

DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

PROGRAM OPPORTUNITY NOTICE (PON)
NUMBER

NATIONAL GEOTHERMAL VARIABLE COST-SHARING DRILLING PROGRAM

CLOSING DATE: JULY 16, 1980

TABLE OF CONTENTS

	<u>Page</u>
I. DEPARTMENT OBJECTIVES -----	
II. SOLICITATION CONSIDERATIONS -----	
III. EVALUATION FACTORS FOR SELECTION -----	
IV. INSTRUCTIONS AND CONDITIONS, AND NOTICES TO RESPONDENTS -----	
V. REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF THE RESPONDENT -----	
VI. LIST OF DOCUMENT, EXHIBITS, AND ATTACHMENTS -----	
Appendix A -----	
Appendix B -----	

I. DEPARTMENT OBJECTIVES

This Program Opportunity Notice (PON) is part of a coordinated national geothermal development program to promote and stimulate the development of low and moderate temperature resources by the industrial and private sectors. This PON is the first solicitation of DOE to participate in a variable cost-share drilling program. Under this PON, all areas of the United States will be considered.

The closing date for this PON is July 16, 1980 at 4:00 p.m. Mountain Standard Time. It is anticipated that the selection process will be completed by August 15, 1980, and the announcement of the proposals selected for awards will be made shortly thereafter. The first award is expected to be made in October of 1980.

Prior to selection for award, additional information, consistent with the overall concepts and approaches presented in the proposal, may be solicited in order to amplify, and or clarify areas of the proposed Statement of Work and/or budget.

Proposals should be straight-forward and complete. Elaborate brochures or other presentations beyond those sufficient to present a complete and effective proposal are neither necessary nor desired.

The proposal submitted in response to this PON may contain proprietary data which the proposer, or his contractors, does not want used or disclosed for any purpose other than evaluation of the proposal. The use and disclosure of any such data may be so restricted, provided the proposer marks the cover sheet of the proposal with the following legend, specifying the pages of the proposal which are to be restricted in accordance with the conditions of the legend:

"The data contained in pages _____ of this proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes, provided that if an agreement is awarded to this proposer as a result of or in connection with the submission of this proposal, the Government shall have the right to use or disclose the data herein to the extent provided in the agreement. This restriction does not limit the Government's right to use or disclose data obtained without restriction from any source, including the proposer."

Mark each sheet of the data you wish to restrict with the following legend:

"Use or disclosure of the proposal data is subject to the restrictions of the title page of this proposal."

Late proposals, modifications of proposals, and withdrawals of proposals will be handled in accordance with the Federal Procurement Regulations, Chapter 1, Section 1-3.802.2 which is attached as Appendix _____.

Proposers may not rely upon DOE or DOE contractor employees to cause a proposal not sent by U.S. Mail to be delivered to the specified room.

II. SOLICITATION CONSIDERATIONS

A. General Description

There is very little use presently being made of low and moderate temperature hydrothermal resources. The main reasons for this appear to be (1) lack of enough knowledge of the resource itself to attract users, and (2) present high risk level and high costs associated with reservoir confirmation. By contrast, utilization of a hydrothermal resource, once it is discovered and confirmed, usually consists of reasonably straightforward engineering.²

Lack of resource knowledge occurs on two levels of detail:

1. On a regional scale, the locations of low and moderate temperature resources are poorly known.
2. On a site-specific scale, the lateral limits, depth, temperature, productivity, and longevity of very few low and moderate temperature hydrothermal reservoirs are known. Very little surface exploration and drilling have been done by the private sector. There are no present federal or state programs to correct this deficiency. This PON Drilling Program would fulfill this need.

The present high risk level for reservoir confirmation stems partly from the lack of resource knowledge stated above and partly from the fact that present surface surveying techniques are not well enough developed to ensure with a high level of probability that a drill hole will intercept a resource. Hydrothermal reservoirs are never uniform or continuous, and dry holes can be drilled in the middle of the best of resources. Better techniques for and more experience in siting wells are needed to decrease the risk of drilling an unproductive well.

The high costs of reservoir confirmation result mainly from the high cost of drilling. Although federal and private funds are being spent to improve drilling techniques, it is unlikely that substantial cost reduction will result in the near term. Drilling costs have been increasing faster than the inflation rate over the past several years. In addition to high drilling costs, there is often a waste of exploration funds through application of inappropriate geological, geophysical or geochemical techniques. New technique development and more experience in application are needed to decrease cost as well as risk.

²Low temperature hydrothermal resources generally have low salinities. Special high temperature equipment and special techniques to handle high salinities are problems usually encountered only with high temperature resources. Most direct heat hydrothermal applications can use off-the-shelf equipment and techniques.

B. Statement of Work

This PON is part of a DOE program to help industry to overcome the above obstacles and stimulate development of low and moderate temperature hydrothermal resources. The objectives of this PON are:

1. To foster economically viable use of low and moderate temperature geothermal resources by the industrial and private sectors by the year 1985, at which time the program would phase out, and
2. To develop an infrastructure of exploration, confirmation and utilization engineering consultants, contractors, and equipment manufacturers that will facilitate increased economic use of low and moderate temperature geothermal resources without the need for federal support beyond 1985.

The proposers will share costs with DOE and will perform the work which shall include drilling, completing and testing a geothermal exploratory/production well. DOE's cost-share for a successful well will be 90% or \$2 M whichever is less. For a well that is neither totally successful or totally unsuccessful, DOE's cost-share will be dependent upon the negotiated variable cost formula, in which the degree of well success is part of the formula. DOE would reimburse the participant after the degree of success of the project has been determined. Therefore, much of the risk associated with reservoir confirmation is assumed by DOE. Further development (installation and operation of utilization systems) of the hydrothermal resources would be financed by private capital.

The government will cost-share only the following items:

1. Site preparation,
2. Actual well drilling and associated problems,
3. Testing during and after drilling,
4. Fluid disposal during drilling and testing, and
5. Completion of the well.
6. Injection well.

Completion of the well is defined as well clean-out; production zone liners and well head equipment to meet well requirements; flowlines necessary for well testing; and equipment necessary to meet institutional regulations.

