

CHAPTER 1

PURPOSE AND NEED

1.0 INTRODUCTION, PURPOSE, AND NEED FOR ACTION

Anadarko E&P Company LP (Anadarko) has notified the Bureau of Land Management (BLM), Rock Springs Field Office that Anadarko proposes to explore and potentially develop a shallow gas project located within the administrative boundary of the BLM's Rock Springs Field Office. The proposed Copper Ridge Shallow Gas project area (CRPA) is generally located in Townships 16 and 17 North, and Ranges 100 through 101 West, 6th Principal Meridian, Sweetwater County, Wyoming, as shown on Figure 1-1. The shallow gas wells, access roads, pipelines, and other ancillary facilities located on federal land would be permitted with the BLM and the Wyoming Oil and Gas Conservation Commission (WOGCC). Facilities located on State of Wyoming and privately owned surface would be permitted with the WOGCC.

Exploration and production of federal oil and gas leases by private industry is an integral part of the BLM's oil and gas policy. The BLM oil and gas program encourages development of domestic oil and gas reserves, as expressed in a variety of laws passed by Congress. Natural gas development is an integral part of the United States' energy future, and part of our current national energy policy. Production of reliable domestic natural gas will strengthen the United States' energy future by decreasing the reliance on foreign supplies.

The purpose and need for the proposed natural gas exploration and development project is to exercise the lease holders' rights within the project area to drill, complete, and operate additional natural gas wells, subject to applicable laws and stipulations of the lease. Exploration and production of natural gas, including methane gas from coal-bearing formations, is in accordance with the President's National Energy Policy, Executive Order 13212. The policy calls for federal agencies "to develop a national energy policy designed to help the private sector, and, as necessary and appropriate, State and local governments, promote dependable, affordable, and environmentally sound production and distribution of energy for the future." Natural gas is an integral part of the U.S. energy future due to its availability, the presence of an existing market delivery infrastructure, and the environmental advantages of clean-burning natural gas.

The purpose and need for this project is to allow the private land/mineral owner and federal lease holder (same) the opportunity to drill and test shallow gas within the project area. The Proposed Action would allow for the exercise the leaseholders' existing rights to drill for, extract, remove, and market gas products if exploration proves successful. Ancillary facilities needed to allow for drilling, extraction, and production of natural gas are also proposed. National mineral leasing policies and the regulations by which they are enforced recognize the statutory right of lease holders to develop federal mineral resources to meet continuing needs and economic demands so long as undue and unnecessary environmental degradation is not incurred. Private land owners have the right to develop their holdings in accordance with state and local laws.

CHAPTER 1: PURPOSE AND NEED

1.1 PROJECT DESCRIPTION

Access to the CRPA is provided by the two-lane paved U.S. Highway 430, Sweetwater County Road No. 4-26, and an existing road network in the CRPA developed to service prior and on-going drilling and production activities. The CRPA overlies an area already developed by two existing oil and gas projects; the Brady Field and the Jackknife Spring Field. Drilling operations within the Brady and the Jackknife Spring fields began in 1960 and the resulting production continues today. Since 1960, a total of 59 producing wells have been drilled and developed. Eight additional, non-producing wells have been plugged, abandoned, and reclaimed.

