-	Page 2
1	STATE OF NEW MEXICO
2	ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3	OIL CONSERVATION DIVISION
4	
5 6	IN THE MATTER OF THE HEARING CALLED ' BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:
7	CASE NO. 14403 APPLICATION OF ARMSTRONG ENERGY CORPORATION FOR AMENDMENT OF DIVISION
8	ORDER NO. R-13183 TO REMOVE THE REQUIREMENT FOR THE PLUGGING AND
9	ABANDONMENT OF THE FEDERAL A WELL NO. 1, CHAVEZ COUNTY, NEW MEXICO.
10.	
11	
12	
13	REPORTER'S TRANSCRIPT OF PROCEEDINGS
14	REPORTER'S TRANSCRIPT OF PROCEEDINGS
15	December 3, 2009
16	Santa Fe, New Mexico
17	
18	BEFORE: [`] DAVID BROOKS: Hearing Examiner TERRY WARNELL: Technical Advisor
19	TERRI WARNEED. TEEMITEAT AUVISOT
20	This matter came for hearing before the New Mexico
21	Oil Conservation Division, David Brooks Hearing Examiner, on December 3, 2009, at the New Mexico Energy, Minerals
22	and Natural Resources Department, 1220 South St. Francis Drive, Room 102, Santa Fe, New Mexico.
23	
24	REPORTED BY: PEGGY A. SEDILLO, NM CCR NO. 88 Paul Baca Court Reporters
25	500 Fourth Street, NW, Suite 105 Albuquerque, NM 87102

1

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 2 INDEX Page APPLICANT'S WITNESS: Bruce Stubbs Direct Examination by Mr. Carr APPLICANT'S EXHIBITS: Exhibits 1 - 4: COURT REPORTER'S CERTIFICATE APPEARANCES For the Applicant: WILLIAM F. CARR, ESQ. Holland & Hart, LLC 110 N. Guadalupe, Suite 1 Santa Fe, NM 87501

Page 3 1 HEARING EXAMINER: At this time we will call 2 Case No. 14403, application of Armstrong Energy Corporation for an amendment of Division Order R13183 to 3 4 remove the requirement for the plugging and abandonment of 5 the Federal A Well No. 1, Chavez County, New Mexico. Call 6 for appearances. 7 MR. CARR: If it please the Examiner, William F. Carr of the Santa Fe office of Holland and Hart. 8 We 9 represent Armstrong Energy Corporation. And I have one witness. 10 HEARING EXAMINER: Will the witness please 11 identify yourself? 12 13 MR. STUBBS: Bruce Stubbs. 14 HEARING EXAMINER: Okay, Mr. Carr, you may 15 proceed. MR. CARR: Thank you, Mr. Examiner. 16 17 BRUCE STUBBS, The witness herein, after first being duly sworn upon 18 his oath, was examined and testified as follows: 19 20 DIRECT EXAMINATION BY MR. CARR: 21 Would you state your name for the record, 22 Ο. 23 please? 24 Α. Bruce A. Stubbs. Mr. Stubbs, where do you reside? 25 Q.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 4 1 Α. Roswell, New Mexico. 2 Ο. By whom are you employed? Armstrong Energy Corporation. 3 Α. And what is your position or relationship with Q. 4 Armstrong Energy Corporation? 5 I'm Vice President of Operations. 6 Α. Have you previously testified before the Oil 7 Ο. Conservation Division? 8 9 Α. Yes, I have. In fact, you testified in the case that resulted 10 Ο. in the Order that we're seeking to have amended here 11 today; is that right? 12 Α. That's correct. 13 And at that time, were your credentials as an 14 Q. 15 expert in petroleum energy accepted and made a matter of record? 16 Yes, they were. 17 Α. 18 Ο. Are you familiar with the application before the Division in this matter today? 19 20 Α. Yes. 21 Ο. You actually prepared the C-108 that was filed in the original case? 22 Yes, I did. 23 Α. 24 And have you prepared exhibits for presentation Q. 25 at this time?

