NORMALLY PRESSURED LANCE NATURAL GAS DEVELOPMENT PROJECT ENVIRONMENTAL ASSESSMENT

EnCana Oil & Gas (USA) Inc.

Project Description

EnCana Oil & Gas (USA) Inc. (EnCana) has notified the Bureau of Land Management (BLM), both Rock Springs Field Office (RSFO) and Pinedale Field Office (PFO), regarding a proposal to develop natural gas resources within the Normally Pressured Lance (NPL) area. The proposed Project Area consists of approximately 70,155 acres administered by the BLM RSFO and PFO, and is located about 68 miles northwest of Rock Springs, Wyoming. It is generally located in portions of T27N R108W, T27N R109W, T28N R108W, T28N R109W, T29N R108W, and T29N R109W. The 6,225-acre Core Area is the primary area of interest in which the bulk of the proposed development would occur.

Fourteen natural gas wells have been drilled within the Project Area since 1999. EnCana proposes to drill an additional 70 wells in the Core Area, and an additional 15 wells scattered throughout the Project Area in a 5-year period beginning in 2009. Wells within the Core Area would be drilled at an average density of one well per 80 acres, and a maximum density of one well per 40 acres. EnCana also proposes to construct associated access roads, pipelines, compressor stations, and other facilities. The exact locations of wells and access roads would be determined during the Application for Permit to Drill (APD) process. The wells would be drilled to depths of approximately 10,000 feet to recover gas reserves from the Lance formation. Approximately 15 days would be required to drill each well.

EnCana proposes to operate a truck-mounted rig equipped with diesel engines meeting Tier III emission standards. This rig has a small footprint, requiring less than 3.5 acres per well pad. Following completion of a well, each well pad would be reduced by 74% to 0.9 acre. EnCana proposes to utilize the traditional, single-well pad design. The traditional well pad would be constructed from materials located at the site.

Prior to APD approval, but after the proposed well pad and access road are staked, onsite inspections would be conducted to assess potential impacts and identify methods to mitigate impacts. Mitigation measures would be established as Conditions of Approval (COAs) to the APD. To minimize new construction, EnCana proposes to utilize the existing ancillary facilities infrastructure within the Project Area, where possible, including roads, gas compression, power lines, water disposal and treatment facilities, and gas gathering pipelines.

EnCana proposes to implement Best Management Practices (BMPs) to reduce the potential environmental impacts of the proposed development. These applicant-proposed BMPs are based upon the guidelines developed by BLM for oil and gas operations. In the course of preparation and completion of the Environmental Assessment (EA), EnCana would work with the BLM to develop additional operator-committed practices as needed to address particular impacts resulting from or likely to result from the proposed project.

Construction Practices

Construction or surface-disturbing activities would occur generally during daylight hours only and only after approval of an APD by the BLM. Two-track roads would be used to access well pads where possible. Where a two-track road is not feasible, the access roads connecting a well pad to the nearest established road would be constructed utilizing a 75-foot-wide right-of-way (ROW) or on-lease access with corridors on each side for drainage ditches and allowing space for a ROW for the eventual pipeline. All new access roads would be constructed with appropriate drainage and erosion control features and structures to include cut-and-fill slope and drainage stabilization, relief and drainage culverts, water bars, and wind ditches in accordance with the road construction standards described in the 2007 BLM Gold Book, 4th Edition. Access roads would be constructed using standard equipment and techniques. Bulldozers and/or road graders would first clear vegetation and topsoil from the ROW. These materials may be windrowed for future redistribution during the reclamation process.

Well pads would be designed so that construction materials balance (i.e., soil materials taken from cuts would be about the same quantity as that needed for fill to construct a level pad), while attempting to minimize the total disturbed area. After completion of drilling, the majority of the well pad would be reclaimed. All available topsoil suitable for reclamation (up to 12 inches) would be stripped from the well pad area and stored adjacent to the well pad. This storage site would be designated in the well pad design plan in the APD prior to the start of actual well pad construction. Cut and fill slopes would be constructed, if necessary, in a manner that would hold topsoil during reclamation and subsequent re-establishment of vegetation.

