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For

DOE Award No. DE-PS26-O4NT15541

*Compilation and presentation of Existing Data on Oil and Gas Leasing
Development in a manner useful to the NEPA Process*

Report Submitted
By The
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ABSTRACT

The project is titled “Compilation and Presentation of Existing Data on Oil and Gas leasing and Development in a Manner Useful to the NEPA Process.” The Interstate Oil and Gas Compact Commission (IOGCC), headquartered in Oklahoma City, Oklahoma is the principal investigator and they have partnered with ALL Consulting, Inc., headquartered in Tulsa, Oklahoma in this project. State agencies who have also partnered in the project are the Wyoming Oil and Gas Conservation Commission, the Montana Board of Oil and Gas Conservation and the Alaska Oil and Gas Conservation Commission

The objective is to develop faster and more comprehensive access to existing oil and gas data to effectively enable land management agencies and operators to make better and faster decisions that supports a legitimate balance between environmental protection and appropriate levels of development. This will be achieved by developing data management tools that provide faster and more comprehensive access to existing data. This will be accomplished by conducting research focused toward improving consistency for decision-makers, defining technically sound analytical methods, detailing real case scenario energy industry parameters, and compile and present nationally accessed data relative to on-shore oil and gas leasing and development, in a manner that is requisite for an efficient NEPA review process

Data and information from the results of the research will be assembled into a manual with nation-wide applicability. The manual will leverage existing studies, reports and other oil and gas related information to generate a reference list of data sources that will be evaluated and compared to calibrate environmental impact and resource development assessment predictions. An integral part of this research will be conducting a case study on a targeted coal bed natural gas (CBNG) development area in Alaska to validate the manual. The development of this comprehensive resource manual for source and analysis guidance will allow operators, NEPA specialists, and other federal and state land management agencies to more efficiently develop accurate resource projections, more reliable environmental impact analyses, and provide a common set of sound quantification methods and simple explanations for where, why and how to use them under widely variable political, geographical and environmental settings.

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LISTS OF GRAPHICAL MATERIALS

NONE

INTRODUCTION

This is the first semi-annual Technical Progress Report for the Department of Energy (DOE) project titled *Compilation and Presentation of Existing Data on Oil and Gas Leasing and Development in a Manner Useful to the NEPA Process* submitted by the Interstate Oil and Gas Compact Commission (IOGCC) under DOE grant number DE-FC26-04NT15541. This report details progress for the months of November 2004 through March 2005 completed by the IOGCC and ALL Consulting (ALL) team for the project. This report details the tasks completed, tasks in progress, problems encountered, problems resolved, miscellaneous project activities, and tasks to be conducted over the next quarter.

EXECUTIVE SUMMARY

Tasks-In-Progress

The Interstate Oil and Gas Compact Commission (IOGCC) and All Consulting have been researching methods used to predict development impacts and reasonable foreseeable development scenarios for various conventional and unconventional oil and gas activities on federal lands. To date we have contacted over 50 representatives from the Bureau of Land Management, USDA Forest Service, National Park Service, US Fish and Wildlife Service, various state agencies and several universities. Attached to this report is a list of the individuals that have been contacted to-date from these various federal agencies.

These inquiries, along with independent internet research, have identified over 30 NEPA documents and 11 guidance manuals which address oil and gas development impacts and scenarios. The documents represent some existing DOE studies, BLM Resource Management Plans (RMPs), Environmental Impact Statements (EIS) and Environmental Assessments (EAs). We are currently evaluating these documents to identify relevant methodologies used to predict oil and gas impacts. However, our initial impression is that there are not any standard analytical methods identified, but rather impacts appear to be based on the experience of the preparers and their feel for the region.

Additional research has involved the identification of relevant studies of actual oil and gas impact comparisons. We've followed the same approach as described above and made inquiries to the same individuals which as resulted in requests to have studies identified. Only a handful of studies have been identified to date.

EXPERIMENTAL

There have been no experimental methods used to date on this project.

RESULTS AND DISCUSSION

TASKS COMPLETED

No tasks have been completed to date.

