1	Page 1 STATE OF NEW MEXICO
2	ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3	OIL CONSERVATION DIVISION
4	
5	ORIGINAL
6	
7	REPORTER'S TRANSCRIPT OF PROCEEDINGS
8	COMMISSION HEARING
9	DOCKET NO. 28-09
10	COMMISSION HEARING DOCKET NO. 28-09
11	
12	August 13, 2009 🔀 🗔 Santa Fe, New Mexico
13	
14	BEFORE: MARK E. FESMIRE: Commission Chair
15	JAMI BAILEY: Commissioner WILLIAM C. OLSON: Commissioner
16	
17	
18	This matter came for hearing before the New Mexico Oil Conservation Commission on August 13, 2009, at the
19	New Mexico Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Room 102,
20	Santa Fe, New Mexico.
21	
22	REPORTED BY: PEGGY A. SEDILLO, NM CCR No. 88 Paul Baca Court Reporters
23	500 Fourth Street, NW, Suite 105 Albuquerque, New Mexico 87102
24	
25	

•

PAUL BACA PROFESSIONAL COURT REPORTERS

INDEX 1 Page 2 CASE NO. 13957 4 3 CASE NO. 14055 4 5 5 OCD'S WITNESSES: JANE PROUTY 6 Examination by Mr. Padilla 6 Examination by Mr. Swazo 16 Examination by Mr. Padilla 7 22 DAVID BROOKS Examination by Mr. Swazo 24 8 Examination by Mr. Padilla 30 Examination by Mr. Swazo 38 9 Examination by Mr. Swazo 42 10 C&D MANAGEMENT'S WITNESSES: TOM KIZER 11 Examination by Mr. Padilla 44 Examination by Mr. Swazo 74 12 Examination by Mr. Padilla 124 Examination by Mr. Swazo 191 13 Examination by Mr. Padilla 198 GEORGE SHIPLEY 14 Examination by Mr. Padilla 199 Examination by Mr. Swazo 25 15 OCD'S REBUTTAL WITNESSES: 16 DANIEL SANCHEZ Examination by Mr. Swazo 238 17 Examination by Mr. Padilla 240 Examination by Mr. Swazo 246 18 JANE PROUTY 19 Examination by Mr. Swazo 248 Examination by Mr. Padilla 254 20 C&D MANAGEMENT'S REBUTTAL WITNESSES: 21 GEORGE SHIPLEY Examination by Mr. Padilla 257 22 EXHIBITS 23 OCD'S EXHIBITS: 24 Exhibit 95 256 Exhibit 96 256 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 2

APPEARANCES 1 2 For the OCD: SONNY SWAZO, ESQ. State of New Mexico Oil Conservation Division 3 Assistant General Counsel 1220 S. St. Francis Drive 4 Santa Fe, NM 87505 5 For the OCC: MARK A. SMITH, ESQ. State of New Mexico 6 Oil Conservation Division Assistant General Counsel 7 1220 South St. Francis Drive Santa Fe, NM 87505 8 FOR C&D MANAGEMENT: ERNEST L. PADILLA, ESQ. 9 Padilla Law Firm, PA 1512 S. St. Francis Drive 10 Santa Fe, NM 87504 11 CASE NOS. 14149 and 14150 12 13 • APPLICANT'S WITNESSES: MARY SHARON BALAKAS Examinatin by Mr. Bruce 27414 FREDERICK MARK Examination by Mr. Bruce 291 15 HOWARD MUSGROVE 16 Examination by Mr. Bruce 305 EXHIBITS 17 APPLICANT'S EXHIBITS 18 Exhibits 1 - 4 284 19 Exhibits 5 - 11 312 20 Exhibits A - H 304 APPEARANCES 21 For the Applicant: JAMES BRUCE, ESQ. 22 Attorney at Law P. O. Box 1056 23 Santa Fe, NM 87504 24 25 COURT REPORTER'S CERTIFICATE 319

PAUL BACA PROFESSIONAL COURT REPORTERS

8db8c84d-240d-40b9-8479-fbbeb59f8ade

Page 3

Page 271 No. R-1960 to Determine Reasonable Costs and for 1 Authorization to Recover Costs for Production of Pooled 2 Mineral Interests in Rio Arriba County, New Mexico. 3 The Commission having deliberated on this, 4 instructed counsel to draft an Order, and counsel has 5 drafted said Order. Have the Commissioners had a chance 6 7 to review the Order? COMMISSIONER BAILEY: Yes, I have, and I believe 8 9 it reflects our decisions made and I intend to sign it. CHAIRMAN FESMIRE: Okay. Commissioner Olson? 10 COMMISSIONER OLSON: I agree with the assessment 11 of Commissioner Bailey and I second that motion. 12 13 CHAIRMAN FESMIRE: Okay. All those in favor of adopting the Order as drafted by counsel in Case No. 13957 14 signify by saying "aye." 15 COMMISSIONER OLSON: Aye. 16 COMMISSIONER BAILEY: Aye. 17 CHAIRMAN FESMIRE: Let the record reflect that 18 the Order was unanimously adopted. It will be signed by 19 the members of the Commission and transmitted to the 20 secretary. 21 With that, we will proceed to the next order of 22 business before the Commission. That is two related 23 24 cases, Case No. (14149 and Case No. 14150. 25 Case No. 14149 is the De Novo Application of

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 272 El Paso E&P Company to abolish the Van Bremmer 1 Canyon-Vermejo Gas Pool, Expand the Castle Rock 2 Park-Vermejo Gas Pool, and Establish Special Rules and 3 Regulations for the Castle Rock Park-Vermejo Gas Pool in 4 Colfax County, New Mexico. 5 Case No. 14150 is a related case. It is also a 6 de novo application. It is the Application of El Paso E&P 7 Company, LP to Expand the Stubblefield Canyon Raton-8 Vermejo Gas Pool, and to Establish Special Rules and 9 Regulations for the Pool in Colfax County, New Mexico. 10 Is the attorney -- single -- ready to make his 11 appearance? 12 MR. BRUCE: Yes, sir. Mr. Chairman, Jim Bruce 13 of Santa Fe representing the Applicant. I have three 14 15 witnesses. CHAIRMAN FESMIRE: Okay. And I understand that 16 this is an uncontested hearing? 17 That is correct. MR. BRUCE: 18 19 CHAIRMAN FESMIRE: Okay. Mr. Bruce, would you ask your witnesses to stand and be sworn, please? 20 (Note: The witnesses were placed under 21 oath by the court reporter). 22 CHAIRMAN FESMIRE: Mr. Bruce, do you have an 23 opening statement? 24 25 MR. BRUCE: Yes, just very briefly,