The government will only cost-share in the injection well if the water quality is such that disposal requires subsurface injection.

The proposer must offer a use for of the produced fluids that is economically feasible and self-sustaining for a minimum of 20 years.

Within 60 days after contract execution, the proposer will submit to DOE an environmental report describing the potential environmental effects of the proposed project. Other reports and deliverables required during the term of this PON are:

1. Management Plan - A detailed plan which defines the project objectives, the responsibilities of all participants in the project, the organizational composition of the management team, the project controls to be implemented, and the required reports and meetings.
2. Monthly Progress & Cost Report - A monthly report summarizing both management and technical activities during the past month planned activities for the succeeding month, and identifying significant problems and solutions encountered or anticipated. A corresponding monthly cost status as compared to the cost plan will be prepared. It will show estimated, actual and projected costs, and explanation of averages.
3. Milestone Schedule - A time frame schedule defining trackable milestones used to measure progress in terms of schedule. This is to be submitted upon contract execution.
4. Well Cuttings - Three sample bags (3" x 5") of well cuttings will be collected every 20 feet for DOE, and the State geologist. The cuttings will be filed and available to the public after well completion.
5. Logs - A copy of all logs is to be transmitted to DOE as available.
6. Daily Drilling Reports - A daily record shall be kept on the IADC Official Standard Daily Drilling Report or other form standard to the drilling industry. The general remarks section shall contain an accurate record of hole conditions and work performed and time required for all work to the nearest quarter-hour. A copy of the Daily Drilling report shall be transmitted to the government monitoring officer. Daily verbal communication may be required to transmit this information. An additional daily record form may be provided for transmittal at the discretion of the monitoring officer.

7. Test Data - A copy of test data is to be provided to DOE and its contractors for reservoir assessment. The government will use this data for an independent evaluation to determine the degree of success of the well for purposes of determining the government cost-share.
8. Well Drilling and Testing Completing Report - A report submitted at the program completion summarizing the results of the program and documenting all pertinent data relating to well drilling, all testing and completion. This document will be available for public information.
9. Final Cost Report - A cost report submitted at program completion summarizing estimated and actual costs. This report will show the DOE cost-share as evaluated by the previously negotiated variable cost-share formula criteria.

All technical data and reports will be made available for public information by the government as soon as is possible after the completion of the project. Any information deemed proprietary by the proposer must be clearly defined prior to agreement execution and will be subject to negotiation by the DOE contracting officer.

DOE requires state teams help proposer pass this qualification criteria

C. Qualification Criteria - *yes or no type of rating no evaluation rating*

To qualify under this PON, certain qualification criteria must be satisfied. Prior to evaluation, each proposal will undergo a preliminary review to assure that the following qualification criteria are satisfied:

→ if don't meet this criteria technical merit of proposal is not even evaluated

1. The proposer must be willing and able to begin the site exploration work before October 1, 1981.
2. The proposal must contain a variable cost-share plan.
3. The proposal must contain a plan whereby degree of success or failure of the project can be determined. The cost share plan must be linked to degree of success or failure in such a way that DOE pays a larger portion of the cost as the degree of success decreases.
4. The proposal must contain proof to right of access, leases and/or ownership to property.
5. The proposal must contain ^{evidence} ~~proof~~ of/right to water use for the geothermal use proposed. *or geothermal/mineral right or may application pending*
6. The proposer must include in the proposal a letter of intent to develop the reservoir once it is confirmed.

Financial capability demonstration
 ↑
 usually in Evaluation Criteria

7. The proposal must contain drilling of ~~at least one~~ new well(s) or cleaning or workover of one or more existing wells along with flow testing of the well(s) for the purpose of reservoir confirmation.
8. The proposer must include a statement permitting DOE personnel, DOE contractor personnel, and other personnel designated by DOE access to the site.

D. Other Pertinent Information

1. In supporting demonstrations under the Federal Nonnuclear Research and Development Act, DOE may provide various forms of Federal assistance. This work will be performed on a cost-participation basis under a cooperative agreement. No profit or fee shall be paid to participant.

For a totally unsuccessful well, the Government's cost participation, is limited to 90% of the estimated cost of drilling incurred after the proposal closing date, or a maximum of \$2.0 million of the cost incurred by the participant after the proposal closing date, whichever is the lowest figure. This PON does not obligate the Government to pay any costs incurred in the preparation and submission of the proposals, or to enter into any cooperative agreement with any proposer.

For a completely successful well, the Government's cost participation is limited to 10% of the estimated cost of drilling incurred after the proposal closing date.

For a well that is neither totally unsuccessful or completely successful, the Government's cost participation will depend upon the variable cost-share plan negotiated after selection for award has been made.

2. It is expected that 5 or more projects will be initiated as a result of this PON, depending upon the cost of the selected projects. The Government, however, is not obligated to make any particular number of awards totaling any particular aggregate sum.
3. The Government's liability in support of the proposed project shall be limited to a fixed amount to be determined during negotiations. The Government will assume no responsibility for the analysis or design of the system or its operability, or for the direct or indirect consequences, agree to indemnify the Government against any and all liability for claims arising from the project.

4. Title to all equipment or material purchased by the participant will remain with the participant. However, in the event the participant fails to complete the project, the Government will have the right to demand and receive title to any hydroelectric energy system hardware which has not been installed up to the extent of the Government's financial contribution.
5. DOE strongly encourages small business and disadvantaged business participation in its programs and in this PON, and it is DOE policy to give these business concerns a reasonable opportunity to participate fairly and equitably in the variable cost-share drilling program. The demonstration projects contemplated under this PON are considered particularly appropriate for small business involvement. If applicable, certification of small business status for proposed team members and subcontractors is to be submitted with the proposal. Definitions relating to small business size standards are based on governing regulations of the Small Business Administration. The definitions can be found in the Code of Federal Regulations, 13 CFR 121.3-2, or by calling your local Small Business Administration Office.
6. The work performed by any successful proposer will be subject to the surveillance of a Government Contracting Officer and Technical Representative.