After topsoil-stripping operations are completed, construction of the well pad would begin. Construction practices would involve use of standard earth-moving equipment. Components of the well pad include construction of a reserve pit to temporarily store drilling fluids, cuttings, and water produced during drilling, and a flare pit for emergency and development flaring. Construction of a well pad and associated facilities would usually require approximately 2 to 5 days to complete, depending on site and terrain limitations**.**

Drilling

Drilling operations would be conducted in compliance with all Federal Oil and Gas regulations and Onshore Orders, all Wyoming Oil and Gas Conservation Commission rules and regulations, and all applicable local rules and regulations. Drilling of a well would require transport of approximately 10 to 20 heavy truckloads of drilling-related equipment and materials to facilitate the drilling operation, depending upon the development area. This includes transportation of the drill rig, drill pipe, drilling fluid products, living trailers, and related support equipment, but does not include the truck traffic required for resupplying the operation (e.g., fuel, drilling fluid additives, etc.). The extent of additional traffic would depend on the phase of the drilling operation, but would not include more than 20 to 30 total vehicles per day per drill site throughout the drilling operation. Total rig-up activities and installation of ancillary facilities would take approximately 2 days to complete.

Drilling and production operations would continue over the 5-year period of development of the Proposed Action. The number of wells drilled annually would depend on factors such as market prices, permit approval, and rig availability. Completion operations for each productive well would commence as soon as possible after the drilling rig moves off location.

No surface disposal of produced water is proposed. The produced water would be trucked to the nearby Jonah Infill Drilling Project Area (JIDPA) water treatment/disposal facilities. A water-based mud system would be used for the drilling operations. Drilling muds and cuttings would be placed in an earthen reserve pit with an impermeable synthetic liner to prevent seepage into the soil. All reserve pits containing hydrocarbons would be flagged to deter access by birds and other animals. If present, hydrocarbons floating on the surface of the reserve pit would be removed as soon as possible after the drilling operations are complete. Reserve pit fluids would be allowed to dry by evaporation and would be removed as soon as practical. When the reserve pit is backfilled, cuttings and drilling muds would be covered to a depth of at least 3 feet. Service trailers located on the well pad would be self-contained and would not require a septic system. Sewage would be hauled off-site to a government-approved disposal site.

Where applicable, Spill Prevention, Control, and Countermeasure (SPCC) Plans would be developed and maintained during drilling and production operations. The SPCC Plan outlines the methodology to be used to contain a hydrocarbon spill and how to facilitate rapid clean up of any hydrocarbon spill prior to potential contamination of surface and subsurface water.

Completion

It is expected that where conditions allow, and where EnCana's Wyoming Department of Environmental Quality (WDEQ)-Air Quality Division permit requires, completion operations will be conducted using flareless flowback technology, which eliminates or significantly reduces emissions from completion operations. Well completion operations would involve perforation, stimulation, and testing of potentially productive zones. Perforation, stimulation, and testing require heavy equipment to be transported and utilized at the well site, and in cases where flareless completions are impracticable, flaring of produced gas. A typical cased well bore generally consists of conductor pipe, surface casing, and production casing. At the termination of completion operations, the well casing would be perforated at a productive interval to allow the flow of hydrocarbons to the surface. Completion operations typically last up to 20 days.

The average water estimate for the drilling and completion of a well is 25,000 barrels. Water would be obtained from both recycled produced water from the JIDPA water treatment facility and nearby shallow water wells.

Reclamation would be completed on parts of the well pad, access road, and ROW that are no longer needed after completion and testing operations. However, access roads to the productive well sites would be maintained for well servicing activities (i.e., maintenance, improvements, etc.). Remote telemetry technology would be used where feasible to reduce the amount of truck traffic associated with well servicing.

