## STATE OF NEW MEXICO

## ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

Application of FAE II Operating, LLC, for Reinstatement of Injection
Authority and Authorization to Convert
Producing Wells to Injectors for
Waterflood Operations,
Lea County, New Mexico

Case No. 22133

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

THURSDAY, SEPTEMBER 9, 2021

SANTA FE, NEW MEXICO

This matter came on for hearing before the New Mexico Oil Conservation Division, William Brancard, Esq. Hearing Examiner, Kurt Simmons and Baylen Lamkin, Technical Examiner, on September 9, 2021, via Webex Virtual Conferencing Platform hosted by New Mexico Department of Energy, Minerals and Natural Resources

Reported by: Mary Therese Macfarlane.

New Mexico CCR #122

PAUL BACA COURT REPORTERS

500 Fourth Street NW, Suite 105 Albuquerque, New Mexico 87102

(505) 843-9241

|    |  | 1     |
|----|--|-------|
|    | P  | age 2 |
| 1  | APPEARANCES  |       |
| 2  | FOR FAE II OPERATING: Dana S. Hardy, Esq. Hinkle Shanor, LLP |       |
| 3  | P.O. Box 2068<br>Santa Fe, NM 87504-2068                     |       |
| 4  | (505) 982-4544<br>dhardy@hinklelawfirm.com                   |       |
| 5  |  |       |
| 6  | CONTENTS   |       |
| 7  | CASE NO. 22133   | PAGE  |
| 8  | Case Called:   | 4     |
| 9  | Taken Under Advisement:                                      | 15    |
| 10 |  |       |
| 11 | FAE WITNESSES:   |       |
| 12 | HUXLEY SONG:   |       |
| 13 | Witness Qualified:   | 8     |
| 14 | Witness Sworn:   | 9     |
| 15 | Cross Examination By Examiner Lamkin: 9, 1                   | 4     |
| 16 |  |       |
| 17 | STEVEN LEHRBASS:   |       |
| 18 | Witness Qualified:   | 8     |
| 19 | Witness Sworn:   | 9     |
| 20 | Cross Examination By Examiner Lamkin:                        | 11    |
| 21 |  |       |
| 22 | JESSICA LaMORRA  |       |
| 23 | Witness Qualified:   | 8     |
| 24 | Witness Sworn:   | 9     |
| 25 | Cross Examination By Examiner Lamkin:                        | 12    |
|    |  |       |

|        |     |   | Page 3    |
|--------|-----|---|-----------|
| 1      |     | INDEX OF EXHIBITS   |           |
| 2      | NO. | DESCRIPTION   | ADMITTTED |
| 3      | A   | Self-Affirmed Statement of Steven<br>Lehrbass                         | 15        |
| 4      | A-1 | CV of Steven Lehrbass   | 15        |
| 5<br>6 | A-2 | Application and Propossed Notice of<br>Hearing                        | 15        |
| 7      | A-3 | Plat of Tracts, Tract Ownership,<br>Pooled Party, Unit Recapitulation | 15        |
| 8      | A-4 | Area of Review Map  | 15        |
| 9      | A-5 | Form C-108  | 15        |
| 10     | A-6 | Notice Letter and Return Recipts                                      | 15        |
| 11     | A-7 | Affidavit of Publication  | 15        |
| 12     | В   | Testimony of Jessica LaMarro,<br>Geologist                            | 15        |
| 14     | B-1 | Type Log of Seven Rivers-Queen<br>Injection Interval                  | 15        |
| 15     | B-2 | Structure Map   | 15        |
| 16     | B-3 | Cross Section   | 15        |
| 17     | B-4 | Cross Section   | 15        |
| 18     | B-5 | Produced Water Analysis   | 15        |
| 19     | С   | Self-Affirmed Statement of  | 15        |
| 20     |     | Huxley Song   |           |
| 21     | C-1 | Production Curve  | 15        |
| 22     | C-2 | Incremental Production and Economic Summary                           | 15        |
| 23     |     |   |           |
| 24     |     |   |           |
| 25     |     |   |           |

