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 HILCORP ENERGY COMPANY CASE NO. 16118 FOR AN EXCEPTION TO THE WELL DENSITY REQUIREMENTS OF THE SPECIAL RULES AND REGULATIONS OF THE BLANCO-MESAVERDE GAS POOL, SAN JUAN COUNTY, NEW MEXICO.

Consolidated with

APPLICATION OF HILCORP ENERGY COMPANYCASE NOs. 16119,FOR AN EXCEPTION TO THE WELL DENSITY16120, 16121,REQUIREMENTS OF THE SPECIAL RULES AND16122, 16123,REGULATIONS OF THE BLANCO-MESAVERDE GAS16124, 16125,POOL, RIO ARRIBA COUNTY, NEW MEXICO.16126, 16127

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

May 3, 2018

Santa Fe, New Mexico

BEFORE: MICHAEL McMILLAN, CHIEF EXAMINER SCOTT DAWSON, TECHNICAL EXAMINER DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Michael McMillan, Chief Examiner, Scott Dawson, Technical Examiner, and David K. Brooks, Legal Examiner, on Thursday, May 3, 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

Page 2 1 APPEARANCES 2 FOR APPLICANT HILCORP ENERGY COMPANY: 3 ADAM G. RANKIN, ESQ. HOLLAND & HART, LLC 110 North Guadalupe, Suite 1 4 Santa Fe, New Mexico 87501 5 (505) 988-4421 agrankin@hollandhart.com б 7 INDEX 8 PAGE 9 Case Numbers 16118 through 16127 Called 3 10 Hilcorp Energy Company's Case-in-Chief: 11 Witnesses: Charles "Chuck" E. Creekmore: 12 13 4 Direct Examination by Mr. Rankin 14 James Osborn: Direct Examination by Mr. Rankin 15 17 Cross-Examination by Examiner McMillan 25 16 Cross-Examination by Examiner Dawson 25 17 Proceedings Conclude 27 Certificate of Court Reporter 28 18 19 20 EXHIBITS OFFERED AND ADMITTED 16 21 Hilcorp Energy Company Exhibit Numbers 1 through 3 22 Hilcorp Energy Company Exhibit Numbers 5 through 9 24 23 24 25

Page 3 1 (1:31 p.m.) 2 EXAMINER McMILLAN: I'm going to call the hearing back to order. 3 We're going to call Case Number 16118, 4 5 application of Hilcorp Energy Company for an exception to the well-density requirements of the special rules 6 7 and regulations of the Blanco-Mesaverde Gas Pool. This 8 case shall be combined with Case Number 16119, Case 9 Number 16120, Case Number 16121, Case Number 16122, Case Number 16123, Case Number 16124, Case Number 16125, Case 10 11 Number 16126 and Case Number 16127. 12 Call for appearances. 13 MR. RANKIN: Mr. Examiner, Adam Rankin, with the law office of Holland & Hart in Santa Fe, on 14 behalf of the Applicant. I have two witnesses today. 15 16 EXAMINER McMILLAN: Okay. If the witnesses would please stand up and be sworn in at this time. 17 18 Thank you. 19 (Mr. Creekmore and Mr. Osborn sworn.) 20 MR. RANKIN: Mr. Examiner, before we begin, 21 I just want to point out on the cover sheet of the exhibit packet before you and on the cover sheet of the 22 23 inside sleeve, there is an error that was just brought 24 to my attention, and the case numbers are incorrectly 25 noted there. The last two cases should be 16126 and

Page 4 16127. 16126 is omitted, and 16128 is an incorrect 1 2 reference. EXAMINER McMILLAN: Okay. Please proceed. 3 MR. RANKIN: Mr. Examiner, I call my first 4 5 witness, Mr. Chuck Creekmore. CHARLES "CHUCK" E. CREEKMORE, 6 7 after having been previously sworn under oath, was 8 questioned and testified as follows: 9 DIRECT EXAMINATION BY MR. RANKIN: 10 11 0. Mr. Creekmore, will you please state your name 12 for the record? Charles Creekmore. 13 Α. 14 Q. In what capacity -- by whom are you employed? 15 Α. Hilcorp Energy Company. 16 And in what capacity do you work for Hilcorp? Q. I'm a landman. 17 Α. 18 And what do your responsibilities include with Q. 19 Hilcorp? 20 My primary responsibilities are the San Juan Α. 21 Basin. 22 Q. And have you previously testified before the Division? 23 24 Α. Yes, I have. 25 And have you had your credentials as a Q.

