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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 COG OPERATING, LLC CASE NO. 16378 FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

## REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

September 20, 2018

Santa Fe, New Mexico

## BEFORE: WILLIAM V. JONES, CHIEF EXAMINER DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, William V. Jones, Chief Examiner, and David K. Brooks, Legal Examiner, on Thursday, September 20, 2018, 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

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Page 4 (8:31 a.m.) 1 EXAMINER JONES: So let's start on the 2 first case of the day, Case 16378, application of COG 3 Operating, LLC for a compulsory pooling in Eddy County, 4 5 New Mexico. Call for appearances. 6 7 MR. LARSON: Mr. Examiner, Gary Larson, 8 Santa Fe office of Hinkle Shanor, for the Applicant, COG 9 Operating. And I have two witnesses. 10 MR. BRUCE: Mr. Examiner, Jim Bruce of 11 Santa Fe, representing MRC Permian Company. I have no 12 witnesses. 13 EXAMINER JONES: Any other appearances? 14 MRC Permian, LLC? MR. LARSON: May I proceed, Mr. Examiner? 15 16 EXAMINER JONES: Yes. 17 JAMES D. MARTIN, after having been first duly sworn under oath, was 18 19 questioned and testified as follows: 20 DIRECT EXAMINATION BY MR. LARSON: 21 22 **Q**. Good morning, Mr. Martin. 23 Good morning. Α. 24 Would you state your full name for the record? Q. 25 My name is James Drenning Martin, Α.

Page 5 1 D-R-E-N-N-I-N-G. 2 And where do you reside? 0. Midland, Texas. 3 Α. 4 And by whom are you employed and in what Q. 5 capacity? I am a landman for COG Operating, LLC. 6 Α. 7 And what is the focus of your responsibilities ο. 8 as a landman at COG? 9 I oversee various oil and gas properties in Α. Eddy County, New Mexico. 10 11 And are you familiar with the land matters that 0. 12 pertain to COG's applications? 13 Α. Yes. 14 And have you previously testified at a Division Q. 15 hearing? 16 Α. Yes. 17 Q. And did the examiner accept your qualifications as an expert in petroleum land matters? 18 19 Α. Yes. 20 MR. LARSON: Mr. Examiner, I tender 21 Mr. Martin as an expert in petroleum land matters. 22 EXAMINER JONES: He is so qualified. 23 (BY MR. LARSON) Would you identify the document 0. 24 marked as Exhibit 1? 25 Exhibit 1 is a C-102 well location and acreage Α.

Page 6 dedication plat. 1 2 And that's for the Roadrunner Federal Com #23H? 0. 3 Α. Yes, sir. 4 And is Exhibit Number 1 a true and correct copy Q. of the C-102 for the Roadrunner well? 5 6 Α. Yes. 7 And what formation is COG seeking to pool? Q. 8 The Wolfcamp. Α. And are there any depth exceptions in the 9 Q. Wolfcamp? 10 11 Α. No. 12 Q. And what pool will the proposed well produce 13 from? The Purple Sage Pool. 14 Α. 15 Q. So that's 320-acre spacing? 16 Α. Yes. 17 Q. And do you know the pool code? 18 It's 98220. Α. 19 And will the Roadrunner 23H be the standard for Q. 20 the 640-acre horizontal spacing unit? 21 Α. Yes. 22 Would you next identify the document marked as Q. Exhibit 2? 23 24 Α. Exhibit 2 is a unit ownership map depicting 25 each individual tract included in the unit, who the

Page 7 working interest owners are and their respective working 1 2 interest percentages. 3 Q. And did you prepare this exhibit? 4 Α. Yes. 5 And does it identify all the working interests Q. in the horizontal spacing unit? 6 7 Α. Yes. 8 And does COG hold working interests within each Q. 9 quarter-quarter section in the proposed unit? 10 Α. Yes. 11 0. Would you next identify the document marked as 12 Exhibit 3? 13 Α. Exhibit 3 is a sample well-proposal letter with corresponding green cards. 14 15 And we'll note at the top of Exhibit 3, it ο. 16 shows "September 17th." That's because it was printed off of a Word document? 17 18 Yes, sir. Α. 19 That's not the date it was sent? Q. 20 Correct. Α. 21 And did you prepare and sign and send all of Q. 22 the well-proposal letters? 23 Α. Yes. 24 And was a letter sent to each of the working 0. 25 interests identified in Exhibit 2?

