

Table of Contents

Executive Summary

- The Mandate from Congress
- The President's National Energy Policy Directives
- Methodology
- Results
- Compliance with the Law

1.0 Introduction

- 1.1 Background
- 1.2 The EPCA as Amended by the EPAct 2005
- 1.3 The National Energy Policy, May 2001
- 1.4 The EPCA Phase I Inventory, 2003
- 1.5 The National Petroleum Council Report, 2003
- 1.6 Approach
- 1.7 Roles of the Agencies
- 1.8 Intended Use
- 1.9 Products/Future Direction

2.0 Methodology

- 2.1 **Procedures for Collecting and Preparing Land Status and Oil and Gas Access Constraints**
 - 2.1.1 Federal Land Status
 - 2.1.1.1 Sources of Land Status Data
 - 2.1.1.2 Land Status Data Preparation
 - 2.1.1.3 Land Status Data—Related Caveats
 - 2.1.2 Federal Oil and Gas Lease Stipulations
 - 2.1.2.1 Sources of Lease Stipulation Data
 - 2.1.2.2 Lease Stipulation Data Preparation
 - 2.1.2.3 Lease Stipulation Data—Related Caveats
 - 2.1.3 Federal Drilling Permit Conditions of Approval
 - 2.1.3.1 Sources of Conditions of Approval Data
 - 2.1.3.2 Conditions of Approval Data Preparation
 - 2.1.3.3 Conditions of Approval Data—Related Caveats
- 2.2 **Procedures for Collecting and Preparing Oil and Gas Resource, Reserves Growth, and Reserves Data**
 - 2.2.1 Undiscovered Oil and Gas Resources
 - 2.2.1.1 Sources of Oil and Gas Resources Data
 - 2.2.1.2 Oil and Gas Resource Data Preparation
 - 2.2.1.3 Oil and Gas Resource Data—Related Caveats
 - 2.2.2 Proved Ultimate Recovery Growth (“Reserves Growth”)
 - 2.2.2.1 Sources of Remaining Proved Ultimate Recovery Data
 - 2.2.2.2 Remaining Proved Ultimate Recovery Data Preparation
 - 2.2.2.3 Remaining Proved Ultimate Recovery—Data Caveats
 - 2.2.3 Oil and Natural Gas Resource Maps
 - 2.2.4 Proved Reserves
 - 2.2.4.1 Sources of Proved Oil and Gas Reserves Data
 - 2.2.4.2 Proved Oil and Gas Reserves Data Preparation
 - 2.2.4.3 Proved Reserves Data—Related Caveats
- 2.3 **Data Integration and Spatial Analysis**
 - 2.3.1 Categorization of Oil and Gas Access Constraints
 - 2.3.1.1 Data Integration and Spatial Analysis-Related Caveats
 - 2.3.2 Analytical Modeling of Federal Lands and Resources

3.0 Results

- 3.1 Study Area Features**
 - 3.1.1 Northern Alaska (NPR-A and ANWR 1002 Only)
 - 3.1.2 Uinta-Piceance Basin
 - 3.1.3 Paradox/San Juan Basins
 - 3.1.4 Montana Thrust Belt
 - 3.1.5 Powder River Basin
 - 3.1.6 Wyoming Thrust Belt
 - 3.1.7 Greater Green River Basin (South Western Wyoming)
 - 3.1.8 Denver Basin
 - 3.1.9 Florida Peninsula
 - 3.1.10 Black Warrior Basin
 - 3.1.11 Appalachian Basin

- 3.2 Regional Features**

- 4.0 Additional Federal Land Access Issues**

- 4.1 Issues Directly Impacting Access
- 4.2 Issues Indirectly Impacting Access

Appendices

- | | |
|--------------------|---|
| Appendix 1 | Acronyms and Abbreviations |
| Appendix 2 | Glossary of Terms |
| Appendix 3 | Federal Land Status Preparation |
| Appendix 4 | Federal Oil and Gas Lease Stipulation Data Preparation |
| Appendix 5 | Application for Permit to Drill - Conditions of Approval Data Preparation |
| Appendix 6 | U.S. Geological Survey Methodology for the Assessment of Undiscovered Oil and Gas Resources |
| Appendix 7 | Energy Information Administration Initial Estimates of Remaining Proved Ultimate Recovery Growth |
| Appendix 8 | Energy Information Administration Proved Reserves Estimation and Field Boundary Construction |
| Appendix 9 | GIS Methodology |
| Appendix 10 | Federal Land Use Planning Documents Used in the Phase II Inventory |
| Appendix 11 | Federal Oil and Gas Surface Management Prescriptions - Available on the DVD-ROM and the Website |

