

---

---

**Appendix B**  
**Wyoming State Lands Special Use Lease and**  
**Wyoming Game and Fish Department**  
**Memorandum of Agreement**

---

---

**ACTION:** APPROVAL OF SPECIAL USE LEASE APPLICATION

**AUTHORITY:** W.S. 36-5-114; Rules Chapter 5, Section 3

Type of Use: Methane and Helium Recovery Facility

Lease No.: SU-599

Applicant: Cimarex Energy, Inc.

County: Sublette

Acres: 33.83

Description: Tract in E2  
Section 16, Township 29 North, Range 114 West, 6<sup>th</sup> P.M.

Improvements: Proposed Improvements: Seven Buildings with Equipment in each building described as: Control Room/Office/Shop, Motor Control Center 1 and 2, Compressor Building, Processing Building, Sour Gas Building, Carbon Dioxide/Hydrogen Sulfide Injection Pump Building, Warehouse, Switchgear/Control Building with the Electrical Substation plus Plat Inlet facility, Propane Refrigeration System, Flare Stack, Atmospheric Storage Tanks, Cryogenic Separation Equipment, Communications Infrastructure, Various Plant Pipe Racks and Appurtenances, a Warehouse Building, Plant Security Fencing, Electrical Pole Structures, Well Flow Pipelines, etc., Water Well, Waste Facilities with an applicant estimated value of \$40,000,000.00

Recommended Rental: \$19,000.00, per year adjusted annually by 2.7% to offset inflationary pressure and subject to five year rental review

Recommended Term: September 1, 2008 to September 1, 2058  
(50 Years)

Discussion:

The Rands Butte Project entails the building and installation of a Methane & Helium Recovery Facility (MHRF) which will produce methane and helium from the Madison formation in the Riley Ridge Federal Unit (RRU) and will re-inject all byproduct gasses such as carbon dioxide and hydrogen sulfide back into their source producing formation. No liquid petroleum products will be produced. No sulfur products will be produced.

This application was submitted to the Board for consideration during the June 5, 2008 Board meeting. Following testimony from the Wyoming Game and Fish Department (Game and Fish), the grazing lessee and Cimarex, the matter was deferred pending further investigation by the Office and scheduling of a field inspection by the Board.

Since the June meeting, the Board of Land Commissioners has conducted an onsite field inspection (June 16, 2008) to gather specific facts related to the proposed project. Additionally, a meeting involving Cimarex, Game and Fish and affected landowners was held on June 24, 2008 to identify and discuss specific concerns and possible solutions related to the proposed MHRF plant. Finally, a meeting was held on July 11, 2008 between Game and Fish and Cimarex to discuss the mitigation measures and possible stipulations that would be placed on the Special Use Lease should it be approved.

Recently, a Mitigation Agreement between the Game and Fish and Cimarex has been agreed upon that would provide funding for elk monitoring and research, habitat enhancement and elk damage prevention. Correspondence detailing the Agreement is attached as Exhibit A. The projects would be funded by Cimarex with funds held by a mutually agreed upon third party and administered by the Game and Fish. Additionally, lease stipulations have been agreed to that would serve to reduce /mitigate impacts associated with the facility (Exhibit B).

An analysis of the proposal including discussions regarding background, siting considerations, construction and operational impacts, potential impacts to elk winter range and income to trust beneficiaries is attached as Exhibit C.

#### Public / Agency Comment

Comment from the Game and Fish and the public regarding the proposed project has been received by the Office. General concerns related to the proposed MHRF can be summarized as follows:

- 1) Negative impacts to the Riley Ridge elk herd and potential increased threat of brucellosis transmission.
- 2) Air quality impacts related to ozone and Hydrogen sulfide
- 3) Potential water quality impacts
- 4) Reduction or cancellation of BLM or State grazing lease(s)

As stated earlier, the Game and Fish has approved the Mitigation Agreement and lease stipulations that would serve to reduce/mitigate impacts to the elk herd and adjacent landowners that may be affected by change in elk distribution patterns. As the plant will be essentially a zero emissions facility, negative impacts to air quality are expected to be minimal. Hydrogen sulfide gas is easily dispersed by air movement. Due to wind intensity and flow at the preferred location, dispersion of any Hydrogen sulfide, that may be accidentally released, would be maximized. Cimarex is currently working with the Department of Environmental Quality to conduct an extensive analysis of air quality in the Riley Ridge area. As the gasses will be re-injected into source formation, no water quality impacts would be expected. In addition, this potential will be evaluated by the Wyoming Oil and Gas Commission prior to approval of required permits. Finally, there are no anticipated effects related to the cancellation or a reduction in AUMs of either a State or federal grazing lease resulting from the proposed plant, Mitigation Agreement or the lease stipulations.

Comments received by the Office are attached as Exhibit D.

Other permitting requirements associated with construction of the MHRP are detailed under Section E of the Detailed Analysis (attached). These permitting and regulatory compliance measures will provide the public additional opportunities for comment on the project.

It has been determined that this special use lease application site is not in a sage grouse habitat core area.

#### **DIRECTOR'S RECOMMENDATION:**

The Director provides this Board Matter for the above described Special Use Lease application for consideration with a recommendation to approve conditioned upon Cimarex compliance with provisions of the Mitigation Agreement with the Wyoming Game and Fish Department, lease stipulations designed to minimize disturbance to the Riley Ridge Elk herd and compliance with all other applicable local, state and federal regulations. Should the Board approve the application, the lease would be for a fifty year term at a rental of \$19,000.00 per year adjusted annually by 2.7% to offset inflationary pressure and subject to a rental review every five years. A bond required by Cimarex Energy, Inc. equal to an Engineer's estimate for reclamation of the site until such time as it is no longer being used would be required. Approval of the application is not to be considered as an approval of the applicant's estimated value of improvements.

**BOARD ACTION:** \_\_\_\_\_



## WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4610

Web site: <http://gf.state.wy.us>

### EXHIBIT A

GOVERNOR  
DAVE FREUDENTHAL  
DIRECTOR  
STEVE FERRELL  
COMMISSIONERS  
JERRY GALLES - President  
CLIFFORD KIRK - Vice President  
CLARK ALLAN  
FRED LINDZEY  
RON LOVERCHECK  
ED MIGNERY  
BILL WILLIAMS, DVM

July 23, 2008

Lynn Boomgaarden, Director  
Office of State Lands and Investments  
122 West 35<sup>th</sup> Street, Herschler Bldg 3<sup>rd</sup> Floor West  
Cheyenne, WY 82001

RE: Memorandum of Agreement for ("MOA") Wildlife Mitigation of the Riley Ridge  
Methane & Helium Recovery Facility

Dear Director Boomgaarden:

This letter shall summarize the understanding between Cimarex Energy Co. (Cimarex) and Wyoming Game and Fish Commission (WGFC) regarding Wildlife Mitigation measures for the construction, operation and maintenance of a natural gas sequestration plant known as the Riley Ridge Methane & Helium Recovery Facility located in T29N, R114W, Sec.16, Sublette County, Wyoming ("Facility").

WGF and Cimarex have agreed to enter into an MOA that will contain, among others, the following terms and conditions.

1. A mitigation fund in the amount of up to \$1,550,000.00 will be funded by Cimarex and held by a third party as mutually agreed upon by WGFC and Cimarex.
2. The mitigation fund is intended to provide financial resources for three specific mitigation objectives to be undertaken as they relate to Cimarex's Facility which are: (i) elk damage prevention; (ii) elk monitoring/research; and, (iii) elk habitat enhancement.
3. Cimarex agrees to provide the following mitigation funds as described:
  - a. Elk Monitoring/Research - not to exceed \$450,000.00
  - b. Habitat Enhancement - not to exceed \$350,000.00
  - c. Elk Damage Prevention - not to exceed \$750,000.00

Lynne Boomgaarden  
July 23, 2008  
Page 2

The total portion of the fund applicable to Elk Monitoring/Research is expected to be available in the first year of the project and maintained up to five years as needed. The portion of the fund applicable to Habitat Enhancement is expected to be maintained for up to 10 years as needed with the goal of maintaining an annual account balance up to \$100,000, but in no event will the total habitat enhancement amount paid by Cimarex exceed \$350,000. The portion of the fund applicable to Elk Damage Prevention is expected to be maintained for the life of the project as needed with the goal of maintaining an annual account balance of up to \$50,000, but in no event will the total amount paid by Cimarex exceed \$750,000 for elk damage prevention. Funds not previously disbursed within the prescribed time lines will be returned to Cimarex.

4. The geographic area covered by the Memorandum of Agreement is expected to fall into three (3) categories:
  - a. Elk Monitoring and Research: The geographic area for capturing elk for monitoring and research will be the general geographic area from Middle Piney Creek (immediately north of Finnegan Feed ground) south to LaBarge Creek within the Hunt Area 94, South Piney. Elk monitoring would include the geographic areas used by radio-collared elk.
  - b. Elk Habitat Enhancement: The geographic area for elk habitat enhancement will be expected to cover all occupied elk transitional and winter range in the Riley Ridge/Rand's Butte areas Hunt Area 94, South Piney. Documented movements of radio-collared elk may more closely define the area.
  - c. Elk Damage: The geographic mitigation area for elk damage prevention will encompass lands that have direct surface impacts from elk displaced by the construction and operation of the Riley Ridge Facility. Such areas are expected to be South Piney and Middle Piney drainages within the geographic scope of Hunt Area 94, South Piney. However, elk damage prevention would occur wherever radio-collared elk are displaced.

Lynne Boomgaarden  
July 23, 2008  
Page 3

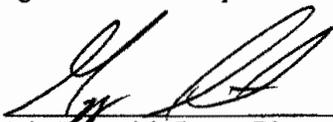
Cimarex and WGF agree to finalize the MOA prior to the August 7, 2008 State Land Board Meeting and look forward to presenting the final Wildlife Mitigation plan to the Board.

Thank you in advance for your cooperation and support.

Cimarex Energy Co.

By:   
Michael M. Wolfe, Regional Land Manager

Wyoming Game and Fish Department

By:   
for John Emmerich, Deputy Director

JE/cmc

## EXHIBIT B

### Example/Proposed Wildlife Stipulations

#### **Pre-Construction Phase**

1. Prohibit site preparation activities in designated parturition areas from May 1 to June 20.
2. Prohibit site preparation activity in designated elk crucial winter range from November 15 to April 30.
3. Maintain locked gates at private land crossings to prevent unauthorized access.
4. No possession of firearms by employees or contractors on, to, or from the site.

