

NEW MEXICO OIL CONSERVATION DIVISION

EXAMINER HEARINGSANTA FE, NEW MEXICOHearing Date AUGUST 20, 1998 Time 8:15 A.M.

NAME	REPRESENTING	LOCATION
JAMES BLOUNT	SOUTHWEST ROYALTIES	MIDLAND, TX
Bill Sinatra	KCS Medallion	MIDLAND, TX
Tom Beauchamp	KCS Medallion	TULSA, OK
Rick Deffenbaugh	✓	✓
Paul Carter	Subcontractor	Midland, TX
Paul Owen	Campbell, Carr, Briggs & Shickel	S.F.
Michael Shuman	West Oil	S.F.
Bob Kozarek	Bonanza Oil Fields Corp.	Denver, CO
Lou Mazzullo	COSTCO Energy	ABQ
Philip Weiss	Bonanza Oil Fields Corp.	Denver, CO
John Elmer	—	SF
Sandra Smith	El Paso	Fort Worth

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 12,021

APPLICATION OF SOUTHWEST ROYALTIES,)
INC., FOR A WATERFLOOD PROJECT,)
LEA COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner **RECEIVED**

August 20th, 1998

SEP 03 1998

Santa Fe, New Mexico

Oil Conservation Division

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, August 20th, 1998, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

August 20th, 1998
Examiner Hearing
CASE NO. 12,021

	PAGE
EXHIBITS	3
APPEARANCES	3
APPLICANT'S WITNESSES:	
<u>JAMES BLOUNT</u> (Engineer)	
Direct Examination by Mr. Cooter	5
Examination by Examiner Catanach	15
Examination by Mr. Ashley	18
Further Examination by Examiner Catanach	19
REPORTER'S CERTIFICATE	21

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	8	15
Exhibit 2	9	15
Exhibit 3	10	15
Exhibit 4	11	15
Exhibit 5	12	15

* * *

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
 Attorney at Law
 Legal Counsel to the Division
 2040 South Pacheco
 Santa Fe, New Mexico 87505

FOR THE APPLICANT:

EASTHAM, JOHNSON, MONNHEIMER and JONTZ, P.C.
 500 Marquette, NW, Suite 1200
 P.O. Box 1276
 Albuquerque, New Mexico 87103-1276
 By: PAUL A. COOTER

ALSO PRESENT:

MARK W. ASHLEY
 NMOCD Petroleum Geologist
 2040 South Pacheco
 Santa Fe, New Mexico 87505

* * *

1 WHEREUPON, the following proceedings were had at
2 8:25 a.m.:

3
4
5
6
7 EXAMINER CATANACH: We'll go ahead and at this
8 time call Case 12,021.

9 MR. CARROLL: Application of Southwest Royalties,
10 Inc., for a waterflood project, Lea County, New Mexico.

11 EXAMINER CATANACH: Call for appearances in this
12 case.

13 MR. COOTER: Paul Cooter, Mr. Examiner, appearing
14 on behalf of Southwest Royalties.

15 I have one witness in this case, Jim Blount.

16 EXAMINER CATANACH: Call for additional
17 appearances.

18 Okay, will the witness please stand to be sworn
19 in at this time?

20 (Thereupon, the witness was sworn.)

21 MR. COOTER: Mr. Blount and I are going to share
22 some exhibits this morning, and with your permission and
23 assurance that we'll speak up so that everyone can hear,
24 may the witness sit at this table with me?

25 EXAMINER CATANACH: That's fine.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

JAMES BLOUNT,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. COOTER:

Q. State your name for the record, please, sir.

A. James Blount.

Q. And by whom are you employed?

A. By Southwest Royalties.

Q. And what's your position with that company?

A. I'm an area supervisor.

Q. What duties do you have as that?

A. I'm basically a production engineer in charge of all of southeastern New Mexico.

Q. Would you state your education and professional experience for the Examiner?

A. Yes, I have a bachelor of petroleum engineering degree from Texas A&M in 1984, and I've worked in oil fields for -- or worked as an engineer for eight years.

Q. For people other than Southwest Royalties?

A. Yes, I worked seven years for -- or six years for Mitchell Energy as an engineer, two years for Santa Fe as a contract engineer, and I've been with Southwest Royalties for a year and a half.