- 1 (Time noted 10:45 a.m.)
- 2 EXAMINER BRANCARD: Okay. Let's move away from
- 3 compulsory pooling for a while and deal with some other
- 4 issues here.
- I have next up on the agenda Cases 22133,
- 6 22134. I don't know if you want to handle those
- 7 separately or as consolidated.
- 8 This is FAE, II Operating, if I got that
- 9 right.
- 10 MS. HARDY: Yes. Good morning, Mr. Examiner.
- 11 This is Dana Hardy with the Santa Fe Office of Hinkle
- 12 Shanor on behalf of FAE II Operating, LLC.
- 13 And I think it might make sense for us to
- 14 present these cases separately. We'll try not to
- 15 duplicate, but since they involve different acreage I
- 16 think that would make the record more clear.
- 17 EXAMINER BRANCARD: Okay. Are there any other
- 18 interested persons for Case 22133? (Note: Pause.)
- 19 Hearing none, what do you have for us
- 20 today, Ms. Hardy?
- 21 MS. HARDY: Mr. Examiner, FAE applies for an
- 22 Order reinstating injection authority for its State "A"
- 23 A/C 65, 67, 69 and 71 wells within its Blackbeard North
- 24 Waterford project within the Seven Rivers and Queen
- 25 Formation, comprised of portions of Sections 5, 7, 8 and

- 1 9, Township 22 South, Range 36 East, in Lea County.
- 2 FAE also seeks to convert four of its
- 3 wells, the State "A" A/C 64, 68, 70 and 72, which are
- 4 producers to injections for waterflood operations.
- 5 We've provided the testimony and exhibits
- 6 of three witnesses in support of the application and the
- 7 witnesses are available today to answer questions if the
- 8 Division has any.
- 9 I'd like to provide a brief overview of the
- 10 project and the exhibits, if that would be helpful for the
- 11 Division.
- 12 EXAMINER BRANCARD: I think it would be. Please
- 13 proceed.
- MS. HARDY Thank you.
- To give you some background regarding the
- 16 project, it was initially approved in March of 1967 Via
- 17 Order No. R-3200, which established the project and
- 18 allowed six injection wells to be used for secondary
- 19 recovery. The project was expanded subsequently through
- 20 several different Orders. One was issued in 1970, that is
- 21 Order No. R-3200-A, and then again on September 6th of
- 22 1983, and then again on September 11, 1984. And those
- Orders are numbered WFX 518 and WFX 530, respectively.
- 24 So most of those expansions dealt with
- 25 wells being converted to injection.

1 Production within the project has been

- 2 maintained since it was approved. FEA acquired the
- 3 project in June of 2021, and seeks to reinstate injection
- 4 authority and convert to result in a more efficient water
- 5 flood project.
- The exhibits that we've provided include as
- 7 Exhibit A the Self-Affirmed statement of Steven Lehrbass.
- 8 Mr. Lehrbass is director of land at FAE. He has not
- 9 previously testified and has provided his CV as Exhibit
- 10 A-2.
- 11 Mr. Lehrbass' affidavit provides overview
- 12 and of the project and its history. He provides a plat of
- 13 the unit that identifies the ownership interests by tract
- 14 and includes the lease numbers. That's Exhibit A-3.
- 15 A-4 is a map of the project area that
- 16 depicts the injectors and procedures, and Exhibit A-5 is
- 17 FAE'S C-108 for these wells.
- 18 The Area of Review maps are provided at
- 19 pages 18 through 25 of the C-108, and the affected parties
- 20 entitled to Notice are identified on page 46.
- 21 We've provided the Hearing Notice Letter
- 22 and return receipts in Exhibit A-6, and the Notice of
- 23 Publication is included in Exhibit A-7.
- 24 We did notify all affected parties, and
- 25 that included New Mexico State Land Office.