Figures

Executive Summary

- Figure ES-1. Study Area Locations
- Figure ES-2. Simplified Results; Summary of All Phase II Study Areas—Total Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure ES-3. Results; Summary of All Phase II Study Areas—Total Federal Land and Oil and Natural Gas Resources by Access Category
- Figure ES-4. Regional Charts

Section 1.0 – Introduction

- Figure 1-1. Study Area Locations

Section 2.0 – Methodology

- Figure 2-1. Federal Land Status Map, Northern Alaska Study Area
- Figure 2-2. Federal Land Status Map, Uinta-Piceance Basin Study Area
- Figure 2-3. Federal Land Status Map, Paradox/San Juan Basins Study Area
- Figure 2-4. Federal Land Status Map, Montana Thrust Belt Study Area
- Figure 2-5. Federal Land Status Map, Powder River Basin Study Area
- Figure 2-6. Federal Land Status Map, Wyoming Thrust Belt Study Area
- Figure 2-7. Federal Land Status Map, Greater Green River Basin Study Area
- Figure 2-8. Federal Land Status Map, Denver Basin Study Area
- Figure 2-9. Federal Land Status Map, Florida Peninsula Study Area
- Figure 2-10. Federal Land Status Map, Black Warrior Basin Study Area
- Figure 2-11. Federal Land Status Map, Appalachian Basin Study Area
- Figure 2-12. Conventional vs. Continuous Oil and Gas Accumulations
- Figure 2-13. Conceptual Block Diagram of Oil and Gas Plays
- Figure 2-14. Total Oil Map, Northern Alaska Study Area
- Figure 2-15. Total Oil Map, Uinta-Piceance Basin Study Area
- Figure 2-16. Total Oil Map, Paradox/San Juan Basins Study Area
- Figure 2-17. Total Oil Map, Montana Thrust Belt Study Area
- Figure 2-18. Total Oil Map, Powder River Basin Study Area
- Figure 2-19. Total Oil Map, Wyoming Thrust Belt Study Area
- Figure 2-20. Total Oil Map, Greater Green River Basin Study Area
- Figure 2-21. Total Oil Map, Denver Basin Study Area
- Figure 2-22. Total Oil Map, Florida Peninsula Study Area
- Figure 2-23. Total Oil Map, Black Warrior Basin Study Area

- Figure 2-24. Total Oil Map, Appalachian Basin Study Area
- Figure 2-25. Total Natural Gas Map, Northern Alaska Study Area
- Figure 2-26. Total Natural Gas Map, Uinta-Piceance Basin Study Area
- Figure 2-27. Total Natural Gas Map, Paradox/San Juan Basins Study Area
- Figure 2-28. Total Natural Gas Map, Montana Thrust Belt Study Area
- Figure 2-29. Total Natural Gas Map, Powder River Basin Study Area
- Figure 2-30. Total Natural Gas Map, Wyoming Thrust Belt Study Area
- Figure 2-31. Total Natural Gas Map, Greater Green River Basin Study Area
- Figure 2-32. Total Natural Gas Map, Denver Basin Study Area
- Figure 2-33. Total Natural Gas Map, Florida Peninsula Study Area
- Figure 2-34. Total Natural Gas Map, Black Warrior Basin Study Area
- Figure 2-35. Total Natural Gas Map, Appalachian Basin Study Area

