

## **1.0 PURPOSE OF AND NEED FOR ACTION**

### **1.1 INTRODUCTION**

Bill Barrett Corporation (BBC), successor in interest to Intoil, Inc., has notified the Casper Field Office (CFO), Bureau of Land Management (BLM) of their intent to propose a modification to the Cooper Reservoir Natural Gas Development Project as originally proposed by Intoil, Inc. and subsequently approved in the June 1998 Decision Record (DR) and Finding of No Significant Impact (FONSI) issued for the Cooper Reservoir Natural Gas Development Project (CRNGDP) (BLM 1998). The DR and FONSI for the CRNGDP approved drilling, completion, testing, production, and reclamation of up to 73 additional natural gas wells in and adjacent to the Cooper Reservoir Unit at a maximum density of 16 well locations per section (i.e., a 40-acre well location density pattern).

BBC currently proposes to modify the original/authorized Proposed Action (BLM 1998) and develop a maximum of 32 well locations per 640-acre section (i.e., a 20-acre well location density pattern) in a 2,528 acre (+/-) core area of the original CRNGDPA. A maximum of 16 wells per section (i.e., a 40-acre well location density pattern) would be proposed throughout the remainder of the Modified Cooper Reservoir Natural Gas Development Project Area (MCRNGDPA) (see Figure 1.1). After additional development, it may be determined that a 10-acre well density pattern is necessary in order to fully and efficiently recover natural gas reserves within certain portions of the MCRNGDPA core area (see Figure 2.1). BBC would drill these 10-acre wells from existing well pads constructed in conjunction with wells drilled at the larger 20-acre and 40-acre well densities utilizing directional drilling techniques to achieve the desired bottom hole location. While economic conditions are such that the sustained drilling of wells at the 10-acre density is not currently justified, BBC seeks analysis of this contingency in anticipation of potential future improvements in both directional drilling technology and market conditions.

Consistent with the increase in well density, BBC now proposes to construct a maximum of 115 well locations within the MCRNGDPA, an increase of 42 over the 73 well locations analyzed in the original CRNGDP EA (BLM 1998). Including the potential for 10-acre density wells, the total number of well bores to be analyzed in the MCRNGDP EA would be 165, with these wells to be drilled on a maximum of 115 individual well pads. Approximately 2,080 acres that were originally included in the CRNGDP EA (BLM 1998) will be eliminated from the modified project description resulting in a revised project area encompassing approximately 4,082 acres or 62% of the original CRNGDPA. Development activity within the original CRNGDPA would be allowed to continue under the terms and conditions of the 1998 DR and FONSI until such time as this analysis has been completed and approved by BLM.

The proposed modification is designed to prevent the waste of the natural gas resource and maximize the recovery thereof in the CRU and adjoining areas and has been identified as geologically appropriate by BLM's Wyoming Reservoir Management Group (WRMG) (WRMG 2002). Geologic evaluations presented by Intoil and reviewed by the WRMG indicate that mean well drainage areas in the core area of the CRU average approximately 23 acres for geologic zones between 5,000 and 7,000 feet and 9 acres for those geologic zones below 7,000 feet (WRMG 2003a).

[Link to Figure 1.1](#)

The proposed project would enable the efficient recovery of federally-owned hydrocarbons (natural gas) by BBC pursuant to their rights under existing oil and gas leases issued by the BLM, thereby preventing the waste of these hydrocarbon reserves. National mineral leasing policies and the regulations by which they are enforced recognize the statutory right of lease holders to develop federal mineral resources in order to meet continuing national needs and economic demands as long as undue and unnecessary environmental degradation is not incurred.