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 273 Mr. Chairman, just to focus what we're here for today. 1 First of all, I'd like to say this is not an enforcement 2 case, this is a pool rules case involving gas wells in the 3 Raton basin. 4 Under statewide rules, there is a requirement of 5 160 acres spacing, one well per 160 acres, and you have to 6 7 be 660 feet off the quarter section line. El Paso filed these applications requesting 8 several things. First of all, the pools, although 9 numerous additional wells have been drilled, the pools 10 have never been expanded and the Division did go ahead and 11 expand the pools. 12 They also requested permission to be allowed to 13 drill two wells for 160 acres, and they also requested 14 substantial relief from the setback requirements of 660 15 feet. 16 The Division granted the Application and insofar 17 as two wells per 160 acres, and they relaxed the internal 18 setbacks in the section, but they required that wells 19 still be 660 feet from a section line. 20 El Paso is here today again requesting relief 21 from the setback requirements, and that is the main thrust 22 of this case today. It's really the only thrust. 23 24 This is an unusual case, because -- I put a plat up in front of you here. What you're looking at is over 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 274 600,000 acres that has one mineral owner, and -- except in 1 140 acres, it has one mineral owner shaded in red, and for 2 that matter, it only has one surface owner. 3 The setback relief is requested due to the 4 common mineral ownership, and also due to the topography 5 in this area. However, it will probably help you to see 6 the geology and engineering to appreciate the setback 7 requests, so we will be presenting that. 8 And although I handed you -- or I previously 9 filed -- if I pay approach the bench, Mr. Chairman? 10 CHAIRMAN FESMIRE: You may, sir. 11 MR. BRUCE: I do have one extra large copy of 12 I think if you look at your set of exhibits, this plat. 13 there is an 8 1/2 by 11 land plat, and my clients, when 14 they came in, brought probably a little better plat than I 15 originally submitted. So you'll have a couple of exhibits 16 marked as Exhibit 1, but they're essentially showing the 17 same data. 18 CHAIRMAN FESMIRE: Proceed, sir. 19 MARY SHARON BALAKAS, 20 the witness herein, after first being duly sworn 21 upon her oath, was examined and testified as follows: 22 DIRECT EXAMINATION 23 BY MR. BRUCE: 24 Would you please state your name for the record? 25 Ο.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 275 Α. My name is Mary Sharon Balakas. I reside in 1 2 Castle Rock, Colorado. And who do you work for and in what capacity? 3 Ο. I work for El Paso E&P Company, LP, and I'm Α. 4 currently the business asset manager for the Raton basin. 5 Have you previously testified before the Ο. 6 Commission? 7 Α. I have not. 8 Would you please summarize your educational and 9 Q. employment background? 10 Yes. I have a Bachelor of Science from Illinois Α. 11 State University. I have almost 35 years experience in 12 land. I'm serving as a landman, senior landman and 13 landman manager for companies such as Persidio Oil 14 Company, Encenora, and El Paso. 15 And as part of your duties at El Paso, were you Ο. 16 the landman in overall charge of the land matters in the 17 Raton basin? 18 19 Α. Yes. And are you familiar with the land matters 20 Ο. involved in this application? 21 Α. I am. 22 MR. BRUCE: Mr. Chairman, I tender Ms. Balakas 23 24 as an expert petroleum landman. CHAIRMAN FESMIRE: She'll be so accepted. 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 276 First, what does Exhibit 1, the big plat up in Ο. 1 front, show? And if you'd rather point to --2 Α. Can I get up and show you? 3 Ο. Yes. 4 CHAIRMAN FESMIRE: As long as he let's you. 5 MR. BRUCE: Yes. 6 Okay, Exhibit 1 is a land map that shows our 7 Α. ownership. The reddish brown area encompasses about 8 640,000 acres. We own 100 percent of the minerals. There 9 are approximately 605,000 acres in New Mexico, and the 10 remaining 35,000, approximately, are in Colorado. 11 The Colorado/New Mexico state line is depicted 12 here at this large black line across here, and it's 13 labeled also. Also on the map, you'll see a brown line to 14 the side, the western side squiggly line, and that's the 15 county line between Colfax County and Taos County. 16 And also, there is a bold line on the northwest 17 part and a Colorado portion, and that's a county line 18 also. 19 CHAIRMAN FESMIRE: Now the important part. 20 Where's Philmont? 21 THE WITNESS: The Philmont? 22 Yeah. 23 CHAIRMAN FESMIRE: THE WITNESS: Okay, Philmont is going to be 24 south of this area (indicating). The boy's camp? 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 277 CHAIRMAN FESMIRE: Yeah. 1 2 THE WITNESS: Okay, that's close. Approximately. 3 There are also two isolated reddish brown areas. Α. 4 These are also tracts that El Paso owns 100 percent of the 5 mineral interests in, but we have no current wells in 6 there and they're not part of any pool. 7 And you're not seeking any change in pool rules 8 Ο. for those two isolated areas to the southwest of the 9 10 tract? That's correct. Can I also just point out, Α. 11 there are two white areas on here where we don't own the 12 minerals. One is Brilliant Canyon Ranch, and the other 13 one is the NRA ownership. 14 Okay. And also, I believe all the current wells Ο. 15 are located on that plat? 16 That's correct. I'm sorry. All the current 17 Α. wells that are located within the Stubblefield and the 18 Castle Rock pools are on this map delineated. 19 CHAIRMAN FESMIRE: Are those the only two pools 20 up there? 21 MR. BRUCE: Those are the only two pools in 22 New Mexico. 23 Now again, when we initially filed this 24 Ο. application, what setback requirements were requested from 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 278 the Division? 1 At that time, we requested ten feet from the 2 Α. section line, and then ten feet from any quarter quarter 3 line. 4 And the Division required wells to be 660 feet Ο. 5 from a section line? 6 Yes. 7 Ά. But it did relax the internal lines in the 8 Ο. section? 9 Α. That's correct. 10 And you're here today requesting what? Q. 11 We're here today to seek liberalization of the Ά. 12 660 foot setback that was in the previous Order. 13 Okay. Now again, what is the ownership of the Ο. 14 red areas, mineral ownership? 15 The ownership of the reddish brown area is 100 Α. 16 percent mineral interests by El Paso E&P Company. 17 Okay. Now, there is only one small little area Ο. 18 which is not owned, and I don't have the plat for that. 19 20 Α. I have it here. Highway 555. MR. BRUCE: Mr. Examiner, I haven't marked these 21 yet, but I'll mark these 1-A. 22 On Exhibit 1, there is a line that goes through Α. 23 here. This is Highway 555. We've blown up that portion 24 on here of Highway 555. And on this exhibit, what we 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 279 1 delineated is mineral ownership in yellow that is owned by 2 Colfax County.

3 We have an existing oil and gas lease that 4 covers approximately 141 acres, and we have a 160 acre 5 unit. Where there is Colfax County minerals, we also have 6 a pooling agreement on that quarter section with them. 7 Q. Okay. So out of the 605,000 acres we're talking 8 about, there are 141 acres that are owned by the County of 9 Colfax?

10 A. That's correct.

11 MR. BRUCE: Mr. Chairman, it was in the record 12 for the first hearing, for some reason, the deeds or 13 documents granting the right-of-way just in those certain 14 colored areas that you see there, granted the minerals. 15 Why, we don't know, but that's why there is this odd 16 little breaking up of mineral ownership. 17 Q. But again, those areas are leased to El Paso?