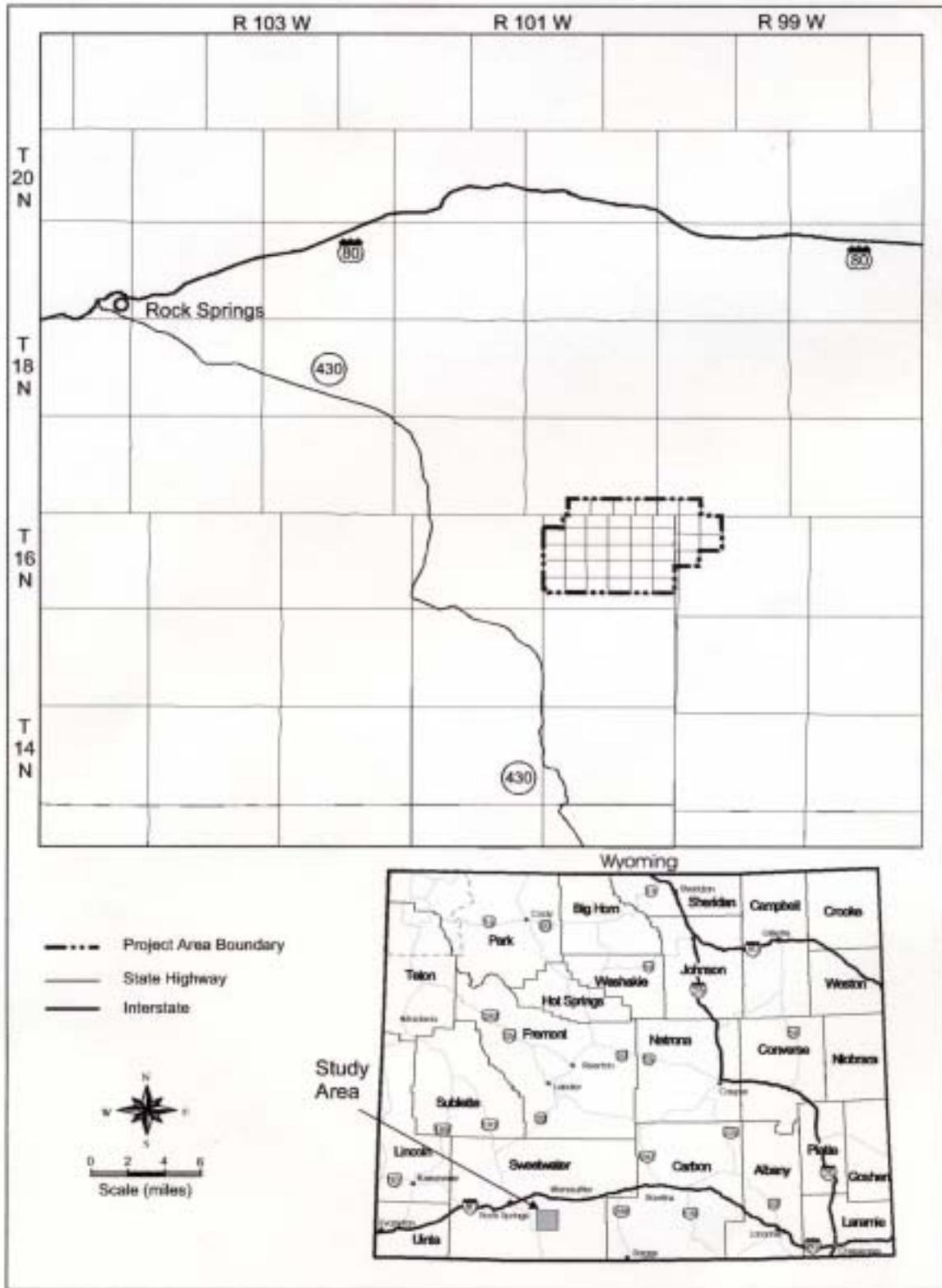
Anadarko proposes drilling a maximum of 89 wells on 160 acre spacing, and utilize much of the existing infrastructure and surface facilities, including access roads, drill pads, and pipeline corridors for the Copper Ridge project. Drilling is expected to last for approximately two to four years, with a projected life-of-project (LOP) of 15 to 20 years. Wells would target sandstone reservoirs and coal seams within the Almond Formation at depths of 2,000 to 4,500 feet. Gas produced would be from both coal seams (coal bed methane or CBM) and adjacent sands. In addition to wellpads and associated construction, Anadarko anticipates that additional infrastructure such as access roads, compression and pipelines would be necessary to develop this resource. Additional gas volumes would be transported via existing trunk pipelines, but additional gathering pipelines are anticipated, depending on the drilling success. The Proposed Action is discussed in-depth in Chapter 2, Proposed Action and Alternatives

The CRPA is located within the checkerboard land pattern that resulted from early railroad grants made by the federal government to the Union Pacific Railroad Company. The odd-numbered sections within the project area are privately owned (surface and mineral rights). Anadarko recently purchased the private surface within the checkerboard from Union Pacific Railroad Company. As a result, Anadarko owns the majority of the private surface and mineral estate within the CRPA. Total land areas and status are shown in Table 1-1.

