

**United States Department of the Interior
Bureau of Land Management**

Documentation of NEPA Adequacy

DOI-BLM-CO-SO50-2014-0011 DNA

February 2014

North Oak Mesa Coal Exploration License Plan

Location: Delta County

**U.S. Department of the Interior
Bureau of Land Management
Uncompahgre Field Office
2465 South Townsend Avenue
Montrose, CO 81401
Phone: (970) 240-5300**



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Determination of NEPA Adequacy (DNA)

NUMBER: DOI-BLM-CO-S050-2014-0011 DNA

CASEFILE/PROJECT NUMBER: COC76319

PROPOSED ACTION TITLE: North Oak Mesa Coal Exploration License Plan

LOCATION/LEGAL DESCRIPTION:

T. 13 S., R. 92 W., 6th P.M.
sec. 6, Lots 12-23, inclusive;
sec. 7, Lots 6-11, inclusive.

T. 13 S., R. 93 W., 6th P.M.
sec. 1, Lots 18-20 inclusive;
sec. 12, Lots 1-3, and 6-8.

Of the approximately 1,287 acres described above, the coal is federal and the surface is privately owned.

APPLICANT: Oxbow Mining Oak Mesa, LLC

BACKGROUND:

The purpose of the exploration program is to gain additional geologic knowledge of the coal underlying the exploration area for the purpose of assessing the reserves contained in a potential lease. The proposed North Oak Mesa Coal Exploration License Plan area for Coal Exploration License COC76319 is located in Delta County to the north of the current Oak Mesa Coal Exploration License COC74911. The exploration drilling will be used to determine the quality and minable quantity of the coal within this area. Drilling in 2012 and early 2013 resulted in the acquisition of data that indicates reserves of federal coal may extend to the north and prompted Oxbow Mining Oak Mesa, LLC (Oxbow) to apply for a coal exploration license to drill two holes as described in the Proposed Action below.

A. Description of the Proposed Action and any applicable mitigation measures

Oxbow proposes to drill two exploration drill holes (see Appendix A) on private surface lands into federal mineral subsurface holdings. The drill holes would be completed from small (0.50 acre) drill pads, and would be drilled to a depth of 2,640 to 2,759 feet, depending on the location

of each drill hole (see [Table 1](#)). The entire exploration area covers about 1,287 acres, and mostly temporary surface disturbances from road and pad construction would occur on about 2.43 acres. Both holes require construction of a pad to create level ground for drilling (approximately 0.5 acre disturbance per site for a total of 1 acre). Activities needed to complete the exploration project include access roads, staging and storage areas, limited clearing and leveling of areas for drilling equipment, completing exploratory drill holes, site maintenance, and reclamation activities. Existing access roads would be used wherever possible. New disturbance from 0.84 miles of a 14 feet wide temporary road construction is anticipated to be 1.43 acres on private surface. Prior to construction, the limits of construction disturbance areas along the access road routes and pad locations would be clearly defined. These limits would be staked and flagged. All construction activities would be confined to these areas. Stakes and flagging would be removed when construction and restoration are completed.

Table 1
Proposed North Exploration Drillholes

Drillhole ID*	Northing	Easting	Collar Elevation (ft.)	Existing Road (Mi.)	Temporary New Road (Mi.)	Temporary Disturbance (Ac.)	Township	Range	Section	Water Haul (Mi.)	Estimated Rotary Drilling Depth (ft.)	Estimated Core Drilling (ft.)	Rollins Sandstone Top Structure Elevation (ft.)	Total Drillhole Depth (ft.)
OM-YR-45	1412539	2366718	9,158	0.77	0.03	0.55	13	93	1	6.94	2,390	250	6,518	2,640
OM-YR-46	1413345	2370061	9,129	0.00	0.81	1.88	13	92	6	7.75	2,509	250	6,370	2,759
Total				0.77	0.84	2.43					4,899	500		5,399

The proposed project area was inventoried by archaeologists from ERO Corporation in September of 2013 (ERO report #5644 December 2013, BLM Project #14UN-03). A single National Register eligible prehistoric property was recorded. After consultation with Colorado SHPO, a project approval was agreed upon with the following proposed Design Features which have been incorporated into the Proposed Action:

1. The access road through the site may be used “as is” through the site, with no road blading or other surface disturbance allowed within the site boundaries.
2. If modifications are made to the surface of the site, a qualified archaeologist will be present to monitor the activity.
3. If any subsurface remains or features are discovered during the monitoring, the project will be halted pending data recovery mitigation for said exposed features. (SHPO consultation – CHS #651578, December 23, 2013).