Page 8 1 Α. Yes. 2 And did they all receive your letter? 0. 3 Α. Yes. 4 And after you sent the well-proposal letters, Q. 5 did you have follow-up communications with all of the 6 working interest owners? 7 Α. Yes. 8 Q. And what was the outcome of those 9 communications? 10 We were able to reach an agreement with all of Α. the working interest owners save and except Chevron 11 12 U.S.A., Inc. and the Allar Company. 13 Are you continuing to negotiate with Allar and 0. 14 Chevron? 15 Α. Yes. 16 And if you're able to strike a deal with both Q. 17 of them, will you notify the Division that that's 18 occurred? 19 Α. Yes. 20 Would you next identify the document marked as Q. 21 Exhibit 4? Exhibit 4 is a list of all the working interest 22 Α. 23 owners, overriding royalty interest owners and 24 unmarketable title owners to whom we delivered hearing 25 notices to, as well as corresponding green cards for the

Page 9 working interest owners. 1 2 And does it also include a sample of the 0. 3 hearing notice letter? 4 Α. Yes. 5 And was a hearing notice letter sent to each Q. 6 and every one of the interests identified in Exhibit 4 7 under your direction and supervision? 8 Α. Yes. And were all the green cards returned from the 9 Q. working interest owners? 10 11 Α. Yes. 12 0. And how about the other interests identified in 13 Exhibit 4? 14 Α. No. 15 And did you have good addresses for all of Q. 16 them? 17 Α. No. In your opinion, did you make a good-faith 18 Q. 19 effort to find good addresses for those interest owners? 20 Yes. We used various internal resources, as Α. well as online databases, people search databases to 21 locate those parties. 22 23 And did COG publish a notice of today's 0. 24 hearing? 25 Α. Yes.

Page 10 1 And on what date was the notice published? Q. 2 Α. August 16th, 2018. 3 Q. Would you identify the document marked as Exhibit 5? 4 Exhibit 5 is an Affidavit of Publication for 5 Α. the Roadrunner Federal Com 23H hearing published in the 6 7 "Carlsbad Current Argus" newspaper. 8 Q. And is Exhibit 5 a true and correct copy of the 9 affidavit? 10 Α. Yes. 11 0. Would you next identify the document marked as 12 Exhibit 6? Exhibit 6 is the initial AFE for the Roadrunner 13 Α. Federal Com 23H that we proposed the well with. 14 15 ο. And is Exhibit 6 a true and correct copy of the 16 AFE that you sent with your well-proposal letter? 17 Yes. Α. And what is the total estimated cost indicated 18 Q. 19 on the AFE? 20 It's 12,760,000. Α. 21 Would you next identify the document marked as Q. 22 Exhibit 7? 23 Exhibit 7 is a subsequent AFE for the subject Α. 24 well which included updated well costs. 25 And what is the total estimated well costs 0.

Page 11 1 indicated on the updated AFE? 2 Α. \$13,712,025. 3 Q. And is the increase in well costs from the 4 initial to the updated AFE the result of rising well 5 costs during the interim period? 6 Α. Yes. 7 Have you sent the updated AFE to all the Q. 8 working interest owners identified in Exhibit 2? 9 Α. Yes. 10 Are the costs indicated on the updated AFE 0. consistent with costs incurred by COG for similar 11 12 Wolfcamp horizontal wells? 13 Α. Yes. 14 And do you have a recommendation for the amount 0. 15 COG should be paid for supervision and administrative 16 expenses? 17 The overhead expenses on a fixed-rate Α. Yes. basis, we're seeking \$7,000 a month during the drilling 18 19 period and then \$700 a month for the producing rate 20 period. 21 ο. And are those amounts consistent with and 22 similar to those charged by COG for other Wolfcamp horizontal wells? 23 24 Α. Yes. 25 And do you also recommend that the rates for 0.

