

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

ORIGINAL

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION FOR
THE PURPOSE OF CONSIDERING:

Case No: 14584

APPLICATION OF EOG RESOURCES, INC.,
FOR AN ORDER AUTHORIZING THE DRILLING OF WELLS
IN THE POTASH AREA, EDDY COUNTY, NEW MEXICO.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING EOG RESOURCES INC

BEFORE: TERRY WARNELL, Technical Examiner
DAVID K. BROOKS, Legal Examiner

December 16, 2010
Santa Fe, New Mexico

This matter came on for hearing before the New
Mexico Oil Conservation Division, TERRY WARNELL, Technical
Examiner, and DAVID K. BROOKS, Legal Examiner, on Thursday,
December 16, 2010, at the New Mexico Energy, Minerals and
Natural Resources Department, 1220 South St. Francis Drive,
Room 102, Santa Fe, New Mexico.

REPORTED BY: Irene Delgado NM CCR 253
Paul Baca Professional Court Reporters
500 Fourth Street, NW, Suite 105
Albuquerque, NM 87103
505-843-9241

A P P E A R A N C E S

FOR THE APPLICANT:

HOLLAND & HART LLP
OCEAN MUNDS-DRY
110 N. Guadalupe, Suite 1
Santa Fe, New Mexico 87501
505-988-4421

INDEX

WITNESSES:

PAGE

DOUGLAS HURLBUT

Direct Examination by Ms. Munds-Dry	03
Examination by Examiner Warnell	08

DON G. GLANTON

Direct Examination by Ms. Munds-Dry	09
-------------------------------------	----

DARYL J. SIEPENS, JR.

Direct Examination by Ms. Munds-Dry	20
Examination by Examiner Warnell	30
Further Exam by Examiner Warnell	40

STEVE L. MUNSELL

Direct Examination by Ms. Munds-Dry	32
Examination by Examiner Warnell	37

EXHIBITS

Exhibits 1 through 2 Admitted	08
Exhibits 3 through 10 Admitted	20
Exhibits 11 through 16 Admitted	30
Exhibits 17 through 19 Admitted	37

REPORTER'S CERTIFICATE

1 EXAMINER WARNELL: That brings us to case Number
2 14584, Application of EOG Resources Inc. for an order
3 authorizing the drilling of wells in the Potash Area, Eddy
4 County, New Mexico.

5 Call for appearances.

6 MS. MUNDS-DRY: Ocean Munds-Dry, with the law firm
7 of Holland and Hart LLP. I represent EOG Resources
8 Incorporated, and I have four witnesses this morning.

9 EXAMINER WARNELL: Four witnesses. If the witnesses
10 could come up front so the court reporter can --

11 EXAMINER BROOKS: Nobody representing Potash?

12 EXAMINER WARNELL: She smiles. Please state your
13 names.

14 MR. HURLBUT: Douglas W. Hurlbut.

15 MR. GLANTON: Don Glanton.

16 MR. MUNSELL: Steve Munsell.

17 MR. Siepens: Jay Siepens.

18 (Witnesses duly sworn.)

19 MS. MUNDS-DRY: With your permission, Mr. Examiner,
20 I will call Mr. Hurlbut.

21 DOUGLAS W. HURLBUT

22 (Having been sworn, testified as follows:)

23 DIRECT EXAMINATION

24 BY MS. MUNDS-DRY:

25 Q. Would you please state your full name for the

1 record?

2 A. Douglas W. Hurlbut.

3 Q. Where do you reside?

4 A. Midland, Texas.

5 Q. By whom are you employed?

6 A. EOG Resources, Inc.

7 Q. How are you employed?

8 A. As a petroleum landman.

9 Q. Have you previously testified before this division?

10 A. Yes, I have.

11 Q. Were your credentials reviewed and accepted as a
12 matter of record?

13 A. Yes, they have been.

14 Q. Are you familiar with the applications or the
15 application that EOG has filed?

16 A. Yes, I am.

17 Q. Are you familiar with the status of land in the
18 subject area?

19 A. Yes, I am.

20 MS. MUNDS-DRY: Mr. Warnell, we tender Mr. Hurlbut
21 as an expert in petroleum land matters.

22 EXAMINER WARNELL: So recognized.

23 Q. Mr. Hurlbut, would you briefly state for the
24 Examiner what you seek from this application?

25 A. Well, approval to drill a Parkway 23, State Com Well

1 Number 2H the 3H and also the Parkway 23 State Well Number
2 4H.

3 Q. Is this area where EOG has proposed to drill these
4 wells in the potash area as defined by ROLMD?

5 A. Yes, they are.

6 Q. Would you please turn to what's been marked as EOG
7 Exhibit Number 1 and review that for the examiners.

8 A. This is a plat that basically shows our Section 23,
9 Section 23 of 19 South, 29 East, Eddy County. And this is a
10 state section comprised of the federal state leases, and we
11 are the operator of the majority of all the lands in that
12 section.

13 Q. Is there a joint operating agreement in place in
14 this section?

15 A. Yes, there is.

16 Q. Is EOG the operator?

17 A. Yes, ma'am.

18 Q. Is there any potash leases that you're aware of in
19 that section?

20 A. There are no potash leases. In fact, that yellow
21 line, I had checked all that, and there are no potash leases
22 within that nine sections.

23 Q. So there are no potash leases within a mile?

24 A. Correct.

25 Q. Is there a potash mine in that section?

1 A. Well, appears to be one that was an old abandoned
2 mine.

3 Q. Do you happen to know the name of that potash mine?
4 I think it has several names.

5 A. I can't remember what the name of it is.

6 Q. Is it the HB Mine? Does that ring a bell? If you
7 don't know, that's fine.

8 A. No.

9 Q. If you would review for the examiners the oil and
10 gas development that is taking place in Section 23.

11 A. Okay. There are currently a couple of wells that
12 are producing in that section. There is a Chi-operated well
13 that's in the northwest corridor of the southeast corridor.
14 It's Bone Springs test, and there is a well that EOG drilled
15 back about 2004, and the surface location is in the Northeast
16 Corridor of the Southwest Corridor, and it's a directional
17 drill down to the morrow, and the bottomhole is over there on
18 the southeast of the northwest corridor. That's currently
19 producing.