TASKS-IN-PROGRESS

Task 1 involves the research of methods used to predict development impacts and reasonable foreseeable development scenarios for various conventional and unconventional oil and gas activities on federal lands. To date we have contacted over 50 representatives from the Bureau of Land Management, USDA Forest Service, National Park Service, US Fish and Wildlife Service, various state agencies and several universities. Attached to this report is a list of the individuals that have been contacted to-date from these various federal agencies.

To maintain consistent inquiries a questionnaire was developed for these initial conversations. The questionnaires were completed by hand during the phone conversation and kept on file. These inquiries along with independent internet research have identified over 30 NEPA documents and 11 guidance manuals which address oil and gas development impacts and scenarios. Lists of these documents have been attached to this report.

The documents represent some existing DOE studies, BLM Resource Management Plans (RMPs), Environmental Impact Statements (EIS) and Environmental Assessments (EAs). We are currently evaluating these documents to identify relevant methodologies used to predict oil and gas impacts. However, our initial impression is that there are not any analysis methods identified, rather impacts are based on the experience of the preparers and their feel for the region. Furthermore, when evaluating the impact predictions, it is not well documented how the quantities or quality of the impact has been generated and therefore we are left with a daunting task of reverse engineering the impact predictions. Once we have successfully completed this task we will move forward with evaluating the methods based on their approach, identifying the parameters considered and categorizing them by regional settings. A spreadsheet form has been developed to track these various parameters for later comparison.

- **Some of the guidance documents or manuals identify methods that have agency endorsements such as the Interagency (BLM, USFS, EPA, USFWS, NPS) Guidance for RFDs, and therefore these will be most useful when evaluating actual impacts or development with predicted quantities. It is the intention to evaluate these methods for variations, regional influences, significant environmental parameters affecting impacts, and applicability to resource (oil or gas, conventional or non-traditional) development.**

Task 2 involves the Identification of relevant studies of actual oil and gas impact comparisons. We've followed the same approach as described for task one and made inquiries to the same individuals resulting in requests to have studies identified. Only a handful of studies have been identified to date, see attached list.

Due to the lack of documented studies we will increase the emphasis of actual site investigations for known developments being evaluated by the team members state agencies as described in Task 3. This data will also be evaluated for parameter influences, regional conditions, environmental settings, type of resource and any other factors which might have led to the current level of impacts. We will rely heavily on the AOGCC, MBOGC, WOGCC and other PAC team members (BLM, USFS, EPA and industry representatives) to guide us to various operations in their states that have both impacts of interest and are known for their exceptional or innovative operations.

Problems Encountered

Not a problem but worth mentioning is that we have had a difficult time identifying NEPA documents or impact studies associated with oil and gas developments. We've contacted numerous US EPA Libraries throughout the nation but very few documents have been identified.

Problems Resolved

N/A

Miscellaneous Project Activities

N/A

Tasks for Next Quarter

We will continue to work on Task 1 and 2 through the next couple of months. Once we have reviewed the documents identified to date and evaluated their method discussions we will prepare a report addressing the studies, and or sites investigated. The reports will be prepared for DOE review and will go through a peer review process before release. The project web page will be updated with this information. We estimate that 2 months will be required to complete these tasks.

10.

