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| 1 | АРРЕА | RANCE | S | , |
| 2 | For the Applicant | | | |
| 3 | JORDAN LEE KESSLER, ESQ. | • | | |
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| 7 | INDI | ΞX | | |
| 8 | CASE NUMBER 15332 CALLED | | | |
| | COG OPERATING, LLC, CASE-IN | N-CHIEF: | | |
| 10 | WITNESS AARON YOUNG | | | |
| 12 | By Ms. Kessler | Direct 4 | Redirect | Further |
| 13 | | EXAMINAT | ION | |
| 14 | Examiner Jones | 10 | | |
| 15 | Examiner Wade | 12 | | |
| 16 | | | | |
| 17 | WITNESS MIKE BURKE | | | |
| 18 | By Mr. Kessler | Direct 12 | Redirect | Further |
| 19 | Examiner Jones | EXAMINAT 14 | ION | , |
| 20 | Examiner Jones | 14 | | |
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| 23 | Reporter's Certificate | | | PAGE 24 |
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|----|---------------------------------------|--------|
| | | Page 3 |
| 1 | EXHIBIT INDEX | |
| 2 | Exhibits Offered and Admitted | |
| 3 | | PAGE |
| 4 | COG OPERATING LLC EXHIBIT 1 | 10 |
| 5 | COG OPERATING LLC EXHIBIT 2 | 10 |
| 6 | | |
| 7 | COG OPERATING LLC EXHIBIT 3 | 10 |
| 8 | COG OPERATING LLC EXHIBIT 4 | 10 |
| 9 | COG OPERATING LLC EXHIBIT 5 | 10 |
| | COG OPERATING LLC EXHIBIT 6 | 18 |
| 10 | COG OPERATING LLC EXHIBIT 7 | 18 |
| 11 | COG OPERATING LLC EXHIBIT 8 | 18 |
| 12 | | |
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PAUL BACA PROFESSIONAL COURT REPORTERS 500 FOURTH STREET NW - SUITE 105, ALBUQUERQUE NM 87102

- 1 capacity.
- 2 A. My name is Aaron Young and I'm employed by COG
- 3 Operating LLC as a landman.
- 4 Q. Have you previously testified before the
- 5 Division?
- 6 A. Yes, I have.
- 7 Q. And were your credentials as a petroleum landman
- 8 accepted and made a matter of record at that time?
- 9 A. Yes.
- 10 Q. Are you familiar with the application that has
- 11 been filed in there case?
- 12 A. Yes, I am.
- Q. And are you familiar with the status of the lands
- 14 in the subject area?
- 15 A. Yes.
- MS. KESSLER: Mr. Examiner, I tender
- 17 Mr. Young as an expert in petroleum land matters.
- 18 EXAMINER JONES: He is so qualified.
- 19 Q. Could you please turn to COG Exhibit 1 and
- 20 identify it and explain what COG seeks under this
- 21 application?
- 22 A. This is the form C-102 for the Cookie Tosser
- 23 State Com 2H in which COG seeks to create a 160-acre
- 24 non-standard spacing unit comprised of the west half,
- 25 east half of section 16; Township, 18 South; Range, 30

- 1 east, Eddy County.
- Q. Do you also seek to pool all of the mineral
- 3 interests in the Bone Spring Formation?
- 4 A. Yes.
- 5 Q. What is the API number for this well?
- 6 A. The API number is 30-015-42440.
- 7 Q. Has the Division designated a pool for this area?
- 8 A. Yes, it has.
- 9 Q. What is that pool?
- 10 A. The pool is the Loco Hills Bone Spring East, pool
- 11 code 39513.
- 12 O. And what are the surface and bottom hole
- 13 locations for this well?
- 14 A. The surface hole is 300 feet from the north line,
- 1, 180 from the east line with deep bottom hole location,
- 16 330 feet from the south line; 2,260 from the east line.
- 17 Q. Is this all state acreage?
- 18 A. Yes, it is.
- 19 Q. And is this area governed by Division statewide
- 20 rules?
- 21 A. Yes.
- Q. So 330 setbacks apply; is that correct?
- 23 A. That is correct.
- Q. On what date do you plan to spud this well?
- 25 A. August 8th.