20 Q. And are there any inactive or plugged wells?

21 A. Yeah. There is a -- a PNA well that's located in
22 the Northwest Corridor of the Southwest Corridor.

23 Q. Now, indicated on here, Mr. Hurlbut, I believe there
24 are three horizontal wells. Are those the three wells that
25 are the subject of EOG's application?

1 A. Correct.

2 Q. And as to EOG's exhibiting active wells to the
3 morrow, would that well -- did that benefit from a waiver
4 from a potash company?

5 A. Yes, it did.

6 Q. Who who granted that waiver?

7 A. I think it was Intrepid.

8 Q. And what about the potash development in this area?
9 I believe you said that there is an abandoned mine?

10 A. Correct. There is an abandoned mine, and there is,
11 you know -- and I understand from other people talking that
12 there -- that the -- I guess the mine where Intrepid's
13 intention is to do a solution mine on some of this acreage on
14 or in the old mine area at some time. I don't know, because
15 nobody knows anything about it really.

16 Q. Okay. If you turn, Mr. Hurlbut, to what's been
17 marked as Exhibit Number 2. Is this the notice packet
18 including the affidavit of notice, the letter that was sent
19 to Intrepid giving them notice of this hearing, along with
20 the green card showing the evidence of the mailing and the
21 affidavit of publication?

22 A. Yes, it is.

23 Q. Were Exhibits 1 and 2 either prepared by you or
24 compiled under your direction and supervision?

25 A. Yes, they were.

1 MS. MUNDS-DRY: Mr. Examiner, we move the admission
2 of Exhibits 1 and 2 into evidence.

3 EXAMINER WARNELL: Exhibits 1 and 2 are admitted.
4 (Exhibits 1 and 2 offered and admitted.)

5 MS. MUNDS-DRY: And I have nothing further for
6 Mr. Hurlbut.

7 EXAMINER WARNELL: Thank you. Mr. Brooks?

8 EXAMINER BROOKS: No questions.

9 EXAMINATION

10 BY EXAMINER WARNELL:

11 Q. Mr. Hurlbut?

12 A. Yes, sir.

13 Q. Kind of a general question, I guess. I'm surprised
14 that Intrepid isn't here. Have they expressed agreement with
15 this or disagreement or have --

16 A. Well, that --

17 Q. Have they expressed --

18 A. -- discussion is going to come next, I think. Donny
19 Glanton is here.

20 Q. I don't want to steal your thunder. I'm sorry.

21 MS. MUNDS-DRY: Mr. Glanton has all the answers to
22 your questions.

23 THE WITNESS: He is the one that's been in
24 correspondence with them, Donny has.

25 EXAMINER WARNELL: All right. Very good. Well then

1 let's let the case take its course. I have no questions.

2 THE WITNESS: Okay.

3 MS. MUNDS-DRY: With that, we call Donny Glanton.

4 DON G. GLANTON

5 (Having been sworn, testified as follows:)

6 DIRECT EXAMINATION

7 BY MS. MUNDS-DRY:

8 Q. Good morning.

9 A. Good morning.

10 Q. Would you please state your full name for the
11 record?

12 A. It's Don G. Glanton. G-l-a-n-t-o-n.

13 Q. And where do you reside, Mr. Glanton?

14 A. Midland, Texas.

15 Q. By whom are you employed?

16 A. EOG Resources.

17 Q. What do you do for EOG?

18 A. My title is senior lease operations right-of-way
19 representative. My primary responsibilities are I handle
20 like surface activities for the company related to oil and
21 gas development, such as establishing locations, securing
22 right-of-ways, those matters. And at the time that this
23 business was taking place, I was also filing applications for
24 permits to drill.

25 Q. Mr. Glanton, have you previously testified before

1 the Division?

2 A. No, I have not.

3 Q. Would you please review your education and work
4 history?

5 A. Okay. I attended one college in Weatherford, Texas,
6 Texas A&M University in College Station. I did not obtain an
7 undergraduate degree. I entered into the oil and gas
8 business in 1981 with Mitchell Energy in their land
9 department and worked with Mitchell through 88 in their land
10 department, as well as their lease operations department. In
11 88 I exited the oil and gas industry and went into some other
12 lines of work. And then in 95 I came back into the oil and
13 gas industry. When I moved to Midland, Texas, I became a
14 part owner of a company in Midland. In 97 we sold that --
15 that business, and then I went to work for an entity called
16 Altura Energy in their land department in 97. Altura, in
17 2000, was acquired by Occidental Petroleum. I worked with
18 Occidental Petroleum in their land department, and that was
19 until 2005. At that time I was hired by EOG to work in their
20 land department under the responsibilities I described
21 previously.

22 Q. And, Mr. Glanton, are you the one in fact who is
23 responsible for filing the APDs for these applications in
24 this case?

25 A. Yes.

1 MS. MUNDS-DRY: Mr. Warnell, we would tender
2 Mr. Glanton as an expert in lease operations and oil and gas
3 permitting issues.

4 EXAMINER WARNELL: So recognized.

5 Q. Mr. Glanton, if you would please turn to EOG Exhibit
6 Number 3, identify and review this set of documents for the
7 examiners.

8 A. Okay. This document is the approved -- the
9 division-approved APD associated with the Parkway 23 State
10 Com 2H, along with the -- with the C-102 which describes the
11 well located as being in the north half/north half of that
12 section.

13 Q. And is this well, has it been proposed as a standard
14 bottomhole location?

15 A. Yes.

16 Q. And let's turn to Exhibit Number 4. What is this
17 document, set of documents?

18 A. Exhibit Number 4 is the approved, division-approved
19 APD for the Parkway 23 State Com 3H. Attached with it is the
20 C-102 describing the dedicated acreage as being the south
21 half of the north half.