18 A. That's correct.

Q. And so, again, El Paso is the only operatorwithin these pools?

21 A. Yes.

22 CHAIRMAN FESMIRE: Okay, and the uncolored areas 23 belong to Mr. Turner -- minerals belong to --

24 THE WITNESS: No.

25 MR. BRUCE: They belong to El Paso.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 280 THE WITNESS: They're El Paso's minerals. 1 CHAIRMAN FESMIRE: Oh, okay. 2 THE WITNESS: Mr. Turner -- or Vermejo Park 3 Ranch only owns surface. 4 CHAIRMAN FESMIRE: Oh, okay. That's right. 5 I'm sorry, I knew that. 6 COMMISSIONER BAILEY: And where is the Vermejo 7 Park Ranch. It's the whole thing? 8 MR. BRUCE: And we've got some subsequent plats, 9 10 Commissioner Bailey -- I think our next witness could point out where the ranch headquarters are and stuff like 11 that. 12 Now, in looking at the plats, the acreage in 13 Ο. which Colfax County has an interest is being developed --14 15 El Paso is not avoiding developing the Colfax County acreage? 16 In fact, most of the area where we have the 17 Α. No. minerals falls within a 160 acre spacing unit where we 18 have drilled a well, and we've formed a pool unit 19 20 agreement with the County. Okay. And El Paso's plans to develop these Ο. 21 wells were necessary, two wells on a well unit would 22 include the Colfax County acreage? 23 That's correct. 24 Α. Q. Okay. And will the next witness address the 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 281 topography issues in this area? 1 Α. 2 Yes. Now, does El Paso request a buffer zone where Ο. 3 the statewide rules would apply? 4 Yes. What we're requesting is, there would be a Α. 5 buffer zone that would include the outer boundary of the 6 Vermejo Park Ranch, every 160 acre unit -- on a 160 acre 7 basis outlying the ranch. 8 Okay. So that would just be developed on the 9 Q. statewide rules with the normal setbacks and one well per 10 160 acres? 11 Α. That's correct. 12 MR. BRUCE: If I may approach the bench again, 13 14 Mr. Chairman? CHAIRMAN FESMIRE: You may, sir. 15 MR. BRUCE: I'm handing you Exhibit 4-A. 16 And Ms. Balakas, what does Exhibit 4-A Q. 17 18 represent? Exhibit 4-A is the actual land descriptions of 19 Α. each 160 acre quarter section where we have entered into a 20 compensatory royalty agreement with the Bureau of Land 21 Management. 22 23 MR. BRUCE: And you can't see it so well on 24 these first two plats, Mr. Chairman, but our next witness will have a plat where it will show where these 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 282 compensatory royalty agreements are. 1 And that is where the El Paso lands adjoin 2 Ο. federal land; is that correct? 3 That's correct, on the west side of the ranch Α. 4 where we've got forest land. 5 CHAIRMAN FESMIRE: Jim, could you take just a 6 7 second and explain that agreement to me? MR. BRUCE: Yes. Mr. Chairman, if you look at 8 this plat -- and you'll be able to see quite clearly here 9 on the southwest side, the white area is mainly federal 10 land, national forest or wilderness. And the 160 acre 11 units were wells along this little stretch of land. 12 The federal government will not lease the land. 13 But they do have a provision in the federal regulations 14 whereby they are paid compensatory royalties. 15 So in 160 acres, these 160 acre tracts -- I think there's 23 of 16 them, the federal government owns varying amounts of 17 acreage. 18 19 CHAIRMAN FESMIRE: So you can't drill on them but they allow you to drain them? 20 MR. BRUCE: But they'll let you drill on your 21 land --22 CHAIRMAN FESMIRE: And drain their reserves. 23 MR. BRUCE: And you pay them their regular 24 royalty. And I spoke with Mr. Jim Lovato at the BLM's 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 283 Farmington office on Tuesday, and he confirmed that, you 1 know, they do not want any additional development on their 2 compensatory royalty land. So we have agreed that nothing 3 would occur on these lands also. 4 As a result, Ms. Balakas, the only parties 5 Ο. affected by this development or your development plans are 6 Colfax County and the United States? 7 That's correct. Α. 8 MR. BRUCE: And Mr. Chairman, I meant to print 9 10 it up last night, in the case file, notice was given of the original hearings to these entities and they did not 11 eappear before the Division. And as I said, I spoke to 12 Mr. Lovato at the BLM and he's fully aware of this 13 hearing. 14 And Mr. Chairman, I submitted the original 15 16 Division Orders as Exhibits 2 and 3 just so the Commissioners would have those in front of them. 17 Ms. Balakas, were Exhibits 1-A and 4-A prepared Ο. 18 by El Paso? 19 Α. That's correct. 20 And in your opinion, is the granting of the two 21 Q. 22 Applications of El Paso in the interest of conservation and the prevention of waste? 23 That's correct. 24 Α. MR. BRUCE: Mr. Chairman, I'd move the admission 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 284 of Exhibits 1, 1-A, 2, 3, and 4-A. 1 CHAIRMAN FESMIRE: Well, I assume the Commission 2 has no objection. They'll be so admitted. 3 MR. BRUCE: And I pass the witness. Δ CHAIRMAN FESMIRE: Commissioner? 5 COMMISSIONER BAILEY: The statement was just 6 made, the only parties involved were the BLM and Colfax 7 County and El Paso E&P? 8 THE WITNESS: Correct. 9 COMMISSIONER BAILEY: The surface owner is a 10 huge factor. Is there an agreement with the surface 11 owners for these additional wells that you're requesting 12 the relaxation of the setbacks? 13 THE WITNESS: Right. We work with -- we have a 14 mineral extraction agreement that covers all of our 15 operations with the Vermejo Park Ranch. And whenever we 16 permit a well or locate one, we're in agreement with them 17 as to where we move the well or where we put it. 18 COMMISSIONER BAILEY: Both the number and the 19 location of the wells? 20 THE WITNESS: The number of wells has got a cap 21 right now of how many existing wells we can have under the 22 agreement, the existing locations. So we still have -- I 23 mean, we still have the ability to drill additional 24 25 wells, yes.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 285 COMMISSIONER BAILEY: I've gotten very confused 1 when you say that there's a cap on the number of wells and 2 that you have not yet drilled the number of wells for that 3 cap, is that what you just said? 4 THE WITNESS: Our existing mineral extraction 5 agreement provides for a cap on the number of locations we 6 can have on current producing wells on the ranch. We have 7 not reached that. We have the right to drill additional 8 wells, such as these infill wells, and be within 9 10 compliance of our agreement. MR. MUSGROVE: On existing pads, is what she's 11 trying to say. 12 COMMISSIONER BAILEY: Okay. And the 13 infrastructure, the roads, the pipelines, whatever, that's 14 all taken care of within your agreement with Vermejo Park? 15 THE WITNESS: Yes. 16 COMMISSIONER BAILEY: You need a magnifying 17 glass for this. I certainly can't see. On Exhibit No. 1, 18 we have a rainbow of colors in the legend in the top 19 right, but not --20 THE WITNESS: Right. That's standard El Paso 21 It shows minerals, where we have a partial legend. 22 It comes out of our drafting department. interest. So 23 that legend that comes up -- Here, Let me show you. 24 It shows where we own 100 percent working 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 286 interests, where we have depth restrictions, partial 1 interests, seismic options. We color code everything. 2 And that comes through our central land records in Houston 3 and our drafting department. 4 5 COMMISSIONER BAILEY: Okay, so if we only saw pink, then that only applies to the pink color? 6 THE WITNESS: Yes. If it says "EPP, Mineral 7 Fee," that means we own the minerals. And in this case, 8 9 we have 100 percent. COMMISSIONER BAILEY: The surrounding owners --10 because the buffer zone on the outside, are you asking for 11 relaxation of that setback around the buffer zone of this? 12 THE WITNESS: No. 13 MR. BRUCE: No, the buffer zone would be, you 14 know, within the 160 acre well units on the exterior of 15 this acreage and where it adjoins the --16 CHAIRMAN FESMIRE: The entire boundary? 17 MR. BRUCE: The entire boundary. 18 CHAIRMAN FESMIRE: But the exception is the 19 compensatory royalty agreements where you can --20 MR. BRUCE: Well, it -- they kind of merge 21 together, actually, but the BLM wanted us to reflect what 22 was in the compensatory agreements. And with our next 23 witness, I will point them out on an exhibit we have. 24 But what we are asking is that, you know, that 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 287 there be 160 acre quarter sections, so a half a mile 1 buffer zone on the entire upside of this area including 2 south of the New Mexico/Colorado border. 3 And then also, joining the two white areas which 4 are Non-El Paso minerals so that, you know, until 5 something is done there, they would remain on statewide 6 rules. So they wouldn't be affected by the requests for 7 these pools. 8 CHAIRMAN FESMIRE: Which means you can't drill 9 any closer than 660 acres to the boundary? 10 MR. BRUCE: Yes. 11 CHAIRMAN FESMIRE: Except, does that apply to 12 the compensatory mineral --13 MR. BRUCE: Yes, it would apply to that also. 14 CHAIRMAN FESMIRE: So why would you have to --15 Never mind. 16 MR. BRUCE: Yeah, I -- But in talking with the 17 BLM, they wanted us to expressly list the lands that were 18 compensatory royalties. 19 CHAIRMAN FESMIRE: Okay. That doesn't make any 20 I mean, you know, you're going to be statewide 21 sense. rules where it would affect them, but in order not to 22 object to this, they just wanted to make sure that ... 23 MR. BRUCE: I guess they just wanted no more 24 25 wells next to them. I think it's wilderness area up in