#### **Construction Phase**

1. Prohibit project related human activity in designated parturition areas from May 1 to June 20.
2. Prohibit project related human activity in designated elk crucial winter range from November 15 to April 30.
3. Maintain locked gates at private land crossings to prevent unauthorized access.
4. No possession of firearms by employees or contractors on, to, or from the construction site.
5. When accessing the 17-34 well site, limit motorized access to established roads.
6. Dogs (excluding guide dogs) shall be prohibited at construction site.
7. Mandatory reprimand or dismissal for employees convicted of unlawful take (hunt, pursue, catch, capture, shoot, fish, seine, trap, kill or possess, or attempt to hunt, pursue, catch, capture, shoot, fish seine, trap, kill or possess) of wildlife while employed or contracted by the company or on company property. This applies to unlawful activities that occur within the Riley Ridge Unit and main access routes to the Unit
8. Project proponent shall comply with all applicable Federal wildlife laws and regulations to eliminate/minimize potential impacts to endangered, threatened, proposed or protected species, and their habitat (i.e. Migratory Bird Treaty Act, Golden Eagle/Bald Eagle Act) determined to be present through on-site inventories conducted by the proponents during pre-construction phase.

#### **Post-Construction/Operations Phase**

1. Limit routine maintenance flaring operations from November 15 to April 30 to reduce disturbance to wintering elk
2. Limit snow plowing operations to only main road to plant/well site (17-34).

3. When accessing the 17-34 well site, limit motorized access to established road.
4. No possession of firearms by employees or contractors on, to, or from the plant site.
5. Winter road maintenance must include blading turnouts on both uphill and downhill sides of the road at one-half to one-mile intervals and at known game crossings to allow wildlife escape routes.
6. Dogs (excluding guide dogs) shall be prohibited at the plant site.
7. Mandatory reprimand or dismissal for employees convicted of unlawful take (hunt, pursue, catch, capture, shoot, fish, seine, trap, kill or possess, or attempt to hunt, pursue, catch, capture, shoot, fish seine, trap, kill or possess) of wildlife while employed or contracted by the company or on company property. This applies to unlawful activities that occur within the Riley Ridge Unit and main access route to the Unit.
8. Use best efforts to carpool or bus work crews during shift changes to reduce vehicle disturbance to wildlife.
9. Use best efforts to minimize vehicle travel between dawn (6-8 a.m.) and dusk (4-6 p.m.) during critical winter months.
10. Off-road travel shall be minimized to prevent habitat damage.
11. Use best efforts to limit routine visits to well sites on crucial winter range to times when big game are typically bedded (i.e., mid-day), to reduce disturbance and stress on wildlife.
12. Use best efforts to employ remote sensing technology to reduce daily/weekly truck trips to well sites.
13. All compressor engines/exhaust stacks shall be adequately muffled, to reduce noise levels to 49dBA; Use best and practical efforts to ensure compressor engines/exhaust stacks meet a noise level of 10 dBA (with a standard deviation of + or - 3dBA) above ambient background noise at the lease line fenced perimeter.
14. Powerlines and conductors shall be constructed in accordance with raptor-safe design criteria.
15. Project proponent is to provide information to their employees and contractors about wildlife laws and regulations, and about the sensitivity of wildlife to disturbance.
16. Garbage disposal must be strictly monitored. Open pits or landfills are prohibited and garbage collection and/or disposal must minimize bear-human conflicts. Garbage containers shall be bear-proof.
17. Project proponents shall comply with all applicable Federal wildlife laws and regulations to eliminate/minimize potential impacts to endangered, threatened, proposed, or protected species, and their habitat (i.e. Migratory Bird Treaty Act, Golden Eagle/Bald Eagle Act) determined to be present through on site inventories conducted by the proponents during pre-construction phase.

EXHIBIT C

**CIMAREX ENERGY, INC.**  
**SPECIAL USE LEASE APPLICATION**  
**SU-599**  
**DETAILED ANALYSIS**

**August 7, 2008**

**Prepared by the**

**Office of State Lands and Investments**

**Herschler Building, 3W**

**122 West 25<sup>th</sup> Street**

**Cheyenne, WY 82002**

**PROPOSAL:**

Cimarex Energy has submitted a Special Use Lease application on State trust lands located in Sublette County. Termed the Rands Butte Project, the proposal entails the building and installation of a 200 MMSCFD capacity Methane & Helium Recovery Facility (MHRF) that will recover methane and helium from the Madison formation in the Riley Ridge Federal Unit (RRU) and will re-inject all byproduct gasses such as carbon dioxide and hydrogen sulfide back into their source producing formation. No liquid petroleum products or sulfur products will be produced. The plant would be owned, and operated by Cimarex Energy and would be staffed with approximately 15-20 employees for year-round operations.

**AUTHORITY:**

W.S. 36-5-114, Leasing for industrial, commercial and recreational purposes.

Rules: Chapter 5, Section 3.

**LEGAL / LAND DESCRIPTION:**

Section 16 (E2), Township 29 North, Range 114 West, 6th P.M., Sublette, County, Wyoming (see Attachment A). The preferred MHRF would occupy approximately 10 acres within a total area of 33.83 acres and would be enclosed with 10 ft. chain link fence.

The site is at an elevation of approximately 8,500 feet along Riley Ridge, an west-east trending sedimentary formation east of the Wyoming Range, in Sublette County, Wyoming approximately 17 miles west of Big Piney. It is marked by steep slopes and patches of aspen woodlands within extensive stands of Wyoming big sagebrush vegetation.

Based on ecoregion mapping compiled by the Environmental Protection Agency (EPA), the preferred plant site is generally located within the Level III Middle Rockies ecoregion, which is characterized by glaciated mountains with moderately steep to steep slopes. Deep, V-shaped drainages with moderate to high gradient perennial streams and boulder, cobble, and bedrock substrates are common. Common soil series that may be found in this area are Sapphire, Redfeather, Tongue River, Starley, Farlow, Nathrop, Starman, and Turnerville. These shallow to moderately deep, well-drained soils are indicative of the rolling to steep topography in the area. Geologic conditions, combined with the parent materials, have produced variable soil textures and very complex soil/landform relationships.

Vegetation communities in the preferred plant site are dominated by sagebrush. The Wyoming big sagebrush vegetation community is characterized by a mosaic distribution of sagebrush stands ranging from moderate density to high density. Other shrub species that occur within the sagebrush community include rabbitbrush (*Chrysothamnus* spp.), winterfat (*Krascheninnikovia lanata*), Gardner's saltbush (*Artiplex gardneri*), and occasionally black greasewood (*Sarcobatus vermiculatus*). Mountain big sagebrush (*A. t. ssp. vaseyana*) and silver sagebrush (*A. cana*) also occur in or near the preferred plant site and are interspersed with the mixed conifer, aspen, and lodgepole pine forests. Mixed conifer forest, which consists mainly of Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*), and lodgepole pine (*Pinus contorta*) can also occur in the area.

The Wyoming big sagebrush community provides forage for livestock and big game, and nesting cover and forage for sage-grouse and some big game species, depending on elevation and density. The site is not located within a defined sage grouse core area. There are no known threatened or endangered plant species at this elevation or on Riley Ridge in general.

#### **BACKGROUND:**

The Special Use Lease application for the MHRF facility was received by the Office in January of 2008. The Project was presented to the Board of Land Commissioners for consideration at the June 5, 2008 Board meeting. Testifying on the matter were representatives of Cimarex Energy, the Wyoming Game and Fish Department (WGFD) and the current grazing lessee.

The primary issues of concern raised during the meeting were 1) the current preferred plant location, 2) potential negative impacts to the Piney Elk herd and 3) potential economic loss to trust beneficiaries.

No action was taken by the Board pending further review of the proposal.

#### **EXISTING LEASES / RIGHTS OF WAY:**

The current grazing lessee is Dan H. Budd and Sons (#3-6884). The lease expires on March 1, 2017. True Oil, LLC currently has two gas wells in the section. Both wells are located south of the preferred MHRF and outside of the subject area. To date, there are no current rights of way (ROW) of record on the parcel.

#### **PROPOSED IMPROVEMENTS:**

The proposed MHRF will consist of the following buildings and equipment; control room/office/shop, motor control center 1 and 2, compressor building, processing building, sour gas building, Carbon Dioxide/Hydrogen Sulfide injection pump building, warehouse, switchgear/control building with the electrical substation plus plat inlet facility, propane refrigeration system, flare stack, atmospheric storage tanks, cryogenic separation equipment, communications infrastructure, various plant pipe racks and appurtenances, a warehouse building, plant security fencing, electrical pole structures, well flow pipelines, water well, and waste facilities. The applicant estimates the value of improvements to be approximately \$40,000,000.00

#### **DISCUSSION POINTS:**

##### **A) Siting Considerations**

During early Project development, several options for Project location were reviewed. The primary and most critical consideration for all location reviews was employee and public health and safety and using the natural wind normally present. Preservation of the view shed of the Piney Creek drainages and their historic western character along with preservation of the view shed of the Lander Cutoff of the Oregon Trail were also highly important. Reduction of human

activities and surface disturbance along with minimizing impact on wildlife were important considerations as well.

The Project will not require construction of new roads. Reduction of human and truck traffic and the use of multi-well pad drilling were key principals in location selection and review.

The following detail discusses salient points regarding the locations reviewed by Cimarex Energy:

1. Location of MHRF at a lower elevation in the general Riley Ridge area on private fee or state lands outside the Riley Ridge Federal Unit (Attachment B, sites A, B and C).

These locations were rejected for the following reasons:

- a. Wind velocity and turbulent mixing were judged to be somewhat less effective in the lower elevation, more open environment.
- b. Public surface occupancy is considerably closer to this location than the Cimarex preferred alternative raising the potential for safety concerns.
- c. The location would be near open, flowing springs and well established traditional agricultural uses on the private fee property.

