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## THE GEOTHERMAL DRILLING ORGANIZATION

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The Geothermal Drilling Organization (GDO) was established to sponsor near term technology development of direct benefit to the geothermal industry. Projects are jointly funded by DOE and industry with the DOE share limited to 50% of the total cost. Industry contributions can be in the form of cash payments or in-kind services which include well test facilities, manpower, and hardware. Project proposals are first screened by the executive committee and then submitted to the full membership. If there is sufficient interest to form a participating group (minimum of two industry partners), a project letter agreement is negotiated that outlines the scope of the project and member obligations.

At the present time, three projects have been established and are in progress. A high temperature borehole acoustic televiwer is being developed to provide an on-call service to geothermal operators. The televiwer will be used for casing inspection and fracture mapping in the open wellbore. A downhole air turbine has been designed, assembled, and bench tested to generate performance data. A recent drilling test of the turbine in a low temperature well in Farmington, NM, demonstrated its ruggedness and improved drilling performance. Approximately 600 feet were drilled in sand and shale sequences at rates of penetration near 200 ft/hr. Upcoming drilling tests in the Geysers will determine the turbine's high temperature performance. Downhole tools are being constructed to deploy a two part urethane foam for lost circulation control. The device will be evaluated in lost circulation zones encountered during geothermal drilling. A test measurement plan has been prepared to aid characterization of the lost circulation zones before and after treatment.

Currently the GDO is working to establish new projects in high temperature elastomer development. Proposals are being evaluated to manufacture and test drill pipe protectors, rotating head seals and BOP rubbers.

Members joining the GDO pay a one time fee of \$500. Copies of the GDO charter are available for distribution.

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