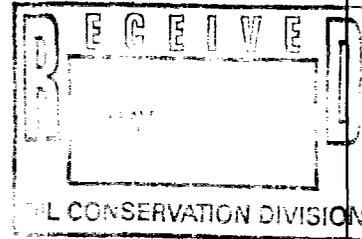


STATE OF NEW MEXICO

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:)
)
APPLICATION OF MARALO, INC.)
)

CASE NO. 11,277

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

May 4th, 1995

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on Thursday, May 4th, 1995, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, before Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

STEVEN T. BRENNER, CCR
(505) 989-9317

I N D E X

May 4th, 1995
 Examiner Hearing
 CASE NO. 11,277

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APPLICANT'S WITNESSES:

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* * *

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* * *

A P P E A R A N C E S

FOR THE APPLICANT:

CAMPBELL, CARR & BERGE, P.A.
 Suite 1 - 110 N. Guadalupe
 P.O. Box 2208
 Santa Fe, New Mexico 87504-2208
 By: WILLIAM F. CARR

* * *

STEVEN T. BRENNER, CCR
 (505) 989-9317

1 WHEREUPON, the following proceedings were had at
2 8:39 a.m.:

3 EXAMINER CATANACH: Call Case 11,277, Application
4 of Maralo, Inc., for a nonstandard oil proration unit and
5 an unorthodox oil well location, Lea County, New Mexico.

6 Are there appearances in this case?

7 MR. CARR: May it please the Examiner, my name is
8 William F. Carr with the Santa Fe law firm Campbell, Carr
9 and Berge.

10 We represent Maralo, Inc., and I have one
11 witness.

12 EXAMINER CATANACH: Any additional appearances?
13 Will the witness please stand to be sworn in?

14 (Thereupon, the witness was sworn.)

15 SHANE LOUGH,

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

18 DIRECT EXAMINATION

19 BY MR. CARR:

20 Q. Will you state your name for the record, please?

21 A. Shane Lough.

22 Q. Mr. Lough, where do you reside?

23 A. Odessa, Texas.

24 Q. By whom are you employed?

25 A. Maralo, Incorporated.

1 Q. What is your current position with Maralo?

2 A. Senior staff geologist.

3 Q. Mr. Lough, have you previously testified before
4 this Division?

5 A. Yes.

6 Q. At the time of that testimony, were your
7 credentials as a petroleum geologist accepted and made a
8 matter of record?

9 A. Yes.

10 Q. Are you familiar with the Application filed in
11 this case on behalf of Maralo?

12 A. I am.

13 Q. Have you made a geological study of the area
14 surrounding the subject pool?

15 A. I have.

16 MR. CARR: Are the witness's qualifications
17 acceptable?

18 EXAMINER CATANACH: They are.

19 Q. (By Mr. Carr) Mr. Lough, could you briefly state
20 what Maralo seeks with this Application?

21 A. We're seeking an unorthodox well location for our
22 Johnson 19 Number 1 at a location 2310 from the south line
23 and 990 from the east line of Section 19, Township 9 South,
24 Range 35 East.

25 Q. Are you also seeking a nonstandard oil proration

1 unit for this well?

2 A. We are.

3 Q. And what is that?

4 A. The southeast quarter of the northeast quarter
5 and the northeast quarter of the southeast quarter of
6 Section 19.

7 Q. What is the primary objective in this pool?

8 A. The Devonian formation.

9 Q. And in what pool will the well be drilled?

10 A. The Northeast Jenkins-Devonian Pool.

11 Q. Are there special pool rules in effect for this
12 pool?

13 A. Yes, there are. They were adopted on June the
14 15th of 1993 by Maralo's application.

15 The rules are 80-acre spacing units comprised of
16 the north half, the south half, the east half and west half
17 of a quarter section, and the wells are to be drilled
18 within 150 feet of the center of a quarter-quarter.

19 Q. The Maralo application fails to comport either
20 with the designated spacing units under these rules or the
21 well-location requirements?