2. Location of the MHRF on State land (Attachment B, sites D,E,F and preferred site location).

Cimarex considered a total of four possible alternative locations for the MHRF on State lands in Section 16, T29N, R114W. In addition to the current preferred site, the following locations were considered:

- i. Site D: Located in Section 16, T29N, R114W generally north of current preferred site.
- ii. Site E: Located in Section 16, T29N, R114W generally northeast of current preferred site and west of Well RRU 10-14.
- iii. Site F: Located in Section 16, T29N, R114W generally south of current preferred site.

After considering all options and potential issues, the current site was selected as the Cimarex preferred location for the MHRF.

The other three locations (D, E and F) were rejected for location of the MHRF for the following reasons:

- a. Wind velocity and turbulent mixing were judged to be slightly less effective in the more open environment.
- b. Public surface occupancies are slightly closer to these locations as opposed to the Cimarex preferred alternative (16-D).
- c. In consultation with the state grazing lessee, the plant site was located in an area to account for minimal impact to AUM's and cattle distribution.

- d. This location would require development of a new and/or upgraded road system to improve access. This would result in increased disturbance and potential public demand for access.
- e. The location would be near open, flowing springs and well established traditional agricultural uses on the private Fee property in 2 of the 3 rejected locations.

3. Location of the MHRF to serve the RRU and operated as a third party processing facility (Attachment B, sites G, H and I).

Cimarex considered building the Facility outside the RRU as a third party processing facility. Any third party processing facility would have been problematic due to issues related to transfer metering, ownership and liability associated with moving fluids across unit and lease boundaries. Three primary options for a third-party MHRF co-located on non-federal land northeast of the RRU were considered.

- i. Location H on private Fee lands
- ii. Location I on private Fee lands
- iii. Location G on State of Wyoming lands

These locations are at lower elevation in the Piney Creek drainage and on existing developed road infrastructure.

The above three locations (G, H, and I) were rejected for location of the MHRF for the following reasons:

- a. The producing wells on the RRU would be some 5 to 8 miles away and across flowing streams. This exposes the public to more miles of sour gas gathering flow lines installed at lower elevations close to public use and occupancy with potentially increased risk to public health and safety compared to the Cimarex preferred alternative in the unlikely event of an accidental leak or release.
- b. This location could potentially result in increased environmental disturbance to wildlife habitats and existing agricultural land uses.
- c. All facilities, as well as the production flow lines and their reclaimed ROW would be more visible from the Lander Cutoff of the Oregon Trail than in other locations.
- d. Wind velocity and turbulent mixing were judged to be slightly less effective in the more open environment.
- e. Public surface occupancies are closer to these locations as opposed to the Cimarex preferred alternative.
- f. The sour gas gathering flow lines from the producing wells to the MHRF would cross several public roads thence exposing the travelling public to increased risk in the event of a flow line leak

4. Location of the MHRF on BLM land outside the boundaries of the RRU to serve the RRU (Attachment B, site J).

Cimarex considered an option presented at a meeting with WGFD that would have located the MHRF on BLM land approximately 2 to 3 miles south and/or southeast on lower Reed Ridge or lower Trail Ridge.

This location was rejected for the following reasons:

- a. The producing wells on the RRU would be several miles away from the MHRF. This location would require the construction and continued operation of longer production flow lines through a difficult pipeline construction topography, high gradient environment from the wells on the RRU to the MHRF. This exposes the public to more flow line miles of sour gas gathering flow lines installed at lower elevations and crossing natural air channels (deep valleys) close to public use and occupancy with potentially increased risk to public health and safety compared to the Cimarex preferred alternative in the unlikely event of an accidental leak or release.
- b. Construction of the production flow lines will disturb more surface in this option and could increase the potential for ongoing surface damage due to erosion of the ROW's due to the steep gradients involved along the route(s).
- c. The need for winter access to the entire Project area including flow line ROW's is not decreased. Periodic human intrusion on wildlife winter range may be increased due to the length of such ROW with possible increased impact to wildlife on winter range.
- d. Increased human disturbance in big game crucial winter range due to the need for periodic monitoring access along the increased length of flow line ROW; monitoring of the Multi-Well pad envisioned for the RRU 17-34 site and for access to the RRU 10-14. Winter access to the RRU 17-34 site in the absence of an opened road to the MHRF located per the Cimarex preferred alternative will likely involve use of heavy equipment on at least a periodic basis to ensure access.
- e. This option increases the overall human disturbance and project footprint. Human presence on Riley Ridge is lowered but is still required. Increased surface disturbance occurs and human presence is dispersed over a larger area than other options.
- f. If used, a successful deployment of remote monitoring technology for the producing wells will still require periodic human presence for verification, calibration and maintenance.
- g. Human presence on Reed Ridge and Trail Ridge is potentially increased thus dispersing activity across the landscape within new areas considered to be within big game crucial winter range.
- h. Relocation of the MHRF to this location appears to have potential affect on BLM sensitive fish species due to MHRF location on the upper Beaver Creek drainage.
- i. There are complex BLM administrative policies for the use and management of non-unitized lands used in servicing the RRU gas. There is no assurance that such policies can be successfully modified to ensure Cimarex comparable access to their RRU resources.
- j. If the MHRF is located outside the unit boundaries, additional facilities and surface footprint is required for transfer metering and associated preprocessing.
- k. The MHRF could possibly be visible from the historic Lander Cutoff of the Oregon Trail due to construction of the facility on north-eastern and eastern facing slopes.
- l. To protect the RRU from drainage; preserve the BLM mineral interest and royalty from RRU production and preserve the State's royalty interest intact, the project wells will need to remain located as currently planned in the Rand's Butte Project.
- m. Disposal of produced water would be difficult if the plant site is not located within the unit boundaries and absent a good Nugget formation test.

- n. State of Wyoming and other RRU owners would sustain a dilution in their ownership interests in the RRU if the facility was moved to another location off RRU with subsequent loss of royalty revenue to the State and the School Trust Fund.
- o. The State of Wyoming and the Common School Permanent Land Income Fund would lose rental payments if the MHRF or other parts of the project were moved off the preferred location on State lands.

The WGFD has also indicated that alternative sites would require an evaluation of feasibility and possible impacts to other wildlife values in the area including:

- Colorado River Cutthroat (CRC) Trout habitat associated with Beaver Creek and Trail Ridge Creek.
- Given the sensitive nature of habitat for CRC trout along Beaver Creek, the Bureau of Land Management (BLM) designated this area as an Area of Critical Environmental Concern (ACEC).
- Potential Canadian Lynx habitat is mapped for many of the Conifer/Aspen stands along the ridge tops to the west and southwest of the proposed plant site.

#### B) CONSTRUCTION AND OPERATIONAL IMPACTS:

The Plant site as previously indicated will cover/disturb 33.83 acres and is the only new disturbance within the RRU which covers 9,780 acres. The Unit is designated by the red crosshatched area and extends to the North of the map perimeter (see attachment C). Two existing well sites will be utilized as indicated by the green boxes (10-14 well site and 17-34 well site). Regardless of the plant site location both these well sites will exist and be accessed over the life of the project. Access to these well sites and the preferred plant site is by way of an existing road shown "roughly" by the dark green line, and again, will be utilized over the life of the project.

The facility is designed to have a capacity of 200 MMSCFD. Processing capacity at start up would only be 100 MMSCFD. The limiting factor will likely be the production capacity of the two producing wells. The drilling of two additional wells and the installation of additional electrically compressors will allow the full capacity to be utilized.

Construction of substantial portions of the MHRF will be performed off-site in fabrication shops in Midland, Texas and Pocatello, Idaho. The modular components would be transported to the plant site and assembled. The plant site will be tiered to follow the natural contour of the site and minimize the amount of surface disturbance.

All aboveground MHRF components would be painted a BLM-accepted environmental color that blends with the surrounding landscape, except for structures that require hot or cold insulation and subsequent metal cover and structures that require safety coloration to comply with Occupational Safety and Health Administration (OSHA) regulations.

Specific design features have been selected to minimize the visibility of the MHRF and to lower the visual profile of the facility. The facility as currently proposed should not be visible from the Lander Cutoff of the Oregon Trail. Some of the taller equipment may be visible from certain areas distant to the facility but designs have been selected to lower visual impact. Aircraft warning lights should not be required on the facility permanent structures

A new electrical substation will be constructed at the site along with major processing equipment and related piping. Construction would involve normal oil and gas construction equipment including cranes, welding machines, forklifts, graders and other equipment required by the contractor.

Summary of anticipated surface activity for the proposed MHRF:

Pre-construction Phase:

Activity on the State lands prior to construction would entail individual site visits by Cimarex employees and contractors to do tasks such as surveys, soil samples, water samples air monitoring etc. and meeting with applicable regulatory agencies. No disturbance of the surface would take place and no heavy equipment would be traveling on to the "State site" (other than the existing road access for the drilling of unit wells to the west of the State section).

Construction Phase:

Construction of the MHRF would take place following approval of the State Lease as well as all other agency approvals (BLM, Wyoming DEQ etc.) The total time required to complete all components of the project is estimated to be approximately 28 months. The majority of the outside construction will likely be completed during a single construction season (May-November). A work crew of 50 to 150 may be present on the construction site during certain periods and will require 200-400 heavy truck loads depending of the phase of the construction. Construction period will take into account and will be limited by seasonal stipulations.

Post- Construction Phase:

The MHRF will be operated 24 hours per day, 365 days per year and maintained by a total staff of approximately 15-20. This total staff would not likely all be on site at any one time. Typical staffing may be as low as two during the night shift and 8-10 during the day. The personnel would travel from local communities to the plant site daily. Snow control structures and snow removal programs will be required for winter access

Cimarex will make efforts to "car pool" personnel when applicable.

Due to design of the project, with CRA flowlines eliminating chemical injection and where metering and flow control of the wells is handled at the plant site, access to the multi-well pad (the 17-34 site) will be much less than is typical. This will further decrease human presence on the ridge, particularly in the more sensitive areas to the west.

### C) POTENTIAL IMPACTS TO CRUCIAL ELK WINTER RANGE

The Cimarex MHRF in the Riley Ridge area (Section 16, T29N, R114W) is located along the Wyoming Range Front, and includes crucial winter range for a free-ranging elk herd segment in Sublette County. The Riley Ridge area is one of two native elk winter ranges remaining in the entire Piney Elk Herd unit. Mid-winter surveys conducted by the WGFD for the past 3 years indicate on average, 198 elk have used this winter range complex (approximately 50% of the elk in Hunt Area 94 that winter on native range). Attachment C depicts results of a study conducted

as a University of Wyoming Cooperative Wildlife Unit master's project (2000-2002). The study monitored elk distribution for three consecutive winters and shows elk use on Section 16 and the surrounding area. Winter use is significant around the proposed plant location (Section 16, T29N, R114W).