Table 1-1. Surface Ownership of the Copper Ridge Project Area.

Surface Ownership	Acres	Percent
Federal (BLM)	11,565	46.4
Private	12,108	48.5
State of Wyoming	1,280	5.1
Total	24,953	100.0

CHAPTER 1: PURPOSE AND NEED



CHAPTER 1: PURPOSE AND NEED

1.2 RELATIONSHIP TO EXISTING PLANS AND DOCUMENTS

Resource Management Plan - The document which directs management of federal lands within the Rock Springs Field Office is the approved Resource Management Plan (RMP) for the Green River Resource Area (now the RSFO -USDI-BLM 1997). The objective for management of oil and gas resources, as stated in the RMP, is to provide for leasing, exploration, and development of oil and gas while protecting other resource values. In addition, the RMP states public lands within the checkerboard area are open to mineral leasing and development (to promote mineral recovery) with appropriate mitigation on a case-by-case basis.

The development of natural gas within the Copper Ridge Unit is in conformance with the RMP. The reasonably foreseeable development analyzed in the RMP assumed 1,258 successful well completions under the proposed plan. As of September 2003, the RSFO has between 696 and 705 producing wells including 26 producing CBM wells (per preliminary review of raw data from WOGCC). The Proposed Action is within that analyzed under the RMP. The environmental analysis prepared for the proposed additional wells in the Copper Ridge Unit would incorporate decisions, terms, and conditions of use as described in the RMP. This analysis incorporates and tiers to the air quality analysis prepared for the Pinedale Anticline Natural Gas Project EIS (USDI, 2000) which updated the air quality analysis for the Kemmerer, Pinedale, and Rock Springs Field Offices' RMPs.

Other Environmental Documents – Continental Divide/Wamsutter II (CD/WII) EIS/ROD (USDI, 1998) includes all or a portion of the CRPA in its Cumulative Impacts Analysis Area (CIAA). The Pinedale Anticline EIS/ROD (USDI, 2000), CD/WII EIS/ROD (USDI, 1998), and Desolation Flats DEIS (USDI, 2003) include the CRPA for air impacts analysis only. The Decision Record, Finding of No Significant Impact, Changes to Modification/Corrections to the Environmental Assessment for the Vermillion Basin Natural Gas Exploration and Development Project (USDI, 2002), Appendix D which analyzed directional and horizontal drilling techniques in the Almond formation. Appendix D can be access via the internet at <http://www.wy.blm.gov/nepa/rsfodocs/vermbasin/VBPA-well-architecture-letter.pdf>

Use Authorizations - Use authorizations (i.e., rights-of-way, permits, etc.) for roads, powerlines, pipelines, compressors, and well site facilities would be processed through the BLM application for Permit to Drill (APD) and Sundry Notice permitting process as long as the facilities remain on-lease and are owned and operated by the unit operator. Any sales pipeline located on-lease or any facility located off-lease would require individual rights-of-way. All individual permits located on public land would be subject to further environmental review.

Lease Stipulations - Some federal oil and gas leases within the proposed area may include special stipulations on occupancy. These stipulations are in addition to the standard lease terms and are designed to protect surface resources such as soils, water, and wildlife by restricting periods of activity or areas of disturbance. Application of these lease stipulations would be handled on a case-by-case basis for each APD submitted to the BLM.

1.3 NATIONAL ENVIRONMENTAL POLICY ACT

The proposed project has been analyzed in accordance with the requirements of the National Environmental Policy Act (NEPA). To comply with NEPA and the Council on Environmental

CHAPTER 1: PURPOSE AND NEED

Quality regulations, which implement NEPA, the BLM is required to prepare an environmental analysis. This environmental assessment (EA) serves several purposes.