Page 12 supervision and administrative expenses be adjusted 1 2 periodically pursuant to the COPAS accounting procedure? 3 Α. Yes. 4 And is COG also requesting a 200 percent charge Q. 5 for the risk of drilling and completing the well? 6 Α. Yes. 7 And in your opinion, will the granting of COG's Q. 8 application avoid the drilling of unnecessary wells, protect correlative rights and serve the interest of 9 conservation and prevention of waste? 10 11 Α. Yes. 12 MR. LARSON: Mr. Examiner, I move the 13 admission of Exhibits 1 through 7. EXAMINER JONES: Any objection? 14 MR. BRUCE: No objection. 15 16 (COG Operating, LLC Exhibit Numbers 1 17 through 7 are offered into evidence.) 18 EXAMINER JONES: Does MRC Permian intend to 19 put on anything today? 20 MR. BRUCE: No. No. I have no questions of the witness. 21 22 EXAMINER JONES: Okay. 23 CROSS-EXAMINATION 24 BY EXAMINER BROOKS: 25 You have here -- on Exhibit 4, you've got the Q.

Page 13 unmarketable title owners, and you first list the heirs 1 2 and -- well, you list the heirs and devisees of various 3 people, and then you list current mineral owners. 4 Α. Yes, sir. 5 And I'm assuming those current mineral Q. 6 owners -- the people you list as current mineral owners 7 are people who have apparent chain -- chain of title to 8 mineral interests by, through and under the people you 9 believe to be heirs --10 Α. Yes. 11 -- of the person identified in title line for 0. 12 that particular chain of title? 13 Α. Those are the heirs who we have Yes. identified with the resources. We had, internally, the 14 15 title opinion, and we've taken leases or our partners 16 have taken leases on all these current mineral owners. 17 Q. So all those are all leased interests? 18 Α. Correct. 19 And the only unleased interests would be then Q. 20 the interests of any outstanding heirs who have not 21 been --22 Who we don't know about. Α. 23 Yes. You have identified here all the leased 0. 24 interests that you -- of heirs that you -- that you have 25 identified?

Page 14 So there are no unleased current mineral 1 Α. 2 interest owners. 3 Q. There are no unleased mineral interest owners 4 whom you know --5 That I know about, correct. Α. 6 So all those would be only people who would be Q. 7 heirs that you don't know about? 8 Α. Yes. Okay. And the overriding royalties, are those 9 0. 10 under the state lease? 11 Yes, sir. Α. 12 Q. And I'm assuming you have identified them 13 because their assignments do not include pooling clauses? 14 The base leases do not. 15 Α. 16 The state leases never do, as far as I'm aware. Q. 17 Correct. Yes. Α. 18 Q. Okay. Thank you. 19 EXAMINER JONES: So this was Exhibits 1 20 through 7? I think it was. Did we admit those yet? I asked for objections and --21 22 MR. LARSON: I requested the admission of 23 1 through 7. 24 EXAMINER BROOKS: I'm sorry. I chimed in 25 at the wrong time.

Page 15 EXAMINER JONES: No, you didn't. 1 2 I don't have any questions. Thank you very 3 much. 4 THE WITNESS: Thank you. 5 MR. LARSON: Just for the record, those exhibits are admitted? 6 7 EXAMINER JONES: Exhibits 1 through 7 are 8 admitted. (COG Operating, LLC Exhibit Numbers 1 9 through 7 are admitted into evidence.) 10 11 EXAMINER JONES: Will you please stand and 12 let the court reporter -- did you stand before? 13 MR. FISHER: No, I didn't. 14 MATT FISHER, after having been first duly sworn under oath, was 15 questioned and testified as follows: 16 17 DIRECT EXAMINATION BY MR. LARSON: 18 19 Q. Good morning, Mr. Fisher. 20 Good morning. Α. 21 Will you state your full name for the record? Q. 22 Matt Fisher. Α. 23 Where do you reside? Q. Midland, Texas. 24 Α. 25 And by whom are you employed and in what Q.

