

FINAL

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**PROJECT
ADMINISTRATION
PLAN**

MAY 2009



FINAL

PROJECT ADMINISTRATION PLAN

INTERIM PLAN, PAPA ROD

PINEDALE ANTICLINE OIL AND GAS
EXPLORATION AND DEVELOPMENT PROJECT

Sublette County, Wyoming

Prepared for:

U.S. Department of Interior, Bureau of Land Management, Pinedale Field Office
Wyoming Department of Environmental Quality, Water Quality Division
U.S. Environmental Protection Agency, Region 8
Shell Rocky Mountain Production
Questar Market Resources
Ultra Resources, Inc.

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May 15, 2009

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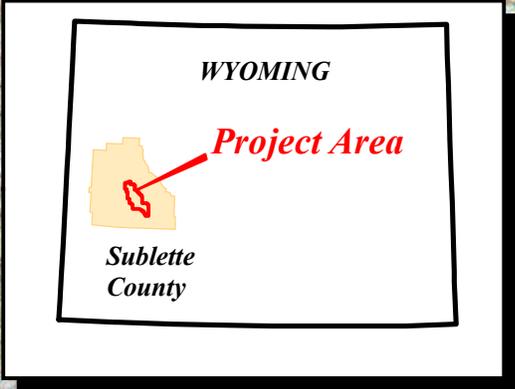
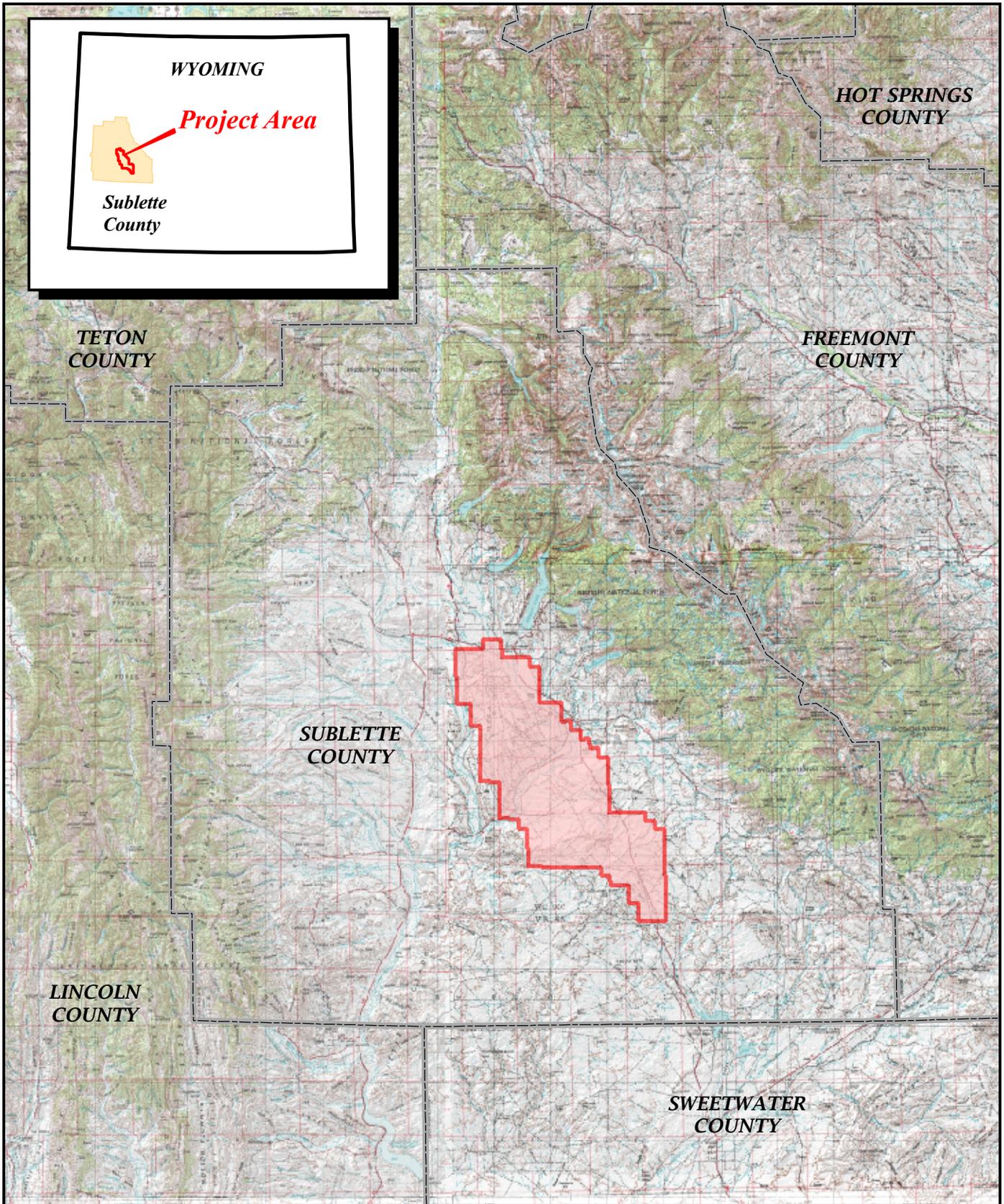
I.0 INTRODUCTION