III. EVALUATION FACTORS FOR SELECTION

A. General Conditions

A Federal Government Source Evaluation Board will evaluate proposals in accordance with the Government regulations and the criteria and considerations set forth in this section of the PON. In conducting this evaluation, the Government may utilize assistance and advice from qualified personnel from other Federal agencies, DOE contractors, universities, and industry. Proposers are, therefore, requested to state on the cover sheet of their proposal if they do not consent to an evaluation by such non-DOE personnel. The proposers are further advised that DOE may be unable to give full consideration to a proposal submitted without such consent. Information contained in the proposals shall be treated in accordance with the policies and procedures set forth in paragraph 9-3.150 of the DOE Procurement Regulations^[a], as summarized in Section I of this document.

DOE reserves the right to support or not support any proposal. All proposers will be notified in writing of the action taken on their proposals. Proposers should allow approximately 120 days for such notification. Status of any proposal during the evaluation and selection process will not be discussed with proposers.

B. Preliminary Review

Prior to making a comprehensive evaluation of the proposal, a preliminary review will be made to determine that the proposal:

1. Contains sufficient technical cost, and other required information to enable comprehensive evaluation.
2. Has been signed by a responsible official of the proposing organization(s) or a person authorized to obligate such organization(s).
3. Has met all the Qualification Criteria listed in Section II, C.

C. Evaluation

Proposals which pass the preliminary review will undergo a comprehensive technical and business evaluation in accordance

[a] Copies of the Federal Procurement Regulations (Code of Federal Regulation, Title 41, Chapter 1) and the DOE Procurement Regulations (CFR, Title 41, Chapter 9) may be purchased from the superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at a nominal cost.

VOLUME I - TECHNICAL PROPOSAL EVALUATION CRITERIA

1. Technical Discussion - The technical discussion will be evaluated for content and adequacy, and the proposed project will be evaluated for technical feasibility considering as a minimum the following factors:
 - a. Description of project including the proposed usage for produced fluids which has a minimum project life of 20 years for a project of demonstrative success using current technology, that is economically feasible.
 - b. Description of Resource.
 - c. Completeness of exploration, drilling, and test plans.
 - d. Treatment of any safety problems.
 - e. Rate of Return (ROR) for the entire project.
 - f. Impact on local or regional energy needs.
 - g. Requirements necessary for a successful project.
 - h. Letter of Intent to develop the reservoir once it has been confirmed.
 - i. Statement allowing DOE personnel, DOE contractor personnel, and other personnel designated by DOE access to the site.
 - j. Any other pertinent information which will provide a meaningful insight into the proposed project.
2. Institutional Considerations - The institutional considerations will be evaluated according to the following factors:
 - a. Legal description and proof of access, leases and/or ownership to property.
 - b. Impact of known or potential environment issues associated with the projects.
 - c. Treatment of any relevant legal, social, or institutional problems.
3. Project Management Plan - The project management plan will be evaluated to determine the:
 - a. Quality of the management plan for the project, including the organizational structure, and provisions for technical and administrative controls.

- b. Adequacy of the project work schedule and its timeliness in accomplishing DOE geothermal objectives.
4. Personnel and Organization Experience - The experience of the organization and the proposed management team (key personnel) will be rated with special emphasis on projects comparable to the scope and magnitude of the proposed project. Preference will be shown to teams indicating geothermal and/or related industry knowledge.

VOLUME II - COST PROPOSAL EVALUATION CRITERIA

5. Project Cost/Budget Summary - The project cost/budget summary will be evaluated to determine the:
- a. Compliance of the proposal with the instructions for completing the Optinal Form 60.
 - b. Reasonableness of costs and time proposed for functional tasks.
 - c. Reasonableness of costs for major components.
6. Organization Information - The organization information will be evaluated to determine the:
- a. Financial position of the proposer(s). Proposers will be evaluated on the adequacy of their resources or their ability to obtain such resources to finance the non-DOE share of the entire project.
 - b. Adequacy of the proposing entity to accomplish the project considering its size, type of business, and history.
 - c. A satisfactory record of a past business performance.
7. Cost Participation/Variable Cost-Share Plan - The variable cost-share plan will be evaluated for adequacy and fairness between DOE and the proposer, as well as the amount of cost participation.

D. Program Policy and Preference Factors

In conjunction with the technical and business evaluation results, the Source Selection Official will make selections for negotiations and subsequent awards in a manner that will further the objectives of the DOE National Geothermal Variable Cost-Share Drilling Program, considering the following factors:

1. Not more than one project will be selected from any proposer or principal participant.
2. A variety of projects in terms of geographic locations.

IV. INSTRUCTIONS AND CONDITIONS, AND NOTICES TO RESPONDENTS

Each PON response shall be prepared in two separate and detachable volumes: Volume I - Technical Proposal, and Volume II - Business Proposal.

A. Volume I - Technical Proposal

Volume I - Technical Proposal consists of the offeror's outline, addressing the technical and management aspects of the procurement, of its capabilities and what it will do to satisfy the requirements of the Statement of Work.

Since the Technical Proposal will be evaluated to determine such matters as understanding of the work to be performed, technical approach, and potential for completing the detail. The proposal should be practical and be prepared simply and economically, providing straightforward, concise delineation of what it is the offeror will do to satisfy the requirements of the Statement of Work.

The proposal shall contain an outline of the proposed lines of investigation, method of approach to the problem(s), any recommended changes to the Statement of Work, the phases or steps into which this project might logically be divided, estimated time required to complete each phases or steps into which this project might logically be divided, estimated time required to complete each phase or step, and any other information considered pertinent to the problem(s).

The proposer shall not merely offer to perform work in accordance with the scope of work but shall outline the actual work proposed as specifically as practical. The Statement of Work reflects the problems and objectives of the program under consideration; therefore, repeating the scope of work without sufficient elaboration will not be acceptable.

