

JACK MORROW HILLS CAP SUPPLEMENTAL DRAFT EIS

MINERALS FACT SHEET

BLM RESPONSIBILITIES FOR OIL AND GAS LEASING

Development of oil and gas on Federal lands is performed under procedures required by the Mineral Leasing Act of 1920 and 1987 Amendments. Under these laws, BLM offers the rights to oil and gas development to private parties through the leasing process. After areas have been nominated for inclusion in a sale, BLM advertises the lease sale and available parcels, and leases may be obtained by competitive bid. Parcels included in the sale that were not obtained by competitive bid can be purchased immediately after the sale. Leases are offered with a time limit; expiring at a specified date unless the lease is actively producing oil or gas and royalty is paid on the produced resource.

OIL AND GAS LEASING AND LAND USE PLANNING

BLM is conducting planning and analysis of land management alternatives for the Jack Morrow Hills (JMH) Coordinated Activity Plan (CAP) and is preparing a Supplemental Environmental Impact Statement (SEIS). After the SEIS is completed, the preferred alternative will be implemented as the JMH CAP. The CAP will specify the land management decisions to provide for multiple use and protection of the land and resources. The CAP will identify areas available for leasing and development, and the required actions needed to mitigate impacts of development. Existing oil and gas leases may be developed consistent with environmental protection clauses in the leases and applicable regulations.

As part of the land use planning process, BLM estimates the level of oil and gas development activity that could occur under different management options. This allows BLM to evaluate the potential environmental and socioeconomic impacts of development for the management alternatives. The evaluation of alternatives meets BLM requirements to comply with the National Environmental Policy Act, and supports the development of land management plans required by the Federal Land Policy and Management Act.

FROM RESOURCES TO RESERVES: HOW DEVELOPMENT ACTIVITY PROVIDES ACCESS TO ENERGY SOURCES

For each planning area, BLM evaluates the resource potential based on the available sources of information from Federal and State Agencies, industry and trade associations, and the scientific literature. Resource estimates are based on regional geology, the presence of geologic formations that may have generated hydrocarbons, and geologic structures that have suitable characteristics for hosting oil and gas accumulations. In existing oil and gas producing areas, well records and geophysical surveys provide important sources of data for estimating resources.

Resource estimates often indicate that a region has potential for energy production at rates much greater than currently exist. These estimates often have considerable uncertainty because of the complexity of geologic settings and the geologic events that must occur for petroleum generation, migration, and accumulation. As areas are explored, discovered energy resources are converted to reserves. Reserves are oil and gas resources that have been tested and produced through wells, and there is sufficient

information available to predict petroleum product volumes and recovery rates using scientific and engineering principles.

The amount of time required to develop reserves depends on resource and economic factors. A number of specific issues are being considered by BLM in estimating energy development activity for the JMH planning process. In addition to the resources present in the area, factors that are expected to impact future energy development in JMH include:

- Non-discretionary requirements that BLM exclude parts of the JMH from leasing for energy development, such as Wilderness Study Areas, which require Congressional action before leasing may occur
- Previous success rates for exploration and development activity in JMH and nearby areas
- Drilling and production costs, and anticipated production rates
- Energy prices expected for commodity sales in the area during the planning period (2002 through 2021)
- Geologic risks of finding energy reserves in new geologic settings in the planning area
- Resource estimates for the JMH indicate that coalbed methane is a significant part of the undiscovered energy resources, so technical requirements for successful production will include:
 - Installing wells at a sufficient spacing to allow coal seam dewatering and gas production
 - Developing an environmentally acceptable method for disposal of produced water, which will require subsurface injection to meet surface water quality standards for the Colorado River Basin portion of the JMH
 - Successful completion of wells at depths of up to 7,000 feet, including enhanced permeability treatments
 - Treatment of produced gas to reduce carbon dioxide content to achieve market quality
- Impacts of BLM management actions on leasing, exploration and development activity in the JMH.

BLM is using several resource estimates in the planning process. The sources of the resource estimates include the checkerboard method, where available sections in areas with resource potential are counted and predicted well numbers are estimated, comments provided by Barlow and Haun, Inc. on the scoping for the previous Draft EIS for the JMH, and a study of the area performed by the Wyoming State Geological Survey (WSGS). The resource estimates and the range of predicted total number of wells under different management alternatives are listed in the following table. These activity level estimates will provide the basis for the environmental and economic impact analysis of the energy resource management alternatives. Management actions implemented in the planning area will meet BLM obligations under the Federal Land Management and Policy Act, the Mineral Leasing Act and Amendments, and the National Environmental Policy Act.

JACK MORROW HILLS
Energy Resource Estimates and Projected Activity Levels

Resource Estimates

Estimate Source	Gas Resource	Oil Resource	Coalbed Methane Resource	Projected Total Oil and Gas Wells	Projected Total Coalbed Methane Wells
Barlow and Haun, Inc.	2.05 TCF	NP	0.05 TCF	732	NP
Checkerboard Method	4.54 TCF	NP	NP	897-1,077	NP
WSGS	1.26 TCF	535 MBO	2.05 TCF	322	543

**Projected Exploration and Development Activity
During the Planning Period (2002-2021)**

Activity Type	Range of Activity Estimated for the Planning Options at JMH
Total Oil and Gas Exploration Wells Drilled	91-183
Total Oil and Gas Development Wells Drilled	42-120
New Producing Oil and Gas Wells	56-147
Coalbed Methane Exploration Wells Drilled	25-50

Abbreviations: TCF=Trillion cubic feet of gas; MBO=Thousand barrels of Oil; NP=Not provided