A consortium of agencies and companies prepared an Interim Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan (Interim Plan; Geomatrix 2008) that was designed to fulfil certain requirements of a recent Bureau of Land Management (BLM) Record of Decision (ROD; BLM 2008) for the Pinedale Anticline Oil and Gas Exploration and Production Area (also known as the Pinedale Anticline Project Area, or PAPA) in Sublette County, Wyoming (Figure I). The group is comprised of representatives and technical specialists with the U.S. Department of Interior Bureau of Land Management (BLM), the Wyoming Department of Environmental Quality's Water Quality Division (DEQ/WQD), and Region 8 of the U.S. Environmental Protection Agency (EPA) as well as Shell Rocky Mountain Production (Shell), Questar Market Resources (Questar), and Ultra Resources, Inc. (Ultra). AMEC Geomatrix, Inc. (Geomatrix) is providing technical support to the group. Collectively, the agencies are referred to herein as the "BDE" (BLM/DEQ/EPA) and the three oil and gas companies are referred to as the "Operators."

The Interim Plan was developed to conform with BLM's Regional Framework for Water Resources Monitoring Related to Energy Exploration and Development (Regional Framework; USGS 2007). The three Interim Plan components, or tasks, are intended to satisfy the following steps listed in the Regional Framework. A detailed explanation of the relationship between the Interim Plan and Regional Framework is provided in Appendix B of the Interim Plan (Geomatrix 2008).

<u>Interim Plan Tasks</u>	<u>Regional Framework Steps</u>
Task 1: Characterize the groundwater system	Steps 3 through 5
Task 2: Augment the existing monitoring program, as necessary	Steps 3, 4 and 6
Task 3: Identify mitigation for all potential sources of contamination until such time as the potential for contamination has been removed or alleviated.	Steps 2 through 6

This Administration Plan complements the overall Interim Plan and provides descriptions of administrative aspects of the project that the group intends to follow to achieve the overall objectives of the project. Included herein are descriptions of the organization of the group, administrative tasks to be accomplished during the course of the project, and a schedule of project activities. As the project evolves, this plan or portions thereof may be revised in response to redirection in the focus of the effort, changes in roles and/or responsibilities of key personnel, or other impacts on the overall project including scheduling.



