

United States
Department of the Interior
Bureau of Land Management

Miles City Field Office

Denbury Onshore LLC
21-09H Pennel APD

Environmental Assessment (EA)
DOI-BLM-MT-C020-2013-0201-EA

For Further Information Please Contact:

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BLM



PROPOSED ACTION: The Denbury well would be completed on federal surface, penetrating Federal minerals. The proposed action is to build one well pad, construct supporting infrastructure including the installation of a flowline, install a powerline and drill a horizontal well bore into the Red River Formation. Once drilled, the well would be tested, and if commercial quantities of oil or gas are discovered, the location would be completed for production. Drilling is expected as soon as all the necessary permits have been obtained (subject to any timing restrictions for the protection of wildlife). The drilling operations are expected to take approximately 30 days. The well would be drilled in full compliance with all applicable laws, regulations (43 CFR 3100), *Onshore Oil and Gas Orders*, the Application for Permit to Drill (APD) and any Conditions of Approval.

Table 1.

Well name and Number/Lease No.	Drilling Pad Footages, (acres: max cut/fill)	Access Road Footages (acres)	Flowline (footages, bearing) (acres)	total
21-09H Pennel/MTBIL021068A	300' x 400' (4.23 acres; 20.5'/15.5')	224' x 18' (.09 acres)	8,186' x 30' SE (5.6 acres)	9.92 acres

Access

The proposed well is approximately 7.5 miles northwest (straight-line distance) of Baker, Montana. Total distance from Baker to the proposed location using State Highways, County Roads, and the well roads is approximately 9 miles.

The proposed access road for the well is approximately 224 feet. (*See map 1*) The road would have a running surface width of approximately 18 feet. The borrow ditches would be back sloped 3:1 or shallower. The access road would be constructed in accordance with the guidelines established for oil & gas exploration and development activities as referenced in the joint BLM/USFS publication: *Surface Operating Standards for Oil and Gas Exploration and Development*, Fourth Edition and/or BLM Gold Book (Gold Book).

Well Site Construction And Drilling

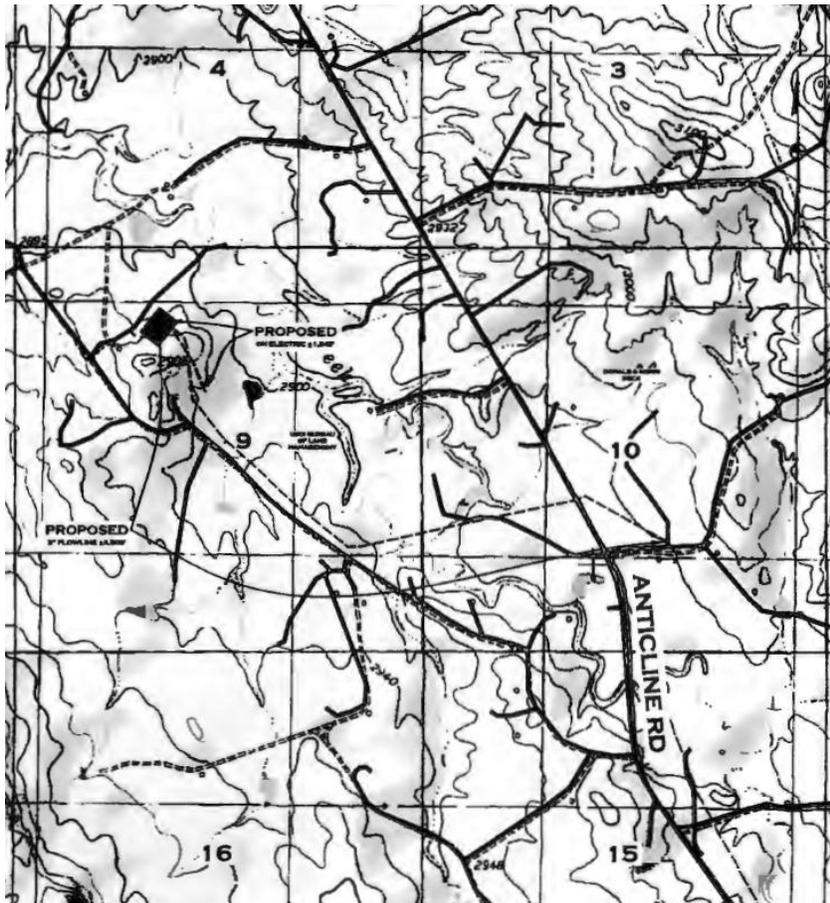
The proposed action for drilling and producing oil includes constructing one well pad and a short road segment to accommodate drilling one horizontal oil well, which is located in the NE¼NW¼ of Section 9, T. 8 N., R. 59 E., in Fallon County, Montana as shown in Table 1.

