

# CHAPTER 1

## PURPOSE AND NEED

### 1.0 INTRODUCTION

### 1.1 PROJECT DESCRIPTION AND LOCATION

#### 1.1.1 Description

The Cave Gulch-Bullfrog-Waltman natural gas producing area operators, including Barrett Resources Corporation, Chevron USA Production Company, Marathon Oil Company, Prima Oil and Gas Company, and other oil and gas companies (hereafter referred to as "the Operators"), have notified the Bureau of Land Management (BLM), Casper District, Platte River Resource Area that the Operators intend to drill and develop natural gas wells in the Cave Gulch-Bullfrog-Waltman Natural Gas Production Area (project area) of central Wyoming (Figure 1-1). The proposed development wells, access roads, pipelines, and other ancillary facilities located on all federal land, including split estate (e.g. state or private surface ownership with federal mineral ownership, or federal surface ownership with state or private mineral ownership), 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 appropriate surface owner.

#### 1.1.2 Location

The Cave Gulch-Bullfrog-Waltman project area is located in Natrona County, Wyoming, as shown on Figure 1-1. The analysis area is generally located within Townships 36 and 37 North (T36-37N), Ranges 86 and 87 West (R86-87W), 6th Principal Meridian. The area is accessed by U.S. Highway 20/26 west from Casper, Wyoming to Waltman, Wyoming as shown on Figure 1-1. Access to the interior of the project area is provided by Natrona County Road No. 104 north from Waltman, and an existing road network developed to service prior and on-going drilling and production activities.

#### 1.1.3 Project Background

Presently, the Cave Gulch-Bullfrog-Waltman project area contains two federal units that are subject to active drilling programs (Figure 1-1, Table 1-1). These are the Bullfrog Unit and the Cave Gulch Unit. Also, there are two federal units within the project area that are not currently subject to active drilling programs. These are the Tepee Flats and Rochelle Ranch Units (Figure 1-1, Table 1-1).

##### 1.1.3.1 Bullfrog Unit

The Waltman Unit was approved effective April 13, 1959. The Bullfrog Unit was approved effective March 30, 1977. Since the Lance and Fort Union Participating Areas (PAs) of the Waltman Unit were located entirely within the Bullfrog Unit Area, these PAs were merged into the Bullfrog Unit.

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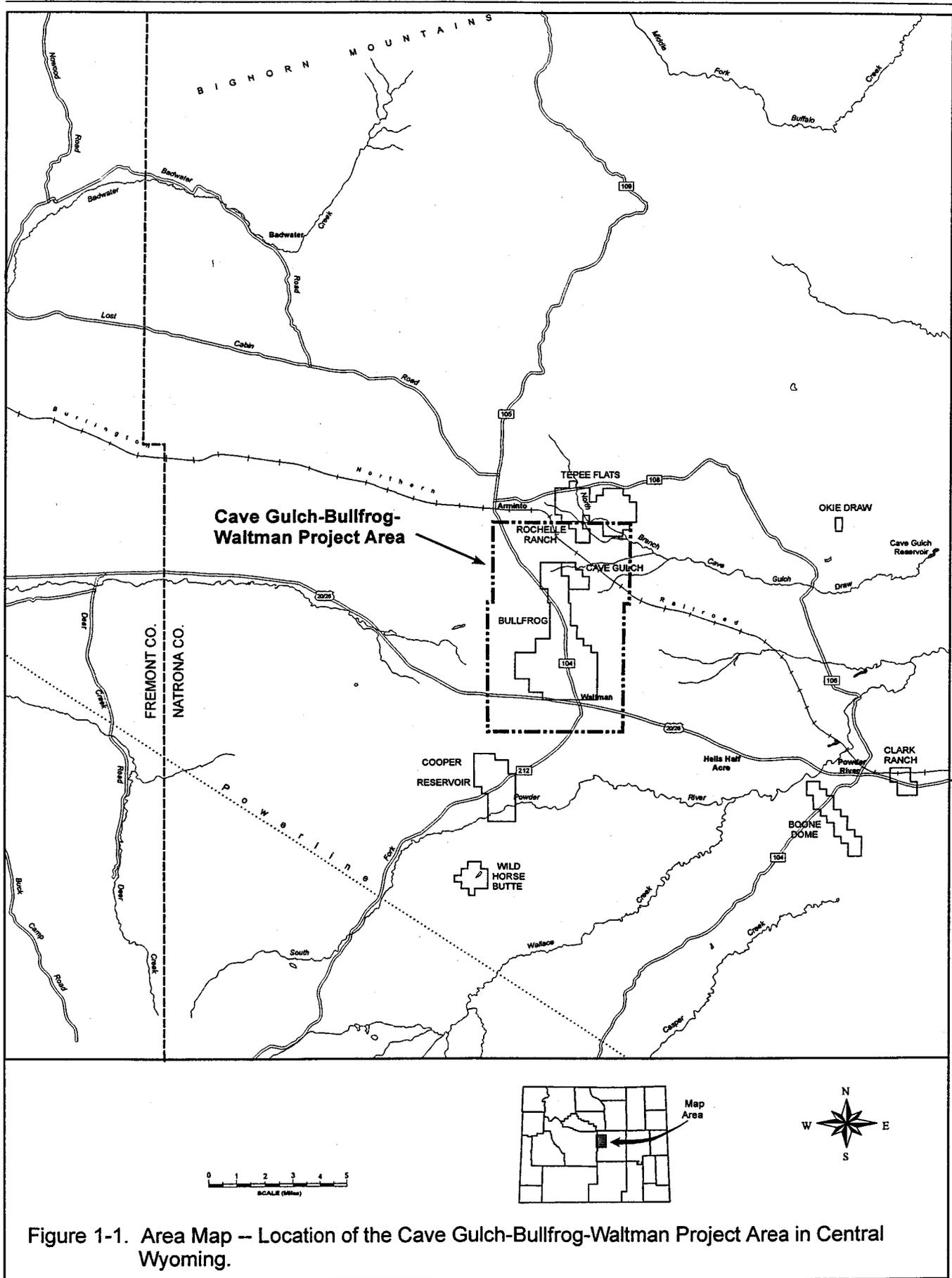