- 1 Q. Would you please turn to COG Exhibit 2 and
- 2 identify this exhibit for the Examiners.
- 3 A. This is an ownership outline of the subject well
- 4 for the west half, east half, identifying the various
- 5 tracts and the working interest owners and their
- 6 respective percentages.
- 7 Q. Is the party that you seek to pool highlighted in
- 8 bold?
- 9 A. Yes, they are.
- 10 Q. And is that a working interest owner?
- 11 A. Yes, it is.
- 12 Q. Just to be clear, that is EOG Resources, correct?
- 13 A. That is correct.
- Q. And is Exhibit 3 a copy of the well proposal
- 15 letter that you sent to EOG?
- 16 A. Yes, it is.
- 17 O. On what date was that letter sent?
- 18 A. April 7, 2015.
- 19 Q. And did the well proposal letter also include an
- 20 AFE?
- 21 A. Yes.
- 22 O. Are the costs reflected on this AFE consistent
- 23 with what COG has incurred for drilling similar
- 24 horizontal wells in this area?
- 25 A. Yes, they are.

- 1 Q. What additional efforts did you undertake to
- 2 reach a voluntary agreement with EOG?
- 3 A. We've had ongoing discussions via e-mail and
- 4 telephone conversations with their landman to reach a
- 5 mutually agreeable deal, but that has not yet been
- 6 finalized.
- 7 Q. Did the well proposal letter also identify the
- 8 requested overhead and administrative costs while
- 9 drilling the well and while producing it, should you be
- 10 successful?
- 11 A. Yes.
- 12 Q. What are those rates?
- A. It is 7,000 a month while drilling and 700 for
- 14 producing rates.
- 15 O. Are these costs in line with what COG and other
- operators in the area charge for similar wells?
- 17 A. Yes.
- 18 Q. Do you ask that administrative and overhead costs
- 19 be incorporated into any order resulting from this
- 20 hearing?
- 21 A. Yes.
- Q. And do you ask as well that it be adjusted in
- 23 accordance with the appropriate accounting procedures?
- 24 A. Yes.
- Q. With respect to the uncommitted interest owner,

- 1 do you request that the Division impose a 200 percent
- 2 risk penalty?
- 3 A. Yes.
- 4 Q. Did COG identify the offset operators or lessees
- 5 in the 40-acre tracts surrounding the proposed
- 6 non-standard spacing unit?
- 7 A. Yes, we did.
- 8 Q. Is an offset plat and a risk of offset parties
- 9 who were given notice of this hearing included as
- 10 Exhibit 4?
- 11 A. It is.
- 12 Q. And did COG provide notice of this hearing to
- 13 those offset operators as shown in COG Exhibit 5?
- 14 A. That is correct.
- 15 O. And this exhibit also reflects that notice of
- 16 this hearing was given to EOG, correct?
- 17 A. Yes.
- 18 Q. Was it necessary to publish notice or were all of
- 19 the interests to be pooled locateable?
- 20 A. All the interests to be pooled were locateable.
- 21 Q. Were Exhibits 1 through 4 prepared by you or
- 22 compiled under your direction or supervision?
- 23 A. Yes, they were.
- 24 MS. KESSLER: Mr. Examiner, I move the
- 25 admission of Exhibits 1 through 5, which includes my

