

**PROJECT DESCRIPTION**  
**SPRUCE STOMP PROPOSED COAL LEASE**  
**COC-75916**

Bowie Resources, LLC (Bowie) submitted a federal competitive coal lease-by-application (LBA) to the Bureau of Land Management (BLM) on October 12, 2012. The proposed LBA contains lands managed by the BLM Uncompahgre Field Office and the U.S. Forest Service (FS) Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG), as well as private lands. The LBA (COC-75916), called Spruce Stomp contains approximately 1,813 acres and is immediately adjacent to existing coal leases held by Bowie. The proposed lease covers approximately 1,359.9 acres of FS land, 87.5 acres of BLM land and 365.6 acres of private surface (see Map 1). The application area contains an estimated 9 million tons of recoverable coal. All of the coal mineral estate is administered by the BLM. The BLM is required by law to consider leasing federal coal for economic recovery.

With respect to lands managed by the FS, the agency is considering consenting to the BLM for leasing coal reserves underlying lands under its jurisdiction and prescribes conditions (as stipulations) for the protection of non-mineral (surface) resources. If FS consent is given, the BLM, after considering the application and what stipulations are necessary to protect non-mineral (surface) resources, will decide whether or not to offer the coal lease by competitive bid.

The BLM, charged with administration of the mineral estate on these Federal lands, is required by law to consider leasing Federally-owned minerals for economic recovery. Federal mineral leasing follows the Mineral Leasing Act of 1920 as amended by the Federal Coal Leasing Amendments Act of 1976 (MLA), and specific procedures for this project are set forth in 43 CFR 3425. The BLM has the mineral leasing authority, and since the Spruce Stomp tract contains National Forest System (NFS) lands, the GMUG is the Surface Managing Agency for lands under their authority. The extraction of the coal resources is established by the Mineral Leasing Act of 1920, as amended by the Federal Coal Leasing Amendments Act of 1976 and the Federal Land Policy and Management Act (FLPMA) of 1976. Recovering these federally administered coal reserves ensures that they would not be bypassed or rendered inaccessible.

The BLM and FS are responding to the application to lease federal coal and preparing an Environmental Assessment (EA). The preparation of the EA, in accordance with the National Environmental Policy Act (NEPA), was initiated by the BLM and FS to respond to the application to lease federal coal.

The following is the legal description of the proposed lease:

**Township 12 South, Range 91 West, 6<sup>th</sup> P. M.**

Section 31: Lots 11 through 26 inclusive

Section 32: Lots 10 through 15 inclusive

**Township 12 South, Range 92 West, 6<sup>th</sup> P.M.**

Section 36: S2

**Township 13 South, Range 91 West, 6<sup>th</sup> P.M.**

Section 5: lots 2, 3, 4, 10, & 11, N/2N/2SENE, N/2NWSWNE, NESWNE, SESWNE, E/2NWSE, W/2W/2NESE, N/2NENESE, NENWNESE, W/2W/2SENE

**Township 13 South, Range 92 West, 6<sup>th</sup> P.M.**

Section 1: Lots 1 through 4 inclusive

Section 6: Lots 1 through 4 inclusive

\*containing 1,813 acres more or less

At the leasing stage, the federal agencies evaluate the effects of subsidence (i.e., the land surface lowered as a result of mining) on surface resources, and identify where surface resources may require specific protection from subsidence or foreseeable surface uses. To analyze potential surface impacts due to underground mine subsidence, the EA will develop a Reasonably Foreseeable Mine Plan (RFMP) for the leasing stage. The RFMP which will include surface uses on the lease tract and this may include methane drainage wells (MDWs) and associated access roads required to safely mine the coal resources. Because LBAs are competitive leases, and the lessee is not known at this time, specific locations of the MDWs and roads are not known at the leasing stage. They will not be known until the time specific mine plans are approved by the State, BLM, Mine Safety and Health Administration, and the Office of Surface Mining during the subsequent permitting process.

Leasing conveys rights to the mineral resources; however, leasing actions do not authorize mining of the resource. Subsequent permitting actions would be required to allow mining, and to change the approved mine permit boundary to include the modification area. These permitting actions fall under the purview of the Colorado Division of Reclamation Mining and Safety (DRMS) under procedures set forth in 30 CFR 700 et. seq., and the Regulations of the Colorado Mined Land Reclamation Board for Coal Mining. These changes may also require approval from the USDI through the Office of Surface Mining Reclamation and Enforcement (OSM).

Items to be analyzed in the RFMP will include MDWs, drill pads, water for drilling, and access roads as described below:

- MDWs are utilized as a mine methane drainage technique and are necessary to mine the proposed and existing leases. Prior to mining, vertical and directional holes are drilled from the surface to within a short distance above a longwall panel. MDWs would ventilate potentially explosive gases from the mine in order to provide a safe environment for miners working underground. Venting of the potentially explosive gases for the safety of the miners is the overriding consideration.