Page 5 petroleum landman accepted and made a matter of record? 1 2 Α. Yes. 3 Q. Prior to joining Hilcorp, did you previously 4 work as a landman in the San Juan Basin? 5 Yes, I did, for ten years. Α. 6 Are you familiar with the applications filed in Q. 7 this case? 8 Α. Yes, I am. Have you conducted a study of the lands and the 9 Q. 10 parties who are potentially affected by these 11 applications? 12 Α. Yes, I have. And are you familiar with the special pool 13 0. 14 rules that are the subject of these ten combined 15 applications? 16 Α. Yes, I am. 17 MR. RANKIN: Mr. Examiner, I would tender 18 Mr. Creekmore as an expert in petroleum land matters. 19 EXAMINER McMILLAN: So qualified. 20 (BY MR. RANKIN) Mr. Creekmore, just to reorient Q. 21 the Commissioners [sic] to these applications and what 22 it is that Hilcorp is requesting, will you just remind 23 the Examiners whether this acreage is subject to the 24 special rules -- any special pool rules? 25 Yes, they are, to the Blanco-Mesaverde pool Α.

Page 6 rules, which require four wells per 320 acres and two 1 2 wells per each quarter section that make up that 320 acres. 3 4 So what relief is Hilcorp seeking with each of ο. 5 these ten cases? We are wanting -- in all but two of the cases, 6 Α. 7 we're wanting a fifth well in the drill block and the 8 spacing unit for the Mesaverde, and then that will result in three wells per quarter section. And then in 9 two of the cases, we're requesting just three wells in a 10 quarter section. 11 12 0. For ease of reference, the two wells -- the two 13 cases which you're seeking a third well in the quarter 14 section, are those the first and last cases in these 15 exhibit packets? 16 Α. Yes, they are. 17 Q. Those are cases outside of the federal units; 18 is that right? 19 Α. Yes. 20 And so then every other case, eight cases, Q. 21 middle cases, all are seeking a fifth well and a third well in the quarter section, correct? 22 That is correct. 23 Α. 24 Okay. Now, do the special pool rules require 0. 25 you come in to hearing every time you want to seek an

Page 7 1 exception for the density requirements? 2 Α. That is the requirement in the rules. 3 Q. Now, are these applications and density 4 exceptions part of the overall strategy to identify unrecovered reserves in the Mesaverde Formation? 5 Yes. We have identified areas that there are 6 Α. 7 unrecovered reserves. We do have Dakota wells that are 8 in the same location, and to make it -- make those wells 9 economic, we're using wellbores of the Dakota to go 10 uphole into the Blanco-Mesaverde. 11 0. Now, in this case there are ten applications 12 pending. In each case is it a Dakota -- existing Dakota 13 completion for all ten cases? One of the cases, though, 16122, is going 14 Α. Yes. to be a trimingle. It is 28-5 63E. It is also 15 16 completed in the Mancos Formation. 17 Q. So that would be the Mancos, Dakota and 18 Mesaverde. That'll be a trimingle? 19 Α. Yes, a trimingle. 20 Is Hilcorp in the process of preparing for Q. 21 approval for a trimingle in that well? 22 Α. Yes, we are. 23 Otherwise, for all the other nine cases, has 0. 24 the Division already preapproved downhole commingling 25 between the Dakota and Mesaverde Formations?