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 288 there. Tribal land. 1 CHAIRMAN FESMIRE: Okay. Yeah, good idea. 2 COMMISSIONER BAILEY: What is the cap for the 3 number of wells? 4 MR. MUSGROVE: Active well bores, 1,250. We're 5 currently at 944. 6 COMMISSIONER BAILEY: That's all I have. 7 CHAIRMAN FESMIRE: And your expansions, you're 8 going to drill from the same pads? 9 MR. MUSGROVE: The infills we were talking about 10 will be --11 THE WITNESS: Will be both vertical and 12 13 directional. MR. MUSGROVE: There are sites that have been 14 15 used up on an active site. MR. BRUCE: That's all I have with this witness. 16 COMMISSIONER OLSON: So I guess you've reviewed 17 this through with the Vermejo Park Ranch, I'm assuming? 18 19 THE WITNESS: Yes, we have. And they were well aware of our hearing last year on the infill. They had no 20 objection at the time. So they're aware that we have the 21 order. 22 COMMISSIONER OLSON: So they're wanting to see 23 things drilled from the same pad, is that kind of their 24 preference on this? 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 289 THE WITNESS: I think that we're under our 1 current agreement. Along the way we have amended, as 2 necessary, programs. So at this point, we have our 3 4 existing agreements with them. COMMISSIONER OLSON: And this falls within the 5 6 existing agreement? 7 MR. BRUCE: Commissioner Olson, I've seen the surface use agreement once, but it's -- it's 8 9 rather detailed. Rather large and detailed. THE WITNESS: Yes, it is. Well, we have a very 10 sophisticated landowner. There's been a lot of thought 11 put into the agreement, back to Penzoil in '93, and 2003 12 when we entered into an agreement. 13 COMMISSIONER OLSON: I saw it a long time ago, 14 It's pretty big. 15 too. CHAIRMAN FESMIRE: I have no questions of this 16 witness. 17 MR. SMITH: May I ask a question? 18 CHAIRMAN FESMIRE: Oh, yes, surely. 19 Talking about notice, I think MR. SMITH: 20 21 someone earlier -- Mr. Bruce, you may have said it, that Colfax and the federal government both had notice of the 22 last hearing? 23 MR. BRUCE: Yes. 24 MR. SMITH: And you spoke with someone from the 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 290 BLM about this hearing that you're currently in? 1 2 MR. BRUCE: Jim Lovato at the BLM Farmington office. 3 MR. SMITH: Okay. So the BLM has notice of it. 4 Colfax, did you talk to anybody from Colfax? 5 MR. BRUCE: No. But, I mean, they were given 6 written notice of the original hearing and did not appear. 7 Okay. And Vermejo Park, I take it, MR. SMITH: 8 your position is that this is allowable under your 9 agreement with them, so there's no need to give them 10 notice of this hearing? 11 MR. BRUCE: Well, I think it's not only that 12 it's allowable -- these wells and locations would be 13 allowable under the surface use agreement, but I do not 14 read the Division's regulations to require us to give 15 notice to the surface owner. But they were aware of it, 16 as El Paso has testified. They had discussions before the 17 original hearing with Vermejo Park. 18 THE WITNESS: We did invited them if they were 19 20 interested in attending this meeting. MR. SMITH: Vermejo Park or Colfax County? 21 THE WITNESS: Vermejo Ranch. 22 MR. SMITH: Okay. I have no questions. 23 24 MR. BRUCE: I call Mr. Mark to the stand. 25 CHAIRMAN FESMIRE: Mr. Mark, you've been

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 291 1 previously sworn? MR. MARK: Yes, sir. 2 FREDERICK MARK, 3 the witness herein, after first being duly sworn 4 upon his oath, was examined and testified as follows: 5 DIRECT EXAMINATION 6 BY MR. BRUCE: 7 Would you please state your name and city of Ο. 8 residence for the record? 9 Α. My name is Frederick Earl Mark, and my residence 10 11 is Evergreen, Colorado. Who do you work for and in what capacity? 12 Ο. I work for El Paso Exploration and Production, Α. 13 LLP, and I'm an advisor geologist. 14 You've been qualified as an expert geologist 15 0. before the Division, but since we're in front of the 16 Commission, could you describe your educational and 17 employment background? 18 I have a Bachelor's Degree in Geology from the 19 Α. University of Idaho. I've been in the business 35 years. 20 This the second time I've worked for El Paso in my career. 21 I worked for Sun, WM Petroleum, and TRC Consulting 22 23 Company. And how long have you been back with El Paso 24 0. 25 this second time?

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 292 I've been with El Paso for almost four years 1 Α. 2 now. And does your area of responsibility at El Paso Q. 3 include this part of New Mexico? 4 Α. Yes. 5 And are you familiar with the geology involved 6 Q. in these two pools? 7 8 Α. Yes, I am. Mr. Chairman, I tender Mr. Mark as 9 MR. BRUCE: an expert petroleum geologist. 10 CHAIRMAN FESMIRE: Mr. Mark, are you a certified 11 petroleum geologist? 12 13 THE WITNESS: I am a certified petroleum geologist in Wyoming. 14 CHAIRMAN FESMIRE: Okay. Mr. Mark is so 15 accepted. 16 Ο. Mr. Mark, could you look at your Exhibit A and 17 describe zones of interest in Vermejo Park? 18 Α. If I may stand up? 19 CHAIRMAN FESMIRE: You may. 20 This is a type log of the section that produces 21 Α. gas from coal on the Vermejo Park Ranch. The lowest 22 formation that we penetrate is the Trinidad sandstone. 23 It's a massive sandstone from 50 to 200 feet thick. 24 It was deposed during the regression of the mid 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 293 continent seaway, the shoreline deposits and offshore 1 It does not produce gas. And the work that we have bars. 2 done in the field, it has nannotarcy permeability. It's 3 very tight. 4 The next formation is the Vermejo formation. 5 Ιt contains coal. It was deposited during the late 6 cretaceous time in a lower delta plane environment. 7 It contains -- any given well can have between -- can 8 penetrate between no seams and up to 12 seams. 9 The seams in the Vermejo range from a maximum of 10 10 feet thick to less than one foot thick. The extent --11 the coals are very lenticular in the Vermejo. The 12 thickest coal will be -- there's only one seam, it's over 13 10 feet thick, and it covers about 15 square miles. 14 The rest of the coals are between one and six 15 feet thick and cover at most three square miles. A 16 typical coal seam will be three feet thick and cover from 17 one to two sections. The coal is, as I said, quite 18 lenticular and discontinuous. 19 Above the Vermejo is the Raton formation. 20 Excuse me, I should have said that the Vermejo formation 21 is between 350 feet and 50 feet thick on the ranch. 22 And it thins from west to east. 23 Above the Vermejo formation is the Raton 24 formation. It's 1,800 feet thick. The base of the Raton 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 294 1 formation is the Raton conglomerate. It was deposited in 2 a graded stream with a little higher gradient. There are 3 no coals in it.