People Contacted for DOE NEPA Project

1. Lisa Norby, National Park Service
Geologic Resources Division
2. Kathleen Erwin, Fish and Wildlife
(WY)
3. Melody Holm, USDA FS (Region
2)
4. Berry Berckhart, USDA FS
(Region 4)
5. Robert Fujimoto, USDA FS
(Region 6)
6. Delia Jacquette, USDA FS
(Region 8)
7. Jon Kato, USDA FS (Region 10)
8. Bill Diel, BLM (AK)
9. BLM, (UT) – don't have oil and
gas told to contact other office
10. Ed Ginouves, BLM (UT)
11. Daryl Trodder, BLM (UT)
12. Jeff Brown, BLM (UT)
13. Don Stevens, BLM (UT)
14. Mike Ford, BLM (UT)
15. Buzz Rakow, BLM (UT)
16. Rody Cox, BLM (AZ)
17. Jim Ramakka, BLM (NM)
18. Clarence Seagrave, BLM (NM)
19. Armondo Lopez, BLM (NM)
20. Joe Lara, BLM (NM)
21. Barry Hunt, BLM (NM)
22. Walt George, BLM (WY)
23. Patrick Moore, BLM (WY)
24. Kelly Lamborn, BLM (WY)
25. Vic Seafeldt, BLM (WY)
26. Rod Randall, BLM (WY)
27. Paul Beales, BLM (WY)
28. Renee Dana, BLM (WY)
29. Bill Lanning, BLM (WY)
30. Jeff Cundick, BLM (ID)
31. Scott Forssell, BLM (ID)
32. Brent Cunderla, BLM (OR, WA)
33. Duane Spencer, BLM (CO)
34. Howard Clebbenger, BLM (UT)
35. Theodore Rockwell, EPA (AK)
36. David Schmidt, EPA (Region 9)
37. Chad Settle, University of Tulsa
38. Val Smith, University of Kansas
39. Dan McCool, University of Utah
40. Ed Womak, BLM (WY*)
41. Kim Chan, BLM (CA)
42. Bruce Emmes, USDA FS (Region
5)
43. Jim Hall, Fish and Wildlife (AK)
44. LaurieAnn Omotto, BLM (NM)
45. Bob Prickett, BLM (OK)
46. Steve Wells, BLM (NM)
47. Doug Powell, BLM (UT)
48. Howard Clebbenger, BLM (UT)
49. David Simons, BLM (WY)
50. Jim McDonald, USDA FS (Region
9)
51. Dan McCool, University of Utah
52. James W.C. White, University of
Colorado at Boulder
53. Jon M. Wraith, Montana State
University
54. Harold Bergman, University of
Wyoming
55. Len Broberg, University of
Montana
56. Heidi McIntosh, Southern Utah
Wilderness Alliance

List of NEPA Documents Identified for Further Study

Environmental Assessment for The Quantum Adobe Town 2D Geophysical Project

1. DEIS Oils and Gas Environmental Analysis Los Padres National Forest
2. Northeast National Petroleum Reserve - Alaska Draft Amended IAP/EIS
3. Northwest National Petroleum Reserve, AK, EIS
4. Beaufort Sea Multiple Sales-FEIS
5. Alpine Satellite Development Plan (EIS)
6. Final EIS for Federal Fluid Minerals Leasing and Development in Sierra and Otero Counties
7. Roan Plateau Resource Management Plan and Draft Environmental Impact Statement
8. Big Thicket Oil and Gas Management Plan (DEIS)
9. Daniel Boone National Forest EIS
10. EA for the USA & State South Branch 1-8 Exploratory Gas Well (Huron-Manistee National Forests)
11. Questar Year-Round Drilling Proposal Supplemental, WY (EA)
12. Desolation Flats Natural Gas Field Development, WY (EIS)
13. Lower Bush Creek Coal Bed Methane Exploratory Pilot Project, WY (EA/FONSI)
14. Vermillion Basin Natural Gas, WY (EA)
15. Continental Divide/Wamsutter II Natural Gas Project, WY (EIS)
16. Northern San Juan Basin EIS, CO
17. Lisk Chaney Federal Well Development, Wayne National Forest, OH (EA, FONSI)
18. Drake 4C Federal Well Development, Wayne National Forest (EA)
19. Jefferson National Forest FEIS
20. Hanna Draw CBM Exploration Project (EA)
21. Oil and Gas Resource Development for San Juan Basin, NM (RFD)/Farmington EIS
22. Aviara Exploration Wells, UT (EA)
23. River Gas EIS, UT (EIS)
24. Vernal Field Office (DEIS)
25. Scotty Lake Coalbed Natural Gas Pilot Project, WY (EA)
26. Custer National Forest Oil and Gas Leasing DEIS
27. Finger Lakes National Forest, Oil and Gas Leasing, Exploration, and Development (being mailed) – not received yet (2/2/05)
28. Alabama Forest Plan, FEIS
29. NEPA docs from southeastern states (Alabama, Arkansas, Louisiana, etc.). Being mailed. Have not received yet (2/2/05)
30. Gunnison Gorge NCA Proposed RMP/EIS, CO (perhaps not as useful)
31. VERITAS DGC LAND, INC. 2-D SEISMIC EXPLORATION, UT
32. I am trying to track down one for a project in Dark Canyon, NM that was recommended to me (2/2/05)
33. Requested the Pinedale/Anticline EIS (2/1/05)