Q. Are you familiar with this Application and the

1 subject matter of it?

2 A. Yes, I am.

3 Q. Have you previously testified before this
4 Division in other cases?

5 A. Yes, I have.

6 MR. COOTER: We would tender Mr. Blount as an
7 expert witness.

8 EXAMINER CATANACH: Mr. Blount is so qualified.

9 Q. (By Mr. Cooter) State what Southwest Royalties
10 seeks by this Application in Case 12,021.

11 A. We seek to convert the Gonzales "31" Federal
12 Number 6Y well to an injection well -- it's currently a
13 producer -- and to classify the east half of Section 31 as
14 the water-injection project.

15 MR. COOTER: Mr. Examiner, we've brought this to
16 the Division's attention. While the well is correctly
17 designated in the docket, the lands, the unit, is
18 incorrectly -- the land description is incorrectly
19 described.

20 EXAMINER CATANACH: Is that being readvertised,
21 Mr. Cooter?

22 MR. COOTER: That's my understanding, that it's
23 being readvertised.

24 They got the land descriptions on the two
25 Applications as the same. It's correct in the second

1 application, which -- the next case which you will hear.

2 But this one should be correctly described, I think, as the
3 east half, Section 31, Township 9 South, Range 33 East.

4 EXAMINER CATANACH: Okay.

5 MR. COOTER: In talking with the office, it was
6 my understanding that we would proceed with the hearing
7 today. It would be readvertised and the case continued.
8 If anyone shows up to oppose it at that time, we'll have to
9 face that fact.

10 EXAMINER CATANACH: Do you know if it's
11 readvertised for the September 3rd hearing?

12 MR. COOTER: I don't know. I talked with Florene
13 and --

14 EXAMINER CATANACH: Okay, we'll check that to see
15 when it's been advertised for. Okay.

16 Q. (By Mr. Cooter) The well is located in the east
17 half of Section 31, Township 9 South, Range 33 East; is
18 that correct?

19 A. That's correct.

20 Q. Actually, it's in Unit I of that section?

21 A. Right.

22 Q. Did you prepare and file with the Division the
23 appropriate application for authorization to inject water
24 into this well?

25 A. Yes, I did.

1 Q. That's the Division's Form C-108, I believe.

2 A. Yes, sir.

3 Q. Let me first direct your attention, if I may, to
4 Exhibit 1 and ask you to identify that?

5 A. Yeah, in Exhibit 1 there's -- The wells in the
6 half-mile radius are highlighted.

7 We have the Gonzales 7 -- or 31 Federal Number 7
8 in unit letter K -- I'm sorry, it's not in K, in unit
9 letter G.

10 And then we have the 31 Federal Number 2 in unit
11 letter H.

12 The well in -- that we're looking at converting
13 is highlighted in blue in unit letter I, and then the rest
14 of the wells in the half-mile radius are all outlined as
15 either being producers or plugged wells.

16 And then the leases that Southwest Royalty
17 currently operates are highlighted in yellow.

18 Q. That is the same map that was attached to the --
19 to your Form C-108, was it not? It's just presented in a
20 little different manner --

21 A. Yes, sir.

22 Q. -- for perhaps easier reading.

23 Turning to your Application -- Oh, first, let me
24 ask the Examiner, if you would, to take administrative
25 notice of that application for authority to inject which

1 was filed in this case, the C-108.

2 EXAMINER CATANACH: That's the one dated May 6th,
3 1998?

4 MR. COOTER: Yes, sir.

5 EXAMINER CATANACH: Okay, administrative notice
6 of that application will be taken in this case.

7 Q. (By Mr. Cooter) Following the map that was
8 attached to the -- that application, and Exhibit 1, which
9 is the same map in a little different format, what is --
10 following that there are two pages entitled "Wells in Area
11 of Review". Explain that, if you would.

12 A. Yes, sir, this is a tabulated data of the casing
13 designs of each of the wells and their completion
14 information, the type of well they are, the date drilled,
15 the total depth, and their locations.

