

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. 12,982

APPLICATION OF THE NEW MEXICO OIL)
 CONSERVATION DIVISION FOR AN ORDER)
 AUTHORIZING THE DIVISION TO PLUG TWO)
 WELLS IN EDDY COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

January 9th, 2003

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, January 9th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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OIL CONSERVATION DIV.
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I N D E X

January 9th, 2003,
Examiner Hearing
CASE NO. 12,983

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A P P E A R A N C E S

FOR THE DIVISION:

DAVID K. BROOKS
 Attorney at Law
 Energy, Minerals and Natural Resources Department
 Assistant General Counsel
 1220 South St. Francis Drive
 Santa Fe, New Mexico 87505

* * *

1 WHEREUPON, the following proceedings were had at
2 12:42 p.m.:

3 EXAMINER CATANACH: Okay, at this time we'll call
4 Case 12,982, Application of the New Mexico Oil Conservation
5 Division for an order authorizing the Division to plug two
6 wells in Eddy County, New Mexico.

7 Call for appearances.

8 MR. BROOKS: Mr. Examiner, I'm David Brooks,
9 Energy, Minerals and Natural Resources Department of the
10 State of New Mexico, appearing for the New Mexico Oil
11 Conservation Division.

12 EXAMINER CATANACH: Any additional appearances?
13 There are none.

14 MR. BROOKS: I have two witnesses.

15 EXAMINER CATANACH: Will the witnesses stand to
16 be sworn in?

17 (Thereupon, the witnesses were sworn.)

18 MR. BROOKS: Call Tim Gum. May I proceed?

19 EXAMINER CATANACH: Please.

20 TIM W. GUM,
21 the witness herein, after having been duly sworn upon his
22 oath, was examined and testified as follows:

23 DIRECT EXAMINATION

24 BY MR. BROOKS:

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

1 A. My name is Tim Gum.

2 Q. By whom are you employed?

3 A. New Mexico Oil Conservation Division.

4 Q. And we've had some confusion about what I mean
5 when I say what office. In what geographical location are
6 you employed?

7 A. It's the District 2 Office, located in Artesia,
8 New Mexico.

9 Q. And what is your title?

10 A. District Supervisor.

11 Q. And what are your duties in that capacity?

12 A. To manage the District Office and to ensure that
13 the Rules and Regulations of the Oil Conservation Division
14 are complied with by the oil industry.

15 Q. And on and prior to December 31, 2002, was it
16 also one of your responsibilities to maintain files in
17 which were included copies of all documents which were
18 filed with the Division with regard to each of the wells in
19 your District?

20 A. That's correct.

21 Q. I will ask you to look at the exhibit folder or
22 exhibit stack that has been provided to you. First of all,
23 though, are you familiar with a well called the Ramuz Well
24 Number 1, located in Section 18, Township 23 South, Range
25 26 East, Eddy County, New Mexico?

1 A. Yes, I am.

2 Q. And are you familiar with a well called the
3 Devito, D-e-v-i-t-o, Well Number 1, which is located in
4 Section 12, Township 23 South, Range 25 East, Eddy County,
5 New Mexico?

6 A. Yes, I am.

7 Q. Now, these two wells are located -- although
8 they're in different ranges, they're actually located very
9 close to each other, correct?

10 A. That's correct.

11 Q. In adjacent sections?

12 A. That's right.

13 Q. And when were these wells drilled?

14 A. In the early 1940s.

15 Q. So your acquaintance with them is from the files,
16 not from personal recollections?

17 A. That's correct. And may I point out at this
18 point in time, Mr. Examiner, the well files consist of
19 very, very limited data, and all of our interpretations are
20 made strictly from limited data.

21 Q. Now, Mr. Gum, have you testified previously
22 before Examiners in the New Mexico Oil Conservation
23 Division?

24 A. Yes, I have.

25 Q. And have your credentials as a well inspector

1 been testified to and made a part of the record?

2 A. They have.

3 MR. BROOKS: Tender Mr. Gum as an expert in well
4 inspection.

5 EXAMINER CATANACH: Mr. Gum is so qualified.

6 But I do have a question, Mr. Brooks, for you.
7 You keep referencing December 31st of 2002 as being a
8 cutoff date where certain duties changed with regards to
9 maintaining well records?

10 MR. BROOKS: Well, I'm not familiar with the
11 details, Mr. Catanach, but it is my understanding that the
12 procedure henceforth will be that the well records will be
13 immediately scanned and thereafter will be maintained
14 electronically and that it will no longer be well files
15 maintained in the District Offices.

