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- Q. Who do you work for and in what capacity?
- 2 A. I'm a landman for Cimarex Energy.
- 3 Q. Have you previously testified before the
- 4 Division?
- 5 A. No, I have not.
- 6 Q. Would you please summarize your educational and
- 7 employment background?
- 8 A. I have an undergrad in energy management from
- 9 the University of Oklahoma. I worked with
- 10 ConocoPhillips as a landman for four years, until March
- 11 2013, at which point I joined Cimarex Energy.
- 12 Q. Have you testified as a landman before any
- 13 other regulatory body?
- 14 A. Yes. I've testified in the Oklahoma City
- 15 Conservation Division.
- 16 Q. And the land at issue here today, is that your
- 17 area of responsibility at Mewbourne --
- 18 A. Yes.
- 19 O. -- excuse me -- at Cimarex?
- 20 A. Yes, it is.
- 21 Q. And are you familiar with the land matters
- 22 involved in this case?
- 23 A. Yes, I am.
- 24 MR. BRUCE: Mr. Examiner, I tender
- 25 Ms. Reese as an expert petroleum landman.

- 1 EXAMINER GOETZE: She is so qualified.
- Q. (BY MR. BRUCE) Ms. Reese, could you identify
- 3 Exhibit 1 for the Examiner and describe what we're
- 4 asking for today?
- 5 A. Yes. Exhibit 1 is a Midland Map Company land
- 6 plat. It's highlighting the southeast quarter of
- 7 Section 34, 25 South, 26 East and the east half of
- 8 Section 34, 26 South, 26 East. We are requesting
- 9 approval of a 480-acre well unit for the Hayduke 34 Fed
- 10 Com Well #3H, and it'll be a horizontal well in the
- 11 Wolfcamp Formation. We also seek to pool the
- 12 uncommitted interest owners.
- 13 O. And what is Exhibit 2?
- A. Exhibit 2 is a Form C-102 for the well. It's a
- 15 horizontal well to be drilled with the surface location
- 16 at 1,980 [sic] feet from the south line and 200 feet
- 17 from the east line of Section 34, with a terminus of 660
- 18 feet from the south line and 760 feet from the east line
- 19 of Section 3. The well's API number is 300153955. And
- 20 the pool is in the East Sage Draw Wolfcamp gas pool,
- 21 which is based on 320 acres of wells located at least
- 22 660 feet from the quarter section line.
- 23 MR. BRUCE: Mr. Examiner, the next witness
- 24 will have more information on the well plan.
- 25 EXAMINER GOETZE: Very good.

- 1 Q. (BY MR. BRUCE) Moving back to Exhibit 1, what
- 2 is the interest ownership in the proposed well unit?
- 3 A. Cimarex owns or controls 100 percent of the
- 4 well unit, except for the northwest quarter of the
- 5 southeast quarter of Section 34. That 40-acre tract is
- 6 owned, 81.25 percent, by EOG, and the remaining 18.75
- 7 percent interest is uncertain.
- Q. And what is the cause of the uncertainty of the
- 9 interest ownership?
- 10 A. The interest is owned of record by Partnership
- 11 Properties Company, which was acquired over 30 years
- 12 ago. However, that company is no longer in existence.
- 13 We have examined corporate records in various states,
- 14 and we believe Freeport-McMoran Oil and Gas is the
- 15 successor to Partnership Properties. However, there is
- 16 an assignment filed with the BLM in which Legacy
- 17 Reserves Operating may claim an interest as well.
- 18 However, Legacy, the signor, never owned an interest of
- 19 record.
- Q. So at this time do you seek to pool EOG,
- 21 Partnership Properties, Freeport-McMoran and Legacy
- 22 Reserves?
- 23 A. Yes.
- Q. And let's discuss your efforts to obtain the
- 25 voluntary joinder of these parties. So what is Exhibit

