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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 OPERATING, CASE NO. 16230 LLC FOR A NONSTANDARD SPACING AND PRORATION UNIT AND COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

## REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

June 28, 2018

Santa Fe, New Mexico

## BEFORE: PHILLIP GOETZE, CHIEF EXAMINER DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Phillip Goetze, Chief Examiner, and David K. Brooks, Legal Examiner, on Thursday, June 28, 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 3 INDEX PAGE Case Number 16230 Called Tap Rock Operating, LLC's Case-in-Chief: Witnesses: б Erica Hixson: Direct Examination by Mr. McMillan Cross-Examination by Examiner Brooks 12, 13 Adam Smith: Direct Examination by Mr. McMillan Cross-Examination by Examiner Goetze Proceedings Conclude Certificate of Court Reporter EXHIBITS OFFERED AND ADMITTED Tap Rock Operating, LLC Exhibit Numbers 1 through 5 Tap Rock Operating, LLC Exhibit Numbers 6 through 14 

Page 4 (9:05 a.m.) 1 2 EXAMINER GOETZE: 16230, application of Tap Rock Operating, LLC for a nonstandard spacing and 3 proration unit and compulsory pooling, Eddy County, New 4 5 Mexico. Call for appearances. 6 7 MR. McMILLAN: Seth McMillan, Montgomery & 8 Andrews, on behalf of Tap Rock Operating. 9 MS. ARNOLD: Dana Arnold on behalf of Tap Rock Operating. 10 11 EXAMINER GOETZE: Other appearances? COG 12 entered --13 MS. RYAN: I'm here. 14 EXAMINER GOETZE: Oh, okay. MR. McMILLAN: Very well. Once again, we 15 16 have two witnesses. 17 EXAMINER GOETZE: Will the witnesses please stand, identify yourself for the court reporter and be 18 19 sworn in? 20 MS. HIXSON: Erica Hixson. 21 MR. SMITH: Adam Smith. 22 EXAMINER GOETZE: Oh, they're already sworn 23 in, aren't they? 24 MR. McMILLAN: I'll go ahead and call our 25 first witness, Erica Hixson.

	Page 5
1	ERICA HIXSON,
2	after having been previously sworn under oath, was
3	questioned and testified as follows:
4	DIRECT EXAMINATION
5	BY MR. McMILLAN:
6	Q. Please state your full name and place of
7	residence?
8	A. Erica Hixson, Arvada, Colorado.
9	Q. Where are you employed and in what capacity?
10	A. Tap Rock Resources as a landman.
11	Q. Did you testify just moments ago before the
12	Division and have your credentials accepted and made a
13	matter of record?
14	A. I did.
15	Q. Are you familiar with the application filed in
16	this case?
17	A. Yes.
18	Q. Are you familiar with the subject lands?
19	A. Yes.
20	MR. McMILLAN: Mr. Examiner, I would tender
21	Ms. Hixson as an expert petroleum landman.
22	EXAMINER GOETZE: She's so qualified.
23	Q. (BY MR. McMILLAN) Would you briefly state for
24	us what Tap Rock seeks by this application?
25	A. Yes. In this case Tap Rock Operating seeks an

Page 6 order approving a nonstandard spacing and proration unit 1 comprised of the east half of Section 29 and the east of 2 half of Section 32, Township 26 South, Range 29 East, 3 Eddy County, New Mexico, pooling all mineral interests 4 in the Wolfcamp Formation underlying the nonstandard 5 6 The unit will be dedicated to our proposed Money unit. 7 Graham 26S29E3229 #208H and the Money Graham 26S29E3229 8 #234H wells. 9 0. Thank you. 10 Have you prepared certain exhibits for 11 introduction in this case? 12 Α. Yes. 13 Let's turn to them now. Is Exhibit 1 a tract 0. 14 map showing Tap Rock's project area? 15 Α. It is. 16 And please describe for us the status of the Q. 17 acreage shown in Exhibit 1. 18 In Section 29, there is a federal lease. Α. Yes. 19 It covers the northeast quarter of Section 29, the north 20 half-southeast quarter and the southeast-southeast quarter of Section 29. The southwest-southeast of 29 is 21 22 a fee lease, and the east half of Section 32 is a fee 23 lease. 24 0. Excellent. Let's turn now to Exhibit 2. Is this the 25