22 Q. And again, has this well been proposed as a standard
23 bottomhole location?

24 A. Yes.

25 Q. And what is EOG Exhibit Number 5?

1 A. Exhibit 5 would be the division-approved APD for the
2 Parkway 23 State 4H along with the C-102 depicting the
3 dedicated acreage as being the south half/south half of
4 Section 23.

5 Q. And what is the primary objective of all three of
6 the proposed wells?

7 A. Be the Bone Spring.

8 Q. And when did you file these applications for permits
9 to drill?

10 A. These were filed July 29, 2009.

11 Q. And you reference in your testimony, Mr. Glanton,
12 that all of these APDs have been approved?

13 A. Correct.

14 Q. After you filed these APDs or after you saw that
15 they were approved, did you have a discussion with the
16 district office regarding the process to be followed in
17 R-111-B?

18 A. Yes. Yes, I did. Just kind of in an abundance of
19 caution, I contacted the district office concerning the
20 approval to get more information from them with the knowledge
21 at the time they were filed that we were well within the
22 R-111-B boundary.

23 Q. And did you discuss at that time that you believe
24 notice needed to be sent to any potash companies that had
25 leases within a mile and also to the State Land Office and

1 the BLM?

2 A. That is correct. That discussion was had, and the
3 State -- excuse me -- the district office did initiate that
4 action.

5 Q. And did you notify any potash companies pursuant to
6 our --

7 A. I did, by certified mail, we contacted -- because of
8 the knowledge there wasn't any potash leases in that area, we
9 contacted both major players in the southeast being -- Mosaic
10 being one and Intrepid being the other.

11 Q. And what is EOG Exhibit Number 6?

12 A. Exhibit Number 6 would be a letter to IMC Potash
13 that was sent to them which basically set out an explanation
14 of what we were -- what we were planning and proposing in
15 Section 23. There was a similar letter sent associated with
16 all three wells, so the individual letter for all three wells
17 that was mailed to IMC to explain our project.

18 Q. And did you also send this same letter to Mosaic?

19 A. Yes. Yes, we did.

20 Q. And --

21 EXAMINER WARNELL: Question, excuse me.

22 MS. MUNDS-DRY: Yes, Mr. Warnell?

23 EXAMINER WARNELL: IMC is now Intrepid?

24 MS. MUNDS-DRY: Yeah.

25 A. Well, I believe that's incorrect. I believe IMC is

1 actually Mosaic. I believe.

2 Q. Oh, okay.

3 A. If you look at Mosaic's letter, which is the next
4 exhibit, they -- they explain they are formerly IMC Potash.

5 Q. So IMC is now Mosaic?

6 A. That's correct. I may have made that confusion in
7 our previous discussion.

8 Q. And so then let me make sure then, to clarify for
9 the record then, a similar letter then was sent to
10 Intrepid?

11 A. That is correct.

12 Q. For all three of the wells?

13 A. That is correct.

14 Q. And then what is Exhibit Number 7?

15 A. Exhibit 7 is a letter back from Mosaic, which you
16 can see they recognize the receipt of application from us
17 related to our three well proposals. And basically they
18 responded that they had no standing in this particular
19 township, and that it would probably better serve to contact
20 Intrepid for their response.

21 Q. Okay. And then what is Exhibit Number 8?

22 A. Exhibit 8 would be the Intrepid response. Again,
23 their response basically said that they did object to our
24 drilling of the wells due to their reason of us being located
25 a quarter mile to open mine workings in measured ore, and

1 that would be their response concerning all three well
2 locations.

3 Q. Okay. And after you received this letter from
4 Intrepid, did you have any further contact with anyone at
5 Intrepid?

6 A. We did. Later we actually drove -- "we" being
7 myself and our land manager, Patrick Tower, and Mr. J.
8 Siepens, who is here to testify, met with a mine engineer,
9 Tom McGuire, with Intrepid, on March 30 and discussed our
10 plans of development in Section 23.

11 Q. And so you presented your proposed well during that
12 meeting to Mr. McGuire?

13 A. We did.

14 Q. And what happened during those discussions? What
15 did you learn from Mr. McGuire?

16 A. Well, Mr. McGuire, we sat down with him and laid our
17 maps out and kind of showed him what we are proposing with
18 our horizontal wells. His comment which, stuck with us, is
19 that any plans that they would have in the future to conduct
20 any mining activities, such as solution mining of that
21 abandoned mine, would not be affected by our proposal, that
22 our well locations were located up-dip of that mine.

23 So we felt that was very encouraging news related to
24 the fact that we knew that they were considering the solution
25 mining effort.

1 Q. Based on that conversation, then, if you could turn
2 to what's been marked as EOG Exhibit Number 9 and identify
3 and review this document.

4 A. Right. You know, in our discussions, in our
5 meetings, you know, we have explained we did not receive the
6 waiver from the corporate office, and that we discussed how
7 we could secure that waiver. And Mr. McGuire told us, he
8 said, "Why don't you go ahead and resubmit that letter, that
9 waiver letter, but send it to my attention, and then I will
10 visit with the appropriate officials in their corporate
11 office to discuss our proposal."

12 Q. And is Exhibit Number 9 then the copy of the letter
13 that you sent to Mr. McGuire?

14 A. That is correct.

15 Q. And again you are just asking for their consent to
16 drill these wells?

17 A. Right.

18 Q. And then once you received this letter, what was
19 Intrepid's response at that point?

20 A. At some point thereafter I received a contact call
21 from a landman with Intrepid named Katie Keller. And
22 basically she wanted to ask me questions about our leasehold,
23 and why we picked those locations, and that she was going to
24 prepare something and mail to me. And one of the things that
25 she discussed is that this waiver that they may be willing to

1 grant may be conditioned on us moving our locations and
2 signing a letter which they prepared regarding the solution
3 mining project.

4 Q. And did she send that letter or that information to
5 you?

6 A. Yes, that -- that came later by e-mail, which did --
7 it set out basically that understanding. They had proposed
8 some alternate locations for all three well locations, and
9 then they had drafted a letter for us to consider signing on
10 behalf of their solution mining group.