1 Exhibit B is the Self-Affirmed statement of

- 2 Jessica LaMarro. Ms. LaMarro is a geologist with FAE and
- 3 has previously testified before the Division.
- 4 She provides a type log of the injection
- 5 interval as Exhibit B-1 and a structure map of the unit at
- 6 Exhibit B-2. Exhibits B-3 and -4 contain cross-sections
- 7 of the target interval within the Seven Rivers and Queen
- 8 Formations, and Exhibit B-5 contains a produced water
- 9 analysis.
- 10 Ms. LaMorra states in the affidavit that
- 11 there are no faults or geologic impediments that would
- 12 impede the efficiency of the project, and injection will
- 13 not impair any hydorcarbon-bearing zones, and that
- 14 injection fluids will be confined to the injection hole.
- 15 She also states that she does not expect
- 16 any water compatibility issues and no evidence of open
- 17 faults or hydrological connection between the injection
- 18 interval and underground sources of drinking water.
- 19 Exhibit C is the Self-Affirmed Statement of
- 20 Huxley Song. Mr. Song is the vice president of
- 21 engineering at FAE and has previously testified before the
- 22 Division.
- He discusses the wellbore schematics,
- 24 injection pressure and perforations. He provides a
- 25 production graph as Exhibit C-1, and Exhibit C-2 contains

1 an incremental production and economic summary of the

- 2 project.
- 3 He concludes that FAE's proposal is
- 4 technically feasible and would result in increased EUR.
- 5 So with that I would request that the
- 6 witnesses be qualified as experts in their respective
- 7 fields, and that their exhibits are admitted. And they
- 8 are available for questioning by the examiners.
- 9 EXAMINER BRANCARD: Thank you.
- 10 The witnesses are qualified as experts, and
- 11 we have with us today as an examiner, Mr. Baylen Lamkin to
- 12 assist us, and I will go to Mr. Lamkin for any questions.
- 13 EXAMINER LAMKIN: Yeah. Thanks. I have a
- 14 couple of questions.
- 15 Is there currently any flooding going on in
- 16 this project at all or is this to reinstate authority for
- 17 this entire area.
- 18 MR. SONG: There's -- is my audio clear? This
- 19 is Harold.
- 20 MS. HARDY: We should probably swear in the
- 21 witness.
- 22 EXAMINER BRANCARD: We should. So you have two
- 23 witnesses, is that correct, or more than two?
- MS. HARDY: I have three.
- 25 EXAMINER BRANCARD: I see another. Okay. So

- 1 everybody raise their right hands.
- 2 (Whereupon FAE witnessses Steven Lehrbass,

Huxley Song and Jessica LaMarro were duly sworn

- 3 by the Hearing Examiner.)
- 4 Okay. So we start with Mr. Song.
- 5 Could you please give your -- spell your
- 6 name for the record for the court reporter. Thank you.
- 7 THE WITNESS: Yes, sir. My name is Huxley Song
- 8 and that's spelled H-u-x-l-e-y, and my last name is
- 9 S-o-n-g.
- 10 EXAMINER BRANCARD: Great.
- 11 So is Mr. Song going to answer this
- 12 question, Ms. Hardy?
- MS. HARDY: I believe so, Mr. Examiner.
- 14 EXAMINER BRANCARD: Okay. Please proceed.
- 15 MR. SONG: Yes, sir. Okay, I can take that
- 16 question.
- 17 CROSS EXAMINATION
- 18 BY EXAMINER LAMKIN:
- 19 (Note: Question found at Page 8, line 15.)
- 20 A. Yes. So there's been one well, the "A" A/C No.
- 21 2 -- 2 No. 66 -- that has maintained injection for the
- 22 last decade or so, a little bit over the last decade, and
- 23 the other eight wells that we are referencing here have
- 24 not had injection here recent.
- Q. Is there a particular reason why 40 acres is not