16 Now, I stand to be corrected if I misunderstand
17 that, because that's outside my area of expertise with the
18 Division, and when we have a case that involves well
19 records subsequent to that date, I will have to figure out
20 how to prove them up. But it's my understanding that life
21 is changing at the OCD.

22 EXAMINER CATANACH: Okay, I just wanted to
23 clarify that for the record. Thank you.

24 Q. (By Mr. Brooks) Mr. Gum, I will ask you to look
25 at what has been marked as OCD Exhibit Number 1 and ask you

1 if the six pages of Exhibit Number 1 constitute copies of
2 the entire well file on the Ramuz Well Number 1.

3 A. Yes, they do.

4 Q. And then I will ask you to look at OCD Exhibit
5 Number 4, and I will ask you if the five pages constituting
6 Exhibit Number 4 constitute the entire well file on the
7 Devito well Number 1.

8 A. They do.

9 Q. Now, do you have an assistant named Van Barton?

10 A. Yes, I do.

11 Q. Does he work under your direction?

12 A. Yes, he does. He is currently the Field Rep II
13 in charge of all field operations.

14 Q. I will ask you to look at Exhibits Numbers 2 and
15 5 and ask you if Mr. Barton prepared those exhibits
16 pursuant to your direction.

17 A. Yes, he did.

18 Q. Now, can you tell us what Exhibits Numbers 2 and
19 5 purport to depict?

20 A. They depict, based again on the current
21 information we have in the well file, the current physical
22 condition of each wellbore.

23 Q. Now, you testified that these wells were drilled
24 in 1940. Were they plugged and abandoned, purportedly, at
25 or about the time they were drilled?

1 A. Essentially, yes.

2 Q. So subsequent to 1941 you have no information
3 about these wells; is that correct?

4 A. That's correct.

5 Q. And Mr. Barton did not have any information on
6 which to draw these diagrams save and except that which is
7 contained in Exhibits Numbers 1 and 4, correct?

8 A. That's correct.

9 Q. Now, with regard to Exhibit Number 2, does that
10 exhibit show that the Ramuz Well Number 1 was properly
11 plugged and abandoned in accordance with the statutes and
12 regulations that existed in 1941?

13 A. That's correct.

14 Q. Now, with respect to Exhibit Number 5, is there
15 anything specific in the well file to show that the well
16 was plugged and abandoned, properly plugged and abandoned,
17 even at that time?

18 A. No, the well file did not reflect that, where the
19 cement plugs were actually set or not. There's only one
20 indication, on an old scout ticket, that the well was
21 P-and-A'd.

22 Q. But there's no description of what plugs were set
23 or at what depth?

24 A. That's correct.

25 Q. Now, would the plugging depicted on OCD Exhibit

1 Number 2 for the Ramuz Well Number 1, would that be a
2 proper plugging and abandonment under the current OCD Rules
3 and regulations?

4 A. No, it would not.

5 Q. And can you tell us why?

6 A. Basically, the location and size of the plugs are
7 not what is required today.

8 Q. Now, did Mr. Barton also prepare under your
9 direction OCD Exhibits Numbers 3 and 6?

10 A. Yes, he did.

11 Q. And what are Exhibits 3 and 6?

12 A. That is the proposed plugging procedures that the
13 District Office recommends in order to replug these wells.

14 Q. Now, if the wells were plugged in accordance with
15 Exhibits Numbers 3 and 6, respectively, in your
16 professional opinion would they be properly plugged and
17 abandoned in accordance with the statutes of the State of
18 New Mexico and the Rules of the New Mexico Oil Conservation
19 Division now in effect?

20 A. That's correct.

21 Q. Now, the need to replug the Ramuz Number 1, which
22 apparently was plugged at the time, will be the subject of
23 the testimony of another witness. But of course the
24 Devito, we have no evidence that that, in fact, was ever
25 plugged, other than just the one notice -- word "plugged"

1 in some -- in one document in the file, correct?

2 A. That's correct.

3 Q. So based on that evidence, would you be prepared
4 to testify that that well should be re-entered -- at least
5 as a minimum, re-entered to determine if it has been
6 properly plugged and, if it has not, should be plugged and
7 abandoned in accordance with the current standards?

8 A. That's correct.

9 Q. Do you believe that that plugging of that well is
10 necessary to prevent waste, protect public health and the
11 environment?