Pipelines

The locations for new pipelines in the Project Area would be surveyed and staked prior to the start of any construction activities. Prior to installation, detailed design plans will be submitted by EnCana to the BLM during the APD process. Pipeline construction would generally occur adjacent to access roads within the access road 75-foot ROW. The pipeline trench would be excavated mechanically with trenching equipment, such as a backhoe or trencher. The width of the trench would range from 18 to 24 inches. The trench would be constructed to a depth that would maintain a minimum of 36 inches of normal soil cover or 24 inches of cover in consolidated rock.

Newly constructed pipelines would be hydrostatically tested to evaluate structural soundness. Integrity tests would be conducted in full compliance with the mandatory BLM pipeline requirements. Releases of hydrostatic pipeline test waters would be in complete accordance with WDEQ discharge requirements. Disturbance for new gas pipeline ROWs would generally parallel the access road and be a combined total of 75 feet wide for the road and the pipeline. New gathering pipelines would also be needed for transporting the new production to in-field compression stations and pipelines connecting with the transmission lines.

Production

After well completion, production equipment and gathering pipelines would be installed. Production would continue as long as the well is capable of commercial production and a demand for the gas exists (approximately 30 years per well). Where feasible, shared facilities may be used to reduce surface disturbance, lessen visual impact, and lower costs. All aboveground production facilities would be painted a BLM-accepted environmental color that blends with the surrounding landscape, except for structures that require safety coloration to comply with Occupational Safety and Health Administration (OSHA) regulations.

A low pressure system (utilizing compression) would be required for the Project Area because of the low reservoir pressures identified within the Lance formation. As additional production comes online, additional compression would be needed and would be added in phases. Each new compressor station may occupy up to 4 acres of surface and would consist of compressor engines, dehydrators, meter houses, and stock tanks. Condensates would be separated from the natural gas stream and would be stored in tanks at each well location. Condensates would be removed from storage tanks on a periodic basis as needed and transported by truck for sale. Emission control technologies are required to reduce emissions from condensate storage tanks pursuant to WDEQ-AQD rules and regulations.

Reclamation

Erosion and sedimentation would be controlled by promptly revegetating the areas around the well pads in the fall or spring season following completion, and by providing surface water drainage controls, such as berms, sediment collection traps, diversion ditches, and erosion stops, as needed. Immediately following completion operations, unused portions of well pads and ROWs would be returned to their original contour and would be re-seeded where the BLM determines necessary. Seeding would be completed with seed mixtures of plant species indigenous to the Project Area and approved by the BLM or applicable Conservation District.

Abandoned well pads, roads, or other disturbed areas would be restored to near original condition. This includes reestablishing soil conditions and ensuring revegetation of the disturbed areas to the specifications of the Surface Use Agency at the time of abandonment. All disturbed surfaces would be re-contoured to the approximate original contours, with reclamation of the well pad and access road performed as soon as practical after final abandonment. Reclamation practices would continue as needed, until such time as written approval is received from the BLM.

Relationship to Existing Plans and Documents

The document that directs management on federal lands within the RSFO is the 1997 approved Record of Decision (ROD), Green River Resource Management Plan (RMP). The objective for management of oil and gas resources, as stated in the Green River RMP, is to provide for leasing, exploration, and development of oil and gas while protecting other resource values. In addition, the Green River RMP states that public lands within the Project Area are open to mineral leasing and development to promote mineral recovery on behalf of the United States, along with appropriate mitigation of disturbance on a case-by-case basis.

The document that directs management on federal lands within the PFO is the 1988 approved ROD for the Pinedale RMP, as amended. The objective for management of oil and gas resources, as stated in the Pinedale RMP, is as follows: "The public lands and federal mineral estate will be made available for orderly and efficient development of mineral resources. All minerals actions will comply with goals, objectives, and resource restrictions (mitigations) required to protect the other resource values in the planning area."

The development of natural gas within the NPL Project Area is in conformance with the Green River and Pinedale RMPs. The environmental analysis that will be prepared for the proposed NPL Project Area will incorporate decisions, terms, and conditions of use as described in the Green River and Pinedale RMPs.