Section 3.0 – Results

- Figure 3-1. Simplified Chart of Results, Summary of All Phase II Study Areas—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-2. Chart of Results, Summary of All Phase II Study Areas—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-3. Simplified Chart of Results, Northern Alaska Study Area—Federal Land and Oil and Gas Resources by Accessibility
- Figure 3-4. Chart of Results, Northern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-5. Federal Land Access Categorization Map, Northern Alaska Study Area
- Figure 3-6. Map of Total Federal Oil, Northern Alaska Study Area
- Figure 3-7. Map of Total Federal Natural Gas, Northern Alaska Study Area
- Figure 3-8. Simplified Chart of Results, Uinta-Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-9. Chart of Results, Uinta-Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-10. Federal Land Access Categorization Map, Uinta-Piceance Basin Study Area
- Figure 3-11. Map of Total Federal Oil, Uinta-Piceance Basin Study Area
- Figure 3-12. Map of Total Federal Natural Gas, Uinta-Piceance Basin Study Area
- Figure 3-13. Simplified Chart of Results, Paradox/San Juan Basins Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-14. Chart of Results, Paradox/San Juan Basins Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-15. Federal Land Access Categorization Map, Paradox/San Juan Basins Study Area

- Figure 3-16. Map of Total Federal Oil, Paradox/San Juan Basins Study Area
- Figure 3-17. Map of Total Federal Natural Gas, Paradox/San Juan Basins Study Area
- Figure 3-18. Simplified Chart of Results, Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-19. Chart of Results, Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-20. Federal Land Access Categorization Map, Montana Thrust Belt Study Area
- Figure 3-21. Map of Total Federal Oil, Montana Thrust Belt Study Area
- Figure 3-22. Map of Total Federal Natural Gas, Montana Thrust Belt Study Area
- Figure 3-23. Simplified Chart of Results, Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-24. Chart of Results, Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-25. Federal Land Access Categorization Map, Powder River Basin Study Area
- Figure 3-26. Map of Total Federal Oil, Powder River Basin Study Area
- Figure 3-27. Map of Total Federal Natural Gas, Powder River Basin Study Area
- Figure 3-28. Simplified Chart of Results, Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-29. Chart of Results, Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-30. Federal Land Access Categorization Map, Wyoming Thrust Belt Study Area
- Figure 3-31. Map of Total Federal Oil, Wyoming Thrust Belt Study Area
- Figure 3-32. Map of Total Federal Natural Gas, Wyoming Thrust Belt Study Area
- Figure 3-33. Simplified Chart of Results, Greater Green River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-34. Chart of Results, Greater Green River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-35. Federal Land Access Categorization Map, Greater Green River Basin Study Area
- Figure 3-36. Map of Total Federal Oil, Greater Green River Basin Study Area
- Figure 3-37. Map of Total Federal Natural Gas, Greater Green River Basin Study Area
- Figure 3-38. Simplified Chart of Results, Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-39. Chart of Results, Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-40. Federal Land Access Categorization Map, Denver Basin Study Area
- Figure 3-41. Map of Total Federal Oil, Denver Basin Study Area
- Figure 3-42. Map of Total Federal Natural Gas, Denver Basin Study Area

- Figure 3-43. Simplified Chart of Results, Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-44. Chart of Results, Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-45. Federal Land Access Categorization Map, Florida Peninsula Study Area
- Figure 3-46. Map of Total Federal Oil, Florida Peninsula Study Area
- Figure 3-47. Map of Total Federal Natural Gas, Florida Peninsula Study Area
- Figure 3-48. Simplified Chart of Results, Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-49. Chart of Results, Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-50. Federal Land Access Categorization Map, Black Warrior Basin Study Area
- Figure 3-51. Map of Total Federal Oil, Black Warrior Basin Study Area
- Figure 3-52. Map of Total Federal Natural Gas, Black Warrior Basin Study Area
- Figure 3-53. Simplified Chart of Results, Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Accessibility
- Figure 3-54. Chart of Results, Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Figure 3-55. Federal Land Access Categorization Map, Appalachian Basin Study Area
- Figure 3-56. Map of Total Federal Oil, Appalachian Basin Study Area
- Figure 3-57. Map of Total Federal Natural Gas, Appalachian Basin Study Area
- Figure 3-58. Charts of the Top Five Study Areas by Federal Lands and Oil and Natural Gas
- Figure 3-59. Regional Charts

Section 4.0 – Additional Federal Land Access Issues

Appendix 1 Acronyms and Abbreviations

Appendix 2 Glossary of Terms

Appendix 3 Federal Land Status Preparation

- Figure A3-1. Schematic of BLM’s Primary Land Records Databases
- Figure A3-2. Master Polygon
- Figure A3-3. Public Domain Lands
- Figure A3-4. Query of U.S. Rights Data
- Figure A3-5. Federal Split Estate Oil and Gas Ownership
- Figure A3-6. Defining Ownership

