Page 1

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

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

APPLICATION OF MARATHON OIL PERMIAN, CASE NOS. 20163, LLC FOR COMPULSORY POOLING, LEA 20164 COUNTY, NEW MEXICO.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

May 16, 2019

Santa Fe, New Mexico

BEFORE: LEONARD LOWE, CHIEF EXAMINER MICHAEL MCMILLAN, TECHNICAL EXAMINER DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Leonard Lowe, Chief Examiner; Michael McMillan, Technical Examiner; and David K. Brooks, Legal Examiner, on Thursday, May 16, 2019, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

REPORTED BY: Mary C. Hankins, CCR, RPR New Mexico CCR #20 Paul Baca Professional Court Reporters 500 4th Street, Northwest, Suite 105 Albuquerque, New Mexico 87102 (505) 843-9241

Page 2 1 APPEARANCES 2 FOR APPLICANT MARATHON OIL PERMIAN, LLC: 3 DEANA M. BENNETT, ESQ. MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A. 4 500 4th Street, Northwest, Suite 1000 Albuquerque, New Mexico 87102 5 (505) 848-1800 deanab@modrall.com б 7 FOR INTERESTED PARTY EOG RESOURCES, INC.: 8 MICHAEL H. FELDEWERT, ESQ. HOLLAND & HART, LLP 9 110 North Guadalupe, Suite 1 Santa Fe, New Mexico 87501 (505) 988-4421 10 mfeldewert@hollandhart.com 11 12 13 INDEX 14 PAGE Case Numbers 20163 and 20164 Called 3 15 16 Case Presented by Affidavit 3 17 Proceedings Conclude 19 20 18 Certificate of Court Reporter 19 20 EXHIBITS OFFERED AND ADMITTED 21 Marathon Oil Permian, LLC Exhibit Numbers 1 and 2 with A through K 19 22 23 24 25

Page 3 (9:52 a.m.) 1 2 EXAMINER LOWE: We will hear Case 20169, 3 which is Marathon Oil Permian for compulsory pooling, and Case Number 20164, Marathon Oil Permian for 4 compulsory pooling, and 20163 Marathon Oil Permian for 5 compulsory pooling. 6 7 MS. BENNETT: Thank you. 8 Good morning. Deana Bennett on behalf of 9 the Applicant, Marathon Oil Permian, LLC. 10 MR. FELDEWERT: Mr. Examiner, Michael 11 Feldewert, with the Santa Fe office of Holland & Hart, 12 on behalf of EOG Resources, Inc. 13 We entered an appearance in this matter, but the parties have been able to work things out, and 14 we withdrew our objections to these applications. 15 EXAMINER LOWE: 16 Okay. 17 MS. BENNETT: Thank you. I'd like to start with Case Numbers 20163 18 19 and 20164 and consolidate those two for affidavit 20 purposes first, and then I'll turn to 20169, if that's 21 agreeable to the examiners. 22 EXAMINER LOWE: That will be fine. 23 MS. BENNETT: Good morning. I am representing Marathon Oil Permian, LLC in these cases. 24 25 And the first cases I'm presenting are Case Numbers

Page 4 20163 and 20164, and these are applications for 1 compulsory pooling. And the applications are 2 actually -- these applications are for the 3rd Bone 3 Spring, and so I'll be doing the Wolfcamp application 4 5 separately. The reason that I've chosen to put these 6 7 two Bone Spring cases together in the same affidavit is 8 that they cover a half section combined, east half-east 9 half, west half-east half, and so it seemed more 10 efficient to put these two together. So I intend to present these by affidavit. 11 12 EXAMINER McMILLAN: Are there any other 13 appearances? 14 Proceed. 15 MR. HALL: Thank you. 16 So for the Division's review, I've included the applications right behind the cover sheet. 17 So 18 application 20163 and 20164 are right behind the cover 19 sheet. 20 And if you turn to Exhibit 1, Exhibit 1 is the affidavit of the landman, Mr. Ryan Gyllenband. 21 And Mr. Gyllenband has previously testified before the 22 Division on behalf of Marathon, and his credentials were 23 accepted as a matter of record. 24 25 And in his affidavit, he discusses the fact

that there is no opposition expected to the granting of this application -- or these applications, and that's why we decided to put them on by affidavit. He also includes with his affidavit several exhibits, and I'll go through those in a moment. But it's the lease tract map for each proposed unit and the C-102s, proposal letters and AFEs.