Since the issuance of the DR and FONSI for the CRNGDP in 1998 both Intoil and BBC have drilled a combined total of 38 wells within the original CRNGDPA (as of December 1, 2003). Of the 18 active/proposed wells identified in Table 3.3 of the CRNGDPA EA (BLM 1998), 6 wells are currently producing gas wells, 4 wells are shut-in, 1 well remains a water disposal well, 6 wells have been plugged and abandoned, and 1 well was never drilled. There are currently 40 producing gas wells, 5 shut-in gas wells, 1 water injection well, and 3 wells recently drilled which are now waiting on completion operations within the MCRNGDPA (WOGCC 2003). Additional exploration and development within the Modified Cooper Reservoir Natural Gas Development Project Area would generally consist of the following component activities:

- construction of up to 42 additional well locations within the overall project area;
- construction of approximately 13,900 feet (2.64 miles) of access road necessary to provide access to the additional well locations proposed by BBC;
- installation of approximately 13,900 feet (2.64 miles) of buried natural gas and produced water pipelines for the gathering and transportation of gas and water produced from wells within the project area to compression (gas) and disposal (water) facilities;
- enlargement of field transmission capacity in existing gas trunk lines through the installation of approximately 17,300 feet (3.28 miles) of parallel (looped) pipeline within the field;
- installation of processing and production facilities, and the routine operation/maintenance of commercially productive wells within the field;
- expansion of existing gas compression to facilitate sales of natural gas produced within the project area; and
- abandonment and reclamation of individual well location and access roads as they are determined to be commercially non-productive.

As indicated above, the project area considered in the original CRNGDP EA (BLM 1998) encompassed approximately 6,282 acres. BBC now proposes to reduce the overall area considered for continued development by approximately 38% and will drill a maximum of 92 additional wells from a maximum of 42 additional well pads within the MCRNGDPA along with the roads, pipelines, and ancillary facilities necessary for the production of commercially successful wells drilled in conjunction with this modified development proposal. These activities are hereafter referred to as the Proposed Action. Those lands potentially affected by implementation of the

modified proposed action are defined as the “project area” and the boundaries of this project area are shown on Figure 1.2.

This modified Field Development EA incorporates the original CRNGDP EA (BLM 1998) by reference and expands upon that analysis as necessary to provide guidelines for the implementation of additional development within the modified project area on a reduced spacing pattern. Through interdisciplinary analysis and review, consideration of reasonable alternatives, and public participation, this EA will serve as a vehicle for:

- determining the significance of environmental impacts associated with the Proposed Action and alternatives;
- assisting in the decision-making process;
- deciding whether an Environmental Impact Statement (EIS) is necessary; and,
- identifying and developing appropriate mitigation measures to minimize the environmental impacts of the Proposed Action and alternatives.

## **1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION**

As indicated above, BBC proposes to drill up to a total of 92 additional natural gas wells from 42 additional well pads in the project area over a period of approximately 5 to 10 years. This activity would be in addition to the 49 existing well locations (not including abandoned wells) which have been previously approved and subsequently drilled within the project area as of December 1, 2003. Thirty-eight of these wells were drilled subsequent to the issuance of the DR and FONSI for the CRNGDP EA (BLM 1998). Implementation of the Proposed Action would allow for the efficient recovery of known hydrocarbon reserves (natural gas) within the MCRNGDPA.

The development of federal oil and gas leases is an integral part of the BLM oil and gas leasing program under the authority of the *Mineral Leasing Act* (MLA) of 1920 as amended (30 U.S.C. 181, *et seq*), the *Federal Land Policy and Management Act* (FLPMA) of 1976 (P.L. 94-579), the *Federal Onshore Oil and Gas Royalty Management Act* (FOOGRMA) of 1982 (30 U.S.C. 1701, *et seq*), and the *Federal Onshore Oil and Gas Leasing Reform Act* (FOOGLRA) of 1987 (43 CFR Part 3100). The BLM’s oil and gas leasing program is intended to encourage the development of domestic oil and gas reserves, thereby reducing national dependence upon foreign energy supplies.

## **1.3 NEPA COMPLIANCE**

This Environmental Assessment was prepared pursuant to:

- the *National Environmental Policy Act* (NEPA) of 1969, as amended;



- subsequent regulations adopted by the Council on Environmental Quality (CEQ) found in 40 CFR Part 1500-1508; and
- applicable Bureau of Land Management rules, regulations, and policies regarding implementation of NEPA and compliance with CEQ regulations.