Page 16 1 capacity? 2 Α. I am a geologist for COG Operating, LLC. 3 Q. And are you familiar with the geological 4 aspects of the proposed Roadrunner well in the matters 5 addressed in COG's application? 6 Α. Yes. 7 Have you previously testified at a Division Q. 8 hearing? 9 Yes, I have. Α. 10 And at each of those hearings, did the examiner Q. 11 accept your qualifications as an expert in petroleum 12 geology? 13 Α. Yes. 14 MR. LARSON: Mr. Examiner, I tender Mr. Fisher as an expert petroleum geologist. 15 16 EXAMINER JONES: Any objection? 17 MR. BRUCE: No. 18 EXAMINER JONES: He is so qualified. 19 MR. LARSON: Thank you. 20 (BY MR. LARSON) Mr. Fisher, I'll direct your Q. 21 attention to Exhibit 8, and would you identify it for 22 the record? 23 Okay. This is a location map of the Roadrunner Α. 24 23H, and it shows COG's acreage in yellow and the 25 approximate location of the Roadrunner 23H shown by the

Page 17 dashed line, as well as an offset producing Wolfcamp A 1 Shale well. 2 3 Q. And did you produce this map? Yes, I did. 4 Α. 5 And will the completed interval of the Q. 6 Roadrunner well comply with the Division's current 7 setback requirements? 8 Α. Yes, it will. And who operates the offset Wolfcamp A well 9 Q. 10 that's identified in Exhibit 8? That is Cimarex. 11 Α. 12 0. And has the Cimarex well been productive? Yes, it has. 13 Α. 14 Q. Would you identify the document marked as Exhibit 9? 15 16 Α. This is a structure map -- a subsea structure map on the top of the Wolfcamp Formation. The contour 17 18 intervals here are each 50 feet. It's the same map as 19 before, just overlain with these contour intervals. 20 And did you prepare this map? Q. 21 Α. Yes, I did. 22 0. And would you describe what your structure map 23 is intended to depict? 24 Α. You can see the regional dip going from west to 25 east. And this shows that the Roadrunner 23H will be

Page 18 drilled approximately along strike, so we shouldn't 1 encounter much structural dip throughout the course of 2 the lateral. 3 4 ο. And what role did this map have in your 5 analysis of the prospects for the Roadrunner well? It showed us that we shouldn't encounter any 6 Α. 7 drilling hazards or faulting or anything. 8 Q. Would you next identify the document marked as 9 Exhibit 10? This is a location map for the cross section, 10 Α. which is shown on the next exhibit, going from A to A 11 12 prime, which is going from north to south. 13 And did you also prepare this exhibit? 0. Yes, I did. 14 Α. 15 And would you identify the final exhibit, which Q. 16 is Number 11? Okay. This is the cross section, which was 17 Α. referenced on the previous exhibit, going from A to A 18 prime, from left to right. There are three wells shown 19 20 here. Each well has three tracts. On the left in black 21 is the gamma ray. In the middle is the deep resistivity, and on the right is the porosity log. 22 This 23 cross section is hung on the top of the Wolfcamp shown 24 by the datum in red at the top. And then the lateral 25 interval, the Roadrunner 23H, is shown on the middle

Page 19 well to the left shown by the green box. 1 2 And did you prepare this exhibit? 0. 3 Α. Yes, I did. 4 And what does the cross section tell you about Q. 5 the target interval? It appears that the target interval and the 6 Α. 7 Wolfcamp will be continuous throughout the course of the 8 lateral. 9 And there are no geologic faults or other 0. 10 impediments in the interval? 11 No, sir. Α. 12 Q. In your opinion, will the proposed Roadrunner 13 well be productive along the entire length of the 14 completed lateral? Yes, I believe so. 15 Α. 16 And in your opinion, will the production be Q. 17 reasonably uniform across the length of the lateral? 18 Α. Yes. 19 And in your opinion, will the granting of COG's Q. application avoid the drilling of unnecessary wells, 20 21 protect correlative rights and serve the interests of 22 conservation and prevention of waste? 23 Α. Yes. 24 MR. LARSON: Mr. Examiner, I move the 25 admission of Exhibits 8 through 11.