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Source: 250K WYGISC, BLM



Project Location Map
Pinedale Anticline Project Area
Sublette County, Wyoming
FIGURE 1

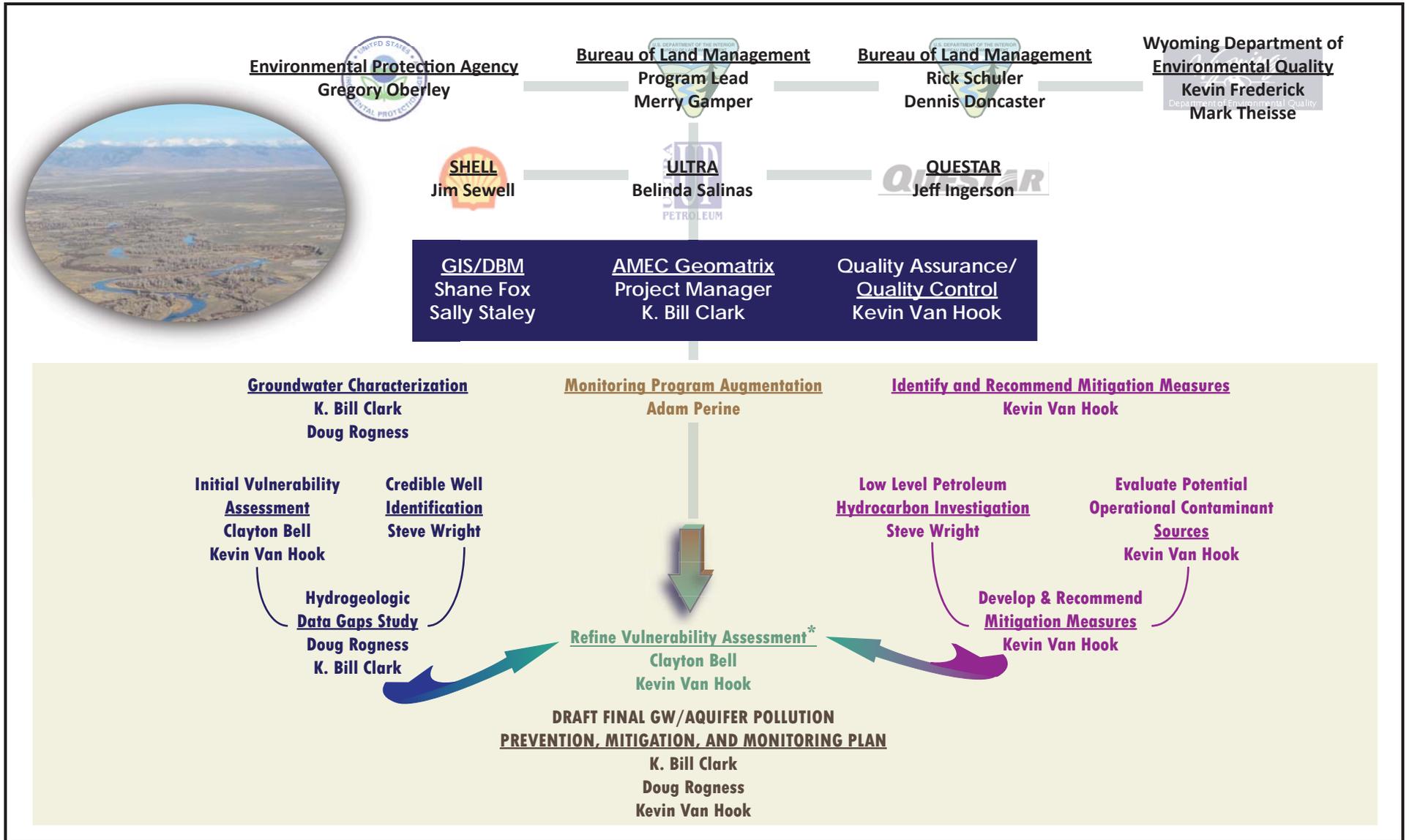
2.0 PROJECT PERSONNEL

The project organization and flow chart is shown in **Figure 2**. Key individuals that represent the BDE and Operators are shown at the top of the chart. Ms. Merry Gamper of the BLM is the Program Lead for the project and will coordinate communication to/from BDE representatives with the Operators and Geomatrix. The Interim Plan is being implemented by Geomatrix and K. Bill Clark will serve as Project Manager. He will be responsible for coordinating all aspects of the project and communicating project activities and status between the BDE, Operators, and Geomatrix project team.

