



GL03100 - 4 of 4

Chevron Geothermal Company of California

595 Market Street, San Francisco, California
Mail Address P.O. Box 7147, San Francisco, CA 94120-7147

June 15, 1983

Heber Paper
Submitted for Presentation at
1983 GRC Annual Meeting

Mr. A. J. Adduci
Fossil, Geothermal and Solar
Energy Programs Division
U.S. Department of Energy
1333 Broadway
Oakland, CA 94612

Dear Tony:

The Heber paper that you sent on June 8 has been reviewed by Chevron Resources personnel and was found not to contain any proprietary information. We have no objection to its publication. We appreciate your concern and your allowing us to review the paper.

Sincerely,

A handwritten signature in black ink that reads "A. M. Cooper". The signature is written in a cursive style with a large, looping "C" at the end.

A. M. Cooper
Manager, Geothermal Operations

AMC:cmp



Lawrence Berkeley Laboratory

University of California
Berkeley, California 94720
Telephone 415/486-4000
FTS: 451-4000

June 24, 1983

Mr. A. M. Cooper
Manager, Geothermal Operations
Chevron Geothermal Company
of California
P.O.Box 7147
San Francisco, CA 94120-7147

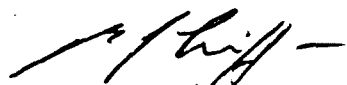
Dear Mr. Cooper:

Thank you for reviewing the paper on Heber which Gudmundur Bodvarsson and I prepared for the 1983 GRC Annual Meeting.

In a few weeks we plan to start modeling the behavior of Heber under production. First, we will use the radial model assumed in the natural state simulations, and perhaps later a three-dimensional model. Before publishing the results of this new study we intend to provide your Company an advance copy of the paper for your information, and to obtain your comments and suggestions.

Because of our interest in understanding the general behavior of geothermal systems, particularly those in the Salton Trough, we hope to be able to work in close contact with your group during the modeling studies of the Heber system.

Sincerely,


Marcelo J. Lippmann
Staff Scientist
Earth Sciences Division

cc: A. Adduci, DOE/SAN



Lawrence Berkeley Laboratory

1 Cyclotron Road Berkeley, California 94720

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September 2 1983

Mr. A. M. Cooper
Manager, Geothermal Operations
Chevron Geothermal Company
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P.O. Box 7147
San Francisco, CA 94120-7147

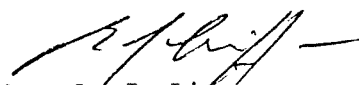
Dear Mr. Cooper:

Please find enclosed a copy of the first rough draft of a paper entitled " The generating capacity of the Heber geothermal field " which Dr. Bodvarsson and I plan to present during the next geothermal reservoir engineering workshop to be held in December at Stanford University.

In this study we have used the same radial model that we used in analyzing the natural state of the Heber system. As before we only used data that were already in the open literature. We studied different production-injection scenarios to determine the maximum feasible fluid production rates for this field.

We would welcome your comments and suggestions which could improve the breadth and content of the paper for the Stanford meeting.

Sincerely,


Marcelo J. Lippmann
Staff Scientist
Earth Sciences Division

Encl.

cc: A. Adduci, DOE/SAN
(with encl.)



Lawrence Berkeley Laboratory

1 Cyclotron Road Berkeley, California 94720

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March 15, 1984

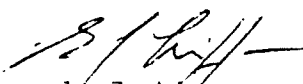
Mr. A. M. Cooper
Manager, Geothermal Operations
Chevron Geothermal Company
of California
P. O. Box 7147
San Francisco,

Dear Mr. Cooper:

Please find enclosed is a copy of the typescript of the paper "The Heber geothermal field, California: Natural state and exploration modeling studies" which we are planning to submit to the journal Water Resources Research of the American Geophysical Union. This work combines and expands the results of our two earlier papers presented at the Geothermal Resources Council (October 1983) and at the December 1983 Geothermal Reservoir Engineering workshop at Stanford.

We would welcome your comments on the enclosed paper before it is sent to the editor of the journal April 2, 1984.

Sincerely,


Marcelo J. Lippmann
Staff Scientist
Earth Sciences Division

MJL/lf

Enclosure

cc: A. Adduci/DOE-SAN
(with enclosure)

NOTE: The editor suggested that the paper should be submitted to the Journal of Geophysical Research, where it was published in January 1985.



Chevron Geothermal Company of California

595 Market Street, San Francisco, California
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March 23, 1984

Mr. M. J. Lippmann
Earth Sciences Division
Lawrence Berkeley Laboratory
1 Cyclotron Road
Berkeley, CA 94720

Dear Mr. Lippmann:

Thank you for the opportunity to preview your paper "The Heber Geothermal Field, California" Your results are interesting and surprisingly similar to Chevron's evaluation. Since no reservoir data has yet been released, I cannot comment on the accuracy of the values you assumed. In a general sense, we have found a general decrease in horizontal permeability with depth but only small variations areally. There also seems to be some fracture contribution to well productivities, at least in the central thermal plume area. Your paper is well written and shows that a reasonable evaluation of a geothermal resource can be made with only minimal data and a simple reservoir model.

Sincerely,

A handwritten signature in cursive script that reads "I. J. Epperson".

I. J. Epperson
Senior Reservoir Engineer