BIBLIOGRAPHY

List of Supporting Documents for DOE NEPA Study

1. *Cumulative Environmental Effects of Oil and Gas Activities on Alaska's North Slope*, 2003 --National Research Council of the National Academy of Science. (Recommended by Theodore Rockwell, Alaska EPA: “This document is limited to the North Slope and was not specifically designed to compare predictions with actual occurrences but it does lay out a methodology that was employed and discusses effects seen as of 2003 when it was published”)
 2. *Renewal of the Federal Grant for the Trans-Alaska Pipeline System Right-of-Way EIS*, U.S. Dept. Of Interior, Bureau of Land Management. (Recommended by Theodore Rockwell, Alaska EPA: “available from BLM Again, this document is limited in scope and does not specifically compare predictions to occurrences but it should provide information associated with that decision to renew authorization.”)
 3. *NEPA-Study of Effectiveness After 25 Years*, (General NEPA discussion) recommended by David Schmidt, EPA Region 9.
 4. National Park Service NEPA Guide (general guide)
 5. *IPIECA: A Guide to Social Impact Assessment in the Oil and Gas Industry* (Web search, general guideline for social impact assessment prepared by industry)
 6. *Assessing Impacts of Oil and Gas Development on Mule Deer* (Suggested by Wyoming BLM, tried to locate reference used within this study *Evaluation of EIS-level NEPA documents associated with oil and gas development on federal lands in southwest Wyoming*, but haven’t been able to).
 7. *Modernizing NEPA Implementation* (Web search), report analyzing: “nuts and bolts” of NEPA implementation by focusing on:
 - . Technology and information management and security;
 - . Federal and intergovernmental collaboration;
 - Programmatic analyses and tiering;
 - . Adaptive management and monitoring;
 - . Categorical exclusions; and
 - . Environmental assessments.
 8. *Federal Leadership Forum Supplemental NEPA Guidelines for Oil and Gas Activities on Public Lands* (Web search “These guidelines are to set a framework for an early, consistent, and effective process by which affected agencies maximize interaction, and exchange information and opinions on issues, questions or concerns; identify and resolve significant issues; and/or develop feasible alternatives to the extent practicable.” Small, only 13 pages).
 9. *Interagency Reference Guide, Reasonable Foreseeable Development Scenarios and Cumulative Effects Analysis for Oil and Gas Activities on Federal Lands in the Greater Rocky mountain Region*, USDA Forest Service suggested, and BLM mandated guidance for RFD development.
- The “Gold Book”: *Surface Operating Standards for Oil and Gas Exploration and Development* (recommended by many, sent by BLM WY Kemmere

LISTS OF ACRONYMS AND ABBREVIATIONS

AOGCC	Alaska Oil and Gas Conservation Commission
BLM	Bureau of Land Management
CBNG	Coal Bed Natural Gas
DOE	Department of Energy
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FONSI	Finding of No Significant Impact
IAP/EIS	Integrated Activity Plan/Environmental Impact Statement
IOGCC	Interstate Oil and Gas Compact Commission
IPIECA	International Petroleum Industry Environmental Conservation Association
MBOGC	Montana Board of Oil and Gas Conservation
NEPA	National Environmental Policy Act
NETL	National Energy Technology Laboratory
NPA	National Park Service
PAC	Project Advisory Committee
RFD	Request for Development
RMP	Resource Management Plan
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WOGCC	Wyoming Oil and Gas Conservation Commission

APPENDICES

None