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

APPLICATION OF COULTHURST  
MANAGEMENT & INVESTMENT, LLC  
FOR AUTHORIZATION TO INJECT AS  
PART OF A PRESSURE MAINTENANCE  
PROJECT, SANDOVAL COUNTY, NEW MEXICO.

CASE NO. 14835

REPORTER'S TRANSCRIPT OF PROCEEDINGS  
EXAMINER HEARING

BEFORE: DAVID K. BROOKS, Chief Examiner  
WILLIAM V. JONES, Technical Examiner

May 10, 2012

Santa Fe, New Mexico

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This matter came on for hearing before the  
New Mexico Oil Conservation Division, DAVID K. BROOKS,  
Chief Examiner, and WILLIAM V. JONES, Technical  
Examiner, on Thursday, May 10, 2012, at the New Mexico  
Energy, Minerals and Natural Resources Department, 1220  
South St. Francis Drive, Porter Hall, Room 102,  
Santa Fe, New Mexico.

REPORTED BY: Mary C. Hankins, CCR, RPR  
New Mexico CCR #20  
Paul Baca Professional Court Reporters  
500 4th Street, Northwest, Suite 105  
Albuquerque, New Mexico 87102

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APPEARANCES

FOR APPLICANT COULTHURST MANAGEMENT & INVESTMENT, LLC:

ADAM G. RANKIN, ESQ.  
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EXHIBITS MARKED OR FORMALLY IDENTIFIED

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1 (9:35 a.m.)

2 EXAMINER BROOKS: At this time, we'll call  
3 Case Number 14835, the Application of Cobalt Management  
4 and Investment, LLC for -- I'm sorry. I'm getting it  
5 mixed up with the last one.

6 At this time, we will call Case Number  
7 14835, Application of Coulthurst -- and that's  
8 C-O-U-L-T-H-U-R-S-T -- Management & Investment, LLC for  
9 Authorization to Inject as a Part of a Pressure  
10 Maintenance Project, Sandoval County, New Mexico.

11 Call for appearances.

12 MR. RANKIN: Mr. Examiner, my name is Adam  
13 Rankin, Holland & Hart, Santa Fe, on behalf of  
14 Coulthurst Management & Investment.

15 And I have one witness today.

16 EXAMINER BROOKS: Okay. And this witness  
17 needs to be sworn?

18 MR. RANKIN: Correct.

19 PAUL C. THOMPSON,  
20 after having been first duly sworn under oath, was  
21 questioned and testified as follows:

22 DIRECT EXAMINATION

23 BY MR. RANKIN:

24 Q. Thank you, Mr. Thompson.

25 Can you please state your full name for the

1 record?

2 A. Paul C. Thompson.

3 Q. And where do you reside?

4 A. I reside in Farmington, New Mexico.

5 Q. And by whom are you employed?

6 A. Walsh Engineering & Production Corporation.

7 Q. Have you previously testified before the Oil  
8 Conservation Division, had your credentials as an expert  
9 in petroleum engineering accepted?

10 A. It's been awhile, but yes.

11 Q. Nothing has changed, has it?

12 A. No.

13 Q. Thank you, Mr. Thompson.

14 What is your current position with Walsh  
15 Engineering?

16 A. I'm the president.

17 Q. So you're acting as a consultant in this case;  
18 is that correct?

19 A. I am, correct.

20 Q. Now, are you familiar with the application that  
21 was filed?

22 A. Yes.

23 Q. And have you prepared exhibits to present at  
24 this hearing?

25 A. Yes, I have.

1 MR. RANKIN: Mr. Examiner, I move to tender  
2 Mr. Paul Thompson as an expert in petroleum engineering.

3 EXAMINER BROOKS: So qualified.

4 MR. RANKIN: Thank you.

5 Q. (BY MR. RANKIN) Mr. Thompson, can you please  
6 briefly summarize what it is that Coulthurst is seeking  
7 with this application?

8 A. Coulthurst hopes to improve the oil production  
9 from the Erin Number 3 and Erin Number 9 wells by  
10 increasing the reservoir pressure in the South San Luis  
11 field by injecting produced water into the reservoir via  
12 the Erin Number 2 well. All three wells have  
13 produced -- are completed in the Menefee Formation.

14 We are asking to inject a maximum of 100  
15 barrels of produced water a day, average approximately  
16 60 barrels of water a day, at a maximum injection  
17 pressure of 105 psi, which is based on the standard .2  
18 psi to the top perf. The existing perforations are  
19 between 525 to 580 feet.