The 2013 “Habitat and Wildlife Survey” completed specifically for this Proposed Action stated that it would result in the depletion of 0.06 acre-feet of water from within the Colorado River basin. This Proposed Action falls under BLM Colorado’s Programmatic Biological Assessment (PBA) for water depleting activities associated with BLM’s non-fluid minerals program in the Colorado River basin in Colorado (BLM 2008).

In response to BLM's PBA, the U. S. Fish and Wildlife Service (FWS) issued a Programmatic Biological Opinion (PBO)(ES/GJ-6-CO-08-F-0006) on December 19, 2008, which concurred with BLM's determination that water depletions are "Likely to Adversely Affect" the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker. Likewise, the proposed project is also likely to adversely affect designated critical habitats for these endangered fish along the Green, Yampa, White, Colorado, and Gunnison rivers. However, the FWS also determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat. This project has been entered into the Uncompahgre Field Office water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

The Appendix B – Design Features for Coal Exploration License COC74911 under General Design Features states in part: "Clearances/survey, including cultural resource surveys and biological resource surveys, would be completed for drill hole and access road locations that were not reviewed..." The 2013 "Habitat and Wildlife Survey" did review the drill sites and access roads included in the Proposed Action.

B. Land Use Plan (LUP) Conformance

The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5-3, BLM 1617.3):

Name of Plan: Uncompahgre Basin RMP

Date Approved: July 26, 1989, as amended

Decision Number/Page: Mineral Resources Decision, Coal Management, page 31, Record of Decision (ROD)

Decision Language: Management Units 1, 3, 4, 7, 8, and 16 are acceptable for further leasing consideration with no special restrictions.

The Proposed Action Alternative is located in Management Unit 7 and is therefore consistent with current land management planning for the proposed Coal Exploration License.

C. Identify applicable National Environmental Policy Act (NEPA) documents and other related documents that cover the proposed action.

Bureau of Land Management (BLM). 2012. Final Environmental Assessment - DOI-BLM-CO-S050-2011-0036 EA, Oak Mesa Coal Exploration License, Delta County, Colorado.

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?

Documentation of answer and explanation:

Yes. The Proposed Action is similar to, and directly north of, the action analyzed in the DOI-BLM-CO-S050-2011-0036 EA for the Oak Mesa Coal Exploration License COC74911 which was issued November, 1, 2012. Geographic and resource conditions for the proposed Coal Exploration License COC76319 application area of the North Oak Mesa Project are similar to the area analyzed in the 2011-0036 EA. There are no unusual situations that affect granting the proposed exploration license that would not be mitigated by the Design Features for Coal Exploration License COC74911 listed in Appendix B – Design Features for Coal Exploration License COC74911 of the DOI-BLM-CO-S050-2011-0036 EA.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?

Documentation of answer and explanation:

Yes. The analysis of impacts for the Proposed Action in the 2011-0036 EA considered current information on natural, cultural, social and economic resources with respect to exploration drilling activities. No other alternatives were proposed to respond to unresolved conflicts concerning alternative uses of available resources. Design Features for Coal Exploration License COC74911 were incorporated into the approved action to resolve impact concerns. Those same Design Features will be incorporated into the proposed North Oak Mesa Coal Exploration License COC76319 drilling project as listed in Appendix B – Design Features for Coal Exploration License COC74911 of the DOI-BLM-CO-S050-2011-0036 EA.

3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

Documentation of answer and explanation:

Yes. Issues and stipulations were identified using the same method used for the 2011-0036 EA. UFO specialists screened the North Oak Mesa Coal Exploration License COC76319 application area using data available from our Geographic Information System (GIS) in combination with reports and current information available from other agencies and sources, such as the Colorado Parks and Wildlife (CPW) and cultural reports. This includes consideration of the most recent list of sensitive species.

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

Documentation of answer and explanation:

Yes. Resource concerns and impacts are substantially the same as those addressed in the 2011-0036 EA, and would be mitigated by the same Design Features for Coal Exploration License COC74911 listed in Appendix B applied to the existing Oak Mesa exploration drilling project being applied to the new Proposed Action. The 2011-0036 EA included a reasonably foreseeable development scenario that anticipates expected disturbance and impacts over a minimum of a 10 year period related to coal mining activities.

