

GL03093 - 4 of 5

STANFORD GEOTHERMAL PROGRAM

REINJECTION TECHNOLOGY PROJECT

East Mesa Field Testing

October 1, 1985 - September 30, 1986

\$50,000

Submitted to: Department of Energy
Idaho Operations Office
550 Second Street
Idaho Falls, Idaho 83401

Supplement to: Contract Number DE AS07 84ID12529

**Stanford Geothermal Program
Reinjection Technology Project - Field Tests
FY-86 Program Plan and Budget**

The Stanford Geothermal Program has conducted several tracer tests in active geothermal fields in the past few years. We have found, however, that the cost and type of effort required in such studies is difficult for a university-based research program to maintain. We therefore shifted our emphasis towards industry-shared tests, performed by field operators in their own geothermal fields. At the present time, we are in the process of conducting a tracer test in the geothermal field at Broadlands, New Zealand which will start October 17, 1985. This test will be performed by the New Zealand Ministry of Works and Development, at their own expense. Stanford personnel will be present during part of the test in November, 1985 and will assist in the interpretation as a test of the proposed interpretive model.

In FY-86 we are proposing to participate in the design and planning of a well-to-well tracer test to be conducted in the East Mesa Geothermal Field in cooperation with Magma Power Company, EG&G Idaho, UURI and LBL. Stanford's part in the tracer test would be mainly associated with its interpretation, but we would also contribute to the design specifications of the test.

The objective of these tests will be the evaluation of the performance of the interpretative model we have developed for the forecasting of thermal breakthrough. The confirmation of the technique will require the subsequent monitoring of the tested wells. Although our goal in these studies is scientific, our results will hopefully be of use to the field operators in reaching production decisions in the fields.

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Reinjection Technology Project

East Mesa Field Testing

BUDGET 1986

October 1,1985-September 30,1986

1985-86

I. DIRECT SALARIES

Prof. R. N. Horne, Principal Investigator
three months @ 10% effort 1,728

Dr. J. S. Gudmundsson, Project Manager (or replacement)
four months @ 10% effort 1,228

Student Research Assistant
three months @ 50% effort 2,298

Support Staff
Secretary (4 months at 10%) 630
drafting/graphics (30 hours @ 11.85) 355

TOTAL DIRECT SALARIES 6,239

II. STAFF BENEFITS

25.4% of direct salaries 1,584

III. TRAVEL

Domestic Travel
Two trips to Washington 2,000
Three trips to Southern Calif. 3,000 5,000

IV. MISCELLANEOUS SUPPLIES AND EQUIPMENT

Tracer chemicals (either potassium iodide or rhodamine) 10,000
Minor equipment and lab supplies 6,673 16,763

NET TOTAL DIRECT COSTS 29,586

V. INDIRECT COSTS @ 69% of NTDC 20,414

TOTAL COSTS -- East Mesa Field Testing Project 50,000