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1	STATE OF NEW MEXICO
2	ENERGY, MINERAL AND NATURAL RESOURCES DEPARTMENT
3	OIL CONSERVATION COMMISSION
4	IN THE MATTER OF THE HEARING OF THE OIL CONSERVATION
5	DIVISION UPON ITS OWN MOTION FOR AN ORDER CONTRACTING, EXTENDING, AND ABOLISHING CERTAIN POOLS
6	IN RIO ARRIBA, SANDOVAL, AND SAN JUAN COUNTIES, NEW MEXICO
7	CASE NO. 15474
8	BEFORE: MICHAEL McMILLAN, Lead Examiner DAVID K. BROOKS, Legal Examiner
9	WILLIAM JONES, Examiner
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11	TRANSCRIPT OF PROCEEDINGS
12	March 31, 2016
13	Santa Fe, New Mexico
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15	This matter came on for hearing before the New
16	Mexico Oil Conservation Division, MICHAEL McMILLAN,
17	Lead Examiner, and DAVID K. BROOKS, Legal Examiner,
18	and WILLIAM JONES, Examiner, on Thursday, March 31,
19	2016, at the New Mexico Energy, Minerals and Natural
20	Resources Department, 1220 South St. Francis Drive,
21	Room 102, Santa Fe, New Mexico.
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23	REPORTED BY: PAUL BACA, CCR #112
24	PAUL BACA COURT REPORTERS
25	500 4th Street, NW, Suite 105 Albuquerque, New Mexico 87102

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Page 2 APPEARANCES For OCD: Keith Herrmann Keith.Herrmann@state.nm.us Oil Conservation Division 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3463 INDEX WITNESS: PAGE: KATHERINE PICKFORD Examination by Mr. Herrmann CERTIFICATE OF COURT REPORTER

Page 3 EXAMINER McMILLAN: Let's go on the record 1 2 and call Case Number 15474, in the matter of the hearing of the Oil Conservation Division upon its 3 4 own motion for an order contracting, extending, and abolishing certain pools in Rio Arriba, Sandoval, 5 and San Juan Counties, New Mexico. 6 7 I call for appearances, please. MR. HERRMANN: Keith Herrmann, 8 representing the Oil Conservation Division. 9 10 EXAMINER McMILLAN: Any other appearances? Will the witness -- one witness? 11 12 MR. HERRMANN: Yes. EXAMINER McMILLAN: Will the court 13 reporter please swear the witness. 14 15 KATHERINE PICKFORD, after having been first duly sworn under oath, 16 17 was questioned and testified as follows: 18 EXAMINATION BY MR. HERRMANN: 19 Ms. Pickford, would you please state your 20 Q. name, title, and place of employment for the record? 21 My name is Katherine Pickford. 22 Α. I'm the geoscientist at the District 3 Aztec office for the 23 24 Oil Conservation Division. 25 Have you previously testified in an expert Q.

Page 4 capacity in front of the Oil Conservation Division? 1 2 Α. I have not. Would you please briefly summarize your 3 Ο. qualifications and duties that you perform for the 4 OCD? 5 6 Α. I have a master's degree in geology. I have worked for the Oil Conservation 7 Division since December of 2014. 8 9 I review permit applications for new wells and changes to drilling plans. 10 I protect correlative rights. 11 12 I document production amounts. I have knowledge of formations and geology 13 involved in oil and gas production. 14 15 I interpret well logs. I research for changes to rules, manage 16 oil and gas pool boundaries, and ensure protection 17 of groundwater aquifers. 18 And approximately how long have you 19 0. practiced geoscience? 20 Well, I served as a geologist starting in 21 Α. 1999, so I've been employed in the capacity of 22 either a geologist or hydrogeologist since that 23 24 time. 25 Q. Okay.

Page 5 MR. HERRMANN: At this point I would like 1 2 to move to admit Ms. Pickford as an expert. EXAMINER McMILLAN: She is qualified as an 3 expert in geology and hydrogeology. 4 5 MR. BROOKS: May I ask a couple of 6 questions? 7 EXAMINER McMILLAN: Yes. MR. BROOKS: This is just curiosity. 8 9 What is a geoscientist? 10 THE WITNESS: Geologist. I mean, it is the science of --11 MR. BROOKS: Yeah. I've worked around 12 geologists all of my life, but you're the first 13 geoscientist I've met. So ... 14 15 THE WITNESS: I think that was my actual title, or how --16 17 MR. BROOKS: Okay. So that's something the Oil Conservation Division -- or the Energy 18 Minerals and Natural Resources Department came up 19 with that title? 20 21 THE WITNESS: That was the position that was advertised. 22 23 MR. BROOKS: Oh, okay. 24 THE WITNESS: That I was hired to fill. 25 My card actually says geologist. But...