	Page 7
1	C-102s are these the C-102s for the proposed Money
2	Graham wells?
3	A. They are.
4	Q. You've noted the pool code and pool name on the
5	C-102s, correct?
б	A. Correct.
7	Q. When were the C-102s submitted?
8	A. May 28th.
9	Q. And have they been approved?
10	A. They have not.
11	Q. Are the surface- and bottom-hole locations for
12	the wells shown on the C-102s?
13	A. Yes.
14	Q. What pool rules govern development here in the
15	Wolfcamp?
16	A. Wolfcamp; Purple Sage.
17	Q. Again, is this pool unaffected by the new
18	horizontal drilling rules?
19	A. Yes.
20	Q. What are the setbacks for wells in this pool?
21	A. 330 feet.
22	Q. And will the first and last take points for the
23	Money Graham wells be situated within these setbacks?
24	A. Yes.
25	Q. What is the primary objective for the Money
1	

Page 8 1 Graham wells? 2 Α. The Money Graham 234 is Middle Wolfcamp, and 3 the Money Graham 208 is Upper Wolfcamp. 4 ο. Is it correct that Tap Rock does not yet own 5 the right to drill in each tract that will be traversed 6 by the wellbores? 7 Α. That's correct. 8 Q. And that's why you're here today? Correct. 9 Α. 10 Let's take a look at Exhibit 3. Is this the 0. ownership breakdown here? 11 It is. 12 Α. 13 Can you please describe Tap Rock's ownership in 0. 14 Sections 29 and 32? Tap Rock owns approximately 38 percent working 15 Α. 16 interest. 17 Q. And how long has Tap Rock owned these 18 interests? 19 Α. We acquired this interest in January of 2017. 20 Okay. Turning now to Exhibit 4, does this Q. 21 appear to be, behind the email at least, a well-proposal letter to COG Operating? 22 23 Α. It is. 24 Is this well being proposed -- are these wells, 0. 25 rather, being proposed under an operating agreement?

Page 9 1 Α. Yes. 2 And did you include a copy of the proposed 0. 3 operating agreement in your well-proposal letter to COG? 4 Α. Yes. 5 Are you asking the Division to pool this Q. 6 unjoined working interest? 7 Α. Yes. 8 Q. Were there any unlocatable interest owners? 9 Α. No. 10 Does Tap Rock seek the imposition of a 200 Q. 11 percent risk penalty against the unjoined working 12 interest? 13 Α. Yes. 14 0. Does Tap Rock seek to be designated operator for the well? 15 16 Α. Yes. In your opinion, has Tap Rock made a good-faith 17 Q. 18 effort to locate all interest owners and communicate 19 with them in order to obtain voluntary participation? 20 Α. Yes. 21 Were the AFEs for the Money Graham wells Q. 22 attached to your well-proposal letter? 23 Α. Yes. 24 Can you -- for the record, what is the total 0. 25 for each completed well?

Page 10 The total for the Money Graham #208 is 1 Α. approximately \$8.8 million, and the total for the 234 is 2 approximately \$1.9 million. 3 4 ο. Are these AFEs still valid and effective, or 5 have they changed? They have not changed, still valid and 6 Α. 7 effective. 8 Q. Are they in line with what's being charged by 9 other operators in the area for similar wells? 10 Α. Yes. 11 Have you made an estimate of overhead and 0. 12 administrative costs while drilling and producing the 13 wells? Yes, 7,000 for drilling and 700 for producing. 14 Α. 15 Are these costs in line with what's being ο. 16 charged by other operators in the area? 17 Α. Yes. 18 Do you recommend that these drilling and Q. 19 overhead rates be incorporated into the order? 20 Α. Yes. 21 Does Tap Rock also request that the order Q. 22 provide for an annual adjustment of these drilling and 23 producing overhead rates? 24 Α. Yes. 25 In your opinion, has Tap Rock acted diligently 0.