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

Documentation of answer and explanation:

Yes. Preparation of the EIS for the 1989 Uncompahgre Basin RMP included full participation of the public and a Governor's consistency review. The 2011-0036 EA was prepared based on scoping (September 2011) and review of a preliminary EA (May 2012) from the public, other agencies, and tribes. Coordination with agencies and tribes on coal mining and exploration activities is ongoing.

E. Persons/Agencies /BLM Staff Consulted

Scoping and comments on a preliminary EA were solicited from the public, other agencies, and tribes for the 2011-0036 EA and all comments were reviewed and considered in the development of the EA. The scoping and comment process that was completed for the EA has been determined to be adequate for this Proposed Action.

List of Preparers:

Desty Dyer	UFO Mining Engineer
Glade Hadden	UFO Archeologist
Ken Holsinger	UFO Wildlife Biologist
Jedd Sondergard	UFO Hydrologist

REMARKS:

Cultural Resources: If the Design Features included in the Proposed Action are met there will be no adverse effect to any historic properties and the project may be authorized with no further work.

Native American Religious Concerns: There are none noted for this project. Informal consultation with the Ute Mountain Ute THPO indicates that there is a low potential for Sacred Sites and/or Traditional Cultural Properties in the area and no further work is required.

Threatened and Endangered Species: This project has been entered into the Uncompahgre Field Office water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year. There are no other threatened, endangered, or BLM sensitive species known to occur within the UFO that inhabit or derive important use of the areas directly impacted by the Proposed Action.

As provided in the Design Features for the existing lease, timing of activities associated with drilling and other measures will be implemented to minimize the chances of impacting nesting activities by migratory birds. There are only a few Bird Species of Conservation Concern that utilize habitat types found in the proposed exploration area. Most of these species nest in habitat that will not be affected and only forage in the areas where disturbance will occur.

Hydrology/Surface and Groundwater: In reviewing the proposed sites, no additional mitigation measures are needed in addition to the existing Design Features.

Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the Proposed Action and constitutes BLM's compliance with the requirements of the NEPA.

Name of Project Lead: Desty Dyer

Date: February 27, 2014

Signature of NEPA Coordinator



Date 2-27-14

Signature of the Responsible Official


Barbara Sharrow Acting Field Manager
Field Manager, Uncompahgre Field Office

Date 3/3/14

Note: The signed Conclusion on this Worksheet is part of an interim step in the BLM's internal decision process and does not constitute an appealable decision. However, the lease, permit, or other authorization based on this DNA is subject to protest or appeal under 43 CFR Part 4 and the program-specific regulations.

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Decision Record

(DOI-BLM-CO-S050-2014-0011 DNA)

PROPOSED ACTION TITLE: North Oak Mesa Coal Exploration License Plan

DECISION:

It is my decision to issue Coal Exploration License COC76319 containing approximately 1,287 acres, as described in the Proposed Action of DNA #DOI-BLM-CO-S050-2014-0011, and subject to the Design Features in Appendix B – Design Features for Coal Exploration License COC74911.

MITIGATION MEASURES:

Design Features for Coal Exploration License COC74911 listed in Appendix B of the EA has added to it additional proposed Design Features for a single National Register eligible prehistoric property within COC76319 which have been incorporated into the Proposed Action. The updated Appendix B will all be a condition of the proposed Coal Exploration License COC76319.

MONITORING:

Normal routine compliance inspections will take place periodically throughout the life of the exploration license. The inspections will be planned to monitor exploration success and environmental effects of the project and to insure that the operator complies with the conditions on the exploration license.

RATIONALE:

This decision to issue the proposed coal exploration license is needed to determine seam reserve availability within the Oak Mesa area of Delta County. The exploration drilling will confirm the quality, quantity, and extent of the coal within this area. The North Oak Mesa Coal Exploration License Plan is adjacent to existing known coal reserves and extends from the north boundary along the midsection of the Oak Mesa project about one mile. The proposed coal exploration license application was submitted and reviewed under the Mineral Leasing Act of 1920, as amended, and regulations at 43 CFR 3410.

The decision to allow the Proposed Action is in conformance with the 1989 Uncompahgre Basin Resource Management Plan. It has been made in consideration of the impacts to the affected resources. The Design Features applied to the Proposed Action will meet or exceed the standard for Public Land Health.

