

GLO1137

FINAL REPORT: VOLUME 77-0

ERDA

EY-76-S-07-1601

Stanley H. Ward

VOLUME 0 OF
Final Report ERDA/DGE
Contract EY-76-S-07-1601

I. Introduction

Contract EY-76-S-07-1601 was signed on June 1, 1976 for a May 1, 1976 start date. Since that time there have been six contract modifications (MODS A001 through A006) and a deobligation. Essential elements in the base contract and its modifiers include the following items:

- 1) Contract Date
- 2) Start Date
- 3) Amount
- 4) Cumulative Amount
- 5) Research to be performed by contractor
- 6) Final Report Due Date
- 7) Recommended Modified Due Date
- 8) ERDA Technical Representative
- 9) ERDA Administrative Representative
- 10) Deliverables and Reports
- 11) Technical Reports
- 12) Statements of Work

To permit timely tracking of these items, we have prepared a *Tracking Document* which is included as Appendix I of this first volume of a final report. This *tracking document* records all essential features of contractual obligations and attempts to forecast delivery of all technical and final reports. Because of the changing scope of the contract, some further contract

modifications are being sought to rectify obvious differences between intent and contract. While the *tracking document* reflects such recommended modifications it does not call for them specifically; they are left to direct negotiation between ERDA and U of U.

By contract we are obliged to honor the items identified as "Research to be performed by contractor" and "Deliverables and Reports". Flexibility in executing every detail in "statements of work" and, for that matter, in "Research to be performed by contractor" seems to be afforded by the statement in the base contract which reads, "It is understood that Appendix A, a guide to the performance of this contract, may be deviated from subject to the specific requirements of this contract." It is not the intent of the University of Utah nor its subcontractors to deviate from its tasks, detailed in its proposed and accepted statements of work, unless these deviations serve the best interest of ERDA's programmatic objectives. It is in this philosophy that expansions of scope, reductions of scope, and combinations of tasks have been effected in our planning (all within the funding limitation of \$1,274,466.00 imposed).

The initial termination date of contract EY-76-S-07-1601 was originally established as April 30, 1977. Through six modifications and a deobligation this termination date has been extended to April 30, 1978. It is clearly not the intent of ERDA/DGE nor of U of U and its subcontractors to delay final reporting on all items until April 30, 1978. Rather, it is the intent of all parties to terminate each task in a sequential manner at the earliest possible date. Thus, U of U personnel are expending every effort to terminate early commitments: the *tracking document* reflects this effort. However, because of the rapid expansion of scope and because of delays in deliveries of essentials, some stretching out of tasks is being experienced. Fortunately, the stretch out is accompanied by a slower dollar burn rate than anticipated

so that the performance/dollar ratio remains virtually unaltered from that anticipated at the outset. Accordingly, all deliverables in the base contract shall be delivered by the end of the current calendar year. Such is also the case for five of six tasks identified under MOD A001. For the sixth task under MOD A001 we are recommending, at the moment, a one year deferral of reporting because of an expected expanded scope under FY 78 funding (Task 76.1.18 of tracking document). All items under MOD A002 shall be delivered on schedule. Later MODS are not involved in this first volume of the *Final Report*. Several subsequent volumes of the *Final Report* shall appear.

II. Reports Delivered

1) Task 1) of the base contract called for as a deliverable,

"One or more designs for exploration architecture which shall specify in detail the most cost-effective exploration sequence or sequences incorporating in a modular construction several elements of geology, geochemistry and geophysics. This architecture shall be concerned with convective hydrothermal systems in the Basin and Range province."

This item was delivered as Technical Report (77-2) in April, 1977 and appears as Appendix VI hereto and made a part of this report.

2) Task 2) of the base contract called for as a deliverable,

"Specific recommendations on the preferred technologies for detecting, delineating, and evaluating convective hydrothermal systems in the Basin and Range Province. Further, specific items shall be identified which require additional research."

This item is in preparation and will be delivered by October 31, 1977 as a volume in the *Final Report*.

3) Task 3) of the base contract called for as a deliverable,

"A comprehensive case history of the Roosevelt Hot Springs KGRA noting in detail the characteristic signatures, or lack thereof, for each of the geological, geochemical and geophysical techniques employed."

This item is completed and will be submitted to Geology as a two part paper. It will also be used as a base document for a GSA field trip in April, 1978. It will be submitted as a volume in the *Final Report*

4) Task 4) of the base contract called for as a deliverable,

"A report on seismicity, precision gravity, and precision leveling as indicators of environmental impact of fluid withdrawal."

This item will be submitted as a volume in the *Final Report*

Under MOD A001 four deliverables were required as follows:

Task 5) "An evaluation of the AIRTRACE system for exploration for geothermal systems."

The final report on this item will be included as a volume in the *Final Report*.

Task 6) "Detailed expenditure and milestone charts at start of expanded effort."

These documents were delivered on or about Nov. 15, 1976.

Task 7) "Quarterly reports containing planned and actual expenditure chart, and a summary of progress containing highlights and critical issues."

These reports have been delivered.

Task 8) "The Contractor shall within three months after the effective date provide a proposal to the Contracting Officer setting out a method for disseminating to the public on an on going basis the information generated under this contract."

This proposal was submitted on or about Oct. 15, 1976 and subsequently was accepted by the Contracting Officer.

Under MOD A003, the final reporting requirements have been met for Tasks CSU1, through CSU5, Tasks CSID1 through CSID4, and Tasks NE1 through NE5 and shall be submitted as volumes in the *Final Report*. The remaining tasks under CSU, CSID and NE require renegotiation since the contract and the intent differ. This renegotiation is in process.

III. Technical Reports Delivered

To effect the contractual requirement of the base contract to maintain all materials collected on an open file status, we have prepared and issued to all interested parties the following technical reports.

<u>Report No.</u>	<u>Date</u>	<u>Title</u>
76-1	November 1976	Dipole-Dipole Resistivity Delineation of the Near Surface Zone at the Roosevelt Hot Springs KGRA. S. H. Ward and W. R. Sill.
76-2	December 1976	A Thermodynamic Model of the Hydrolysis of Microcline in Acid Sulfate Solutions. R. E. Dedolph and W. T. Parry.
76-3	October 1976	Magnetotelluric Survey and Resistivity Maps, Roosevelt Hot Springs, Utah. Geotronics Corporation.
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Each of these technical reports is included herein as Appendices II through XI. Additional technical reports are in preparation and shall be delivered according to the schedule of the *Tracking Document*.

IV. Reporting Schedule

Contract MOD A003 contains the first detailed instructions for reporting. The U of U is seeking modifications of the contract to allow the contract to meet intent with respect to concurrence of ERDA/DGE Technical Representative.

V. Technical and Administrative Representatives

The *Tracking Document* contains our recommendations for Technical and Administrative Representatives for each major task. This recommendation represents a consensus of ERDA/DGE and U of U on best management procedures and a modification of the contract is being sought to effect the changes reflected in the contract between the Contract and the *Tracking Document*.

You have previously received all technical reports with the exception of Appendix IV (Technical 76-3), which is attached. Please send notice if you wish further copies of any of these reports sent.

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