In implementing the Interim Plan, Mr. Clark will be assisted by a cadre of support personnel, technical specialists and task leaders. For all aspects of the project, database management and GIS services will be performed by Shane Fox and Sally Staley, and quality assurance and quality control will be overseen by Kevin Van Hook. Task leaders were specifically selected to manage the various studies and work tasks associated with implementing the Interim Plan. Individuals responsible for the key project components include:

- Doug Rogness and K. Bill Clark – Groundwater Characterization
 - Kevin Van Hook and Clayton Bell – Vulnerability Assessment
 - Steve Wright – Credible/Suitable Well Determination
 - Doug Rogness and K. Bill Clark – Hydrogeologic Data Gaps Study
- Adam Perine – Monitoring Program Augmentation
- Kevin Van Hook – Identification and Recommendation of Mitigation Measures
 - Steve Wright – Low Level Petroleum Hydrocarbon Investigation
 - Kevin Van Hook – Evaluation of Potential Operational Contaminants
 - Kevin Van Hook – Development and Recommendation of Mitigation Measures
- K. Bill Clark and Doug Rogness – Draft Final Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan

Appendix A contains contact information for all project participants, including BDE and Operator representatives and the Geomatrix project team.



Note:

* Pending Task - Dependent upon revised conceptual model.

May 2009

3.0 ADMINISTRATIVE TASKS

Administrative tasks associated with this project are intended to promote effective and efficient communication and consensus building among the BDE, Operators, and Geomatrix. Communication will focus primarily on soliciting input on the content of the various project planning documents, providing progress reports on the status of various work efforts, and raising issues that require resolution by the BDE, Operators, and/or Geomatrix.

Key tenets of the project management scheme for the Project include:

- **Status Meetings** – Routine, scheduled conference calls and meetings will be held to seek input from the BDE, Operators, and Geomatrix on various aspects of the project. The first project meeting was held on January 15, 2009 and focused on draft outlines for three Plans of Study. Project participants met face-to-face and via tele-conference.

The Geomatrix Project Manager will schedule conference calls on a monthly basis (or more frequently as needed) to update project participants of progress and solicit input on resolving any issues that may arise. These meetings, as necessary, may also be held over the internet (e.g., GoToMeeting™ or WebEx) if graphical information needs to be presented and discussed.