Figure 1-1. Area Map -- Location of the Cave Gulch-Bullfrog-Waltman Project Area in Central Wyoming.

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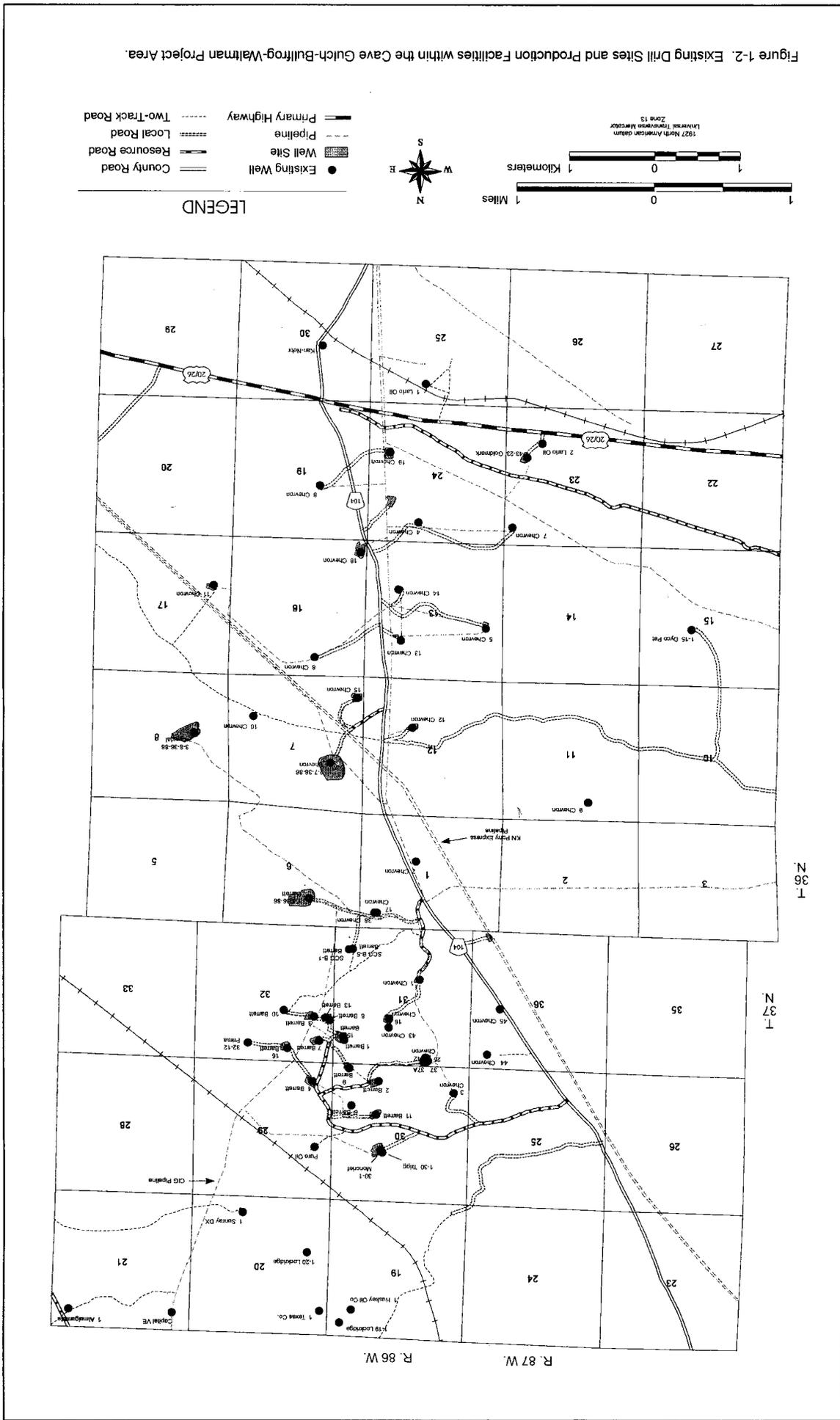


Figure 1-2. Existing Drill Sites and Production Facilities within the Cave Gulch-Bullfrog-Waltman Project Area.