12 A. Yes, I do.

13 MR. BROOKS: Tender Exhibits 1 through 6
14 inclusive.

15 EXAMINER CATANACH: One through 6 will be
16 admitted.

17 MR. BROOKS: Pass the witness.

18 Oh, may I ask a couple of other questions that I
19 forgot?

20 EXAMINER CATANACH: Certainly.

21 Q. (By Mr. Brooks) The people who are identified in
22 these well files as operators, do you have any idea who
23 those people are or whether any of them might still be
24 alive or not?

25 A. No.

1 Q. There's -- Fred Turner is identified as one of
2 the operators of the Devito Number 1. Do you have any idea
3 if that is Fred Turner of Midland, Texas, formerly of
4 Midland, Texas?

5 A. I could assume that that was, but I have no
6 record that indicates it's the same Fred Turner.

7 Q. If it was, he's deceased?

8 A. He's deceased.

9 Q. And has been for quite a long time?

10 A. A long time, yes.

11 Q. Very good. Given that this last activity was in
12 1941, which was 62 years ago, and someone who was 18 then
13 would be 80 now, is it a fairly reasonable assumption that
14 the individuals that were involved in these wells are now
15 deceased?

16 A. That's correct.

17 MR. BROOKS: Pass the witness.

18 EXAMINATION

19 BY EXAMINER CATANACH:

20 Q. Mr. Gum, Moran Drilling Company, I wonder if
21 there was any association with Moranco, the later Moranco
22 Drilling?

23 A. I assume that that is correct, but these drilling
24 companies have changed significantly since that time, so --

25 Q. Yeah. Now, Moranco is not even in existence

1 anymore --

2 A. No.

3 Q. -- is that correct?

4 I assume that there was a problem with the Ramuz
5 Number 1 to cause it to have to be re-entered. Is that the
6 next testimony?

7 A. I believe that will be the testimony --

8 MR. BROOKS: Mr. Olson will testify on that
9 subject.

10 Q. (By Examiner Catanach) Okay. Now, these were
11 the well file records that were in existence at the Artesia
12 District Office?

13 A. That's correct.

14 Q. Did you examine any of the documents that may be
15 present in the Santa Fe Office?

16 A. I did not, no.

17 Q. Okay. There might be some additional information
18 about it in our files. I don't know that, but sometimes we
19 have stuff that the District Offices don't have and vice-
20 versa, so it might be worth -- just to look and see if we
21 have anything with regards to these wells.

22 Mr. Gum, with regards to the Ramuz Number 1, what
23 is it about the original plugging of that well that doesn't
24 really conform to the modern requirements?

25 A. It's the small amount of cement for the plugs and

1 also the location.

2 Q. Is it also the fact that the plugs weren't --

3 A. -- tagged.

4 Q. -- tagged, no indication of tagging the plugs?

5 A. To verify that the plugs area actually there.

6 EXAMINER CATANACH: Okay, I have nothing further
7 of Mr. Gum. He may be excused.

8 MR. BROOKS: Thank you. Call William Olson.

9 WILLIAM C. OLSON,

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

12 DIRECT EXAMINATION

13 BY MR. BROOKS:

14 Q. Would you state your name for the record, please,
15 Mr. Olson?

16 A. My name is William Olson.

17 Q. By whom are you employed?

18 A. I'm employed by the New Mexico Oil Conservation
19 Division.

20 Q. What office?

21 A. In the Santa Fe Office.

22 Q. And in what capacity?

23 A. As a senior hydrologist for the Environmental
24 Bureau.

25 Q. And would you state generally what are your

1 duties as senior hydrologist?

2 A. My duties are to review hydrologic and geologic
3 information in processing of permits for -- operational
4 permits as well as for cleanup of contaminated ground water
5 and soils.

6 Q. Have you testified before Division Examiners
7 previously?

8 A. Yes, I have.

9 Q. And have you testified to your credentials as an
10 expert hydrologist, and have they been made a matter of
11 record?

12 A. Yes.

13 MR. BROOKS: Tender Mr. Olson as an expert
14 hydrologist.

15 EXAMINER CATANACH: Mr. Olson is so qualified.

16 Q. (By Mr. Brooks) Mr. Olson, are you familiar with
17 the Ramuz State Number 1 well located in Section 18,
18 Township 23 South, Range 26 East, Eddy County, New Mexico?

19 A. Yes, I am.

20 Q. And are you likewise familiar with the Devito
21 Well Number 1, located in Section 12, Township 23 South,
22 Range 25 East, Eddy County, New Mexico.