Page 5

8 Well, let's turn to Exhibits A1 and A2. Exhibits A1 and A2 are those lease tract maps and 9 ownership information for the two wells that are 10 11 proposed, the east half-west half and the west half-west half of Section 18. And so these two exhibits show the 12 13 acreage, as well as the aggregate ownership and the parties that Marathon is seeking to pool. And so that's 14 the second page of Exhibit A1, and the second page of 15 16 Exhibit A2 are the parties Marathon is seeking to pool. 17 When Mr. Gyllenband was doing his due 18 diligence for this, he sent out proposal letters. 19 Marathon hires a broker. The broker gets the names and 20 addresses, and proposal letters are sent out to the working interest owners, along with AFEs. And then 21 22 Marathon follows up to get voluntary agreement in the units. And Mr. Gyllenband, in his affidavit, testifies 23 24 that it's his opinion that he made a good-faith effort 25 to obtain voluntary joinder in the units.

Page 6 One thing I want to point out about this 1 that we'll be talking a lot more about in the 2 geologist's testimony is that there is a depth severance 3 in the Bone Spring, and that depth severance is created 4 5 by lease language. And the language [sic] is included in Exhibit B of Mr. Gyllenband's materials. And it is 6 7 100 feet below the stratigraphic equivalent of the 8 deepest depth drilled by the lessee and capable of 9 producing in paying quantities. 10 EXAMINER BROOKS: Where is this? 11 MS. BENNETT: That's in Exhibit B. 12 EXAMINER BROOKS: Exhibit B. Okav. 13 MS. BENNETT: It's about the third-to-the-last line in Exhibit B. 14 EXAMINER BROOKS: Which tract or tracts 15 16 does this affect? 17 MS. BENNETT: Both. 18 Examiner BROOKS: Both? 19 MS. BENNETT: Uh-huh. It affects both. 20 EXAMINER BROOKS: So it's all the way 21 across the unit? 22 MS. BENNETT: It is. 23 And Marathon did, though, notify interest 24 owners above and below the depth severance. So they have notified the offsets above and below. And I will 25

Page 7 be talking a lot more about the depth severance in the 1 2 geologist's affidavit. 3 EXAMINER BROOKS: Yes. I suppose he will tell us where the landing depth is by comparison to the 4 depth severance. 5 б MS. BENNETT: Yes. He won't, but I will be 7 pointing out his exhibits that do tell you that. 8 EXAMINER BROOKS: Yes. 9 Just a question, though, about depth 10 From what you read -- and I haven't gone severances. back and read this paragraph, but does it differ as to 11 12 various parts of the units as to what the defined depth 13 is? Does it depend on which well may have penetrated, or is it the deepest? 14 MS. BENNETT: My understanding is this is 15 16 based on the Government L well, and Marathon has well logs of the Government L well in the geologist's 17 affidavit. 18 19 EXAMINER BROOKS: Very good. We'll let you 20 postpone that until you discuss the geologist's affidavit. 21 22 MS. BENNETT: Yeah. Any other questions about that before I move on to the landman's other 23 24 exhibits? 25 EXAMINER BROOKS: Not now.

MS. BENNETT: So he testifies -- well, Exhibit C are the C-102s for these two Bone Spring wells, the 4H and the 1H. And they show the pool name, which is the Red Hills; Bone Spring, North, and the pool code, 96434. And he testifies that these wells will comply with the setback requirements.

7 Exhibit D is the proposal letter that was 8 sent out to the working interest owners. And as with 9 other Marathon proposal letters, it has separate 10 elections for each proposed well, and it also includes 11 the approximate TVD for each well and the locations for 12 the wells.