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 5 Α. Yes, I have. 1 2 MR. CARR: We tender Mr. Stubbs as an expert in petroleum engineering. 3 HEARING EXAMINER: He is so qualified. 4 Mr. Stubbs, would you briefly state what it is 5 Q. that Armstrong seeks in this case? 6 7 Α. The Order issued by the Division, R13183, had a requirement to reenter Federal A No. 1 and replug it. 8 And 9 we're requesting to remove that requirement from the order. 10 Is Armstrong Exhibit No. 1 a copy of that order? 11 0. 12 Α. Yes. And is that requirement found in the ordering 13 Q. 14 paragraph? 15 Α. That's correct. 16 Q. Did you address this well in the testimony that was presented in the original case? 17 18 Α. Yes, we did. And what did you testify to? 19 Q. Well, I thought it was my duty to bring this 20 Α. well to the attention of the Examiner that day, because 21 this was the only well in the half mile area of 22 investigation around our injection well that did not 23 either have casing or a cement plug across the interval 24 25 that we were going to inject into.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 6 But I also brought to the attention of the 1 2 Examiner that that well is east of the porosity pinchout 3 and there is really not a zone there that's conducting It's 1 or 2, 3 percent porosity, and it's in a fluids. 4 5 anhydrite filling, and there is really not a zone there. So it was my -- well, I had a little concern 6 7 about it and wanted to let you know about it, it really is not a problem as far as our project is concerned. 8 9 Ο. And how did you ask that that well be treated? It was our recommendation that the well file be 10 Α. 11 reviewed with the Artesia district office, and if they concurred with our recommendation, that the well would not 12 13 have to be replugged. Following the hearing, did you consult, in fact, 14 0. with the Artesia district office? 15 Yes, I met with Randy Dade, the supervisor down 16 Α. 17 there. Q. And did you reach an agreement on the well with 18 him? 19 20 Α. He concurred with me that the well was 21 satisfactorily plugged to isolate any fluid movement. Is the well on federal land? 22 Ο. Yes, it is. 23 Α. Did you also confer with the BLM? 24 Q. 25 Α. Yes, I brought it to the attention of the BLM.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 7 This well was in question. And they reviewed it and they 1 also concurred that it was plugged properly and no 2 3 remedial action was necessary. Is the injection well as part of the waterflood 4 Ο. project ready to go as soon as you resolve the issue with 5 this well? 6 The well is drilled and completed. We'll be 7 Α. laying an injection line next week and then it will be 8 ready for injection. 9 When you received the order that required the 10 Ο. plugging of the well, did you contact the Oil Conservation 11 Division? 12 I went down and talked to Randy Dade and sent a Ά. 13 letter to the Oil Conservation Commission, and 14 Commissioner Fesmire replied with a letter not to inject, 15 is basically what it amounted to. 16 Until the order was revised? 17 Ο. Α. That's correct. 18 Have you prepared exhibits for presentation here 19 Ο. 20 today? 21 Α. Yes, I have. Are those contained in what has been marked 22 Ο. Armstrong Exhibit 2? 23 Α. That is correct. 24 25 What is the first page of this exhibit? Q.

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 8 It's just a summary of all the well data and Α. 1 2 what's taken place. Let's go to the plat, the second page in Exhibit 3 Ο. Would you identify the subject well and then review 2. 4 the exhibit for the Examiner? 5 This is a map of the Round Tank Queen area. 6 Α. The subject well, the Federal A No. 1, is located in Section 7 29, 330 on the west line, 2310 on the south line. It's 8 2,533 feet southeast of our proposed injection well, the 9 10 Round Tank Queen No. 7, which is in unit letter A of Section 30. 11 12 Ο. Let's go to the Isopach Exhibit No. 2 in the Exhibit 2. 13 This is an isopach map showing the Queen Sand 14 Α. 15 that we're going to be injecting into. The sand is bounded on the west by a porosity pinchout. And it's also 16 bounded on the east by a porosity pinchout that runs just 17 about on the section line north/south between Sections 30 18 and 29, and 19 and 20. 19 20 And the next page in the exhibit is a Ο. 21 photograph. What does that show? 22 Α. This is a core. We just cored another well out We ran Tank Queen No. 6 Y, which will be a 23 there. producing well offsetting to the west of the injection 24 25 well.