If development activity displaced these elk from native winter range and elk sought forage from nearby private lands, the WGFD would be forced to either haze the animals from the conflict areas or establish emergency feeding operations. Personnel costs to haze animals from conflict areas would be highly variable and difficult to project. However, emergency feeding costs could be estimated based on data from the WGFD elk feedground program. Operational costs for the closest elk feedground to the Riley Ridge area averaged \$132 per elk over the last 5 years. Projecting displacement of 50 to 100% of the Riley Ridge elk to an emergency feeding operation, annual cost could range from \$13,200 to \$26,400. The WGFD estimates the economic return per elk harvested is \$1,527. Annually, sportsmen in elk Hunt Area 94 record a 30% success rate during the hunting season. Based on the past 3 year average of ~ 200 elk wintering in the Riley Ridge complex, and a harvest of 50 to 60 elk, the economic return to the state totals between \$80,000 and \$90,000, annually.

#### D) INCOME TO TRUST BENEFICIARIES

Should the plant be constructed, the following revenues could be anticipated by the state;

##### 1) Special Use Lease

Pursuant to Chapter 5, section 7 of the Rules and Regulations of the Board of Land Commissioners, the annual rental for a special Use Lease shall be the amount bid by the applicant, if accepted by the Board, or as set by the Board as part of its decision in a case of conflicting applications. The minimum annual rental shall be based on fair market value for the same or similar use of the land and any improvements owned by the State after an economic analysis is made. In cases where annual rental cannot be established based on fair market value for the same or similar use of the land, the minimum rental shall not be less than \$250.00 or 5 1/2% of the appraised land value and any improvements owned by the State.

A staff appraiser completed an evaluation of the lease application in February of 2008. Based upon comparables of similar land use in the area, the appraiser recommended that the rental rate be established at \$19,000 annually. This rate would be adjusted annually by 2.7% to offset inflationary pressure and subject to five year rental review. The recommended term of the lease is 50 years.

##### 2) Royalty Income

Within the Riley Ridge Unit, there are 640 acres of State land, 40 acres of fee land and 9,100 acres of federal lands. The location of the plant within the unit on either state, federal or fee lands would have no affect on the gas royalties received by the State. The State's share of the unit production is 6.54341% on Methane and Helium sales following production and processing. The State would also receive 50% of the royalties generated from methane production on the federal lands. The State would not realize revenue from Helium produced from federal lands.

Based upon projected plant production of 620 bcf and current Methane pricing, the State could expect approximately \$32.1MM over the life of the plant should it be installed. Additionally, Helium production is estimated to be 17 bcf and would generate estimated revenues of \$8.5MM over the expected plant life.

#### E) REGULATORY PERMITTING SUMMARY

Below is a summary and status of permits required for the proposed MHRF plant:

1. BLM Permit for Power Line and Pipeline corridor and associated actions
  - a. Scoping document for preparation of a Environmental Assessment has been prepared and submitted
    - i. Scoping document includes reference to MHRF as well as the proposed wells and associated actions (including a third party operated Helium recovery facility located at Calpet Road and HWY 189)
2. APD for the drilling of the 20-14 well in the Riley Ridge Unit
  - a. Application submitted in April, anticipate approval in July 2008
  - b. Application has already been made with the Wyoming OGCC for this well
3. DEQ Air Emissions permit
  - a. This is associated with the any emissions from the MHRF
  - b. Application has been made and approval anticipated this summer via a public hearing
4. DEQ Construction permit, timing unknown
5. Wyoming OGCC permit for CO2 and H2S injection well
  - a. Permit will be applied for once the 20-14 well is drilled and applicable well information is obtained; approval anticipated in late '08 or early '09
6. Wyoming OGCC permit for the drilling of a Unit Water Injection well to be located on State Section 16 T114N-R29W
  - a. Two permits are required, 1 for drilling and a UIC permit; application to be made in summer of '09
7. Local Construction Permit from Sublette County/Big Piney for the construction of the MHRF; subject to approval of BLM EA application, application could be as early as late '08
8. Water well permit from the State of Wyoming, Office of the State Engineer; anticipated application to be made in summer of '09
9. Eventually 3 more well permits will be applied for with the Wyoming OGCC and the BLM (APD's) all of which are to be dilled from the same existing pad.; will submit APD's in June of '08, approval subject to BLM EA (note wells have already received approval from Resource Management group of BLM under an existing Plan of Development)

#### F) PUBLIC COMMENT

Comment regarding the proposed project was invited in either written or electronic format from adjacent landowners and other who expressed interest. Comments can generally be summarized as follows:

- 1) Negative impacts to the Riley Ridge elk herd and potential increased threat of brucellosis transmission.

The Game and Fish and Cimarex have settled on language for a Mitigation Agreement

and lease stipulations that would serve to reduce/mitigate impacts to the elk herd and adjacent landowners that may be affected by change in elk patterns.

2) Air quality impacts related to ozone and Hydrogen sulfide

As the plant will be essentially a zero emissions facility, negative impacts to air quality are expected to be minimal. Hydrogen sulfide gas is easily dispersed by air movement. The preferred location would maximize dispersion of any Hydrogen sulfide that may be accidentally released due to wind intensity and flow. Cimarex is currently working with the Department of Environmental Quality to conduct an extensive analysis of air quality in the Riley Ridge area.

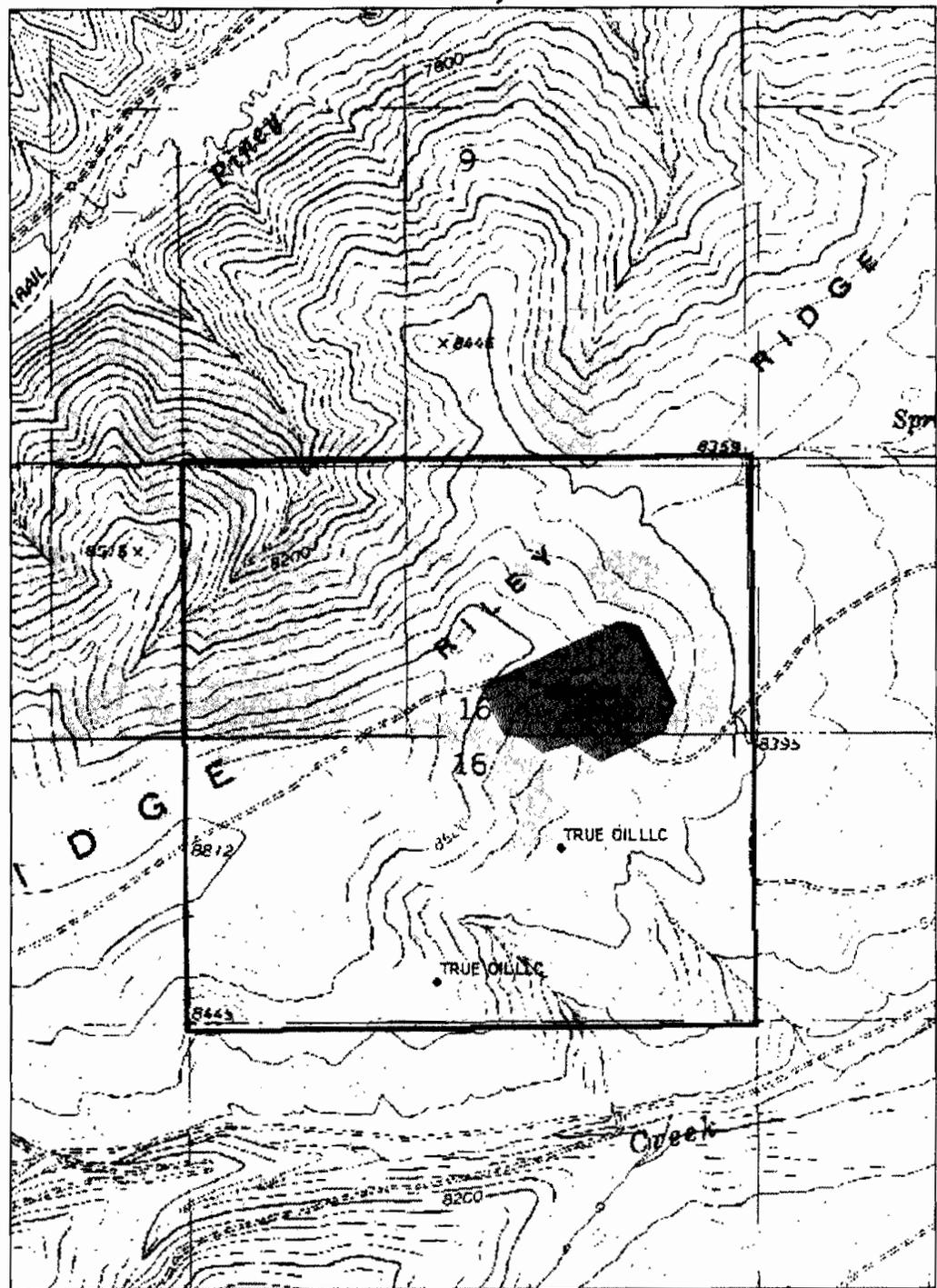
3) Potential water quality impacts

As the waste gasses will be re-injected into source formation, no water quality impacts would be expected. In addition, this potential will be evaluated by the Wyoming Oil and Gas Commission prior to approval of required permits.