The proposed well pad would be approximately 300 feet wide × 400 feet long. If the well is completed as a successful producer, or if it is unsuccessful, the surfacing would be removed from the location when the surface disturbance is reclaimed. Topsoil would be removed from the area needed for well pad construction and saved for reclamation. Trash would be disposed of in an enclosed container at an approved landfill. Self-contained toilets and closed septic systems would be used for sewage which would be disposed of in accordance with State regulations. A 105' long × 55' wide × 18' deep, lined reserve pit would be excavated in "cut" material on each pad. The reserve pit would be lined with a leak resistant plastic liner a minimum 12 mils in thickness. At the location, the reserve pit would be fenced during drilling operations on three sides, and when the drill rig is removed, the fence would be completed on the fourth side of each reserve pit. This is done to keep out wildlife and livestock. The reserve pit would be netted to prevent bird mortality after the drilling rig is moved from location. Drilling fluids and cuttings would be contained in the pit. Pooled fluids would be vacuumed out of the reserve pit and be disposed of at an approved facility, and the solids in the pit will be allowed to dry in place and buried. Produced fluids would be contained in sealed tanks until the construction of oil production facilities are completed.

The proposed action for drilling operations is to drill the well to a vertical depth of 8,650 feet and to a measured depth of 12,588 and would produce oil and gas from the Red River Formation. The intermediate portion of the well would be drilled using an invert oil mud system. Shallow aquifers would be protected by setting surface casing to about 1,900' feet and cementing back to surface. Potentially productive hydrocarbon zones and deeper aquifers are isolated by running production casing through the well bore to the target formation. An appropriately sized blow out preventer (BOP) would be used to control the well and prevent the accidental release of hydrocarbons or salt water into the environment.

Flowline and Construction

Production would be run to a central battery located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 19, T8N – R59E. The proposed pipeline would be 3 inch steel crude line, 8,503 feet in length and would tie into an existing flowline. See Map 1 for the location of the proposed line. If any new facilities are required at the central facility – they would be submitted via Sundry Notice, directly by Denbury Onshore LLC.



Map 1. Proposed well site 21-09H Pennel, electric line, and flowline

Powerline Construction

Power would be brought to the location via overhead power line.. The powerline would be installed an estimated 1,043 foot length, from the well site and tie in to existing overhead powerlines to the southeast as shown in Map 1. It is anticipated that five additional power poles would be set. This would be a single phase, overhead 14.4 kV electric distribution line. The powerline would consist of a guide-wire structure and one 40-foot pole and a 10-foot cross-arm. No site clearing or topsoil removal would be necessary. The powerline segments would be constructed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power Lines," Raptor Research Foundation, Inc., 1981, as amended in 1996 and 2006.

Production Facilities

Production facilities would consist only of a pumpjack and power pole. The pump jack would be painted Covert Green within six months of well completion and maintained as such to comply with visual quality objectives. The access road and production pad would have scoria as the foundation for the surfacing material then topped with pit-run gravel to comply with visual quality objectives.

Denbury would eradicate weeds on the entire project area with established guidelines of Federal, State, and Local Agencies, in accordance with an authorized pesticide use plan. Denbury would require all vehicles entering and leaving location to be in clean condition to minimize transport and establishment of noxious weeds.

Interim Reclamation

After this well is completed for production, the location and surrounding area would be cleared of all unused tubing, equipment, debris, materials, trash, and junk and items not required for production. The well pad would be reduced in size to accommodate only as much of the area that is needed for the pumping unit and a work-over rig, which is approximately 2.03 acres. The unused portions of the well pad would be re-contoured, topsoil redistributed, and seeded with the prescribed seed mixture. The top soil areas would be seeded promptly after completion of drilling operations, depending on season/weather constraints. The entire disturbed areas would be fenced to help establish vegetative cover. Disturbed areas would be monitored for erosion and action would be taken to stabilize, repair, and re-seed eroded or washed areas.

Final Reclamation

When the well is plugged and abandoned, Denbury would submit a Sundry Notice to the Authorized Officer for approval to complete the final abandonment requirements for reclamation of the location. At final abandonment, the well location, and access road would undergo "final" reclamation so that the character and productivity of the land are restored.

The well would be plugged according to federal or state requirements. After the well is plugged, the location would be cleared of all facilities, equipment, and the surface reclaimed. The surfacing material would be removed. The well sites and other disturbed areas would be recontoured and seeded with the prescribed seed mix. Erosion control measures would be installed as needed. An abandonment marker would be installed on the well casing and it would be cut off 4' below ground level.

The access road would be reclaimed to near natural conditions removing scoria, re-contouring all cut and fill slopes, and establishing all natural drainage.