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(Note - A Participating Area is an area in an oil and gas unit where a specific geologic formation or horizon is proven commercially productive. Revenue and royalty is usually shared by participants in a unit on the basis of mineral rights, as defined by leased or owned

**Table 1-1. Federal Units within the Cave Gulch-Bullfrog-Waltman Project Area.**

Unit Name	Operator	Effective Date	Total Acreage
Bullfrog	Chevron	March 30, 1977	5124.17 acres
Tepee Flats	Moncrief	Dec. 28, 1979	2400.00 acres
Rochelle Ranch	John Lockridge	July 31, 1987	240.00 acres
Cave Gulch	Barrett	July 28, 1994	440.00 acres

mineral rights). CIG became the operator of the new Bullfrog Unit and operated the Muddy-Sundance Participating Area. Chevron became the sub-operator of the unit, retaining operatorship of the Lance and Fort Union PAs. On June 22, 1983, CIG resigned as the unit operator and was succeeded by Chevron.

Pursuant to the terms of the unit agreement, the unit boundary contracted (i.e. was reduced in size) on August 15, 1985, to the lands proven productive in the Lance, Fort Union, and Muddy-Sundance PAs. A portion of the lands eliminated from the Bullfrog Unit upon contraction were subsequently committed to the Cave Gulch Unit and are being developed by the unit operator, Barrett Resources Corporation. Drilling activity as of December 5, 1996, within the Bullfrog Unit is summarized in the following table.

**Table 1-2. Drilling Activity Within the Bullfrog Unit.**

<u>Well Name</u>	<u>Status</u>
Waltman No. 16	Spudded July, 1995; producing
Waltman No. 17	Spudded August, 1996; drilled (waiting completion)
Waltman No. 18	Spudded July, 1995; shut-in (waiting nomination)
Waltman No. 19	Spudded July, 1995; shut-in (waiting nomination)
Waltman No. 20	Spudded October, 1996; drilled (waiting completion)
Waltman No. 37	Spudded December, 1995; producing
Waltman No. 37A	Spudded November, 1996; drilling
Waltman No. 38	Spudded August, 1996; drilled (completion underway)
Waltman No. 42	Spudded January, 1996; (producing)
Waltman No. 43	Spudded September, 1996; drilled (completion underway)
Waltman No. 44	Spudded November, 1996; drilled (completion underway)
Waltman No. 45	Location built; waiting to drill
Bullfrog No. 2-7	Temporarily abandoned

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### 1.1.3.2 Cave Gulch Unit

The Cave Gulch Unit is operated by Barrett Resources Corporation. Barrett requested formation of the Cave Gulch Exploratory Gas Unit in June 1994. Final approval for the unit was granted by the BLM on August 1, 1994. Barrett spudded (i.e., commenced drilling) an initial exploratory well (Cave Gulch Federal No. 1) on July 23, 1994. The well was drilled to a total depth of 6,900 feet, with natural gas encountered in the Lance Formation. Subsequent drilling efforts within the Cave Gulch Unit, as of December 5, 1996, are summarized in the following table.

**Table 1-3. Drilling Activity Within the Cave Gulch Unit.**

<u>Well Name</u>	<u>Status</u>
Cave Gulch Unit No. 1	Spudded July, 1994; producing
Cave Gulch Unit No. 4	Spudded October, 1994; producing
Cave Gulch Unit No. 9	Spudded January, 1995; producing
Cave Gulch Unit No. 8	Spudded May, 1995; producing
Cave Gulch Unit No. 3	Spudded June, 1995; producing
Cave Gulch Unit No. 2	Spudded August, 1995; producing
Cave Gulch Unit No. 11	Spudded October, 1995; producing
Cave Gulch Unit No. 7	Spudded October, 1995; producing
Cave Gulch Unit No. 13	Spudded November, 1995; producing
Cave Gulch No. 15	Spudded November, 1995; producing
Cave Gulch Unit No. 10	Spudded June, 1996; producing
Cave Gulch Unit No. 6	Spudded July, 1996; producing
South Branch Cave Gulch No. B-5	Spudded August, 1996; waiting on completion
Cave Gulch No. 16	Spudded August, 1996; drilling
South Branch Cave Gulch No. B-1	Spudded September, 1996; waiting on completion
Cave Gulch Unit No. 17	Approved for 1996 interim development; not drilled
Bullfrog 1-6 Re-entry	Approved for 1996 interim development; permit approved - no activity

Drilling activity within the unit areas in the project area is not regulated by a WOGCC spacing order except for the Chevron Bullfrog Unit Area which is regulated by a WOGCC spacing order that vacated (i.e., invalidated) the location requirements of Rule 302. By vacating Rule 302, Chevron may develop the Lance and Fort Union PAs on any spacing pattern that would result in maximum efficient recovery of the oil and gas reserves. Chevron has elected to develop the PAs on 160 acre spacing (1 well per 160 acres), with the exception of the acreage adjacent to the Cave Gulch Unit. To protect the Bullfrog Unit from drainage by Cave Gulch Unit wells, Chevron has chosen to develop this acreage on 40-acre spacing (1 well per 40 acres). Development plans for the proposed natural gas production project provide for development of the Lance and Fort Union Formations with well spacing varying from four to sixteen wells per section.