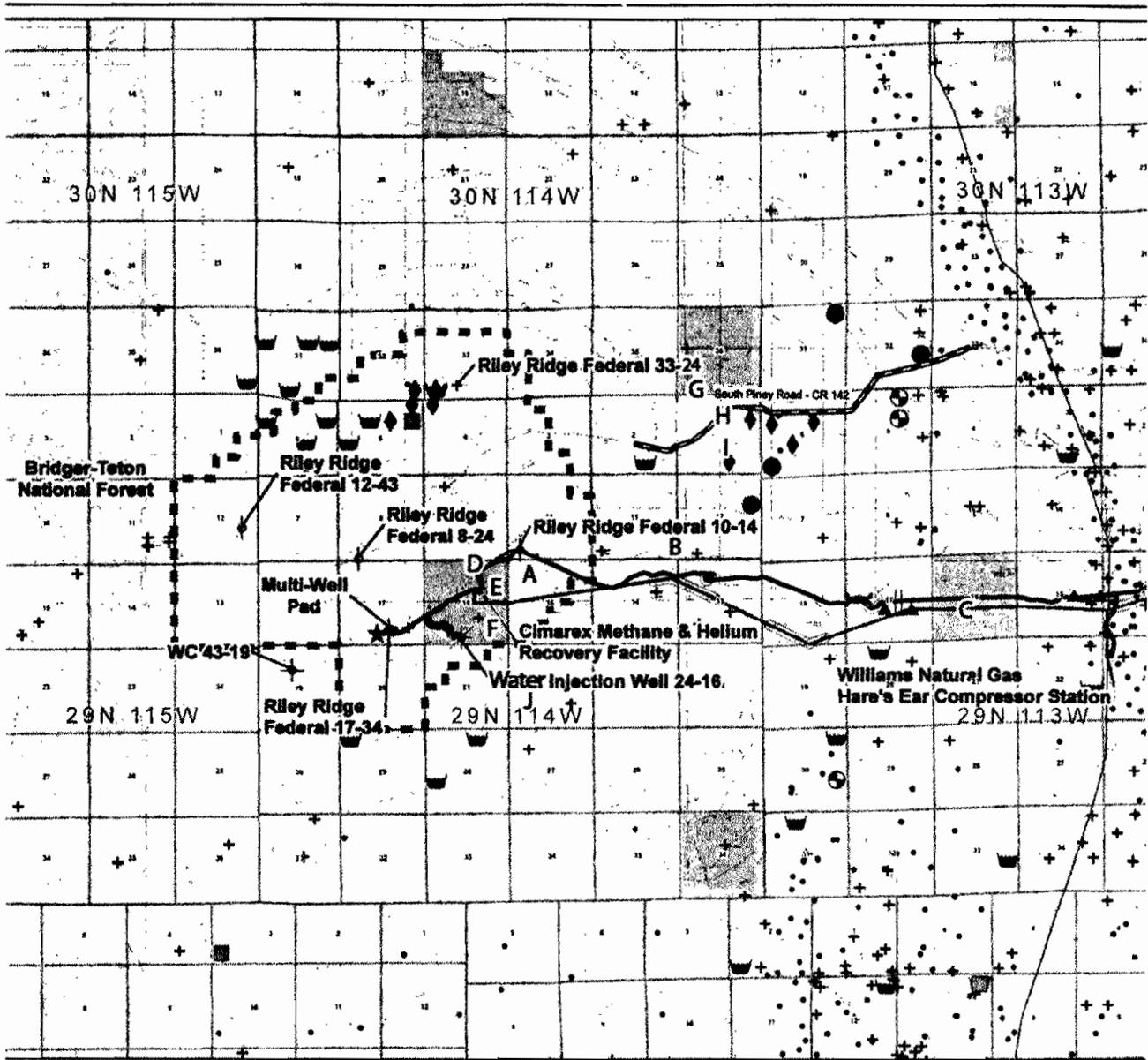
4) Reduction or cancellation of BLM or State grazing lease(s)

There are no anticipated reductions in either AUMs or cancellation of lease agreements, whether Federal or State, associated with the proposed MHRF plant.

# Cimarex Riley Ridge Site Sec 16 T29N, R114W

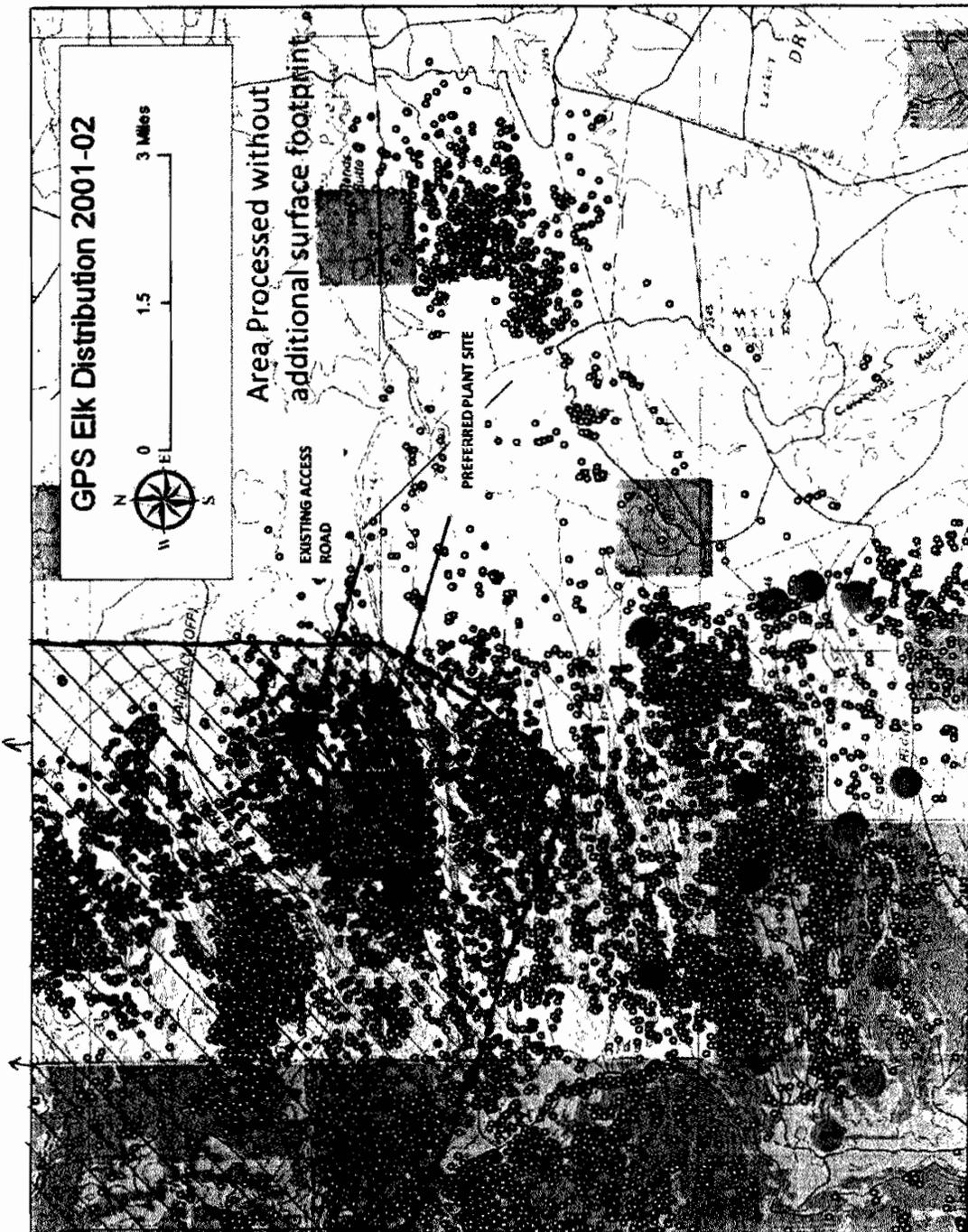


# Rands Butte Siting Considerations ATTACHMENT B



## Legend

⊗ Helium Plant	■ MS Water Well	— Proposed Gas & Fiber Optic Line	□ Well Pad
⋮ PA Gas Well	• Active Well	— Proposed Gas, Electric & Fiber Optic Line	□ Substation
↑ Shutin Gas	+ Plugged & Abandoned Well	— Proposed Helium & Fiber Optic Line	Ownership
★ Meteorological Tower	≡ Existing Culvert	— Proposed Electric, Helium & Fiber Optic Line	⋯ BLM
⊕ Water Injection Well	▲ Existing Cattle Guard	— Proposed Electric, Gas, Helium & Fiber Optic Line	⋯ Forest Serv
⊕ CBM Water Well	▲ Existing Cattle Guard & Gate	⋯ Proposed Electric & Fiber Optic Line	□ State
⊕ Domestic Water Well	— Proposed Electric	— Existing Williams' Pipeline	□ Private
⊕ Stock/Domestic Water Well	— Proposed Electric, Water & Fiber Optic Line	— Existing Improved Road	⊕ Riley Ridge
⊕ Stock Water Well	— Proposed Gas, Electric, Water & Fiber Optic Line	▨ Pending Final Design and Alignment	





## WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4610

Web site: <http://gf.state.wy.us>

**GOVERNOR**  
DAVE FREUDENTHAL  
**DIRECTOR**  
TERRY CLEVELAND  
**COMMISSIONERS**  
RON LOVERCHECK - President  
BILL WILLIAMS, DVM - Vice President  
LINDA FLEMING  
CLARK ALLAN  
JERRY GALLES  
CLIFFORD KIRK  
KERRY POWERS

March 17, 2008

WER 11757  
Office of State Lands and Investments  
Cimarex Riley Ridge Project  
(AKA Rand's Butte Project)  
Sublette County

Mr. Jim Arnold  
Real Estate Management - Assistant Director  
Office of State Lands and Investments  
Herschler Building, 3rd West  
122 West 25th Street  
Cheyenne, Wyoming 82002-0600

Dear Mr. Arnold:

Cimarex Energy Company proposes to construct a 200 MMSCFD capacity Gas Processing and Carbon Sequestration Plant on a State Land parcel (Section 16, T29N, R114W) in Sublette County. Wyoming Game and Fish Department (WGFD) have identified this location as important winter wildlife habitat for elk and moose. This area, known as Riley Ridge, includes crucial winter range for the largest wintering elk herd in Sublette County.

Cimarex expects the plant construction to take 12 months. Once complete, the plant will operate year-round, including during winter when access to and activity at the proposed plant location would be expected to result in considerable disturbance to the elk.

WGFD data indicate elk concentrate on this State section during winter months. Typically, free-ranging elk will avoid winter habitats where human disturbance occurs. The Riley Ridge area provides native elk winter range for approximately 150-200 elk, or about 40% of all elk in the Piney Elk Herd that winter on native ranges along the Wyoming Range Front. There are no other native elk winter ranges remaining outside of the Riley Ridge area that provide the vital requirements of security, freedom from human disturbance, and natural forage to support this number of elk each winter. Thus, we expect significant impacts to the elk if they cannot access this area.