20 We're proposing to include all of Federal  
21 Lease NMSF0081171K, which is approximately a 520-acre  
22 lease, all in Section 33 of Township 18 North, Range 3  
23 West.

24 Q. Thank you, Mr. Thompson.

25 And what is the status of the land in which

1 you're seeking to inject?

2 A. All of it is on federal surface and federal  
3 minerals.

4 Q. Thank you, Mr. Thompson.

5 Can you please turn to what's been marked,  
6 within Exhibit Number 1, tab number 1, and that's the  
7 green tab. This is an overview map of the area; is that  
8 correct?

9 A. That's correct.

10 Q. It also indicates, by the dotted line, the  
11 half-mile area of review?

12 A. That's correct.

13 Q. And it also indicates all the offset leasing;  
14 is that correct?

15 A. Yes, that's correct.

16 Q. And it indicates all the wells within that area  
17 of review?

18 A. That's correct.

19 Q. Now, to whom was notice provided of this  
20 application?

21 A. Notice was provided to Three Forks Resources  
22 and to the Farmington BLM Office.

23 Q. Thank you, Mr. Thompson.

24 Now, looking at Exhibit Number 2, this is  
25 an affidavit prepared by your attorney and myself

1 indicating that notice was provided according to the  
2 Division rules; is that correct?

3 A. That's correct.

4 Q. And behind that affidavit is a letter that was  
5 sent to all affected parties; is that correct?

6 A. That's correct.

7 Q. And on the following page, Exhibit A to that  
8 letter indicates that notice was provided to the BLM in  
9 Farmington, as well as to Three Forks Resources; is that  
10 correct?

11 A. Yes, that's correct.

12 Q. And the green cards are on the following page  
13 as well?

14 A. Yes.

15 Q. Now, it appears that the notice to Three Forks  
16 was returned; is that correct?

17 A. Yes, it was.

18 Q. Now, the address that you used for providing  
19 notice to Three Forks Resources, what was the source of  
20 that address?

21 A. That was the address that was listed on the OCD  
22 Web site, under the operator's tab.

23 Q. Thank you, Mr. Thompson.

24 Exhibit Number 3 is a copy of the notice of  
25 publication in the Rio Rancho Observer; is that correct?

1 A. That's correct.

2 Q. And an affidavit indicating it was published;  
3 is that correct?

4 A. That's correct.

5 THE WITNESS: These are the white numbers.

6 MR. RANKIN: Yes. I'm sorry. This is the  
7 white exhibit numbers. Sorry.

8 THE WITNESS: Yes.

9 Q. (BY MR. RANKIN) Now, you prepared the  
10 application, FORM C-108, for authorization to inject; is  
11 that correct?

12 A. That's correct.

13 Q. And that's back at the front tab, the white  
14 tab, correct?

15 A. Yes.

16 Q. And that's your signature at the bottom of the  
17 application, correct?

18 A. Yes, it is.

19 Q. Now, is this an existing project or a new  
20 project?

21 A. No. This will be a new project.

22 Q. Now, can you please briefly review for the  
23 Examiners the history of the well that you're proposing  
24 to inject, the Erin Number 2?

25 A. Erin Number 2 was drilled in October of 1991,

1 completed as an oil producer in December of '91. The  
2 initial production on the completion report was  
3 four-and-a-half barrels of oil a day with no water. The  
4 well produced continuously until May of 2003.

5           During that time, they had received a  
6 permit to dispose of the produced water to an unlined  
7 pit. They got the -- the well was inactive for a couple  
8 of years, and they got the plug-it-or-produce-it letter  
9 from the Feds. They filed a P&A notice, but decided to  
10 go out and try acidizing the perms, which they did in  
11 2006. They produced the well -- or the well came back  
12 after the acid job at two barrels of oil a day and  
13 20 barrels of water a day.

14           We applied for permission for injection of  
15 this well in March of 2011. And prior to that, I was  
16 working with Steve Hayden, in the Aztec office, prior to  
17 his death. So that kind of delayed things here a little  
18 bit for this application.

19           Q. Now, is there any production within the  
20 formation that you seek to inject at the Menefee?

21           A. The well, cumulative, has produced around  
22 35,000 barrels total, of which 25,000 was oil and 10,000  
23 was water.