Page 8 That is already approved. 1 Α. Yes. 2 So the only requirements here for approval 0. 3 would be the well-density exceptions pursuant to the 4 special pool rules? 5 That is correct. Α. 6 Now, has the company brought a reservoir Q. 7 engineer to the Division here today to testify about the 8 drainage issues and the request for the well-density 9 exceptions? 10 Yes, we have. Α. 11 0. Your job today is to testify about the notice 12 requirement, right? 13 Primarily, yes. Α. 14 Now, will you just give a brief overview --0. 15 just review for the Examiners how the exhibit packet, 16 which is significant, is organized? Well, they're all organized in the same manner. 17 Α. The first three identify and locate where the wells are, 18 19 and then under Tab 3, we go into notice and how we 20 provided notice to the parties. 21 Q. So the same sequence of the exhibits exists for 22 each of the ten cases? 23 It's the same sequence. Α. Yes. 24 And speaking of notice, how did Hilcorp provide 0. 25 notice in these cases? Who are the affected parties?

Page 9 Well, if we're the operator, we'll provide 1 Α. 2 notice to the nonoperators. And offsetting operators, we will -- offsetting acreage, we'll provide notice to 3 the operators. And if we're the offsetting operator, 4 we'll provide notice to the nonoperators. 5 6 And that notice goes to all the offsetting Q. 7 spacing units surrounding your spacing units that you're seeking the well-density exception, right? 8 9 Α. That is correct. All right. Well, let's go ahead and jump into 10 0. the review of one of the cases, and let's take a look at 11 12 Case Number 16121, which is the third case in your 13 exhibit packet. You'll see under Tab Number 1, we tried to 14 Α. locate -- we didn't try. We located all of the wells, 15 16 to put you in perspective, and these are the Rio Arriba cases. These are the Rio Arriba wells, and they're all 17 18 in federal units. 19 So this exhibit, Number 1, is the same exhibit ο. for each of the eight cases that are for the spacing 20 21 units within federal units, correct? 22 They're all located here, and they're in Α. Yes. 23 each one of your case tabs. 24 Now, the other two wells that are outside the 0. 25 unit are the first and last cases in the exhibit

notebook; is that correct? 1 2 Α. That is correct. 3 Q. And there, Exhibit 1 reflects the spacing units 4 for which you're seeking well-density exceptions in 5 Exhibit Number 1; is that correct? 6 Yes, that is correct. Α. 7 So if you flip to the first case in your ο. exhibit notebook, you'll see Exhibit Number 1. 8 That shows the spacing units at issue in the first and last 9 10 cases; is that correct? 11 That is correct. And the section -- east half Α. 12 of Section 35, that is for the Johnston Federal 9F well. 13 And then Case 26 [sic] is for Sunray F 1F well; 0. 14 is that correct? That is correct. 15 Α. 16 Now, going back -- let's go back to the case Q. 17 we -- we started out with, Case Number 16121, which involves the San Juan 27-5 Unit 139 well; is that 18 19 correct? 20 Α. Yes. 21 And you've identified an overview of the eight Q. 22 spacing units that are within the federal units? 23 Α. Yes. 24 What does Exhibit Number 2 show? 0. 25 Exhibit Number 2 is focused on just this case, Α.

Page 11 and we've highlighted the spacing unit in question where 1 we're asking for the fifth well. And it also shows the 2 boundary for the -- the exterior boundary for notice 3 purposes of the adjoining tracts. 4 5 So the green is the spacing unit, and the red Q. 6 outline is the notice area, right? 7 Α. Correct. And this is a situation where it's within the 8 ο. 9 federal unit. And so all the offsets are operated by 10 Hilcorp, so Hilcorp provided notice to the working 11 interest owners in the unit, correct? 12 Α. Correct. And they also got ballots, too, so 13 they got notice twice, in essence. 14 Now, is Exhibit 3 a copy of the letter that was 0. 15 provided to all these offsetting owners by Hilcorp? 16 Α. Yeah. Well, it starts out with the notice letter that we sent. And yes, it lists all the various 17 18 owners who we've sent notice to. 19 Q. So the next page of the exhibit is a copy of 20 the list of the owners in that spacing unit, right? Not only that spacing unit. We combined --21 Α. many of these owners were in all the different cases, so 22 23 provided all the different cases in one packet to each 24 of the owners to save money and time. 25 But for each case, this list is different --Q.

