

Bureau of Land Management  
Kemmerer Field Office

SCOPING NOTICE  
**Bear Canyon Exploratory Well Development**

**Description of Project**

Fortuna (U.S.) L.P. (Fortuna) has filed a Notice of Staking (NOS) for the development of a wildcat oil well location with the Bureau of Land Management (BLM), Kemmerer Field Office.

The proposed well is located approximately 20 miles northwest of the town of Kemmerer and 12 miles southeast of Cokeville, Wyoming (Figure 1). The environmental assessment will analyze the affects of exploratory development associated with this proposal, including construction, drilling, and completion activities. BLM previously conducted an environmental analysis (EA) of the impacts resulting from exploratory development through the Bear Canyon 8-12 well pad, and access road (WY090-EA07-089). The project area for the current proposed well is within the affected environment described within the previous analysis, therefore, this analysis tiers to the previous analysis and will address the site-specific impacts for this well location.

Oil exploration and development will occur in phases including construction, drilling, completion, and production.

**Construction Phase**

The construction phase utilizes bulldozers, scrapers, and other heavy equipment to construct a well pad large enough to support all equipment necessary throughout the drilling and completion phase.

Existing Disturbances Used

Primary access to the proposed the Bear Canyon 14-13 well location is north from Kemmerer along Highway 223 and then the existing Dempsey Road (BLM Road 4211). From the paved surface Highway 233 crossing BLM, State, and Fee lands. Some blading and re-graveling with 2-3 inch crushed gravel may be required on Dempsey Road for maintenance purposes only. Reconstruction of Dempsey Road is not anticipated or planned. Access road construction is anticipated to take approximately 5 days.

New Construction

The operator proposed to construct 1.3 miles of new or upgraded crown and ditched road to connect the proposed well pad with the existing Dempsey Road. Construction would result in a minimum 30-foot construction right-of-way, resulting in approximately 4.7 acres of new surface disturbance.

The proposed well pad will provide the necessary area to drill and complete the proposed well location. The well pad would be approximately 450 feet by 400 feet, or 4.1 acres. Under the proposal the operator will remove all the vegetation and topsoil, which will be stockpiled, and the entire well pad would be leveled and compacted to provide an adequate surface to set the drilling rig.

In addition, the proposal includes a proposal for a crew camp adjacent to the well pad, abutting the pad on the northern eastern corner. The crew camp measures 110 feet by 160 feet, or 0.4 acre. Five trailers will provide living quarters (including a kitchen) for up to 20 workers. Workers would occupy the crew camp for the duration of drilling activities (up to 4 months). The well pad, spoil piles, and areas between the pad and piles would initially disturb about 5.5 acres (including about 0.4 acre for the crew camp, which would be located adjacent to the well pad) (Figure 2).

Construction of the well pad and access roads utilize the following types and classes of heavy equipment:

- D6 or larger crawler tractor,
- Class 12 or larger motor grader,
- a Class 125 or larger track hoe,
- a mid-sized backhoe,
- a 10-yard dump truck,
- a Class 988 loader, and
- five pickup trucks to and from the well site daily.

Well pad and access road construction is anticipated to take five days.

## **Drilling Phase**

### Drilling Operations

Once construction of the well pad is complete, commencement of drilling operations will begin. Approximately 50 vehicle trips using large trucks will be required to move a drill rig and associated equipment to the site. An additional 50 vehicle trips are necessary to remove the equipment after completion of drilling. The operator has indicated that it intends to use a drill rig rated at approximately 2,500 to 4,000 horsepower, and powered by diesel engines. The exact type and size of drill rig is dependent upon rig availability at the time of project implementation and the depth of the proposed well.

Once the well is drilling additional vehicle trips would be necessary. Semi class vehicles would include the following vehicle trips:

- Tanker trucks will deliver diesel fuel as necessary to a storage tank located on the well pad.
- Water trucks will be necessary to haul two to three loads per day for the first month of drilling and then one per day thereafter.
- The mud vehicle would make a trip to the site every second day.
- Semi's hauling drilling pipe and casing would be on an as-needed basis and could be as high as three to four vehicles per day.

Therefore, four to eight vehicles would enter and leave the location daily for the 90 to 120 day duration of drilling.

