

**STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
Division of Oil and Gas**

**Usibelli Coal Mine, Inc.
Exploration License ADL 390606
LO/AK14-002 Healy Creek Exploration Project
Exploration License Plan of Operations Decision**

September 5, 2014

I. INTRODUCTION

On June 26, 2014 Usibelli Coal Mine, Inc. (UCM) submitted a request to the Division of Oil and Gas (Division) for approval of an Exploration License Plan of Operations (Plan) to carry out a Coalbed Methane (CBM) drilling exploration program at the Healy Creek Exploration Site #1 (Healy Creek Prospect). The Healy Creek Prospect is approximately 7 miles east of the town of Healy. Approval of this Plan, along with approvals from other state and federal agencies (Agencies), is necessary for Usibelli to carry out drilling at the Healy Creek Prospect. Any further exploration is subject to further review and approval by the Department of Natural Resources (DNR).

II. SCOPE OF DECISION

The DNR Commissioner has delegated authority for exploration licensing to the Division under Department Order: 003 in accordance with Alaska Statute (AS) 38.05 and 11 Alaska Administrative Code (AAC) 82.951. As set forth below, the Division has evaluated the proposed Plan to determine if sufficient information as required by 11 AAC 82.951 and 11 AAC 83.158 is provided.

In approving a Plan, the Division may require amendments that it determines are necessary to protect the State's interests (11 AAC 83.158(e)).

The UCM Healy Creek Exploration Project will consist of a single vertical coal-bed methane exploratory well drilled inside the exploration license area. This single exploration well will be a shallow well drilled to approximately 1500 ft. in depth and will help UCM determine whether sub-surface coal seams contain sufficient quantities of methane gas to justify further exploration. The well will be drilled either by a mud rotary system or a diamond drill rig. The planned wellbore will include cored intervals or be continuously cored, to its proposed total depth, to sample and test any gas bearing seams identified. This decision authorizes UCM to explore for gas only within T12S, R6W, Section 16, Fairbanks Meridian (see Attachment 1), ADL 390606.

The plan of operations describes up to 3 additional wells to be drilled pending the results of the above mentioned well. Additional information outlining the proposed operations for 2015 wells will need to be submitted for review to the Division prior to commencing operations and will be subject to Division approval.

The June 28, 2010 Healy Basin Gas Only Final Finding approved the Exploration License and exploration license phase, which includes exploration under the license. As the Final Finding explains, "In the license phase, the licensee gathers information about the area's petroleum potential. This process may include examining surface geology, performing environmental assessments, conducting geophysical surveys, and drilling exploratory wells." The Final Finding considered the current and projected uses of the area, in Chapter 5, and the reasonably foreseeable effects of exploration license activities in Chapter 8. This plan of operations is focused on assessment and consideration of specific exploration activities within the license area. Before the next phase begins, there will be an opportunity for public comment.

III. LAND STATUS

The UCM Healy Creek Exploration Project area is comprised of state lands issued under patent #1233180 on 08/27/1963.

A. State of Alaska (State) owned lands:

Meridian: FM Township: 12 S Range: 6 W Section(s): 16
Proposed well site location: 63 52 27.51, 148 44 12.24 Decimal Degrees NAD83
ADL: 390606

The Healy Basin CBM Exploration Project is sited on school trust lands within the Denali Borough. The DNR the Yukon Tanana Area Plan includes the project area. The Yukon Tanana Area Plan co-designated the proposed area as coal resources and wildlife habitat. The proposed exploration project will take place on a former coal exploration airstrip located near Healy and Cripple creeks. A surface land use agreement is not required at the Healy Creek Prospect location because the State of Alaska is surface owner in the well vicinity area. The proposed pad and any brush clearing for the pad will be minimal due to its location on a pre-existing airstrip.

IV. PROPOSED OPERATIONS

The Plan describes the proposed operations in full detail. Set forth below is a summary of the key details.