23 Q. Is there a particular reason for concern about
24 the integrity of these wells that doesn't exist generally
25 in all wells?

1 A. Yes, it's largely due to the way that these wells
2 -- or the lack of information on plugging of these wells,
3 and also as to the nature of what was encountered during
4 drilling of these wells.

5 Q. Are these wells located in close proximity to one
6 of the City of Carlsbad's public water source fields?

7 A. Yes, these wells are located approximately 2500
8 feet from the City of Carlsbad's wellfield.

9 Q. Now we'll call your attention to what has been
10 marked as OCD Exhibit Number 7 and ask you to identify it.

11 A. This is a map of the City of Carlsbad Sheep Draw
12 Wellfield Wellhead Protection Areas for their water supply
13 system.

14 Q. Now, these wells are not actually identified on
15 this map. Could you point out to the Examiner where on the
16 map the Ramuz and Devito wells are located?

17 A. The Ramuz well would be located in the area there
18 -- There's a section listed as 18, Township 23 South, Range
19 26 East, and it would be up in Unit C, up towards the
20 northern boundary line of that section.

21 And the Devito Number 1 would be located just
22 above the "E" in Well Number 7 there in Section 12, which
23 would be due east, as you see, of Well Number 8 in the
24 Carlsbad system.

25 Q. Now, has the City of Carlsbad articulated some

1 concern about the proximity of these wells to their
2 wellfield?

3 A. Yes, the City of Carlsbad is concerned about
4 these wells. They were drilling a monitor well in Section
5 12 in the corner, in the southeast of the southeast of
6 Section 12, and encountered brine water and initiated --
7 That discovery initiated a Division investigation, which is
8 how we discovered these wells as not being properly plugged
9 according to today's standards.

10 Q. From what aquifer is the Carlsbad wellfield
11 producing?

12 A. The Carlsbad wellfield produces out of the
13 Capitan Reef limestones, which occur at about a 350- to
14 400-foot depth west of the Devito Number 1.

15 Q. Now, based on your study of this matter, do you
16 actually believe that these wells are in communication with
17 the Reef aquifer?

18 A. From the preliminary investigation that we have
19 conducted to date -- and we have published a report on this
20 -- we do not believe that they are in direct communication
21 with the Carlsbad Reef Complex.

22 Q. Can you rule out the possibility of an impact on
23 the Carlsbad Wellfield from these wells?

24 A. No, we cannot.

25 Q. And there is a very close geographical proximity,

1 correct?

2 A. Yes, that's also shown in a subsequent exhibit
3 that we have here as well, Exhibit Number 8.

4 Q. Now, is there another aquifer that you believe
5 may well be affected by these wells?

6 A. Yes, there's also a shallow alluvial aquifer that
7 exists in the area, and groundwater in that aquifer occurs
8 at depths ranging from 20 to approximately 200 feet.

9 Q. To your knowledge, is the water in that latter
10 aquifer -- Well, do you have a name for that?

11 A. They're just listed as the alluvial aquifers for
12 that area.

13 Q. To your knowledge, is the water from that
14 aquifer, the alluvial aquifer that you said might be in
15 communication with these wells -- to your knowledge, is
16 that water being appropriated to beneficial use?

17 A. Yes, it is protectible water under the State of
18 New Mexico in that it contains less than 10,000 milligrams
19 per liter of total dissolved solids and is used for
20 livestock and domestic purposes east of the area.

21 Q. Mr. Olson, did you in preparation for this case
22 make an examination of the well files maintained by the OCD
23 in Santa Fe with regard to the Ramuz Number 1 and the
24 Devito Number 1?

25 A. Yes, I have.

1 Q. Did you find anything in the Santa Fe well files
2 that is not included in OCD Exhibits Numbers 1 and 4
3 respectively?

4 A. Exhibits 1 and 4 include a combination of all
5 files that we could find in both the Santa Fe and Artesia
6 District Offices regarding this. There is one document I
7 did note, though, that was not in there. We did find a
8 well log in the Bureau of Mines records in Socorro, and I
9 noted that is not in this -- a geologic log that was
10 maintained by the Bureau of Mines.

11 Q. It was actually you who assembled Exhibits
12 Numbers 1 and 4 and provided them to me, was it not?

13 A. That's correct.

14 Q. Did that well log that you mentioned, did that
15 show anything that you regard as significant that's not
16 before the Division presently?

17 A. No, it contains essentially similar information
18 to what is in the well file as presented here.

19 Q. Now, based on your hydrological study of this
20 area, in your professional opinion does the Ramuz Well
21 Number 1 need to be replugged to the best current
22 technology in order to properly protect the groundwater in
23 this area?