Page 20 EXAMINER JONES: Any objection? 1 2 MR. BRUCE: No objection. 3 EXAMINER JONES: Exhibits 8 through 11 are admitted. 4 5 (COG Operating, LLC Exhibit Numbers 8 through 11 are offered and admitted into 6 7 evidence.) 8 MR. LARSON: And I will pass the witness. 9 CROSS-EXAMINATION BY MR. BRUCE: 10 11 Q. Just one question. On your cross section, are 12 those older Pennsylvanian -- wells? Like the actual target on the wells? 13 Α. 14 Yeah. Q. I'm not sure. I just know they covered the 15 Α. 16 interval we were targeting, that we're looking at. 17 Q. What is the age of these wells; do you know? 18 Like, geologically or --Α. 19 When were they drilled? Q. 20 Oh. I do not know. Α. 21 Q. That's all I have. 22 EXAMINER BROOKS: I have no questions. 23 CROSS-EXAMINATION 24 BY EXAMINER JONES: 25 Why north-south? Why put the surface location Q.

	Page 21							
1	where you did?							
2	A. We're drilling north-south because that's been							
3	shown to be the preferred direction to drill based off							
4	of some proprietary data we have showing stress							
5	orientation, and wells that have been north-south in							
6	this area have been more productive.							
7	Q. So you've got both you've got both							
8	scientific data and analogy or empirical data that shows							
9	this is the way to go?							
10	A. Yes, sir.							
11	Q. What about the surface location?							
12	A. I'm not sure on the actual surface location,							
13	why we surfaced in 25 or 36. I just know we prefer to							
14	drill north-south.							
15	Q. Okay. And are you going to this is Purple							
16	Sage; is that correct?							
17	A. Yes.							
18	Q. You're not applying for an NSL or anything like							
19	that?							
20	A. Not that I understand.							
21	Q. You're going to stay 330 from the lease line?							
22	A. Yeah, that's correct.							
23	Q. And why did you pick this vertical interval							
24	to what was the criteria? Was it porosity? Was it							
25	somebody else drilled a well in this zone and it was							

Page 22 1 good? So the Cimarex well that's shown on the other 2 Α. exhibits has been a productive well, and it's in this 3 approximate interval. This is a shaley interval in the 4 5 Wolfcamp. And there's been a number of wells targeted here throughout Eddy County, and yeah, this is a porous, 6 7 shaley interval, and it seems to be productive in this 8 area. 9 This is a source rock also; is that right? 0. Yes. It's self-sourcing. 10 Α. 11 0. Self-sourcing. 12 Α. Yes. There might be contribution from some of the Wolfcamp below it, but I believe this is also 13 self-sourcing. 14 15 Is it -- the pressure in this zone, is it ο. 16 higher than up on the Bone Spring? 17 Yes, it is. Α. 18 Okay. So you've got -- and that's because why? Q. 19 Because you're deeper and just higher pressure. Α. 20 But not because of any -- any additional Q. 21 maturity of the rocks or temperature? In other words, 22 there should be some reason besides just depth. 23 Yes. I know that maturity of hydrocarbons can, Α. 24 like, cause increased pressure, but here exactly I can't 25 give you an exact answer to the pressures, I guess.

Page 23 What about the AFE? They said there was a 1 Q. 2 change to the AFE, or -- can you talk about that? 3 Α. I can't remember the time gap between the two AFEs, but I know during that time, our costs have 4 5 increased through service costs. 6 Q. Okay. 7 Α. And that's the result of that. 8 Q. Okay. So it's just basically the bids coming 9 in higher? 10 Α. Yes, sir. 11 And can you sell oil here, or can you get it Q. 12 out of Midland nowadays or --13 Α. Hopefully so. 14 Q. -- is that getting better or --It's on its way to get better. 15 Α. It's on its way to get better. 16 Q. 17 Α. Yeah. 18 Thanks very much. 0. 19 Okay. Thank you. Α. 20 MR. LARSON: I have nothing further, 21 Mr. Examiner. I request the case be taken under 22 advisement. 23 EXAMINER JONES: Case 16378 will be taken under advisement. 24 25 Thank you very much.

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1	MR.	LÆ	ARSON:	Thank	you.		2	
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Page 25 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 6th day of October 2018. 21 22 MARY C. HANKINS, CCR, RPR 23 Certified Court Reporter New Mexico CCR No. 20 Date of CCR Expiration: 12/31/2018 24 Paul Baca Professional Court Reporters 25