Page 9 And this is what happens to the Queen whenever 1 2 the porosity gets below about 15 percent, is it starts being filled with that anhydrite and other evaporates. 3 This is the other part of the core, upper part 4 5 of the Queen, and you can see it's about 50 percent anhydrite, and 50 about 50 percent sand. 6 7 And as you move to the porosity pinchout, that anydrite and evaporates probably increase more than it is 8 9 in this core. This particular core has little or no 10 permeability, and on the logs, it shows about 10 percent 11 porosity. Whereas the log on the Federal A well is around 12 13 3 percent porosity. Next we have a -- what is this? Is that a log 14 Ο. 15 of the injection well? This is a log comparing the injection well, 16 Α. 17 which is Round Taken Queen Unit No. 7, and the Federal A well. 18 Ο. What does this show? 19 20 Α. The zone of interest in Round Tank Queen Unit No. 7 shows about 6 foot of sand at the bottom of the 21 22 Queen interval that has about 18 to 20 percent porosity. That's the main zone, about 6 feet of sand. 23 24 As you can see in the Federal A well, that zone is just almost nonexistent. It's showing just real low 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 10 porosity, like 4 percent porosity. It's a much thinner 1 2 So it's east of the porosity pinchout and the zone. 3 zone's just about disappeared. MR. WARNELL: Is that neutron porosity? 4 THE WITNESS: Yes, sir, both of them are a 5 6 neutron log. 7 All right. Let's go to the next page in the Ο. exhibit, the wellbore diagrammatic sketch of the Federal 8 9 Α. This is the way the Federal A No. 1 is plugged. 10 Α. It has a 35 sack unit plug from 2100 to 2000. 11 Isolates 12 anything below the Andres River. The Queen zone is about -- is from 1624 to 1638. Heavy mud was placed in 13 that interval of the hole. There is a cement plug at the 14 15 base of the surface pipe. Seven inch casing was set at 16 375 feet, and they sprouted a hundred sack plug across that shoot, and there's a ten sack surface plug. 17 Q. In your opinion, is this well, the Federal A 18 No. 1 as it currently stands, could it pose a threat to 19 20 any fresh water in the area and become a vehicle for the 21 migration of injected fluid from the Round Tank waterflood project? 22 No, I don't think so. Α. 23 All right. Behind that in the exhibit packet is 24 Q. a letter dated October 28th. What is that? 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 11 Α. That's the letter I sent to Mr. Warnell after I 1 met with Randy Dade in Artesia stating what our conclusion 2 3 was and recommending that the well -- or suggesting that the well was plugged correctly and that we didn't need to 4 do any remedial action. 5 And then behind that, what is the next document? 6 Ο. This is a letter from the Bureau of Land 7 Α. Management out of the Roswell office. They've also 8 reviewed the well and concur that it's plugged correctly 9 10 and meets all accepted industry standards and really doesn't present any kind of a problem. 11 And you are requesting that the requirement for 12Ο. the plugging of this well be deleted from the order? 13 14 Α. That's correct. Ο. Is Exhibit No. 3 a notice affidavit? 15 Α. Yes. 16 Was notice provided to the same individuals that 17 Ο. were notified in the original affidavit? 18 19 Α. That's correct. 20 Ο. And it's notified the surface owners and the 21 leasehold operators within a half mile of the proposed injection well? 22 That's correct. 23 Α. Ο. And those owners are identified on the second 24 page of the affidavit? 25