11 Q. And once you received that information, did EOG
12 review the proposed waiver letter from Intrepid and the
13 alternative locations?

14 A. Yes. Yes. I met with the team, and we discussed
15 obviously the locations, and then additionally the letter, so
16 this was discussed with our team.

17 Q. And what did EOG decide to do with that proposal
18 from Intrepid?

19 A. The decision was that a couple of the locations --
20 and Mr. Siepens, who will be our witness following me, has
21 more explanations on the well location shifts, but a couple
22 of locations, extreme north, extreme south could be adjusted
23 as per their recommendation. The well in the middle, the 3H
24 well, their proposal would not work with our planned
25 development, and obviously the letter which they had provided

1 us would be something that we would not be willing to sign.

2 Q. Okay. So at that -- at that time, did EOG pursue
3 these APDs, or did you -- did you move on to other things?

4 A. Yeah. Basically, you know, we had other projects
5 working, and our emphasis shifted a different direction, so
6 this was kind of put back on the backburner, and at that time
7 that was the decision we made.

8 Q. Okay. Let's back up to the -- we were discussing
9 earlier your conversation with the district office.

10 A. Yes.

11 Q. And you were -- you were concerned about the R-111
12 procedures being followed?

13 A. Uh-huh.

14 Q. And was it your understanding that the district
15 office then also contacted the Bureau of Land Management and
16 State Land Office to notify them of these applications?

17 A. Yes.

18 Q. And to determine whether they were in LMR or buffer
19 zone?

20 A. Yes.

21 Q. And let's go ahead then and look at Exhibit
22 Number 10.

23 A. Okay.

24 Q. What are these documents?

25 A. This is the response from both the State and the BLM

1 with respect to our proposed locations responding to the
2 inquiry about the buffer zone and the LMR.

3 Q. And so each of these documents then is for the 2H,
4 3H, and 4H, from the State Land Office and the Bureau of Land
5 Management?

6 A. Yes.

7 Q. And what did the State Land Office indicate as to
8 the 2H, 3H, and 4H?

9 A. Well, the State Land Office response is that -- and
10 you guys can look -- but basically their response was that we
11 were in the LMR on the 4H well and the 3H well, and not in
12 the LMR on the 2H well. And then they checked the answer on
13 only the 2H well that we were -- that, yes, we were inside
14 the buffer zone.

15 Q. Okay. And what did the BLM say about the --

16 A. The BLM's response for all three well locations were
17 the same in that we were not in the LMR and we were not in
18 the buffer zone.

19 Q. So at this point does EOG know with certainty
20 whether you are in an LMR or buffer zone?

21 A. No.

22 Q. And at this point in time, the APDs have still been
23 approved? They were never rescinded, in other words?

24 A. That's correct.

25 Q. But we don't have a waiver of withdrawal or

1 objection from Intrepid at this point?

2 A. Correct.

3 Q. Okay. Were Exhibits 3 through 10 either prepared by
4 you or compiled from company business records?

5 A. Yes.

6 MS. MUNDS-DRY: Mr. Examiner, we would move the
7 admission of Exhibits 3 through 10 into evidence.

8 EXAMINER WARNELL: Exhibits 3 through 10 are
9 admitted.

10 (Exhibits 3 through 10 offered and admitted.)

11 MS. MUNDS-DRY: That concludes my direct examination
12 of Mr. Glanton.

13 EXAMINER WARNELL: Very good. Thank you.
14 Mr. Brooks?

15 EXAMINER BROOKS: No questions.

16 EXAMINER WARNELL: I have no questions.

17 MS. MUNDS-DRY: We answered all your questions?

18 EXAMINER WARNELL: Uh-huh.

19 MS. MUNDS-DRY: Thank you. At this time we would
20 like to call Mr. Daryl J. Siepens Jr.

21 DARYL J. SIEPENS JR.

22 (Having been sworn, testified as follows:)

23 DIRECT EXAMINATION

24 BY MS. MUNDS-DRY:

25 Q. Would you please state your full name for the

1 record?

2 A. Daryl, D-a-r-y-l, J. Siepens, S-i-e-p-e-n-s, Jr.

3 Q. And where do you reside, Mr. Siepens?

4 A. Midland, Texas.

5 Q. And by whom are you employed?

6 A. EOG Resources.

7 Q. What do you do for EOG?

8 A. I am, by title, a geophysical advisor slash team
9 leader. My responsibilities, I do geophysics as well as
10 geology. I lead the team, which includes from drilling to
11 the land reservoir G&G and supervise the G&G staff for our
12 area.

13 Q. Have you previously testified before the division?

14 A. Yes, ma'am.

15 Q. And were your credentials accepted and made a matter
16 of record?

17 A. Yes, ma'am.

18 Q. Are you familiar with the applications -- the
19 application that's been filed in this case?

20 A. Yes.

21 Q. Are you familiar with the geology in the subject
22 area?

23 A. Yes.

24 MS. MUNDS-DRY: Mr. Warnell, we would tender
25 Mr. Siepens as an expert in petroleum geology and geophysics.

1 EXAMINER WARNELL: So recognized.

2 Q. Mr. Siepens, if you would turn to what's been marked
3 as EOG Exhibit Number 11 and identify that for the Examiners.

4 A. Yes. Exhibit 11 is just kind of -- we are here
5 about the issue of potash, and so just to kind of describe
6 what each map that you will see with relative consistency.
7 Section 23 is a center point with, in essence, that
8 nine-square-mile area that we -- the mile -- this map
9 specifically is the existing wells that are greater than
10 8,000 feet deep, characterized as, quote, deep wells.

11 Q. And that's deep wells pursuant to R-111-B?

12 A. Yes, ma'am. Showing two things, one is a
13 quarter-mile halo around each existing borehole shown in the
14 red open circles, and a half-mile-radius halo around each of
15 those same wells shown as the shaded orange. In addition to
16 those definitions around the wells, the gray box encompassed
17 coming from the northeast, if you will, across our Section 23
18 with a bullet outline, that is the potash area as put out by
19 the BLM, and then the purple lines that look like mine
20 workings is the mine workings as also put out by the BLM.