In the absence of a special order by the WOGCC establishing or authorizing a different well density within the Unit Areas, the spacing pattern established by WOGCC Rule 302 for unspaced areas applies. Rule 302 for the Unit Areas authorizes a well density of one well per 40 acres (16 wells per section) within the Cave Gulch Unit.

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Other development wells within the project area that are not included in a federal unit would be drilled on the spacing pattern established by WOGCC Rule 302 for unspaced areas. Wells drilled by other Operators, as of December 5, 1996, within the project area are summarized in the following table:

**Table 1-4. Wells Drilled by Other Operators Within the Cave Gulch-Bullfrog-Waltman Project Area.**

<u>Operator</u>	<u>Well Name</u>	<u>Status</u>
Moncrief	Cave Gulch Fed. 30-1	Producing gas well
Prima	POG Cave Gulch 32-12	Drilling
	POG Cave Gulch 32-13	Waiting to drill
Goldmark	Goldmark Fed. 43-23	Drilled; Shut-in

### 1.1.4 Land Status

The project area encompasses approximately 25,093 acres of mixed federal, state, and private lands. Of this total, approximately 7,391 acres are federal, 1,235 acres are State of Wyoming, and 16,467 acres are private lands. Surface ownership within the project area is summarized in Table 1-5. Mineral ownership is summarized in Table 1-6. Surface and mineral ownership are illustrated in Figure 1-3.

**Table 1-5. Surface Ownership of the Cave Gulch-Bullfrog-Waltman Project Area.**

<b>SURFACE OWNERSHIP</b>	<b>ACRES</b>	<b>PERCENT</b>
Private	16,467	65.6
Federal (BLM)	7,391	29.5
State of Wyoming	1,235	4.9
<b>TOTAL</b>	<b>25,093</b>	<b>100.0</b>

**Table 1-6. Mineral Ownership of the Cave Gulch-Bullfrog-Waltman Project Area.**

<b>MINERAL OWNERSHIP</b>	<b>ACRES</b>	<b>PERCENT</b>
Private	4,980	19.9
Federal (BLM)	19,327	77.0
State of Wyoming	786	3.1
<b>TOTAL</b>	<b>25,093</b>	<b>100.0</b>

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Figure 1-3. Surface and Mineral Ownership for the Cave Gulch-Bullfrog-Waltman Project Area.

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### 1.2 PURPOSE OF AND NEED FOR ACTION

The Operators propose to develop the natural gas resources within the project area by increasing the total number of wells (i.e., increasing the well density) and ancillary facilities where economically feasible. This proposal would enhance recovery of natural gas from the project area, thus allowing all operators to provide more natural gas to companies distributing and supplying natural gas to consumers, and would benefit consumers by making natural gas supplies available.

The development of federal oil and gas leases is an integral part of the BLM oil and gas leasing program under authority of the Mineral Leasing Act of 1920, As Amended, the Federal Land Policy and Management Act of 1976, As Amended, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The BLM's Platte River Resource Area Resource Management Plan (RMP) (USDI-BLM 1985) reviewed all public lands in the project area and determined them to be suitable for oil and gas leasing and development, subject to certain stipulations.

The purpose of, and need for, the proposed natural gas development is to exercise the lease holders' rights within the project area to drill for, extract, remove, and market natural gas products. Also included is the right of the Cave Gulch-Bullfrog-Waltman area lease holders to build and maintain necessary improvements, subject to renewal or extension of the lease or leases in accordance with the appropriate authority.

### 1.3 PURPOSE OF THE ENVIRONMENTAL ANALYSIS PROCESS

#### 1.3.1 Environmental Analysis Process Background - Gave Gulch-Bullfrog-Waltman Project

Following discovery of natural gas in the Cave Gulch Unit by Barrett Resources Corporation, an environmental assessment (EA) was prepared by the BLM (Barrett Resources Corporation Cave Gulch Area Natural Gas Development Environmental Assessment and FONSI/Decision Record, May 1995). Based on potential environmental impacts contained in the EA, the BLM determined that impacts were not expected to be significant and an EIS would not be required.

Since the initial discovery of natural gas reserves in the Cave Gulch area by Barrett Resources Corporation in 1994, Barrett and Chevron received approval to drill additional wells and construct pipelines within the analysis area, under provisions provided in the Barrett Resources Corporation Cave Gulch Area Natural Gas Development Project Environmental Assessment (May 1995).

The BLM issued a decision to vacate the Barrett Cave Gulch decision record in January, 1996 after BLM determined that the mitigation measures upon which the Barrett EA and FONSI were based could not be executed and/or were not sufficient to prevent potential significant impacts from development in the analysis area. A Chevron EA being prepared for the Bullfrog Unit adjacent to Cave Gulch was suspended when BLM determined that an EIS was required to assess the direct and cumulative impacts from exploration, development, production, and transportation of the natural gas and associated liquid petroleum products in the Cave Gulch-Bullfrog-Waltman project area.

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### 1.3.2 Purpose of the Environmental Impact Statement

The purpose of this Environmental Impact Statement (EIS) is to provide the decision-makers with information needed to make a final decision that is fully informed and based on factors relevant to the proposal. It also documents analyses conducted on the proposal and alternatives in order to identify environmental impacts and mitigation measures necessary to address issues. The EIS also provides a vehicle for public review and comment on the Cave Gulch-Bullfrog-Waltman proposal, the environmental analysis, and conclusions about the relevant issues.