National Environmental Policy Act

The proposed project will be analyzed in accordance with the requirements of the National Environmental Policy Act (NEPA). To comply with NEPA and applicable Council on Environmental Quality (CEQ) regulations that implement NEPA, the BLM is required to prepare an environmental analysis. The environmental document, which is an EA for this project, will serve the following purposes:

- to provide the public and governmental agencies with information about the potential environmental consequences of the project and alternatives;
- to identify all practicable means to avoid or minimize environmental harm from the project and alternatives; and
- to provide the responsible official with information upon which to make an informed decision regarding the project.

One element of the NEPA process is "scoping." Scoping activities are initiated early in the process to:

- identify reasonable alternatives to be evaluated in the environmental analysis;
- identify issues of environmental concern related to the proposed project; and
- determine the depth of analysis for issues addressed in the EA.

This Scoping Statement has been prepared to enable governmental agencies, the general public, and other interested parties to participate in and contribute to the analysis process. Public input is important in establishing the scope of analysis for any NEPA document, and the BLM encourages public participation.

Preliminary Resource Management Issues, Concerns, and Opportunities

The following issues and concerns have been identified by an interdisciplinary team of resource specialists. The issues identified below are not meant to be all-inclusive, but rather a starting point for public input.

- Potential increased traffic and associated impacts on existing county, state, and BLM roads.
- Potential socioeconomic impacts to local communities.
- Potential impacts to surface water and groundwater resources, including floodplains.
- Potential air quality impacts from emissions resulting from drilling and production activities.
- Potential impacts related to reclamation of disturbed areas and control of invasive plants.
- Potential conflicts with livestock management operations in the Project Area.
- Potential impacts to cultural, historical, and paleontological resources within the Project Area.
- Potential impacts to wildlife habitats and populations within the Project Area, including big game, raptors, and sage-grouse.
- Potential impacts to threatened, endangered, or candidate plant and animal species, including potential Green River water depletions and effects on downstream listed fish species.
- Potential cumulative effects of drilling and development activities when combined with other ongoing and proposed developments.
- Potential conflicts between mineral development activities and recreational opportunities.

Interdisciplinary Team

Based upon current understanding of issues, concerns, and opportunities, an interdisciplinary team (IDT) comprised of the following resource specialists has been identified:

- IDT Leader
- Air Quality Specialist
- Soil Scientist
- Rangeland Management Specialist
- Archaeologist
- Geologist
- Realty Specialist
- Transportation Specialist
- Outdoor Recreation Planner
- Hydrologist

- Petroleum Engineer
- Wildlife Biologist
- Fisheries Biologist
- Botanist
- Wild Horse Specialist
- Socioeconomic Specialist
- Public Affairs Specialist
- Natural Resources Specialist
- Planning and Environmental Coordinator
- Writer/Editor

Public Involvement

Public input is important in establishing the level and scope of the analysis necessary. The public is encouraged to participate in the environmental analysis process to help identify the level of analysis needed, alternatives to the proposed action, other issues or concerns that should be analyzed, mitigation opportunities, and any other comments or ideas to help ensure the completeness of the analysis process. It would best serve the needs of the BLM for a concentrated analysis if you would submit all scoping comments by March 30, 2008, which allows a 30-day comment period.

Please submit your comments to:

> Joanna Nara-Kloepper, Project Lead, BLM – Rock Springs Field Office, 280 Highway 191 North, Rock Springs, Wyoming 82901 ***Or Email***: rock_springs_wymail@blm.gov (Please add "EnCana NPL EA" in the Subject line)

Initial Mailing List

The initial mailing distribution for this Scoping Notice includes the following agencies, organizations, and media, in addition to leaseholders and individuals.