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 12 1 Α. Yes. Were Armstrong Exhibits 1 through 3 either Ο. 2 prepared by you or compiled at your direction? 3 4 Α. That's correct. 5 MR. CARR: May it please the Examiner, at this time we move the admission of Armstrong Exhibits 1 6 through 3. 7 HEARING EXAMINER: Armstrong Exhibits 1 through 8 3 will be admitted. 9 MR. CARR: That concludes my direction 10 examination of Mr. Stubbs. 11 12 HEARING EXAMINER: Mr. Warnell? You're the expert here, so --13 MR. WARNELL: Mr. Stubbs, this one took me kind 14 of by surprise. And what I did is, I went back in and I 15 16 looked at the transcript from our last hearing. And one of the questions -- let's see, you were talking here in 17 18 the transcript about the Federal A 1. 19 And I mentioned to you at that time that, "This 20 well concerns me a bit, too. You don't suppose it could be a deal breaker, do you?" And you answered, "No. 21 Ι 22 mean, if we get to the point that nobody is happy with it, we will try to reenter and replug it. I don't like the 23 way this well is plugged either." 24 25 And now here today, you're saying that you no

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 13 longer feel that this well is a threat, but at the time of 1 2 our original hearing, I felt that you thought it was a 3 threat. THE WITNESS: It was a concern. 4 MR. WARNELL: What happened. 5 THE WITNESS: We reviewed all the data, looked 6 7 at the core data, looked at the logs on the offset wells, 8 and at this point, I don't feel that there's any way that zone will conduct any kind of fluid. So no, I don't think 9 there's a threat. 10 MR. WARNELL: But yet in the original hearing, 11 12 you felt there was a threat. 13 THE WITNESS: I felt I had to bring it to 14 everybody's attention so we could review it, and we have. I don't think there's a threat at this point. 15 MR. WARNELL: Okay. No further questions. 16 17 HEARING EXAMINER: So what you're saying is that 18 there's some porosity in the Queen at the point where this 19 subject well is located that fluids that are injected will 20 never reach the well; is that correct? 21 THE WITNESS: That's correct. There's very little porosity, but I think that the real thing is, 22 there's no permeability. 23 HEARING EXAMINER: Yeah. 24 So that's not 25 necessarily inconsistent with your observation that you

PAUL BACA PROFESSIONAL COURT REPORTERS

Page 14 don't like the way the well is plugged because it could be 1 2 a problem and conceivably, if you --THE WITNESS: It was something that needed to be 3 reviewed. I say it's the only well out there that doesn't 4 have casing, cemented across the bleed, or a cement plug. 5 So I felt like it was something that everybody needed to 6 look at, review, and then make a recommendation. 7 And we've gone through that process. 8 9 HEARING EXAMINER: But you're convinced that 10 nothing in the Queen is ever going to reach that well? THE WITNESS: No, I don't think so. 11 HEARING EXAMINER: Okay. 12 13 MR. CARR: If it please the Examiner, I would call your attention to Page 27 of the prior transcript in 14 15 which Mr. Stubbs did testify that the well is probably not conducting the fluids. So I don't think we're going to 16 17 have a problem with losing water into this wellbore. And then I asked if he would recommend that it 18 be reviewed by the District before they proceed, and he 19 20 said that he would recommend that. 21 HEARING EXAMINER: Okay, very good. If there is nothing further, Case No. 14403 will be taken under 22 advisement. 23 (Whereupon, the proceedings ; soncluded) 24 a complete record of the proceedings is the Examiner Loaring of Case No. 25 neord by me on aminer

PAUL BACA PROFESSIONAL COURT REPORTERS

	Page 15
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	10th day of December, 2009.
15	
16	
17	
18	marked and and
19	PEGGY A. SEDILLO, CCR NO. 88
20	License Expires 12/31/09
21	
22	
23	
24	
25	