This EIS analyzes the effects of well pad locations, access roads, production facilities, pipelines, and other facilities associated with natural gas development on resources and land use within the project area.

### 1.4 ENVIRONMENTAL ANALYSIS PROCESS

The BLM, as authorized by the Council for Environmental Quality (CEQ) and the National Environmental Policy Act of 1969 (NEPA) regulations, analyzes actions involving federal leases as to their impact on the human environment (40 CFR, Parts 1500-1508). The analysis is to determine whether approval of the action would result in unnecessary or undue degradation of the land. The analysis uses an accepted process for evaluating and disclosing the potential environmental consequences of the proposed action and alternatives.

The BLM, Casper District, Casper, Wyoming, is the lead agency responsible for preparation of this EIS. The evaluation of this proposal and alternatives was developed through interdisciplinary field review with representatives from the Operators, the BLM, and the project contractor interdisciplinary team (IDT).

Factors considered during the environmental analysis process regarding the natural gas development project include the following:

- The location of environmentally suitable well pad locations, access roads, pipelines, and other production and ancillary facilities that best meet other resource activities and minimize surface resource impacts yet honor the lease rights within the analysis area.
- A determination of impacts resulting from the proposed action and alternatives on the human environment, when conducted in accordance with applicable regulations and lease stipulations, and the development of mitigation measures necessary to avoid or minimize these impacts.

This EIS is *not* a decision document. The decision regarding the project will be documented in a Record of Decision (ROD) signed by the BLM State Director, Cheyenne, Wyoming. The BLM's decision will relate primarily to public lands administered by the BLM. "Public lands" means any lands or interests in lands owned by the United States and administered by the Secretary of Interior through the Bureau of Land Management, without regard to how the United States acquired ownership. Decisions by other jurisdictions to issue approvals related to this proposal may be aided by the disclosure of impacts available in this analysis.

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This EIS will guide the implementation of a selected alternative and will facilitate preparation of additional environmental analyses within the project area and adjacent lands. This EIS is *not* the final environmental review upon which approval of all actions in the Cave Gulch-Bullfrog-Waltman project area will be based. For the most part, this EIS will provide sufficient analyses to allow the BLM to utilize administrative determination and categorical exclusion reviews to determine if surface disturbing proposals should be approved. However, prior to surface disturbance on some drill sites and associated roads, pipelines, and ancillary facilities located on federal surface or federal minerals, additional site-specific analyses may be required.

### 1.5 RELATIONSHIP TO POLICIES, PLANS, AND PROGRAMS

#### 1.5.1 Conformance With Land Use Plan

The natural gas development is in conformance with management objectives provided in the ROD for the RMP/Final Environmental Impact Statement, Platte River Resource Area (USDI-BLM 1985), subject to implementation of prescribed mitigation measures proposed by the Operators in Chapter 2 and mitigation measures derived through analysis of impacts in Chapter 4, Environmental Consequences.

Prior to March, 1980 the BLM did not have a formal land use plan to guide management of oil and gas leasing, wildlife habitat areas, or other resources on public lands in Natrona County. Following the enactment of FLPMA, the BLM was mandated to establish resource management plans to promote multiple use management of the public lands. Between 1978 and 1980, a *Unit Resource Analysis* (URA) describing the existing environment of public lands in Natrona County was compiled. The URA was used to develop the *Natrona Management Framework Plan* (MFP), which was completed March 15, 1980.

The MFP was the BLM's first land use plan that established the BLM's objectives for management of the public land in Natrona County. It established multiple use management decisions for oil and gas leasing, raptor habitat, and other resources; initiated a systematic method for identifying areas of high resource values that were not compatible with oil and gas exploration and production; and, set the process for addressing conflicts. The MFP objectives were to reduce impacts to raptor nesting habitat and other resources while promoting exploration and development of minerals. The MFP eliminated the practice of blanket oil and gas leasing. In implementing the MFP, resource protection stipulations were applied to oil and gas leases where they could mitigate impacts of oil and gas exploration/production; and, where stipulations could not mitigate oil and gas impacts, leases were offered with 'no surface occupancy' stipulations, or were withheld from leasing.

##### 1.5.1.1 Platte River Resource Area Management Plan EIS and Record of Decision

The proposed action is located in Resource Management Unit (RMU) 14; Remaining Platte River Resource Area. Management prescriptions applicable to the proposed action and alternatives within this management unit include:

Recreation Management - RMU 14 will be managed as an extensive recreation management area where dispersed recreation is encouraged and where visitors will have freedom of recreational choice with minimal regulatory constraint.

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Energy and Minerals - Oil and gas exploration and development will be authorized in accordance with lease provisions. Lease constraints and development will be subject to land use decisions described in the "Planning Decisions" section of the RMP Record of Decision.

Soil, Water, and Air - Sensitive drainages in RMU 14 will be studied further to determine the need for additional protective measures and for the development and implementation of watershed management plans. Cave Gulch, located on the north end of the project area, is defined as one of the sensitive drainages.

Wildlife - No specific wildlife management is prescribed for the Unit Area in RMU 14.