24           Q. There are some offsetting wells that are  
25 producing currently?

3 (2 more)

1 A. That's correct. There are three wells in the  
2 half-mile circle; one operated by Three Forks Resources,  
3 at George Number 1, and then the two wells operated by  
4 Coulthurst Management. That's Erin 3 and Erin 9.

5 Q. Now, on tab number 1, those wells are indicated  
6 in the handwritten notation, correct, the George and the  
7 Erin 3 and 9; is that correct?

8 A. Yes.

9 Q. And the Erin 3 and 9 -- Erin 3 is to the  
10 southwest slightly, and the Erin 9 is to the east?

11 A. Correct.

12 Q. And those are updip, correct, from the Erin 2?

13 A. Yes, slightly updip.

14 Q. And so those are the two that we expect to see  
15 a pressure [sic] response in; is that correct?

16 A. That's correct.

17 Q. And then George, being to the northeast and  
18 being downdip, correct?

19 A. That's correct.

20 Q. Now, turning to tab number 3, this is the  
21 well -- Injection Well Data Sheet for the proposed  
22 injection well, Erin Number 2; is that correct?

23 A. Yes, it is.

24 Q. Can you please explain for the Examiners the  
25 status of this well and your intentions?

1           A.    The well's drilled -- you can see the wellbore  
2 diagram in the picture -- at four-and-a-half production  
3 casing, set to 647 feet, cemented to the surface with  
4 120 stacks of cement. The existing perforations are  
5 shown there in three different sand stringers, from 525,  
6 down to 580. We intend to inject water below a packer,  
7 set at approximately 500 feet, and inject down  
8 two-and-three-eighths to it.

9           Q.    Now, is there any plan for stimulating this  
10 well?

11          A.    No, there is not.

12          Q.    And can you please -- we've already reviewed,  
13 actually, the area review, but turning to tab number 1,  
14 have you reviewed all the wells within the area of  
15 review?

16          A.    Yes, I have, all the wells that penetrated the  
17 Menefee that were at least 500 feet deep.

18          Q.    And those wells, in addition to being on the  
19 map, are included in the tabulation; is that correct?

20          A.    Yes. Actually, the map includes all the wells  
21 that were drilled in the area of review.

22          Q.    So the tabulation on tab number 2 just includes  
23 those wells that actually penetrate the proposed  
24 Menefee, the injection --

25          A.    Correct. They're at least 500 feet deep.

1 Q. And all the information that's required by the  
2 Division is included in this application; is that  
3 correct?

4 A. Yes, that's correct.

5 Q. Now, in addition to the application, we've also  
6 provided Exhibit Number 4, which is the white tab, a  
7 copy of the wellbore diagram for each of the wells that  
8 penetrate the Menefee; is that correct?

9 A. Yes, that's correct.

10 Q. And those are contained in Exhibit Number 4,  
11 right?

12 A. Right. These are the wellbore diagrams of all  
13 the wells in that area that are at least 500 feet deep.

14 Q. Now, having reviewed these wells within the  
15 area of review, are you concerned that any water  
16 injected into the area will escape into the Menefee  
17 Formation?

18 A. No.

19 Q. What injection volume is Coulthurst proposing  
20 to inject?

21 A. Again, we're seeking a maximum injection of 100  
22 barrels a day, with an average around 60 barrels a day.

23 Q. And the source of the injection water?

24 A. Those would be the produced water from the Erin  
25 Number 9 and Erin Number 3.

1 Q. And those are producing from the Menefee and  
2 proposing to inject the Menefee, correct?

3 A. That is correct.

4 Q. So you wouldn't expect any compatibility issues  
5 there?

6 A. No. In fact, in tabs 4, 5 and 6 are the water  
7 analyses from the three wells, and the water from all  
8 three wells is very fresh. The 2 has a TDS of  
9 1370 parts per million. The 3, 1390, and the Number 9  
10 is 1320, all very compatible freshwater.

11 Q. So in this proposed injection, the system will  
12 be a closed system; is that right?

13 A. Yes, it will be closed.

14 Q. And what injection pressure will be used, to  
15 reiterate Coulthurst --

16 A. Yeah. The default pressure would be  
17 105 pounds, which is .2 psi per foot to the top perf, so  
18 it's 590 25 [sic].