- 1 3?
- 2 A. Exhibit 3 is the well proposal that we sent to
- 3 each party, and Partnership Properties was returned.
- 4 Q. The others parties did receive their letters;
- 5 did they not?
- 6 A. Yes, they have.
- 7 Q. Now, have you also contacted these parties by
- 8 phone or by e-mail, the locatable ones, to discuss the
- 9 matter with them?
- 10 A. Yes, we have. I've spoken with the landmen at
- 11 Legacy and Freeport-McMoran about the land situation,
- 12 and we are currently trying to work out a farm-out
- 13 agreement with EOG.
- Q. And if EOG does sign the farm-out, will you
- 15 notify the Division so they are dismissed from the
- 16 pooling application?
- 17 A. Yes, we will.
- 18 Q. And with respect to Freeport-McMoran and Legacy
- 19 Reserves, since there is a title issue, are they
- 20 reluctant to join in the well?
- 21 A. Yes, they are.
- Q. They don't want to pay the money if they don't
- 23 own an interest, correct?
- A. Correct.
- 25 Q. In your opinion, has Cimarex made a good-faith

- 1 effort to obtain the voluntary joinder of the interest
- 2 owners in the well?
- 3 A. Yes, we have.
- 4 O. And what is Exhibit 4?
- 5 A. This is a copy of our AFE.
- 6 Q. And what is the cost?
- 7 A. It has an estimated dry-hole cost of 3,459,000
- 8 and a completed well cost of 9,995,869.
- 9 Q. And is this cost in line with the costs of
- 10 other horizontal wells drilled to this depth in this
- 11 area of New Mexico?
- 12 A. Yes, it is.
- Q. And do you request that Cimarex Energy Company
- of Colorado be appointed operator of the well?
- 15 A. Yes.
- Q. And do you have a recommendation to the amounts
- 17 which Cimarex should be paid for supervision and
- 18 administrative expenses?
- 19 A. Yes. We request that 700 a month be allowed
- 20 for drilling and the 7,000 a month be allowed for
- 21 producing the well.
- 22 Q. Just the reverse?
- A. Oh. 7,000 a month for drilling the well and
- 24 700 for producing the well.
- 25 EXAMINER GOETZE: There is a sharp profit

- 1 margin there (laughter). Continue.
- Q. (BY MR. BRUCE) And are these amounts equivalent
- 3 to those normally charged by Cimarex and other operators
- 4 in this area of wells of this depth?
- 5 A. Yes, they are.
- 6 Q. And do you request that the overhead rates be
- 7 adjusted periodically provided by the COPAS accounting
- 8 procedure?
- 9 A. Yes.
- 10 Q. And were the uncommitted interest owners
- 11 notified of this hearing?
- 12 A. Yes. And that is reflected in the affidavit
- 13 marked Exhibit 5.
- MR. BRUCE: Mr. Examiner, one thing. I
- 15 couldn't find my letter to Freeport-McMoran, so I
- 16 re-sent notice to Freeport-McMoran. At the end of the
- 17 hearing, I will have to ask that the hearing be
- 18 continued two weeks just so I can submit notice to you
- 19 on that.
- 20 EXAMINER GOETZE: Okay. Proceed.
- 21 Q. (BY MR. BRUCE) Was notice published as against
- 22 Partnership Properties?
- 23 A. Yes. And that is marked Exhibit 6.
- MR. BRUCE: And, Mr. Examiner, I submitted
- a bunch of notices to the Carlsbad newspaper. They're

- 1 notoriously late getting the full affidavits of
- 2 publication in, but I'll review the actual Affidavit of
- 3 Publication.
- 4 EXAMINER GOETZE: So you want to go ahead
- 5 and provide both documents at the next hearing?
- 6 MR. BRUCE: Correct.
- 7 EXAMINER GOETZE: Okay.
- 8 Q. (BY MR. BRUCE) And what is Exhibit 7?
- 9 A. Exhibit 7 lists the offset operators or working
- 10 interest owners.
- 11 Q. And were they notified of this hearing?
- 12 A. Yes. And that's reflected in the affidavit
- 13 marked Exhibit 8.
- MR. BRUCE: And, Mr. Examiner, all the
- 15 offsets did receive actual notice.
- 16 Q. (BY MR. BRUCE) Ms. Reese, were Exhibits 1
- 17 through 8 either prepared by you or under your
- 18 supervision or compiled from company business records?
- 19 A. Yes.
- 20 Q. And in your opinion, is the granting of this
- 21 application in the interest of conservation and the
- 22 prevention of waste?
- 23 A. Yes.
- MR. BRUCE: Mr. Examiner, I'd move the
- 25 admission of Exhibits 1 through 8.

25

testify to that.