13 And Exhibit E are the AFEs for these two wells, again the 4H and the 1H. And Mr. Gyllenband 14 testifies that the costs reflected in these AFEs are 15 16 similar to the costs for other wells of the same length and the same depth in this area of southeastern New 17 18 Mexico, and he believes that those costs are fair and 19 reasonable. He testifies that Marathon requests 20 overhead and administrative rates of 7,000 a month for drilling a well and 700 a month for a producing well. 21 22 And in his opinion, these rates are fair and comparable 23 to the rates that other operators charge in this area 24 for wells of this same nature. And he requests that 25 these rates be adjusted periodically according to the

Page 8

Page 9 COPAS accounting procedure. Marathon also requests the 1 maximum cost plus 200 percent risk charge be assessed 2 against nonconsenting working interest owners and that 3 it be designated operator of the well. 4 And Marathon requests that it be allowed a 5 period of one year between when the wells are drilled 6 7 and when the first well is completed under the order. 8 He also asks that overriding royalty 9 interest owners be pooled, and I did provide notice to 10 overriding royalty owners of this hearing. 11 Exhibit F, in fact, is my Affidavit of Notice, and Exhibit F includes a list of all of the 12 parties entitled to notice. It also includes a 13 spreadsheet showing the results of that notice, and then 14 it has an Affidavit of Publication from the "Hobbs 15 16 News-Sun" showing that notice was published on May 1st, 17 2019. 18 One thing that I would like to point out is 19 that the BLM has a naming protocol, and consequently 20 Marathon was required to change the name of its wells from what was in the application to what is now on the 21 22 C-102. And that's based on BLM requirements. And 23 Mr. Gyllenband testifies to that as well in his 24 affidavit, that the name on the C-102 is the name that 25 Marathon would like to have appear on the order.

Page 10 1 EXAMINER LOWE: Okay. 2 MS. BENNETT: That's all I have to report on Mr. Gyllenband's affidavit. If you-all have any 3 questions for me about his exhibits or my exhibit, I'm 4 5 happy to try to answer them. If not, then I'll move on to the geologist's exhibit. 6 7 EXAMINER BROOKS: Which exhibit is the 8 C-102? 9 MS. BENNETT: The C-102 is Exhibit C. EXAMINER BROOKS: 10 B? 11 MS. BENNETT: C, as in cat. C, as in 12 C-102. 13 EXAMINER BROOKS: That makes sense. So the name Ned Pepper 18 TB Federal Com 14 #4H is correct? 15 16 MS. BENNETT: That's correct. And the application originally had --17 EXAMINER BROOKS: Yeah. That's the same 18 names that's on the cover sheet. 19 20 MS. BENNETT: It is. Yes. Yes. 21 EXAMINER BROOKS: Okay. Thank you. 22 MS. BENNETT: The only area that should be 23 different is the application, but the exhibits all 24 reflect the same -- the corrected name. 25 EXAMINER BROOKS: Okay.

Page 11 EXAMINER LOWE: What was the big difference 1 2 in the name? 3 MS. BENNETT: Marathon's typical naming protocol is to use the section, township and range, but 4 BLM requires "Federal Com" or "Fed Com" be included in 5 the name, and there is a character limitation. 6 It can 7 only have so many letters and numbers, as I understand 8 it. So that's why it's been changed, to remove the 9 township and section -- or the township and range and only add "Federal Com." And we are working on being 10 more proactive about that on the applications to make 11 12 sure we don't keep running up against this when we have 13 federal leases at issue. 14 EXAMINER McMILLAN: What is the status? MS. BENNETT: They're planned. 15 16 EXAMINER McMILLAN: Proposed? 17 MS. BENNETT: They're proposed, right. Ι know they do have some -- actually, that's for the Hades 18 19 case that's coming up. These are proposed right now. I 20 don't know what the drilling schedule is for the wells. 21 EXAMINER McMILLAN: And are there any 22 unlocatable interests? 23 MS. BENNETT: No. 24 EXAMINER McMILLAN: And the pool rule is 25 statewide, right?

Page 12 1 MS. BENNETT: It is. Fantastic. With that, I'd like to turn to 2 the geologist's affidavit. And the geologist is Ethan 3 Perry, and his affidavit is behind Tab 2. Mr. Perry has 4 previously testified before the Division, and his 5 б credentials were accepted as an expert geologist --7 petroleum geologist. 8 So the first three of his examples are 9 fairly routine. He's included the structure map of the That's Exhibit G. Exhibit G shows the 10 Wolfcamp. proposed project area for the wells, and this shows both 11 12 the Bone Spring and the Wolfcamp wells. But the ones we're looking at in particular here are wells -- are 13 numbered 2 and 4. That's the TB Fed Com 1H and the TB 14 Fed Com 4H. And he testifies that Exhibit G shows that 15 16 the structure dips from the north to south. 17 And Exhibit G also identifies three wells 18 in the vicinity of the proposed wells and has a line of 19 cross section running from A to A prime. And one of 20 those wells is the Government L1, which is the one that is the measuring well for the depth severance as well. 21 22 So turning to Exhibit H, Exhibit H is a 23 stratigraphic cross section hung on the top of the 24 Wolfcamp. And it's his opinion that the well logs that 25 he's identified here give a representative sample of the

