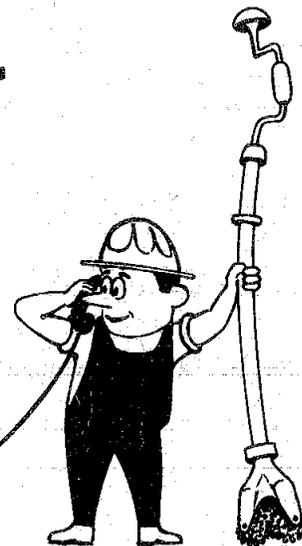


# GEOHERMAL

## Hot Line



A publication of the State of California - Division of Oil and Gas

Volume 2, Number 2

March 1972

**"ONLY SOME OF US CAN LEARN BY OTHER PEOPLE'S MISTAKES. THE REST OF US HAVE TO BE THE OTHER PEOPLE."**

**-CHICAGO TRIBUNE**

### GEOHERMAL CONFERENCE A TREMENDOUS SUCCESS

The First National Conference of the Geothermal Resources Council held at El Centro in February of this year, was successful beyond the most optimistic hopes of the Council. The original estimate was 250 to 300 attendees but more than 650 people were present from 44 states and three foreign nations.

In spite of the problems created by the unexpected turnout, all of the scheduled activities took place. The field trip to the Cerro Prieto steam field in Mexico was attended by more than 325 members. The Mexican government is to be highly congratulated for conducting an excellent trip, and their gracious hospitality will long be remembered by all those who attended. A second highly successful field trip to the geothermal areas in the Imperial Valley was attended by approximately 30 members.

Following is a list of publications generated by the Conference:

1. "Compendium of First Day Papers Presented at the First Conference of the Geothermal Resources Council, El Centro, California, February, 1972." This publication contains papers on worldwide occurrences of geothermal phenomena, federal geothermal leasing and operating regulations, geothermal exploration techniques, geology of the Imperial Valley, geothermal legal problems, the Sierra Club views on geothermal development, and two papers on dry steam and flashed steam power plants. It should be in print by the end of March and will cost \$4.
2. "Geothermal Overviews of the Western United States"

(including Hawaii). This publication contains articles from 12 western states and information on the geology, geothermal potential, future power needs, regulatory agencies, and references on published papers on each state. This publication is available now at a cost of \$6.

3. "List of El Centro Conference Attendees". The list contains names, company affiliations, addresses, and phone numbers of all registered members. It will be available in about two weeks at a cost of \$2.

To obtain the above publications, write:

Geothermal Resources Council  
P.O. Box 1033  
Davis, California 95616

All of the above prices include postage. Make check or money order payable to the "Geothermal Resources Council".

### CALIFORNIA LAWS FOR CONSERVATION OF GEOHERMAL RESOURCES - 1971

The changes to Chapter 4, Division 3, of the Public Resources Code, which were discussed in the "Hot Line" (issue No. 8, December 28, 1971), became effective on March 4, 1972. Revised copies of the booklet "California Laws for Conservation of Geothermal Resources" are now available, at 50 cents each, from:

Division of Oil and Gas  
1416 - 9th Street, Room 1316-35  
Sacramento, California 95814

The new edition includes sample copies of the various forms that are filed with the Division by geothermal operators and a brief explanation of how each form is used.

## WATER WELL DRILLING AFFECTED BY GEOTHERMAL LAW

Section 3702, Chapter 4, Division 3, of the Public Resources Code reads, in part, " 'Geothermal Resources Area' means the same general surface area which is underlaid, or reasonably appears to be underlaid, by geothermal resources." " 'Well' means any well... on lands... reasonably presumed to contain geothermal resources..."

The State of California has determined that, under these definitions and in the interest of public safety and resource conservation, within the bounds of a Geothermal Resources Area, a proposed water well will be considered a geothermal well until such time as the State Oil and Gas Supervisor determines that no hazard exists and that normal requirements for geothermal wells can be waived.

Every effort will be made by the Division to minimize the effect

of this decision on property owners and well drillers. However, in order to carry out its public safety responsibilities, the Division must require that all proposed wells in Geothermal Resources Areas be submitted for review prior to actual drilling.

The boundaries of Geothermal Areas will be established by the State Oil and Gas Supervisor with the concurrence of the Geothermal Resources Board.

As these G.R.A.'s (Geothermal Resources Areas) are established, various means of public announcement will be utilized to ensure that ample time is given to the water well industry prior to enforcement of this regulation.

Any suggestions as to how best to carry out this program will be greatly appreciated. Call either Dave Anderson or Larry Axtell in Sacramento, (916) 445-9686.