21 So as we look at this, we simply see that the wells
22 in Sections 14, 22, 23, 24 do encroach currently with quarter
23 and half-mile radius on potash and numerous wells, Sections
24 24, 23, and even up in 14 also encroach on the mine by the
25 quarter-mile halo. The three red squares are the location of

1 our three applications for Parkways 2, 3 and 4.

2 Q. And this also shows -- and I think we will get to
3 this in a minute -- the well controls you used for a
4 cross-section?

5 A. Yes.

6 Q. Okay. Then if you would, please, turn to Exhibit
7 Number 12. What does this display?

8 A. Exhibit Number 12 is getting us closer to the
9 geology and why we are out here. It's got the same gray
10 shaded area for the potash, but now it's in the same deep
11 well control, but I've done a couple of things. One is we
12 labeled the well names at the top. We have labeled below
13 green highlighted wells. Those green highlighted wells
14 represent Bone Spring producers, and the numbers below in
15 red, or -- excuse me -- green, red, and blue are Bone Spring
16 cumes to date on those wells out of the Bone Spring. This
17 also includes now our land position as referenced by
18 Mr. Hurlbut earlier.

19 Q. In the yellow?

20 A. In the yellow shade. So, for starters, yes, we are
21 looking at this map in Section 23 that Doug had talked to the
22 State 23-A-1 is 101,000 barrel, past tense, producer out of
23 the Second Bone Spring Sand, and we'll look at a
24 cross-section in just a moment.

25 The middle well with no annotation, the Parkway 23

1 State Com 1, has a surface location with the bottomhole going
2 to the quarter -- I mean the 40 acres north of that of a deep
3 morrow gas well of EOG's from 2004. And the third well is
4 State 23 Com 1, that is also a well that is produced from the
5 Bone Spring out of the first sand interval, past tense,
6 48,000 barrels.

7 So the immediacy of our section and our vertical
8 completion that look to perform appropriate and well for
9 their vintage and vertical completion. To note, to the south
10 there is Parkwest State 26 Number 1 that's got 28,000 barrel
11 oil, that is horizontal as of 2010 vintage to the south of
12 this, as well as the Halcon/Petco further south in the Bone
13 Spring.

14 To the north in Section 14, vintage 2009, late
15 August and December of 2009, are similar wells of 30,000 and
16 23,000. Those represent north and south flow, so land and
17 prospect in that respective section with production to the
18 north and south.

19 Q. Thank you. If we could turn to EOG Exhibit Number
20 13. What is this showing you?

21 A. Exhibit Number 13 is a -- is the cross-section that
22 we have just kind of talked through on the wells. In Section
23 23, from west to east, showing the upper zone called the
24 First Bone Spring Sand and highlighted in red along the
25 density curve is the rock that we feel is prospective that is

1 in fact the zone that was completed in the right-hand Chi
2 State 23 well.

3 The first well, this lower shows the Second Bone
4 Spring, and even additionally highlighted in orange or red
5 across there is a key interval of this sand that we target
6 when we drilled the second sand well. And in annotation on
7 the bottom is a reiteration in association with the wells as
8 we just discussed.

9 Q. And before we leave this cross-section, Mr. Glanton
10 testified that the primary objective is the Bone Spring. And
11 I take it from your testimony that it's the Second Bone
12 Spring interval?

13 A. Yes, ma'am. Our primary -- we have drilled 20 plus
14 wells in our sand tank area near here, focused on the second
15 sand, but we also have optimism that we can develop the first
16 sand as well.

17 Q. So the secondary target you would be looking at the
18 first sand then?

19 A. Yes.

20 Q. Let's turn to Exhibit Number 14. What is this
21 display showing you?

22 A. Exhibit Number 14 is just the geologic premise with
23 the primary target. It has the same well control. I removed
24 the potash as to remove confusion, removed our acreage
25 position to remove confusion. The wells with the green dots

1 are still wells of historic Bone Spring production.

2 What's posted on here in contour is the net porosity
3 greater than 8 percent specifically of the highlighted zone
4 on the cross-section, not of the whole Bone Spring Second
5 Sand, but that target zone. And that is the zone that
6 produces in Section 14 in the Cimerex well, as well as in
7 Section 26 in the Lutheran Well, as well as the well that
8 says 56 feet in Section 23 is a vertical. The third
9 geologically is better with volumetric reservoir. So that's
10 the premise of why we want to be where we are for the Second
11 Bone Spring.

12 Q. Great. Let's turn to Exhibit 15, please. Review
13 this for the Examiners.

14 A. This exhibit is similar. It's a gross isopach of
15 the First Bone Spring Sand. The well that has a 200-foot
16 annotation is the Bone Spring Well in particular that was in
17 fact the First Bone producer. The wells -- so, anyway, this
18 too shows the predictability that this area has the
19 propensity for that rock being thick in our locations in
20 relation to that geology.

21 Q. Okay. Turn to Exhibit 16, please. Review this for
22 the Examiners.

23 A. In Exhibit 16 is the structure map on top of that
24 first Bone Spring Sand that we just looked at as the isopach,
25 showing that structural, it's a generality in Section 23.

1 Up-dip is to the west slash northwest, and down-dip is to the
2 southeast slash east.

3 Q. After reviewing these isopach and structural map, in
4 your opinion, then, are these three wells proposed in areas
5 that will be most beneficial given your -- given where you
6 are in the formation?

7 A. Yes, ma'am.

8 Q. And if we could then turn back to Exhibit Number 12,
9 and I wonder if, for the examiners, if you could estimate how
10 much oil and gas could be produced from these three wells.

11 A. Yes. There is a variety of ways of pursuing this,
12 going through the decline curve, but most of the wells in
13 here, save and except the horizontal and directional wells in
14 Section 14 and Section 26, are relatively old, 1989, early
15 90s to present slash or have been plugged.