The lower part of the Raton formation is barren. Coal occurs in the upper 600 to 800 feet. It's extremely lenticular seams. And this formation was deposited in an upper delta plane environment, meandering streams, and the coals are very lenticular, although they can be thick locally, up to 12 feet thick, but the extent is one to two square miles even of those thick seams.

11 There can be up to 15 seams. A typical seam is 12 probably two and a half to three feet thick and less than 13 one square mile of extent.

One thing that I do want to emphasize once again is there are a number of thin seams. There are no thick, extensive seams as you would see in the San Juan basin.

17 I'll go ahead and take this down unless there 18 are any questions. Also, all of these formations crop out 19 along -- in the ranch or around the edge of the basin.

Q. Mr. Mark, you have a series of exhibits,
structure maps and cross-sections marked as Exhibit D
through F. And without interrupting you, could you just
briefly go through these?

A. Yes. Exhibit B is a structure map on the top of the Trinidad sandstone. It's made up over 1,400 data

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 295 points. Basically, it shows the basin as an asymmetrical 1 north base trending northwest/southeast divided into two 2 sub basins by a dome in the center. 3 MR. BRUCE: Mr. Chairman, I filed a set of 4 exhibits about five weeks ago, and then I filed another 5 set last week. And if you don't have yours, 6 Mr. Chairman --7 CHAIRMAN FESMIRE: I'll look over Jami's 8 shoulder here. 9 10 MR. BRUCE: Okay. Like I said -- Let me start again. The red Α. 11 line, the outline of the ranch -- and this is a structure 12 map on the top of the Trinidad. The yellow line, the 13 yellow shaded areas on the east side of the map and the 14 west side of the map, are an outcrop of undifferentiated 15 Vermejo and Trinidad formations which mark the limits of 16 the basin. 17 The white area in the center or the left center 18 of the map is the Vermejo Park dome, and that's where the 19 ranch headquarters are. 20 Just to give you an idea of the size of the 21 ranch, to drive from Raton, which is on the right hand of 22 the west corner, to the Vermejo Park headquarters, the 23 bulk of that is paved highway, takes about 45 minutes at 24 an average speed of around 50 miles an hour. 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 296 The ranch -- the basin itself, as I said, is an 1 asymmetrical basin trending northwest to southeast. 2 There's a dome in the center of the basin that devides it 3 into a northern sub basin and a southern sub basin. 4 5 On the eastern part of the ranch, dips are very 6 gentle from 100 to 300 feet per mile. The east side is characterized by thrusting -- and actually, a little bit 7 west of the coal limit, and very -- The basin on the east 8 side is characterized by very steep dips from 1,500 to 9 2,000 feet per square mile. 10 And the western part of the basin there is also 11 a terrestial decline and the Vermejo Park dome which are 12 also structures with a steep western limb. 13 14 Unless there are any questions, I'll go on to the next exhibit. 15 Exhibit C is an isopach of total coal in the 16 Vermejo formation. Maximum thickness is about 35 feet. 17 And you can see it's thick on the western side of the 18 basin, and in certain ponds in the northern and central 19 part of the basin, it thins, the total coal thins to the 20 21 east. I want to point out again that this is total 22 coal, and there can be up to 12 seams making up this total 23 coal. There is not one coal over the entire basin, but 24 25 numerous thin seams. I will later show on the

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 297 cross-sections AA Prime and BB Prime. 1 The next exhibit -- unless there are any 2 questions, Exhibit D is an isopach of the total Raton 3 pool. Once again, this is total coal added up -- a sum of 4 5 up to 15 seams. There are thick areas that trend 6 northwest/southeast. The Raton coals are not present on the western 7 part of the basin, the gray areas. And the eastern part 8 of the basin, the productive coal measures are terminated 9 by erosion. So the total thickness of the Raton coal ends 10 due to erosion cropping of the coal to the east. Anv 11 questions? 12 Exhibit E is Cross-section AA Prime shown on the 13 previous isopachs. This cross-section is intended to 14 illustrate the lateral variability of the Vermejo 15 formation and Raton formation. 16 There are no markers in either formation and can 17 be unreliably correlated. And the coals also are 18 19 extremely lenticular. You can see the thinning from the Vermejo formation from west to east. 20 You can also see coals -- these wells are 21 separated by about one mile. You can see how difficult it 22 is to even attempt to correlate coals within the Vermejo. 23 These are the most continuous coals on the ranch because 24 25 they're lower delta plane coals.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 298 Above it, the Raton formation, you can see the 1 coals are shaded black on the cross-section. Sandstones 2 are yellow, mudstones are gray. 3 Above in the Raton formation, in the upper third 4 of the Raton formation, you can see Raton coals. These 5 coals are even more difficult to correlate and lenticular 6 than the Vermejo coals. 7 If I may give an example of the lenticular 8 nature of the Raton coals, we planned a horizontal well in 9 the Raton formation. All the surrounding wells from the 10 well we kicked off from had six feet of coal. It appears 11 that the Raton formation is continuous over that area. 12 When we landed the well about 300 feet from the 13 well we kicked off from, we landed in the sandstone. The 14 coal was not present. That will give you an idea of the 15 variability that we have. A well with six feet of 16 coal, 400 feet away, there is no coal. What appeared to 17 18 be in wells up to half a mile away, we had coal. There had been a point bar that apparently 19 coexisted with the sea deposition. The coal has never 20 been deposited there. 21 This is Section BB Prime, Exhibit F. It is a 22 section across the southern part of the basin shown on 23 your slide. And once again, it will give you an idea of 24 the lenticular nature of the coals and how laterally 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 299

1 discontinuous they are.

