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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 TAP ROCK RESOURCES, CASE NO. 16433 LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

## REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

October 4, 2018

Santa Fe, New Mexico

BEFORE: MICHAEL McMILLAN, CHIEF EXAMINER PHILLIP GOETZE, TECHNICAL EXAMINER DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Michael McMillan, Chief Examiner, Phillip Goetze, Technical Examiner, and David K. Brooks, Legal Examiner, on Thursday, October 4, 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 (10:04 a.m.) 1 EXAMINER McMILLAN: At this time I'd like 2 to call Case Number 16433, application of Tap Rock 3 Resources, LLC for compulsory pooling, Eddy County, New 4 5 Mexico. Call for appearances. 6 7 MS. ARNOLD: Dana Arnold for Tap Rock 8 Resources, and Jim Bruce. Hopefully he'll show up soon. 9 EXAMINER McMILLAN: Okay. Is this 10 essentially the east half? 11 MS. ARNOLD: It is. 12 EXAMINER McMILLAN: Is there any way we can 13 incorporate the geology? 14 MS. ARNOLD: It's a slightly deeper landing target, but --15 16 EXAMINER McMILLAN: Okay. Proceed. 17 MS. ARNOLD: I have two witnesses. 18 EXAMINER McMILLAN: Any other appearances? 19 Please proceed. 20 MS. ARNOLD: These two witnesses have 21 already been sworn in. 22 (Mr. Bruce enters the room, 10:05 a.m.) 23 EXAMINER McMILLAN: Please proceed. 24 MS. ARNOLD: Erica Hixson, I'd like the 25 record to show, has previously been sworn in and her

Page 5 credentials as a petroleum landman expert were made a 1 matter of record. 2 3 EXAMINER McMILLAN: Please proceed. 4 ERICA HIXSON, 5 after having been previously sworn under oath, was questioned and testified as follows: 6 7 DIRECT EXAMINATION 8 BY MS. ARNOLD: 9 All right. Can you briefly state what Tap Rock Q. seeks in its application, 16433? 10 Yes. Tap Rock seeks to compulsory pool the 11 Α. east half of Sections 27 and 4 of 26 South, 29 East in 12 order to form a Wolfcamp unit with an initial well 13 called the Welcome to Golden 26S29E2734 Fed Com #244H. 14 And is Exhibit 1 a C-102 for the 244H well? 15 ο. 16 Α. It is. 17 And this well is going to be a federal well? Q. 18 Correct. Α. 19 And where are you in the planning process? Q. 20 We have a surface location that has been Α. approved at an on-site, and we plan to submit those 21 federal APDs next week. 22 23 And are the first and last take points shown on 0. 24 the exhibit? 25 Α. They are.

		Page 6	
1	Q.	And what is the pool for this well?	
2	Α.	Purple Sage; Wolfcamp.	
3	Q.	What are the setbacks for this well?	
4	Α.	330 feet.	
5	Q.	And the setbacks are 330 feet for the pool and	
6	also for the well?		
7	Α.	Correct.	
8	Q.	Turning to Exhibit 2, is this a tract map	
9	showing	the horizontal spacing unit for this well?	
10	Α.	It is, yes.	
11	Q.	And what is this unit comprised of?	
12	Α.	All federal leases.	
13	Q.	And can you briefly describe for the record	
14	14 what tracts or building blocks we are using for this		
15	unit?		
16	Α.	We're using quarter-quarter tracts for this	
17	unit.		
18	Q.	Quarter tracts?	
19	Α.	Quarter tracts.	
20	Q.	Or the equivalent?	
21	Α.	Or the equivalent.	
22	Q.	Turning now to Exhibit 3, have you shown the	
23	Wolfcamp	unit interest here?	
24	Α.	Yes. WPX Energy Permian is one of the	
25	uncommit	ted working interests with approximately 27	
L			