## RECENT PUBLICATIONS

### BUREAU OF RECLAMATION

In the August, 1971, issue of "Reclamation Era", the U.S. Bureau of Reclamation ran an informative 7-page article entitled "The Roar from an Emerging Resource".

Beginning with a review of worldwide geothermal development, the author, Ellis L. Armstrong, Commissioner of Reclamation, discusses the Bureau's Imperial Valley project with special emphasis on water potential, power potential, environment, waste water disposal, subsidence, and seismology.

Single copies are available at 45 cents each from:

Government Printing Office  
Superintendent of Documents  
Washington, D. C. 20402

### STATE OF ARIZONA

A paper entitled "The Occurrence of Thermal Ground-Water in the Basin and Range Province of Arizona" is included in a new publication "Hydrology and Water Resources of Arizona and the Southwest", Volume 1, September, 1971. This volume may be ordered, at \$5, from:

A.W.R.A.  
1525 E. Kleindall Road  
Tucson, Arizona 85719

Reprints of the article on thermal groundwater can be obtained, while they last, from the author:

Dr. Jerome Wright  
Department of Geosciences  
University of Arizona  
Tucson, Arizona 85721

## HAWAII

The President of Hawaiian Electric Company, Lewis Lengnick, announced that as of March 2, 1972, it would be the official policy of the company to purchase geothermal steam produced in the islands if and when high quality steam could be delivered in sufficient quantities.

## SAN DIEGO, CALIFORNIA

The Phillips Petroleum Co. has announced plans to open a west coast geothermal office about the first of April, 1972. The mailing address is P. O. Box 752, Del Mar, California 92014. The office staff includes:

Fred Terry - Manager, Geothermal Operations  
Ken Brunot - Operations Supervisor  
C. W. Berge - Geological Supervisor  
Robert Wright - Land Supervisor

The company also has tentative plans to open a field office in Reno, Nevada, in the near future.

## IMPERIAL VALLEY, CALIFORNIA

Magma Power Co., in a joint venture with San Diego Gas and Electric Co., is currently drilling the fifth well of a seven well program. The five wells and their present status:

	LOCATION (S.B.B. & M.)					
	Well Name	Sec.	T.	R.	Status	Anomaly
1.	"Magmamax" 1	33	11 S.	13 E.	Completed (test pending)	Butte
2.	"Dearborn" 1	30	12 S.	13 E.	Abandoned	None
3.	"Sharp" 1	35	15 S.	16 E.	Abandoned	Mesa
4.	"Woolsey" 1	33	11 S.	13 E.	Completed (test pending)	Buttes
5.	"Holtz" 1	32	16 S.	14 E.	Drilling	Heber

The "Sharp" 1 well was drilled on the edge of the Mesa anomaly and, although it was abandoned, it provided valuable stratigraphic, water quality, permeability, and porosity data. This data should be extremely beneficial to studies now underway on the Mesa anomaly by the Bureau of Reclamation.

The "Magmamax" 1 and the "Woolsey" 1 wells which are approximately 1/4 mile apart, should, when tested, provide valuable data needed for the design of a binary fluid, closed-cycle power plant.

## COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE FEDERAL GEOTHERMAL LEASING PROGRAM

In an effort to be of service to the geothermal industry and to the members of the Geothermal Resources Council, Donald F. X. Finn has made 50 copies of selected comments that were filed with the Department of Interior. This material includes 31 presentations totaling about 575 pages.

Copies may be obtained at \$25 each, including postage (prepaid orders only) from:

Donald F. X. Finn  
11 East 47th Street  
New York, New York 10017

First come, first served, so get your order in soon.

## "GEOTHERMICS" - INTERNATIONAL JOURNAL OF GEOTHERMAL RESEARCH

Maxwell Scientific International, Inc., is now accepting subscriptions to "Geothermics", a journal devoted to geothermal resources research and development. It is published quarterly by the International Institute for Geothermal Research, Pisa, Italy.

In addition to the regular, quarterly edition, "Geothermics" will publish special volumes related to special symposia. Special issue No. 1 is entitled "Geology, Geophysics and Hydrogeology of the Monte Amiata Geothermal Fields". Beginning in 1968, results and data relating to all studies and works carried out for geothermal development, dating back to 1958, began to be systematically organized for publication in this monograph.

Special issue No. 2 "Proceedings of the United Nations Symposium on the Development and Utilization of Geothermal Resources, Pisa, 1970", is in two volumes. Volume 1 contains Introduction to the Symposium, Rapporteur's General Reports of the 11 Sections of the Symposium, and Summarized Reports of the Discussions held in various sections. Volume 2 is in two parts and contains 198 individual papers that were presented at the symposium.