22 A. That's correct.

23 Q. Did Maralo originally seek approval of this
24 Application by an administrative procedure?

25 A. Yeah, we did, on March the 31st of 1995.

1 Q. And what response did you receive to that
2 Application?

3 A. We were advised on April 4th that we would have
4 to set a hearing.

5 Q. Okay, let's go to Maralo Exhibit Number 1. Can
6 you identify this for Mr. Catanach?

7 A. Yes, this is a land plat showing our proposed 80-
8 acre proration unit and the location of the Johnson 19
9 Number 1 well.

10 Q. Is Maralo the operator of all offsetting acreage
11 in the east half of Section 19?

12 A. Yes.

13 Q. Does Maralo also operate all of the west half of
14 Section 20?

15 A. Yes.

16 Q. So there are no offsetting operators to be
17 notified, either of the unorthodox well location or the
18 nonstandard unit; is that right?

19 A. That's correct.

20 Q. Let's go to Exhibit Number 2. Can you identify
21 this, please?

22 A. Exhibit Number 2 is just a regional locator map.
23 It shows -- again shows the proposed proration unit, the
24 well location, and a number of other Devonian fields in the
25 area, as well as the town site of Crossroads.

1 Q. Basically what we're talking about in this
2 Application is a small Devonian feature; is that right?

3 A. That's correct.

4 Q. Okay, let's go to Exhibit Number 3. Could you
5 identify this?

6 A. Exhibit Number 3 is a structure map contoured on
7 the top of the Devonian that I prepared. We incorporated
8 both 3-D seismic data and subsurface well control for this
9 interpretation.

10 As you can see on the map, there is a dashed
11 outline that shows the boundary of our 3-D survey, seismic
12 survey that we shot.

13 It shows the proration unit for this well that
14 we're applying for, as well as the location of the well.

15 It shows a trace where the cross-section that we
16 will present to the Examiner -- it's cross-section C-C' --
17 as well as DST information on the Devonian for wells that
18 have penetrated the Devonian in this area.

19 Q. When we talk about 3-D seismic, that's the area
20 that includes -- Well, the dashed line runs across the
21 middle of 18 -- 16, 17 and 18 north of the location, and
22 then comes down between Sections 24 and 19; is that right?

23 A. That's correct.

24 Q. Can you describe the 3-D seismic program that was
25 conducted in the area?

1 A. The 3-D seismic that we shot was designed to give
2 us a seismic data point every 110 square feet within this
3 survey boundary.

4 Q. And basically what you've done is developed a
5 structure map, and you've tried to -- you're proposing to
6 drill this well at the top of this structural feature?

7 A. That is correct.

8 Q. All right, let's go to the porosity isopach,
9 Exhibit Number 4. Will you review the information on this
10 for Mr. Catanach?

11 A. Yes, this is an interpretation that we prepared,
12 isopaching the net feet of porosity in the Devonian,
13 located above an oil-water contact that we've identified by
14 drill stem test data in this area.

15 Q. Approximately what depth is that oil-water
16 contact?

17 A. It's at a minus 8684.

18 Q. At the proposed location, approximately how many
19 feet above that contact do you hope to encounter?

20 A. We anticipate that we will encounter, hopefully,
21 20 feet, 25, possibly 30 feet.

22 Q. On this exhibit, we've got a well in the
23 southeast of the southeast of 19. What is the status of
24 that well?

25 A. That well is a plugged well.

1 Q. Was it drilled to the Devonian?

2 A. It was drilled to the Devonian.

3 Q. And dry in that interval?

4 A. It was drill stem tested and was tight and was
5 nonproductive in the Devonian.

6 Q. What about the well immediately to the west of
7 the proposed location? What's the status of that?

8 A. It's a plugged well. It was also nonproductive
9 in the Devonian, was drill stem tested, and no completion
10 attempt was made to produce it in the Devonian.

11 Q. In fact, if you were to develop this acreage with
12 a standard proration unit, being half of a quarter section,
13 you would have to place two wells on this feature to
14 produce the reserves that are located therein; is that not
15 right?