Page 12 the second sheet is different for each case because this 1 2 is --3 Α. Oh. Yes. I'm sorry. Yeah. I jumped ahead. Yes. These are the owners --4 5 Just for that --Q. -- for each specific well. 6 Α. 7 Thank you. ο. 8 And then your next list is a copy of the 9 United States Postal Service tracking information sheet 10 showing that each of these parties -- the status of their receipt of the notice; is that right? 11 12 Α. And that's as I was explaining. If they're in more than one unit, they would reflect on this. 13 14 Now, all parties reflected here have received 0. 15 and notice was delivered to all parties except for a 16 handful; is that right? 17 That is correct. Α. 18 Now, the handful that didn't -- either because Q. 19 of the timing, don't show up as a signature received, 20 what did Hilcorp do with respect to those parties? We notified them either by email and got 21 Α. recognition that they had received notice -- and you'll 22 23 see a letter to BP, and their land negotiator sent back 24 and said he had received notice. Kurt Fagrelius, with 25 Dugan, also indicated they had received notice. And

Page 13 Sharon Burns also indicated that. And then we also 1 showed indications where if we had not emailed them or 2 received notice that the postal service had given them 3 4 notice, we sent them by FedEx to them. 5 Now, these addresses you used to send out Q. 6 notice, these are all valid and correct addresses based 7 on your frequently -- frequent correspondence with your 8 working interest owners in the unit? 9 Α. That's correct. 10 EXAMINER BROOKS: Excuse me. I'm kind of lost. You have a lot of sequences that are all the same 11 12 number. Where are you in the notebook? 13 MR. RANKIN: So we are in Exhibit Number 3 for Case Number 16121, which is the --14 EXAMINER BROOKS: Okay. 16121. And the 15 16 cases behind the tab? MR. RANKIN: Yup. Behind the case is the 17 18 tab. 19 EXAMINER BROOKS: Thank you. 20 MR. RANKIN: So we have walked through the notice letter, the list of affected parties for that 21 22 spacing unit, the USPS tracking service data sheet for each of those parties. And then, in addition, we have 23 24 the parties for whom tracking was not updated. Hilcorp 25 followed up and confirmed either by email or sent them a

Page 14 FedEx in advance of the deadline so they would be 1 2 assured of having received those. 3 Q. (BY MR. RANKIN) And then, Mr. Creekmore, you've confirmed that these are all valid and correct addresses 4 5 based on Hilcorp's business records and long-term 6 correspondence of these parties as part of the interest 7 owners in these units? 8 Α. That is correct. 9 EXAMINER BROOKS: Thank you. Thank you. (BY MR. RANKIN) Each Exhibit 3 for all these 10 0. cases reflect the same exhibits, is that correct, except 11 12 for the notice part? The Rio Arriba unit cases, yes, that's correct. 13 Α. 14 Now, on the -- on the nonunit cases, we'll just 0. 15 flip back to the first case. And Exhibit 3 in the first 16 case in your exhibit packet, again as with the case we 17 just walked through, is a notice letter that Hilcorp 18 sent out to the offsetting interest owners; is that 19 correct? 20 That is correct. Α. 21 And then the subsequent cases, a USPS tracking Q. 22 data sheet showing each of those parties actually did 23 receive notice? 24 Α. Yes. That is -- well, with the exception of 25 BP.

Page 15 1 With the exception of BP, right. Q. 2 Behind that tracking sheet is a letter 3 indicating that BP did receive notice and didn't have 4 any objection; is that correct? 5 Α. That's correct. And the same exhibit is -- the last case in the 6 Q. 7 exhibit packet is Case Number 16127, correct? 8 Α. That is correct. Is it true, Mr. Creekmore, that all parties --9 0. affected parties within each spacing unit who are 10 required to receive notice actually did get notice in 11 12 advance of today's hearing? 13 That is correct. Α. MR. RANKIN: Mr. Examiner, I'll just say 14 that we did also publish notice in the newspapers in 15 16 both San Juan County and Rio Arriba County. We had a problem getting the -- because people were not at the 17 newspaper, getting the Notice of Publication for the Rio 18 19 Arriba County newspaper. So if you'd like that, we 20 would be happy to supplement the record with that, but there is no issue with notice, so I don't think there is 21 22 any reason to. So we just want to point that out. 23 We'll be happy to provide those once we get them from 24 the paper. 25 (BY MR. RANKIN) Mr. Creekmore, did you prepare 0.