Page 11 to develop these reserves? 1 2 Α. Yes. 3 Q. In your opinion, will the granting of the Tap 4 Rock's application be in the best interest of 5 conservation, the prevention of waste and the protection б of correlative rights? 7 Α. Yes. 8 Were Exhibits 1 through 4 -- yeah -- prepared Q. 9 for you or at your -- by you or at your direction and 10 control? 11 A. Yes. 12 MR. McMILLAN: I would move the admission 13 of Exhibits 1 through 4 at this time. 14 EXAMINER GOETZE: You sure you don't want to attach anything else? 15 16 MR. McMILLAN: How about if I also throw in 17 Exhibit 5 --18 EXAMINER GOETZE: Thank you. 19 (Laughter.) 20 MR. McMILLAN: -- our notice affidavits and 21 green cards. 22 EXAMINER GOETZE: Ms. Ryan? 23 MS. RYAN: No questions. 24 EXAMINER GOETZE: You don't care about the exhibits? 25

Page 12 1 MS. RYAN: No. 2 EXAMINER GOETZE: All right. Exhibits 1 through 5 are so entered in the record. 3 (Tap Rock Operating, LLC Exhibit Numbers 1 4 through 5 are offered and admitted into 5 evidence.) 6 7 EXAMINER GOETZE: And then, Ms. Ryan, you 8 don't have any questions? 9 MS. RYAN: No. 10 EXAMINER GOETZE: Thank you. 11 EXAMINER BROOKS: I do. 12 CROSS-EXAMINATION BY EXAMINER BROOKS: 13 14 Q. Tap Rock owns 37-something percent of the 15 working interest, you said? 16 Α. Correct. 17 Q. Who owns the rest? 18 Concho. Α. 19 So Concho owns all the rest? Q. 20 They do. Α. 21 You said you proposed to Concho under an Q. 22 operating agreement, so why are you -- why are you here 23 asking for compulsory pooling? 24 Α. We did -- as of very recently, about Monday, 25 we're coming to terms under an operating agreement now.

Page 13 Okay. So you don't have an existing? 1 Q. 2 Α. Not an existing operating agreement, no, but we're -- we're getting close to executing one. 3 Q. 4 Okay. And you will dismiss the case if you get 5 the operating agreement signed before we issue the 6 order? 7 Α. Yes. 8 Q. Okay. Very good. I guess that's all I have. 9 EXAMINER GOETZE: I have no questions for this witness. Thank you. 10 11 CONTINUED CROSS-EXAMINATION 12 BY EXAMINER BROOKS: 13 Oh, are there any overrides under the federal 0. 14 lease? There are, but we gave proper notice and --15 Α. 16 So you gave notice -- proper notice to all the Q. 17 overrides, and that's all documented in your affidavit? 18 Α. Correct. 19 Okay. Thank you. Q. 20 MR. McMILLAN: May the witness be excused? EXAMINER GOETZE: She may. Thank you. 21 22 MR. McMILLAN: We'll call our next witness, Adam Smith. 23 24 ADAM SMITH, 25 after having been previously sworn under oath, was

Page 14 questioned and testified as follows: 1 DIRECT EXAMINATION 2 BY MR. McMILLAN: 3 4 Q. Good morning, again. 5 Good morning. Α. Please state your full name for the record. 6 Q. 7 Adam Smith. Α. 8 Where do you reside? Q. 9 Littleton, Colorado. Α. 10 By whom are you employed? Q. Tap Rock Resources. 11 Α. 12 Have you testified today already before the Q. 13 Division and had your credentials accepted and made a matter of record? 14 15 Α. Yes. 16 Are you familiar with the application filed in Q. 17 this case? 18 Α. Yes. 19 Are you familiar with the subject geology? Q. 20 Α. Yes. MR. McMILLAN: Mr. Examiner, I tender Adam 21 22 Smith as an expert petroleum geologist. 23 EXAMINER GOETZE: We were rude last time. 24 Ms. Ryan, no objections? 25 MS. RYAN: No objection.