16 And so we see 50,000 barrels. We'll start from the
17 First Sand -- excuse me -- we'll start with the 23-A-1,
18 100,000 barrels. Hundred thousand barrels out a 40-acre
19 proration unit, simple upscaling, we can say we put proration
20 use together, that's 400,000 barrels, we have three wells,
21 they each would have the potential to attain that. I would
22 say that when we think of this, we think of 3- to 400,000
23 barrels as a target for each of these three wells out of the
24 Second Sand.

25 The First Sand shows 50,000 barrels, 48,000 barrels

1 in 23 Number 1. There are other wells in there that have
2 produced less, and other wells that produce slightly more.
3 Again simple round math, you could say 50,000 per 40, four
4 40s, we ought to be a couple hundred thousand, so we are
5 using 150 up, optimistically, up to 200,000 barrels per
6 project area per well, and that does not account for similar
7 significant volumes as well.

8 Q. Now, if you look at the more recently drilled
9 horizontal wells, how does that blend then into your
10 estimate?

11 A. These kinds of estimates are consistent with numbers
12 that we have substantially similar in Sand Tank, but also the
13 wells in Section 23 have a multi 20-year history-ish. The
14 wells to the north have a 12- and 18-month history, and they
15 are already approaching 30,000 barrels or more. The Parkway
16 well to the south has got a six-month history, and it's
17 already at almost 30,000 barrels. So it's already achieving
18 in the last six months long-term production of those other
19 wells.

20 Q. If this application is denied, then, in your
21 opinion, will it cause the undue waste of oil and gas?

22 A. I believe so, yes.

23 Q. Will the granting of this application, in your
24 opinion, cause the undue waste of potash?

25 A. If you go to Exhibit 11, I think -- isn't that

1 right? This one, is that Exhibit 11?

2 Q. Yeah.

3 A. Predicated on the existence of existing wells and
4 the position of our locations relative to existing boreholes,
5 I would say no. As well as, based on conversation that Donny
6 talked about with Mr. McGuire at Potash, he indicated that
7 this was a position line that was not particularly favorable
8 for solution mining, although that's an emerging technology.
9 And so, again, I would say I don't think it's a waste.

10 Q. So if I understand you correctly, what we are
11 showing here on this -- on this exhibit is that the majority
12 of this 23 has already been -- if there is -- assuming there
13 is commercial potash, which we don't know, that it's already
14 been wasted by the existing oil and gas development?

15 A. Or damaged, at least, made worse, so yes.

16 Q. We're not contributing any further. And then
17 your -- Mr. Glanton had mentioned you were also there at the
18 meeting with Mr. McGuire, and he had mentioned to you that
19 structurally these locations are up-dip?

20 A. Yes.

21 Q. Meaning a solution runs downhill, if I understand
22 correctly, in my simple way of mind?

23 A. Right. And consistent with some of the
24 correspondence that they sent back, they had a map of the
25 mines and --

1 Q. Okay. In your opinion, Mr. Siepens, will the
2 granting of this application be in the best interest of
3 conservation and the prevention of waste and protection of
4 relative rights?

5 A. Yes, ma'am.

6 MS. MUNDS-DRY: With that, Mr. Examiner, we would
7 move the admission of Exhibits 11 through 16 into evidence.

8 EXAMINER WARNELL: Exhibits 11 through 16 admitted.
9 (Exhibits 11 through 16 offered and admitted.)

10 MS. MUNDS-DRY: I have nothing further.

11 EXAMINER WARNELL: Thank you. Mr. Brooks?

12 EXAMINER BROOKS: No questions.

13 EXAMINATION

14 BY EXAMINER WARNELL:

15 Q. I have a question, I guess, on -- let's just stay
16 with -- stay with Exhibit 11.

17 A. Okay.

18 Q. Your three wells --

19 A. Yes.

20 Q. -- the red boxes, that's the bottomhole location?

21 A. That is surface location.

22 Q. Surface location. So then the bottomhole locations
23 are over where?

24 A. To the far right.

25 Q. To the east?

1 A. Correct.

2 Q. And if we were to number these wells, is that the 2H
3 on top?

4 A. Yes, sir.

5 Q. And then 3H and 4H?

6 A. Correct.

7 Q. I like that. Good. And then the potash mine
8 itself, what kind of depths are we looking at on that mine?

9 A. It is our understanding talking to Mr. Joe Miraz,
10 that fundamental potash is probably like in the 800- to
11 12-hundred-foot range. In this area, we're not 100 percent
12 sure because of the -- it seems like lack of available
13 information.

14 Q. So the floor of that mine there is probably in the
15 neighborhood of 12 hundred feet?

16 A. That's what we're surmising. We don't know exactly
17 what I believe is Zone 126 USGS, this footage is specific to
18 here, but yes, that's what we are surmising.

19 Q. And we are talking about depths of what, 8,000 feet
20 for the Second Bone Spring?

21 A. Correct.

22 EXAMINER WARNELL: No more questions.

23 MS. MUNDS-DRY: Thank you. I call Mr. Munsell.

24 EXAMINER WARNELL: Do you want to take a break?

25 EXAMINER BROOKS: Yeah.

1 MS. MUNDS-DRY: Whatever your pleasure.

2 EXAMINER WARNELL: Let's take a ten-minute break.

3 (Recess taken.)

4 EXAMINER WARNELL: Okay. Let's go back on the
5 record with Case 14548.

6 MS. MUNDS-DRY: Thank you, Mr. Examiner.

7 STEVE L. MUNSELL

8 (Having been sworn, testified as follows:)

9 DIRECT EXAMINATION

10 BY MS. MUNDS-DRY:

11 Q. Would you please state your full name for the
12 record?

13 A. Yes, ma'am. My name is Steve L. Munsell,
14 M-u-n-s-e-l-l.

15 Q. And Mr. Munsell, where do you reside?

16 A. Midland, Texas.

17 Q. And by whom are you employed?

18 A. EOG Resources.

19 Q. What is your position with EOG?

20 A. I am a drilling engineer.

21 Q. Have you previously testified before the Division?

22 A. No, ma'am, I have not.

23 Q. Would you please review for the Examiners your
24 education and work history?

25 A. Yes. I graduated in 1981 with a bachelor of science

1 in petroleum engineering from Texas Tech, and at that time
2 went to work for Mobile Oil. Worked for -- until 2000 for
3 Mobile Oil, and since that time I've worked for Pier
4 Resources, Combrown Incorporated, and EOG Resources as a
5 drilling engineer.