Page 13 Bone Spring Formation in this area. On this particular 1 2 exhibit, he's identified the producing zone with a green-shaded area, and then you can see the target 3 interval is identified with a red arrow. And that's 4 below 11,800 feet on the Government L2 and the 5 Government L1. In his opinion, the producing zone is 6 7 continuous across the proposed units. 8 EXAMINER BROOKS: That's the zone -- the 9 target zone for the proposed wells? 10 MS. BENNETT: The target zone, uh-huh. 11 And I have a separate exhibit entirely that shows Yeah. 12 the depth severance, so we'll get to that in just a 13 minute. 14 EXAMINER BROOKS: Okay. Exhibit I is the gross 15 MS. BENNETT: 16 interval isochore -- I'm sorry -- the gross sand isochore. And it shows, according to the witness, 17 according to the geologist, that the formation is 18 19 relatively uniform across the proposed well units. 20 So Exhibits J and K are the two that show the depth severance. And in my view, Exhibit K is 21 22 really the more informative of the two, so we want to 23 start with that one and maybe work our way back to J if 24 you have any additional questions. 25 But Exhibit K is the Government L1 log.

Page 14 And it shows the Sebastian SB target zone is the well 1 that's the measuring well that was discussed in the 2 3 lease language that was in B, and so the depth severance would be 100 feet below that. And so you can see that 4 5 the depth severance -- what Marathon is proposing is a depth severance of 11,051 feet. And you can see there 6 7 is a line that says "Depth Severance" right around 8 11,000 feet. Do you see that line --9 EXAMINER BROOKS: Yes. 10 MS. BENNETT: -- in blue? 11 And you can see that Marathon's target is about -- I don't know -- 1,000 feet, 800 feet below 12 13 that. 14 EXAMINER BROOKS: Yeah. Below 11,5. 15 MS. BENNETT: Yes. So Marathon's target is 16 identified by that red blob. 17 EXAMINER BROOKS: I assumed as much --18 MS. BENNETT: That's the Ned Pepper. 19 EXAMINER BROOKS: -- especially since it 20 says "Target." 21 (Laughter.) 22 MS. BENNETT: Yes. That's the target right 23 So you can see that that is (A) already guite a there. 24 distance below the depth-severance line --25 EXAMINER BROOKS: Right.

Page 15 MS. BENNETT: -- but also Marathon has 1 2 modeled its hydraulic frac height at best-case scenario, which is the blue portion of that diagram. So if there 3 were no geologic impediments or barriers, that's what 4 5 they've modeled their frac height to get to. But you 6 can see that there is a 100-foot thick limestone in the 7 3rd Bone Spring Carbonate interval that the geologist 8 testifies will prevent fracturing upward into the 2nd 9 Bone Spring Sand. And then even above that, you can see -- he notes that there is a 300-foot thick limestone 10 11 in the 3rd Bone Spring Carbonate that will prevent 12 fracking up into the 2nd Bone Spring Sand. 13 So there are two frac barriers, and the proposed target is nearly 1,000 feet below the 14 depth-severance line. So that's what this exhibit is 15 16 designed to show. 17 Turning back to Exhibit K, Exhibit K does 18 show the -- the first well is the Government L well 19 cross section, and you can see the SBSG target, which is 20 the Sebastian target, and that is around 10,900 feet. And so Marathon has included -- the geologist has 21 included here that it's plus or minus 10,918 feet. 22 So 23 the depth severance technically would be at 11,018 feet, but Marathon's leases are in effect below 10,000 -- I'm 24 25 sorry -- 11,051 feet. So the Marathon leases are about

40 feet below the 100-foot marker for the depth
severance. And not only that, they're also -- about 900
feet below that is where their target zone is. So it's
the geologist's opinion that based on the distance from
the depth severance, as well as the geologic formations
that Marathon will not obtain any hydrocarbons from
above the depth-severed line.