It is estimated that up to 35 MDWs (less than 25 acres) would be drilled over a 3-4 year period to develop the proposed lease tract. It is anticipated that approximately one-third of the MDWs would be drilled directionally from existing pads. Each MDW drilling pad would be approximately 1 acre in size and would be reclaimed within 6-12 months after it is no longer needed for mine safety. Any and all of the proposed MDWs would be submitted as part of mine plan in the future and would receive site-specific agency review

by the surface management agency (FS or BLM) and would be approved as part of a mine plan. Surface disturbance associated with well pads would be temporary (1-3 years).

- Access to the MDWs would be from improved jeep trails or new roads. The work required to improve the roads would include widening, smoothing the surface, and in some cases reducing steep grades.

New roads would be constructed to handle drill rigs, crews and support equipment. On federal lands they would be closed to public access. Because of the potential for cut and fill slopes, it is assumed there would be a 50-foot wide disturbance for new roads. The drill rig would likely be a truck-mounted type capable of both rotary and core drilling. Supporting that rig would be a flatbed supply truck, a 3,000-gallon water truck when needed, two crew trucks for transportation, and an E-log truck which would run digital logs for each hole.

It is expected that over a 3-4 year period approximately four miles of roads (approximately 20 acres of disturbance) would be upgraded or constructed to access the MDWs. All improved or new roads would be constructed to FS, BLM, and/or DRMS standards. The following design and reclamation criteria would be expected to be utilized for approval of future access roads as part of the mine plan review process described above:

- New roads and other linear facilities would be located and constructed to follow the contour of the landform or to mimic lines in the vegetation (avoiding straight roads and steep slopes).
- Road beds would be a maximum of 12-14 feet wide.
- Cutting and filling, and crowning and ditching, of roads would be kept to the minimum necessary.
- Interim reclamation would include partially revegetating roads in order to reduce the amount of bare ground created during construction and drilling activities.
- After there is no longer a need for mine ventilation (1 to 3 years from the time construction is completed), the new road segments would be reclaimed, recontoured back to their original contour to match the “texture” of the surrounding landscape, and revegetated in accordance with FS and BLM direction, and using a FS or BLM-approved seed mix.
- All newly constructed roads would be closed to public access.

The following design features would apply to drill pads:

- Drill pads would be approximately 1 acre in size.
- Construction of each pad would proceed by first selectively clearing brush/vegetation, removing the topsoil and stockpiling it for use in later reclamation, and leveling the subsoil to form a flat pad.
- Drill pads would be designed to prevent or diminish overland flow from entering the site

during precipitation events. Pad sites would have berms on all downslope portions and pads would be sloped to drain all spills and site precipitation into the mud pits.