Lands - Placement of right-of-way facilities will be adjacent to existing facilities or disturbances. Cross-country right-of-way placement will be allowed only when placement in a designated corridor or adjacent to an existing facility is not practical or feasible. New corridors will be designated only when placement as indicated above is not practical and when the environmental impacts can be adequately mitigated.

Planning decisions applicable to the development proposal that pertain to energy and minerals on public lands are contained in decision M1, Energy and Minerals, in the Platte River Resource Area RMP. These decisions are summarized as follows:

### Energy and Minerals (M1)

BLM-administered lands will remain open to oil and gas leasing and exploration subject to the following provisions:

1. Oil and gas leasing will be subject to the Wyoming BLM standard stipulations summarized below. Leasing and development will be subject to the planning decisions. Mitigating measures prescribed in the Platte River Oil and Gas EA (USDI-BLM 1982) and the South Big Horn Oil and Gas EA (USDI-BLM 1979) will be applied case by case.
2. The following standard stipulations are currently being attached to all oil and gas leases when issued in the Platte River Resource Area and applied as necessary to each lease. Older leases may not contain these stipulations.

For those areas having leases issued with specific stipulations, surface disturbance will be prohibited in any of the following areas or conditions. Modifications to these limitations may be approved in writing by the Authorized Official (AO).

### Surface Disturbance Stipulations

Surface disturbance stipulations may be applied to federal leases within the Unit Area. Those leases issued without specific stipulations will be subject to Title 43 CFR 3101.1-2, Surface Use Rights.

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- Slopes in excess of 25 percent.
- Construction with frozen material or during periods when the soil material is saturated or when watershed damage is likely to occur.
- Within 500 feet of surface water and/or riparian areas.
- Within 500 feet of Interstate highways and 200 feet of other existing rights-of-way (i.e. U.S. and State highways, roads, railroads, pipelines, powerlines).
- Within one-quarter mile of occupied dwellings.
- Material sites.

### Wildlife Stipulation

Special wildlife stipulations are included on a case-by-case basis to provide two basic types of protection; (1) seasonal restriction and (2) controlled surface use. These stipulations are:

- To protect important raptor and/or sage and sharp-tailed grouse nesting habitat, drilling and other surface disturbing activity will not be allowed during the period from February 1 to July 31 within certain areas encompassed by this lease(s). This limitation does not apply to maintenance and operation of producing wells.

### Special Resource Protection Stipulation

In order to protect other resource values within the analysis area, the District Manager, B L M , reserves the right to prohibit surface disturbance within a specified distance of the resource value or between specified dates. This limitation does not apply to operation and maintenance of producing wells. Special resource protection stipulations are also applied on a case-by-case basis.

#### **1.5.1.2 Bureau of Land Management - Development of Federal Oil and Gas Leases in the Cave Gulch-Bullfrog-Waltman Area During Preparation of the Cave Gulch-Bullfrog-Waltman Natural Gas Development Project Environmental Impact Statement - Environmental Assessment (No. WY-062-042)**

Following the decision to vacate the Barrett EA decision record, suspend further work on the Chevron EA, and prepare an EIS to ensure compliance with NEPA, the BLM established criteria for development activities which could be allowed during preparation of the EIS. The May 7, 1996 criteria, developed by the BLM, were used to identify actions which would not cause impacts to sensitive resources or commit resources in such a way that a reasonable EIS alternative would be precluded. The following Council on Environmental Quality Regulations, 40 CFR 1506.1, *Limitations on actions during NEPA process*, provided the basis for the limitations on concurrent authorizations:

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(a) Until an agency issues a record of decision as provided in Section 1505.2 ... no action concerning the proposal shall be taken which would:

- (1) Have an adverse environmental impact; or
- (2) Limit the choice of reasonable alternatives.

Interim oil and gas lease development was proposed to provide for continuous lease development while the EIS is being prepared. Without new gas wells and pipelines to transport existing gas production, new exploration and development of oil and gas mineral resources would be delayed for 12 to 18 months.

In addition, some wells already drilled or approved were adjacent to unexplored oil and gas leases. Operators of some of those leases contended that drainage of their leases is occurring and that their lease rights are being affected. While no federal drainage is present, operators assert that correlative rights injury is resulting. Drilling proposed new wells to off-set producing wells is the remedy operators prefer over civil litigation.

The EA Decision Record/FONSI (USDI-BLM, June 1996) authorized development of 14 wells and associated facilities, 3 new transportation pipelines and 2 meter facilities, and a new pipeline from 1 new state well. The development activities were approved subject to the terms and conditions in the Applications for Permit to Drill, Sundry Notices, and Rights-of-Way plans, the regulations in 43 CFR Group 2800 and 3100, and the mitigation measures outlined in the Decision Record/FONSI. The development will result in short-term disturbance of an additional 46.30 acres of federal land, 33.01 acres of state land, and 144.39 acres of private land in Natrona and Fremont counties. A total of 223.70 acres will be used for mineral development activity while the EIS is underway.