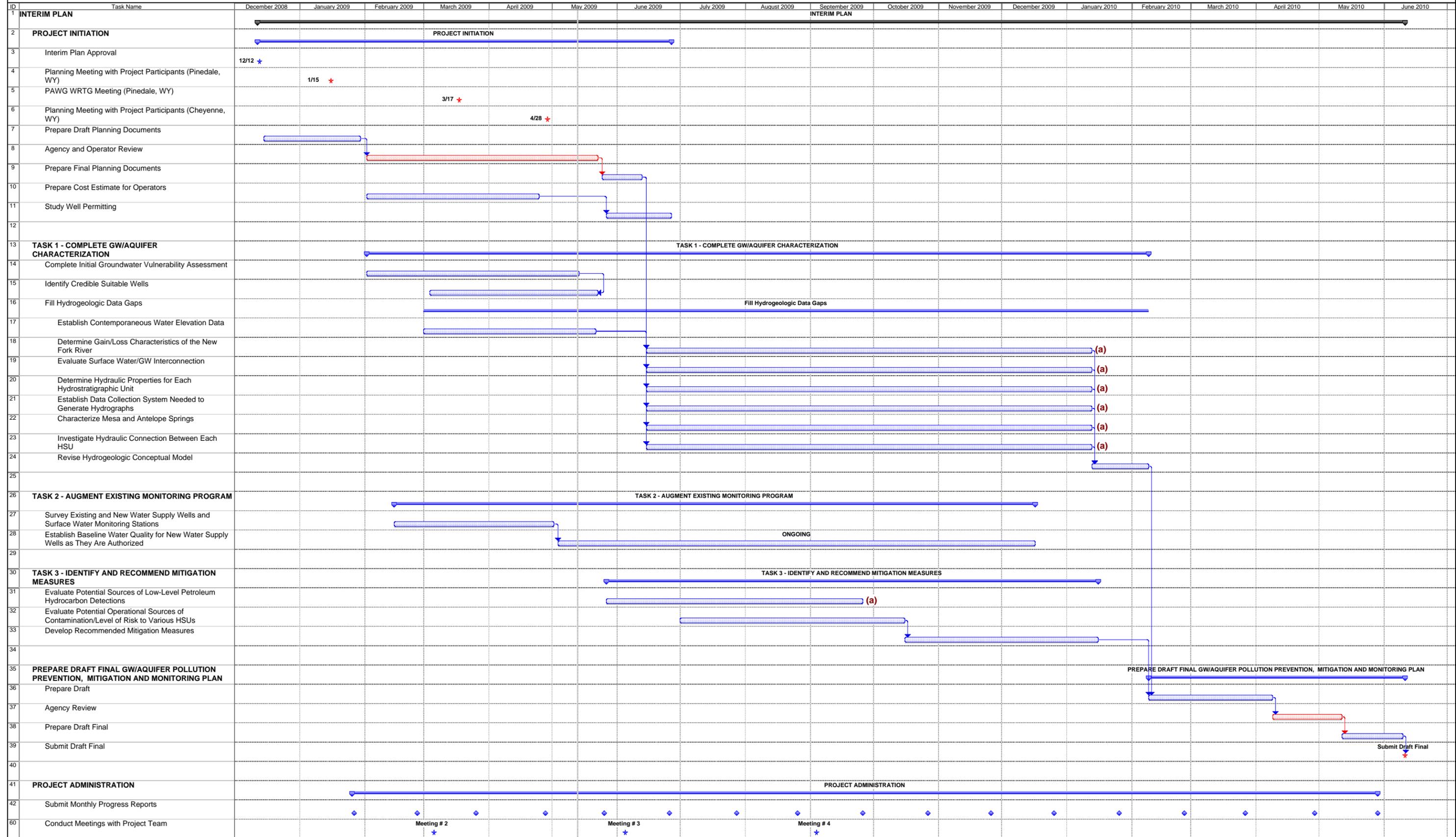
Face-to-face meetings will be held at key junctures in the project to discuss efforts completed to date and future activities. We anticipated that most meetings will be held at the BLM Pinedale Field Office and scheduled to coincide with the beginning and/or end of field studies, and at the initial stages of developing the Draft Final Plan (**Figure 2**). The Estimated Project Schedule (**Figure 3**) shows the approximate dates of these meetings.

Prior to every status meeting (whether face-to-face, conference call, or over the internet), the Geomatrix Project Manager will distribute via email a meeting agenda and logistical information (date/time, call-in number, web site, etc.) to project participants. Subsequent to scheduled meetings, the Project Manager will email a summary of or the working documents from the meeting to project participants.

Updating the Water Resources Task Group (WRTG) of the Pinedale Anticline Working Group regarding project status during their regularly scheduled Spring and Fall meetings is planned. Geomatrix met with the WRTG during their March 17, 2009 meeting and presented the five project planning documents and answered questions.

- **Progress Reports** – Monthly progress reports will be prepared and submitted via email to the BDE and Operators to formally document project activities. This report will include a summary of accomplishments within the reporting period and a listing of work to be accomplished during the forthcoming reporting period. A summary of the project

**FIGURE 3
ESTIMATED PROJECT SCHEDULE
Interim Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan**



(a) Detailed schedules for each Activity will be provided in Plans of Study (see Project Initiation above).