The technical proposal shall, at a minimum, contain the following information:

1. Cover Page for Volume I - The Appendix A to this _____ provides a general format and the specific information which should appear on the cover page to Volume I. One of the following organizational classifications should appear on the cover page: ACADEMIC (Local, State, or Private Control); GOVERNMENT AGENCY (Local, State); NONPROFIT (Private Ownership, Local Government Funded, State Government Funded); NONACADEMIC, PROFIT, (Private Ownership, Small Business, Partnership, Corporation, Private or Public Utility); INDIVIDUAL. Consecutively number copies; i.e., 1 through 10. The number 1 copy should be the original with the signature in ink.

2. Abstract - A concise abstract of about 250 words summarizing the proposed demonstration project should be included.
3. Table of Contents - This volume should include a table of contents to facilitate locating the elements outlined in these guidelines (including page numbers).
4. Technical Discussion - Provide information concerning the technical feasibility of the proposed project. Include as a minimum the following:
 - a. A detailed description of the project, particularly the exploration phase and the intended end use. A staged exploration, drilling, completion and testing program should be planned and scheduled. Decision points in this program should be clearly identified. Because each party in the contract (DOE and the contractor) will have the right to terminate participation at any time, DOE will have need to receive copies of all data generated by the program and to perform independent analyses of these data to determine whether or not to extend participation to the next stage. The proposal should state what data will be delivered and in what form at each stage of the program and the approximate length of time DOE will have to make a decision to proceed. Also discuss what volume of fluid and what temperatures are needed to meet intended application.
 - b. Description of Resource. A comprehensive geologic description of the resource as visualized at the time of the proposal should be submitted. This description should include:
 - (a) regional geologic setting;
 - (b) descriptions of any direct geothermal manifestations such as thermal springs, spring deposits, thermal wells, etc.;
 - (c) any geological, geochemical, geophysical or hydrologic information that bears on the resources;
 - (d) any negative information that bears on the described resource including nearby non-thermal wells and springs.

The descriptions should be supported with geologic data, maps and illustrations.

The description should center around the idea of a geothermal exploration target concept. Available information should be analyzed in such a way that a geologically reasonable idea of conditions in the subsurface is evolved and expressed in terms of a target to be tested by the proposed exploration and drilling program.

- c. Proposed Exploration, Drilling, Testing and Completion Plans. A detailed description of the proposed exploration, drilling, completion well testing and completion program should be included.

1. The Exploration Plan

The program has the basic goal of selecting drill test sites. Geological, geochemical, geophysical and hydrological data collection (as applicable), and analyses and interpretation should form part of the exploration program. Drilling for the purpose of determining thermal gradients is also acceptable is applicable. Each technique applied should contribute to a better understanding of the target concept and of how and where to best drill to test the target concept. Anticipated methods to be used in analysis and interpretation of the exploration data should be detailed or referenced in the referred literature. The program should be kept as modest as possible consistent with developing enough data for good drill site selection. If a drill test site can be selected reliably without the use of surface or shallow hole exploration, then no exploration program need be proposed.

Item 1. Exploration Plan
Item 2. a. Drilling Plan

The proposed drilling program should be given in detail. Anticipated rig type, well diameter, casing schedules, drilling fluids (mud, air, foam, water), bit types, etc. should be specified. Blow out prevention equipment should be described. Anticipated drilling problems and planned mitigating measures should be given. Completion plans in event of a producing well and in event of a non-producing well should be spelled out in detail.

- a. well construction
- b. drilling prognosis
- c. plugging and abandonment procedures.

Item 3b.

Test Plan - Well testing will be a very important part of the program. It is anticipated that results of well testing will be the most useful single item in determining the degree of success or failure of the project. The proposal should specify in detail the plans for testing including contractor (if known), test procedures, and data analysis procedures to be used.

a. During Drilling

- (1) well cutting sample collection methods
- (2) borehole logging and intervals
- (3) tests, i.e. DST, production test etc.

b. After Drilling

- (1) test methods
- (2) duration of test
- (3) data evaluation to determine degree of well success.

Item 4 c. The proposed use should be briefly describe. Sufficient engineering detail should be given that the feasibility of this use can be judged. The proposed end user should be clearly identified.

← d. Discuss and safety problems and practices.

← e. Discuss the anticipated project life (physical and economic).

f. Discuss the rate of return (ROR) and include the minimum attractive rate of return (MARR). The backup information should include the following:

1. Life Cycle Cost Schedule
2. Tax Schedule
3. Amortization Schedule
4. Depreciation Schedule
5. Replacement Schedule
6. Investment Schedule
7. Escalation Schedule (include rates for capital costs, O&M costs, and Fuel costs)
8. Alternate Energy Evaluation
9. Year by Year

g. Discuss what "significant" impact this project will have on local or regional energy needs.

h. Discuss the requirements necessary for a successful project. This should relate to the utilization requirements and the proposed cost-share formula.

i. Include letter of Intent and statement allowing VPI testing and DOE personnel and DOE Contractor personnel access to site.

*Item 5. M Btu / \$
large size projects rated more favorably than small*

- j. Any other pertinent information which would aid DOE in understanding the proposer project.

5.

Institutional Considerations

- a. Provide a legal description of the site. Discuss and provide proof of right of access leases and/or ownership to the property.
- b. Discuss any known or potential environmental issues affecting the project, specifically fluid disposal during and after drilling. Discuss any legal, social or institutional issues to problems associated with the project. This portion should address all institutional problems and compliance with various aspects such as right of access; proof of leases and/or ownership to property; environmental ~~impact statements~~ ^{documents} to meet all local, state, and federal requirements; responsiveness to the proper regulator agency to meet required drilling equipments and drill site restoration necessary prior to further development and utilization.

6. Project Management Plan

- a. Provide a concise and definitive statement of work for inclusion into any resulting cooperative agreement. Define the individual key tasks of work and list them in logical sequence. Describe the planned organizational elements showing the reporting relationships of key tasks, and list all key project personnel who will be involved in the demonstration project. If it is to be a team effort identify each of the participating organizations and/or individuals, and include a project organization chart. If the proposer is a team of organizations, one member organizations must be designated as the principal participant and an individual must be designated Project Manager. The nature of any such arrangement should be delineated. Any DOE award arrangement arising from this solicitation will be made with only one party whether a joint venture, other legal entity, or a team's principal participant. The Project Manager will be identified as the representative of the participant having primary responsibility for execution of the proposed effort. The project's relationship of all parties with respect to each other must be clear. All consultants and contractors to the participant should be identified, if possible, and the nature and extent of their efforts in support of the proposed project should be clearly explained.