Subsequent to the June 1996 EA Decision Record/FONSI, an additional new state well (Chevron Waltman No. 45) was constructed and drilled. The well did not require BLM authorization and was not analyzed in the EA, but uses the pipeline to the Waltman No. 44 well, both of which were included in the EA and Decision Record. The Waltman No. 45 well pad, road, and pipeline construction not addressed in the EA affected approximately 1.57 acres of state land. Including the No. 45 well, a total of 225.27 acres could have been used for mineral development while the EIS was underway.

### **1.5.1.3 Development of Federal Oil and Gas Leases in the Cooper Reservoir Unit - Environmental Assessment - Number WY-062-06-047.**

The Cooper Reservoir Unit is located about 1-mile south of the Cave Gulch-Bullfrog-Waltman project area. Intoil, Inc., operator of the Cooper Reservoir Unit has proposed to drill and produce additional wells within the unit area. BLM is currently preparing a field development EA to address potential environmental impacts associated with the proposed development. The field development EA is planned for completion concurrently with the Cave Gulch-Bullfrog-Waltman EIS. Intoil has requested approval for interim development activities while the EA and EIS are being completed. Although the Cooper Reservoir Unit is not within the Cave Gulch-Bullfrog-Waltman project area, activities proposed in the Cooper Reservoir Unit will contribute to cumulative impacts to various resources, including sensitive soils, raptors, vegetation, water resources, air quality, recreation,

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visual resources, and socio-economics, when combined with development activities proposed in the Cave Gulch-Bullfrog-Waltman project area.

The BLM Decision Record/FONSI (July 8, 1996) recommended that the Intoil interim development proposals analyzed in the Cooper Reservoir interim development EA be approved subject to the terms and conditions in the Applications For Permit to Drill and Sundry Notices, the regulations in 43 CFR Groups 2800 and 3100, and the mitigation measures outlined in the Decision Record/FONSI. The BLM recommended the proposals be allowed to proceed while the Cooper Reservoir Field Development Project EA and the Cave Gulch-Bullfrog-Waltman EIS are being prepared.

The BLM approval authorized the drilling of 4 wells and associated development facilities, including pipelines to transportation pipeline systems. A total of 20.53 acres in the Cooper Reservoir Unit will be used for interim mineral development activity. In addition to the 4 wells and associated facilities, 2 wells were proposed by Intoil, Inc. on private surface. These wells did not require BLM authorization, but were analyzed in the EA.

### **1.5.1.4 Resolution of Chevron USA Production Company's Correlative Rights Issues on Drainage of Chevron's Federal Oil and Gas Leasehold Number WY042929, Located in the W1/2NE1/4 of Section 31, Township 37 North, Range 86 West, Sixth Principal Meridian, Natrona County, Wyoming.**

Subsequent to the June 1996 EA, Chevron requested the BLM to resolve correlative rights claim resulting from drainage of Chevron's leasehold, and asserted that drilling the Chevron Waltman Well No. 43 would be the most equitable means of resolution. The original location of the No. 43 well was not approved in the June 1996 decision. When Chevron requested further action by BLM, alternate locations were submitted with the request.

The BLM concluded on July 25, 1996 that Chevron's leasehold was being drained of natural gas, and on August 1, 1996 the BLM requested Chevron and Barrett to work together to obtain an agreement for sharing revenues from the two leases. The operators declined, and since the BLM had no authority to compel an agreement, other options were evaluated. The options of: (1) prorating or curtailing production of wells, (2) shutting wells in, (3) authorizing the No. 43 well to be drilled as an interim development well, and (4) authorizing the No. 43 well to be drilled as additional interim development, were considered. An open house was held August 27, 1996, and the BLM's proposed decision was available for review and comment at the open house.

The BLM's August 30, 1996 Decision Record/FONSI was tiered to EA No. WY-062-06-042 (June 1996). The Decision Record included decision factors and a technical analysis to address resolution of Chevron's correlative rights claim. The decision was to allow the Chevron well No. 43 to be drilled at an alternate location, in exchange for a Chevron well that was included in the June 14, 1996 Record of Decision. The selected well location fulfilled the criteria relied upon in the June 14, 1996 EA, the cumulative impacts identified in the EA did not increase, and a Finding of No Significant Impact was reached.



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AGENCY	NATURE OF ACTION
<b>WYOMING DEPARTMENT OF ENVIRONMENTAL QUALITY</b>	
Water Quality Division	<p>Administers Storm Water Pollution Prevention Plan.</p> <p>Approves Surface Discharge.</p> <p>Approves wastewater and sewage disposal.</p>
<b>WYOMING STATE ENGINEERS OFFICE</b>	
	<p>Issues permits to appropriate groundwater and surface water.</p> <p>Issues temporary water rights for construction permits to appropriate surface water.</p>
<b>WYOMING STATE HISTORIC PRESERVATION OFFICE</b>	
	<p>Provides consultation concerning inventory of, and impacts to, cultural resources.</p>
<b>WYOMING OIL AND GAS COMMISSION</b>	
	<p>Acts as primary authority for drilling on state and privately held mineral resources, and secondary authority for drilling on federal lands.</p> <p>Holds authority to allow or prohibit flaring or venting of gas on private or state owned minerals.</p> <p>Regulates drilling and plugging of wells on private or state owned minerals.</p> <p>Issues Aquifer Exemption Permit.</p> <p>Approves directional drilling.</p> <p>Administers rules and regulations governing drilling units.</p> <p>Grants gas injection well permits.</p> <p>Administers drainage protection and protection of correlative rights on private/state mineral estate.</p>