1 seeking to unitize or create a unit with the State Land

- Office for this waterflood project? I know it wasn't
- initially created, but I think that was -- you know, it
- 4 was before we had primacy, and I don't think unitization
- 5 agreements were required for waterflood back then either.
- Is there a reason why you guys aren't
- 7 seeking that now?
- 8 A. That's a great question. We actually are in the
- 9 process of putting together a larger unit around this
- 10 area, and going through the title research and acquiring
- 11 assets to do just that, but for now we were hoping to
- 12 reinstate the injection under the previous Order until we
- 13 can get that larger unit formed.
- 14 Q. Are you guys currently in discussions with the
- 15 State Land Office about that, or do you guys have any
- 16 documentation that you can provide that says that they are
- on board with this? I know that you guys Noticed them,
- 18 but, you know, typically we get a Letter of
- 19 Acknowledgement or something from the State Land Office,
- you know, in agreement for them to, you know, allow
- 21 waterflooding in a unit.
- 22 A. I'll let Steven take that one.
- 23 EXAMINER BRANCARD: Okay. Will you please
- 24 identify yourself, Mr. Lehrbass and spell your name.
- 25 WITNESS LEHRBASS: Yes, sir.

- 1 STEVEN LEHRBASS,
- previously duly sworn testified as follows:
- 3 THE WITNESS: My name is Steven with a "v"
- 4 Lehrbass, L-e-h-r-b-a-s-s.
- 5 EXAMINER BRANCARD: Thank you. Please go ahead.
- 6 CROSS EXAMINATION
- 7 BY EXAMINER LAMKIN:
- 8 (Note: Question found at Page 10, line 14.)
- 9 A. So we've had the opportunity to reach out to
- 10 Scott Dawson at the State Land Office. He told us when we
- 11 get to a point where we are ready to actually start the
- 12 application process that we can have our initial area
- investigated with them to actually go over the details
- 14 with a little bit more detail, but until then he said that
- 15 we can just pursue our operations pending our actual
- 16 (inaudible) effort.
- 17 Q. Are you guys --
- 18 A. He is aware of our waterflood proposal, yes.
- 19 Q. Are you guys planning to create two separate
- 20 units for -- I forget what the name of them are. The uh,
- 21 the north and south.
- 22 A. Yeah.
- 23 Q. Are you guys planning to create two units or are
- 24 you going to combine them?
- 25 A. I'm sorry. We are currently contemplating one

- 1 large unit, with any kind of input from the State Land
- 2 Office. We can split that up if we have to, but we are
- 3 currently contemplating one large unit.
- Q. Okay. So you guys are wanting to inject water
- 5 in both the Seven Rivers and the Langley-Maddox, across
- 6 both intervals, or what is the -- I guess in the initial
- 7 Orders that established the Waterford, you know they were
- 8 two separate pools and there was allocation issues between
- 9 production and water flooding. I wasn't able to find
- 10 anything definitively that said that that issue was
- 11 resolved, but I guess the question would be: Has any --
- 12 have you guys come to any, you know, conclusive end to
- 13 that, or has an overriding pool been established for both
- 14 formations, I guess.
- 15 MS. LAMARRO: My name is Jessica LaMarro,
- 16 L-a-m-a-r-r-o. I'm a geologist.
- 17 CROSS EXAMINATION
- 18 BY MR. LAMKIN:
- 19 Q. (Question found at Page 12, line 4.)
- 20 A. What we've noticed is most of the, I guess,
- 21 injection interval in the northern unit, I guess the area
- 22 we're looking at right now, is within the -- sort of the
- 23 Queen Formation, which is similar to what we will be
- 24 seeing in our southern area that we'll be talking about
- 25 next, which was covered by the Langley-Maddox Pool.

I think the northern area is with the Seven

- 2 Rivers Unit, South Unit Pool, but the formations coincide.
- 3 So I don't think we've settled on a particular policy, but
- 4 they seem to be in formation, like the -- sorry.
- 5 The lower part of the Seven Rivers and the
- 6 Upper Queen seems to be the main injection interval in the
- 7 south, and in the north it seems to be the upper to middle
- 8 part of the Queen. So they correspond together.
- 9 So I would suggest the Langley-Maddox Pool, but
- 10 I don't think we've settled on that.
- 11 Q. Have you guys had any discussions with the
- 12 district geologist Mr. Counts about what the pool
- designation would be or anything like that?
- 14 A. I have not.
- 15 EXAMINER BRANCARD: Ma'am, if you could just
- 16 gets a little closer to the microphone that would be
- 17 helpful, too.
- THE WITNESS: I'm so sorry.
- 19 A. (Continued) I have not had a discussion with
- 20 him yet.
- 21 I think one thing to note here is that the
- 22 injection interval will be the exact interval that has
- 23 been produced by these exact wells in the area. So the
- 24 formations that are produced into the wells in the past
- 25 will be the exact injection interval, so we are not

