

CONTRACTING AGENCY: UNIVERSITY OF TEXAS AT AUSTIN
 CONTRACT NUMBER(S): DE-AS01-7901400
 PRINCIPAL INVESTIGATOR: _____

CONTRACT PERIOD	# CONTRIBUTION		WORK DESCRIPTION	LOCATION	REMARKS
	DOE	STATE			
7/1/79 - 6/30/81	300,000	0	<ul style="list-style-type: none"> *ANATOMICAL RESEARCH CENTER *LUNDAVILLE STUDY *LUNDAVILLE/ANAT STUDY *MINDS TRAINING CENTER *RESEARCH CENTER *RESEARCH CENTER *RESEARCH CENTER 	<ul style="list-style-type: none"> CENTRAL TEXAS 210 210 210 CENTRAL TEXAS 210 210 210 210 210 210 — — 	

APPENDIX A

CONTRACTOR: UNIVERSITY OF TEXAS AT AUSTIN

For the contract period from July 1, 1979 through September 30, 1980.

Article A-1 - RESEARCH TO BE PERFORMED BY CONTRACTOR

The scope of work under this contract is unclassified, and the Contractor under this contract with the Department of Energy will perform research described in proposals entitled "Quantitative Hydrologic Assessment of Cretaceous Geothermal Aquifers and Regional Study of Geothermal Potential from Tertiary and Paleozoic strata in Central Texas" and "State wide Survey of Temperatures of Deep Aquifers in Texas" as modified in discussions with DOE. The entire project will take two years. The specific detailed statement of research for the first year consists of the following:

Task 1 - Quantitative hydrologic assessment of three cretaceous aquifers (Hosston/Trinity; Paluxy; Woodbine) identified during previous 1 year regional overview.

Subtask

- a. Search water-well files for single pump drawdown tests, for data used in computing transmissibility, storage coefficient, and hydraulic conductivity.
- b. Encode data obtained from tile search; run programs for T, C, & S.
- c. Begin plotting T, C, and S for final map.
- d. Prepare a tentative (incomplete data base) map showing hydraulic properties of the three cretaceous aquifers).

Task 2 - State-Wide Lineament Survey

Subtask

- a. Acquire landsat images for entire state of Texas.
- b. Assess landsat images for lineaments; using both Band-5 and enhanced color images; 3 man-hours for each image, then make composite of lineaments for each of the two types of image surveyed. Compare and evaluate.
- c. Compile lineaments at scale of 1:250,000 for cartographic transfer at a scale of 1:1,000,000.
- d. Prepare a lineament map of Texas at scale of 1:1,000,000.

Article A-1 - RESEARCH TO BE PERFORMED BY CONTRACTOR (Cont'd)

Task 3 - Application of Lineament Survey to Faults affecting the 3 major cretaceous aquifers

Subtask

- a. Compile all faults mapped on structural maps during previous (regional stratigraphic) overview.
- b. Compile all lineaments covering area along the 3 major cretaceous aquifers.
- c. Compare faults to lineaments.
- d. Compare faults and lineaments to geothermal data (including water temperatures, or geothermal gradient data already prepared during previous (overview) study.
- e. Prepare a fault and lineament map of central Texas for comparison to hydraulic data (see Task 1).

Task 4 - State-Wide Water Temperature Measurements

Subtask

- a. Survey water quality (temp.) data files at Texas Department of Water Resources; locate aquifers as potential geothermal targets; survey water level data files to locate target wells.
- b. Begin water temperature field measurements for the following areas:
 - (1) Balcones and Inner Coastal Plain
 - (2) Trans Pecos Area
 - (3) High Plains
- c. Prepare a partial aquifer temperature map for Texas, including cretaceous and tertiary aquifers along inner coastal plain, and unknown aquifers in Trans Pecos and High Plains.

Task 5 - State-Wide Geothermal Gradient Map

Subtask

- a. Acquire basic data including electric logs w/BHT, and county well location maps.

Article A-1 - RESEARCH TO BE PERFORMED BY CONTRACTOR (Cont'd)

- b. Encode BHT (as corrected), and locate geothermal control points.
- c. Continues encoding of a log data for programming to give geothermal gradient.
- d. Prepare a partial geothermal gradient map of Texas.

Task 6 - Provide Data to USGS Geothermal file

Task 7 - Publish Generalized (Public) Geothermal Map of Texas

Article A-II - WAYS AND MEANS OF PERFORMANCE

- (a) Items for which funding will be provided for effort during the initial term are as indicated below:

Salaries and Wages:	\$177,189
Indirect Costs at 26% for 7/1/79-8/31/79 and 18% for 9/1/79-9/30/80	26,667
Other Direct Costs	83,767
Travel	12,804
Subcontract to Texas Dept. of Water Resources	<u>26,775</u>
	\$327,202

Items for the subsequent term and the balance of the funding provided in A-III below will be defined when the contract is extended.

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

None

- (c) Time or effort of principal investigator(s) contributed by the Contractor but excluded from computation of Government cost and consideration in proportioning costs:

None