- b. Provide a work schedule (design, construction, installation, and operation) for the project. This schedule should indicate the phasing and interrelationship of the various tasks. The schedule should also identify key milestones, decision points and delivery of major equipment items. It is essential that a single focus of management responsibility (the Project Manager) duration and sequence of activities and time (in weeks from the award data) of principal events shall be shown.

7. Personnel and Organization Experience

- a. Describe any relevant experience or related capabilities of the proposing organization and consultants that lend strength to the proposed project. Proposals should include a complete description of previous experience that would demonstrate ability to plan and manage projects of similar magnitude.
- b. Provide biographies of the Project Manager and key personnel to indicate competence and experience in the geothermal development (design, construction, installation, and operation). This section should also identify and include information about persons who will work on the project but for whom no funds are requested.

B. Volume II - Business Proposal

1. Cover Page for Volume II - Refer to instructions under Item IV, A.1, and Appendix B for general format. Identify the original copy and number as copy 1.

Note that the signature(s) of the responsible individual(s) should be on the cover page of Volume I for it to be considered under this _____.

The person signing must have the authority to commit the offeror to all of the provisions of the proposal, fully recognizing that the Government has the right, by the terms of the _____, to make an award without further discussion if it so elects.

2. Table of Contents - Volume II should include a table of contents to facilitate locating the elements outlined in these guidelines (including page numbers).

3. Project Cost/Budget Summary

- a. The cost data of the business proposal should be submitted on GSA Optional Form 60 (Appendix D) with the support data noted in the instructions and footnotes thereto. The "Detailed Description of Cost Element", items 1 through 13 on the GSA Operational Form 60, should be broken down into detail and appended with supporting schedules. The proposer may append as many schedules as required to detail fully the costs of the project. Include the method of computation and application of labor overhead and general and administrative overhead. Compliance with the instructions for completing the GSA Operation Form 60 will be a factor in proposal evaluation. The estimated project costs should be clearly delineated in sufficient detail to permit evaluation of each component. Any contracted costs should be summarized on a supplementary Operational Form 60 for each contractor and recapped on the principal participant's Optional Form 60, under Item 8.
- b. Provide a budget summary by the key (major functional) tasks determined in paragraph VII, B5 above i.e., estimate number of labor hours contributed by individuals, costs and duration of time in weeks for each task to permit evaluation of each activity. The total estimated costs of this summary should equal the total estimated cost under "a" above.
- c. Provide a budget summary by major components of the demonstration project to permit detailed evaluation. Examples of project components are land, transmission lines, environmental reports, securing permits or licenses, design, procurement, construction, checkout, data gathering and analysis, dissemination of costs, operational information, and utilization.

3. Organization Information

- a. Provide financial data of the organization and the available financial resources. Annual financial statement (balance sheet and income and expense statement) for the past three years should be attached for proposer, contractors, and consulting firms.
- b. Provide a brief description of the proposing entity (or entities), including size, type of business, history, and discussion of ownership and/or controlling interest.

- c. Provide a listing of current or recent (within the last two years) Government contracts or other contracts by the proposer(s) in this or related fields. Include the name of the sponsoring agency or firm, contract number, amount of contract, subject area of contract, name and phone number of Contracting Officer for any Government contracts cited. Also, please provide information concerning costs and schedule performance. If necessary for evaluation, DOE may solicit experience data concerning proposer's past performance.

4. Cost Participation/Variable Cost Share Plan

- a. Cost Participation - Provide a detailed description of the contributions to the project by each participant; i.e., participating organization team members and DOE. Note that "cost-participation" is not limited to monetary investment. For the purposes of this SCA, "Cost-participation" is as any beneficial service, such as manpower, equipment, technology, patents, consultants, computer time, etc., that is not dependent on DOE support, and is contributed to the proposed project, and is essential to the success of the project. Please provide detailed estimates of the monetary value of each contribution.
- b. Variable Cost Share Plan - For a completely successful well (one that results in a hydrothermal resource having temperature and production characteristics suitable for the intended direct application), DOE's costs share will be 10%. For a totally unsuccessful well (one that is dry, or has no potential for direct application at all), DOE's costs share will be 90% of the costs, but not to exceed \$2.0 million. For those wells that are neither completely successful nor totally unsuccessful, provide a detailed variable cost share plan, as related to the degree of success.

*no capital equipment
other than permanent
well installation
equipment*

5. Modifications to Cost Proposal

Any modifications to the Cost Proposal shall clearly indicate the cost impact of the modifications to the same level of detail shown in the original proposal.

Once the prospective contractor has been selected, the estimated costs submitted with its proposal shall not be subject to increase, except for changes in certified costs or pricing data submitted with the proposal, unless changes are made in the requirements of the request for proposals. Furthermore, increases shall be considered only in regard to those requirements that are actually

affected by the changes (whether they are initiated by the Government or the offeror), and then only to the extent that such increases will be considered separately, and not as part of a combined overall negotiation of the estimated costs for the proposed contract.

There shall be no fee or profit under the resulting contract.

6. Summary of Exceptions and Deviations

The offeror shall identify and explain any exceptions, deviations, or conditional assumptions taken with respect to the requirements of the SCA included in Part III - Cost Proposal.

Any exceptions, etc., taken must contain sufficient amplification and justification to permit evaluation. The benefit to the Government shall be explained for each exception taken. Such exceptions will not, of themselves, automatically cause a proposal to be termed unacceptable. A large number of exception, or one or more significant exceptions not providing benefit to the Government may, however, result in rejection of such proposal(s) as unacceptable.

7. Other Required Forms - The form "Representations and Certifications" composing Section V of this PON should be completed and signed by the proposer and submitted as part of Volume II - Business Proposal. This form is required in order for the Government to contract with the proposer, and is requested in this PON for review but will not be used in the evaluation.