Ο. Okay. And the final exhibit, Mr. Mark? 2 This is a composite map of a seven and a half 3 Α. USGS topographical map. The ranch boundary is here. This 4 is Colorado. This is New Mexico. This is the ranch 5 headquarters. The yellow lines are, once again, the 6 7 outcrop of undifferentiated Vermejo and Trinidad formations that mark the edges of the basin. 8 We have taken the liberty of showing the 9 Stubblefield gas pool, as well as the Castle Rock gas pool 10 11 in blue. All of our producing wells are shown on this map in black. The black trails here are horizontal wells. 12 What we wish to show on this is first how rugged 13 the topography is on the ranch. In both pools, there are 14 canyons that are over 750 feet deep. This makes location 15 sites -- puts them at a premium. 16 17 We have also on this map have shown our proposed infill wells. This was the subject of our earlier 18 hearing, was the order that allowed us to go to two wells 19 They're shown in two colors, first red and 20 per 160 acres. 21 then blue. These wells were sited based on criteria to 22 23 produce unique reserves so that theire 80 acre drainages did not overlap with the drainage areas of existing wells. 24 Mr. Musqrove will describe that process. 25

Page 300 They're also sited with relation to topography 1 so that we could build a site and so that we have access 2 for both roads and infrastructure corridors. 3 They're also sited in accordance with the MEA. 4 This means that they can be sited -- they're sited for 5 viewscapes and other considerations of the ranch. 6 COMMISSIONER BAILEY: What does MEA stand for? 7 THE WITNESS: Mineral extraction agreement. 8 That's the agreement that we operate on the ranch with. 9 And it's an agreement with the landowner. If you have any 10 detailed questions, I would address them to --11 12 COMMISSIONER BAILEY: No, you just made the 13 reference to MEA, and I didn't know what it meant. THE WITNESS: Oh, yes. That's the initials for 14 mineral extraction agreement. It spells out how we 15 16 operate on the ranch. COMMISSIONER BAILEY: Okay. 17 Α. When we asked for a ten foot setback from 18 section lines in our original hearing, we hadn't counted 19 up the number of wells that would be within that 660 foot 20 setback. 21 22 And what I want to show here is, the wells in red are wells that would fall between 660 -- less than 660 23 24 feet from a section line. You can see there are a large 25 number of them.

PAUL BACA PROFESSIONAL COURT REPORTERS

1 This would require us to file an exception 2 presently because they were less than 660 feet from a 3 section line. There are 235 wells in this program that 4 would fall within 660 feet of the section line. As I 5 said, they're shown in red. That would require us to file 6 exceptions, 235 exceptions.

7 What we're asking is, that we would be exempted 8 from that 660 foot rule so that we would not file those 9 235 exceptions which would burden the state with paperwork 10 and costs.

11 Q. And Mr. Mark, what you're talking about is 12 infill wells within the current point existing boundaries 13 of the pool?

14 A. Yes, that is correct.

Q. And if there is future development outside the pools, that would not count any additional infill wells in unorthodox locations outside the current boundaries of the pools?

19 A. Yes.

20 Q. So that would be additional?

A. Those would be additional as the field expandsand the infill wells expand with it.

Q. Now, with respect to the existing wells, there are already, looking at your plat, a number of unorthodox locations for those existing wells, are there not?

PAUL BACA PROFESSIONAL COURT REPORTERS

8db8c84d-240d-40b9-8479-fbbeb59f8ade

Page 301

Page 302 Unorthodox? Α. 1 Unorthodox, location exceptions is how we --2 Q. Yes. We have in the past filed exceptions. Α. 3 And have any of them been denied? Ο. 4 Α. They have not. 5 Okay. So if the setback requirement that 6 0. El Paso is requesting isn't granted, you'll still have to 7 seek -- you would still want to drill at these unorthodox 8 locations to access mineral reserves? 9 That is correct. Because these have been sited 10 Ά. within the MEA, and they've also been sited to develop 11 unique reserves so that we're not producing from the 12 drainage areas of existing wells. 13 14 So we would have to file for exceptions. But we're also -- As I said before and I might point out, 15 locations, because of topography, are at a premium. 16 MR. BRUCE: Mr. Chairman, one thing, Exhibit 17 4-A, which shows those compensatory royalty agreements 18 with the federal government, what you see down here in the 19 red line is the line of the ranch boundary. 20 And as you see on the southwest side where 21 there's a stair step, the blue line, that's the pool 22 boundaries. Any time you see 160 acres intersected by the 23 red line, that's the acreage with the compensatory royalty 24 agreements with the federal government. 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 303 COMMISSIONER OLSON: As far as the lie of it all 1 on this, is that the stair-stepped area? 2 MR. BRUCE: South of that. And as I said, in 3 those areas, the federal government is receiving its 4 royalty but does not want additional wells on that acreage 5 or near that acreage. 6 COMMISSIONER BAILEY: Are there similar 7 agreements to the east? 8 MR. BRUCE: Not that I know of. I don't 9 believe there are. 10 MS. BALAKAS: Just along there where there is 11 the federal land. 12 COMMISSIONER BAILEY: And these are fee lands to 13 the east? 14 MR. BRUCE: They are -- I think it's fee and --15 a mixture of stuff. I think once you get to the -- it 16 doesn't show it on this plat, Commissioner Bailey, but 17 once you get to the east, it's more of typical New Mexico 18 land holdings than federal state fee. 19 MS. BALAKAS: We don't have any other existing 20 wells that we've drilled outside of our fee that we had to 21 pool other than Colfax County and the BLM that fall in 22 quarter sections where we've drilled wells. 23 MR. BRUCE: I didn't go through Exhibit G, 24 25 Mr. Chairman, but it's similar to Exhibit H.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 304 Mr. Mark, were Exhibits A through H prepared by Ο. 1 you or under your supervision? 2 That is correct. 3 Δ And in your opinion, is the granting of 4 Ο. El Paso's applications in the interest of conservation and 5 the prevention of waste? 6 Yes, it is. 7 Α. MR. BRUCE: Mr. Chairman, I move the admission 8 9 of El Paso's Exhibits A through H. CHAIRMAN FESMIRE: They'll be so admitted. 10 MR. BRUCE: I have no further questions of the 11 witness. 12 COMMISSIONER BAILEY: No questions. 13 COMMISSIONER OLSON: No questions. 14 CHAIRMAN FESMIRE: No questions. 15 MR. BRUCE: I would call Mr. Musgrove to the 16 17 stand. CHAIRMAN FESMIRE: Mr. Musgrove, you've been 18 previously sworn? 19 Yes, I have. MR. MUSGROVE: 20 MR. BRUCE: And Mr. Chairman, Mr. Musgrove will 21 be testifying off of Exhibits 4 through 11 starting with 22 23 that package there. 24 25

PAUL BACA PROFESSIONAL COURT REPORTERS

	Page 305
1	HOWARD MUSGROVE,
2	the witness herein, after first being duly sworn
3	upon his oath, was examined and testified as follows:
4	DIRECT EXAMINATION
5	BY MR. BRUCE:
6	Q. Mr. Musgrove, would you please state your full
7	name for the record?
8	A. Howard Wayne Musgrove.
9	Q. And where do you reside?
10	A. Parker, Colorado.
11	Q. Who do you work for and in what capacity?
12	A. I work for El Paso Exploration and Production
13	Company, LP, and I'm a senior reservoir engineer.
14	Q. Would you please you've testified before the
15	Division but not the Commission, so would you please
16	summarize your educational and employment background for
17	the Commissioners?
18	A. I have a Professional Degree from the Colorado
19	School of Mines in Geological Engineering, 39 years of
20	experience mainly in the Rockies and in California.
21	Q. And what companies have you worked for along the
22	way?
23	A. Tank Euro Oil Company. I worked for EOG. I
24	worked for Costal Oil and Gas, and El Paso.
25	Q. Does your area of responsibility at El Paso