16 A. That's correct.

17 Q. Is it your opinion that one well can effectively
18 drain this Devonian structure?

19 A. Yes, it is.

20 Q. All right, let's move to Exhibit Number 3 [sic],
21 the cross-section. Would you review that for the Examiner?

22 A. Yes, the cross-section is a structural cross-
23 section identified as C-C'.

24 We have identified our well location, as well as
25 the two nearest Devonian penetrations, one directly to the

1 west of our well and one directly to the south of our well.

2 We have incorporated our structural
3 interpretation into this cross-section, as well as a
4 porosity interpretation.

5 The cross-section shows the drill stem tests
6 taken in each of the two offset wells, indicating that each
7 is tight through -- virtually through the productive --
8 potentially productive portion of the Devonian.

9 Our interpretation is that we will encounter
10 porous dolomite at our well location, as well as be,
11 hopefully, 20 to 30 feet structurally high on the Devonian,
12 compared to each of the offset wells.

13 Q. Basically, Mr. Lough, if Maralo is to develop
14 under existing rules, what impact would that have on your
15 efforts to develop this Devonian structure?

16 A. We would have to drill a second well, which we
17 feel like would be unnecessary.

18 Q. What is the reservoir drive mechanism in this
19 pool?

20 A. It's a bottom water drive.

21 Q. And by placing the well at this location, you're
22 maximizing your structural position on this formation?

23 A. Yes, we are.

24 Q. In your opinion, will approval of this
25 Application and drilling of the proposed well at this

1 location be in the best interest of conservation, the
2 prevention of waste and the protection of correlative
3 rights?

4 A. Yes.

5 Q. Were Exhibits 1 through 5 prepared by you or
6 under your direction?

7 A. They were.

8 MR. CARR: At this time, Mr. Catanach, we move
9 the admission of Maralo Exhibits 1 through 5.

10 EXAMINER CATANACH: Exhibits 1 through 5 will be
11 admitted as evidence.

12 MR. CARR: That concludes my direct examination
13 of Mr. Lough.

14 EXAMINATION

15 BY EXAMINER CATANACH:

16 Q. Mr. Lough, within the east half of Section 19,
17 you said that Maralo was the only operator?

18 A. That's correct.

19 Q. Is that a common lease, or is that several
20 leases?

21 A. There are several leases that we've taken across
22 the east half of 19.

23 Q. Are they different -- are they different kinds of
24 leases? Federal, state or fee?

25 A. No, they're all fee.

1 Q. They're all fee leases?

2 A. All fee leases.

3 Q. Is the working interest the same in that east
4 half?

5 A. Yes, sir, the working interest is the same.

6 Q. The royalty interest would be different?

7 A. The royalty interest is different through the
8 different leases, yes, sir.

9 MR. CARR: Mr. Catanach, I have copies of the
10 individual leases, which permit this sort of pooling, and I
11 also have a unit declaration signed by the interest owners
12 in the subject spacing unit, if you would like those
13 offered as part of the record in this case.

14 Q. (By Examiner Catanach) Do you know if there were
15 any concerns voiced by any of the interest owners who were
16 being excluded from a -- say a standard proration unit?

17 A. There were none.

18 Q. Were they aware of your plans --

19 A. As far as I -- Yes, they are aware.

20 EXAMINER CATANACH: I guess that probably would
21 be helpful, Mr. Carr, if you would submit those.

22 MR. CARR: Al right, we'll mark them as Exhibits
23 6 and 7, 6 being a unit declaration, 7 being a set of
24 leases that would cover the east half of Section 19.

25 Q. (By Examiner Catanach) Okay. Mr. Lough, you

1 also -- I missed it. You also were testifying about some
2 additional acreage that Maralo owns in this area, I
3 believe?

4 A. Yes, we own the west half of Section 20. We also
5 own the west half of Section 19.

6 Q. Are you the only operator in the pool?

7 A. Yes, sir, we are, uh-huh.

8 Q. The structures that you've mapped, are those
9 separate and distinct structures within the Devonian?

10 A. Yes, sir, we feel like we've identified an
11 overall large or relatively large structure, but one that
12 has two to three distinct structural highs on -- located on
13 the overall broad structure, and it is these smaller
14 features that are located above the oil-water contact on
15 this feature and are therefore within the productive
16 interval of the feature.

