

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

RECEIVED

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

APR 21 1991
OIL CONSERVATION DIVISION

CASE NO. 10269

**APPLICATION OF MARATHON OIL COMPANY
FOR A WATERFLOOD PROJECT AND TWELVE
UNORTHODOX INJECTION WELL LOCATIONS,
LEA COUNTY, NEW MEXICO**

DOYLE HARTMAN'S OBJECTIONS TO MARATHON'S PROPOSED ORDER

Doyle Hartman, party in the above-captioned proceeding, objects to the entry of Marathon's Proposed Order of the Division provided to the Hearing Examiner in this cause on April 24, 1991 and served on Mr. Hartman on April 29, 1991 as follows:

Although the majority of the proposed order is acceptable to Mr. Hartman, he objects to Marathon's Finding Paragraph 13(b) and Ordering Paragraph 1(a) because these paragraphs do not accurately reflect the agreement entered by Marathon and Mr. Hartman in this case. That agreement, entered in evidence as Hartman's Exhibit No. 1, modifies Marathon's proposed waterflood project. The Order entered in this case should accurately reflect Marathon's proposal as modified by its agreement and the evidence.

Specifically, the two objectionable, identical paragraphs proposed by Marathon state:

(b) the maximum injection pressure shall be below the breakdown pressure of the Queen formation.

In contrast, Paragraph B of the Marathon-Hartman Agreement, Hartman Exhibit 1, and Finding 2(B) of Doyle Hartman's Proposed Findings and Ordering Paragraphs submitted to the Hearing Examiner on April 18, 1991 read:

B. That maximum surface injection pressure in wells #30 and #31 be limited to 0.2 psi/ft, unless Step Rate Tests verify that any other proposed injection pressure is below breakdown.

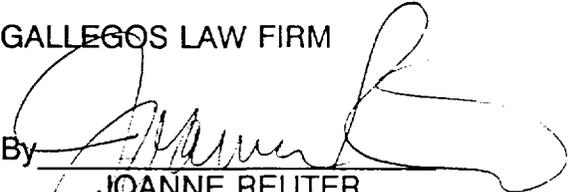
The language proposed by Mr. Hartman does not represent a distinction without a difference. In the first instance, the Hartman-Marathon Agreement specifies a 0.2 psi/ft maximum surface injection pressure, whereas Marathon's proposed Order does not. The 0.2 psi/ft limit is consistent of the Division's guidelines for maximum surface injection pressures and is necessary to protect the Seven Rivers and Yates Formations of the Jalmat Pool from invasion of injection fluid. Moreover, the language of the Hartman-Marathon Agreement in specifying the 0.2 psi/ft injection pressure is more consistent with Marathon's hearing testimony that it would limit the injection pressure to 0.2 psi/ft than is the language of Marathon's proposed order. (See March 21, 1991 Transcript, pp. 44-45, attached.)

Second, the Hartman-Marathon Agreement does not limit breakdown pressure to Queen formation breakdown pressure as Marathon's proposed order does. The breakdown pressure in any other formation affected by the injection, such as the Jalmat or Seven Rivers, may be lower than the breakdown pressure in the Queen. Too great a pressure in the Queen could result in invasion of injection water into the Jalmat Gas Pool interval.

In conclusion, Mr. Hartman requests that the order issued by the Division in this case conform to the agreement of the parties and the evidence as outlined above. Mr. Hartman reiterates his request that his Proposed Finding 2(B) be substituted for or added to Marathon's proposed Finding 13(b) and Ordering Paragraph 1(a).

Respectfully submitted,

GALLEGOS LAW FIRM

By 

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IN THE MATTER OF THE HEARING)
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COMPANY FOR A WATERFLOOD PROJECT,)
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REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

March 21, 1991
11:00 a.m.
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on March 21, 1991, at 11:00 a.m. at Oil Conservation Division Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Paula Wegeforth, Certified Court Reporter No. 264, for the State of New Mexico.

FOR: OIL CONSERVATION DIVISION BY: PAULA WEGEFORTH
Certified Court Reporter
CSR No. 264

1 Q. Are those shown?

2 A. Those would be shown on page 19. The North
3 Ranch water well would be the well located in Section 16.
4 The South Ranch water well would be the one located in
5 Section 22.

6 Q. What are the water analyses we see on pages 17
7 and 18?

8 A. Page 17 is a sample of produced water taken from
9 the lease, from one of our heater treaters. The sample
10 No. 2, raw water, is the anticipated injection water, the
11 Jal water supply system, obtained from Texaco.

12 Turning over to page 18, you can see mixing
13 samples that we had Morton Water Lab do for us to insure
14 that we weren't going to have any compatibility problems
15 with these waters.

16 And we mixed them on three different ratios, and
17 based on these results and the results that we have seen
18 within our own unit, we don't feel that there's going to be
19 any compatibility problems with these two waters.

20 Q. Approximately what would be the surface
21 limitation pressure if you abided by the division guideline
22 of two-tenths pounds per foot of depth?

23 A. That would be an injection gradient of
24 approximately 650 -- or, excuse me, .65 psi per foot or
25 approximately 700 to to 750 pounds surface pressure.

1 Q. Your original application requested a surface
2 pressure in excess of that volume, did it not, or that
3 pressure?

4 A. Yes, sir, it did.

5 Q. And you at this point are not asking to have
6 that exception?

7 A. No, sir. We believe that initially the .2 psi
8 per foot based on our -- on the data available within the
9 depleted wells, that the .2 psi per foot will be adequate
10 for our initial injection records.

11 Q. Are you recommending or suggesting to the
12 examiner the inclusion of administrative process to
13 increase your pressure based on step-rate data?

14 A. Yes, sir, we are. We've seen within our Seven
15 Rivers Queen unit an increase in pressure over time with
16 the increase in reservoir pressure, and we fully expect to
17 see this within our -- within our Section 16 area.

18 And for that reason we are requesting that we be
19 allowed to run step-rate tests at various times to
20 determine the optimum -- or to determine fracture --
21 parting pressures so that we can remain above the -- or,
22 excuse me, below that and yet still maximize injection into
23 our project.

24 MR. KELLAHIN: That concludes my examination of
25 Mr. Bush.