- 1 affidavit.
- 2 EXAMINER JONES: Exhibits 1 through 5 are
- 3 admitted.
- 4 (COG OPERATING LLC EXHIBITS 1 through 5 WERE
- 5 OFFERED AND ADMITTED.)
- 6 MS. KESSLER: And that concludes my
- 7 examination of this witness.
- 8 EXAMINATION BY EXAMINER JONES
- 9 EXAMINER JONES: Okay. Are you going to
- 10 have a geologist in this case?
- 11 THE WITNESS: Yes.
- 12 EXAMINER JONES: So the locations haven't
- 13 changed; this is all state --
- 14 THE WITNESS: Correct.
- 15 EXAMINER JONES: -- and you just want to put
- 16 the surface location in unit A -- for what reason?
- 17 THE WITNESS: It's kind of limited
- 18 surface-wise on where we are able to get well locations,
- 19 and lot A is the best available location.
- 20 EXAMINER JONES: Can you explain the CCA
- 21 land restrictions that are listed for this section?
- 22 THE WITNESS: I believe this Prairie Chicken
- 23 through March through, I believe it's June or July 15th,
- 24 limited drilling and operations.
- 25 EXAMINER JONES: And it is a voluntary

- 1 participation --
- 2 THE WITNESS: It is a requirement under the
- 3 state lease.
- 4 EXAMINER JONES: It is a requirement?
- 5 THE WITNESS: Yes.
- 6 EXAMINER JONES: Are these state leases
- 7 pretty old leases in this area -- probably pretty young?
- THE WITNESS: They are not too old.
- 9 EXAMINER JONES: Okay. And EOG just happens
- 10 to have portions of one and all of the last tract; is
- 11 that correct?
- 12 THE WITNESS: That is correct.
- 13 EXAMINER JONES: And AFE, is that reasonably
- 14 recent?
- THE WITNESS: Yes, it is.
- 16 EXAMINER JONES: You guys all work as a
- 17 team. Your drilling engineer is he on the team too or
- 18 is he in the drilling department?
- 19 THE WITNESS: We work as a team. He is in
- 20 the drilling department, but we all communicate. He
- 21 actually created the AFE.
- 22 EXAMINER JONES: All located and just one
- 23 party being pooled?
- 24 THE WITNESS: That is correct, EOG.
- 25 EXAMINER JONES: And I pass. Any questions?

- 1 EXAMINATION BY MR. WADE
- 2 EXAMINER WADE: Did you testify that all the
- 3 offset interests were locateable?
- THE WITNESS: Yes, they were.
- 5 EXAMINER WADE: There is one returned card.
- 6 I think it's -- I think it is the second-to-the-last
- 7 page of Exhibit 5.
- 8 MS. KESSLER: Mr. Examiner, as I understand
- 9 it, if there is an unlocateable offset party, it is not
- 10 necessary to publish notice, only if it's a party to be
- 11 pooled is it necessary to publish notice.
- 12 EXAMINER WADE: Okay. Thank you.
- 13 EXAMINER JONES: Thank you very much.
- 14 THE WITNESS: Thank you.
- MS. KESSLER: I would like to call my next
- 16 witness.
- 17 EXAMINER JONES: Go ahead.
- 18 MIKE BURKE
- 19 having been first duly sworn, was examined and testified
- 20 as follows:
- 21 DIRECT EXAMINATION
- 22 BY MS. KESSLER:
- Q. Could you please state your name for the record
- 24 and tell the Examiner by whom you are employed and in
- 25 what capacity?

- 1 A. I am Stephen Michael Burke. I'm employed by COG
- 2 Operating in the Midland Texas office.
- 3 Q. Have you previously testified before the
- 4 Division?
- 5 A. Yes.
- 6 Q. And were your credentials as a petroleum
- 7 geologist accepted and made a matter of record?
- 8 A. Yes, they were.
- 9 Q. Are you familiar with the application that has
- 10 been filed in this case?
- 11 A. Yes.
- 12 Q. And have you conducted a geologic study of the
- 13 lands that are the subject of this application?
- 14 A. Yes, I have.
- MS. KESSLER: Mr. Examiner, I tender
- 16 Mr. Burke as an expert in petroleum geology.
- 17 EXAMINER JONES: He is so qualified.
- 18 Q. Could you please turn to COG Exhibit 6 and
- 19 identify this exhibit for the Examiners.
- 20 A. Yes, ma'am. On the left-hand side of this, you
- 21 will see a structure map at the top of the Second Bone
- 22 Spring Sand. The wells that you see there that are in
- 23 orange, those are actually Second Bone Spring Sand
- 24 completions in the vicinity of us.
- The black lines, of course, are the contours.

