PROJECT FACT SHEET

CONTRACT TITLE: Data Management for Assistance in Conducting AOR in California

ID NUMBER: DE-AC22-95MT95004

B & R CODE: AC1015000

DOE PROGRAM MANAGER:
NAME: William H. Hochheiser
PHONE: (202) 586-5614

DOE PROJECT MANAGER:
NAME: David R. Alleman
LOCATION: NPTO
PHONE: (918) 699-2057

PROJECT SITE
CITY: Sacramento **STATE:** CA
CITY: **STATE:**
CITY: **STATE:**

CONTRACTOR: CA Dept of Conservation
Div of Oil,Gas & Geothermal
ADDR: 801 K Street, MS20-20

Sacramento, CA 95814

PRINCIPAL INVESTIGATOR:
NAME: Mike Stettner
PHONE: (916) 323-1781
FAX: (916) 323-0424
INTERNET ADDRESS: mstett@consrv.ca.gov

CONTRACT PERFORMANCE PERIOD:
02/22/1995 to 04/01/1998

PROGRAM: Environmental-Oil
RESEARCH AREA: Environmental

FUNDING ($1000'S)	DOE	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	399	0	399
FISCAL YR 1998	526	0	526
FUTURE FUNDS	0	0	0
TOTAL EST'D FUNDS	925	0	925

OBJECTIVE: Provide resources and capabilities to facilitate the State of California with Area of Review (AOR) variance analysis on a statewide level including: (1) analysis and identification of areas which may qualify for AOR variances; (2) correlation of information from various databases and automation systems to conduct AORs in areas that do not qualify for variances; (3) evaluation of the risk of pollution, during permitting and monitoring, using risk based data analysis; and (4) conduct of spatial analysis of injection well data in conjunction with other geographically referenced information.

PROJECT DESCRIPTION:
Work to be performed: The work in this project will enhance and upgrade the existing GIS software and convert existing data to usable formats; upgrade the RRC's Relational Database Management System (RDBMS) to client/server technology and create a link between the RDBMS and mainframe databases; and implement a document management system to make oil and gas forms containing AOR data readily available.

PROJECT DESCRIPTION (Continued)

Background: The Safe Drinking Water Act (SDWA) of 1974 required that the Environmental Protection Agency develop minimum requirements to establish effective state programs to protect underground sources of drinking water from contamination resulting from the subsurface emplacement of fluids through injections wells. The SDWA states that these requirements must not impede the reinjection of brine or other fluids resulting from oil and gas production, or the injection of fluids used in secondary or tertiary recovery, unless USDW would be endangered. EPA promulgated rules in 1980 that excluded existing Class II injection wells from Area of Review requirements. EPA has recently announced its intent to revise regulations to include the AOR requirement for the previously excluded wells.

A federal Advisory Committee (FAC) has recommended that AORs for existing wells be performed within five years of any new regulations. The FAC also recognized that conditions could make it possible to exempt wells in a specified region (basin, trend, field, portion of a field, etc.) from individual well AORs through a variance. The proposed rule would require states to establish a variance methodology which would delineate where variances from the proposed requirements would be appropriate.

PROJECT STATUS:

Current Work: The project has undergone significant funding change since its initiation due to a high degree of uncertainty with respect to DOE's annual funding. As a result, a modular, phased-approach was adopted to ensure that the project would be effectively complete at any phase in the event of modified funding levels. To date, most of the modified DOE grant has been expended.

Due to uncertain receipt of remaining DOE funding, the Division of Oil, Gas, and Geothermal Resources (Division) is funding a program to develop a comprehensive database system similar to the Risk Based Data Management System (RBDMS) developed by the Ground Water Protection Council. California's system is being developed (written) in Delphi/SQL Server to increase the speed and user-friendliness of the system. It will also allow the Division personnel to use less-powerful computer resources (i.e., memory and processor speed) by not having to run the Microsoft Access-based system associated with RBDMS. The desired functional attributes of the system will include Area of Review capabilities, personnel and resource management prioritization, data processing, and inquires.

A master database server will be located in the Sacramento Headquarters office with subordinate servers located in each district office. Data will be entered in the district offices' systems and will be uploaded periodically to the master database server.

The Division is also in the planning stages to develop an on-line system to provide the capability for electronic transfer of permits, reports, logs, and other data. The Division envisions such a system would allow the receipt of permit applications from operators over the Internet, transfer the appropriate data directly into its data management system, and then provide for transmission of a permit back to the operator. This application would also have to be designed to work with the SQL Server database software.

Scheduled Milestones:

Acquisition completed	08/96
Training and documentation completed	06/98
All systems fully operational	04/97
Final report	02/98

Accomplishments: To date, the Division has achieved the first and most significant objectives of the original proposal, which were to (1) upgrade its information technology infrastructure, and (2) to modify and implement the existing RBDMS to provide data entry.

Currently, about 1 percent (2,500 wells) of California's oil and gas well data has been entered into the data management system. WellView software by Merak has been purchased and distributed to each Division district office. Data that has been entered into the data management systems was ported successfully to WellView for viewing as a casing profile.

In addition, two GPS units were purchased to support the Division's Mapping and GIS applications. Field personnel are collecting data to accurately locate wells and surface equipment expressed in geographic coordinates.