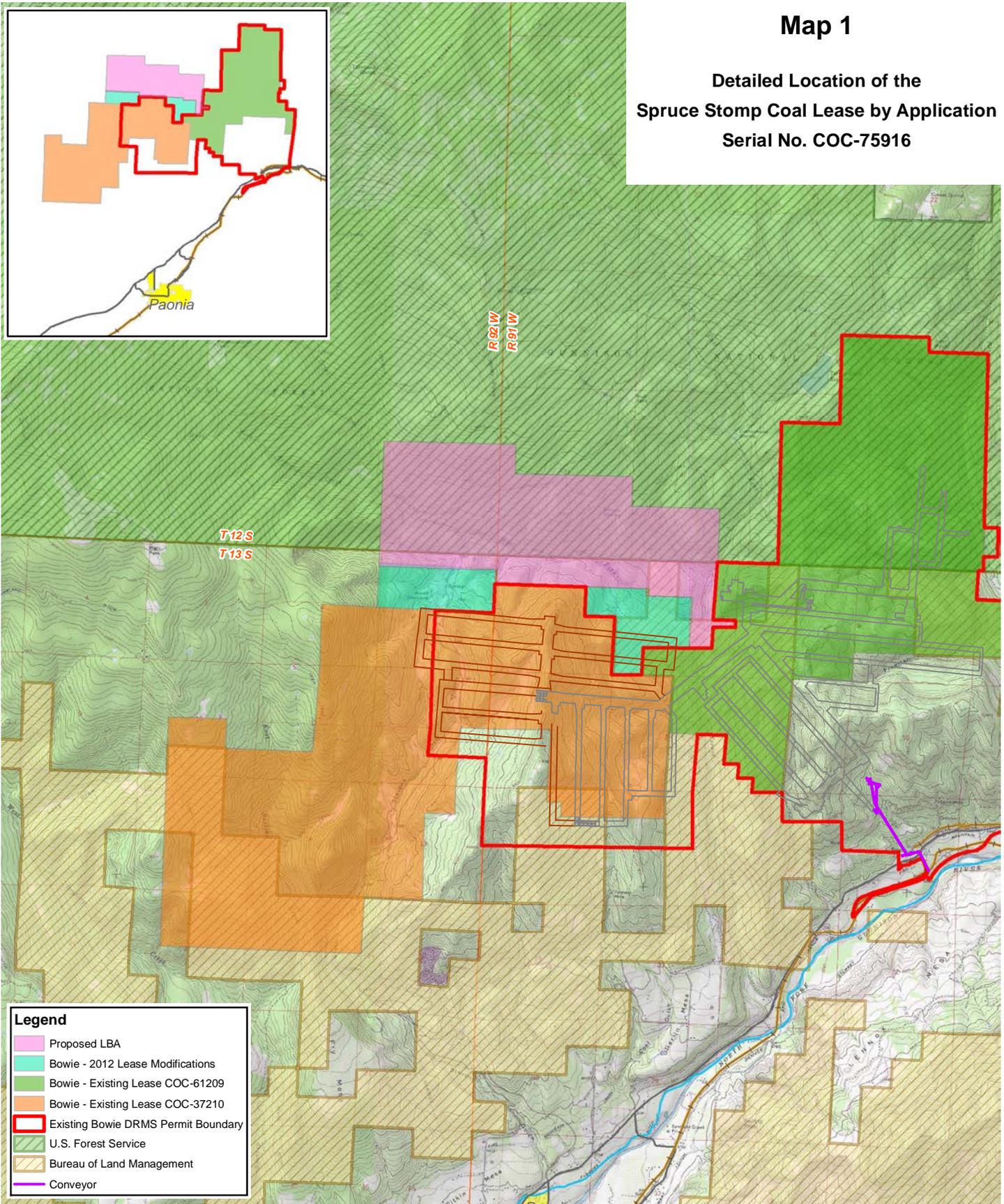
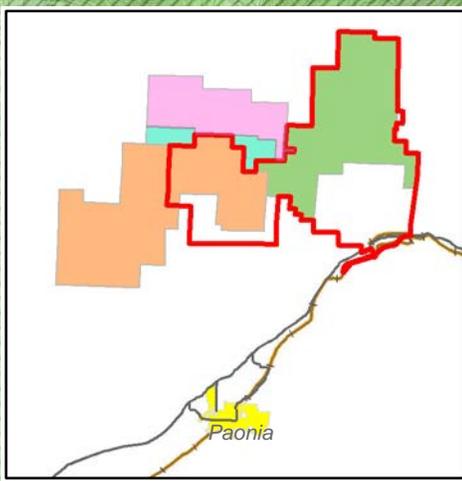
- Impermeable ground cloths would be used under the drill rigs and petroleum product containers to contain minor petroleum leaks. In the unlikely event of a petroleum spill, it would be contained and cleaned up using standard hazmat procedures. Spills would be reported to the FS or BLM authorized hazardous material coordinator, as defined in the operator's spill plan.
- Light shields would be installed to minimize fugitive light and ensure a dark sky condition during nighttime drilling activities. Refueling of equipment would not occur within 100 feet of water bodies.
- Reserve (mud) pits would be constructed on the prepared pad. The mud pits would be small, generally 10 feet wide by 40 feet long by 10 feet deep. Biodegradable synthetic polymer drilling fluids or bentonite would be used and would be contained in the reserve pits until dry. Once the pits are dry, they would be back-filled with reserved soil. If necessary, pits would be pumped out to reduce their content and insure that overflow does not occur. Pumped fluids would be hauled to a Colorado-approved facility for disposal.

Water would be needed for drilling of the MDWs. Likely sources would include:

- Water could be hauled to the MDW pad locations from the Stevens Gulch well field along Stevens Gulch Road, which is an existing road. This is probable for MDWs located in reasonable proximity to the existing Stevens Gulch Road.
- Water for the remaining MDW locations could be pumped from either East or West Terror Creeks.

# Map 1

Detailed Location of the  
Spruce Stomp Coal Lease by Application  
Serial No. COC-75916



**Legend**

- Proposed LBA
- Bowie - 2012 Lease Modifications
- Bowie - Existing Lease COC-61209
- Bowie - Existing Lease COC-37210
- Existing Bowie DRMS Permit Boundary
- U.S. Forest Service
- Bureau of Land Management
- Conveyor

No warranty is made by the Bureau of Land Management for use of the data for purposes not intended by the BLM