- 1 EXAMINER GOETZE: Okay. Then I will defer
- 2 to the geologist.
- JOEL BAKER,
- 4 after having been previously sworn under oath, was
- 5 questioned and testified as follows:
- 6 DIRECT EXAMINATION
- 7 BY MR. BRUCE:
- 8 Q. Mr. Baker, where do you reside?
- 9 A. I reside in Littleton, Colorado.
- 10 Q. Who do you work for and in what capacity?
- 11 A. I work for Cimarex Energy as a geologist.
- 12 Q. Have you previously testified before the
- 13 Division?
- 14 A. I have not.
- 15 Q. Would you summarize your educational and
- 16 employment background?
- 17 A. Yes. I received a bachelor of science degree
- 18 from Texas A & M University in geology in 1985 and my
- 19 master of science degree in geology also from
- 20 Texas A & M University in 1987. Since then, I've been
- 21 employed in the oil industry as a petroleum geologist.
- 22 I started work with Tenneco and then moved, in 1988, to
- 23 work for Mobil. I worked for Mobil for a few years, and
- 24 then I've been with a handful of independents. The last
- 25 ten years I've been employed by Cimarex Energy in

- 1 Colorado, and the last seven months, specifically, I've
- 2 been assigned to the Delaware Basin Group as a
- 3 geologist.
- 4 Q. And are you familiar with the geology involved
- 5 in this application?
- 6 A. Yes.
- 7 MR. BRUCE: And, Mr. Examiner, I would
- 8 tender Mr. Baker as an expert petroleum geologist.
- 9 EXAMINER GOETZE: He is so qualified.
- 10 Q. (BY MR. BRUCE) Mr. Baker, could you refer to
- 11 your combination structure isopach map?
- 12 A. Yes.
- MR. BRUCE: Which is the second one I gave
- 14 you, Mr. Examiner.
- Q. (BY MR. BRUCE) And identify this and describe
- 16 the contents, please.
- 17 A. Yes. On this map, there are two geologic
- 18 elements portrayed here. The black contours are
- 19 contours of the net feet of organic shale in the
- 20 Wolfcamp Formation. The light gray contours are the
- 21 structure map representative of the Wolfcamp Formation.
- 22 The red arrow points to our surface location for the
- 23 Hayduke 34 Fed #3H horizontal well we want to drill.
- 24 That surface location was moved due to topographic
- 25 reasons.

- 1 I'll get into this later, but we'll drill a
- 2 well directionally to penetrate the Wolfcamp well 660
- 3 feet from the north line of the proposed unit, and the
- 4 bottom hole of the lateral will be 660 feet from the
- 5 south line of the proposed unit.
- 6 Q. And so the well -- the entire productive
- 7 interval of the well will be orthodox?
- 8 A. Yes, that is correct. That is correct.
- 9 Q. Go ahead.
- 10 A. Okay. Directly north in Section 34 of the well
- 11 we plan to drill is the Hayduke 34 Fed #1H. The surface
- 12 hole of that well is marked with an arrow. It says
- 13 "type log." That well found 301 feet of Wolfcamp net
- 14 shale. And the contour map illustrates, when we drill
- our proposed, we'll find very similar amounts of shale
- 16 along the whole lateral.
- 17 It's anticipated, at the start of the
- 18 lateral, we will encounter somewhere close to 300 feet
- of net shale, probably about 290 feet, and as we move
- 20 south to our bottom-hole location, the amount of shale
- 21 will increase. And we're anticipating somewhere in the
- 22 neighborhood of 310 feet of shale at the end of the
- 23 lateral. So it's essentially the same amount of
- 24 thickness along the whole lateral, plus or minus ten
- 25 feet. So we're expecting each quarter section along the

- 1 lateral to produce similar amounts.
- Now, what you'll notice in the well to the
- 3 north, it is oriented east-west. The reason for that is
- 4 at the time that well was drilled, we were of the belief
- 5 that it was better to have the heel of the well downdip
- 6 and to drill the well in an updip direction. Since then
- 7 we have learned that that is basically irrelevant.
- 8 We also know that the preferred frack
- 9 direction in this area is from the southwest to
- 10 northeast, and so there is no geologic preference to an
- 11 east-west well versus a north-south orientation. So we
- 12 have elected to drill this well and future wells out
- 13 here in a north-south direction because it's easier and
- more cost effective to drill the lateral at 90 degrees
- 15 and follow structural strike and not have to constantly
- 16 steer the well to stay in zone moving across dip.
- 17 Q. And provided this well turns out well, will you
- 18 anticipate -- would Cimarex anticipate drilling a well
- 19 to the west of the same length?
- 20 A. Yes. Yes, we would.
- 21 Q. And then could you identify the type log and
- 22 discuss that a little bit?
- 23 A. Right. So I mentioned on the map the location
- 24 of the type log about a half mile north of our surface
- 25 location. So this is the log interval across the