Page 7 percent. COG Operating is an uncommitted working 1 2 interest party with approximately 3.45 percent. COG 3 Production, approximately 23 percent. OXY Y-1 with approximately 2 percent, and Tap Rock Resources with 4 5 approximately 45 percent. 6 And have you also, out of an abundance of Q. 7 caution, shown the overriding royalty interest owners in 8 this unit? 9 Α. We have. 10 And those are listed here on Exhibit 3? Q. They are listed. Yes. 11 Α. 12 Turning to Exhibit 4, did you send a well Q. 13 proposal and an AFE for the 244H? Yes, we did. 14 Α. 15 And is this a sample of the letter that was Q. 16 sent to all uncommitted working interest owners? 17 Α. It is, yes. 18 Did you include a JOA with your proposal Q. 19 letter? 20 Α. Yes. 21 And are you asking the Division to pool the Q. 22 uncommitted working interest owners? 23 Α. Yes. 24 And are you asking for the imposition of a 200 Q. 25 percent risk charge against those uncommitted working

Page 8 1 interests? 2 Α. Yes. 3 Q. In your opinion, has Tap Rock made a good-faith effort to locate all interest owners and communicate 4 5 with them in order to obtain voluntary participation in the well? 6 7 A. Yes, with the exception of one party, which I think either Mr. Bruce or Ms. Arnold will address. 8 But 9 yes. 10 (The court reporter requested a repeat of 11 the answer.) 12 Α. So there is one party that we haven't -- we have sent notice as of, you know, now, but we -- I think 13 Mr. Bruce will address that. 14 15 Actually, we confirmed earlier that we have ο. 16 sent them notice --17 Okay. Great. Α. 18 Q. -- so all parties have received notice and we have been in contact with them? 19 20 EXAMINER BROOKS: Appreciate the attorney's 21 testimony. 22 (Laughter.) 23 THE WITNESS: I was not --24 MS. ARNOLD: Sorry. 25 Q. (BY MS. ARNOLD) Can you briefly discuss where

Page 9 you are in your negotiations with uncommitted working 1 2 interest owners? 3 Α. Yes. We are working on negotiating a JOA form 4 right now. 5 And if you are able to reach a JOA form and Q. 6 come to agreement with these parties, will you let the 7 OCD know? 8 Α. Yes. Was there an AFE at the back of Exhibit 4 for 9 0. the 244H well? 10 11 There is. Α. 12 Q. Is this AFE still valid and effective? 13 Yes. Α. 14 Q. And what is the approximate drilling and completion costs for this well? 15 16 Α. Approximately \$9,200,000. 17 And is this cost in line with what's being Q. 18 charged by other operators in the area for similar 19 wells? 20 Yes, it is. Α. 21 Have you made an estimate of overhead and admin Q. 22 costs for drilling and producing the well? 23 Yes, approximately 7,000 per month drilling Α. 24 overhead and 700 a month producing overhead. 25 Q. And are these costs in line with what's being

Page 10

1 charged by other operators?

2 A. They are.

3 Q. Do you recommend that these overhead rates be 4 incorporated into the order resulting from this hearing? 5 Α. Yes. 6 Do you request that the order be issued [sic] Q. 7 provide for an annual COPAS adjustment for the overhead 8 rates? 9 Α. Yes. 10 In your opinion, will the granting of Tap Q. 11 Rock's application be in the best interest of 12 conservation, the prevention of waste and the protection 13 of correlative rights? 14 Α. Yes. MS. ARNOLD: Exhibit 5, you'll see the 15 16 complete Affidavit of Notice from Jim Bruce and the publication notice. 17 18 I'd like to tender Exhibits 1 through 5 19 into the record. 20 EXAMINER McMILLAN: Exhibits 1 through 5 21 may now be accepted as part of the record. 22 (Tap Rock Resources, LLC Exhibit Numbers 1 23 through 5 are offered and admitted into 24 evidence.) 25 MS. ARNOLD: I don't have any further