Page 15 EXAMINER GOETZE: 1 Thank you very much. 2 So qualified. 3 Q. (BY MR. McMILLAN) When did Tap Rock first 4 commence its geologic evaluation of this area? 5 Α. November 2016. 6 And have you conducted a geologic investigation Q. 7 to determine whether the 40-acre tract comprising the 8 project area for the Money Graham wells are each 9 prospective for production? 10 Α. Yes. 11 0. And what was your conclusion? 12 Α. That they are. 13 Will each tract contribute approximately the 0. 14 same amount of reserves to the wells in each of the 15 intervals being developed? 16 Α. Yes. 17 Q. Please discuss broadly with the Examiner the 18 geologic development in this area of the Permian. 19 Α. Yeah. In this area of southern Eddy County, 20 right on the Texas-New Mexico state line, it's more of a basinal setting in the middle Wolfcamp, which I call the 21 22 Wolfcamp B, so it's a lot more shale with pulses of 23 little carbonate debris flows in there that help to 24 contribute to the production. And then it 25 transitionally grades up into a shallow marine setting

Page 16 in the Upper Wolfcamp where you have lots of laminated 1 2 sandstone shales and carbonates that are being put into the basin through higher energy debris flows. 3 4 Q. Mr. Smith, you've prepared certain exhibits for 5 today's presentation, correct? 6 Α. Yes. 7 Let's turn to those now, and if you would ο. 8 kindly walk the Examiner through your exhibits, 6 9 through 12. So Exhibit 6 is the project locator map 10 Α. Yes. 11 showing where our Money Graham 26 South 29 East 3229 12 234H and Money Graham 208H are located in southern Eddy County, of Township 26 South, Range 29 East, Section 32 13 into 29. 14 And then Exhibit 7 is a subsea structure 15 16 map on the top of the Wolfcamp A. This exhibit shows the Money Graham 208H location with a surface hole in 17 18 the south part of Section 32 and a bottom hole in the 19 north part of Section 29. It has the project area 20 outlined in red and a location of the subsequent cross 21 section from A to A prime. I have highlighted the wells that have targeted the Upper Wolfcamp A in the Lower 3rd 22 23 Bone Spring Sand. And this has a subsea structure 24 showing a monoclinal dip down into the east, so we will 25 be drilling along strike more or less with this well as

1 we drill south to north.

The next exhibit, Exhibit 8, is an isopach 2 map -- a gross isopach map of the Upper Wolfcamp from 3 Wolfcamp A to Wolfcamp B. This shows, again, the Money 4 5 Graham 208H location with surface and bottom hole, the б project area and the cross section, A to A prime, on 7 here. And it also shows a pretty consistent gross 8 thickness of 450 foot throughout the Money Graham project area with contour intervals at 25 feet and 9 highlighting wells that have targeted the same interval 10 11 in the Upper Wolfcamp A. 12 Exhibit 9 is a stratigraphic cross section from A to A prime hung on the top of the Wolfcamp A. 13 This cross section includes two wells that are triple 14 combo vertical wells that have a gamma ray from zero to 15 16 200 API units. It's colored from lower API units in blue to higher API units in the dark brown to black and 17 18 then a caliper log from 8 to 18 in scale, a depth log in 19 the middle and then a deep resistivity log in the second 20 track from .2 to 2,000 ohm meters on a logarithmic scale, and a density, neutron -- density and neutron 21 22 porosities and porosity percent units from 30 to minus 10 in the third track with a 10 percent cutoff that you 23 24 can kind of see in the green shading on there. 25 The middle well on here is a Concho

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horizontal well. This is -- so this is the TVD log of the MWD gamma ray from zero to 200 API units. It looks a little different, just with cooler colors because the tool probably wasn't calibrated to the offsets.

Q. Moving along.

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Exhibit 11 -- 10 is now a subsea structure map 6 Α. 7 This is for the location on the top of the Wolfcamp B. 8 Money Graham 234H, which is targeting in the Wolfcamp B. So it shows the surface-hole location in the south part 9 of Section 32 drilling north into 29 for a bottom-hole 10 11 location in the north part of Section 29. It has the 12 project location area outlined in red and a cross section locator from A to A prime same as in the 13 previous cross section. This also has highlighted some 14 Upper Wolfcamp B horizontal wells and Lower Wolfcamp B 15 16 horizontal wells.

17 Exhibit Number 11 is the isopach map of the 18 entire Wolfcamp B, from Wolfcamp B to Wolfcamp C tops, 19 showing the location of the Money Graham 234 and project 20 outlined area, the cross section locator from A to A prime and a gross thickness of around 1,250 foot thick 21 22 of the entire B interval. I've also highlighted the 23 producers of the Upper Wolfcamp B and Lower Wolfcamp B 24 on here.