- 1 Wolfcamp Formation. The horizontal lines are internal
- 2 markers, Wolfcamp B, C, D, E markers. These are log
- 3 correlation points in the Wolfcamp that Cimarex uses
- 4 internally to zone the Wolfcamp.
- 5 This map that we just talked about is the
- 6 summation of all the net shale across the whole Wolfcamp
- 7 interval, so it includes our internal B, C and D
- 8 Wolfcamp zones.
- 9 The logs on the right-hand side, the key
- 10 log is the bulk density log, and there is a vertical
- line marked in red, 2.55 grams per cc. That is a cutoff
- 12 that we use at Cimarex, and it very closely corresponds
- 13 to the amount of organic carbon in the shale. We
- 14 believe that with the density, it's less than 2.5 grams
- 15 per -- .55 grams per cc. There is enough organic
- 16 content in the shale to be commercially productive. So
- 17 we count all of the shale that meets criteria, and it
- 18 gets lumped together into the net shale map that we
- 19 talked about on the other exhibit.
- The horizontal-dashed green line is our
- 21 proposed horizontal target zone. That's where we intend
- 22 to land the well and drill our horizontal.
- 23 O. Were Cimarex's wells to the north landed in a
- 24 similar depth?
- 25 A. Yes. Yes. They were landed in that same

- 1 stratigraphic zone.
- Q. And finally, could you identify Exhibit 11 and
- 3 just briefly discuss the plan for drilling the well?
- 4 A. Exhibit 11 shows our well plan. There are
- 5 actually two views superimposed on here. The larger
- 6 view is -- the L-shape is a vertical view of the well,
- 7 so you can see that the well is directionally drilled
- 8 because of the move in the surface location. And it's
- 9 located such that after we drill the curve, we will
- 10 penetrate the Wolfcamp Formation at a legal location,
- 11 660 feet from the north line of the unit, and then we
- 12 will drill approximately 6,600 feet of lateral length to
- 13 the terminus of the well.
- We plan on -- once the well is drilled, we
- 15 plan on fracking the well with roughly 30 stages. Each
- 16 stage, we will pump 300,000 pounds of sand, with 9,000
- 17 barrels of water per stage.
- 18 Q. Mr. Baker, I notice on the isopach map that it
- 19 says "Author: Dave Rittenbacher." Who is Dave
- 20 Rittenbacher?
- 21 A. David is my colleague. We work on the same
- 22 geologic team. It's a multidisciplinary team, but we
- 23 are both geologists on this team.
- Q. And have you reviewed the well data, and do you
- 25 agree with this interpretation?

- 1 A. Yes. Yes, I do. I do. I've reviewed all this
- 2 with Dave. We work this area.
- 3 Q. And were the type log and the drilling plan
- 4 compiled from Cimarex's company records?
- 5 A. Yes.
- 6 Q. And in your opinion, is the granting of this
- 7 application in the interest of conservation and the
- 8 prevention of waste?
- 9 A. Yes.
- MR. BRUCE: Mr. Examiner, I'd move the
- 11 admission of Exhibits 9, 10 and 11.
- 12 EXAMINER GOETZE: Exhibits 9, 10 and 11 are
- 13 so entered.
- 14 (Cimarex Energy Company of Colorado Exhibit
- 15 Numbers 9, 10 and 11 were offered and
- 16 admitted into evidence.)
- 17 MR. BRUCE: I have no further questions for
- 18 the witness.
- 19 CROSS-EXAMINATION
- 20 BY EXAMINER GOETZE:
- 21 Q. Just one question. You mentioned some sort of
- 22 topographical restriction. Was there a surface
- 23 requirement for you to relocate, or was this just the --
- 24 A. Right. It was -- it was just -- this was as
- 25 close to a flat area to build the pad as we could get.

24

25