Page 11 questions. 1 2 CROSS-EXAMINATION BY EXAMINER McMILLAN: 3 4 Q. Okay. Just for clarity purposes, so there were 5 -- there were unlocatable interests, right, or interests 6 who were not --7 They've all been noticed at this time. Yeah. Α. 8 Q. Properly noticed? 9 MR. BRUCE: Yes. There are green cards as to all of the parties we notified. 10 11 (BY EXAMINER McMILLAN) Actually -- okay. 0. The 12 next question I've got, Exhibit 2 -- I think that's 13 right. Where is the -- okay. So I'm looking at 14 Wolfcamp unit interest. How come, in this case, looking 15 at the overriding, it's COG Production, and in the other 16 case, it was COG Operating? 17 A. That's just what our title opinions came back 18 showing. So COG Production has the interest -- more of 19 the interest in the east half. 20 Q. And then operating has the production? 21 Α. Right. 22 All right. It just seemed kind of odd to me. Q. 23 There is no API numbers, correct? 24 Α. Correct. 25 Q. No depth severances?

Page 12 1 Α. No. 2 EXAMINER McMILLAN: Go ahead. Do you have questions, David? 3 EXAMINER BROOKS: Oh, you meant me. 4 I 5 thought you meant the witness or Ms. Arnold. I think you covered all the legal 6 No. 7 issues in this case. 8 EXAMINER GOETZE: No questions. 9 EXAMINER McMILLAN: Thank you. 10 MS. ARNOLD: I'd like to call our next 11 witness. 12 EXAMINER McMILLAN: Please proceed. 13 MS. ARNOLD: I'd like the record to show that Adam Smith's credentials as an expert petroleum 14 geologist were already made a matter of record. 15 16 EXAMINER BROOKS: Okay. 17 ADAM SMITH, 18 after having been previously sworn under oath, was 19 questioned and testified as follows: 20 DIRECT EXAMINATION BY MS. ARNOLD: 21 22 Q. Mr. Smith, can you please turn to Exhibit 6 and orient us for this 244H well? 23 24 Α. Yes. So the Welcome to Golden 244H well is 25 going to be targeting the Wolfcamp B Formation, so,

again, kind of the south Eddy County, New Mexico-Texas state line area, just on the other half of the section from previously. And the B here is much more of a shaley interval. We're going to be targeting lower in the B, into a maximum flooding surface shale that's in the B, so we expect much more shaley environment. And yeah, pretty quiet at this time of the geologic record.

Q. Turning now to Exhibit 7, does this show a
9 structure map you've put together, and can you briefly
10 describe it for us?

11 Yes. On this structure map, this is the subsea Α. 12 structure map of the Wolfcamp B, again showing the same structure as the Wolfcamp A, just a little deeper. 13 We have a monoclinal dip from the west to the east here. 14 15 I've highlighted the Wolfcamp B offset target wells that 16 have drilled horizontally in this same interval. I also have the project area located in a red outline and the 17 18 Welcome to Golden 244H well located on this map. I also 19 have the cross section from A to A prime highlighted here with the red dots, same wells as previous. 20

Q. And you used these three wells shown here to
make the cross section shown on the next exhibit, 8?
A. Yes.

Q. Can you briefly describe what is shown on this cross section?

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	Page 14		
1	A. This is a stratigraphic cross section hung on		
2	the top of the Wolfcamp B. On here are the same		
3	triple-combo logs and the same logs as described		
4	earlier, but I could go through them again.		
5	But the first track is gamma ray from zero		
6	to 200 colored by an interpreted lithology, so you see a		
7	lot more brown and hotter gamma ray indicating the shale		
8	facies that I described earlier; the caliper log from 6		
9	to 16 inches; depth track in the middle; a resistivity		
10	log from .2 to 2,000, with anything less than 50 ohm		
11	meters shaded in blue; the density neutron log in track		
12	number three with everything highlighted in green that		
13	is above 10 percent density porosity; and the neutron is		
14	in the pink/red with anything over 20 percent		
15	highlighted on that.		
16	Q. Did you also create an isopach map for this		
17	proposed unit?		
18	A. Yes.		
19	Q. Is that shown on Exhibit 9?		
20	A. Yes.		
21	Q. Can you briefly describe what is shown here?		
22	A. This is a gross isopach map from the top of the		
23	Wolfcamp B to the top of the Wolfcamp C, and it shows		
24	the location of the well and our horizontal DSU with a		
25	gross thickness of around 1,250 foot thick of the entire		