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 306 include this portion of northeast New Mexico? 1 Α. Yes, it does. 2 And are you familiar with the reservoir matters Ο. 3 related to these applications? 4 5 Α. Yes. MR. BRUCE: Mr. Chairman, I'd tender 6 Mr. Musgrove as an expert reservoir engineer. 7 CHAIRMAN FESMIRE: Mr. Musgrove, are you a 8 licensed engineer in any state? 9 10 THE WITNESS: No, I'm not. CHAIRMAN FESMIRE: He'll be so admitted. 11 Mr. Musgrove, it's getting late, let's be quick, 12 Ο. and I'll let you run through the exhibits. Would you 13 identify Exhibit 4? 14 Exhibit 4 is a locator plat, again of the 15 Α. Vermejo Park Ranch. It's highlighted in red. I have 16 highlighted the wells which I'll be talking about in the 17 Stubblefield Canyon pool. It will be three wells going 18 19 east to west. That will be VPRA 17, VPR 29 and E 8. Ι will then later discuss five wells in the Castle Rock Park 20 pool and then another plat. 21 Okay. And what does Exhibit 5 show? 22 Q. Exhibit 5 is a similar plat used across the 23 Α. X axis production. The lower red curve is the daily gas 24 production. The dark blue is the daily water production. 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 307 The upper red curve is the monthly gas. And the very 1 light blue is the gas/water ratio curve. 2 Now -- and perhaps we didn't get into this 3 Ο. before, why did you select these three wells from the 4 Stubblefield Canyon pool? 5 6 Α. All the wells that I have selected have at least six years of production history, which gives us more 7 confidence in the calculated remaining reserves, as well 8 as the cumulative gas production. And when you add those 9 two together, you get the estimated ultimate recovery of 10 the well which we will be using on a later exhibit. 11 12 Ο. Okay. And what is Exhibit 6? Exhibit 6 is a file that I put together to show 13 Α. the methodology of calculating the volumetric calculation 14 of gas in place on an 80 acre drainage. 15 Gas in place is simply the thickness of the 16 coal, times the gas content of those coal seams, times the 17 area of the drainage, times the tonnage factor which 18 represents the ash content of the coal. 19 20 I've calculated this for both the Vermejo coals, as well as the Raton, and added them together to get the 21 column marked "OGIP" for 80 acres, which is the original 22 gas in place for each of the 80 acre tracts. 23 Since 93 percent of our producers in the 24 Stubblefield Canyon pool are commingled Vermejo and Raton 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 308 1 production, I then calculated an equivalent feet of coal 2 so that I can relate the feet of Vermejo coal and their 3 gas content, which is generally higher than the feet of 4 coal that we perforate in the Raton and its gas content.

5 I chose 316 standard cubic feet per ton as a 6 standard gas content. And by taking the ratio of the 7 Vermejo gas content, dividing it by 316 times the feet of 8 the Vermejo coal, plus the Raton gas content divided by 9 316 times the feet of coal in the Raton, we calculate an 10 equivalent feet of coal based at 316 standard cubic feet 11 per ton.

12 Q. And what do the results of your calculations 13 show with respect to drainage and the need for additional 14 wells?

15 A. On this particular file, what we show is the EUR 16 and the decline curve analysis for each of the wells in 17 the Stubblefield Canyon pool. The equivalent drainage 18 area is simply the estimated ultimate recovery divided by 19 the product of the gas in place divided by 80, which will 20 give us gas in place per acre, times .528.

The .528 was derived from langmere (phonetic) absorption isotherm data to determine the recovery factor from the initial pressures down to a bariment (phonetic) pressure of both the Vermejo and the Raton coals. I then applied an 88 percent completion

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 309 efficiency to account for screenouts and various things as 1 we frac'ed the various stages of the well to determine the 2 recovery factor that I mentioned. 3 4 Q. And looking both at Exhibits 6 and 7, what do these numbers show with respect to the need to drill 5 additional wells? 6 I think that is on the very next one, which is 7 Α. Exhibit 7. This is a cumulative frequent distribution of 8 the calculated drainage areas of the Stubblefield Canyon 9 pool. It can be seen on this plot that the simple 10 arithmetic means of all our producers, 438, is 78 acres. 11 This plot also shows that 90 percent of all our 12 wells in the Stubblefield Canyon pool will not drain 160 13 14 acres. As a matter of fact, we follow across the 350, 50 percent of the wells are draining less than 66 acres. 15 The technical conclusion from this plot is that 16 most of our wells in the Stubblefield Canyon, one well 17 will not effectively drain 160 acres. 18 CHAIRMAN FESMIRE: It's just a coincidence that 19 20 it will drain 78 or 80 acres? THE WITNESS: Actually, earlier we calculated 21 this, that's why we use 80 as standard drainage area. 22 23 CHAIRMAN FESMIRE: Okay. If you go back to the prior slide, like 24 Α. Exhibit 5, you'll see there are drainage radiuses larger 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 310 than 100 percent recovery factor, and that's because we're 1 2 using 80 acres. Not every well unit will require an infill well? 3 Ο. That is correct. Α. 4 But a lot of them will? Ο. 5 Approximately 90 percent of them in the Α. 6 Stubblefield Canyon pool would require a second well to 7 completely drain the 160. 8 Okay. Then let's move on to the Castle Rock 9 Ο. pool starting with Exhibit 8. 10 Exhibit 8 is the same locator plat of the 11 Α. Vermejo Park Ranch outlined in red. Located from the 12 south going north are five sample wells, VPR 1, VPR 14 D 13 39, VPR D 11, and VPR D 29. 14 And those are reflected on the decline curves on Q. 15 Exhibit 9? 16 That is correct. Exhibit 9 on the five decline Α. 17 curves, again, these wells were selected because they had 18 anywhere from seven to nine years of production history. 19 We have recently recompleted the VPR B 01, 20 adding Raton pay. However, all the rest are still in the 21 22 Vermejo only. You'll see the overall shape of the curve of 23 variability, and the rates that these wells produce that 24 are also variable. And this reflects the very good 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 311 conductivity that we have in the northern portion of that 1 well pool where some of the wells have produced in excess 2 of 3 million a day. 3 And Exhibit 10 is similar to your prior Ο. Δ Exhibit 6, I believe? 5 It's a parallel file which shows again the 6 Α. Yes. calculation of the original gas in place, as well as the 7 calculation of the equivalent feet of coal in each well. 8 And by taking the estimated ultimate recovery, 9 again, dividing by 80 to get us a gas content divided by 10 80 to get a gas content per acre, and again, multiply by 11 .528, we get the equivalent drainage area as shown here. 12 Okay. And what are the median rates of 13 Ο. drainage? And let's move on to Exhibit 11. 14 Exhibit 11 is another cum frequency plot, this 15 Ά. time of the Castle Rock pool. And as you can see, the 16 median arithmetic average is 114 acres, approximately. 17 But if you take a look at the plot a little carefully, 82 18 percent of the wells will drain less than 160 acres. And 19 again, 66 percent of these wells will not drain 80 acres. 20 21 Ο. So again, there is a need for additional infill development in order to adequately produce the reserves 22 underlying the land? 23 That is my technical conclusion. Α. 24 And because that is necessary combined with the 25 Ο.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 312 topography that Mr. Mark discussed, it is quite difficult 1 to come up with well locations, is it not? 2 It is. What we did between the two of us, we 3 Α. took an 80 acre drainage radius and moved it around such 4 that it was not overlapping any of the existing parent 5 well drainage areas. And that's how we located infill 6 potential wells. 7 We took into account whether or not they were on 8 very steep grades and we tried to locate them along 9 existing borders where there would be little or no impact 10 on the ranch's surface. 11 And were Exhibits 4 through 11 prepared by you 12 Ο. or under your supervision? 13 They were. 14 Α. And in your opinion, is the granting of these 15 Ο. two applications in the interest of conservation and the 16 prevention of waste? 17 Α. Yes. 18 MR. BRUCE: Mr. Chairman, I'd move the admission 19 20 of Exhibits 4 through 11. CHAIRMAN FESMIRE: Exhibits 4 through 11 will be 21 so admitted. 22 MR. BRUCE: No further questions of the witness. 23 24 CHAIRMAN FESMIRE: Commissioner Bailey? 25 COMMISSIONER BAILEY: What are you doing with

PAUL BACA PROFESSIONAL COURT REPORTERS

1 all the water?