17 Q. Have you utilized 3-D seismic in this area before
18 to determine well locations?

19 A. Yes, sir, we have.

20 Q. How successful have you been?

21 A. We've been relatively successful on the small
22 structure located in Section 20, primarily in the northeast
23 corner of Section 20. We've drilled three Devonian
24 completions on that feature, and they've drilled out fairly
25 close to the way we had them mapped on our 3-D seismic --

1 by our 3-D seismic.

2 Q. Did the shape and orientation of that structure,
3 or that structural high, was that fairly close to your
4 interpretation?

5 A. Fairly close, yes, sir, it was.

6 Q. Okay. The two offset wells, were they both
7 tested in the Devonian?

8 A. Yes, sir, both of them were drilled as Devonian
9 tests. Both were drill-stem tested multiple times, and
10 neither were found to be productive.

11 Q. Now, it looks like the well to the -- is it the
12 well to the west, the Johnson Number 1, it did have some
13 porous dolomite present in it?

14 A. Yes, sir, it does have porous dolomite present.
15 Our interpretation is that it has just a few feet of porous
16 dolomite that could possibly be productive above the oil-
17 water contact, and with the better porosity forming within
18 the water leg of the feature.

19 Q. What do you gain in terms of moving the well to
20 the unorthodox location? What do you gain from, say, a
21 standard location?

22 A. The -- Drilling the highest point on the
23 structure, based on our 3-D seismic interpretation, we feel
24 like we -- at this location we run the least risk of
25 leaving attic oil in the formation.

1 Q. How much structure do you think you gain at that
2 proposed location?

3 A. We feel like we're going to be gaining probably
4 30 feet to the Kerr-McGee Number 1 Johnson, a 30-foot
5 structural advantage to that well.

6 Q. Say from a standard location, how much do you
7 think you would gain?

8 A. At a standard location, we feel like we would
9 likely be flat to it, possibly ten feet low to that well.

10 Q. So from a standard location, you're gaining how
11 much?

12 A. We feel like from the standard location we'll be
13 gaining 30 feet.

14 Q. Okay. Do you believe that this is the only well
15 that's going to be necessary to drain that structural high?

16 A. Yes, sir, I do, as currently mapped by our 3-D
17 seismic, and it has proven to be relatively accurate, and
18 if it drills out that way, we feel like one well will drain
19 this small feature.

20 Q. The oil that you recover from this structure will
21 -- the majority of it will come from underlying the
22 proposed proration unit; is that your opinion?

23 A. Yes, it is, yes, sir.

24 Q. Is that a producing well in Section 30, the --

25 A. No, sir, on the land plat it -- which is Exhibit

1 1 -- it has been shown to be an abandoned producer.

2 However, it is an abandoned producer.

3 That well had a show of oil in the Devonian, was
4 a very commercial Bough C producer and was ultimately
5 plugged back to the San Andres, and that was the formation
6 that it was most productive from, but it has subsequently
7 been abandoned.

8 EXAMINER CATANACH: I have nothing further of
9 the witness.

10 MR. CARR: Mr. Catanach, that concludes our
11 presentation of this case.

12 EXAMINER CATANACH: Are these exhibits, Mr. Carr?

13 MR. CARR: Those are the ones that I move the
14 admission.

15 EXAMINER CATANACH: Okay, Exhibit Numbers 6 and 7
16 will be admitted as evidence.

17 And there being nothing further in this case,
18 Case 11,277 will be taken under advisement.

19 (Thereupon, these proceedings were concluded at
20 9:01 a.m.)

21 * * *

22 I do hereby certify that the foregoing is
23 a true and correct copy of the proceedings in
24 the above entitled case No. 11277,
25 heard at 11/19/93.

Donald R. Catanach, Examiner
Oil Conservation Division