19 Q. And if Coulthurst requires a higher pressure,  
20 you will seek that through the OCD's step rate test?

21 A. That's correct.

22 Q. And how will Coulthurst monitor the issues of  
23 the wellbore integrity?

24 A. Well, above the packer, the annulus will be  
25 filled with an inner fluid, and we'll be monitoring the

1 pressure of the annular space.

2 Q. And as a result of the injections to Erin  
3 Number 2, do you anticipate a positive response in the  
4 Erin 3 and Erin Number 9?

5 A. Yes, we hope so. We hope that by increasing  
6 the reservoir pressure, it will push the oil back updip  
7 to the two producing wells.

8 Q. Now, aside from the actual production zone --  
9 injection zone, which is freshwater, are there any other  
10 freshwater zones in the area?

11 A. There is the Dakota Formation in this area.  
12 It's approximately 900 feet deep, and it's also a  
13 freshwater zone.

14 Q. And that zone, the Dakota zone, is separated  
15 from the Menefee zone -- the Menefee --

16 A. And mica [sic] shale, that's correct.

17 Q. Are there any other freshwater wells you've  
18 been able to identify?

19 A. There were no domestic water wells listed in  
20 the State Engineer records within one mile of the Erin  
21 Number 2.

22 Q. But you were able to find one well that was  
23 converted to a water well, is that correct, used as an  
24 example?

25 A. Yeah. Coulthurst drilled San Luis Water Well

*THIS IS  
P.L.O. according to  
DIVISION RECORDS*

1 Number 1 to be used as a water supply well, and they  
2 drilled that to the Dakota Formation.

3 Q. And that water analysis is indicated in tab  
4 number 7 -- green tab number 7; is that correct?

5 A. That's correct. And that has a TDS of  
6 1830 parts per million, so even though it's still very  
7 fresh, it's a little saltier than the Erin waters.

8 Q. Now, that water sample is taken from a well  
9 that's located within the area of review, and that's  
10 indicated on the map in tab number 1; is that correct?

11 A. That's correct. It's in the -- it would be to  
12 the east of the Erin Number 2.

13 Q. It looks like it's in the northeast quarter of  
14 the northeast quarter of Section 33?

15 A. Correct.

16 Q. And it has all the appropriate geology and  
17 geologic information attached to the application as  
18 required, correct?

19 A. Yes.

20 Q. And that's included or indicated at tab 8,  
21 within the application, is that correct, item number  
22 seven -- or, rather, item number eight?

23 A. Yes, that's correct.

24 Q. Now, has Coulthurst examined all the available  
25 geologic and engineering data on the reservoir and

1 satisfied yourself that there are no faults or  
2 hydrologic connections between the injection interval  
3 and any source of fresh drinking water?

4 A. Right. We've seen no indication of any faults  
5 or any hydrological connections.

6 Q. Now, in your opinion, will the application  
7 result in any waste or --

8 A. No.

9 Q. In your opinion, will the proposed injection  
10 into the Erin Number 2 result in positive production  
11 performance in Erin Number 2 -- excuse me -- Erin Number  
12 3 and Erin Number 9 wells?

13 A. We're hoping so, yes.

14 Q. Thank you, Mr. Thompson.

15 Now, were Exhibits Numbers 1 through 4  
16 prepared by you or under your supervision?

17 A. Yes, they were.

18 MR. RANKIN: Mr. Examiner, I move to admit  
19 Exhibits 1 through 4 into the record.

20 EXAMINER BROOKS: 1 through 4 are admitted.

21 (Coulthurst Exhibit Numbers 1 through 4  
22 were offered and admitted into evidence.)

23 MR. RANKIN: No further questions,  
24 Mr. Examiner.

25 EXAMINER BROOKS: Okay. I have no

1 questions. I defer to our expert.

2 EXAMINER JONES: Well, I'll ask the expert  
3 some questions.

4 EXAMINER BROOKS: Battle of the experts.

5 CROSS-EXAMINATION

6 BY EXAMINER JONES:

7 Q. Mr. Thompson, we have to define a project area  
8 within our hearing orders for maintenance-type projects,  
9 so how would you define -- how would you want us to  
10 define -- what lands would you say we should use for the  
11 project area?

12 A. Well, it's kind of -- it's kind of wordy,  
13 because there's a 40-acre BLM tract that was eliminated  
14 from this section. So it would be -- all of this is in  
15 Section 33, Township 18 North, Range 3 West, and it  
16 would be the west half, the north half of the northeast  
17 quarter, the north half of the southwest quarter, the  
18 southeast quarter of the southeast quarter.

