

**PROCEEDINGS
SIXTH WORKSHOP
GEOTHERMAL RESERVOIR ENGINEERING**

December 16-18, 1980



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Workshop Report SGP-TR-50***

*Conducted under Stanford-DOE Contract No. DE-AT03-80SF11459 sponsored by the Geothermal Division of the U.S. Department of Energy.

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INTRODUCTION TO THE PROCEEDINGS OF THE SIXTH GEOTHERMAL RESERVOIR
ENGINEERING WORKSHOP, STANFORD GEOTHERMAL PROGRAM

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The Sixth Workshop on Geothermal Reservoir Engineering convened at Stanford University on December 16, 1980. As with previous Workshops the attendance was around 100 with a significant participation from countries other than the United States (18 attendees from 6 countries). In addition, there were a number of papers from foreign contributors not able to attend.

Because of the success of all the earlier workshops there was only one format change, a new scheduling of Tuesday to Thursday rather than the earlier Wednesday through Friday. This change was in general considered for the better and will be retained for the Seventh Workshop. Papers were presented on two and a half of the three days, the panel session, this year on the numerical modeling intercomparison study sponsored by the Department of Energy, being held on the second afternoon. This panel discussion is described in a separate Stanford Geothermal Program Report (SGP-TR42).

This year there was a shift in subject of the papers. There was a reduction in the number of papers offered on pressure transients and well testing and an introduction of several new subjects. After overviews by Bob Gray of the Department of Energy and Jack Howard of Lawrence Berkeley Laboratory, we had papers on field development, geopressured systems, production engineering, well testing, modeling, reservoir physics, reservoir chemistry, and risk analysis. A total of 51 papers were contributed and are printed in these Proceedings. It was, however, necessary to restrict the presentations and not all papers printed were presented.

Although the content of the Workshop has changed over the years, the format to date has proved to be satisfactory. The objectives of the Workshop, the bringing together of researchers, engineers and managers involved in geothermal reservoir study and development and the provision of a forum for the prompt and open reporting of progress and for the exchange of ideas, continue to be met. Active discussion by the majority of the participants is apparent both in and outside the workshop arena.

The Workshop Proceedings now contain some of the most highly cited geothermal literature.

Unfortunately, the popularity of the Workshop for the presentation and exchange of ideas does have some less welcome side effects. The major one is the developing necessity for a limitation of the number of papers that are actually presented. We will continue to include all offered papers in the Summaries and Proceedings.

As in the recent past, this sixth Workshop was supported by a grant from the Department of Energy. This grant is now made directly to Stanford as part of the support for the Stanford Geothermal Program (Contract No. DE-AT03-80SF11459). We are certain that all participants join us in our appreciation of this continuing support.

Thanks are also due to all those individuals who helped in so many ways:

- The members of the program committee who had to work so hard to keep the program to a manageable size - George Frye (Aminoil USA), Paul G. Atkinson (Union Oil Company), Michael L. Sorey (U.S.G.S.), Frank G. Miller (Stanford Geothermal Program), and Roland N. Horne (Stanford Geothermal Program).
- The session chairmen who contributed so much to the organization and operation of the technical sessions - George Frye (Aminoil USA), Phillip H. Messer (Union Oil Company), Leland L. Mink (Department of Energy), Manuel Nathenson (U.S.G.S.), Gunnar Bodvarsson (Oregon State University), Mohindar S. Gulati (Union Oil Company), George F. Pinder (Princeton University), Paul A. Witherspoon (Lawrence Berkeley Laboratory), Frank G. Miller (Stanford Geothermal Program) and Michael J. O'Sullivan (Lawrence Berkeley Laboratory).
- The many people who assisted behind the scenes, making sure that everything was prepared and organized - in particular we would like to thank Jean Cook and Joanne Hartford (Petroleum Engineering Department, Stanford University) without whom there may never have been a Sixth Workshop.

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December 31, 1980