Page 6 MR. BROOKS: Yeah. I wondered if you -- I 1 2 I saw that on your signature, and I saw that. wondered if that meant that you crossed the boundary 3 between geology and geophysics, but I gather that's 4 5 not exactly the case. 6 THE WITNESS: No. I wish, but no. 7 MR. BROOKS: And I'm not sure that -- of course Michael has worked in both of those fields, 8 but I'm not sure that those fields are, generally 9 speaking, all that compatible, from what I hear. 10 But I'm through. 11 12 MR. JONES: The work that you did as a geologist since 1999, was that petroleum geology or 13 14 was that ... THE WITNESS: No. Some of it was with --15 was more environmental in nature. 16 17 And prior to working for the State of New Mexico, I worked for the State of Colorado in 18 mining regulation. 19 Let the record reflect, just 20 MR. BROOKS: 21 because I ask the questions, I have no objection to this witness' qualifications. 22 MR. JONES: Well, she's qualified as an 23 24 expert in geology. 25 (By Mr. Herrmann) All right. Could you Q.

Page 7 please outline why the OCD applied for this hearing? 1 2 Α. Periodically, they adjust the boundaries of pools to ensure that they are a reflection of the 3 4 actual production that's going on in the area. 5 And it's been, I quess, an inordinate amount of time since the last time this was done. 6 7 So the -- I've been encouraged to proceed with the 8 process. So could you describe the changes you are 9 0. proposing? 10 Yeah. Would you like to hear that? 11 Α. 12 Ο. Please. 13 Okay. So the process I went through is, I Α. did a data query to find a list of wells that were 14 reporting to each of the Pictured Cliffs Pools. 15 And then based on that, I went through and 16 identified the dedicated acreage for each of those 17 wells and then compared that to the existing pool 18 boundary for each of the Pictured Cliff Pools. 19 And then if the pool needed to be 20 expanded, I did that. And in some limited 21 situations I contracted a pool boundary, if there 22 23 was a well that was reporting to another pool, where 24 it would connect that well to this other pool. 25 So on those rare occasions I would

Page 8 contract the pool that it wasn't reporting to and 1 2 expand the other pool that it was reporting to into that location. 3 And then I created maps that showed where 4 5 the contractions and expansions would -- were going 6 to occur. 7 Ο. And is that all outlined in your application for hearing? 8 9 Α. Yes 10 Were there any changes? Ο. Α. There were a number of changes. 11 12 There were a very few pools where no 13 changes occurred. 14 There were quite a few expansions and a limited number of contractions. 15 I meant changes in information from the 16 Q. application itself. 17 There were changes. I don't have the 18 Α. Oh. exact date that that occurred, but I was notified by 19 Florine Davidson that there were some expansions 20 that I had noted, that she evidently had a more 21 current record of the existing pool boundaries. 22 23 So those were corrected in the 24 application. 25 Q. Okay.

Page 9 MR. HERRMANN: Mr. Examiners, this is a 1 2 technical conversation, so if you have any questions 3 you need answered... 4 MR. JONES: Can I ask your witness a 5 question? 6 The -- those changes, were they readvertised or were they... 7 THE WITNESS: I don't know. I assumed 8 9 that they were. That would have been Florine who would have done that, and it was my understanding 10 that they were. 11 12 MR. JONES: Okay. But you have not received any objection from any other oil company or 13 qeologist? 14 15 THE WITNESS: No. I've heard of no comment whatsoever. 16 17 MR. JONES: No comments? The legacy production from the Pictured 18 Cliffs that -- for wells that had produced and then 19 zone abandoned or plugged and abandoned and they --20 21 at that point they released their spacing, but the pool itself still stays with those. 22 23 Did you stay with those? 24 THE WITNESS: Yes. 25 MR. JONES: Okay.