- Figure A3-7. Surface Management View
Figure A3-8. Subsurface Oil and Gas Ownership View

Appendix 4 Federal Oil and Gas Lease Stipulation Data Preparation

- Figure A4-1. Stipulation Polygons and Study Area Boundary
Figure A4-2. Example of Polygons after Clipping to Study Area Boundary
Figure A4-3. Query in ArcGIS for All “Critical Big Game Habitat” Stipulations
Figure A4-4. Attribute Table Showing All “Critical Big Game Habitat” Polygons
Figure A4-5. New Polygons Representing Lands with Leasing Stipulations for “Critical Big Game Habitat”
Figure A4-6. Creation of Steep Slope Restriction Polygons

Appendix 5 Application for Permit to Drill - Conditions of Approval Data Preparation

- Figure A5-1. Example of Extrapolating the Effects of Conditions of Approval on Accessibility

Appendix 6 U.S. Geological Survey Methodology for the Assessment of Undiscovered Oil and Gas Resources

- Figure A6-1. Conventional vs. Continuous Accumulations

Appendix 7 Energy Information Administration Initial Estimates of Remaining Proved Ultimate Recovery Growth

- Figure A7-1. Uinta-Piceance Basin Exponential Curve Fit of Equivalent Oil Cumulative Growth Factor
Figure A7-2. Uinta-Piceance Basin Exponential Curve Fit of Tight Formation Equivalent Oil Cumulative Growth Factor
Figure A7-3. Uinta-Piceance Basin Exponential Curve Fit of Liquids Cumulative Growth Factor
Figure A7-4. Uinta-Piceance Basin Exponential Curve Fit of Gas Cumulative Growth Factor
Figure A7-5. Uinta-Piceance Basin Exponential Curve Fit of Tight Formation Gas Cumulative Growth Factor
Figure A7-6. Paradox/San Juan Basins Exponential Curve Fit of Equivalent Oil Cumulative Growth Factor
Figure A7-7. Paradox/San Juan Basins Exponential Curve Fit of Tight Formation Equivalent Oil Cumulative Growth Factor
Figure A7-8. Paradox/San Juan Basins Exponential Curve Fit of Liquids Cumulative Growth Factor
Figure A7-9. Paradox/San Juan Basins Exponential Curve Fit of Tight Formation Liquids Cumulative Growth Factor
Figure A7-10. Paradox/San Juan Basins Exponential Curve Fit of Gas Cumulative Growth Factor
Figure A7-11. Paradox/San Juan Basins Exponential Curve Fit of Tight Formation Gas Cumulative Growth Factor
Figure A7-12. Powder River Basin Exponential Curve Fit of Equivalent Oil Cumulative Growth Factor