Task begin/end dates and durations are subject to change.

schedule and deliverable status will also be presented, as well as acknowledgements of and proposed solutions for any issues or challenges faced during the course of the effort. As shown in the template provided in **Appendix B**, the progress report will at a minimum address several key topics including:

- Progress since last report.
- Health and safety.
- Issues and proposed resolutions.
- Anticipated activities for next reporting period.
- Schedule status.
- Deliverable status.
- Staffing changes or concerns.

Geomatrix will also prepare monthly budget status reports for the Operators. These reports will summarize invoicing and accounts receivable, present the status of work task budgets, and discuss any budget issues that arise during the course of the reporting period.

Administration of the project will continue until all final deliverables have been prepared and have been accepted by the BDE. An administrative record of all official correspondence and deliverables will be maintained by BLM. A hard copy of this record will be delivered to the BDE upon completion of the project.

4.0 PROJECT SCHEDULE

The estimated schedule for the project is presented in **Figure 3**. Detailed schedules for each of the four studies associated with the Interim Plan (Credible/Suitable Well Determination, Hydrogeologic Data Gaps Study, Monitoring Program Augmentation, and Low Level Petroleum Hydrocarbon Investigation) will be described in each Plan of Study. Once the Plans of Study are finalized after review and approval by the BDE (anticipated May 2009), the overall project schedule will be updated and reported with the monthly progress reports.

As part of each monthly progress report, an evaluation of the project schedule will be made. Any issues regarding the timing of work, including currently unforeseen impediments, will be described and a solution recommended. Once the BDE and Operators agree with schedule modifications, the schedule will be updated. During implementation of the Interim Plan, Geomatrix intends to maintain the project timetable shown on **Figure 3** but realizes that circumstances beyond our control may arise and that reasonable adjustments in the schedule may be necessary. Should these circumstances arise, Geomatrix will endeavour to adjust other elements of the project to maintain the overall project schedule.

5.0 PROJECT DELIVERABLES

The preliminary list of project deliverables and the estimated due date for final versions of each document are summarized in **Table I**. The status of deliverables will be tracked in each monthly progress report. Each deliverable will conform to a project-specific style, including format, text font, document covers/appendix dividers, etc. Each draft document will undergo a technical and editorial review before being delivered to the BDE or Operators for review. Geomatrix assumes that one consolidated set of comments will be received from the BDE and individual comments will be received from the Operators. All comments and suggestions for revision will be considered and addressed if necessary. Once necessary changes are incorporated into the documents, final versions of each document will be submitted to the BDE and Operators.

TABLE I
Preliminary List of Project Deliverables - Interim Plan

Task	Deliverable	Estimated Due Date
Project Initiation	Interim Plan	December 12, 2008
	Project Administration Plan	May 29, 2009 ⁽¹⁾
	Credible/Suitable Well Determination – Plan of Study	
	Hydrogeologic Data Gaps Study – Plan of Study	
	Augment Existing Monitoring Program – Plan of Study	
	Low Level Petroleum Hydrocarbon – Plan of Study	
Groundwater Characterization	Initial Groundwater Vulnerability Assessment – Technical Memorandum	May 15, 2009
	Credible/Suitable Well Determination – Technical Memorandum	June 17, 2009
	Hydrogeologic Data Gaps – Technical Report	January 22, 2010
	Revised Hydrogeologic Conceptual Model – Technical Report	January 22, 2010
Augmentation	Well/Surface Water Station Survey Information – Technical Memorandum	June 8, 2009
	Baseline Water Quality Data For New Wells – Technical Memorandum	Dependent Upon Well Installation
Identify and Recommend Mitigation Measures	Sampling and Analysis Plan	July 17, 2009
	Low Level Petroleum Hydrocarbon Investigation – Technical Report	October 30, 2009
	Existing and Recommended Mitigation Measures – Technical Memorandum	January 22, 2010
Monitoring Plan	Draft Final Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan	May 20, 2010
Project Administration	Progress Reports	Monthly
	Project Database	Periodically as New Data are Validated

Note:

(1) Review of Draft and Draft Final versions of planning documents is dependent upon BDE and USQ review schedules.