This EA was prepared under a third-party contract with the guidance, participation and independent evaluation of the Bureau of Land Management, who is in agreement with the findings of this analysis, and who hereby approves and takes responsibility for the scope and content herein. This EA is intended to be a public document that analyzes the probable and known impacts upon components of the human environment that would result from implementation of the Proposed Action and alternatives, and reaches a conclusion regarding the magnitude of the impact(s). Furthermore, this EA was designed to provide the BLM with both documented evidence and a level of analysis sufficient to allow a determination of whether:

- the impacts from the Proposed Action (or project alternatives) on the human environment are significant, thereby triggering the preparation of an Environmental Impact Statement (EIS); or
- that a *Finding of No Significant Impact* (FONSI) is warranted.

If the BLM determines that impacts are insignificant, a *Finding of No Significant Impact* (FONSI) and *Decision Record* (DR) would be prepared and BBC would then be allowed to proceed with additional development within the CRU and any adjacent areas identified within this document. If, however, the BLM determines that impacts are significant, the agency would then be required to prepare an EIS.

This environmental assessment is not a decision document. It merely provides documentation of the process used to analyze the impacts of the Proposed Action and project alternatives, if any, on the human environment. Decisions regarding implementation of the Proposed Action or project alternatives will be fully documented in a *Decision Record* that will be issued by the BLM and will apply only to those lands and resources for which they have been granted specific management responsibility. Various additional aspects of the environment are regulated by other federal, state, and/or local agencies and this EA is not intended to eliminate the need for BBC to pursue permit approval(s) from these regulatory authorities. To the contrary, this document is also designed to provide these agencies with the information necessary to assist them in arriving at their own independent decisions regarding the issuance of permits and approvals necessary for BBC to proceed with the Proposed Action. In this regard, it is essential that these additional regulatory authorities carefully review this EA to ensure that impacts not under the authority of the BLM are disclosed and that possible mitigation measures are identified.

This EA considers direct, indirect, and cumulative impacts of the Proposed Action and the No Action Alternative. As stated above, the purpose of this analysis is to provide the decision-makers with information needed to make a final decision that is fully informed and based upon factors relevant to the proposal. It also serves as the summary documentation of analyses conducted on the proposal in order to identify environmental impacts and those mitigation measures that may be

necessary to address issues. Analyses in the EA are restricted to the potential environmental impacts associated with additional development of the federal leases in the MCRNGDPA including the effects of access road and drill pad construction, additional drilling activities, production testing, produced water disposal, site abandonment and subsequent reclamation. These analyses include the direct effects of construction and drilling activities at or near the proposed drill sites and along the access road corridors, the indirect environmental effects likely expected within a larger study area surrounding each individual drill site and access road corridor, as well as the cumulative impacts of the *Proposed Action* upon the human environment. Additionally, this environmental analysis will include:

- a determination as to whether the Proposed Action is in conformance with BLM policies, regulations, and approved land management direction pertaining to oil and gas exploration and development activities;
- a determination as to whether the Proposed Action is compatible with other resources and permitted land uses in the analysis area; and
- a determination as to whether locations exist for the proposed facilities that would be environmentally suitable, meet the needs of other resource management activities, and which acceptably mitigate surface resource impacts, while honoring the leaseholder's rights.

In compliance with NEPA and CEQ regulations, this EA also considers impacts associated with implementation of the No Action Alternative which would result from BLM denial of the individual permits and/or approvals necessary to develop those federal mineral leases included within the area of analysis. Although a decision to select the No Action Alternative for the MCRNGDP is available to the BLM through denial of any (or all) of the individual Applications for Permit to Drill, the right to drill and/or develop somewhere within the leasehold cannot be denied by the Secretary of Interior (see Section 2.4). Authority to completely deny can only be granted by Congress (*Union Oil Company of California vs. Morton*, 512 F. 2nd 743, 750-751; 9th Cir. 1975).

This Environmental Assessment contains six primary chapters, briefly described below, that are directly relevant to this analysis document. These six primary chapters are described as follows:

- Chapter One, Purpose Of and Need For Action: Provides an introduction and discusses the proposal's compliance with applicable Federal, State and local laws, regulations and land use plans.
- Chapter Two, Proposed Action and Alternatives: Provides a detailed description of both the Proposed Action and alternatives as analyzed in this EA.
- Chapter Three, Affected Environment: Provides a revised description of the environment in the project area as it exists today, and particularly where there have been changes to the environment subsequent to the original CRNGDP EA (BLM 1998).