6 Q. And are you a registered professional engineer?

7 A. I am not.

8 Q. A petroleum engineer?

9 A. Yes, ma'am.

10 MS. MUNDS-DRY: Mr. Warnell, we would move to
11 qualify Mr. Munsell as an expert in petroleum engineer.

12 EXAMINER WARNELL: Texas Tech? It's all right.

13 MS. MUNDS-DRY: Acceptable?

14 EXAMINER WARNELL: Sure.

15 Q. (By Ms. Munds-Dry) Mr. Munsell, if you turn to
16 what's been marked as EOG Number 17.

17 A. Yes, ma'am.

18 Q. And identify and review, is this the wellbores
19 proposed and approved by the APD submitted July of 2009?

20 A. Yes, ma'am. These are essentially just wellbore
21 diagrams that show how the well will be drilled as per the
22 approved APD.

23 Q. Is this for the 2H?

24 A. This is for the 2H, as well as the 3H, and the 4H,
25 which are very similar. The only thing that's going to be a

1 little bit different is maybe the surface casing depths and
2 also two kickoff points and actually no landing points.

3 Q. Thank you. Go ahead and review for the record
4 what -- where is the surface casing you proposed to be set
5 at?

6 A. Okay. I think on the APD, I think it was originally
7 360 feet, and after doing a little more research, it will be
8 set more like at 310 feet, but we will be setting our casing
9 before we get into the salt, if it comes to that point.
10 Essentially, you know, the way that the wellbores are going
11 to be drilled, is we will start out by setting out 20-inch
12 conductor at 40 feet, and then we'll drill with a freshwater
13 spud mud down to our surface casing point, be approximately
14 310 feet or so.

15 And then after we do that, then we will be filling
16 the intermediate section of the hole to 33 hundred feet
17 setting our pipe at the top of San Andres and that will case
18 off the salt there. And then after we drill out at that
19 point, we will be drilling with fresh water, and then
20 changing over to cut brown by the time we get to a TD of
21 approximately 84 hundred TBD in the pilot hole.

22 And at that point we will run open-hole logs, and
23 then we'll determine whether we want to go sideways. And at
24 that point we'll plug back via cement plugs, kick off, and we
25 will be kicking off at approximately 75-hundred-foot TBD, and

1 landing the curve at -- right at 8,000-foot TBD and drilling
2 our doing 4,000-foot lateral.

3 Q. And Exhibit 18, I believe -- and 19 -- I believe you
4 indicated Exhibit 18 is the wellbore diagram for the 3H; is
5 that correct?

6 A. Yes, ma'am.

7 Q. And the Exhibit 19 is the wellbore diagram for the
8 4H?

9 A. Yes, ma'am.

10 Q. And what are the differences, if any, between how
11 these wells will be drilled from the 2H?

12 A. Just mostly -- of course, there will always be a
13 little difference in the surface or the setting points as far
14 as the casing, as far as the, you know, plus or minus 45 feet
15 or so, but the only other differences are pretty much the
16 kick-off points and where the laterals are going to be.

17 Q. And I want to talk to you about the proximity to the
18 abandoned mine. Maybe if we could turn to -- do you have
19 Exhibit 11 there in front of you, just so we can reference it
20 for the Examiners. I have to find it, too. In your opinion,
21 Mr. Munsell, will these wells cause any risk to that existing
22 abandoned mine?

23 A. No, ma'am, I don't think they will.

24 Q. And I notice here in particular, the second box,
25 which I believe is 3H --

1 A. Yes, ma'am.

2 Q. -- is that correct? If you could explain to the
3 Examiners how far away you believe you will be away from that
4 existing mine and maybe discuss a little bit about how long
5 it takes to build your curve and that sort of thing.

6 A. I believe we are going to be 67 hundred foot away
7 from those -- from where it's showing the open mine at that
8 point. And, you know, whenever we actually drill the thing,
9 of course, we will have the direct tools in the hole from the
10 get-go to make certain that we stay very straight until we
11 get past the salts, which are approximately 14 hundred foot
12 TBD, and then as, you know, once we get down to the -- right
13 above the Bone Springs where we kick off where we will be --
14 we'll actually be landing like 66 hundred feet below the
15 mine, so that's pretty much the plan.

16 Q. Okay. Will EOG provide notice of the drilling of
17 these wells so it can be witnessed by Potash representatives
18 if they so choose to assure its drilling in conformance with
19 the approved APDs?

20 A. Yes, ma'am.

21 Q. And were Exhibits 17 through 19 either prepared by
22 you or compiled under your direct supervision?

23 A. Yes, ma'am.

24 MS. MUNDS-DRY: Mr. Warnell, we move to admit
25 Exhibits 17 through 19.

1 EXAMINER WARNELL: Exhibits 17 through 19 are
2 admitted.

3 (Exhibits 17 through 19 offered and admitted.)

4 MS. MUNDS-DRY: That concludes my direct examination
5 of Mr. Munsell.

6 EXAMINER WARNELL: I don't know why we took that
7 break.

8 EXAMINER BROOKS: I don't know. It was a bad
9 decision.

10 EXAMINER WARNELL: I apologize.

11 MS. MUNDS-DRY: We can ask him about the weather, if
12 you would like.

13 EXAMINER WARNELL: No. They probably like to brag
14 about Midland weather this time of year. Any questions,
15 basically?

16 EXAMINER BROOKS: No questions.

17 EXAMINER WARNELL: No questions?

18 EXAMINATION

19 BY EXAMINER WARNELL:

20 Q. Well, Mr. Munsell, I'm not going to let you off that
21 easy. This is the opportunity for me to educate myself a bit
22 on drilling. I am not a drilling engineer. After you set
23 that pipe, your surface casing at 310 feet?