- It provides the public and government agencies with information about the potential environmental consequences of the project and alternatives;
- identifies all practicable means to avoid or minimize environmental harm from the project and alternatives;
- It provides the responsible official with information upon which to make an informed decision regarding the project.

NEPA requires Federal agencies to use a systematic, interdisciplinary approach to ensure the integrated use of natural and social sciences in planning and decision making. Factors considered during the environmental analysis process regarding the Anadarko project include the following:

- A determination of whether the proposal and alternatives are in conformance with BLM policies, regulations, and approved resource management plan direction.
- A determination of whether the proposal and alternatives are in conformance with policies and regulations of other agencies likely associated with the project.

This EA is not a decision document. It documents the process used to analyze the potential impacts of the proposed action and alternatives and discloses the effects of the proposed action and alternatives to that action. A Decision Record (DR), signed by the responsible official (Field Manager, Bureau of Land Management, Rock Springs Field Office) will document the final decision regarding the selected alternative. The BLM will document whether or not significant impacts would occur with implementation of any of the alternatives. If the BLM determines that no significant impacts would occur, a Finding of No Significant Impact (FONSI) Decision Record would be issued. If significant impacts are identified, the BLM decision would be to complete an Environmental Impact Statement (EIS), with subsequent public input and additional analysis of the alternatives. The BLM decision will relate to BLM administered lands.

1.4 LAND AND RESOURCE MANAGEMENT ISSUES AND CONCERNS

In accordance with NEPA and CEQ regulations 40 CFR 1501.7, an early and open process for determining the scope of issues to be addressed is required and for identifying the significant issues related to a proposal. In compliance with this procedural requirement, the BLM, RSFO released a scoping notice on October 15, 2002 for a 30-day review period. Sixteen comment letters were received. The scoping process led to the identification of the following land and resource management issues and concerns potentially associated with the Proposed Action:

- Potential increased traffic and associated impacts on existing county, state, and BLM roads.
- Potential socio-economic impacts to local communities.

CHAPTER 1: PURPOSE AND NEED

- Potential impacts to surface and groundwater resources, including sedimentation/salinity to the Colorado River system and CBM produced water quality issues.
- Potential impacts to sensitive soils within the project area.
- Potential impacts from emissions resulting from additional drilling and production activities.
- Potential impacts related to reclamation of disturbed areas and control of noxious weed invasions.
- Potential conflicts with livestock management operations in the analysis area, including possible impacts to range improvement projects.
- Potential impacts to cultural and historical values within the analysis area.
- Potential impacts to wildlife habitats, especially habitat fragmentation, within the analysis area, including big game, greater sage grouse, and raptors.
- Potential impacts to the Salt Wells Wild Horse Herd Management Area and wild horses.
- Potential impacts to listed, or proposed for listing, threatened and endangered plant and animal species, including potential Colorado River depletion and effects on downstream listed fish species.
- Potential cumulative effects of drilling and development activities when combined with other ongoing and proposed developments on lands adjacent to the Copper Ridge project area.
- Potential conflicts between mineral development activities and recreational opportunities.
- Application and acquisition of appropriate permits.

Certain issues were determined to not be “significant issues related to the proposed action” (40 CFR 1501.7) because they are not potentially affected or impacted by the proposal. These issues brought forth during public scoping and reasons for eliminating that issue from consideration in the analysis are shown below:

- Issues brought forth pertaining to fracing methods and chemical components of drilling fluids do not warrant specific consideration since fracing methods as well as drilling fluids must be in compliance with Federal and state requirements.
- Subsidence: Although it is possible for subsidence to occur, experience in the RSFO has shown subsidence is only likely to occur when material (i.e., coal, trona) is extracted. Extraction of coal is not proposed for this action and only partial dewatering of the coal seam is necessary for the gas to desorb. The coal seam is located over 2,000 feet deep and the integrity of the formations above (i.e., sandstone) would preclude any subsidence from occurring at the surface.
- Migration of natural gas to the surface: The targeted natural gas reservoir is confined, and fractures or other structures that would allow the gas to move from the formation are not present. The layered overburden includes sandstone, siltstones and of shale. Migration of gas to the surface is extremely unlikely. Large quantities of gas would need to migrate through more than 2,000 feet of layered rock to reach the surface, an