The operator intends to utilize a close-loop drilling system in order to minimize the disturbance area. A closed-loop circulation system includes four 600-barrel (bbl) tanks, a cuttings tank, and a flare pit during drilling operations. The closed-loop drilling system replaces the reserve pit with a series of storage tanks. Equipment to separate out solids (e.g., screen shakers, hydrocyclones, centrifuges) and collection equipment (e.g., vacuum trucks, shale barges)

minimize the amount of drilling waste mud and cuttings that require disposal, and maximize the amount of drilling fluid recycled and reused in the drilling process. The wastes created are transferred off-site for disposal at injection wells or oilfield waste disposal facilities. Produced water during testing and completion activities are stored onsite in a 400-bbl tank and trucked as needed depending on the amount produced.

The operator estimates that drilling will take approximately 120 days to reach total depth. All fresh water (less than 10,000 parts per million [ppm] total dissolved solids) encountered during drilling would be isolated by both casing and cement. All potentially productive hydrocarbon zones would be cemented and tested. Site-specific descriptions of drilling procedures and equipment are included in the APD and the associated Conditions of Approvals for the well.

During drilling the operator may encounter hydrogen sulfide (H<sub>2</sub>S). Fortuna has developed an H<sub>2</sub>S Contingency Plan in accordance with the requirements of National Onshore Oil and Gas Operating Order #6, H<sub>2</sub>S operations. The plan describes the safety procedures in the event of an accidental H<sub>2</sub>S release. This plan is on file with the BLM Kemmerer Field Office.

## **Well Completion, Formation Testing, and Production Phase**

### Well Completion and Production

Once the well is drilled and assuming indications of potential well productivity, completion operations would commence. Completion operations would involve setting casing to depth and perforating the casing in target production zones, followed by hydraulically fracturing (fracing) the formation under high pressure. The fracing material would likely contain sand or other proppant to keep the fractures no longer under pressure from closing, thereby allowing hydrocarbons to escape the formation. The next phase would be to flow and test the well to determine rates of production. Completion of the well will take approximately 2 to 4 weeks depending on conditions at the well site.

If the well is determined to be productive, the operator anticipates the need to install the following facilities on the pad including:

- a wellhead,
- separator with a 1 million British thermal unit (1 MMBtu)
- heater/boiler enclosed in a 24 feet by 12 feet by 12 feet high building,
- a 600 bbl oil tank (10 feet high by 20 feet diameter sitting inside a containment area 35 feet by 35 feet by 4 feet high,
- a 60 bbl water tank 6 feet high by 8.5 feet diameter in a containment area 13 feet by 13 feet by 13 feet high,
- and flare or an incinerator, which would be of a height determined by the H<sub>2</sub>S concentrations.

The separator located on the well pad would be powered by natural gas if sufficient amounts are produced by the well, or diesel fuel. The separator would separate the oil, water and waste gas in the stream. Natural gas and all waste gas is sent to a flare or incinerator. These gases would include those from the wellhead through the separator and the flashing and “breathing” emissions from the oil tanks.

Installation of remote telemetry will monitor and control the well operations, particularly, the operation of the flare or incinerator to ensure working order. If the flare were to fail for any

reason the well would be immediately shut down to prevent any gases, especially hydrogen sulfide, from venting to the atmosphere.

### Operations

Initial production of 200 barrels per day (bopd) of crude oil and 20 barrels of produced water per day (bpwd), would require trucks with an approximate 200-bbl load capacity make daily trips to the well to haul the oil and every 3 days to haul the produced water. However, Fortuna would install a 600-bbl oil tank and a 60-bbl water tank for the well in case weather or poor road conditions prevent truck traffic from reaching the site. If access to the site is restricted for more than 3 days, Fortuna would temporarily shut down the well through remote telemetry control.

### **Applicant-Committed Environmental Protection Measures**

The submitted APD submitted by Fortuna includes a number of operator-committed actions that are intended to Avoid, Minimize, Rectify, Reduce, or Compensate for the impacts that were identified during the onsite inspection of the proposed well location. They include the following actions:

#### *Reclamation Practices*

- Interim Reclamation - Following drilling and completion operations, drill equipment, supplies, trash etc. would be removed and the unnecessary and unused portions of the well pad would be reclaimed.
- Final Reclamation – If the well were found to be unproductive upon completion of all reservoir testing, or during the end of its productive live becomes uneconomical to produce the well, the operator has submitted a final abandonment plan that is in accordance with the Gold Book Standards (2007).
- Noise - All vehicles and construction equipment would be appropriately muffled to minimize construction-related noise.