19 Q. But not the southwest of the southeast? That's  
20 a different ownership?

21 A. Not the south half of the northeast quarter nor  
22 the southwest of the southeast quarter.

23 EXAMINER BROOKS: You're not going to --

24 THE WITNESS: With these low volumes, it's  
25 not anticipated that the water is going to move very

1 far.

2 EXAMINER BROOKS: You're not going into  
3 Section 28?

4 THE WITNESS: Not into -- you know, that  
5 would be downdip. We're hoping to increase the  
6 reservoir pressure and push the oil updip.

7 EXAMINER BROOKS: Okay.

8 THE WITNESS: And the two producing wells,  
9 you know, are 500, 700 feet away, so not very far.

10 EXAMINER BROOKS: Those are the Erin Number  
11 2 and the Erin Number 3?

12 THE WITNESS: No. The Erin 2 actually  
13 would be the injection well. The Erin 9, to the east,  
14 and the Erin 3 are the two producing wells.

15 EXAMINER BROOKS: Thank you.

16 Q. (BY EXAMINER JONES) Was Three Forks  
17 Resources -- did they give you any feedback?

18 A. No. That was -- we got the certified letter  
19 returned. I had sent them a letter in the fall, and it  
20 didn't get returned, but I didn't get any feedback from  
21 it last fall either.

22 Q. There's no gas in that Menefee? These are --

23 A. None.

24 Q. Is it sands, or coals and sands?

25 A. It's sands. Sands stringers is what we're

1 looking for. And from my review of the logs, I didn't  
2 really see a lot of coal either.

3 Q. Not even shaley?

4 A. You know, there might have been carb shale out  
5 there, but not anything I would consider coal.

6 Q. What type of oil is in the Menefee? Is it  
7 paraffinic oil like from some --

8 A. You know, I don't know the breakdown there.  
9 I'm sorry.

10 Q. And where is this located? Is it close to the  
11 Mountain Ute Reservation?

12 A. No, no. This is south. This is kind of  
13 between -- well, it would be southwest of Cuba.  
14 Actually, you go to Torreon from Cuba, and you go west  
15 of Torreon and then south. It's out in the middle of  
16 nowhere.

17 Q. So what county is it?

18 A. Sandoval.

19 Q. It's Sandoval.

20 So you've got 35,000 barrels to potentially  
21 fill up?

22 A. Right. Yeah. It'll take years.

23 Q. Take years.

24 A. You know, kind of one of the reasons of the  
25 project was that, before the pit rule, you know, they

1 had a deal with grazing, a allottee, just to use the  
2 water for watering livestock. So they were just dumping  
3 the water into an unlined pit. Well, you can't do that  
4 anymore. So now they're -- you know, it's a really  
5 low-marginal economic well to have to truck the water  
6 off. It's really expensive. So to do the pressure  
7 maintenance really kills two birds with one stone.

8 Q. I don't have any more questions. Thank you.

9 EXAMINER BROOKS: Okay. I have nothing  
10 further.

11 Mr. Rankin?

12 MR. RANKIN: I have no follow-ups.

13 EXAMINER BROOKS: Very well. Case Number  
14 14835 will be taken under advisement.

15 (The hearing concluded, 9:55 a.m.)

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 14835,  
heard by me on 5-10-2012.

David K. Brooks, Examiner  
Oil Conservation Division

1 STATE OF NEW MEXICO  
2 COUNTY OF BERNALILLO

3

4 CERTIFICATE OF COURT REPORTER

5 I, MARY C. HANKINS, New Mexico Certified  
6 Court Reporter No. 20, and Registered Professional  
7 Reporter, do hereby certify that I reported the  
8 foregoing proceedings in stenographic shorthand and that  
9 the foregoing pages are a true and correct transcript of  
10 those proceedings that were reduced to printed form by  
11 me to the best of my ability.

12 I FURTHER CERTIFY that the Reporter's  
13 Record of the proceedings truly and accurately reflects  
14 the exhibits, if any, offered by the respective parties.

15 I FURTHER CERTIFY that I am neither  
16 employed by nor related to any of the parties or  
17 attorneys in this case and that I have no interest in  
18 the final disposition of this case.

19



20

MARY C. HANKINS, CCR, RPR  
Paul Baca Professional Court Reporters  
New Mexico CCR No. 20  
Date of CCR Expiration: 12/31/2012

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