6.0 REFERENCES

- Geomatrix, 2008.** Final. Interim Groundwater/Aquifer Pollution Prevention, Mitigation, and Monitoring Plan. Pinedale Anticline Oil and Gas Exploration and Development Project, Sublette County, Wyoming. Prepared for U.S. Department of Interior, Bureau of Land Management, Pinedale Field Office, Wyoming Department of Environmental Quality, Water Quality Division, U.S. Environmental Protection Agency, Region 8, Shell Rocky Mountain Production, Questar Market Resources, and Ultra Resources, Inc. December.
- U.S. Department of Interior, Bureau of Land Management (BLM), 2008.** Record of Decision for the Supplemental Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project, Sublette County, Wyoming. September 12.
- U.S. Geological Survey (USGS), Colorado Water Science Center, 2007.** Regional Framework for Water-Resources Monitoring Related to Energy Exploration and Development. Prepared for BLM. September 30.



APPENDIX A

**PROJECT
PARTICIPANT
CONTACT
INFORMATION**

PROJECT PARTICIPANTS -- INTERIM PLAN
Pinedale Anticline Oil and Gas Exploration and Development Project
Sublette County, Wyoming

Name	Title	Organization	Address	Email	Telephone
Merry Gamper	Supervisory Natural Resource Specialist	Bureau of Land Management Pinedale Field Office	1625 West Pine PO Box 768 Pinedale, WY 82941	Merry_Gamper@blm.gov	(307) 367-5313
Rick Schuler	Physical Scientist	Bureau of Land Management Wyoming State Office	5353 Yellowstone Road P.O. Boix 1828 Cheyenne, WY 82003	Rick_Schuler@blm.gov	(307) 775-6092
Dennis Doncaster	Zone Hydrologist	Bureau of Land Management Rock Springs Field Office	280 Highway 191 North Rock Springs, WY 82901	Dennis_Doncaster@blm.gov	(307) 352-0207
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Shane Fox	CAD/Graphics GIS Analyst	AMEC Geomatrix	1001 South Higgins, Building B Missoula, MT 59801	Shane.Fox@AMEC.com	(406) 542-0129
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APPENDIX B

**MONTHLY
PROGRESS
REPORT
TEMPLATE**

PROGRESS REPORT
January 2009

**INTERIM GROUNDWATER/AQUIFER POLLUTION PREVENTION,
MITIGATION AND MONITORING PLAN**
PINEDALE ANTICLINE OIL AND GAS EXPLORATION AND DEVELOPMENT PROJECT
SUBLETTE COUNTY, WYOMING

PROGRESS MADE SINCE LAST REPORTING PERIOD

Planning Documents

-
-

Initial Vulnerability Assessment

-
-

Credible/Suitable Well Determination

-
-

Hydrogeologic Data Gaps Study

-
-

Monitoring Program Augmentation

-
-

Low Level Petroleum Hydrocarbon Investigation

-
-

Evaluate Potential Operational Containment Sources

-
-

Develop and Recommend Mitigation Measures

-
-

Prepare Final Groundwater/Aquifer Pollution Prevention, Mitigation and Monitoring Plan

-
-

HEALTH AND SAFETY

-
-

ISSUES AND PROPOSED RESOLUTIONS

-
-

ANTICIPATED ACTIVITIES FOR NEXT REPORTING PERIOD

-
-

SCHEDULE STATUS

-
-

DELIVERABLE STATUS

-
-

STAFFING CHANGES OR CONCERNS

-
-