24 A. Yes, sir.

25 Q. And then you drill through about a thousand feet of

1 salt or so?

2 A. Yes, sir. In the -- the base of salt is about 1,400
3 feet.

4 Q. Uh-huh. How many days of drilling time is that?
5 How do you -- what's your mud program? What do you do when
6 you go through that salt?

7 A. When we drill that entire section of the hole from
8 the surface casing point to TD, it will be with saturated
9 brown water, and that, and also using sweeps to help clean
10 the hole.

11 Q. And so that hole stays pretty well engaged going
12 through that salt?

13 A. Yes, sir. And normally nowadays we are drilling
14 these wells with PVC, so this section of the hole drills
15 really fast. In like two days we'll -- we'll be drilled
16 through this section and pre-running casing.

17 Q. Wow. And then once you drill your lateral at 4,000
18 feet, how -- how are you going to complete that?

19 A. Well, normally they're, you know, fracture
20 stimulated, and normally, you know, 10 to 12 stages and
21 pretty much just water and sand.

22 Q. That's a pretty expensive frac?

23 A. Yes, sir.

24 Q. Frac job, I mean.

25 A. And very busy. Nowadays it's just hard to get --

1 the surface companies are lined up just months down the road
2 because of their schedule.

3 Q. Yeah. They are probably pretty happy about that.
4 They like that. So fracking gets a bum wrap. Every time I
5 turn on the TV, I see about fracking. Are there any natural
6 fractures out here? Is there any -- any way, you know -- we
7 are here in this lateral about, what, 6,000 feet below?

8 A. 65 feet below the base of salt, yes, sir.

9 Q. How do we assure ourselves that we are not going to
10 be fracking up into the mine itself?

11 A. Well, you know, I think that that's something that,
12 you know, based off the -- you know, we do a lot of pinnacle
13 surveys, and he kind of helps me with this.

14 MS. MUNDS-DRY: Mr. Siepens can talk a little bit
15 more about that, too.

16 MR. SiepensS: Can we tag-team?

17 MS. MUNDS-DRY: We should probably recall --

18 A. Not all of our fracture stimulations, but a lot of
19 those stimulations, and, you know, normally we are seeing,
20 you know, frac heights of maybe, you know, 3- to 400 feet,
21 but I don't think we have ever seen anything that's gone, you
22 know, over a thousand feet or so. And you know 60, 66
23 hundred feet, I don't think would -- I think the probability
24 of that would almost be zero. In my opinion.

25 Q. Do you have a good natural barrier up there some

1 place between your lateral and --

2 A. Yes, sir, we do.

3 Q. What is that?

4 A. I would say that here it would be the Bone Spring
5 would be probably our best barrier.

6 Q. Okay.

7 EXAMINER WARNELL: I have no more questions.

8 MS. MUNDS-DRY: Do you want to ask some questions of
9 Mr. Siepens about -- or are you satisfied with --

10 EXAMINER WARNELL: Let's bring Mr. Siepens back.

11 MR. SIEPENS: I shouldn't have offered.

12 FURTHER EXAMINATION OF DARYL SIEPENS, JR.

13 BY EXAMINER WARNELL:

14 Q. It's a slow morning. You can't go Christmas
15 shopping all day. So, Mr. Siepens, what is it that you wish
16 to tell me?

17 A. Well, you requested -- nothing, if you have nothing.
18 No, you were inquiring as far as the frac. No,
19 geotechnically, this specific area does not have any
20 deep-seated faults coming up through this section for a frac
21 to hook into and come up. And you know, the stratcom is
22 above us, so we will -- the mining, the mine works, so it's
23 like 14 hundred is the base of them, but, yeah, you have the
24 Delaware section to which, in fact, one of the previous cases
25 was describing. But, yeah, we have like 13 hundred to 17

1 hundred feet of the Upper Bone Spring Dolomite -- I mean, not
2 dolomite -- we have carbonate above our First Sand itself
3 that's typically -- so that is also the barrier to the frac.

4 As a generality, Mr. Munsell talked of the job that
5 we had monitored went downhole as well as surface technology
6 for frac jobs. The jobs are generally contained that there
7 is no quicksand or natural geologic features that would take
8 us that high.

9 Q. So on your frac height, you wouldn't expect to go
10 above?

11 A. Well, in the first Bone Spring Sand specific, if we
12 were fracking that zone on the cross-section we would stay,
13 in general, virtually controlled totally contained in that
14 and not above. The second zone down deep, it may get up as
15 high as the first, but it stays fairly contained, but it will
16 go further into the --

17 Q. Okay. Well, thank you. I appreciate that. No
18 further questions.

19 MS. MUNDS-DRY: Thank you. We have nothing further
20 in this matter.

21 EXAMINER WARNELL: Okay. Would you entertain the
22 possibility of giving me a draft on this sometime in the next
23 week?

24 MS. MUNDS-DRY: I would be more than pleased to give
25 you a proposed order.

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

1 EXAMINER WARNELL: Thank you. With that, then we'll
2 take case Number 14584 will be taken under advisement, and
3 that concludes today's hearings.

4 EXAMINER BROOKS: We will stand adjourned.

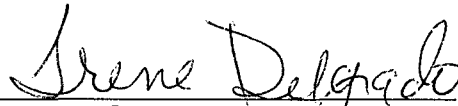
5 (Adjourned 09:52 a.m.)
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

REPORTER'S CERTIFICATE

I, IRENE DELGADO, New Mexico CCR 253, DO HEREBY
CERTIFY that on December 16, 2010, proceedings in the
above-captioned case were taken before me and that I did
report in stenographic shorthand the proceedings set forth
herein, and the foregoing pages are a true and correct
transcription to the best of my ability.

I FURTHER CERTIFY that I am neither employed by nor
related to nor contracted with any of the parties or
attorneys in this case and that I have no interest whatsoever
in the final disposition of this case any any court.

WITNESS MY HAND this 16th day of December 2010.


Irene Delgado NM CCR 253
License Expires: 12-31-10