16 Q. These are the wells shown on Exhibit 1 as
17 producing or plugged wells?

18 A. The tabulated data would be the producing wells.

19 Q. Producing wells.

20 There is -- Let me direct your attention to
21 Exhibit Number 2, now, Mr. Blount. What is that?

22 A. That's also tabulated data. There's one addition
23 to the original application. The Federal 31 Number 1 well,
24 which is located in unit letter N, was omitted. The
25 original circle had that just being outside, and after

1 looking at it a little closer, I realized it should have
2 been in there. So I went ahead and added that well to the
3 Application.

4 Q. I'm trying to see on the map. Where -- Point
5 that out for me.

6 A. That would be the well in the southeast of the
7 southwest of 31.

8 Q. Oh, okay. That's shown on your revised map. But
9 other than that, Exhibit 2 is the same sheet as the second
10 page of the attachment to your Form C-108?

11 A. Yes, sir.

12 Q. Let's pass now to what has been marked as Exhibit
13 Number 3. Identify that and explain it, if you would.

14 A. Okay, Exhibit Number 3 is a structure map of the
15 San Andres in that particular area. It's a map on the top
16 of the San Andres A sand, or actually the A interval. It's
17 a dolomite.

18 Q. Let's go back to the Form C-108 just a minute, if
19 you would, and following the summary of the wells that you
20 testified to just a minute ago are two schematic pages, or
21 pages with schematic -- Explain those.

22 A. Yes, sir. Those are schematics of the P-and-A'd
23 wells in the half-mile radius area of review, the first
24 well being the Federal 31 Number 2-Y, which is located in
25 unit letter K of Section 31. And the second well is the

1 State 32 Number 1, which is located in also unit letter K
2 of Section 32.

3 Both those wells penetrated the San Andres and
4 have been plugged, and are filed as required.

5 The third -- There's a third well out there
6 that's P-and-A'd, but it was junked and abandoned and it
7 didn't penetrate the San Andres. It was abandoned at a
8 depth of 2300 feet.

9 Q. All right, let's go back in the application to
10 the first legal-size page following the two-page
11 application. Identify -- Explain what's shown on that.

12 A. Yes, sir, this is a schematic and a tabular data
13 showing the proposed injection setup of our well. We're
14 going to run 2-3/8-inch plastic-coated tubing with a packer
15 and set the packer at a depth -- or approximately 70 feet
16 above the top perforation, and we'll convert it to
17 injection, injecting into the formation from 4239 feet to
18 4282. That interval consists of the San Andres A and B.

19 Q. Before we go on with your proposed operations on
20 that well, let's go back and take care of Exhibit 4 and 5.
21 Identify those. Let's start with 4.

22 A. Okay, Exhibit 4 is an isopach of the A interval.
23 It shows that the thickness in the A in the particular well
24 that we're going to be converting is 18 feet. That's about
25 an average thickness of the -- in Section 31, with the

1 thickest area being just to the west of this well, and
2 pinching out as it goes to the east.

3 Q. And Exhibit Number 5?

4 A. Exhibit Number 5 is an isopach of the B interval,
5 and it shows that actually the 6Y is one of the thicker
6 wells in that particular interval, but the B is not as
7 productive as the A.

8 And it also shows the isopach is pinching out to
9 the east of this well.

10 Q. What are your proposed operations, Mr. Blount,
11 for this injection well?

12 A. We're proposing to, as I said before, run
13 plastic-coated tubing with packer. We'll be injecting at a
14 rate of approximately 500 barrels of water a day, at
15 approximately 800 pounds. We anticipate a maximum rate of
16 1000 barrels of water a day, at a maximum of 2100 pounds.

17 The system is going to be a closed system. We
18 plan to have closed-top tanks and take only water from our
19 San Andres wells, to the unit to the northeast.

20 Q. Have the well logs for this well been previously
21 filed with the Oil Conservation Division?

22 A. Yes, they have.

23 Q. Any freshwater wells within one mile?

24 A. Yes, sir, there's a well that's just -- Actually,
25 it's just over a mile. It's in Section 29 in about the

1 northeast -- or northwest quarter of that section, and it
2 was producing from the Ogallala formation, and the base of
3 that fresh water is approximately 400 feet.