- 1 They're 100-foot contours, and you can see we are
- 2 dipping to the southeast.
- 3 And then in kind of the middle of the map is a
- 4 square around the producing unit with a diagram of the
- 5 well pad as it will crossover into it and going north to
- 6 south in the unit.
- 7 The fact that the Second Bone Springs is
- 8 completely mappable across the area, I am going to
- 9 demonstrate on the next exhibit, which is cross section
- 10 A to A Prime, which goes through. And I must apologize,
- 11 but I don't have it on the map, it goes through the well
- 12 that's just northeast of the unit down to the actual
- 13 well that we're drilling to the well just south of it
- 14 so --
- 15 EXAMINATION BY EXAMINER JONES
- 16 EXAMINER JONES: So that is A as in unit P
- 17 of section --
- 18 THE WITNESS: It's in the very southwest
- 19 of -- I mean southeast of section -- I guess that would
- 20 be section --
- 21 MS. KESSLER: Directly to the north,
- 22 correct?
- THE WITNESS: Right.
- 24 EXAMINER JONES: That is A then?
- THE WITNESS: That's A. And then if you

- 1 draw that line due south, you will go first through the
- 2 Cookie Tosser well bore that we're asking for and then
- 3 into the next well there that has an orange dot on it.
- 4 EXAMINER JONES: The orange dot is in
- 5 section 21; is that right?
- 6 THE WITNESS: Right.
- 7 EXAMINER JONES: Is it unit D of 21?
- 8 THE WITNESS: The B will be in spot A.
- 9 EXAMINER JONES: You say in unit letter A?
- 10 THE WITNESS: Let me -- this print didn't
- 11 turn out as good as I would have liked.
- 12 EXAMINER JONES: That is what it says here,
- 13 unit letter A of -- on the cross section it says -- of
- 14 16?
- THE WITNESS: Right. That will be point B
- 16 on the cross section.
- 17 EXAMINER JONES: Okay. Now I'm having a
- 18 little trouble finding section 16 here. This is 16.
- THE WITNESS: Yes.
- 20 EXAMINER JONES: So your cross section is
- 21 pretty short?
- 22 THE WITNESS: It is very short. You have to
- 23 travel from -- from that point to where B ends, you have
- 24 to go nearly two miles to the next well deep enough to
- 25 penetrate the Bone Spring. So I didn't include it on

- 1 the cross section.
- 2 EXAMINER JONES: Okay.
- 3 BY MS. KESSLER (cont'd):
- Q. Mr. Burke, do you consider the wells on the cross
- 5 section to be representative of wells in the area?
- 6 A. Yes, I do.
- 7 Q. And if you could turn to Exhibit 7. Could you
- 8 identify this exhibit for the Examiner?
- 9 A. Exhibit 7 is the cross section that I put
- 10 together that basically runs right across the surface
- 11 location of the well we are proposing. There's an
- 12 orange-ish-red line at the top horizontally and at the
- 13 bottom horizontally. And those depict the top and the
- 14 base of the Second Bone Spring Sand.
- And you can see that it's about, more or less,
- 16 300-gross feet of interval. Within that interval you
- 17 have carbonates and sandstones that are coming and
- 18 going. And we will more or less target the middle --
- 19 the bracketed midway between those two points at a depth
- 20 of about 8,100 feet.
- 21 Q. Have you identified thickness or uniformity or
- 22 variation in thickness of this target interval?
- 23 A. Yes. As a matter of fact, there's nothing to
- 24 indicate there's any great change in the overall
- 25 thickness, the 350 feet, and I saw no indications of any

- 1 faulting or other kind of barriers in the area.
- 2 Q. So you have identified continuity across this
- 3 non-standard unit?
- 4 A. Yes.
- 5 Q. Have you identified any geologic impediments to
- 6 developing this area using full section horizontal
- 7 wells?
- 8 A. No, I have not.
- 9 Q. Do you believe that the area can be efficiently
- 10 and economically developed by horizontal wells?
- 11 A. Yes, I do.
- 12 Q. And do you believe that the proposed non-standard
- unit will on average contribute more or less and lead to
- 14 production in the well?
- 15 A. Yes.
- Q. Will the completed interval for the well comply
- 17 with all setback requirements?
- 18 A. It will.
- 19 Q. And is Exhibit 8 a diagram of the planned well
- 20 path?
- 21 A. Yes, it is.
- Q. And does this diagram demonstrate that the
- 23 proposed well will comply with the Division's 330 foot
- 24 setback?
- 25 A. It will comply, yes.