Page 16 or oversee the preparation of Exhibits 1 through 3 for 1 2 Case Numbers 16118 through 16127? 3 Α. Yes. MR. RANKIN: Mr. Examiner, I'd move the 4 5 admission of Exhibits 1 through 3 for each of the cases I just recited. 6 7 EXAMINER McMILLAN: Exhibits 1 through 3 in 8 Cases 16118 through 16127 shall be admitted. MR. RANKIN: 9 Thank you, Mr. Examiner. 10 (Hilcorp Energy Company Exhibit Numbers 1 11 through 3 in all cases are offered and 12 admitted into evidence.) 13 THE WITNESS: Do we want to admit --MR. RANKIN: Well, I don't think we need to 14 15 worry about it because we've covered all the notice 16 issues. 17 So with that, Mr. Examiner, I have no 18 further questions and pass the witness. 19 EXAMINER McMILLAN: Any questions? 20 EXAMINER DAWSON: I don't have any 21 questions. 22 EXAMINER McMILLAN: David? 23 EXAMINER BROOKS: No questions. 24 EXAMINER McMILLAN: Thank you very much. 25 THE WITNESS: Thank you.

	Page 17
1	MR. RANKIN: Thank you, Mr. Creekmore.
2	With that, Mr. Examiner, I'd like to call
3	my second witness.
4	EXAMINER McMILLAN: Okay. Please proceed.
5	JAMES OSBORN,
6	after having been previously sworn under oath, was
7	questioned and testified as follows:
8	DIRECT EXAMINATION
9	BY MR. RANKIN:
10	Q. Mr. Osborn, please state your name for the
11	record.
12	A. James Osborn.
13	Q. By whom are you employed?
14	A. Hilcorp Energy Company.
15	Q. In what capacity?
16	A. Reservoir engineer.
17	Q. And have you previously testified before the
18	Division?
19	A. I have.
20	Q. And had your credentials as an expert reservoir
21	engineer accepted as a matter of record by the Division?
22	A. I have.
23	Q. And have you conducted a study of the reservoir
24	and the lands at issue here for all these ten cases?
25	A. Yes.
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Page 18 Are you familiar with the ten applications that 1 0. 2 were filed? 3 Α. Yes. 4 Have you prepared exhibits and opinions and Q. 5 conclusions based on your analysis on whether the 6 existing well density is appropriate in these cases? 7 Α. Yes. 8 MR. RANKIN: Mr. Examiner, I would retender Mr. Osborn as an expert witness in reservoir 9 10 engineering. 11 So qualified. EXAMINER McMILLAN: 12 0. (BY MR. RANKIN) Mr. Osborn, would you explain briefly Hilcorp's analytical approach to evaluating the 13 14 propriety of the well density for each of these spacing 15 units? 16 Α. So the approach that we used to identify bypassed areas was to focus on these unconventional 17 18 [sic] decline curve analysis of the existing wells, log 19 drive volumetric calculations and then mapping all that information and identifying the basinwide original gas 20 in place, cumulative gas production and estimated 21 22 ultimate recoveries. With that information, we identified the 23 24 areas that have lower-than-expected recoveries both to 25 date and estimated for the existing wellbores -- well

Page 19 stock in those areas. And so we used that to find the 1 2 areas with lower -- lower recoveries and focused our 3 efforts. 4 So as with the original case you presented back ο. 5 in January, have you continued to do your analysis with 6 the input from Hilcorp's geologists in order to evaluate 7 well-density issues? 8 Α. Yes. 9 MR. RANKIN: And, Mr. Examiner, I would just reiterate that we are seeking to incorporate the 10 prior testimony of Hilcorp's geologist for original gas 11 12 in place for the entire --13 (BY MR. RANKIN) Mr. Osborn, is it your opinion 0. 14 that each of these consolidated cases represent and have 15 identified areas where there are unrecovered reserves 16 under the existing well-density patterns in the area? 17 Α. Yes. 18 And is it your opinion that the gas is not Q. 19 being fully and effectively drained by the existing well 20 patterns? 21 Α. Yes. 22 0. So let's just take a look at the first exhibit 23 in the third case in the exhibit packet, Case Number 24 And turn, if you will, Mr. Osborn, to Exhibit 16121. 25 Number 5, which is behind Tab Number 5, and review for

1 the Examiners what this bubble map shows with respect to 2 the San Juan 27-5 Unit 139 well?