COMPLIANCE WITH MAJOR LAWS:

The decision is in compliance with the Uncompahgre Basin RMP as well as applicable laws, regulations and policy, including the Endangered Species Act, Migratory Bird Treaty Act, Clean Water Act, Clean Air Act, National Historic Preservation Act, Mining and Minerals Policy Act of 1970 and Mineral Leasing Act of 1920 as amended, and the Surface Mining Control and Reclamation Act of 1977.

FINDING OF NO SIGNIFICAN IMPACT:

A Finding of No Significant Impact (FONSI) was prepared for the 2011 Oak Mesa Coal Exploration License EA (DOI-BLM-CO-S050-2011-0036) based on the information contained in that EA and consideration of criteria for significance (40 CFR 1508.27). The conclusion in that FONSI, dated September 11, 2012, remains valid, and a new FONSI does not need to be prepared. It is my determination that: 1) the implementation of the proposed action will not have significant environmental impacts; 2) the Proposed Action is in conformance with the Uncompahgre Basin Resource Management Plan; and 3) the Proposed Action does not constitute a major federal action having significant effect on the human environment. Therefore, an Environmental Impact Statement is not necessary.

APPEAL PROCEDURES:

The BLM decision to issue the proposed coal exploration license is subject to appeal to the Interior Board of Land Appeals (IBLA). Anyone wishing to appeal will have 30 days from this decision to appeal to the IBLA, Office of the Secretary, in accordance with regulations at 43 CFR Part 4. Appeal and stay procedures are outlined in Form 1842-1.

NAME OF PREPARER: Desty Dyer

NAME OF ENVIRONMENTAL COORDINATOR:

Bruce Kellbaum

Date:

2-27-2014

SIGNATURE OF AUTHORIZED OFFICIAL

Barbara Sharrow

Barbara Sharrow
Field Manager

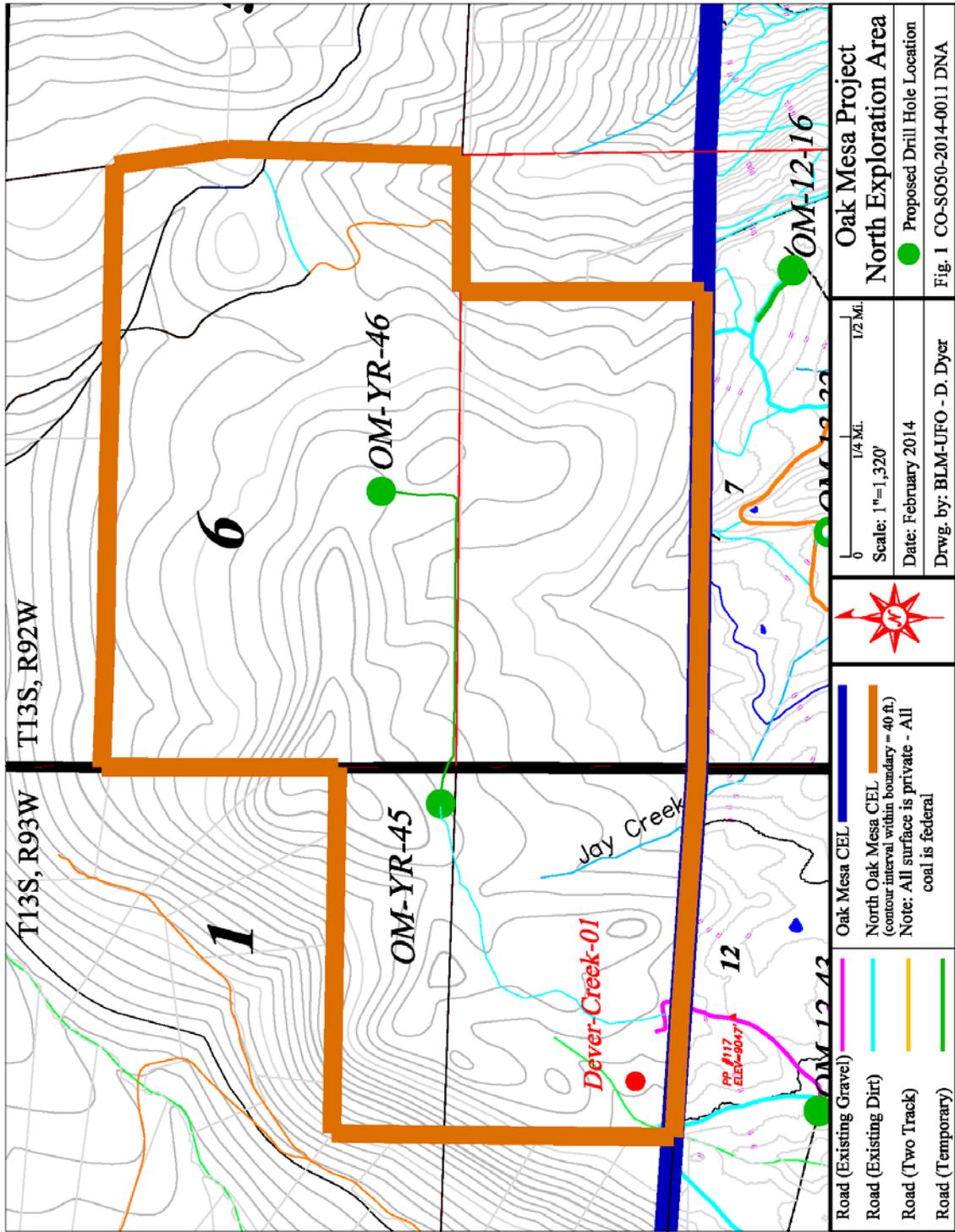
Acting Field Manager

Uncompahgre Field Office

Date Signed:

3/3/14

Appendix A



Appendix B. Design Features for Coal Exploration License COC74911 to be applied to COC76319

Drill Pads

- Wherever possible, existing ground disturbance would be used for drilling sites, and construction activities would be limited to clearing of brush and removal of rocks and large boulders.
- Prior to construction, the limits of construction disturbance areas along the access road routes and pad locations would be clearly defined.
 - These limits would be staked and flagged.
 - All construction activities would be confined to these areas.
 - Stakes and flagging would be removed when construction and restoration are completed.

Access

- Existing access roads would be used wherever possible to reach the drilling locations.
- 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 14 feet wide.
- Cutting and filling, and crowning and ditching, of temporary roads would be kept to the minimum necessary.

Staging

- The 7X/Bear Ranch LEX property would serve as a casting and laydown area.
- Other storage, including equipment and supply storage, would occur along new temporary access roads or at drill locations within the designated areas.
- All storage would occur away from public access areas.

Site Clearing

- Where possible, areas of existing disturbance would be used
- Clearing and grading would be accomplished using bulldozers, road graders or other standard earth-moving equipment.
- The topsoil component (up to 12 inches, where present) would be salvaged for use in reclamation activities.
 - In many areas, surface rock is present and topsoil salvage would be limited.
- Drill pads that require grading would have a surface area of about 0.50 acres (about 180 feet by 120 feet).
- Drill pads not requiring grading would have a surface occupation and clearing area of no greater than 0.50 acre.

Drilling Activities

- Exploratory drilling would use a truck-based, self-leveling rotary drill rig with about a 53 foot mast (fully extended) and with a base dimension of about 10 by 10 feet.
- The drill rig is equivalent in size and capability to those used to drill deep water wells.
- Bore holes would be drilled using 8 ¾ inch rotary bit to a depth of up to 200 feet, depending upon ground conditions and the ultimate depth of the hole at each location.
- A steel surface casing would be installed and cemented in place. A 6 ¼ inch rotary bit would be used to drill the borehole to a preselected depth above the target coal seam.
- A 3-inch core barrel and bit would be used to recover a core from the coal seam and portions of the rock material above and below the coal seam.
- Bore holes would be drilled to the extent possible with air, air-water, air-foam, or water as the circulation medium.
- A lubricating bentonite-based mud would be used in holes that are difficult to keep open.
 - The muds used in these instances would not contain metallic compounds.
- Approximately 3,000 to 4,000 gallons of water would be used for each borehole under normal drilling conditions (0.528 acre foot of water total for all 43 boreholes).
- Water would be delivered to each borehole site by a tanker truck designed to haul water. A cuttings pit to hold soil and rock material removed from the borehole would be excavated with a backhoe within the pad area.
- The pit would be approximately 20 feet in length, 8 feet in width, and 8 feet deep (47 cubic yards each).
- All drilling locations would require construction of a pit for cuttings and containment of produced water (both water injected during air drilling and any water produced from the formation).
- If drilling mud is required to maintain hole stability and/or circulation, a portable mixing tank would be used to mix and contain the drilling mud.
- Where bentonite is used, portable mixing tanks would contain all bentonite. It would not be placed in the cuttings pit.