1 opening up anything new, not going any deeper, not going

- 2 any shallower, just using the existing perforation,
- 3 existing pool, existing formation, and we will do our
- 4 injection within that interval.
- 5 FURTHER CROSS-EXAMINATION OF HUXLEY SONG
- 6 BY EXAMINER LAMKIN:
- 7 Q. In the initial Order it says that the
- 8 waterflooding fluid was going to be provided by Chevron
- 9 from the Capitan Reef. What formation sources are you
- 10 guys planning on using for when you re-establish the flood
- 11 Is it going to continue to be the same source or do you
- 12 guys have production water you're going to reinject?
- 13 What's the plan?
- 14 A. Yes, we will use production water from the
- 15 exact-same formations that we will be injecting to but a
- 16 little bit down dip.
- 17 EXAMINER LAMKIN: I believe that covered all the
- 18 questions that I had initially. If I come up with
- 19 anything else over the course of reviewing the material
- 20 then I'll reach out and let you guys know.
- 21 THE WITNESS: Okay. Sounds good. Thank you.
- 22 EXAMINER BRANCARD: Thank you. Mr. Simmons, do
- 23 you have any other questions?
- 24 EXAMINER SIMMONS: No, I'm good with letting
- 25 Baylen take the lead on that. Thank you

- 1 EXAMINER BRANCARD: Thank you.
- 2 So Ms. Hardy, is that it for the
- 3 presentation on this?
- 4 MS. HARDY: That's it for my presentation. I
- 5 would just request that the case be taken under
- 6 advisement.
- 7 EXAMINER BRANCARD: All right. Okay. Thank you.
- 8 So the exhibits will be admitted into the record.
- 9 Are there any other persons interested in
- 10 Case 22133?
- 11 Hearing none, we will take this case under
- 12 advisement. But as Mr. Lamkin noted, in cases like this
- 13 we often like to get back in touch with the Applicant if
- 14 we have some concerns or need further information, if that
- 15 is okay.
- MS. HARDY: Yes. Thank you.
- 17 WITNESS SONG: Absolutely.
- 18 EXAMINER BRANCARD: Thank you.
- 19 (Time noted 11:02 a.m.)

20

21

22

23

24

25

|    | Page 16   |
|----|---|
| 1  | STATE OF NEW MEXICO )   |
| 2  | : ss  |
| 3  | COUNTY OF TAOS )  |
| 4  |   |
| 5  | REPORTER'S CERTIFICATE  |
| 6  | I, MARY THERESE Macfarlane, New Mexico Reporter                     |
| 7  | CCR No. 122, DO HEREBY CERTIFY that on Thursday,                    |
| 8  | September 9, 2021, the proceedings in the above-captioned           |
| 9  | matter were taken before me; that I did report in                   |
| 10 | stenographic shorthand the proceedings set forth herein,            |
| 11 | and the foregoing pages are a true and correct                      |
| 12 | transcription to the best of my ability and control.                |
| 13 | I FURTHER CERTIFY that I am neither employed by                     |
| 14 | nor related to nor contracted with (unless excepted by the          |
| 15 | rules) any of the parties or attorneys in this case, and            |
| 16 | that I have no interest whatsoever in the final                     |
| 17 | disposition of this case in any court.                              |
| 18 | /s/ Mary Macfarlane   |
| 19 | ——————————————————————————————————————                              |
| 20 | MARY THERESE Macfarlane, CCR<br>NM Certified Court Reporter No. 122 |
| 21 | License Expires: 12/31/2021   |
| 22 |   |
| 23 |   |
| 24 |   |
| 25 |   |