

G E O T H E R M A L

The Geothermal Steam Act Amendments of 1988

By George D. Wilson, Esq.

Geothermal leaseholders whose leases were facing imminent cancellation due to lack of commercial development have been granted a reprieve in a bill passed by Congress this past fall.

The Geothermal Steam Act Amendments of 1988 ("the Act") allow federal geothermal leases to be extended for up to ten years, in five year increments. The Act, signed into law on September 22, 1988 by President Reagan, amends the Geothermal Steam Act of 1970 by doubling the time available to bring a leasehold into production. Under the 1970 law leases were granted for ten years followed by 40 year extensions if the lease had become commercially productive. Responding to environmental concerns, the new law also protects certain National Park thermal features from commercial development.

The amendments recognize today's weak market conditions which have stymied potential power sales from many geothermal wells. The rush to develop alternative energy generation has slowed with a leveling off of energy demand, a significant reduction in oil prices, and, in some areas, an energy oversupply. Furthermore, the substantial federal and state encouragement of independent and alternative energy generation which existed in the early 1980s has eroded in recent years.

For example, in 1984 and 1985 California suspended the Standard Offer contracts it had instituted to simplify the contracting process for qualifying facilities ("QFs") wishing to sell power to the utilities. Nevada utilities have been even slower to contract with QFs. Sierra Pacific Power Company, for instance, is operating under an 85 MW cap established in July 1987 for all QF additions, up from a 35 MW cap set a year earlier.

Leaseholder Requirements Changed

By eliminating the requirement that leaseholders demonstrate commercial production within the initial ten-year lease term, the federal government has eased the use-it-or-lose-it pressure on current lessees to develop property under sub-optimum conditions. Appearing before the Senate Committee on Energy and Natural Resources, Robert H. Lawton, Deputy Assistant Director for Energy and Mineral Resources, Bureau of Land Management

("BLM"), stated, "The public interest is well served by keeping leases in the hands of lessees who have already sunk costs in leaseholds and would have strong incentive to establish production."

He added that, "Without this change, we anticipate that in the near future there will be many relinquishments of existing leases with little demand for new ones."

Under the new law, to qualify for the extensions lessees must demonstrate "bona fide efforts to produce or utilize geothermal steam in commercial quantities for such lease, given the then current economic conditions." In addition, the lessee must meet either a "payment in lieu of commercial quantities production" or "significant expenditure" requirement.

The "payment in lieu of commercial quantities production requirement" requires the lessee to agree to modify the lease terms and conditions to require annual payments to the Interior Department of at least \$3 per acre for the first five years and \$6 per acre in the second five years.

Significant Expenditures

To meet the "significant expenditure requirement" the lessee must annually demonstrate expenditures (of at least \$15 per acre in the first five years, \$18 per acre in the second five years) on one or more of the following activities:

- drilling operations (for exploratory or development wells, or geochemical or geophysical surveys for such wells);
- construction of roads or generating facilities;
- procurement of architectural or engineering services to design generating facilities to be located on the leasehold; and
- environmental studies required by state or federal law.

The BLM expects that regulations for implementing the lease extension provisions will soon be issued.

Even without the regulations the BLM will provide for the suspension of leases due to expire. Before such suspension, however, it will be incumbent on lessees to notify the BLM in writing that their leases are going to expire and

GEO SELLS EQUITY IN EAST MESA PROJECT

Mission Energy Subsidiary/Gem In Partnership

Gem Inc., a wholly owned subsidiary of Geothermal Resources Inc., has formed a limited partnership with a wholly owned subsidiary of Mission Energy Company, an indirect subsidiary of SCEcorp (the parent company of Southern California Edison Company). The Mission Energy subsidiary has become a 50 percent owner of the East Mesa geothermal project and an equal general partner of the GEO East Mesa Limited Partnership. This includes the 37 MW geothermal power generating facility (GEM 1) currently under construction and the existing 13.4 MW McCabe geothermal power generation facility.

The Mission Energy subsidiary purchased all of the interest in the East Mesa geothermal project held by PacifiCorp Credit Inc. (Portland, Oregon) with the balance of its 50 percent interest being acquired from GEO's interest in Gem Inc.

STILLWATER PROJECT UNDERWAY

Ormat Closes Construction Financing

Ormat Energy Systems Inc. has closed the construction loan for the Stillwater Geothermal I Project near Fallon, Nevada.

The 17 MW (gross) air-cooled

PUBLICATIONS RECEIVED

Trace Arsenic Species and Equilibria in Geothermal Fluids
EPRI. Project manager: Vasel W. Roberts, Generation and Storage Division EPRI GS-6142. Topical Report, 128 pp, EPRI Research Reports Center, (P.O. Box 50490, Palo Alto, CA 94303 (415)965-4081).

EPRI's objective was to develop a methodology for predicting the

amount of arsenic most likely to flow through geothermal systems. The concentration of arsenic in geothermal steam falls at or below the detection limits of commonly used analytic methods which makes accurate measurement difficult. The methodology developed in the study supplies estimates of arsenic concentration, speciation, and flow distribution in geothermal fluids.

power plant is scheduled to be in full operation by the second quarter of 1989 and sell power under a 30-year contract with Sierra Pacific Power Company.

The \$36,000,000 loan was provided by Bankers Trust Company and Bank of Nova Scotia. Constellation Development Inc. (a Baltimore Gas & Electric subsidiary) will provide the utility equity. Bankers Trust Company, acting as the financial advisor to Ormat, is in charge of arranging the balance of the equity and the long-term debt. Ormat will construct the power plant, develop the field, and operate and maintain the project under a long-term contract.

GEO SELLS AIDLIN INTEREST

Pays Off Immediate Debts

Geothermal Resources International Inc. (GEO) has sold its interest in the 20 MW Aidlin Geothermal Project to

Geothermal Energy Partners Ltd. (GEPL), a California partnership. The Aidlin project is located in The Geysers Area of northern California.

GEPL was represented in the transaction, which has a total value of approximately \$13 million, including \$1.8 million in cash, by its general partner, Western Geothermal Company, a wholly-owned subsidiary of Mission Power Engineering Company (MPE).

Under agreements entered into earlier in 1988, GEO planned to work with MPE, to jointly develop a geothermal steam field and a 20 MW net electric power generating facility to sell electricity to Pacific Gas and Electric Company under existing power sales agreement.

Ronald P. Baldwin, GEO's chief executive officer, said the sale provides GEO with a portion of the funds necessary to meet some of its most immediate financial obligations. This includes an interest payment of \$850,000 owed to PacifiCorp in Portland, Oregon.

Geothermal Steam Act Continued

that they believe they are eligible to receive lease extensions under the Act. According to the BLM's California office, virtually all lessees in California should be eligible for extensions.

The BLM regulations —when issued— will likely be flexible enough to accept a range of activities as sufficient demonstration of lessee diligence, including obtaining power contracts, negotiating pooling or unitization agree-

ments, exploring for additional resources, and lease transfers.

On a final note, in order to protect thermal features within the national parks, the Act specifies "significant thermal features" in the U.S. National park system and establishes a monitoring program to protect these features from any adverse impacts of geothermal development on lands in the vicinity of national parks.

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