CHAPTER 1: PURPOSE AND NEED

extremely unlikely occurrence. Migration is further prohibited by well completion processes, designed and implemented to prevent the loss of the resource being produced. The area between the boreholes and casing will be cemented from surface to total depth, preventing the gas from migrating other than through the production pipe.

1.5 AUTHORIZING ACTIONS

The proposed federal, state, county, and local actions required to implement the Copper Ridge Shallow Gas Project are listed in Table 1-2.

Table 1-2. Federal, State, and County Authorizing Actions.

AGENCY	NATURE OF ACTION
DEPARTMENT OF THE INTERIOR	
Bureau of Land Management (Rock Springs Field Office)	NEPA compliance and approval of ROW applications for pipelines; temporary use permits; approval of APD's and Sundry Notices.
U.S. Fish and Wildlife Service	Coordination, consultation, and impact review on federally listed or proposed for listing, threatened or endangered species of fish, wildlife, and plants. Migratory bird impact coordination.
U.S. ENVIRONMENTAL PROTECTION AGENCY	
	Spill Prevention Control and Countermeasures (SPCC) Plans. Regulate hazardous waste treatment, storage, and /or disposal.
DEPARTMENT OF THE ARMY	
U.S. Army Corps of Engineers	Issue permits(s) (Section 404) for placement of dredged or fill material in or excavation of waters of the U.S. and their adjacent wetlands.

CHAPTER 1: PURPOSE AND NEED

AGENCY	NATURE OF ACTION
WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY	
Water Quality Division	<p>National Pollution Discharge Elimination System (NPDES) permits for discharging waste water and storm water runoff.</p> <p>Conformance with all surface water standards; permit to construct and permit to operate.</p> <p>Permits to construct settling ponds and waste water systems, including ground water injection and disposal wells.</p> <p>Regulate disposal of drilling fluids from abandoned reserve pits.</p> <p>Administrative approval for discharge of hydrostatic test water.</p>
Air Quality Division	New Source Review (NSR) Permit: All pollution emission sources, including compressor engines and portable diesel and gas generators.
WYOMING STATE ENGINEERS OFFICE	
	<p>Issue permits to appropriate groundwater and surface water.</p> <p>Issue temporary water rights for construction permits to appropriate surface water.</p>
WYOMING STATE HISTORIC PRESERVATION OFFICE	
	Consultation concerning identification, evaluation, assessments effect and treatment of adverse effects on historic properties.

CHAPTER 1: PURPOSE AND NEED

AGENCY	NATURE OF ACTION
SWEETWATER COUNTY	
	<p>Zoning certificates for site development and construction.</p> <p>Small wastewater system permits, where applicable.</p> <p>Road use agreements and/or oversize trip permits when traffic on county roads exceeds established size and weight limits or where the potential for excessive road damage exists.</p> <p>Construction and conditional use permits for all new structures.</p> <p>Zoning changes where applicable.</p> <p>Control of noxious weeds.</p> <p>Permits to bore or trench county roads or for any crossing or access off a county road.</p>
WYOMING DEPARTMENT OF TRANSPORTATION	
	<p>Conformance with applicable size and weight limits for trucks.</p>
WYOMING OIL AND GAS CONSERVATION COMMISSION	
	<p>Primary authority for drilling on state and privately held mineral resources and secondary authority for drilling on federal lands.</p> <p>Authority to allow or prohibit flaring or venting of gas on private or state owned minerals</p> <p>Regulate drilling and plugging of wells operating on private or state owned minerals.</p> <p>Aquifer Exemption Permit.</p> <p>Directional drilling.</p> <p>Rules and regulations governing drilling units.</p> <p>Gas injection well permits.</p>