Lighting

- Lighting would consist of one or two “tower” lights near the top of the drill rig at a height of about 50 feet, and portable lighting units on the ground to allow drillers to monitor drill cuttings and review the drill cores.
- Ground lighting units would be aimed at work areas.
- For safety reasons, lighting cannot be artificially shielded, but natural topographic and vegetative shielding would be considered in light placement.

Noise

- Noise levels from drilling operations would be about 85 decibels (dB), which does not require hearing protection for workers. Noise levels will be in compliance with state and federal standards.

Equipment and Personnel

- The following personnel and equipment would be required to complete exploration activities
 - Bulldozer (1) and Excavator (1) for clearing, excavating, moving, and grading; personnel about 2 people;
 - Grader (1) for clearing, moving small amounts of soil and finish grading; personnel 1;
 - Drilling rig (1 or 2); personnel about 5 to 7 people;
 - Carpool pickup (1 for each rig crew) to transport drilling staff;
 - E-log truck (1) and equipment for digital logging of bore holes; personnel 1 to 2 people;
 - Delivery trucks and semi trucks for delivery of water tanks, and other bulk construction items; about 1-2 personnel per delivery; about 2 trips per day;
 - Water Truck for dust suppression (1); personnel 1; and
 - Pick-up trucks and SUVs with flatbed trailers (1) for small equipment transport; personnel 1.

Storm Water Control

- For locations that require construction of a drill pad, the pad would be graded so that any water runs toward the cuttings pit.
- Either silt fencing or straw wattles would be placed to contain storm water runoff within the pad area.
- For locations that do not require construction/leveling of a pad, silt fencing or straw wattles would be used as needed to prevent storm water runoff from leaving the drilling operations area.

Site Maintenance

- Oxbow would control dust from drilling and related activities, divert and control both natural runoff from disturbed areas and fluid loss from drilling, and would clean up any trash or debris.
- A maximum of about 0.4 acre-foot of water is anticipated to be required for fugitive dust suppression, depending on seasonal climate conditions.
 - A water truck would be used to apply water to access roads, as needed, to control dust.
- Waste construction materials and rubbish from all construction areas would be collected, hauled away, and disposed of in an approved manner.

- Food-related trash would be stored inside contractor vehicles and removed daily.
- If necessary, bear-proof trash containers would be provided.
- Where fences must be cut for gate installation or other construction activities, prior to gate cutting, the brace posts would be installed and wires attached in order to maintain adjacent wire tension.
- Any fence damaged during construction would be repaired immediately.
- Gates, where required, would be installed in accordance with landowner and BLM agreements, and would be maintained in good working order.
- All new or existing gates would remain closed and locked at all times except when attended or unless otherwise directed by the landowner.

Fire Prevention

- All drilling equipment would be provided with fire extinguishers and shovels for fighting small fires, if necessary.
- Drilling crews would be equipped and trained to fight small fires.
- Spark arresters would be required for equipment generating sparks, including ATVs and chainsaws.
- Smoking would be allowed during construction activities only in designated safe-smoking areas.
- Common sense practices regarding heat/spark sources, particularly in dry conditions, would be followed.
- Parking hot vehicles on dry shrubs would not be allowed, and other logical avoidance practices would be followed.

Reclamation – Bore Hole

- All drill holes would be backfilled, sealed and abandoned.
- During drilling, fluid return would be monitored to identify the depth and extent of any water producing zones. Upon abandonment, in accordance with Drill Hole Plugging Procedures agreed to by BLM and CDRMS, bentonite chips or bentonite plug gel or similar seal would be established in the bottom of the hole, extending to within ten feet of the surface.
- A cement plug would be set in the hole ten (10) feet below the ground to within three (3) feet of the surface.
- Accumulations of drill cuttings would be buried in the excavated pit.
- Part of the abandonment process includes the use of bentonite mud to seal the borehole.
- At no time during the drilling and well abandonment process will any bentonite mud be placed in the cuttings pit.
- Several of the exploration holes may be completed as ground water monitoring wells, in preparation for base line monitoring required for permit submission.
 - Identification of specific drill holes to be completed as ground water monitoring wells would occur once initial meetings with the CDRMS have

occurred. Drill holes selected to be completed as monitoring wells would be completed in accordance with the guidelines agreed to by the BLM and CDRMS for monitoring wells.