THE WITNESS: We inject it into deeper 2 formations. We have eight water injection wells located 3 across the ranch. And they are currently going into the 4 Glorieta unit, as well as the Dakota and the and the Lower 5 Entrada. 6 COMMISSIONER BAILEY: And how much carbon 7 dioxide are you also producing with coalbed methane? 8 THE WITNESS: Currently, we're very low in CO2 9 production. We've yet to get over half a percent. 10 COMMISSIONER BAILEY: Okay. That's all I have. 11 CHAIRMAN FESMIRE: Commissioner Olson? 12 COMMISSIONER OLSON: How much water are you 13 generating right now? 14 THE WITNESS: We're injecting around 55,000 15 16 barrels of water a day. COMMISSIONER OLSON: That's all I have. 17 CHAIRMAN FESMIRE: What's your average 18 production rate up there now with the, what, thousand 19 wells? 20 THE WITNESS: We're at 944 total well bore 21 count. We have a total of 4 nine barrel wells (phonetic) 22 and two Raton collaborative wells. The rest are all 23 coalbed methane producers, and one producing right at 24 about 82 million a day total. That includes our Colorado 25

PAUL BACA PROFESSIONAL COURT REPORTERS

8db8c84d-240d-40b9-8479-fbbeb59f8ade

Page 313

Page 314 production. Average rate is, plus or minus, 95 to 100 APF 1 2 a day. CHAIRMAN FESMIRE: Per well? 3 THE WITNESS: Per well. 4 CHAIRMAN FESMIRE: And what is your EUR average 5 on the coal wells? 6 It varies. In the Stubblefield 7 THE WITNESS: 8 Canyon area, it's about 580 million standard cubic feet 9 per well. And in the Castle Rock Park pool, it's about 675 million. The maximum well up there is 7.2 BCM, and 10 the minimum well in Castle Rock Park is a 10. 11 12 CHAIRMAN FESMIRE: I have no further questions. 13 Mr. Bruce? I only have one thing. If I may MR. BRUCE: 14 approach the Commission, and I'd submit this as an 15 exhibit. Just as closing, Mr. Chairman, we're requesting 16 a whole lot of relief from the setback requirements. 17 And what I've submitted to you is, first of all, an Order 18 involving the West Pecos Slope-Abo that at least in this 19 -- that pool, which is not all one owner or one operator, 20 did grant a 330 foot setback requirement, and I would 21 contend that with the circumstances of this case, even 22 additional relief should be granted. 23 The second matter is an application that has not 24 yet been heard by the Division, but it is an application 25

Page 315 of Williams Production Company regarding its Rosa unit 1 where it is asking within the unit area or at least within 2 the participating area of the unit essentially the same 3 relief that El Paso is requesting in this case. 4 And I would also note that, again, although this 5 concerns oil matters, you know, it's current Division 6 7 policy that within a water flood unit, you can locate wells pretty much anywhere within -- no closer than within 8 330 to the outer boundary of a water flood unit, you can 9 locate them as long as they're ten feet off the quarter 10 quarter section line. 11 I just bring that up as there is neither 12 precedent nor movement toward doing this where it doesn't 13 affect any exterior interest owners or any mineral owners. 14 So, I'd just bring these to your attention. 15 CHAIRMAN FESMIRE: Mr. Bruce, why did the 16 Division decide against this -- the one provision that 17 you're asking for, the ten foot --18 I'm not sure. I asked Mr. Warnell MR. BRUCE: 19 at one point and he said he didn't remember. So I did 20 21 ask. 22 CHAIRMAN FESMIRE: Because there's just -there's one owner, one operator, there's never been any 23 thought to unitizing this? 24 MR. BRUCE: Yeah, unitizing you usually do when 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 316 there is multiple ownership, multiple leases, et cetera, 1 but because they're -- it's -- if there's -- you know, 2 other than those, that one small Colfax County lease, you 3 know -- there's not even a lease covering this acreage, 4 it's just mineral fee acreage. 5 CHAIRMAN FESMIRE: Right. And I don't suppose 6 7 the surface owner is going to subdivide any time in the 8 near future. 9 MR. BRUCE: I don't think he's into selling the 10 property. CHAIRMAN FESMIRE: Okay. Anything else, 11 12 Commissioners? COMMISSIONER BAILEY: No. 13 COMMISSIONER OLSON: No. 14 CHAIRMAN FESMIRE: Do you have anything else to 15 16 add, Mr. Bruce? 17 MR. BRUCE: No, sir. CHAIRMAN FESMIRE: Thank you very much. At this 18 time, we'll go into executive session and figure this one 19 out. 20 21 (Note: Executive session took place.) CHAIRMAN FESMIRE: The record should reflect 22 that the Commission met in executive session and has made 23 a decision in Case No. 14149, the Application of El Paso 24 Exploration and Production Company, LP, to Abolish the Van 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 317 Bremmer Canyon-Vermejo Gas Pool, Expand the Castle Rock Park-1 Vermejo Gas Pool, and to Establish Special Rules and 2 Regulations for the Castle Rock Park-Vermejo Gas Pool, 3 Colfax County, New Mexico. 4 And in addition, Case No. 14150, a related case, 5 entitled The Application of El Paso Exploration and 6 Production Company, LP to Extend the Stubblefield Canyon 7 Raton-Vermejo Gas Pool and to Establish Special Rules and 8 Regulations for the Gas Pool, Colfax County, New Mexico. 9 The record should reflect that all three 10 11. Commissioners were present during the deliberation, and the only thing that the Commissioners discussed during the 12 deliberation was the outcome of those two cases. 13 We have instructed counsel to draft an Order. 14 He will draft it and circulate it prior to the next 15 meeting of the Oil Conservation Commission, and the 16 Commissioners will have the opportunity to review it at 17 that time. 18 Is there any other business before the 19 Commission? 20 COMMISSIONER BAILEY: No, that's it. 21 22 CHAIRMAN FESMIRE: At this time, the Chair would very happily entertain a motion to adjourn. 23 COMMISSIONER BAILEY: I so move. 24 COMMISSIONER OLSON: Second. 25

PAUL BACA PROFESSIONAL COURT REPORTERS

	Page 318
1	CHAIRMAN FESMIRE: All those in favor signify by
2	saying "aye."
3	COMMISSIONER BAILEY: Aye.
4	COMMISSIONER OLSON: Aye.
5	CHAIRMAN FESMIRE: The record should reflect it
6	was unanimous.
7	(Whereupon, the proceedings concluded.)
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

	Page 319
1	STATE OF NEW MEXICO)) ss.
2	COUNTY OF BERNALILLO)
3	
4	
5	REPORTER'S CERTIFICATE
6	
7	I, PEGGY A. SEDILLO, Certified Court
8	Reporter of the firm Paul Baca Professional
9	Court Reporters do hereby certify that the
10	foregoing transcript is a complete and accurate
11	record of said proceedings as the same were
12	recorded by me or under my supervision.
13	Dated at Albuquerque, New Mexico this
14	24th day of August, 2009.
15	
16 17	PRAMA LAND
18	PEGGY A. SEDILLO, CCR NO. 88 License Expires 12/31/09
19	
20	
21	
22	
23	
24	
25	

1