Page 10 1 THE WITNESS: That area -- the only 2 contractions I made is if another well was producing within that boundary that was assigned to a 3 4 different pool. Other than that, I maintained the 5 6 boundaries and didn't contract anything that wasn't 7 replaced by another pool. MR. JONES: Okay. Thank you very much for 8 9 coming up here for this and for answering that. Would you like to add anything else about 10 this process or what your intentions are in the 11 future? 12 THE WITNESS: It's my understanding that 13 I'll be proceeding with this process for the other 14 pools that are in different formations. So this was 15 the first formation I was addressing, and I'll be 16 moving forward with the other formations. 17 MR. JONES: Would the other examiners like 18 to ask any questions? 19 MR. BROOKS: Well, except for the Mancos, 20 21 which you've already worked and which is going to be part of the rule making here, right? 22 THE WITNESS: Right. But I'm actually 23 24 doing nomenclature for some of the Gallup pools. 25 MR. BROOKS: Okay. Are you -- is it going

Page 11 to change anything in terms of what you're proposing 1 2 for the Mancos as of now, what I have looked at? 3 THE WITNESS: There's going to be a minor expansion, because I participated in a meeting 4 yesterday with SLO and ANCANA. 5 6 MR. BROOKS: Okay. 7 THE WITNESS: And they are creating a unit that's going to extend to the west slightly. 8 9 MR. BROOKS: Okay. Well, I would appreciate being advised of that. 10 11 THE WITNESS: Okay. 12 MR. BROOKS: Nothing further. EXAMINER McMILLAN: So the Pictured Cliffs 13 is one of the few formations that doesn't have just 14 one giant pool? 15 THE WITNESS: Correct. It doesn't have a 16 17 basin-wide pool. It has separate pools. 18 EXAMINER McMILLAN: I'm just curious why. Do you know why? 19 THE WITNESS: I don't. 20 21 MR. BROOKS: That happened a very long 22 time ago. 23 EXAMINER McMILLAN: Oh, okay. 24 MR. BROOKS: I don't know why either. 25 THE WITNESS: I mean, I would speculate

that it's because -- although it takes up quite a 1 large portion of the basin, it doesn't cover the 2 entire basin. 3 4 And at this point I would assume, with the 5 exploration that's been done in those areas where there aren't pools, if there was any product to be 6 7 produced that they would have been producing that by 8 now. 9 What percentage of the basin MR. BROOKS: is the Blanco Pictured Cliffs? 10 THE WITNESS: The Blanco Pictured Cliffs? 11 12 Maybe 10 percent. 13 MR. BROOKS: Oh, I thought it was larger 14 than that. THE WITNESS: You might be thinking of the 15 Blanco Mesa Verde, which takes up quite a large 16 17 area. MR. BROOKS: Oh, probably so. 18 MR. JONES: I would ask, if there's any --19 if these changes -- if the drilling in the Pictured 20 Cliffs is still -- you're still receiving lots of 21 active applications for drilling, or this happened 22 23 long ago and you're just catching up with the 24 nomenclature? 25 THE WITNESS: Pretty much just cleaning it

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Page 13 1 up. 2 The last time I know of that the map was updated was 2010, and I don't know if there was any 3 4 nomenclature affiliated with that. 5 So we're just cleaning up, mostly 6 historical. I can't say that I've seen many 7 applications for Pictured Cliffs wells. MR. JONES: So the only question I quess 8 9 we've got to nail down for sure is if the application that we've got is -- includes the 10 corrections that were made. 11 THE WITNESS: You should have, because I 12 forwarded that information to Florine. She was 13 going to print it out, so you should have the most 14 up-to-date information. 15 16 MR. JONES: Okay. 17 Anything further? MR. HERRMANN: No further questions. 18 19 MR. JONES: Okay. Thank you very much. Case Number 15474 will be taken under 20 21 advisement. Thank you. 22 MR. HERRMANN: Thank you. 23 MR. BROOKS: Okay. Thank you. 24 (Proceedings concluded at 9:58 a.m.) 25

	Page 14
1	CERTIFICATE
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3	I, Paul Baca, RPR, CCR in and for the
4	State of New Mexico, do hereby certify that the
5	above and foregoing contains a true and correct
6	record, produced to the best of my ability via
7	machine shorthand and computer-aided transcription,
8	of the proceedings had in this matter.
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10	
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12	Certified Court Reporter #112
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