Page 15 B interval, and has the cross section locator from A to 1 2 A prime as well on here. 3 Q. Is the interval continuous throughout the 4 proposed unit? 5 Α. Yes. 6 Are there any major faults or discontinuities? Q. 7 Α. No. 8 Q. What about any porosity differences throughout 9 the unit or any major thickening or thinning? 10 Α. No. 11 Q. And have you created a simplified wellbore 12 diagram found on Exhibit 10? 13 Α. Yes. 14 And what does it show? 0. It shows the location of the Welcome to Golden, 15 Α. and it shows the 330-foot setbacks from the north and 16 south line and that our first perforation will be no 17 18 closer than 330 feet from the north line, and the last 19 perforation will be no closer than 330 feet from the 20 south line. 21 And those are in line with the Purple Sage; Q. 22 Wolfcamp rules? 23 Α. Yes. 24 And what is the prevailing development pattern Q. 25 for this interval of the Wolfcamp area?

Page 16 1 Α. This is a stand-up. 2 And that's what you have proposed here? 0. 3 Α. Correct. 4 In your opinion, would the granting of Tap Q. 5 Rock's application be in the best interest of 6 conservation, the prevention of waste and the protection 7 of correlative rights? 8 Α. Yes. 9 MS. ARNOLD: I'd like to introduce Exhibits 10 6 through 10 into the record. 11 EXAMINER McMILLAN: Exhibits 6 through 10 12 may now be accepted as part of the record. 13 (Tap Rock Resources, LLC Exhibit Numbers 6 14 through 10 are offered and admitted into evidence.) 15 16 MS. ARNOLD: I don't have any further questions. 17 18 CROSS-EXAMINATION 19 BY EXAMINER McMILLAN: 20 Do you expect each quarter section -- quarter Q. 21 section -- or quarter section equivalent to contribute 22 more or less equally to production? 23 Α. Yes, sir. 24 Do you expect this to be more gassy than the Q. 25 wells to the west, or do you expect the GOR to be

Page 17 crudely the same? 1 2 Α. The wells immediately to the west, or how far 3 west? 4 Yeah. Just to the west, other wells subject to Q. 5 compulsory pooling. Oh, yes. I do expect this to be more gassy 6 Α. 7 than our previous Welcome to Golden wells because 8 they're in the Wolfcamp A, and down here, since we are, 9 you know, 1,000 feet or so deeper with these ones than 10 the other ones, I do expect them to be a bit more gassy. 11 EXAMINER McMILLAN: I don't have any more 12 questions. 13 EXAMINER GOETZE: So one question for this witness. 14 15 CROSS-EXAMINATION 16 BY EXAMINER GOETZE: 17 Q. This is an unconventional play, in essence, 18 because you're dealing more with shale than you are a 19 natural reservoir? 20 Yes, sir. Α. 21 So it's going to be very tight rock? Q. 22 Right. Α. 23 So your completion for this will be a little Q. 24 bit different than, say, in your Wolfcamp A? 25 A little bit, but I don't expect it to be too Α.

Page 18 much different. We'll probably have the same design for 1 the amount of sand put away. We may alter our fluid 2 type, though, that we use. 3 4 Q. Okay. No more questions. Thank you. 5 CROSS-EXAMINATION б BY EXAMINER BROOKS: 7 Q. You said you expect it to be more gassy. Would 8 you expect them to exceed the 100,000 GOR? 9 Α. No, sir. 10 Thank you. Q. 11 MS. ARNOLD: I would ask that Case Number 16433 be taken under advisement. 12 13 EXAMINER McMILLAN: Okay. Case 16433 shall be taken under advisement. 14 15 Thank you very much. 16 (Case Number 16433 concludes, 10:19 a.m.) 17 18 19 20 21 22 23 24 25

Page 19 1 STATE OF NEW MEXICO COUNTY OF BERNALILLO 2 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 attorneys in this case and that I have no interest in 18 19 the final disposition of this case. 20 DATED THIS 25th 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