- Once monitoring is no longer required, these wells would be abandoned in the same manner as the original bore holes.
- A metal post with tag would be placed in the vicinity of the hole as a permanent marker.

Reclamation – Roads

- Interim reclamation would include partially revegetating road shoulders in order to reduce the amount of bare ground created during construction and drilling activities.
- The new road segments would be reclaimed to their original contour and rough texture in order to match the “texture” of the surrounding landscape, and revegetated in accordance with BLM direction, and using a BLM-approved seed mix.

Reclamation – Pits

- Any drilling mud left in the portable mixing tank after the borehole is completed would be used along with additional bentonite in the hole abandonment process.
- The pits may be temporarily fenced and allowed to dry before backfilling with previously excavated material.
- The excavated material would be returned to the pits in such a manner as to approximate the original soil profile, particularly as related to the near-surface soils or top soil.
- During backfilling, the material would be mixed and compacted as it is replaced by running the equipment over the backfilled area during placement of successive lifts.
- Following backfilling, disturbance areas would be graded to their approximate original configuration or to a natural looking configuration that blends with the surrounding topography and the original surface drainage reestablished.

Reclamation – General

- All trash and debris would be removed from drill sites for disposal. Excavations, including pits, would be backfilled.
- Any salvaged topsoil materials would be re-spread onto the regraded surface and reseeded of the areas (pads and roads – unless the landowner requests the roads remain) would take place using the pre-determined seed mixture.

Reclamation – Re-seeding

- Seeding would take place in the fall or early spring.
- A temporary perimeter fence would be placed around reclaimed areas to prevent disturbance by cattle and elk.
- Monitoring of re-seeding efforts would occur for two or three field seasons to determine stand success, re-seeding requirements and control of any noxious weeds.

Reclamation Success criteria:

- Vegetation cover in disturbed areas would be at least 70 percent of the vegetation cover in adjoining undisturbed areas. For example, if nearby

undisturbed areas have approximately 75 percent vegetation cover, the reclamation success criteria would be 52.5 percent total vegetation cover.

- Vegetation cover would be comprised of species included in the seed mix and other desirable species found in the surrounding area.
 - Vegetation patchiness is acceptable, as long as there are no contiguous bare areas greater than about 3 feet by 3 feet (about 9 square feet).
- Reclamation Success criteria for sage grouse (See sage grouse section below).

Noxious Weed Management

- Clean equipment to remove weed seeds prior to use onsite;
- Monitor and spray/perform weed control as necessary.
- The operator and the operator's contractors will disinfect heavy equipment, hand tools, boots and any other equipment used previously in a river, lake, pond, or wetland, by routinely cleaning equipment using 140° water and high-pressure sprayers to remove dirt, mud and foreign debris before equipment is brought on-site.
- The operator and the operator's contractors will clean trucks and equipment at wash-stations in nearby towns or at the contractor's yard (off-site) to ensure that all equipment and vehicles shall be clean of all dirt and debris that can harbor weed seed.
- Monitoring and control of noxious or invasive weeds attempting to establish within the project boundaries throughout the construction and production phases should be performed in coordination with routine maintenance activities and in accordance with state law.
- The Operator will monitor for and control noxious or invasive weeds throughout the construction and production phases. Mandatory noxious weed control is required on the pads, drill holes, and access roads used by the lessee/operator for the life of the project.
- Application of pesticides and herbicides on public lands will conform to BLM and state laws.
- To prevent the entry of hazardous substances into surface waters:
 - Chemical treatments within the riparian areas shall be applied by hand and shall be applied only to specific targets.
 - Leave a 25-foot buffer along surface waters when chemicals are being applied through ground application with power equipment.
 - Always refer to chemical label instructions for additional guidance on use near water and required buffer zones.
 - To enhance effectiveness and prevent transport into streams, apply chemicals during appropriate weather conditions (generally calm and dry) and during the optimum time for control of the target pest or weed.

Coordination

- Coordination with landowners, including meeting with domestic and irrigation water providers and Town of Hotchkiss representatives, to address concerns about water supply facilities and provide requested information; posting the work schedule on Oxbow's website (<http://oakmesaproject.com>) and will make a press announcement regarding start of work.
- Existing rights-of-way and ditches will be avoided to the extent possible. If they cannot be avoided, caution will be taken to ensure no damage to the facility or disruption of use occurs. As necessary, right-of-way holder(s) will be contacted to coordinate activities that may influence their facilities.