24 A. Yes, I believe so, especially due to the
25 pressurized water zones that they did encounter at depth in

1 that well.

2 Q. And do you believe that the Devito Number 1 well,
3 which may not have been plugged properly at the time,
4 should now be plugged for the protection of groundwater in
5 this area?

6 A. Yes, this well also included pressurized water at
7 depth and does not appear to be properly plugged according
8 to today's standards.

9 Q. I'll call your attention to what has been marked
10 as OCD Exhibit Number 8 and ask you to identify it.

11 A. Exhibit Number 8 is a stratigraphic section
12 showing the relationships various coreholes through the
13 area. It also includes in this cross-section the Turner
14 and Devito Devito Number 1 well, which is located on
15 towards the -- It's listed as well number 4 there, towards
16 the right-hand side of the page.

17 Q. Now, the Ramuz well is actually not shown on
18 here, correct?

19 A. It is not shown, but it is a very similar
20 stratigraphic section as the Devito Number 1. It is
21 located actually -- would be located actually east of the
22 Devito Number 1.

23 Q. Very good. Is there anything else that you
24 believe the Examiner should be advised of in regard to this
25 situation that we haven't covered?

1 A. No, I do not.

2 MR. BROOKS: Offer Exhibits 7 and 8.

3 EXAMINER CATANACH: Seven and 8 will be admitted.

4 MR. BROOKS: Pass the witness.

5 EXAMINATION

6 BY EXAMINER CATANACH:

7 Q. Mr. Olson, is the concern with these wells is
8 that fluid from maybe a zone that does not have good
9 quality water might migrate into the Capitan Reef? Is that
10 the concern?

11 A. Yes, these were drilled into the top of the
12 Delaware formation, and Delaware formation water in that
13 area ranges from about 59,000 to 190,000 parts per million
14 of chlorides and ranges from about 220,000 to 290,000 parts
15 per million of total dissolved solids.

16 Fresh water in the area in the Capitan Reef is
17 very high quality potable drinking water, and shallow
18 groundwater in the alluvial aquifers, while not as good a
19 quality, as potable in some areas, is protectible and has
20 designated or beneficial uses.

21 Q. Okay. Was this originally brought to our
22 attention by the City of Carlsbad? How did that work?

23 A. It came to our attention that they had
24 encountered this during the drilling of a monitor well, and
25 we initiated contact with the City at that point to find

1 out what was going on, and we've had some subsequent
2 meetings with the City on this matter.

3 Q. So they were drilling a monitor well and they
4 encountered what, a water flow?

5 A. They encountered -- at about 115 feet encountered
6 a brine water, high-sulfur brine water. It had somewhere
7 around -- approximately 110,000-120,000 parts per million
8 chlorides, and that initiated an investigation by the
9 Division.

10 One of the concerns about the -- that started
11 with the Devito Number 1 well was that they did encounter
12 pressurized water. Like I said, it encountered the
13 Delaware water, and water came up about 1200 feet in the
14 hole. Still would be about 550 feet from the surface, but
15 it did -- that most likely was the reason why -- it was
16 drilled by cable tool, and it was most likely that they
17 could not -- appeared that they could not shut that water
18 off and abandon the hole at that time.

19 Q. So it's the opinion of the Division that these
20 wells should be replugged?

21 A. Yes, that they have potential to cause impacts to
22 ground water.

23 Q. Okay, and I assume that we are taking it upon
24 ourselves to use our plugging funds to replug these wells?

25 A. Yes.

1 EXAMINER CATANACH: Okay. I believe that's all I
2 have, Mr. Brooks.

3 MR. BROOKS: That is all, I have, Mr. Examiner.

4 EXAMINER CATANACH: Well, okay then, that's all
5 we have in this case. There being nothing further, Case
6 Number 12,982 will be taken under advisement.

7 (Thereupon, these proceedings were concluded at
8 1:11 p.m.)

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16 I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 12982
heard by me on January 9 19 2003.

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18 David R. Catnach, Examiner
Oil Conservation Division
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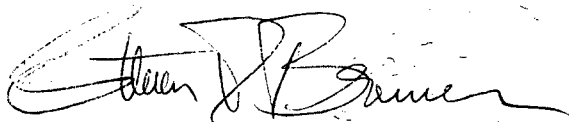
CERTIFICATE OF REPORTER

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 January 13th, 2003.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006