- Chapter Four, Environmental Consequences: Describes the impacts associated with each alternative including the Proposed Action. Where appropriate, mitigation measures are identified to reduce impacts to an acceptable level. In some cases these mitigation measures may be outside of the regulatory authority vested with the BLM, but may be under another agency's authority, or can be implemented voluntarily by BBC.
- Chapter Five, Mitigation and Monitoring: Summarizes the mitigation measures identified to eliminate or minimize impacts associated with the Proposed Action and alternatives.
- Chapter Six, Consultation and Coordination: Provides a summary of those issues identified during both internal and public scoping during the preparation of this EA. This chapter also provides a list of the EA preparers, reviewers and persons who commented or provided data used in the preparation of the document.

A tiered approach was used in the preparation of this environmental analysis document and much of the information contained in the original CRNGDP EA (BLM 1998) has been incorporated into this document by reference, particularly in Chapter Two (Proposed Action) and Chapter Three (Affected Environment) where there have been no major changes from the information originally presented in the original analysis document.

#### 1.4 GENERAL LOCATION AND LAND OWNERSHIP

Please refer to the CRNGDP EA (BLM 1998) for general information concerning the location of the MCRNGDPA and access thereto. The modified project area encompasses approximately 4,082 acres of mixed federal, state, and private lands. Of this total, approximately 1,440 acres are owned by the United States of America, 760 acres are owned by the State of Wyoming, and the remaining 1,882 acres are owned by private individuals. Table 1.1 summarizes surface ownership within the modified project area, while Table 1.2 summarizes the mineral ownership therein. Figure 1.3 depicts the surface ownership within the MCRNGDPA and Figure 1.4 depicts the mineral ownership within the MCRNGDPA.

**Table 1.1**

**Surface Ownership within the MCRNGDP Area**

Surface Ownership	Acres	Percent of Total
Federal (BLM)	1,440.00	35.28
Private (Fee)	1,881.74	46.10
State of Wyoming (State)	760.00	18.62
<b>TOTAL</b>	<b>4,081.74</b>	<b>100.00</b>

[Link to Figure 1.3](#)

[Link to Figure 1.4](#)

**Table 1.2**

**Mineral Ownership within the MCRNGDP Area**

<b>Mineral Ownership</b>	<b>Acres</b>	<b>Percent of Total</b>
Federal (BLM)	3,799.37	93.08
State of Wyoming (State)	0.00	0.00
Private (Fee)	282.37	6.92
<b>TOTAL</b>	<b>4,081.74</b>	<b>100.00</b>

**1.5 AUTHORIZING ACTIONS AND RELATIONSHIP TO STATUTES AND REGULATIONS, OR OTHER PLANS**

Please refer to Section 1.5 of the CRNGDP EA (BLM 1998) for a discussion of authorizing actions and their relationship to statutes, regulations, and/or other plans.

**1.5.1 Primary Federal Permitting Requirements**

Please refer to Section 1.5.1 of the CRNGDP EA (BLM 1998) for a discussion of primary federal permitting requirements.

**1.5.2 Primary State Permitting Requirements**

Please refer to Section 1.5.2 of the CRNGDP EA (BLM 1998) for a discussion of primary state permitting requirements including the Wyoming Department of Transportation, Wyoming Oil and Gas Conservation Commission, Wyoming Department of Environmental Quality, and the Wyoming State Engineer.

**1.6 CONFORMANCE WITH EXISTING LAND MANAGEMENT PLANS**

The Modified Cooper Reservoir Natural Gas Development Project, as proposed by BBC, would be consistent with management direction contained in the Platte River Resource Area *Resource Management Plan* dated July 1985. Furthermore, all operations proposed by BBC would be conducted in full compliance with the terms and conditions of the federal leases involved in the Proposed Action or project alternatives, applicable Onshore Oil and Gas Orders, 43 CFR Part 2800 regarding right-of-way grants, and also with oil and gas leasing regulations as contained in 43 CFR Part 3100, specifically with subpart 3162 concerning Requirements for Operating Rights, Owners and Operators.

The Proposed Action and alternatives are not inconsistent with state and local government programs, plans, zoning, and applicable regulations.