4 Q. Did you have an analytical -- analysis of that
5 water done?

6 A. Yes, sir, we did, and we attached that to the
7 C-108 application.

8 Q. Also attached to the application is a list of the
9 surface owners in the area of review?

10 A. That's correct.

11 Q. And notice of this was given to them?

12 A. That's correct.

13 Q. Was notice also given to all offset operators?

14 A. Yes, it was, and where there were no operators,
15 it was -- the notice was given to the interest owners.

16 Q. Did you have a title review made to determine
17 those offset operators?

18 A. Yes, we did.

19 Q. And is that attached to the Form C-108?

20 A. Yes, it is.

21 Q. We've covered the geological information. Have
22 we talked about the stimulation?

23 A. No.

24 Q. What is the proposed stimulation?

25 A. The proposed stimulation with the -- We'd

1 anticipate possibly to acidize in the zone with 2000
2 gallons of acid.

3 Q. Have you reviewed the available geologic and
4 engineering data and found any evidence of open faults or
5 other hydrologic connection between the injection zone and
6 any underground source of drinking water, which in this
7 case I think you said was the Ogallala?

8 A. That's correct. I've reviewed that, and I find
9 no evidence of any open faults or hydrologic connection.

10 MR. COOTER: I've filed with you, Mr. Examiner,
11 the affidavit of mailing and the return receipts to all
12 interested parties, and I would tender that.

13 Q. (By Mr. Cooter) Were -- You testified that you
14 prepared the Form C-108 and oversaw the attachments that
15 were attached to it.

16 Did you prepare the Exhibits Numbers 1 through 5,
17 which have been offered today?

18 A. No, sir, I didn't. Those were prepared by our
19 geologist.

20 Q. But under your direction and supervision?

21 A. Yes, sir, they were. I reviewed the contents.

22 MR. COOTER: We tender Exhibits 1 through 5 that
23 were referred to by this witness in his testimony?

24 Anything else?

25 EXAMINER CATANACH: One through 5?

1 MR. COOTER: Yes, sir.

2 EXAMINER CATANACH: Exhibits 1 through 5 will be
3 admitted as evidence.

4 MR. COOTER: And that concludes our direct
5 examination of this witness.

6 EXAMINATION

7 BY EXAMINER CATANACH:

8 Q. Mr. Blount, the -- your proposed project area is
9 the east half of Section 31; is that right?

10 A. That's correct.

11 Q. Is that a single federal lease?

12 A. Yes, sir, it is.

13 Q. Okay. Is that entirely owned by Southwest?

14 A. Yes, sir, it is.

15 Q. Southwest currently operates the -- Is it called
16 the Flying M San Andres Unit?

17 A. Yes, sir.

18 Q. Which is located just adjacent to Section 31 to
19 the northeast?

20 A. That's correct.

21 Q. And that is a waterflood project in the San
22 Andres zone?

23 A. Yes, sir, it is.

24 Q. This is the same zone that's being flooded?

25 A. That's correct, this is an expansion of that

1 project.

2 Q. Okay. It's -- Technically, it's an expansion;
3 it's actually a new project?

4 A. Well, that's correct.

5 Q. Have you guys calculated just within the east
6 half of Section 31, what the additional recovery might be?

7 A. No, sir, I sure haven't.

8 Q. Is it possible that you could do that, maybe
9 calculate an estimate?

10 A. I could attempt that.

11 Q. Is this the only injection well that you plan to
12 have on this section?

13 A. For the short term. Eventually, I'd like to
14 convert three other wells out there to injection.

15 I was looking at installing a five-spot pattern
16 in the Flying M Unit, and that pattern is going to be
17 extended down into this Gonzales 31 Federal lease.

18 Q. Okay, you're going to be putting water into both
19 the A and the B sands?

20 A. That's correct.

21 Q. Is it fair to say that the A is the more prolific
22 of the two?

23 A. In this particular area, it is. There's some
24 parts of this field up to the northeast where the B is as
25 prolific, but in the Gonzales Federal lease, it looks like

1 the A is dominant.

2 Q. What is the current producing rate of the wells
3 in the project area at this time?

4 A. Okay, the Number 6 well -- or I'm sorry, the
5 Number 7 well, which would be the one in Unit Letter G, is
6 making 6 barrels of oil, 15 gas, zero water.