#### *Erosion and Sedimentation Control*

- All vehicles would be restricted to permitted roads and approved ROWs, no cross country travel will be permitted.
- Instruct employees and contractors to travel at appropriate speeds to limit disturbance to soils and vegetation, and to minimize the potential for vehicle-wildlife and vehicle-vehicle collisions.
- For construction, drilling, and completion activities, Fortuna would apply dust suppressants, as needed, to utilized roads to reduce fugitive dust from vehicle traffic. At the end of the life of the project, all surface facilities would be removed and all disturbed areas would be recontoured and reseeded.
- The operator will prepare and submit a Storm Water Pollution Prevention Plan. A copy of the approved plan would be provided to be on file with the KFO.

#### *Water Quality*

- The operator has opted to drill the proposed location utilizing a closed-looped mud system to minimize the potential for contamination of surface, and subsurface fresh water.
- The operator will construct the entire location to maintain a zero run-off from the proposed well location.

#### *Air Quality*

- For construction, drilling, and completion activities, Fortuna would apply dust suppressants, as needed, to utilized roads to reduce fugitive dust from vehicle traffic for an anticipated use of 1.5 acre-feet.
- Fortuna would comply with EPA and Wyoming Department of Environmental Quality standards for drill rig engines/emissions.

### *Vegetation Resources*

- To reduce the spread/introduction of noxious and invasive weed species via project-related vehicles and equipment into the Project Area, project employees and contractors would not be allowed to drive off-road (unless on approved ROWs).

### *Wildlife Protection*

- Fortuna would comply with all BLM directives concerning the restriction of construction and drilling activities during times when these activities would affect designated wildlife species.
- To reduce the potential for wildlife-vehicle collisions, Fortuna would require their employees and contractors to always drive at safe speeds.
- To protect wildlife from the possibility of harassment or depredation by dogs, no dogs would be allowed on the well site.
- Employees and contractors would be prohibited from harassing, shooting, maiming, or killing of wildlife in the project area.
- All necessary pits would be properly fenced to prevent wildlife and livestock entry.

### *National Historic Trails*

- The previously submitted Bear Canyon 7-23 well location has been modified addressing previous concerns related to visibility, and proximity, resulting in negative impacts to the characteristics of the National Historic Trails, resulting in the placement of the Bear Canyon 14-13 well location. The Bear Canyon 14-13 has been designed to minimize those previous impacts on National Historic Trails.

### *Cultural and Paleontological Resources*

- If cultural or paleontological resources were discovered during construction and drilling activities, all activity within the immediate area of impact would cease. Fortuna would immediately notify BLM of the find. The BLM and Wyoming State Historic Preservation Office (SHPO) representatives would then determine how to avoid impacting the site or artifact.

### *Fire Protection*

- Vehicles with catalytic converters would be restricted to existing roads and trails. Parking or idling would not be permitted in portions of roads or trails with taller vegetation.
- The following operational procedures would be followed:
  - 1) All brush build-up around mufflers, radiators, heater-treaters, and other engine parts would be avoided; periodic checks would be conducted to prevent this build-up.
  - 2) All personnel would be advised that smoking is only allowed in company vehicles and/or designated smoking areas; and that all cigarette butts should be placed in appropriate containers and not thrown on the ground or out windows of vehicles.
  - 3) All personnel would be advised that campfires or uncontained fires of any kind are prohibited.
  - 4) The crew contingency plan would include a fire communications protocol for contacting fire-fighting personnel.
  - 5) Water would be kept onsite for fire suppression purposes.

### *Public/Crew Safety*

- Fortuna would take all necessary precautions for the protection and safety of the public during construction of the project. Warning signs would be posted along roads to inform the public of construction activity.
- To facilitate coordination with local emergency services, Fortuna would provide mapped locations of the proposed drilling locations and times to the respective emergency services personnel, as applicable, in advance of any exploration drilling activities. In addition, Fortuna would have cell phones or radios onsite, as appropriate, to provide immediate communication to emergency services.
- Local emergency telephone numbers and geographic positioning system (GPS) coordinates would be posted at drilling locations.
- Vehicle traffic would be limited to existing roads and trails and approved ROWs. Vehicles would travel within set speed limits of main access roads and at slower speeds appropriate for conditions on more remote roads and trails.
- At a minimum, all crew members would comply with the Occupational Safety and Health Administration (OSHA) rules and regulations.
- All pipelines would be flagged or marked before construction activities or post construction activities take place in the vicinity of the pipeline.