For additional information, write to:

Maxwell Scientific International Inc.  
Fairview Park  
Elmsford, New York 10523

## MONO COUNTY, CALIFORNIA

Southern California Edison Co. has announced that it has quit-claimed its exploration permits on the state land under Mono Lake. This action no doubt is a result of the final evaluation of the information gained from the two exploratory wells drilled near the lake in late 1971 (see issue Nos. 7 and 8). An article describing the drilling operations appears in the March issue of "California Geology", published by the California Division of Mines and Geology. P. O. Box 2980, Sacramento, Ca., 95812.

## IT'S A GAS!

"Oil and gas drilling is a popular tax shelter among wealthy people. They can shield their general income from taxation by in-

vesting in drilling and then deducting most of the investment immediately as drilling costs are incurred. Several years ago, a power company began extracting geothermal steam for use as a power source from a California geyser area. In figuring its taxes, the company used the oil depletion allowance and investors deducted drilling costs, just as if the steam were oil.

"The IRS disallowed the deductions on the ground geothermal steam isn't a depletable resource like those Congress had in mind when it gave favorable tax treatment to oil and gas. But a circuit appeals court recently upheld the taxpayers. Geothermal steam isn't ordinary ground steam that is fed by constant water seepage making it inexhaustible, the court said. It argued that geothermal steam is locked in closed spaces like natural gas and isn't replenished by seepage. Thus it's depletable and should be treated like gas, the judges reasoned.

"One tax expert predicts the decision will attract new money to geothermal steam development."

## WALL STREET JOURNAL

## IMPERIAL VALLEY LAND MAPS

Pacific Coast Land Service is offering land base maps of the geothermal area of Imperial Valley. This is a series of 10 base maps, covering the area from the Mexican Border to the Salton Sea on a scale of 1" = 2000'.

Land ownership, land leasing, and geothermal activity overlays should be completed by the end of March, 1972.

For additional information contact:

Pacific Coast Land Service  
2444 Marconi Ave.  
Sacramento, California 95821  
(916) 488-0301

## BOULDER CITY, NEVADA

The Bureau of Reclamation issued specifications for drilling a geothermal test well on the Mesa anomaly in the Imperial Valley, California on March 3, 1972. Bids will be received until 10 - a.m. - April 4 and opened the same day at the Region 3 Administration Building, Nevada Highway and Parks Street, in Boulder City, Nevada.

A pre-bid conference will be held at 2 - p.m. March 21 at the Boulder City office for the convenience of prospective bidders. Attendance will not effect evaluation of bids or award of the contract by the Government. Prospective bidders interested in attending should advise the Bureau of Reclamation by March 16.

Copies of specifications No. 300C-320 may be obtained by writing Box 427, Boulder City, Nevada 89005 or by telephoning (702) 293-8446.

## SIERRA CLUB, CALIFORNIA

The February, 1972, issue of "Bonanza", the monthly newsletter of the Mother Lode Chapter of the Sierra Club, contains an article opposing possible geothermal development on a section of privately owned land in the southeastern corner of Lassen National Park. The

article also mentions drilling activity near the Terminal Geyser in the early 1960's. The section is now leased by the Thermal Power Co. of San Francisco who is currently studying the area.

The article ends with a strong pitch for supporting federal efforts to purchase this section of land for inclusion in the Lassen National Park.

#### **HOT-WATER SPRING DRIVES GENERATOR, PEKING SAYS**

Communist Chinese workers have succeeded in building a small power station using natural underground hot water in Tengwu District in Kwantung Province, Southern China, a Peking broadcast said.

The official New China News Agency, NCNA, monitored in Tokyo, said since the station was experimentally put into operation the flow of underground hot water, its temperature, and pressure remained as usual.

NCNA said the natural hot water changes into steam to propel the turbines. NCNA did not disclose the electric generating capacity of the station. It said Chinese workers have successfully built the station after 49 experiments.

ASSOCIATED PRESS

#### **BOOK OF INTEREST TO INVESTORS**

"The Exploration Drilling Program", by Thad W. Thomas, which was published by The Tax Shelter Newsletter in 1969, examines a financing technique employed in recent years by many small or "independent" oil companies. "Drilling programs" are becoming extremely popular and offer the investor tax benefits from oil investments and the possibility of high returns from successful drilling

ventures. In some areas, this concept may be applied to geothermal drilling.

For additional information, write:

The Tax Shelter Newsletter, Inc.  
11 East 47th Street  
New York, New York 10017

#### *Geothermal Hot Line*

*A periodic publication of the California Division of Oil and Gas. Subscription price, January through December, \$3.*

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#### **NOTICE**

Effective with this issue, back issues of the "Hot Line" from 1971 will no longer be available. Back issues of this year will be sent automatically upon receipt of a subscription order.

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**U. S. POSTAGE**  
**PAID**  
Sacramento, Cal.  
Permit No. 337