevention of waste and the protection of

- 1 correlative rights?
- 2 A. We feel that it will.
- Q. Were Chevron Exhibits 8 through 10 prepared by
- 4 you or compiled under your direction and supervision?
- 5 A. Yes, they're prepared by me.
- 6 MR. FELDEWERT: Mr. Examiner, I move the
- 7 admission into evidence of Chevron Exhibits 8
- 8 through 10.
- 9 EXAMINER JONES: Exhibits 8 through 10 are
- 10 admitted.
- 11 (Whereupon, CHEVRON U.S.A. INC. Exhibits 8
- 12 through 10 were offered and admitted.)
- MR. FELDEWERT: And that concludes my
- 14 examination of this witness.
- 15 EXAMINATION BY EXAMINER DAWSON
- 16 EXAMINER DAWSON: Good morning, Mr. Taha.
- 17 THE WITNESS: Good morning.
- 18 EXAMINER DAWSON: The question I have,
- 19 you're drilling these mile-and-a-half laterals, correct?
- THE WITNESS: Yes.
- 21 EXAMINER DAWSON: How much does it cost to
- 22 drill one of those mile-and-a-half laterals; do you have
- 23 any idea?
- 24 THE WITNESS: I do. Give me a second. It
- 25 should be about 2.9 million.

- 1 EXAMINER DAWSON: 2.9 million?
- THE WITNESS: Yes.
- 3 EXAMINER DAWSON: So the 5H is in production
- 4 now?
- 5 THE WITNESS: No. As indicated, by the
- 6 previous -- by Rob Morrison, we are going to zipper frac
- 7 all four wells at the same time.
- 8 EXAMINER DAWSON: What is your estimation on
- 9 the ultimate recovery from these wells?
- 10 THE WITNESS: I am not the reservoir
- 11 engineer. My understanding is it's between -- in terms
- of oil equivalent, it's going to be 200- to 250,000.
- 13 But, as I said, I am not the expert on that. I'm not
- 14 the reservoir engineer.
- 15 EXAMINER DAWSON: That should be more than
- 16 enough to pay it out, then, for the drilling costs.
- I have no further questions. Thank you.
- 18 EXAMINATION BY EXAMINER JONES
- 19 EXAMINER JONES: So where did the Abo go in
- 20 this area?
- 21 THE WITNESS: What's that?
- 22 EXAMINER JONES: The Abo is missing -- I'm
- 23 just kidding you. It's the Delaware Basin -- correct?
- 24 -- so there is no Abo.
- THE WITNESS: Right.

- 1 EXAMINER JONES: You go straight from the
- 2 Bone Spring into the Wolfcamp?
- 3 THE WITNESS: Right.
- 4 EXAMINER JONES: Are you guys interested in
- 5 the Wolfcamp down here?
- THE WITNESS: We are. And we have an
- 7 expiration well in the works. But in terms of
- 8 development wells, we are only targeting the Upper
- 9 Avalon, Lower Avalon, Brislin, and the North Spring --
- 10 Brislin Spring at the moment.
- 11 EXAMINER JONES: Geologically, can you see
- 12 the need to drill more wells than the two that -- in
- other words, do you need to drill wells at a lot denser
- 14 spacing, smaller acreage per well?
- 15 THE WITNESS: Chevron appears to be drilling
- 16 about as denser spacing as I've seen anywhere in the
- 17 basin. To the south, COG has drilled wells at 330
- 18 spacing.
- 19 But I have seen the results on three
- 20 wells -- they have six wells lined up; I have seen the
- 21 results on three of those wells. They are early and
- 22 they would not be factored in -- they have not been on
- 23 production long enough to be able to get a good feel for
- 24 communication between the wells and what the EURs would
- 25 be. So they are certainly in our sites, we are looking

- 1 at those wells. But for our purposes, we made the
- 2 decision to go with 8 wells per session.
- 3 EXAMINER JONES: So you are not bringing a
- 4 case today, I quess, for the west half of those two
- 5 sections. But what do you think geologically for over
- 6 on the west half?
- 7 THE WITNESS: It looks pretty continuous.
- 8 In terms of sign-offs, you have to keep a mile
- 9 distance -- we ensure we keep a mile distance between
- 10 completions and drilling operations. So we will be
- 11 drilling that as our pad number 4. This is pad
- 12 number 2. So we'll step away and drill a third pad
- 13 somewhere else.
- 14 EXAMINER JONES: Okay. A mile away?
- 15 THE WITNESS: Yes.
- 16 EXAMINER JONES: So that -- doing all the
- 17 fracs at once, you can --
- THE WITNESS: We try to keep a mile between
- 19 those operations just to ensure that we would not --
- 20 for the purposes of safety and de-risking the area.
- 21 EXAMINER JONES: It looks like -- is it true
- 22 that it's dipping to the south a bit?
- 23 THE WITNESS: It is. So these wells were --
- 24 if I recall, we are about 70 feet deeper at the toe than
- 25 we were at the heel.

- 1 EXAMINER JONES: Is that optimum for
- 2 drilling?
- 3 THE WITNESS: It is optimum for drilling
- 4 along the lateral, to ensure that we can get casing over
- 5 to the end.
- 6 EXAMINER JONES: And for a gas well, it
- 7 would be good, you can flow it out --
- 8 THE WITNESS: Yes.
- 9 EXAMINER JONES: -- but for producing
- 10 liquids, you kind of like your heel of the well to be
- 11 lower, wouldn't you?
- 12 THE WITNESS: I've heard various arguments
- and I've seen data to indicate that you get a better
- 14 well drilling toe up and toe down. So to me, it's
- 15 inconclusive.
- 16 EXAMINER JONES: Okay.
- 17 THE WITNESS: I know our production
- 18 engineers would prefer we drill toe up. But the geology
- 19 just doesn't allow us to do that in this case.
- 20 EXAMINER JONES: And the faults, what was
- 21 the geologic environment that caused the faults?
- 22 THE WITNESS: Well, you have a number -- you
- 23 have some deep-seated faults here and down at Silurian
- 24 and in the Devonian. So I think it's a continuation. I
- 25 think you have reactivation of faults over time. These

- 1 line up pretty well with deeper seated faults that we
- 2 see. So ongoing thrusting of the Awadgatar Orogeny, I
- 3 think probably produced -- it certainly has created
- 4 stress and it's allowed faulting to occur. You can get
- 5 both small reverse and small normal faults.
- 6 EXAMINER JONES: So Pennsylvanian time is
- 7 the oldest you would see them?
- 8 THE WITNESS: No. We see them all the way
- 9 down into the ore division. These are older --
- 10 EXAMINER JONES: Youngest would be the Lower
- 11 Permian.
- 12 THE WITNESS: Early Paleozoic.
- 13 EXAMINER JONES: But stand-up wells are the
- 14 way to go here and you don't want to drill wells at
- 15 different angles, I mean for stress purposes or --
- 16 THE WITNESS: No. It's optimal. I mean, we
- 17 have drilled a well east, west, and it had poor
- 18 production.
- 19 EXAMINER JONES: Okay.
- 20 THE WITNESS: And the few wells that have
- 21 been drilled east, west in this area, by us and other
- 22 operators, appear to have had fairly poor production
- 23 with respect to north, south wells in the immediate
- 24 vicinity.
- 25 EXAMINER JONES: And you didn't want to put

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8	I, ELLEN H. ALLANIC, New	Mexico Reporter CCR					
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