Sage grouse

BLM is actively pursuing a more definitive identification of species. If that identification verifies that they are Gunnison or Greater sage grouse, the following design features would be implemented to reduce impacts to nesting and brood rearing activities on the project area.

- No surface disturbing activities are permitted between April 15 and August 30 within occupied and potential habitat.
- Should lek locations be found in the future, additional restrictions would include no surface disturbing activities from March 15 through May 31 within 0.6 miles of the edge of a lek.
- Vegetation cover in areas disturbed by exploration activities would be seeded with a grouse friendly native seed mix. Vegetation cover in disturbed areas would meet at a minimum 75 percent of Gunnison sage grouse Rangewide Conservation plan guidelines for breeding habitat (Table 1 in RCP, pg H-6; Gunnison Sage Grouse Rangewide Steering Committee 2005) within three growing seasons. Reseeding would be required if vegetation cover does not achieve the 75 percent of guidelines.
- Seed mixes would be designed using only native species with the intent to establish 10 to 30 percent native grass cover on arid sites and 20 to 40 percent on mesic sites. Native forbs would be included in the mix with the intent of establishing 5 to 15 percent cover on arid sites and 20 to 40 percent on mesic sites. Tall forbs in addition to those listed in Table 4 would be added to the seed mix for disturbance in occupied and potential sage-grouse habitat (including the following drill locations and associated roads: OM-YR-03R, OM-YR-04R, OM-YR-05, OM-YR-06, OM-YR-19, OM-YR-23R, OM-YR-24, OM-YR-28, OM-YR-29, OM-YR-07R, OM-YR-11R, OM-YR-12, OM-YR-17, OM-YR-26, OM-YR-27, and OM-YR-34) based on seed availability and on-going vegetation studies, and would be approved by BLM and other surface owners in advance of seeding activities.

General Design Features

- Clearances/survey, including cultural resource surveys and biological resource surveys, would be completed for drill hole and access road locations that were not reviewed in Fall 2011 because of lack of right-of-access prior to any ground disturbing activities.
- Refueling of equipment would not occur within 200 feet of live water.

- Any lubricant, oil or grease, or fuel spills shall be reported immediately to the BLM. Any spills would be removed from the spill area as quickly as possible and disposed of appropriately off-site. Any spills will be cleaned to the authorized officer's satisfaction using standard hazmat procedures.
- The point of access (where applicable) would be blocked as directed to prevent motorized use of a reclaimed road. To discourage access and use of reclaimed areas, natural barriers and signs would be placed near the point of entry where project roads have been reclaimed. The BLM would approve barrier locations and techniques.
- A red-tailed hawk nest located just south of West Reservoir and within ¼ mile of the OM-02 site, would be monitored for nesting activity during construction. If the nest is active, construction and drilling operations could be put off until the young have fledged. This would eliminate the chances of the nest being impacted.
- If project timing would include construction during the migratory bird nesting time frame for the project area (generally through July 15), potential impacts and modifications to project schedule needed to comply with the Migratory Bird Treaty Act would be discussed with BLM prior to exploration activities. Monitoring for migratory birds would occur if Oxbow wishes to proceed during the nesting season. If monitoring results in positive active nest data, appropriate avoidance buffers would be developed in coordination with BLM based on species and site-specific conditions.
- For drilling sites where development of a pad is necessary, the topsoil would be stockpiled, and either silt fencing or straw wattles would be placed around the stockpile.
- Straw wattles would be used to minimize erosion until the disturbances are revegetated.
- During and after drilling, the drill site would be fenced to keep animals out of the site to prevent damage to stormwater BMPs and newly revegetated areas. Oxbow is negotiating with individual landowners regarding the type of fence installed for reclamation purposes; electric fencing with solar panels to provide power have been used in the past and are proposed. Oxbow would be responsible for fence installation, monitoring and removal.

After consultation with Colorado SHPO, a project approval was agreed upon with the following proposed Design Features which have been incorporated into the Proposed Action:

1. The access road through the site may be used "as is" through the site, with no road blading or other surface disturbance allowed within the site boundaries.
2. If modifications are made to the surface of the site, a qualified archaeologist will be present to monitor the activity.
3. If any subsurface remains or features are discovered during the monitoring, the project will be halted pending data recovery mitigation for said exposed features. (SHPO consultation – CHS #651578, December 23, 2013).