

EXECUTIVE SUMMARY

The Department of Interior (DOI), Bureau of Land Management (BLM) Pinedale Field Office (PFO) and Rock Springs Field Office (RSFO) have received a proposal from EnCana Oil and Gas (USA), Inc., BP America Production Company, and other natural gas operators (collectively known as the Operators) to expand existing natural gas drilling and development operations in the Jonah Field in south-central Sublette County, Wyoming. Operations are proposed for that portion of the Jonah Field referred to as the Jonah Infill Drilling Project Area (JIDPA) which encompasses approximately 30,500 acres located in portions of Townships 28 and 29 North, Ranges 107 through 109 West, approximately 32 miles southeast of Pinedale and 28 miles northwest of Farson, Wyoming.

The DOI/BLM PFO and RSFO have determined the proposed project would constitute a major federal action and therefore requires the preparation of an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act of 1969, as amended (NEPA). This Final EIS (FEIS) replaces the Draft EIS (DEIS) in its entirety and was prepared in accordance with NEPA to assess the environmental consequences of the Operators' proposed action and alternative courses of action. It is intended to provide the public and decision-makers with a complete and objective evaluation of impacts that might occur from the Proposed Action and reasonable alternatives.

Life of project (LOP) is estimated to vary from 63 to 105 years, depending on the alternative and pace of development.

Currently within the JIDPA, BLM has approved or committed to 497 well pads with associated access roads, pipelines, and ancillary facilities. Operation and maintenance of these facilities will continue as authorized by existing permits.

PROPOSED ACTION

The Operators propose to expand development of natural gas and condensate reserves from the Lance and other formations at depths of approximately 11,000 feet by drilling as many as 3,100 additional wells on up to 16,200 acres of new surface disturbance during the development (drilling) phase. Specific features include the following: a minimum of 64 well pads per 640-acre section, downhole well spacing from 1 bottomhole/5 acres to 1 bottomhole/40 acres; up to 465 miles of new resource roads with associated pipelines; 8 miles of new collector/local roads; 41 acres of new surface disturbance for ancillary facilities; and 100 acres of new surface disturbance for exploration of other formations. The Operators have committed to various mitigation measures that vary by alternative and propose to fund compensatory or off-site mitigation (CM) under some alternatives. The CM fund could mitigate adverse impacts within the JIDPA by financing substitution mitigation projects outside the JIDPA. As proposed, the fund could be based on the level of surface disturbance authorized.

SCOPING

Public and agency scoping was conducted to determine issues relative to the Proposed Action. A scoping notice and informational materials were mailed to potentially interested parties beginning in March 2003. All issues identified during scoping and BLM and Interdisciplinary Team reviews were evaluated to identify key issues that drove development of alternatives and the impact analyses. The nine key issues identified are: surface disturbance acreage; socioeconomics and boom/bust avoidance; regional visibility effects; greater sage-grouse/greater sage-grouse habitat protection; pronghorn antelope migration corridor protection; direct and indirect habitat fragmentation and loss for all wildlife; maximum natural gas recovery; loss of livestock forage and project hazards; and BLM monitoring and enforcement capability.

The three action alternatives meet the Purpose and Need of the proposal but vary in response to the key issues. Some alternatives considered in depth in the DEIS have not been carried over to the FEIS. Other alternatives were considered but rejected for a variety of reasons.

ALTERNATIVES

No Action Alternative: Reject Operators' Proposal

The No Action Alternative would reject the Operators' Proposed Action and all field-level development alternatives. Though this alternative rejects the field-level development as proposed, previously approved drilling and drilling at spacing analyzed in previous NEPA documents could take place. An estimated 533 such wells that are not part of the current proposal have already been completed or are to be drilled in the study area. No Action Alternative serves as a benchmark enabling decision-makers and the public to compare the magnitude of environmental consequences across action alternatives.

Alternative A: Minimize Directional Drilling

New (drilling phase) surface disturbance would be comparable to the Proposed Action (16,200 acres), but development activity would be exempt from some existing BLM Conditions of Approval (COAs), stipulations, and mitigation. Most notably, environmentally sensitive areas would not be avoided in order to increase the gas recovered.

Alternative B: Minimize Surface Disturbance

All new wells would be drilled from the 497 currently approved well pads. This alternative requires expansion of existing well pads but results in the least amount of new surface disturbance (3,222 acres) while still providing for a higher level of resource recovery within the JIDPA.

BLM Preferred Alternative

The Preferred Alternative would limit total surface disturbance at any given time to 46% of the JIDPA, or a maximum of 14,030 acres. To mitigate environmental impacts as quickly as possible, Operators would be required to initiate reclamation of developed well pads pursuant to Reclamation Plan specifications. Credit would thereafter be given, on an acre-by-acre basis up to a maximum of 6,379 acres, for areas the BLM determines have successfully been reclaimed

(i.e., achieved 80% indigenous vegetative basal cover/density and species composition). Under no circumstances would cumulative total surface disturbance exceed 20,334 acres over the LOP.

Performance-based field management objectives would address key issues and significant impacts, particularly those associated with air quality. Monitoring and surveying would be required to determine if objectives are being met. An interagency adaptive management working group would be established to monitor the effectiveness of development guidelines, mitigation, and monitoring, and to recommend to BLM any modifications to these procedures based on monitoring results.