WGFD has been working with Cimarex to identify an alternate location for the plant. To avoid the expected impacts to elk, WGFD recommends the plant location be moved approximately two miles southeast of the currently proposed location. We have also visited with the BLM to discuss other resource issues for the alternate location, and plan to continue working with Cimarex and the BLM to identify an appropriate alternate location.

Mr. Jim Arnold  
March 17, 2008  
WER 11756 – Page 2

WGFD appreciates the benefit of carbon sequestration, but we would certainly like to avoid impacting crucial elk habitat function on this particular location. We ask that you consider these impacts and the decreased habitat value for the elk when assessing this proposal. We would be happy to take part in any discussions with you and Cimarex regarding possible alternate locations for this project.

Thank you for the opportunity to provide comments.

Sincerely,

  
By JOHN EMMERICH  
DEPUTY DIRECTOR

JE:VS

cc: Ryan Lance – Governor's Planning Office



## WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4610

Web site: <http://gf.state.wy.us>

GOVERNOR  
DAVE FREUDENTHAL

DIRECTOR  
TERRY CLEVELAND

COMMISSIONERS  
JERRY GALLES - President  
CLIFFORD KIRK - Vice President  
CLARK ALLAN  
FRED LINDZEY  
RON LOVERCHECK  
ED MIGNERY  
BILL WILLIAMS, DVM

May 21, 2008

WER 11757  
Office of State Lands and Investments  
Cimarex Riley Ridge Project  
Gas Plant proposal  
Sublette County

Jim Arnold  
Real Estate Management - Assistant Director  
Office of State Lands and Investments  
Herschler Building, 3rd West  
122 West 25th Street  
Cheyenne, Wyoming 82002-0600

Dear Mr. Arnold:

We understand that Cimarex Energy Company has submitted an application to construct a 200 MMSCFD capacity Gas Processing and Carbon Sequestration Plant on a State Land parcel (Section 16, T29N, R114W) in Sublette County.

This is located along the Wyoming Range Front, in the Riley Ridge area, and includes crucial winter range for the largest wintering elk herd in Sublette County (200+, or about 40% of the Piney Elk Herd Unit that winter on native range). Attached are maps from a University of Wyoming Cooperative Wildlife Unit master's project (2000-2002) that shows elk use on Section 16 and the surrounding area. Winter use is highest, and there is also spring use and likely some calving there as well.

Cimarex expects the plant construction to take 12 months. Once complete, the plant will operate year-round, including during winter when access to and activity at the proposed plant location would be expected to result in considerable disturbance and significant impact to the elk. Mitigation opportunities for the elk impacts are extremely limited and not considered a viable option.

We previously asked, in a letter dated March 17, 2008, that you consider these impacts and the decreased habitat value for the elk when assessing this proposal, and indicated that we were working with Cimarex to find a possible solution.

We have had additional discussions with Cimarex and have been unable to find a solution for the elk issue on the State section. We must continue to recommend that options for siting the plant in a less crucial habitat area be considered.

Jim Arnold  
May 21, 2008  
WER 11757 – Page 2

Toward that end, it is our understanding that Cimarex has an option to place the plant on the adjoining Section 10, which is private land. While this would still be on crucial winter range, it would be farther onto the periphery of the winter range. Our field biologists have indicated that the plant site for this location has less elk use and the elk impact there would be much less significant.

Given that option, it would certainly be our strong recommendation that the plant be located on the optional site and off State land.

Thank you for your consideration of this issue. We continue to be available for discussion.

Sincerely,

  
for TERRY CLEVELAND  
DIRECTOR

TC:VS

Attachments

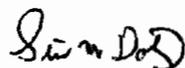
June 16, 2008

To Governor Dave Freudenthal and the Wyoming State Land Board,

I have lived within a few miles of the proposed Cimarex Energy Company's Madison Gas Development Project site for 25 years and I have some very pressing concerns about their proposal. The venting of poisonous gas during a mechanical malfunction and the release of hydrogen sulfide<sup>1</sup> into the air on a calm night would be totally devastating to everything in its path, as was demonstrated when the well at this location blew out during its original drilling (necessitating the evacuation of the local residents). Even if the escaping gas is burned, thus changing it to sulfur dioxide, the ramifications to my greenhouse operation, which earns over \$300,000 per year, could be a loss of approximately \$200,000. Sulfur dioxide, although not as poisonous to people, is highly toxic to tomato plants. In the event of a mandatory evacuation heating systems for my greenhouses would shut down resulting in an immediate freeze (during much of the year) of our entire 28,000 sq ft facility. This would result in not only the loss of plants, but also the freeze and rupture of the boiler and water system resulting in an additional \$100,000 worth of damage. Other agricultural losses in the area would be in the millions, and each agricultural operator would have to estimate their own values. I am sure the loss of wildlife can be estimated by Wyoming Game and Fish. Although a cash bond to cover possible damages resulting from the planned system might be acceptable for business losses, it would of course never be able to cover the loss of human life. All sour-gas processing facilities that I am aware of are always located in totally unpopulated areas, which would be a better option. Given the fact that there are approximately 35 winter residents, not including daytime employees, within approximately 6 miles and an unknown increase of this number in the summertime due to recreational activities, I feel this needs to be addressed in a satisfactory manner. Notification by telephone would be difficult and cell phone signal is pretty much nonexistent in much of the area. A sheriff's deputy dispatched from Big Piney would have a hard time locating a rancher who's working out on their property. The wind speed and direction in this area are consistently inconsistent. Water quality is also an extreme concern. Loss of quality water would of course be devastating to the agricultural community here.

This operation is not your average natural gas processing plant. It brings up highly toxic gas and attempts to re-inject it at extreme pressures through a system that has yet to be tested on such a scale. Residents who I have talked with in Big Piney range in opinion from "it shouldn't be built in the forest" to flatly saying that "we don't want it and we don't need it". Of the people with whom I've discussed this, the general opinion is that Sublette County has no more room for construction workers' housing or the desire to bring more jobs to an economy that is overwhelmed by workers at this point.

While it is true that the Cimarex plant is not being built in a major city, I feel people who have invested their lives in this valley should have the right not to be cast aside in the name of progress. Many of these people have lived here for generations. We have chosen to live here, and have survived the winters, the wind, and the droughts. Please don't think of us as disposable. We are an important part of Wyoming, its history, and its future.



Stewart M. Doty  
WYOMATOES  
PO Box 375  
Big Piney, WY 83113  
(307) 276-3057  
Wyomatoes@wyoming.com

<sup>1</sup> The toxicity levels of hydrogen sulfide can be found online at a site such as Wikipedia.



## Wyoming Outdoor Council

wyomingoutdoorcouncil.org

444 East 800 North  
Logan, UT 84321

t: 435 752.2111  
f: 435 753.7447

July 10, 2008

Mr. Jim Arnold  
Real Estate Management—Assistant Director  
Office of State Lands and Investments  
Herschler Building, 3<sup>rd</sup> West  
122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002-0600

**Re: Cimarex Energy, Inc. Rands Butte Project Methane and Helium  
Recovery Facility**

Dear Mr. Arnold:

Please accept these comments from the Wyoming Outdoor Council regarding the above project, which is proposed in Sublette County (hereinafter we will refer to it as the “Cimarex Project”). This large industrial facility in the foothills of the Riley Ridge would recover methane and helium, at least partially from the approximately four new wells that would be drilled, and reinject gasses, apparently primarily carbon dioxide and toxic hydrogen sulfide, back into the ground. The project would be located in the Riley Ridge Federal Unit. The preferred location for this project from Cimarex’s standpoint is Site 16-D, which is located in T29N R114W Section 16.

This proposed site is problematic and should be rejected by the Office of State Lands and Investments because construction of the Cimarex Project on this location will be harmful to elk that winter in the area. In correspondence from the Wyoming Game and Fish Department (WGFD) to the land board, the WGFD stated that this area is critically important for wintering elk and moose, that access to the proposed plant site would “result in considerable disturbance to the elk,” and that about 40% of the elk in the Piney Elk Herd that winter on native ranges (a relatively rare situation in northwestern Wyoming) rely on this area. The WGFD stated, “There are no other native elk winter ranges remaining outside of the Riley Ridge area that provide the vital requirements of security, freedom from human disturbance, and natural forage to support this number of elk each winter. Thus, we expect significant impacts to the elk if they cannot access this area.” In addition to providing winter range for the elk herd, some calving also may occur there, and as the WGFD also stated, “Mitigation opportunities for the elk impacts are extremely limited and not considered a viable option.” Given these severe problems, we urge

the Office of State Lands and Investments to reject construction of the Cimarex Project on the proposed site.

We would also note that at least on federal lands in the Riley Ridge Unit, the BLM has not been permitting oil and gas development activities since a March 2005 Documentation of Land Use Plan Conformance and NEPA [National Environmental Policy Act] Adequacy, or DNA, found that the 1983 Riley Ridge Environmental Impact Statement was deficient in several regards. We have enclosed that DNA for your consideration. We especially note the concerns raised over the air quality analysis in this DNA. We feel this is a significant issue that must be addressed before the Cimarex Project is approved.

As the State knows, last winter the Wyoming Department of Environmental Quality (DEQ) was forced to issue five health advisories due to elevated ozone levels in the Pinedale area. Clearly air quality is a major concern in this area. If the Cimarex Project Plant will emit precursors to ozone formation such as volatile organic compounds and nitrogen oxides, the State must have assurance that this will not lead to or contribute to violation of air quality standards *before* this plant is approved by the land board, not after. At the June 5, 2008 Air Quality Advisory Board meeting in Casper, Air Division Administrator Dave Finley stated to the Board, "We are anticipating we are going to have a non-attainment area" in Sublette County. Because this area is nearing noncompliance with the National Ambient Air Quality Standard for ozone, the implications of that change in status are numerous and highly significant. Thus, the State Lands Board should ensure this issue is fully considered prior to permitting the Cimarex Project. Given the numerous other large industrial projects undergoing environmental analysis in this area—including the Pinedale Anticline infill on BLM land and the Plains Exploration and Development (PXP) project on the Bridger-Teton National Forest—there is likely little room for increased emissions of ozone precursors. In addition, Class I areas in this area (principally the Bridger Wilderness Area) must receive full protection of visibility under the provisions of the Clean Air Act, and both ozone and nitrogen oxide emissions are significant contributors to visibility problems.