And then Exhibit 12 is a stratigraphic

Page 19 cross section hung on the Wolfcamp B that shows the same 1 2 two wells that I walked through in our previous cross section with the same template for gamma ray and then 3 the Concho Sidewinder horizontal well that's offset to 4 5 the Money Graham to show the gamma ray signature in the б Wolfcamp B. 7 ο. Great. 8 And you have identified on Exhibits 9 and 9 12 the specific intervals for your landing targets, 10 correct? 11 Α. Yes. 12 0. Are these intervals continuous throughout the 13 project area? 14 Α. Yes. 15 Have you seen any faults or discontinuities? Q. 16 Α. No. 17 Do you observe any notable porosity differences Q. 18 throughout the project area? 19 I do not. The data is a little bit sparse, but Α. 20 I interpret that as pretty consistent through here due to the depositional set. 21 22 Q. Great. 23 Any substantial thickening or thinning? 24 Α. No. 25 Are Exhibits 13, 14 schematic wellbore diagrams Q.

Page 20 for the Money Graham wells? 1 2 Α. Yes. 3 Q. And tell us, what's the prevailing development pattern for the Wolfcamp in this area? 4 5 These are stand-up. This is an area of Α. 6 stand-up development. 7 Okay. And so are Tap Rock's stand-up units 0. 8 consistent with the prevailing development pattern? 9 Α. Yes. 10 You did this once already, but let's do it for 0. 11 this record. Can you just briefly discuss Tap Rock's 12 experience drilling horizontal wells? Α. 13 Yeah. The Tap Rock operating team has drilled approximately 300 wells in the Northern Delaware Basin 14 of New Mexico. 15 Has Tap Rock arranged for a drilling rig for 16 Q. 17 the Money Graham wells? 18 Α. Yes. 19 And where do these wells fall in Tap Rock's 0. drilling schedule? 20 21 November of this year. Α. 22 0. Okay. In your opinion, will granting Tap Rock's application be in the interest of conservation, 23 the prevention of waste and the protection of 24 25 correlative rights?

Page 21 1 Α. Yes. 2 Were Exhibits 6 through 14 prepared by you or 0. 3 at your direction? 4 Α. Yes. 5 MR. McMILLAN: I tender at this time б Exhibits 6 through 14, Mr. Examiner. 7 EXAMINER GOETZE: Ms. Ryan? 8 MS. RYAN: No objection. 9 EXAMINER GOETZE: Thank you. Exhibits 6 through 14 are entered into the 10 11 record. 12 And I'll make sure I entered Exhibits 1 through 5, too. 13 14 (Tap Rock Operating, LLC Exhibit Numbers 6 through 14 are offered and admitted into 15 16 evidence.) EXAMINER GOETZE: Ms. Ryan, any questions? 17 18 MS. RYAN: No. 19 EXAMINER BROOKS: No questions. 20 CROSS-EXAMINATION 21 BY EXAMINER GOETZE: So one question: Order of drilling, which do 22 Q. 23 you plan to go with first? 24 Α. We will drill the 234 first, the deeper well. 25 The deeper well. Q.

Page 22 1 And then how -- would you complete both of 2 them at the same time after the drilling? I believe so, yeah. We'll probably do batch 3 Α. drilling and do a completion at the same time. 4 5 A question on one of your figures: Q. For 6 instance, let's go to Figure 10. What are the two 7 horizontals in Section 32, the east-west? Are those 8 Bone Spring? 9 Α. Yeah. Those are shallower. I believe they're Bone Spring or even Delaware, some Brushy Canyon. 10 11 0. Thank you. Let's see. All right. I don't have any 12 13 Thank you very much. questions. MR. McMILLAN: We ask that this case be 14 taken under advisement, and, mercifully enough, we don't 15 16 have a request for an expedited order. 17 EXAMINER GOETZE: You may want to ask for it the way things are going. 18 19 MR. McMILLAN: Oh, shall we --20 EXAMINER GOETZE: Amazingly, it may end up 21 benefitting you in no way at all. Case 16230 is taken under advisement. 22 23 And let's take a ten-minute break. 24 (Case Number 16230 concludes, 9:25 a.m.) 25 (Recess, 9:25 a.m. to 9:43 a.m.)

Page 23 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 26th day of July 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