Report Title:	"Develop Data Management System for Assistance in Conducting Area of Reviews (AORs) in Texas"
Type of Report:	Quarterly Technical Report
Start Date:	October 1, 1996
End Date:	December 31, 1996

Principal Authors: Lori Wrotenbery, Deputy Director
Oil and Gas Division

Darryl F. Burgess, Methods Analyst - Administration
Oil and Gas Division

Lorelei Weitzel, Assistant Director - Customer Applications
Information Technology Services Division

Report Issue Date:	January 15, 1997
DOE Award No.:	DE-FG22-95MT95007
Submitting Organization:	Railroad Commission of Texas (RRC or Commission) 1701 N. Congress Avenue P.O. Box 12967 Austin, Texas 78711-2967

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

DISCLAIMER

ABSTRACT

The following technical report provides a detailed status report of the DOE grant project entitled "Develop Data Management System for Assistance in Conducting Area of Reviews (AORs) in Texas." The grant funding allocated is for the purpose of providing the Railroad Commission of Texas (Commission or RRC) with resources and capabilities to conduct AOR and AOR variance analysis statewide.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The following technical report provides details on tasks that have been completed, tasks that are currently in progress, and tasks that are scheduled to begin in the next quarter (10th). The report is for the ninth (9th) quarter, from October 1, 1996 through December 31, 1996.

At present, the Commission is nearing completion of implementation of the Geographic Information System (GIS) component of the project. Additionally, we have completed the networking of two (2) of nine (9) district offices, as part of the LAN/WAN (Local Area Network/Wide Area Network) component. Regarding the Client Server/Scanning System component of the project, planning and design work are still in progress. The Commission has purchased Oracle as its database software and hired a database administrator to ensure that this software is implemented in the most effective and efficient manner possible. In addition, several scanning devices are currently being evaluated for use.

INTRODUCTION

The Commission's application for grant funds for this project was approved by DOE on February 14, 1995. Funding for this project has been awarded in five (5) increments over the project period. The initial award notification was received on February 10, 1995 for $550,000. Subsequent award notifications were received on May 7, 1996 for $275,000; July 23, 1996 for $75,000; October 28, 1996 for $236,157; and December 18, 1996 for $100,000.

Funding for this project was for a two-year period. The Commission requested, on December 23, 1995, a no-cost time extension of the project period. This extension will extend the completion date from February 13, 1997 to October 31, 1997. This extension will allow the Commission to fully utilize allocated funds in the most cost-effective manner.

The objectives are to provide resources and capabilities to enable the Commission to conduct Area of Review (AOR) variance analysis on a statewide level, including: 1) the identification and analysis of areas that may qualify for AOR variances; 2) the correlation of information from various databases and automation systems to conduct AORs in areas that do not qualify for variances; 3) the evaluation of the risk of pollution, during permitting and monitoring, using risk-based data analysis; and 4) the ability to conduct spatial analysis of injection well data in conjunction with other geographically referenced information. The Commission will achieve these objectives through the acquisition and implementation of the following components: 1) a Geographic Information System (GIS); 2) a Client-Server/Scanning System; and, 3) a Local Area Network/Wide-Area Network (LAN/WAN) system encompassing the district offices.

RESULTS AND DISCUSSION

The following information details the status of each of the above-referenced project components. Included are the following: 1) what tasks have been completed to date; 2) what tasks are on-going; and, 3) what tasks are planned for the next quarter. Please note that, as stated above, on December 23, 1996, the Commission requested a no-cost extension of the project period to extend the completion date from February 13, 1997 to October 31, 1997. The projections in this report are based on the assumption that this extension will be approved.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) COMPONENT

Completed:
1. Acquire GIS software (for development and data conversion)
2. Stabilize INFORMAP environment (migrate users from old VAX8800 to VAXstation cluster)
3. Provide GIS technical training for developers and production staff
4. Perform GIS database design
5. Convert GIS data
6. Acquire GIS development tools

In Progress:
1. GIS data migration (continuing)
2. GIS technical training (continuing)
3. AOR application design
4. GIS workstation upgrades
5. Additional GIS workstations for GIS data migration

Next Quarter:
1. GIS data migration (continuing)
2. GIS technical training for developers (continuing)
3. AOR application development (continuing)

CLIENT SERVER/SCANNER COMPONENT

Completed:
1. Acquire hardware for Client Server developers
2. Acquire development tools for Client Server developers
3. Acquire connectivity software for Client Server developers
4. Acquire development server
5. Provide development tool training for developers
6. Evaluate and select relational database
7. Perform additional development tools evaluation

In Progress:
1. Perform database modeling for table creation (continuing)
2. Evaluate database server requirements (continuing)
3. Develop scanning requirements and evaluate vendor software/hardware (continuing)
4. Evaluate database design tools
5. Provide database technical training for developers
6. Provide additional connectivity from Client/Server to mainframe
7. Create database tables for AOR
8. Extract and load mainframe data into Oracle (relational database software)
9. Provide additional connectivity from server to PCs for developers
10. Acquire additional database development tools

Next Quarter:
1. Provide technical training for developers (continuing)
2. Provide additional connectivity for user access
3. Upgrade database server for full database load
4. Select document imaging/scanning system
5. Select additional database development tools

LOCAL AREA NETWORK/WIDE AREA NETWORK (LAN/WAN) COMPONENT

Completed:
1. Develop LAN/WAN implementation plan
2. Acquire hardware and software for Houston district office
3. Install LAN/WAN equipment at Houston district office
4. Train Houston district office staff
5. Provide post-implementation support for Houston district office
6. Acquire hardware and software for Midland district office
7. Install LAN/WAN equipment at Midland district office
8. Train Midland district office staff
9. Provide post-implementation support for Midland office

In Progress:
1. Review detailed plan for Kilgore district office upgrade
2. Place Kilgore equipment orders

3.	Coordinate Kilgore WAN configuration with appropriate state providers
4.	Evaluate upgraded mainframe connectivity options
5.	Plan for Wichita Falls district office upgrade
6.	Prepare Kilgore equipment
7.	Install Kilgore district office LAN/WAN
8.	Train Kilgore district office staff
9.	Provide post-implementation support for Kilgore office
10.	Develop equipment list for Wichita Falls district office
11.	Order equipment for Wichita Falls district office
12.	Install LAN/WAN in Wichita Falls district office
13.	Train Wichita Falls district office staff
14.	Provide post-implementation support for Wichita Falls office

Next Quarter:

1. Plan and begin implementing LAN/WAN installation in San Antonio district office
2. Plan and begin implementing LAN/WAN installation in Corpus Christi district office
3. Plan and begin implementing LAN/WAN installation in Pampa district office

CONCLUSION

In closing, the Commission is well on its way toward completing the GIS component of the project. Work is progressing smoothly on the Client Server/Scanner System and LAN/WAN components of the project. During the 10th quarter, GIS data migration and Client Server development will continue, as planned. Implementation of LAN/WANs in the Wichita Falls and Kilgore district offices will be taking place also.

Page 5
cont.

List of Acronyms and Abbreviations

RRC	-	Railroad Commission of Texas
Commission	-	Railroad Commission of Texas
DOE	-	Department of Energy
GIS	-	Geographic Information System
LAN/WAN	-	Local Area Network/Wide Area Network
C/S	-	Client Server
AOR	-	Area of Review