8. Agreement Terms and Conditions - Those persons returning the postcard stating an intention to propose will receive a copy of a sample agreement which contains the terms and conditions applicable to any work arising out of this PON. Most of these terms and conditions are required by statute or regulation. Any exceptions to the sample agreement provisions should be identified and the rationale for the exceptions provided. Execution of an agreement containing the required terms and conditions will be necessary in order for the Government to support any proposal.

C. Other Pertinent Information

1. The date of issuance of this PON is May 15, 1980.
2. The issuing office is the

Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, ID 83401

3. The closing date of this PON is July 16, 1980, at 4:00 p.m. Mountain Daylight Time.
4. Ten (10) copies of the proposal should be mailed to

Mr. _____, SEB Secretary
Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, ID 83401

To facilitate handling, please also mark on the outside envelope containing your proposal.

"Proposal for National Geothermal Variable Cost Share Drilling Program - To Be Opened By Addressee Only."

5. The DOE Point of Contact is Mr. _____, SEB Secretary, Phone Number (208 526-_____).
6. The type of instrument expected to result from this PON is a cooperative agreement where no profit or fee will be paid to the participant.
7. Telegraphic proposals will NOT be considered, although proposals may be modified by telegraphic notice provided such notice is received prior to the date and time specified for receipt of proposals. The term "telegraphic" includes mailgrams.
8. Alternate proposals may be submitted as a separate proposal. However, not more than one project will be selected from any proposer or principal participant.
9. (a) Availability of Contractor Reporting System Guidelines Single copies of the unabridged "DOE Uniform Contractor Reporting System Guidelines" may be obtained without charge by written request with a return envelope (at least 9 1/2") with postage for 1 1/2 pounds sent to the following address:

U. S. Department of Energy
Uniform Contractor Reporting Guidelines
Distribution
Office of Administrative Services
Washington, D.C. 20454

(b) Upon request to the Government Representative designated in the _____ cover Letter, DOE will provide copies of referenced documents, consistent with available supplies. However, it is expected that offerors will utilize their own resources and those available to the general public to the maximum extent possible.

10. DOE will agree to participate in a project at a specific level to be negotiated; however, the actual amount to be obligated in each fiscal year will be subjected to the availability of funds appropriated by Congress.
11. This PON does not obligate the Government to pay any costs incurred in the preparation and submission of the proposals, or to enter into any cooperative agreement with any proposer.
12. Elaborate brochures or other presentations beyond those sufficient to present a complete and effective proposal are neither necessary or desirable.
13. Late proposals, modifications of proposals, and withdrawals of proposals will be handled in accordance with the Federal Procurement Regulations, Chapter 1, Section 1-3.802-2, which is attached as Appendix ____.
14. Five pre-posal conferences will be held at the following places and times:
 - a.
 - b.
 - c.
 - d.
 - e.
15. The proposal must be valid for 180 days from the closing date of this PON.
16. Proposals must set forth full, accurate, and complete information as required by this PON (including attachments). The penalty for making false statements in proposals is prescribed in 18. U.S-C. 100.
17. Marking and Treatment of Proposal Information

The proposal submitted in response to this SCA may contain technical data and other data, including trade secrets and/or privileged or confidential commercial or financial information, which the proposer does not want disclosed to the public or used by the Government for any purpose other than proposal evaluation. To protect such data, the proposer should specifically identify each page, including each line or paragraph, thereof containing the data to be protected and mark the cover sheet of the proposal with the following notice:

NOTES

The data contained in pages _____ of this proposal have been submitted in confidence and contain trade secrets and/or privileged or confidential commercial or financial information, and such data shall be used or disclosed only for evaluation purposes, provided that if a contract is awarded to this proposer as a result of or in connection with the submission of this proposal, the government shall have the right to use or disclose the data herein to the extent provided in the contract. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the proposer.

Mark each sheet of the data you wish to restrict with the following legend:

"Use or disclosure of the proposal data in lines specifically identified by an asterisk(*) are subject to the restriction on the title page of this proposal."

The Government assumes no liability for disclosure or sue of unmarked data and may use or disclose such data for any purpose.

In the event any data contained in a proposal in response to this solicitation is requested pursuant to the Freedom of Information Act, 5 USC 552, the proposer will be advised of such request, in accordance with 10 CFR 709.9; and prior to any release of information the proposer will be requested to expeditiously advise DOE of, and submit to DOE, and detailed listing of all information in its proposal which it believes to be exempt from disclosure under the Act such action and cooperation on the part of the proposer will ensure that any information released pursuant to the Act is properly determined.

18. DOE Policies for Patents, Data, and Copyrights

Offerors are advised that policies and procedures applicable to the patents, data, and copyrights provisions of this RFP, including procedures for advance waiver of patent rights, are set forth in the Federal Register, Vol. 42, No. 134 - Wednesday, July 13, 1977.

19. Request for Waiver of Government Patent Rights

Offerors and prospective contractors, in accordance with applicable statutes and DOE Regulations (41 CFR 9-9.109-6), have the right to request in advance of, or with thirty

days after the effective date of contracting, a waiver of all or any part of the rights of the United States in subject inventions.

20. The section of this solicitation which describes the work to be performed also sets forth DOE's known requirements for technical data. The Additional Technical Data Requirements clause, if included in this solicitation, provides the Government with the option to order additional technical data, the requirements for which are not known at the time of contracting. There is, however, a built-in limitation on the kind of technical data which may be required. This limitation clause provides that the contractor may withhold delivery of proprietary data. Accordingly, it is necessary that your proposal state that the work to be performed and the known requirements for technical data as set forth in the solicitation have been reviewed, and either state that, to the best of your knowledge, no data will be withheld, or submit a list identifying the proprietary data which, to the best of your knowledge, will likely be used in the contract performance and will be withheld.