- 1 O. In your opinion, will granting COG's application
- 2 be in the best interest of conservation and the
- 3 prevention of waste and the protection of correlative
- 4 rights?
- 5 A. I do.
- 6 Q. Were Exhibits 6 through 8 prepared by you or
- 7 compiled under your direction or supervision?
- 8 A. They were.
- 9 MS. KESSLER: Mr. Examiner, I move into
- 10 evidence Exhibit 6 through 8.
- 11 EXAMINER JONES: Exhibit 6 through 8 are
- 12 admitted.
- 13 (WHEREUPON, COG_OPERATING_LLC_EXHIBITS_6
- 14 THROUGH 8 WERE OFFERED AND ADMITTED.)
- 15 EXAMINER JONES: Mr. Burke, these -- I guess
- 16 the big question here is the well's going east, west and
- 17 then you're proposing one, north, south. Can you talk
- 18 about the direction of drilling in this area and why
- 19 they are drilled in different directions and -- from a
- 20 geologist's standpoint.
- THE WITNESS: Sure.
- The primary reason we are drilling this well
- 23 to the north, south is because we are basically
- 24 landlocked there by wells that have already been drilled
- 25 in the area. If we had a preference, we would probably

- 1 follow the pattern that's established; east, west in
- 2 this area.
- 3 There are many people who think that maximum
- 4 stress direction, that works the best. What we try to
- 5 do when we drill a north, south well like this in this
- 6 particular area is we will try to put a little larger
- 7 frac on it. It costs a little more money but it helps
- 8 to get the results up on par with the east, west type
- 9 wells.
- So in a perfect world, we would have drilled
- 11 it east, west, but we really can't. And we want to
- 12 capture these resources.
- 13 EXAMINER JONES: I understand. What will
- 14 you do during the frac job to tell where the production
- is coming from on this well. Is there any chemical
- 16 tracer or radioactive tracer you might --
- 17 THE WITNESS: I don't believe we have
- 18 anything like that planned on this particular well. We
- 19 have run micro seismic in the area, because we've
- 20 drilled a good number of wells in this general vicinity
- 21 and have found that the carbonates above the sand and
- 22 the carbonates below the sand contain the fracs very
- 23 well. And that's with big fracs, you know, 4-million
- 24 pound, 5-million pound fracs.
- 25 EXAMINER JONES: Pretty low diameter -- in

- 1 other words, is it Hunter mesh sand? Is it 20, 40 at
- 2 the maximum?
- 3 THE WITNESS: You are getting me there.
- 4 They change that up so much. I would be just guessing.
- 5 EXAMINER JONES: Will you be watching the
- 6 well as it's going.
- 7 THE WITNESS: Yes, I will.
- 8 EXAMINER JONES: So, primarily, when you are
- 9 watching it while it's going, you are watching to make
- 10 sure they are in the zone you want to be in?
- 11 THE WITNESS: On many of these horizontal
- 12 wells, we don't run open hole logs, you know. In this
- 13 particular area, there is a fairly good number of older
- 14 wells that were drilled to the Morrow and to the Straun
- 15 that give us pretty sufficient control that we think we
- 16 can land in it.
- And then we mud log it through the interval
- and hope for shows and try to keep it in the shows, the
- 19 good oil shows if we can. Sometimes we will adjust it
- 20 up slightly, down slightly.
- This one will probably angle upward a little
- 22 bit -- excuse me, I mean angle downward a little bit
- 23 because we are drilling down dip to try to stay in the
- 24 middle of formation where the best rock appears to be.
- 25 EXAMINER JONES: Would you preferably drill

