



State of Idaho

GL04203

# DEPARTMENT OF WATER RESOURCES

STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS  
Governor

C. STEPHEN ALLRED  
Director

RECEIVED

JAN 14 1980

GEOTHERMAL ENERGY  
BRANCH

Mailing address:  
Statehouse  
Boise, Idaho 83720  
(208) 334-4440

## IDAHO - DOE GEOTHERMAL STATE COUPLED PROGRAM

FY 1980

The Idaho Department of Water Resources has cooperated with the Department of Energy for the past three years to collect basic data describing the geothermal resources of the state. The major part of this effort has been to update the inventory of known hydrothermal occurrences and assess their potential for direct contact use. The inventory information formed the data base for the Geothermal Resources Map of Idaho which is being printed by the National Oceanic and Atmospheric Administration.

Several earlier state publications resulting from Department of Energy funded research were regional geothermal assessments with hydrothermal inventories. Part of last year's efforts were regional geology and geothermal assessments for the Nampa-Caldwell and Tyhee-Pocatello areas.

The hydrothermal and geothermal data base available for the state is sufficient to provide background information for more detailed regional evaluations which would meet the needs of local developmental interests. Citizen interest is particularly high in the area served by the Wood River Resource Council. To encourage geothermal development, the state would like to shift part of its program emphasis from basic data collection to regional prioritization studies.

The state team for the contract period will consist of three full-time geologists, a half-time supervisor who is also a geologist, and a quarter-time supervisor. Frank Sherman, the Supervisor for the Geothermal and Environmental Quality Section will be the principal investigator. Five principal tasks are scheduled for the contract period.

- (1) The state team will work with citizens in the Wood River Resource Council area to evaluate those resources where development interest has been expressed, and to insure that information about all developable resources is available to potential users. A report of findings will be published by the Department of Water Resources. Approximately 20 percent of the contract period staff time will be devoted to this project. Most of the budgeted funds for geophysics on drilling will probably be utilized in this study effort.

- (2) A similar resource evaluation effort will be made for another area in the state. The Nampa-Caldwell or Weiser areas are those being most seriously considered, however site selection will be coordinated with the State Office of Energy to insure adequate development interest in the area. The Department of Water Resources will publish a report of finding. Approximately 20 percent of the contract period staff time will be devoted to this project.
- (3) Roughly 30 percent of the state effort is programed for field work and data analysis as part of a concentrated effort to update information on the geothermal resources in Southeastern Idaho. An effort will be made to obtain temperature gradient data from the holes-of-opportunity in that part of the state. As part of the assessment, the regional groundwater flow systems and their relationship to the geothermal resources will be examined. Much of this analysis will be subcontracted to the University of Idaho.
- (4) Twenty percent of the state team effort will be dedicated to assisting the public and interacting with the State Office of Energy. The Department of Water Resources has established a reputation for expertise in the area of geothermal resource information and are frequently contacted by citizens and industry for information and assistance.
- (5) The Department of Water Resources will publish an abridged version of the statewide direct use report containing all the basic data. Additional information and input from the U.S.G.S. will be incorporated prior to publication. An initial printing of 2,000 copies is planned. Approximately 10 percent of the contract period staff time will be devoted to this project.

BUDGET

Period Covered: February 1, 1980 to January 31, 1981

Funding Source	<u>DOE</u>	<u>IDWR</u>
A. Salaries		
(a) Senior Water Resource Analyst	\$20,900	
(b) Senior Water Resource Analyst	19,500	
(c) Geologist I	9,500	
(d) Section Supervisor (1/2 time)	13,000	
(e) Bureau Chief (1/4 time)	<u>7,900</u>	
Total Salaries	\$70,800	
B. Fringe Benefits (34% of total salaries)	<u>24,000</u>	
TOTAL PERSONNEL		\$94,800
C. Vehicle Rental		4,500
D. Travel		
(a) In-state airfares	\$ 500	
(b) In-state per diem (\$12/day)	3,800	
(c) In-state lodging (\$20/night)	3,500	
(d) Out-of-state airfare for professional meetings	800	
(e) Out-of-state per diem for professional meetings (\$15/day)	200	
(f) Out-of-state lodging for professional meetings (\$30/day)	<u>300</u>	
Total Travel		9,100
E. Printing and Binding		20,000
F. Data Processing		4,000
G. Subcontracts		
(a) Geophysics and/or drilling	25,000	
(b) Groundwater flow study	50,946	
H. Miscellaneous		
(a) Expendable equipment	2,500	
(b) Water quality analyses	<u>10,000</u>	
TOTAL DIRECT COSTS		\$220,846
I. Indirect Costs (33% of total direct)	55,400	\$17,500.
J. Capital Outlay ( 1 light table)	<u>600</u>	
CONTRACT TOTALS	<u>\$276,846</u>	<u>\$17,500</u>

IDAHO DEPARTMENT OF WATER RESOURCES

Contract No. DE-AS07-77ET28407

Mod. 005 from 04/31/80-  
04/30/81

DOE \$250,000  
Total \$267,500

STATEMENT OF WORK

1. Wood River Valley - IDWR will perform a detailed investigation of geothermal potential which will include: identification of location, temperature, geochemical sampling, flow, and bottomhole thermal gradients measured on all available wells and springs in the area from Magic Reservoir to north of Ketchum in the Wood River drainage. Any and all existing geology and geophysical information will be compiled; Note that any data purchases are subject to prior DOE approval. Structural geology of the area will be determined based on air photo interpretations and lineament studies. Some mapping of select areas within the valley may be necessary to verify the structural and lithologic interpretations. A report of the findings will be produced.
2. Washington County - A study equal to that identified in Task 1 will be performed in Washington County, Idaho.
3. Southeastern Idaho - As part of a two-year East Idaho study, the area from Island Park to the Idaho/Utah boarder east of the Snake River Plain will be examined for geothermal potential in a similar program as outlined in Task 1. This task will be performed by the University of Idaho as a subcontract from IDWR, in conjunction with IDWR personnel and geothermal programmatic directives.
4. Assistance in the form of geothermal expertise, will be coordinated with the Idaho State Office of Energy in response to inquiries by citizens and industry for information and assistance pertinent to geothermal development.
5. Reports - A statewide direct use report containing all the basic geothermal information collected to date will be published and distributed in accordance with previously agreed upon distribution terms. All new geothermal information will be incorporated into the USGS GEOTHERM files. Monthly and final reports will be produced as outlined in DOE Form CR-537