7 The Well Number 2 to the east of that is making 3
8 barrels of oil, 7 MCF and 3 barrels of water.

9 The Number 1 well to the -- or in Unit Letter J,
10 is making 6 oil, 7 MCF and 3 barrels of water.

11 The Number 6 well is currently making 5 barrels
12 of oil. I think it's also 5 MCF, although I don't have
13 that written down.

14 The Number 9 well that's located in Unit Letter O
15 is making 7 oil, 16 MCF and 1 barrel of water.

16 The Number 3 well is making 2 barrels of oil, 7
17 barrels of water -- I mean, 7 MCF, 2 barrels of water.

18 And the Number 5 well is making 2 barrels of oil,
19 7 MCF and 1 barrel of water.

20 Q. Is that correct, two of these wells that you just
21 listed off are not within the east half of 31, right?

22 A. No, sir, all those wells are in the east half of
23 31.

24 Q. All seven of these producing wells?

25 A. That's correct.

1 Did you want the two outside of the east half?

2 Q. No, I did not, but I can't --

3 A. Okay, the -- well, let me refer to -- The 6 was
4 the well we're looking at converting. That's in Unit
5 Letter I.

6 Q. Okay.

7 A. That's the one making 5.

8 Q. Okay, that's the one you're going to convert?

9 A. Right.

10 Q. Got you.

11 A. And then the 9 would be there in Unit Letter O,
12 and the 3 and the 5 are both in Unit Letter P.

13 Q. Okay.

14 EXAMINATION

15 BY MR. ASHLEY:

16 Q. Mr. Blount, I have a couple of questions.

17 What did you say the average injection rates and
18 pressures were going to be for that -- for the Number 6
19 well?

20 A. The average should be approximately 500 barrels
21 of water a day at approximately 800 p.s.i.

22 Q. And the maximum?

23 A. It would be 1000 barrels a day at 2100 p.s.i.

24 Q. What's the average injection rate in the unit?

25 A. Right now it's very sporadic. We're in the

1 process of redesigning this unit to more effectively take
2 water.

3 We have a -- We bought this unit from Coastal
4 early last year, and they were basically putting water
5 wherever it would go. So there's wells that take 1300
6 barrels of water a day, there's wells that take 200 barrels
7 of water a day.

8 And we're trying to -- And we're in the process
9 right now of putting in a new trunkline system and some
10 chokes where we can better manage our water injection, and
11 that's -- So the average is approximately 500, but like I
12 say, there's a wide variety of production, injection, on
13 this.

14 Q. Could you say again where that first water well
15 is located and how deep it is?

16 A. Yes, sir, it's located in the northwest quarter
17 of Section 29, which would be north northeast of this
18 particular lease. And I don't have the top of the
19 interval, but it was 400 feet, was the depth of the well.

20 MR. ASHLEY: Thank you.

21 FURTHER EXAMINATION

22 BY EXAMINER CATANACH:

23 Q. Mr. Blount, you described a junked and abandoned
24 well somewhere in that area. Do you know --

25 A. Yes, sir, that would be the Belco Federal Number

1 2. That's located in Unit Letter K, directly offsetting
 2 the 2Y, which is listed in the P-and-A'd category. That
 3 well was drilled to a depth of 2314 and junked and
 4 abandoned.

5 Q. We don't have any plugging details on that well?

6 A. That's correct. My understanding was that if
 7 they didn't penetrate the San Andres, that wasn't required.

8 EXAMINER CATANACH: Okay, we found out that the
 9 case will be readvertised and placed on the September 3rd
 10 docket, Mr. Cooter, so we have no further questions of the
 11 witness.

12 Did you have anything further in the case?

13 MR. COOTER: No.

14 EXAMINER CATANACH: Do you have anything further?

15 MR. COOTER: No, that concludes our --

16 EXAMINER CATANACH: Okay. There being nothing
 17 further in this case, this case, 12,021, will be continued
 18 to the September 3rd docket.

19 (Thereupon, these proceedings were concluded at
 20 8:50 a.m.)

21 I do hereby certify * * *
 22 a complete record of the proceedings in
 23 the hearing or hearing of Case No. 12021,
 24 heard by me on August 26, 1998.
 25 Daniel M. Catanch, Examiner
 Off Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
 COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL August 29th, 1998.



STEVEN T. BRENNER
 CCR No. 7

My commission expires: October 14, 1998