Local Government

City of Rock Springs
Sublette County
Sublette County Conservation District
Sublette County Extension
Sublette County Weed and Pest
Town of Big Piney
Town of Boulder
Town of Pinedale
Wyoming Business Council

Educational Institutions, Universities, and Museums

Library-University of Wyoming
Sublette County Library
University of Wyoming Dept. of Anthropology
University of Wyoming Renewable Resources
University of Wyoming American Studies Program
Western Wyoming Community College
Wyoming Association of Professional Historians
Wyoming Association of Prof. Archaeologists
University of Wyoming Natural Diversity Database

Environmental or Conservation Groups

American Lands Alliance
Animal Protection Institute of America
Biodiversity Conservation Alliance
Center for Native Ecosystems
Defenders of Wildlife
Earth Justice Legal Defense Fund
Environmental Defense Fund
Friends of Fort Bridger
Greater Yellowstone Coalition
Land and Water Fund for the Rockies
Medicine Butte Wildlife Association
Mormon Trails Association
National Pony Express Association (NPEA)
National Wildlife Federation
Overland Trail Corp.
People for the USA
People for the West
People for Wyoming
Predator Project
Public Lands Foundation
Rocky Mountain Elk Foundation
Safari Club International
Sierra Club
Southern Utah Wilderness Alliance
Southwest Forest Alliance
Southwest WY Mule Deer Foundation
The Alliance for Historic Wyoming
The Nature Conservancy
The Wilderness Society
Theodore Roosevelt Conservation Partnership
Trout Unlimited
Upper Green River Valley Coalition
Western Watersheds Project, Wyoming Office
Western WY Mule Deer Foundation
Wildlife Management Institute
Wyoming Advocates for Animals
Wyoming Conservation Voters
Wyoming Outdoor Council
Wyoming People for the USA
Wyoming Wilderness Association
Wyoming Wildlife Federation

Federal Agencies

Advisory Council on Historic Preservation
Federal Aviation Administration
Federal Energy Regulatory Commission
National Trust for Historic Preservation
Natural Resources Defense Council
Office of Environmental Policy and Compliance
U.S. Army Corps of Engineers
U.S. Department of Agriculture
U.S. Department of Energy
U.S. EPA, Region 8
USDA Natural Resources Conservation Service
USDI Bureau of Reclamation
USDI Minerals Management Service
USDI National Park Service-Long Distance Trail Office
USDI Office of Surface Mining
USDI Office of the Regional Solicitor
Western Wyoming Resource Conservation & Development

Federal Elected Officials

U.S. Representative Barbara Cubin
U.S. Senator John Barrasso
U.S. Senator Mike Enzi

Trade Groups

Independent Petroleum Association of Mountain States
Petroleum Association of Wyoming
Public Lands Advocacy
Southwest Wyoming Industrial Association
Southwest Wyoming Mineral Association
Wasatch Mountain Placer Association
Wyoming Business Alliance
Wyoming Mining Association

Media

Casper Star-Tribune
Green River Star
Pinedale Round-up
Rock Springs Daily Rocket Miner
Sublette County Examiner
Kemmerer Gazette

Other

Western Governors' Association
Wyoming Association of Municipalities
Sweetwater County Conservation District
Sublette County Conservation District

Public Land Users or User Groups

Motorcycle Industry Council
Oregon-California Trail Association
Rock Springs Grazing Association
Wyoming Farm Bureau Federation
Wyoming Public Lands Council
Wyoming Sportsman's Association
Rock Springs Grazing Association
Wyoming State Grazing Board
Wyoming Stock Growers Association
Wyoming Wool Growers Association
Rural Development, Economic Development, Western Land Exchange Project

State Agencies/Boards (Wyoming)

Air Quality Advisory Board
Board of Wildlife Commissioners
Department of Agriculture
Department of Environmental Quality
Department of Game and Fish
Department of Revenue
Department of Transportation
Engineer's Office
Geological Survey
Groundwater Advisory Committee
Land Quality Advisory Board
Natural Gas Pipeline Authority
Oil and Gas Conservation Commission
Planning Office
State Forestry Division
State Historic Preservation Office
State Lands and Investments
State Parks and Cultural Resources
Trails Program
Wyoming Business Council
Wyoming Livestock Board
Wyoming Outfitters and Guides Association
Wyoming State Library
Wyoming State Museum

State Elected Officials

Governor Dave Freudenthal
Representative Kathy Davison
Representative Monte Olsen

Tribes

Eastern Shoshone Tribe
Northern Arapaho Tribe
Northern Ute Tribe
Shoshone-Bannock Tribe