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NATRONA COUNTY	<p>Grants small wastewater system permits where applicable.</p> <p>Issues driveway access permits where new roads intersect with county roads.</p> <p>Prepares road use agreements and/or oversize trip permits when traffic on county road exceeds established size and weight limits or where the potential for excessive road damage exists.</p> <p>Issues construction and conditional use permits for all new structures.</p> <p>Administers zoning changes where applicable.</p>

### 1.7 ISSUES AND CONCERNS

Public issues and comments regarding the proposed natural gas development project were solicited for incorporation into this EIS through the scoping process. Scoping consisted of numerous public notices, one formal public scoping meeting, and special interest work sessions with the Cave Gulch-Bullfrog-Waltman operators, environmental organizations, and County, State and Federal government. Scoping measures conducted are summarized in Section 5.2 - Public Participation, of this EIS. Environmental and social issues of local importance associated with natural gas production identified through the scoping process are summarized as follows:

1. Potential impact to geologic and paleontologic resources at all disturbed sites associated with natural gas production operations.
2. The potential for increased erosion resulting from access road, pipeline, and drill site construction activities, primarily on sensitive soils (e.g., those which are highly erosive such as red soils, calcareous soils, sand dunes, or sandy soils).
3. Potential impacts to the quality of surface and groundwater resources and wetland areas within the project area and adjacent lands.
4. Potential impacts to the air quality of the area resulting from dust and emissions created by construction and natural gas production activities.
5. Possible adverse impacts to wildlife in the analysis area and adjacent lands, including the following:
  - Potential impacts to wildlife habitats within the project area and adjacent lands for sage grouse, raptors, prairie dogs, big game winter range (primarily pronghorn antelope), and non-game wildlife species.

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- Potential impact to threatened and endangered and sensitive plant and animal species and communities.
6. Raptor management concerns within the project area and adjacent land:
- Field development should not continue until a raptor protection plan is developed in the project area as well as in other raptor habitat areas. An integrated approach to raptor management is needed. BLM has a duty to address not leasing parcels, leases with No Surface Occupancy stipulations, and leases with timing limitations.
  - Expand raptor nest buffers to 1-mile for ferruginous hawk nests and 1/2-mile for golden eagle nests (the best mitigation is avoidance). The 1/4- and 1/2-mile nest buffers are not sufficient.
  - It may be necessary to change the protection for raptor nests in field development situations from seasonal to year-round buffers around specific raptor nests or use areas.
  - Raptor monitoring has not been adequate for accurate assessment of the number of raptors and raptor use in the area.
  - Ferruginous hawk studies using the WGFD monitoring method for a larger area and raptor population trends should be used.
  - Off-site mitigation should be analyzed. More research should be conducted into available literature where positive impacts have been documented to be used for analysis of raptor mitigation, including off-site mitigation. USFWS has test case mitigation which should be analyzed.
  - Artificial Nest Structures (ANS) could be a viable management tool in connection with off-site mitigation, and should be analyzed.
7. Existing road and gas pipeline concerns:
- Increased traffic and associated impacts on existing county, state, and BLM roads.
  - Utilization of existing road and pipeline corridors rather than construction of new ones (i.e., cumulative site disturbance effects resulting from additional road and pipeline construction within an existing corridor).
8. Potential impacts to known and unknown cultural and historic values within the analysis area.
9. Disruption of livestock management operations (primarily herding) and potential for loss of suitable range forage within the project area resulting from additional field development activities.

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10. Reclamation of disturbed areas and control of noxious weed invasions following reclamation.
11. Socioeconomic impacts to local communities resulting from project implementation, and subsequent increased demand on local facilities and services. Other socioeconomic considerations in the analysis should include:
  - Gas development is vital to the Wyoming economy and tax structure.
  - The same tabular and graphical presentations of socioeconomic data should be used in analyzing all the alternatives so they can be easily compared.
  - The tax and economic benefits should be central to the EIS analysis, and the cost of non- or delayed development should be disclosed.
12. Potential impacts associated with noise due to construction activities and natural gas production operations.
13. Directional drilling should be used and surface wells should be limited to 1 well per 160 acres to minimize impacts to raptor habitat and surface resources.
14. Other gas fields north and south, along the geologic fault, should be included in the EIS (e.g., South Big Horns, Lysite, and Lost Cabin).
15. Tepee Flats should not be included in the EIS.
16. Drainage and correlative rights of the various operators should be considered.
17. Cumulative impacts analysis of natural gas in-field development, relative to other land and resource activities in the area, both on-going and proposed.

### 1.8 OPPORTUNITIES

Opportunities that may arise from the Cave Gulch-Bullfrog-Waltman Natural Gas Production project include the following:

1. The natural gas development project would allow the Operators to continue development of both proven and unproven natural gas reserves.
2. Potential economic benefits to communities surrounding the project area by providing jobs and an increase in the local tax base.
3. The natural gas field development project could provide the opportunity to develop a domestic energy source that decreases dependence on foreign sources.
4. The field development project would provide a clean-burning energy resource that could supplement or replace some existing energy sources that are more harmful to the environment.