Another significant concern with this project is that it will apparently be processing and/or producing large quantities of hydrogen sulfide, a very toxic gas. This seems to be driving many of the siting and other planning considerations for this project. For example, in the document before the board entitled "Board Matter D-14," Cimarex stated that "The primary and most critical consideration for all location reviews was employee and public health and safety and using the natural wind normally present." It seems apparent that this industrial site will be a dangerous place that the public must be protected from. If this is true, this raises grave questions in our view as to whether this project should be approved at all. Creating a public health hazard does not seem like good public policy to us. We know that much of the natural gas from the Riley Ridge area is "sour" (i.e., it contains hydrogen sulfide), but there is much "sweet" natural gas available in Wyoming, so there seems to be little need to pursue development of sour gas if doing so presents public health threats, or potentially does. We ask the Office of State Lands and Investments to fully consider this issue before approving this project.

Thank you for considering these comments, and please keep us apprised of the status of this project.

Sincerely,



Bruce Pendery

cc: Governor Dave Freudenthal  
Secretary of State Max Maxfield  
State Auditor Rita Meyer  
State Treasurer Joseph B. Meyer  
Superintendent of Public Instruction Dr. Jim McBride

## Documentation of Land Use Plan Conformance and NEPA Adequacy (DNA)

U.S. Department of the Interior Bureau of Land Management  
WY100-DNA05-107

---

**Note:** This Worksheet is to be completed consistent with the policies stated in the Instruction Memorandum entitled, "Documentation of Land Use Plan Conformance and National Environmental Policy Act (NEPA) Adequacy" transmitting this Worksheet and the "Guidelines for using the DNA Worksheet," located at the end of the Worksheet.

### A. Describe the Proposed Action

### B. Land Use Plan (LUP) Conformance

LUP Name:\* Pinedale RMP Date Approved: 12/12/88  
Other document: Bridger-Teton NF Land and RMP Date Approved: 3/2/90  
Other document \_\_\_\_\_ Date Approved \_\_\_\_\_

\* List applicable LUPs (e.g., Resource Management Plans and activity, project, management, or program plans, or applicable amendments thereto)

The proposed action is in conformance with the applicable LUPs because it is specifically provided for in the following LUP decisions:

According to provisions held within the Pinedale RMP, the planning area will be open to consideration for exploration, leasing, and development for all leasable minerals, which include oil, gas, coal, shale, and geothermal steam.

The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions):

### C. Identify applicable NEPA documents and other related documents that cover the proposed action.

List by name and date all applicable NEPA documents that cover the proposed action.

Riley Ridge Natural Gas Project Environmental Impact Statement, November 1983

Riley Ridge NGP Supplemental Environmental Assessment, Exxon LaBarge Project Well Field Changes, February 1985

Riley Ridge NGP Supplemental Environmental Assessment Exxon LaBarge Project Phase II, May 1985

Riley Ridge NGP Supplemental Environmental Assessment, Exxon LaBarge Project Waste Water Disposal, June 1985

List by name and date other documentation relevant to the proposed action (e.g., biological assessment, biological opinion, watershed assessment, allotment evaluation, and monitoring report).

Big Piney/La Barge Coordinated Activity Plan Environmental Assessment, August 1991  
Mobil Tip Top/Hogsback Unit Natural Gas Project, Big Piney/LaBarge Coordinated Activity Plan Area Environmental Assessment, March 1994  
Supplemental Information Report (SIR) Riley Ridge Natural Gas Project, August 2004  
Biological Evaluation to supplement SIR, July 2004  
Biological Assessment to supplement SIR, May 2004

#### D. NEPA Adequacy Criteria

1. Is the current proposed action substantially the same action (or is a part of that action) as previously analyzed? Is the current proposed action located at a site specifically analyzed in an existing document?

Documentation of answer and explanation:

Both the current proposal and the proposed action for the 1984 Riley Ridge EIS have a natural gas well development component. Beyond the fact that both would develop wells, the proposed actions vary substantially.

Within the Riley Ridge DEIS, major project actions and components included the following: (1) exploration, development and abandonment of a 159,928-acre, low-Btu gas well field projected to develop 238 Hydrogen Sulfide (H<sub>2</sub>S) sour gas wells; (2) construction, operation, maintenance, and abandonment of four sour gas treatment plants with a total processing capacity of 2.8 billion cubic feet per day (cf<sub>d</sub>) and a production threshold of 576 cf<sub>d</sub> of methane; (3) construction, operation, maintenance, and abandonment of associated rights-of-way for gathering lines, trunk lines, railroads, access roads, transmission lines, and other ancillary facilities; and (4) processing and transportation of products and by-products.

The proposed action as it relates to the Riley Ridge EIA, addresses sweet gas development as opposed to sour gas development of which have entirely different health, safety, and production requirements. The proposed action is consistent with the number of wells analyzed within the Riley Ridge EIS, but the spacing analyzed was approximately 1 well per 640 acres. The proposed action would significantly increase the density of well spacing previously analyzed. Development of a sweet gas natural gas field would also require the authorization of a new sweet gas pipeline corridor, requiring additional compression, which was not analyzed within the original Riley Ridge EIS.

In 1994, an Environmental Assessment was completed for Mobil Tip Top/Hogsback Unit Natural Gas Project which overlapped a portion of the Riley Ridge project area. While the analysis area for both of these documents overlap a portion of the Riley Ridge EIS area, neither document states or infers that they supplement, augment or otherwise modify or apply to the Riley Ridge EIS area.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with

respect to the current proposed action, given current environmental concerns, interests, and resource values?

Documentation of answer and explanation:

NO—The range of alternatives analyzed within the 1984 Riley Ridge EIS focused on the placement/siting of four processing plants that would be needed to make the sour gas saleable. Other components of these alternatives included two methodologies addressing sulfur transport; three possible routes for power supply; the placement of man-camps which would provide employee housing; as well as the well field development of 238 H<sub>2</sub>S wells. A No Action alternative was also analyzed in the 1984 Riley Ridge EIS document. Several alternatives were considered but dropped from detailed analysis. These include: additional treatment plant siting scenarios and the use of multi-well directional drilling.

The current proposed action, given current environmental concerns, interests, and resource values was not addressed by any of the above referenced alternatives as written within the Riley Ridge document. On page 1-53 of the DEIS, an allowance for approximately 21 sweet gas wells per year was made and the impacts of said sweet gas wells was to have been included as part of the baseline conditions from which impacts could be measured. It was not carried forward in any of the subsequent decision documents. Some aspects of the proposed action, such as the processing of rights-of-ways actions, overall well pad design, road and pipeline placement would not change. However, alternatives which would have addressed tighter well spacing beyond the 1 well per 640 acres or the location of a new sweet gas pipeline corridor, were not included as part of the 1984 document. The current project would require no new employee housing, and power sources are already in existence. Because sweet gas is made saleable at the well site location, no new processing facilities would be required beyond in-situ production activities.

3. Is the existing analysis valid in light of any new information or circumstances?

Documentation of answer and explanation:

NO- Within the Pinedale Field Office, there are currently two areas, the Pinedale Anticline and the Jonah field, which have undergone rapid development. The Pinedale Anticline is currently piloting 20 acre-spaced wells and the Jonah Infill may be going to 5-10 acre-spaced wells. Because of the rapid rate of development, it is hypothesized that emissions of Nitrous Oxide (NO<sub>x</sub>) are beyond what has been analyzed in any existing documents for these areas, and may require new, additional monitoring to determine impacts on the adjacent Class I Bridger National Forest airshed and high-quality area lakes. Because of NO<sub>x</sub> concerns, additional air quality monitoring is in the foreseeable future. In particular, previous analysis of air quality within the Pinedale Field Office as a whole has classified drilling rigs as non-point sources but because of the sheer number of rigs operating at one time, they may need to be addressed as a point source. Existing air quality analysis within the Riley Ridge document concentrated on emissions of SO<sub>2</sub> and H<sub>2</sub>S, not NO<sub>x</sub>.

Additionally, several species became eligible for listing under the Endangered Species Act following the implementation of the Riley Ridge decision document. The Riley Ridge document

has not been updated with new analyses addressing impacts to the Threatened and/or Endangered Species. The T&E species of concern include: the Grizzly Bear (*Ursus arctos horribilis*), Gray Wolf (*Canis lupus*), and Canada lynx (*Lynx Canadensis*). Also not included in the original evaluation were probable water depletions in the Colorado River System and impacts to threatened and/or endangered aquatic species. These include: the Bonytail chub (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), Humpback chub (*Gila cypha*), and Razorback sucker (*Xyrauchen texanus*). Water depletions could also affect the native, pure strain Cutthroat trout for which an upper watershed area was designated as an Area of Critical Environmental Concern after the Riley Ridge document.

Impacts to a BLM sensitive species, the greater sage-grouse, have not been addressed within the Riley Ridge documents.

Because the CAP EA addressed concerns under an 80-acre spacing scenario, analyses are valid but the cumulative impacts have not been addressed to the full extent required under a 40-acre spacing scenario. In addition, the above-listed Threatened and/or Endangered Species, and the sensitive greater sage-grouse, were accounted for in the CAP analyses, but possible impacts to Canada lynx or their habitat, was not.

**4. Do the methodology and analytical approach used in the existing NEPA document(s) continue to be appropriate for the current proposed action?**

Documentation of answer and explanation:

NO- The EIS for the Riley Ridge Natural Gas Project was completed 21 years ago (January 84) and several significant issues have arisen since. The methodology and analytical approach employed are still valid and applicable to some but not all elements of the current proposed action. Some significant issues identified during public scoping of the original project as well as new issues that have surfaced/re-surfaced. In recent discussions between Forest Service and BLM personnel, it has become apparent that new circumstances as well as current conditions and potential impacts warrant additional analysis. These issues include but are not limited to 1) air quality, 2) Threatened and Endangered Species, 3) Cumulative Impacts due to proposed tighter spacing of well sites as well as proposed pipelines that were not analyzed, 4) sour gas wells vs. conventional gas wells

The air quality methodology used in the 1984 analysis is considered archaic to air quality modeling procedures and techniques used today. Industry analysis completed in 1999 adjusted qualitatively to a current 2004 figure shows actual impacts are in excess of those analyzed and approved in the original Pinedale Anticline EIS. NOx levels adjusted from the 1999 analysis indicate we are above the threshold or additional cumulative Air Quality impact analysis in the original Pinedale Anticline EIS. This is without taking into account emissions from the Jonah field and the Riley Ridge Natural Gas Project and how they will affect current conditions related to NOx emission levels in the upper Green River Basin at this time.