- 1 up hill? Your production engineer, did they say
- 2 anything about that?
- 3 THE WITNESS: It is not such a preference
- 4 that would cause us to intentionally have the well bore
- 5 go up. You're talking probably on the drainage end of
- 6 the well bore?
- 7 EXAMINER JONES: Yes.
- 8 THE WITNESS: We have done no studies on
- ·9 that that I am aware of, so we typically try to go as
- 10 flat as we can. That makes it easier for setting path
- 11 for the completion groups, and it just seems to be a
- 12 possible better mechanical thing to do.
- 13 EXAMINER JONES: How much water do you
- 14 expect for every barrel of oil?
- THE WITNESS: In this particular area, we're
- 16 hoping for probably 50, 50. It will probably be more
- 17 water than oil, will be a higher cut.
- 18 But this Lusk area is pretty far to the
- 19 north and pretty far up dip in the development of the
- 20 Second Bone Spring, so it has better cuts than wells
- 21 further south and further down dip.
- 22 EXAMINER JONES: So when you get close to
- 23 the Texas line, it's a higher water cut?
- THE WITNESS: Yes.
- 25 EXAMINER JONES: And it looks like you got

- 1 alternating carbonates and sands?
- THE WITNESS: Right.
- 3 EXAMINER JONES: So that sounds like a
- 4 drilling hazard to me.
- 5 THE WITNESS: Right.
- 6 EXAMINER JONES: I quess they are -- blame
- 7 will go all directions if it doesn't work.
- 8 THE WITNESS: Yeah.
- 9 EXAMINER JONES: Do you expect all four of
- 10 the standard spacing units in this 160-acre project area
- 11 to contribute to the well production?
- 12 THE WITNESS: Yes. I see no reason why that
- will not sufficiently grant those resources.
- 14 EXAMINER JONES: And you had to sell this
- 15 well to your management?
- THE WITNESS: Yes.
- 17 EXAMINER JONES: Okay. And they obviously
- 18 signed off on it or you wouldn't be doing it?
- 19 THE WITNESS: Yes, sir.
- 20 EXAMINER JONES: I don't have any more
- 21 questions. I appreciate your coming in.
- THE WITNESS: Thank you-all.
- 23 MS. KESSLER: I ask that this case be taken
- 24 under advisement.
- 25 EXAMINER JONES: Thank you very much. We

| | Page 23 |
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| 1 | will take this is case 15332, we will take it under |
| 2 | advisement. |
| 3 | (Time noted 9:18 a.m.) |
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| 14 | i co hereby certify that the foregoing to a complete record of the proceedings in |
| 15 | the Examiner hasting of Case No. |
| 16 | neard by me on |
| 17 | Oil Conservation Division |
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| 1 | STATE OF NEW MEXICO) |
| 2 |) ss. |
| 3 | COUNTY OF BERNALILLO) |
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| 6 | |
| 7 | REPORTER'S CERTIFICATE |
| 8 | I FIIFN II AIIANIC Nov Movice Departer CCD |
| 9 | I, ELLEN H. ALLANIC, New Mexico Reporter CCR No. 100, DO HEREBY CERTIFY that on Thursday, July 9, 2015, the proceedings in the above-captioned matter were |
| 10 | taken before me, that I did report in stenographic shorthand the proceedings set forth herein, and the |
| 11 | foregoing pages are a true and correct transcription to the best of my ability and control. |
| 12 | the good of my defined and concrete |
| 13 | I FURTHER CERTIFY that I am neither employed by |
| 14 | nor related to nor contracted with (unless excepted by the rules) any of the parties or attorneys in this case, |
| 15 | and that I have no interest whatsoever in the final disposition of this case in any court. |
| 16 | desposition of this odd in any cours. |
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| 19 | Ellen tilne |
| 20 | ELLEN H. ALLANIC, CSR |
| 21 | NM Certified Court Reporter No. 100 License Expires: 12/31/15 |
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