### *Geological Hazards*

- To protect the wellbore against the small potential of a large earthquake, Fortuna would include the following measures:
  - 1) Thicker casing
  - 2) Remote access to seal off well downhole
  - 3) Blind Rams on rig (shear the casing and drill stems resulting in total loss of access to well bore)
  - 4) Emergency shutdown valves

### *Visual Resources*

- All permanent structures would be painted a flat, non-reflective Yuma Green (Olive Black) to match the surrounding environmental colors. All facilities would be painted within six months of being located on site. Facilities required to comply with OSHA may be excluded.

## **Relationship to Existing Plans and Documents**

Resource Management Plan – The document that directs management of the BLM administered lands within the analysis area is the Kemmerer Resource Management Plan (RMP, June 1986). Continued leasing and oil and gas developments are expressly authorized activities under the existing Kemmerer RMP.

Use Authorization – An approved Application for Permit to Drill are subject to the Terms and Conditions for the Lease. Other conditions of approval, to protect important resources, may be applied to the authorization if analysis indicates that such measures would reduce anticipated environmental impacts.

### National Environmental Policy Act

On reviewing the proposal from Fortuna, the BLM has determined that an environmental analysis is required to determine whether impact for the Proposed Action will be considered significant. Additionally, NEPA requires that a No Action alternative be considered in all environmental documents. This will allow a comparison of the economic and environmental consequences of all alternatives. Under the No Action alternative, exploration drilling would not occur in the project area.

## Identified Resource Management Issues, Concerns, and Opportunities

BLM has identified the following issues and concerns through an internal review process. It is not an all-inclusive list, but rather a starting point for public input and a means of identifying the resource disciplines needed to conduct the analysis.

Air Quality  
Raptor nesting habitat  
Greater sage-grouse habitat  
Big game winter ranges  
Steep slopes  
Riparian areas  
Cultural resources  
National Historic Trails  
Native American religious sites  
Paleontological rock outcrops  
Abandoned mines  
Residential areas  
Underground utilities and other facilities  
Road Development  
Road crossings  
Weeds  
Hunting areas and other recreation  
Grazing  
Sensitive soils  
Sensitive plant species  
Steep slopes  
Threatened and Endangered Species

### Timing Needs or Requirements

Public input is important in establishing the level and scope of the analysis. 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.

Please submit your comments by September 17, 2008. Mail written comments to:

Address: James Roberts  
Kemmerer Field Office  
312 HWY 189 N.  
Kemmerer, Wyoming 83101

Email: [Kemmerer\\_wymail@blm.gov](mailto:Kemmerer_wymail@blm.gov)  
(Please reference the Bear Canyon Project in the subject field)

## **Public Participation**

The following individuals and organizations will receive a copy of this scoping statement:

### Government Offices

Bureau of Land Management, Wyoming State Office (910, 912, 920,930)  
Office of the Governor  
U.S. Department of the Army, Corps of Engineers  
U.S. Fish and Wildlife Service  
Wyoming State Clearinghouse  
Wyoming Department of Environmental Quality (Land, Air, and Water)  
Wyoming Oil and Gas Conservation Commission  
Wyoming Game and Fish Department (Cheyenne, Green River)  
Office of State Lands and Investments  
Wyoming State Planning Office  
Wyoming State Geological Survey  
Wyoming State Engineer  
Wyoming Department of Revenue  
Wyoming Water Development Commission  
U.S. Bureau of Reclamation

### Elected and Other Officials

Mayors of Kemmerer, Diamondville, Frontier, and Cokeville  
State Senators  
State Representatives  
Lincoln County Commissioners  
Lincoln County Planner  
Lincoln County Libraries

### Public Land Users and User Groups

Grazing permittees for the Fish Creek, Rock Creek, Airport, and Quaken Asp Canyon Allotments.

Idaho Power and Light

Affected Federal oil and gas lessee holders: Anshutz Oil and Gas, Gary Williams Company, Hallador Petroleum LLP., Liberty Petroleum, SBG Forever, Blanco Company, and Questar Exploration and Production Co.