Since 1984 new Threatened and/or Endangered Species have been listed that were not analyzed nor were they included in a biological assessment to determine if the proposed project will affect the species. Some of these species include the Grizzly Bear (*Ursus arctos horribilis*), Gray Wolf (*Canis lupus*), Canada lynx (*Lynx Canadensis*). Also not included in the original evaluation was

the possibility of water depletions in the Colorado River System and the impacts to threatened and endangered species (Bonetail chub (Gila elegans), Colorado pikeminnow (Ptychocheilus lucius), Humpback chub (Gila cypha, and Razorback sucker (Xyrauchen texanus)) inhabiting the downstream reaches.

Current and planned spacing density vs. the 1 well per section that was analyzed, as well as sour gas wells vs. conventional wells with pipelines that were not analyzed, raises concerns regarding surface placement and the quantity of new surface disturbance, dust and habitat fragmentation. This tighter spacing as well as the proposing of conventional wells and pipelines requires that the Effected Environment be further analyzed to determine the effect on Wildlife and Fisheries, Water Resources, Air Quality, Soils and Vegetation, Visual Resources, Cultural Resources, Recreation Resources, Grazing, Timber and Transportation Networks.

**5. Are the direct and indirect impacts of the current proposed action substantially unchanged from those identified in the existing NEPA document(s)? Does the existing NEPA document analyze site-specific impacts related to the current proposed action?**

Documentation of answer and explanation:

NO- While many of the direct and indirect impacts identified in the existing Riley Ridge EIS would remain substantially unchanged with the current proposed action there will be some elements of the current proposed action that would substantially change direct and indirect impacts that were identified in the existing NEPA document. The proposed planned and current spacing density and addition of pipelines would result in additional surface disturbance. This tighter spacing and new surface disturbance would increase human activity levels, erosion and sedimentation, air quality impacts, habitat fragmentation, as well as possibly affecting newly listed T&E Species and impacting visual resources, among other elements identified in the existing NEPA. The existing NEPA document does not analyze site specific impacts related to the current proposed action as spacing density was analyzed at 1 well per section and the new proposed pipeline was not analyzed. Current and proposed spacing density is greater than 1 well per section. Multiwell Directional Drilling was an alternative considered in the original Riley Ridge EIS but eliminated from further analysis.

**6. Are the cumulative impacts that would result from implementation of the current proposed action substantially unchanged from those analyzed in the existing NEPA document(s)?**

Documentation of answer and explanation:

NO-Two additional natural gas projects are proposed in this area, one is the Jonah Infill project which proposes up to 3100 additional well on 5 to 10 acre spacing within the Jonah Field. The other is the South Piney Coalbed Methane project which is proposing up to 210 wells. The cumulative impacts from these proposed projects in conjunction with the current proposed activities in the Riley Ridge area would not be the same as those described in the initial EIS for the Riley Ridge Natural Gas Project.

The air quality methodology used in the 1984 analysis is considered archaic to air quality modeling procedures and techniques used today. Industry analysis completed in 1999 adjusted

qualitatively to a current 2004 figure shows actual impacts are in excess of those analyzed and approved in the original Pinedale Anticline EIS. NOx levels adjusted from the 1999 analysis indicate we are above the threshold for additional cumulative Air Quality impact analysis in the original Pinedale Anticline EIS. This is without taking into account emissions from the Jonah field and the Riley Ridge Natural Gas Project and how they will affect current conditions related to NOx emission levels in the upper Green River Basin at this time.

**7. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?**

Documentation of answer and explanation:

Public involvement including interagency review for Riley Ridge Natural Gas Project EIS occurred during the preparation of the November 1983 EIS and January 1984 Record of Decision and then again for the Supplemental EA for the Riley Ridge Project in February 1985. New circumstances (outlined above #4) as well as current conditions and potential impacts require new public involvement and interagency review to some but not all elements of the current proposed action.

**E. Interdisciplinary Analysis:** Identify those team members conducting or participating in the NEPA analysis and preparation of this worksheet. (See attached specialist input sheets)

David Geer  
Merry Gamper  
Bill Lanning  
Lisa Solberg  
Steve Laster  
Carol Kruse

Natural Resource Specialist  
Natural Resource Specialist  
Supervisory Natural Resource Specialist  
Wildlife Biologist  
Rangeland Management Specialist  
Planning & Environmental Coordinator

**Conclusion**

- Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of NEPA

Note: If you found that one or more of these criteria is not met, you will not be able to check this box.

Based on the preceding evaluation, we found the 1984 Riley Ridge EIS to be deficient in several categories. Therefore to implement additional actions under the umbrella of this EIS supplemental NEPA analysis is needed.

NEPA options available include: 1) Individual EA's for individual APD's, 2) Programmatic EA to supplement the EIS, 3) Supplemental EIS, 4) New stand alone EIS.

Individual EA/APD: This would not be practical because it would not be expedient or realistic to prepare comprehensive air quality/emissions cumulative impact analysis for each and every

APD and to do less than a comprehensive analysis would result in piecemealing the effects.

Programmatic EA: Air quality impacts would likely be significant, consequently a FONSI could not be achieved. Additionally USFS EA process is essentially the same as the EIS process in terms of public comment periods and overall processing time.

Supplemental EIS: This would be the recommended option. It will allow the specific deficiencies to be corrected without re-creating those EIS sections that are still viable and applicable to the current proposed actions.

New EIS: This is not recommended because it would duplicate/re-create portions of the existing EIS that are still viable and applicable to current proposed actions.

/s/ Priscilla E. Mecham

Signature of the Responsible Official

March 3, 2005

Date

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision.

**From:** Jim Arnold  
**To:** Fresquez, Lorraine  
**Date:** 8/1/2008 9:11 AM  
**Subject:** Fwd: Cimarex Plant

>>> "Tim Thompson" <[crosslazytwo@wildblue.net](mailto:crosslazytwo@wildblue.net)> 7/20/2008 7:58 PM >>>  
To: State Land and Investments, Director Lynn Boomgaarden, Assistant Director Jim Arnold, State Loan and Investment Board, Chairman, Governor Dave Freudenthal, Secretary of State Max Maxfeld, State Auditor Rita Meyer, State Treasure Joseph Meyer, Superintendent of Public Instruction Dr. Jim McBride.

I would like to voice my concerns and comments pertaining to the Cimarex Energy Co. Application for a helium processing plant and the infrastructure associated with this plant located in a state school section in the Riley ridge area on the Southern end of the Wyoming range. The approval of this application will have numerous effects to large tracts of land outside the permit area which is home to many types of wildlife along with permitted livestock allotments both state and federal along with, private lands. Inevitable complications to a herd of elk, local livestock producers their lifestyle and the risk of losing grazing allotments and permits.

A brief history begins with a small group of elk staying in this area from late fall through winter and into spring seasons in the early 1980's with numbers around 15-25 head growing to over 300 head to date. The past 25 plus years this herd has remained in this same area through fall, winter, spring and summer, thriving and prospering with minimal oil and gas impacts, the siege of the wolf reintroduction, state regulated hunting seasons, and forage competition from agriculture users such as myself throughout their entire natural range and existence. In this area and time frame this particular herd has caused minimal cost to local agriculture producers our ranch in particular in lost forage and fence damage, again minimal, and to the people and the State of Wyoming 0 \$ cost for what is and should be looked at as an indigenous herd, a hidden gem competing against nature, some unnatural nature, industry, agriculture, and government making this herd prime for study and documentation.

Concerns for impacts caused from the dispersal of this elk herd has a serious brucellosis alert and a much higher contact opportunity than already exists with our operation that borders this project area and lies with in the improved roads, pipe- lines, and power line easements to be constructed, along with the traffic and man power to operate such a project. Historically our cow calf operation has of late professionally brucellosis tested our herd each fall for the voluntary State of Wyoming test results and personal knowledge. The managers of this particular elk herd have no documentation relating to there health status, or the extent of their entire range. Through several phone conversations mitigation was never directly addressed towards local livestock producers with the concerns of elk/ cattle contact, exposure, and competition seemed a non issue or concern of the Wyoming Game and Fish or Cimarex Energy personal. This is a real issue and concern to our operation and adjacent allotment and permit users as well as private land owners.

Meetings have taken place between Wyoming Game and Fish and Cimarex Energy Co. to discuss various mitigation plans along with dollar amounts for potential problems, conflicts, and managements plans for winter feeding, habitat improvement, studies of migratory patterns and health documentation. Our ranches private ground, state grazing leases, BLM allotments of summer range lies within and next to this herd natural range. This exposes our

family owned and operated of 106 years federal and state permits for grazing first in line for reduction or cancellation as steps to these mitigation plans are implemented with no input from agriculture / livestock producers in the immediate area.

The boards decision towards this permit should be put on hold to allow state agencies, and the energy company along with interested land owners, and permit holders the proper time and professional opportunity to document the full extent of this particular herds range, patterns, routes, tendencies, along with a complete health status report for the better understanding of how and why this area has allowed this particular herd to survived and produce the healthy numbers that have remained obscure to so many for so long, posing such controversies and alarms to the numbers of different entities involved directly or indirectly. A moratorium of this permit will not only allow the full understanding of this herd it will allow the needed time to look at the protection and preservation of the cutthroat trout in the Spring and Beaver creeks drainage, the historically safe and healthy preservation of the livestock and other wildlife, maintaining existing allotment size and permit numbers for agriculture, and the paramount importance of safety practices, secure methods and procedures to drilling , the production procedure along with the handling and transporting of H2s sour gas in the weather conditions and prevailing wind factors in the area directly up wind of us with concerns .

Sincerely Yours,

Timothy S Thompson  
President. Cross Lazy Two L & L  
PO Bx 220  
Big Piney, Wyo 83113  
307 276 3660  
[crosslazytwo@wildblue.net](mailto:crosslazytwo@wildblue.net)