21. If this contract is in an amount which exceeds \$10,000 and if any royalty payments are directly involved in the contract or are reflected in the contract price to the Government, the contractor agrees to report in writing to the Patent Counsel (with notification by Patent Counsel to the Contracting Officer) during the performance of this contract and prior to its completion or final settlement, the amount of any royalties or other payments paid or to be paid by it directly to others in connection with the performance of this contract together with the names and addresses of licensors to whom such payments are made and either the patent numbers involved or such other information as will permit the identification of the patents or other basis on which the royalties are to be paid. The approval of DOE of any individual payments or royalties shall not stop the Government at any time from contesting the enforceability, validity or scope of, or title to, any patent under which a royalty or payments are made.

V. REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF THE RESPONDENT

SAMPLE DOE PROPOSAL COVER PAGE
VOLUME I - TECHNICAL PROPOSAL
PROJECT PROPOSAL SUBMITTED TO THE
DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

NUMBER _____

NATIONAL GEOTHERMAL VARIABLE COST SHARE DRILLING PROJECT

Copy No. _____

Date of Submission _____

Name of Organization (principal participant if a team of organizations)

Organizational Classifications

Address of Organization

Title of Proposed Project

Funds requested From DOE _____ Total Cost of Project _____

Location of Site _____

Proposed Project Duration (in months) _____

Requested Starting Date _____

Project Manager _____

Position and Title _____

Telephone (w/area code) _____

Permission for Outside Evaluation Yes _____ No _____

SAMPLE DOE PROPOSAL COVER PAGE
VOLUME II - CONTRACT PROPOSAL
PROJECT PROPOSAL SUBMITTED TO THE
DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE

NUMBER _____

NATIONAL GEOTHERMAL VARIABLE COST SHARE DRILLING PROJECT

Copy No. _____

Date of Submission _____

Name of Organization (principal participant if a team of organizations)

Organizational Classifications

Address of Organization

Title of Proposed Project

Funds requested From DOE _____ Total Cost of Project _____

Location of Site _____

Proposed Project Duration (in months) _____

Requested Starting Date _____

Project Manager _____

Position and Title _____

Telephone (w/area code) _____

APPROVAL OFFICIAL

Signature _____

Name Typed _____

Title _____

Date _____

GEOTHERMAL AREAS 7500C WITH PROBABLE USGR

STATE	FAO Name & NUMBER	LOCATION / USGR	MEAN RESERVOIR TEMPERATURE (°C)	MEAN RESERVOIR THERMAL ENERGY (10 ¹⁸ J or 1 Quad)
ARIZONA	# 29 POWER RANCHES, INC.	SE of PHOENIX	165 ± 6	1.12 ± 0.36
CALIFORNIA	# 35 SURPRISE VALLEY AREA	NE CALIF. - NEAR ALTURAS	152 ± 12	7.9 ± 3.2
	# 57 COSO AREA	CHINA LAKE AREA	220 ± 11	2.5 ± 7
	# 58 RANDSBURG AREA	CHINA LAKE AREA	172 ± 29	4.0 ± 1.2
	IMPERIAL VALLEY AREA: SE CALIFORNIA		233 ± 9	4.3 ± 0.8
	# 64 SALTON SEA		323 ± 8	9.7 ± 2.8
	# 64A WESTMORLAND		217 ± 7	6.7 ± 1.9
	# 65 BRAWLEY		253 ± 10	2.2 ± 5
	# 68 EAST MESA		182 ± 7	16.3 ± 3
	# 70 BORDER		160 ± 4	1.57 ± .25
	# 71 HEBER		175 ± 5	3.1 ± 6
THE GETSERS AREA:		NORTH OF SAN FRANCISCO		
# 48 THE GETSERS		237 ± 8	100 ± 24	
# 46 SUIPRUD BANK		194 ± 6	3.2 ± 0.9	
# 47 CLEAR LAKE AREA		190 ± 9	3.9 ± 1.7	
COLORADO	# 78 PARADISE A.S.	NW of DURANGO	154 ± 9	1.25 ± 0.36
IDAHO	# 93 CRANE CREEK - COVE CREEK	Western Idaho, NE of Weiser, ID.	171 ± 10	16.4 ± 7.6

(GEOOTHERMAL AREAS > 150°C (CONT))

STATE	790 Name & Number	LOCATION / USER	MEAN RESERVOIR TEMPERATURE (°C)	MEAN RESERVOIR THERMAL ENERGY 10 ¹⁸ J or T Duno
NEVADA	# 141 STEAMBOAT SPRINGS LOVELOCK - RENO DISTRICT: # 144 SODA LAKE # 145 STILLWATER AREA # 146 FERULEY AREA # 147 BEADY H.S. # 148 DESERT PEAK	RENO AREA WEST-CENTRAL NV.	200 ± 5 157 ± 5 159 ± 8 182 ± 13 155 ± 6 221 ± 5	14.4 ± 5.9 7.5 ± 4.3 23 ± 9 1.51 ± 0.44 8.2 ± 4.2 29 ± 10
NEW MEXICO	# 171 VALLES CALDERA	WEST OF LOS ALAMOS	273 ± 8	87 ± 39
OREGON	LAKEVIEW DISTRICT # 190 CRUMPS H.S. WALE DISTRICT # 203 NEAL H.S. # 204 WALE H.S.	SOUTH-CENTRAL OR. EAST-CENTRAL OR.	167 ± 9 188 ± 8 157 ± 2	3.0 ± 1.2 1.56 ± 0.44 45 ± 21
UTAH	MINERAL MTS. DISTRICT # 208 LOU FERGUSON # 209 ROOSEVELT	SW UTAH	167 ± 6 265 ± 8	16.0 ± 4.1 32 ± 13
TOTAL = 772.01 ± 264.25				

User Coupled- Environmental Requirements

Susan Spencer

Address probs in generic sense

1) disposal problem types

2) dewatering problem types etc.

Preparation of in-house generic environmental report

so proposers can follow generic guidelines

to submit w/ proposals & streamline report

i.e. can an environmental "report" vs. environmental assessment" be sufficient

allow ID to make this decision rather than D.C.

"assessment" must involve govt → contractor can't supply themselves

(GCD)

3/6/80
Shuckman

Resource Assessment
Commercialization
State Teams
↓
DOE Regions

DOE/ID

UURI
Program Mgt.

EG&G
Program Mgt.