Okay. Exhibit 5 -- on the right-hand side of 3 Α. Exhibit 5 is some specific well information for this 4 subject well. On the left-hand side of the exhibit is a 5 bubble map of cumulative production to date. The red 6 7 circle is centered over the San Juan 27-5 Unit 139 8 subject well. And looking at the bubble map, the darker 9 colors and larger circles indicate more cumulative gas produced from the existing wells. The smaller circles 10 or lighter colors are less recovery. And you can see 11 that the 139 is looking to drain undrained -- the 12 undrained area to the north of that well where there is 13 a big gap in production. 14 15 And you prepared a similar exhibit for each of ο. 16 these cases, for each of the proposed wells that you're

17 seeking to recomplete in the Mesaverde, right?

18 A. That is correct.

19 Q. And you've got another set of exhibits here 20 that review your certain analytical approach in 21 determining whether there should be gas remaining in 22 place; is that right? 23 A. Correct.

Q. Will you review for the Examiners those next three exhibits?

Page 21

Uh-huh. So Exhibit 6 is a map -- a basin --1 Α. 2 basinwide map of Mesaverde original gas in place. The hotter colors indicate more original gas in place. 3 The cooler area -- the cooler colors indicate less original 4 5 gas in place. And the red star on the southeastern portion of the Basin indicates the location of the 139 6 7 subject well. So this area -- this well is in an area 8 of moderately high gas in place. 9 Exhibit Number 7 is a map of cumulative gas 10 production to date in the Mesaverde. Aqain, hotter

11 colors indicate more gas production. Cooler colors 12 indicate less gas production. And the red star over the 13 139 area indicates that this area is relatively low cum 14 gas production to date.

Exhibit Number 8 is simply a map of 15 16 remaining gas in place. So this is original gas in place less of cumulative gas to date produced. And, 17 18 again, you can see the red star over the 139 well is in 19 an area of considerable remaining gas in place in terms 20 of high original gas in place and low recovery to date. 21 And you've prepared the same three exhibits for Q. 22 each of these cases. The only difference between the

23 location of that red star indicating the different 24 location for each specific wells; is that right?

25 A. That's correct.

Page 22 Have you also conducted -- in addition to this 1 0. 2 sort of general theoretical analysis of the undrained 3 reserves, have you also conducted a numerical analysis 4 of the specific spacing unit at issue in this case? 5 Α. Yes. 6 Is that your next exhibit? Q. 7 Α. Yes. 8 Can you review it for the Examiners? Q. So Exhibit 9 is a table of the area surrounding 9 Α. the Unit 139 subject well. We look at it at three 10 different levels, just slicing and dicing, to make sure 11 things are in alignment, so at a quarter section, a 12 section and a nine-section level. 13 The table indicates calculated volumetric 14 15 gas in place for that reference area, the section 16 equivalent gas in place, cumulative production for that area and associated recovery factor, remaining gas in 17 place -- and that's, again, original gas in place less 18 19 of cumulative -- and finally, the estimated ultimate recovery of the existing wellbores and the associated 20 recovery factor for those wells. 21 22 0. Looking at the estimated ultimate recovery and 23 the recovery factory in your last column there, does 24 that reflect the existing well-density pattern? 25 So those numbers -- the low recovery factors to Α.

Page 23 date -- the low recovery factors attributed to the 1 2 estimated ultimate recovery of the existing wells indicate that this area is not being sufficiently 3 drained by the existing wells, and we're looking to add 4 5 wellbores -- or utilize existing wellbores to add completions to further drain this area. 6 7 What would be, in your opinion, an adequate ο. recovery factor indicating that the spacing unit is 8 9 being adequately drained? 10 70 to 80 percent. Α. 11 0. So the numbers here are significantly below 12 that value, right? 13 Α. Correct. 14 0. And now have you -- you've done the same 15 analysis and have exhibits reflecting that analysis for 16 each and every one of these cases in the exhibit folder; 17 is that right? 18 That's correct. Α. 19 And if we were to walk through each one of Q. 20 those analyses for every case, while the numbers may be 21 slightly different, your ultimate opinion and conclusion 22 about the existing well spacing pattern is the same; is 23 that correct? 24 Α. That's correct. 25 So without having to go through them all, 0.

