



December 16, 1981

Dr. L.L. Mink, Program Manager
Energy & Technology Division
U.S. Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, Idaho 83401

Dear Roy:

Enclosed are the "Contract Management Summary Report" and "Project Status Report" for DOE grant DE-AS07-791D12037, "Heat Flow and Geothermal Evaluation of Oregon and Washington," for the month of November 1981.

Sincerely yours,

Dae

David D. Blackwell
Professor of Geophysics

ddb/cjg
cc: N.W. Fraser
E.G. Jones
R. Gray
D. Foley
enclosures

PROJECT STATUS REPORT

DEPARTMENT OF ENERGY CONTRACT #DL-AS07-791D1203/
Heat Flow and Geothermal Evaluation of Oregon and Washington

FOR THE MONTH OF November 1981 :

CONTRACT STATUS

Reduction of temperature-depth and other digitized log data,
as well as thermal conductivity testing, proceeding on schedule.

VARIANCES AND PROBLEMS

Routine equipment maintenance lagging slightly behind schedule
as laboratories are running near full capacity.

AREAS OF CONCERN

Scheduling use of laboratory facilities to achieve maximum
production by student assistants becomes more difficult late
in the semester, as students' schedules are more demanding.

ACHIEVEMENTS

Current season's field data being integrated into thermal modeling
of Oregon and Washington.

CONTRACT MANAGEMENT SUMMARY REPORT

DEPARTMENT OF ENERGY CONTRACT #DE-AS07-791D12037

Heat Flow and Geothermal Evaluation of Oregon and Washington

PROJECT COSTS

June 1981	<u>\$ 19353.83</u>	December 1981	_____
July 1981	<u>\$ 15667.04</u>	January 1982	_____
August 1981	<u>\$ 16547.22</u>	February 1982	_____
September 1981	<u>\$ 27986.20</u>	March 1982	_____
October 1981	<u>\$ 18020.81</u>	April 1982	_____
November 1981	<u>\$ 19573.63</u>	May 1982	_____
		<i>TOTAL COST-TO-DATE</i>	<u>\$ 117148.73</u>

MAJOR PROJECT MILESTONES

June 1981	First field use of digital-recording equipment system in new logging van.
July 1981	Received first batches of digital data from Oregon & Washington for reduction and analysis in computer lab.
August 1981	Large volume of field data received; also first batches of cutting samples for thermal conductivity analysis.
September 1981	First complete 1981 summer field data workups: interval gradient & thermal conductivity data, location & lithology data.
October 1981	Backlog of summer field data now being processed by student assistants.
November 1981	New field data being integrated into thermal modeling of data from previous years' work.
December 1981	
January 1982	
February 1982	
March 1982	
April 1982	
May 1982	

PROJECT MANPOWER

June 1981	P.I. 80%, secretary 75%, research associate 90%, lab asst. 90%, lab tech (2) 90% & 100%, field asst. 50%, student (2) 50% & 37.5%
July 1981	P.I. 80%, research associate 90%, lab asst. 45%, lab tech. (2) 25% & 100%, field asst. (2) 100%, student 50%
August 1981	P.I. 40%, research associate 90%, lab tech 100%, field asst. (2) 50% & 100%, student 50%
September 1981	P.I. 30%, secretary 50%, research associate 90%, lab asst. 90%, lab tech. 100%, field asst. 100%, student (2) 30% & 85%
October 1981	P.I. 30%, secretary 45%, research associate 90%, lab asst. 80%, lab tech. 100%, field asst. 100%, student (2) 25% & 50%
November 1981	P.I. 30%, secretary 45%, research associate 90%, lab asst. 80%, lab tech. 100%, field asst. 100%, student (2) 25% & 50%
December 1981	
January 1982	
February 1982	
March 1982	
April 1982	
May 1982	

CONTRACTING AGENCY: 2nd DEPT. METRO POLICE DEPARTMENT
 CONTRACT NUMBER(S): 13-AC07-28-13037
 PRINCIPAL INVESTIGATOR: _____

CONTRACT PERIOD	\$ CONTRIBUTION	STATE	WORK DESCRIPTION	LOCATION	REMARKS
7/10/29 - 5/31/29	162000	0	SUPPORT THE POLICE DEPT SERVICES IN SNOWS	CROSSING IN IN WASHINGTON D.C.	

CONTRACTOR: SOUTHERN METHODIST UNIVERSITY

APPENDIX A

July 10, 1979

For the contract period from the "entered into" date through May 31, 1980.

Article A-1 - RESEARCH TO BE PERFORMED BY CONTRACTOR

(a) The scope of work under this contract is unclassified, and the Contractor under this contract with the Department of Energy will perform research consisting of the following:

(1) The states of Oregon and Washington will contract drilling and perform various geological and geophysical studies necessary for inclusion in this study. The cost of the state work will be at the states' expense. Southern Methodist University (SMU), as part of this contract, will cooperate with the states of Oregon and Washington in order to define the heat flow and geothermal potential in the Cascade Range and in the Basin and Range province of Oregon.

(2) SMU will conduct field measurements of temperature and in situ well parameters of natural gamma activity, specific conductance, resistivity, and sonic velocity. Samples will be collected for thermal conductivity determinations. In the laboratory thermal conductivity determinations, terrain corrections, and other core sample determinations will be made. Complete heat flow values will then be calculated for geothermal interpretation.

(3) SMU will then integrate all data from the three parties to the research for a combined interpretation of the regional heat flow and geothermal potential of select target areas.

(4) Deliverables: SMU will develop a report (plus figures) with detailed estimates of the magnitude and location of the geothermal resources in the Cascade Range of Oregon and Washington, and in the Basin and Range province of Oregon. In addition, SMU will provide all the analyses to the states of Oregon and Washington for subsequent incorporation into state geothermal resource maps at the state's expense.

Article A-II - WAYS AND MEANS OF PERFORMANCE

(a) The items to be supported include the following:

Salaries	\$61,153
Employee Benefits	5,634
12% Faculty Salaries of \$32,005	
6.15% staff (non-retirement) of \$29,148	
Indirect Costs	37,250
65% on-campus salaries of \$50,286	
42% off-campus salaries of \$10,867	
Equipment	31,000
Supplies	8,020
Travel	15,943
Computer	6,000
Publication	2,000
	<u>\$167,000</u>

(b) Items, if any, significant to the performance of this contract, but excluded from computation of Support Cost and from consideration in proportioning costs:

None

(c) Time or effort of Principal Investigator(s) including indirect cost and fringe benefits contributed by the Contractor but excluded from computation of Support Cost and consideration in proportioning costs:

None

(d) All subcontracts and consultant agreements require the review and written approval of the Contracting Officer.

Article A-III - FUNDING

The total estimated cost of items under A-II(a) above, for the contract period stated in this Appendix A is \$167,000.00; DOE will pay 100% of the actual costs of these items incurred during the contract period stated in this Appendix A, subject to the provisions of Article III and Article B-V. The estimated DOE Support Cost for the contract period stated in this Appendix is \$167,000.00.

The estimated DOE Support Cost is funded as follows:

(a) Estimated unexpended balance from prior period(s) \$	<u>-0-</u>
(b) New funds for the current period	<u>\$167,000.00</u>