Geology
Technical
Research

Geochemistry
End Case
Studies

Geophysics
Proposal
Review

Regional
Studies
Monitor

Reservoir
Engineering

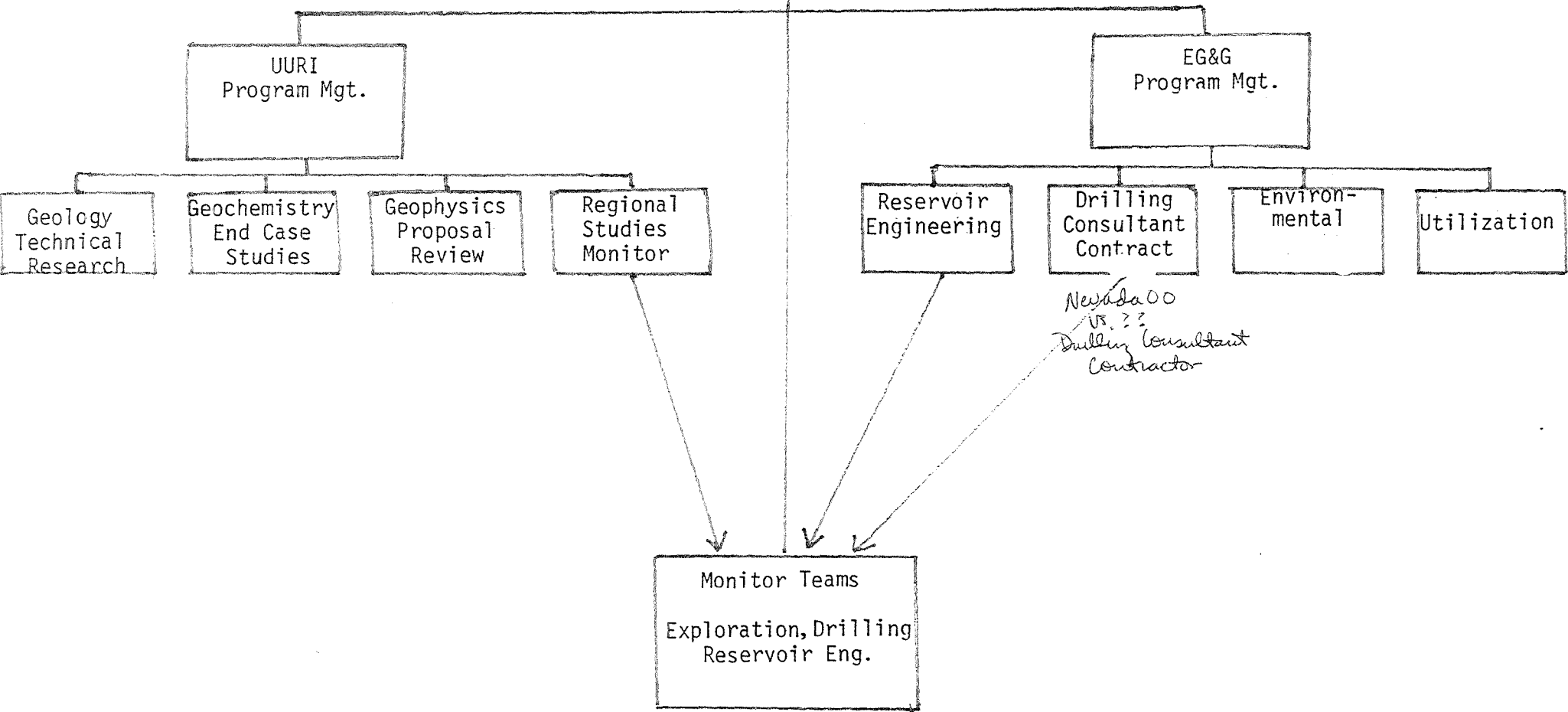
Drilling
Consultant
Contract

Environ-
mental

Utilization

Nevada 00
US ???
Drilling Consultant
Contractor

Monitor Teams
Exploration, Drilling
Reservoir Eng.



MANAGEMENT ROLES

I. State Teams and Regions

1. Assist proposer with proposals for both resource and utilization.
2. Act as advisors to the Proposal Evaluation Technical Advisor Committee.

II. DOE-ID

1. Direct the overall program.
2. Establish the Management Plan.
3. Write solicitation and award.
4. Change Control Board.

III. UURI

1. Exploration lead.
2. Management Plan.
3. Solicitation Planning and Evaluation
4. End case studies.
5. Coordinate pre-proposal conferences.
6. Exploration technology transfer.
7. Monitor.
8. Coordinate State Resource Teams.

IV: EG&G

1. Reservoir Engineering
 - a. Solicitation evaluation and planning
 - b. Sample Well testing plans
 - c. Evaluate well success
 - d. Reservoir testing technology transfer
 - e. Monitoring

2. Drilling Consultant Contract
 - a. Solicitation planning and evaluation.
 - b. Monitor.
 - c. Feed information to Sandia for drilling technology transfer.

3. Environmental.
 - a. Develop generic environmental report.
 - b. Solicitation planning and evaluation.
 - c. MONITOR

4. Utilization./ Management
 - a. Management Plan.
 - b. Solicitation planning and evaluation.
 - c. Help ID set up Change Control Board.
 - d. Coordinate Commercialization State teams.
 - e. Assist proposer to establish new end use if required.

1/15/80

GEOHERMAL

Confirmation Drilling Program

* - anticipate min. 3 weeks
max 10 weeks

FY80 FY81

Jan Feb Mar Apr May Jun Jul Aug Sep Oct

Write RFP
Setup Eval Board 5/15
Sources Forged
ETC
RFP
OUT

UURI Case Studies Out

EG&G Develop Generic Environmental Prog.

Develop Program Mgt Plan

Gear up State-Coupled Teams & Hold

Pre-Proposal Briefings
(GRC UURI) Compile Contractor & Consultant List

Evaluation
Presentations

Response Period 7/15

Proposal Review
SELECTION 8/15

Contract Negotiations

Monitoring
Subseq Eval.
Neg. New Cont.

First Award

FY 81 budget =
\$10M