- Figure A7-13. Powder River Basin Exponential Curve Fit of Liquids Cumulative Growth Factor
- Figure A7-14. Powder River Basin Exponential Curve Fit of Gas Cumulative Growth Factor
- Figure A7-15. Wyoming Thrust Belt Exponential Curve Fit of Oil Equivalent Cumulative Growth Factor
- Figure A7-16. Wyoming Thrust Belt Exponential Curve Fit of Liquids Cumulative Growth Factor
- Figure A7-17. Wyoming Thrust Belt Exponential Curve Fit of Gas Cumulative Growth Factor
- Figure A7-18. Greater Green River Basin Exponential Curve Fit of Equivalent Oil Cumulative Growth Factor
- Figure A7-19. Greater Green River Basin Exponential Curve Fit of Liquids Cumulative Growth Factor
- Figure A7-20. Greater Green River Basin Exponential Curve Fit of Gas Cumulative Growth Factor
- Figure A7-21. Denver Basin Exponential Curve Fit of Equivalent Oil Cumulative Growth Factor
- Figure A7-22. Denver Basin Exponential Curve Fit of Liquids Cumulative Growth Factor
- Figure A7-23. Denver Basin Exponential Curve Fit of Gas Cumulative Growth Factor
- Figure A7-24. Black Warrior Basin Exponential Curve Fit of Oil Equivalent Cumulative Growth
- Figure A7-25. Black Warrior Basin Exponential Curve Fit of Liquids Cumulative Growth Factor
- Figure A7-26. Black Warrior Basin Exponential Curve Fit of Gas Cumulative Growth Factor
- Figure A7-27. Uinta-Piceance Basin Liquids Fields Model Fit
- Figure A7-28. Uinta-Piceance Basin Gas Fields Model Fit
- Figure A7-29. Paradox/San Juan Basins Liquids Fields Model Fit
- Figure A7-30. Paradox/San Juan Basins Gas Fields Model Fit (Coalbed Natural Gas Not Included)
- Figure A7-31. Powder River Basin Liquids Fields Model Fit
- Figure A7-32. Powder River Basin Gas Fields Model Fit
- Figure A7-33. Wyoming Thrust Belt Liquids Fields Model Fit
- Figure A7-34. Wyoming Thrust Belt Gas Fields Model Fit
- Figure A7-35. Greater Green River Basin Liquids Fields Model Fit
- Figure A7-36. Greater Green River Basin Gas Fields Model Fit
- Figure A7-37. Denver Basin Liquids Fields Model Fit
- Figure A7-38. Denver Basin Gas Fields Model Fit
- Figure A7-39. Black Warrior Basin Liquids Fields Model Fit
- Figure A7-40. Black Warrior Basin Gas Fields Model Fit

Appendix 8 Energy Information Administration Proved Reserves Estimation and Field Boundary Construction

- Figure A8-1. Phase II Process Flows
- Figure A8-2. Buffering Process
- Figure A8-3. Field Buffers by Reservoir
- Figure A8-4. Field Buffers by Field
- Figure A8-5. Buffered Field Outline Issues

- Figure A8-6. Tangent Trapezoid Smoothing Rules
- Figure A8-7. Field Boundary Before and After Smoothing with Tangent Trapezoid Technique
- Figure A8-8. Black Warrior Basin Quality Check Map Showing Smoothed Field Outlines and Percent Federal Land

Appendix 9 GIS Methodology

- Figure A9-1. Creation of NLA/LUP Polygons
- Figure A9-2. Extended Drilling Zone Conceptual Diagram
- Figure A9-3. Removal of the Extended Drilling Zone from NSO Areas
- Figure A9-4. Display of Overlapping Timing Limitations (WTB Study Area)
- Figure A9-5. Display of Federal Land Access Categorization (WTB Study Area)
- Figure A9-6. Display of Federal Resource Access Categorization with Extended Drilling Zone Applied (WTB Study Area)
- Figure A9-7. Display of Federal Land Access Categorization with Extended Drilling Zone Removed and Sage Grouse Nesting Habitat Stipulation Excepted (WTB Study Area)

Appendix 10 Federal Land Use Planning Documents Used in the Phase II Inventory

Appendix 11 Federal Oil and Gas Surface Management Prescriptions - Available on the DVD-ROM

Tables

Executive Summary

Table ES-1. Summary of All EPCA Inventory Areas—Total Federal Land and Oil and Natural Gas Resources by Access Category

Section 1.0 – Introduction

Table 1-1. BLM and Forest Service Offices Participating in the Inventory

Section 2.0 – Methodology

Table 2-1. Federal Land Acreage by Surface Management Agency

Table 2-2. Land Use Plans by Study Area

Table 2-3. COAs by BLM Field Office

Table 2-4. Undiscovered Technically Recoverable Resources by Play

Table 2-5. Remaining Proved Ultimate Recovery Growth (“Reserves Growth”) by Study Area (Federal and Non-Federal)

Table 2-6. Range of EIA Estimated Remaining Proved Ultimate Recovery Growth (“Reserves Growth”) for Selected Study Areas

Table 2-7. Proved Reserves Summary Statistics

Table 2-8. Summary of All Federal Oil and Natural Gas Resources by Study Area and Resource Type

Table 2-9. Federal Land Access Categorization Hierarchy

Section 3.0 – Results

Table 3-1. Summary of All Phase II Study Areas—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-2. Northern Alaska Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-3. Uinta/Piceance Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-4. Paradox/San Juan Basins Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-5. Montana Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Table 3-6. Powder River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