Page 24 Mr. Osborn, it's your opinion that the applications that 1 2 Hilcorp has filed should be approved in order to access 3 these unrecovered reserves that would otherwise be left 4 in place? 5 Α. That's correct. 6 Is it your opinion that the approval of Q. 7 Hilcorp's applications would impair in any way the 8 reservoir? 9 Α. No. Is it your opinion that the approval of these 10 0. applications would impair the correlative rights of any 11 12 offsetting interest owners? 13 Α. No. 14 Now, Mr. Osborn, is it your opinion that the 0. 15 granting of these ten applications would be in the best 16 interest of conservation and the prevention of waste? 17 Α. Yes. 18 Mr. Examiner, at this time I MR. RANKIN: 19 would move the admission of Exhibits 5 through 9 in Case 20 Numbers 16118 through 16127. Exhibits 5, 6, 7, 8 and 21 EXAMINER McMILLAN: 22 9 in Cases 16118 through 16127 shall be accepted as part of the record. 23 24 (Hilcorp Energy Company Exhibit Numbers 5 25 through 9 in all cases are offered and

Page 25 admitted into evidence.) 1 2 MR. RANKIN: Thank you, Mr. Examiner. 3 I have no further questions and pass the witness. 4 5 CROSS-EXAMINATION BY EXAMINER McMILLAN: 6 7 ο. Okay. And so what -- have the infill results -- how have they worked so far? Have they met 8 your expectations? 9 10 Yes. They've actually exceeded our Α. expectations in every -- every case so far. 11 12 0. Every case it's been successful? 13 Α. Yes. 14 Q. That's my only question. 15 EXAMINER McMILLAN: Do you have any 16 questions? 17 EXAMINER DAWSON: I have a couple of questions. 18 19 CROSS-EXAMINATION 20 BY EXAMINER DAWSON: 21 Q. On the decline curves you prepared for each of 22 the wells, did you -- those were exponential decline 23 curves, correct? Well, most of them are actually hyperbolic, but 24 Α. 25 the age of the wellbores, most of these wells are at

Page 26 this point effectively exponential. We have a limiting 1 exponential factor. So a lot of these wells are 30, 40 2 years old, so they've reached that terminal decline 3 4 rate. 5 Okay. And Hilcorp's plans are only to Q. 6 recomplete the Mancos in only one of the wells? 7 Α. There is one well that's currently completed in 8 the Dakota and Mancos, and we'll be adding the Mesaverde 9 in that instance. And we're preparing the trimingling documentation. 10 11 0. Okay. Are you expecting to trimingle any other 12 wells after you see the results of how that well 13 performs? Potentially, yes, sir. 14 Α. 15 All right. That's all the questions I have. ο. 16 MR. RANKIN: Mr. Examiner, before I ask you to take these cases under advisement, I just would 17 respectfully make the point that there are two wells for 18 19 which Hilcorp is hoping to being able to reinitiate 20 recompletion in the month of June. And I know that you have a lot on your plate, but I just want to point out 21 22 if it's possible to get an order. We can help you. 23 EXAMINER McMILLAN: Will has this down. So I'm just the hearing examiner. He's writing it. 24 25 MR. RANKIN: Okay. If it's helpful, we'll

Page 27 provide Word versions of the applications. EXAMINER McMILLAN: Will's got a sheet that's got -- an Excel spreadsheet that has everything in there, and if there is a question, he'll call you. MR. RANKIN: All right. Thank you. No further questions from me. With that, I would request that these cases all be taken under advisement. EXAMINER McMILLAN: All right. Cases 16118 through 16127 shall be taken under advisement. Thank you. (Case Numbers 16118 through 16127 conclude, 2:00 p.m.)

Page 28 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 9th day of June 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