8 He also testifies that the horizontal 9 spacing unit is justified from a geologic standpoint for these two units, that are will no structural impediments 10 11 or faulting that will interfere with horizontal 12 development and that each quarter-quarter section in the unit will contribute more or less equally to production. 13 He testifies that the preferred well orientation in this 14 area is north to south, and that is because the 15 16 orientation of the maximum horizontal stress orientation is roughly east-west. And in his opinion, the granting 17 of these application is in the interest of conservation 18 19 and the prevention of waste. 20 EXAMINER LOWE: Okav. EXAMINER BROOKS: Well, I tend to assume 21 22 that. 23 MS. BENNETT: Assume that it's his opinion? 24 EXAMINER BROOKS: That that is his opinion. 25 With that, I don't have any MS. BENNETT:

Page 17 further affirmative statements, but I'm happy to answer 1 2 or try to answer any questions the Division may have. 3 EXAMINER BROOKS: Well, you seem to have a 4 very large margin of separation with the depth 5 severance, as well as geologic proof, so that looks 6 good. 7 MS. BENNETT: That's correct. And in 8 addition, he did model, as I mentioned, maximum frac 9 height, and that shows it would not get anywhere near 10 the depth-severance area. 11 EXAMINER BROOKS: Thank you. 12 EXAMINER LOWE: I have no questions. 13 MS. BENNETT: Thank you. 14 EXAMINER McMILLAN: Okay. I'm looking at essentially Exhibit K. 15 16 MS. BENNETT: Okay. 17 EXAMINER McMILLAN: So the Ned Pepper is -essentially it's the base of the 3rd Bone Spring. Is 18 19 ownership identical between the 3rd Bone Spring and the 20 Wolfcamp? MS. BENNETT: I believe it is. Let me 21 22 just -- he did testify to that in his affidavit that it is uniform. Yes. 23 24 EXAMINER McMILLAN: So the depth 25 severance -- going back to K, the depth severance is

Page 18 1 11,051? 2 MS. BENNETT: Uh-huh. Marathon's leases in effect are below 11,051. I think geologically, perhaps, 3 the depth severance is a bit higher than that. Based on 4 5 the lease language, it would be -- and the depth of the well, the depth severance actually would be at 11,018. 6 7 EXAMINER BROOKS: That's based on where 8 this formation -- the productive formation base appears 9 in the government well. 10 MS. BENNETT: That's right. And the 11 Government L1 log, which is on Exhibit J, that shows the 12 SBSG target, which is the Sebastian well, and it shows TVD at 10,918 feet. And so when you add 100 feet to 13 that, it's 11,018 feet. 14 15 EXAMINER BROOKS: Okay. 16 MS. BENNETT: So combining the depth of the well plus the lease language requires a 100-foot buffer, 17 18 essentially. 19 EXAMINER BROOKS: Thank you. 20 EXAMINER LOWE: I have no questions. 21 MS. BENNETT: Okay. With that, then I 22 would ask that Exhibits 1 and 2 and their attachments be admitted into the record for Case Numbers 20163 and 23 24 20164. 25 MR. FELDEWERT: No objections.

Page 19 EXAMINER LOWE: No objections? All the exhibits are accepted for these cases, and we'll take it under advisement. (Marathon Oil Permian, Inc. Exhibit Numbers 1 and 2 and A through K are offered and admitted into evidence.) MS. BENNETT: Thank you very much. (Case Numbers 20163 and 20164 conclude, 10:16 a.m.)

Page 20 1 STATE OF NEW MEXICO 2 COUNTY OF BERNALILLO 3 CERTIFICATE OF COURT REPORTER 4 5 I, MARY C. HANKINS, Certified Court Reporter, New Mexico Certified Court Reporter No. 20, 6 7 and Registered Professional Reporter, do hereby certify 8 that I reported the foregoing proceedings in 9 stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings that 10 were reduced to printed form by me to the best of my 11 12 ability. 13 I FURTHER CERTIFY that the Reporter's Record of the proceedings truly and accurately reflects 14 the exhibits, if any, offered by the respective parties. 15 16 I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or 17 18 attorneys in this case and that I have no interest in 19 the final disposition of this case. 20 DATED THIS 30th day of May 2019. 21 22 MARY C. HANKINS, CCR, RPR 23 Certified Court Reporter New Mexico CCR No. 20 Date of CCR Expiration: 12/31/2019 24 Paul Baca Professional Court Reporters 25