ENVIRONMENTAL IMPACTS

Physical Resources Impacts

Topography/Water

The JIDPA has a continental, semi-arid, cold desert climate and is located in the central Green River Basin with ephemeral drainages primarily flowing to the Green or Big Sandy Rivers. Groundwater and surface water are variable in quality. Use of surface water from the JIDPA has been limited in the past due to the ephemeral nature of the surface stream system. Groundwater is taking an increasing role in both livestock watering and natural gas development operations. Significant impacts to topography are expected but not to groundwater resources. Surface water resources down-channel from the JIDPA could be affected by cumulative runoff events.

Paleontology

Paleontological resources are known to exist within the JIDPA and the surrounding cumulative impact assessment area. As such, the potential exists for direct impacts to unknown paleontological resources under all alternatives.

Air Quality/Visibility

Although, no violations of applicable federal or state air quality standards are anticipated, significant project-specific and cumulative air quality impacts to visibility are possible at regional Class I airsheds (e.g., Bridger Wilderness Area) are anticipated under all alternatives (including No Action). A summary of air quality impacts is presented in Tables 4.1 and 4.2, and a detailed analysis of air quality effects is provided in the *Final Air Quality Technical Support Document for the Jonah Infill Drilling Project Environmental Impact Statement*.

Soils

Seventeen soil map units occur in the JIDPA and most have construction and reclamation limitations. Several known sand dunes and other windblown deposits occur in the area. Significant impacts to soils (loss during runoff events, loss of productivity) could occur under all alternatives.

Biological Resources Impacts

Wildlife

Significant impacts to various wildlife habitats in the JIPDA have already occurred as a result of past and current oil and gas development activity. Wildlife that occurs in the JIPDA that may be impacted by this project include pronghorn antelope, greater sage-grouse, raptors, and up to 17 BLM Wyoming Sensitive (BWS) species (most notably sagebrush obligates). On-site mitigation measures and monitoring would occur under most alternatives pursuant to the Wildlife Monitoring/Protection Plan; however, additional significant impacts to some of these species are anticipated. On-site habitat function should be restored as reclamation vegetation nears maturity.

Threatened & Endangered Species

Threatened and endangered (T&E) species that may occur on or downstream from the JIDPA include the black-footed ferret, bald eagle, four Colorado/Green River fish species (Colorado pikeminnow, humpback chub, bonytail chub, and razorback sucker), and the plant Ute ladies'-tresses. Groundwater depletions may adversely affect the four endangered fishes, but no impacts are anticipated to the other T&E species.

Plant Cover

Plant cover values vary according to the three dominant sagebrush vegetation types present on the JIDPA, with significant impacts expected in many areas. To mitigate the potential impacts, a Reclamation Plan for the project has been prepared (see *Jonah Infill Drilling Project Development Procedures Technical Support Document*, Appendix B) and would be required for all development alternatives. Performance-based management objectives in the BLM Preferred Alternative would further mitigate impacts by focusing development and reclamation on faster restoration of pre-development plant cover.

Land Use Impacts

During the LOP and beyond, the JIDPA may not be as suitable for the historical land uses of livestock grazing, wildlife use, and recreation until facilities are removed, lands are reclaimed, and on-site habitat function is restored.

Cultural and Historic Resources Impacts

Potential impacts to cultural resources would be mitigated through data recovery and/or avoidance of significant properties. Site-specific surveys for cultural resources would be conducted prior to disturbance, and formal Wyoming State Historic Preservation Office (SHPO) consultation would occur where cultural resource properties may be impacted. If eligible cultural properties were inadvertently disturbed (unanticipated discoveries), appropriate data recovery programs would be implemented.

Socioeconomic Impacts

Communities most likely to be affected by the proposed project are Pinedale, Big Piney/Marbleton, and Boulder in Sublette County; La Barge in Lincoln County; and Eden/Farson and Rock Springs in Sweetwater County. A detailed socioeconomic impact assessment was

prepared for this project (see *Socioeconomic Analysis Technical Support Document for the Jonah Infill Drilling Project Environmental Impact Statement*). Significant socioeconomic impacts have already occurred in these cities and counties, due in part to oil and gas development over the past decade. Beneficial impacts have included additional work opportunities, increased salaries, and increased government revenues. Increased population growth has resulted in adverse impacts, including increased demands on infrastructure, social services, emergency services, medical facilities, and housing availability, as well as increased crime that has burdened law enforcement organizations. JIDPA will have similar types of beneficial and adverse effects, but the additional impacts are not expected to be significant in scale.

MITIGATION MEASURES

Numerous standard, JIDPA-specific, and site-specific mitigation measures could be applied during all phases of the project to minimize potential impacts. Site-specific measures would be applied in approved Applications for Permit to Drill and Rights-of-Way applications for each new project feature as Conditions of Approval for mitigation or monitoring. Interim reclamation would restore any areas disturbed during initial development that are not required during the production phase for the LOP. Upon completion of the project, all wells would be plugged and abandoned, surface facilities would be removed, and the remaining disturbed areas (with the exception of certain road improvements) would be reclaimed and revegetated.