- Table 3-7. Wyoming Thrust Belt Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Table 3-8. Greater Green River Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Table 3-9. Denver Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Table 3-10. Florida Peninsula Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Table 3-11. Black Warrior Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category
- Table 3-12. Appalachian Basin Study Area—Federal Land and Oil and Natural Gas Resources by Access Category

Section 4.0 – Additional Federal Land Access Issues

- Table 4-1. Access Issues, Northern Alaska Study Area
- Table 4-2. Access Issues, Paradox/San Juan Study Area (Utah)
- Table 4-3. Access Issues, Paradox/San Juan Study Area (New Mexico and Colorado)
- Table 4-4. Access Issues, Montana Thrust Belt Study Area
- Table 4-5. Access Issues, Powder River Basin Study Area
- Table 4-6. Access Issues, Wyoming Thrust Belt Study Area
- Table 4-7. Access Issues, Greater Green River Basin Study Area
- Table 4-8. Access Issues, Denver Basin Study Area
- Table 4-9. Access Issues, Florida Peninsula Study Area
- Table 4-10. Access Issues, Black Warrior Basin Study Area
- Table 4-11. Access Issues, Appalachian Basin Study Area

Appendix 1 Acronyms and Abbreviations

Appendix 2 Glossary of Terms

Appendix 3 Federal Land Status Preparation

- Table A3-1. Polygon Attributes from the LR-2000 Datasets
- Table A3-2. Typical CarteView Input File

Appendix 4 Federal Oil and Gas Lease Stipulation Data Preparation

Table A4-1. Rendering Errors in Phase I Offices

Appendix 5 Application for Permit to Drill - Conditions of Approval Data Preparation

Table A5-1. Study Areas Sampled for COAs

Table A5-2. BLM Field Offices for Which COAs Data Were Abstracted

Table A5-3. Stratified Random Sampling Guidance

Table A5-4a. Findings from Interviews with BLM Field Personnel – Applicant Funded Surveys

Table A5-4b. Findings from Interviews with BLM Field Personnel – Prohibitive Lease Stipulations/COAs

Table A5-5. COA Statistics by Field Office

Table A5-5. (Concluded). COA Statistics by Field Office

Appendix 6 U.S. Geological Survey Methodology for the Assessment of Undiscovered Oil and Gas Resources

Appendix 7 Energy Information Administration Initial Estimates of Remaining Proved Ultimate Recovery Growth

Table A7-1. Phase II Selected Models and Results

Table A7-2. Comparison of Estimates of Reserves Growth-Natural Gas

Table A7-3. Exponential Method Ultimate Recovery Growth from 2003 to 2303

Table A7-4. Hyperbolic Incremental Growth Factor Model Results

Appendix 8 Energy Information Administration Proved Reserves Estimation and Field Boundary Construction

Table A8-1. Phase II Study Areas and Their State and County Affiliations

Table A8-2. Links to Websites Used in Phase II

Table A8-3. State Agencies Contacted

Table A8-4. Well Data Sources by State for Phase II

Table A8-5. Inter-Well Distance Ranges, Nominal Standard Well Spacings, and Buffer Radii

Table A8-6. Regression Equation Parameters for the Estimation of Non-Reported Reserves

Table A8-7. Field Count, BOE Production & BOE Reserves for Four Reserve Types in Each Study Area

Table A8-8. Summary of 2001 Federal Lands Proved Reserves by Study Area

Table A8-9. Summary of Updated 2001 Federal Lands Proved Reserves by Phase I Study Area

Appendix 9 GIS Methodology

Table A9-1. Jurisdictions Classified as NLA/LUP

Table A9-2. Federal Land Categorization

Table A9-3. Stipulation Exception Factors by USDA-FS and BLM Office

Table A9-4. Exception Factors Example for Overlapping Stipulations (WTB Study Area)

Table A9-5. Extended Drilling Zones by Jurisdiction

Table A9-6. Sample Master Stipulations List for a Selected Area

Appendix 10 Federal Land Use Planning Documents Used in the Phase II Inventory

Appendix 11 Federal Oil and Gas Surface Management Prescriptions - Available on the DVD-ROM