A. Sequence and Schedule of Events

2014

- The project is scheduled to begin after trail maintenance for coal exploration occurs in the spring of 2014 (with brush clearing to be completed prior to April 15 to avoid impacts on migratory birds, ravens, and raptors).
- Pending construction activities, drilling will begin in late August or early September and run through October of 2014 (revised 8/25/14).
- Preliminary tests for gas presence will be run on water samples from the exploration well.
- Demobilization from the 2014 season is scheduled for September to October 2014. Clean up and reclamation will be completed by October 31, 2014.

2015

- During the summer of 2015, additional testing will be conducted and 1-3 additional exploration wells may be drilled, dependent on the results from the 2014 program.
- Demobilization from the 2015 season is scheduled for early September 2015.
- Clean up and reclamation will be completed by October 31, 2015.

B. Well Sites

The well pads for both the 2014 and 2015 programs will be staked by the project engineer on an existing fill area previously used as an airstrip within active coal UCM leases targeted for future mining. Because CBM wells involve drilling to a shallower depth than conventional gas exploration programs, a smaller drilling rig can be employed therefore reducing the dimensions of the pad and allowing UCM to support drilling activities with a 150-foot by 150-foot pad surface for the Healy Creek Site No. 1 well site. There will be no camp facility at the well site location and all contractors and employees will commute between Healy and the well site on a daily basis.

C. Buildings

The completed well pad will contain: A drill rig and associated support facilities, temporary waste storage, water tank, and parking area.

D. Fuel and Hazardous Substances

Hazardous material, primarily batteries, stored on the well pad location will be placed as far removed from the drilling rig activities as practicable. They will be situated within a secondary containment diked and lined area that is capable of containing 110% cumulative stored fluid or hazardous materials should a release occur. Hazardous materials shall be packaged and returned to the vendor for recycling. If for any reason that is not possible they will be transported to an approved disposal/treatment facility such as Emerald Alaska, Inc., or other approved disposal/treatment facilities in accordance with applicable regulations.

All equipment will be fueled offsite at the Usibelli Coal Mine under UCM's existing Spill Prevention Control and Countermeasure (SPCC) plan. Petroleum products stored on site will be limited to oils and greases for drill maintenance. There will be less than 1320 gallons of petroleum stored at the exploration site and therefore no SPCC will be required.

Drilling Waste

During the drilling operations, drilling fluids and mud, and drill cuttings will be circulated to the surface. Muds will be recirculated in the drilling process throughout the exploration process. However, if necessary, muds can be pumped out of the drill rig into a tank truck and transported to contingency leak-free storage tanks at the UCM landfill for interim storage. Cuttings will be stored in a metal leak-free side-dump trailer/truck parked on the drill pad. Drilling wastes will be disposed of at the UCM permitted waste disposal site located at the Poker Flats mining area (permit #SWZ046-15), at the Fairbanks Class II landfill, OIT or other approved disposal site.

Drilling wastes are likely to meet the criteria for inert wastes.

Production water will be stored in leak-free metal tanks on site until drilling has been completed then re-injected into the same formation.

E. Solid Waste Sites

Workers will be housed in the town of Healy so general wastes will be limited to: sewage, general refuse, metal, wood, and grey water. Solid wastes will be temporarily stored in transfer storage containers on the drill pad prior to disposal. Solid, non-burnable wastes would be deposited into large dumpsters located at the drill pad. Any food wastes that could attract wildlife will be stored in enclosed containers. Inert waste will be transported to the UCM permitted waste disposal site located at the Poker Flats mining area (permitSWZ046-15).

F. Water Supplies

Temporary Water Use Permits in support of coal bed methane exploration under Usibelli's 2014 - 2015 Healy Creek Exploration Project (Healy Creek Site #1) will include the Healy Creek, Cripple Creek and UCM Hangar Pond water sources. No channelization or bank alterations are planned as part of the water withdrawal operations. No other equipment, except water withdrawal equipment, will be used or placed below ordinary high water for any water resource associated with Usibelli's project. Water intake pipes used to remove water from fish bearing water bodies will be equipped with screened enclosures approved by ADF&G.

G. Utilities

No utilities are proposed for Usibelli's Healy Creek Prospect.

H. Material Sites

No material sites are proposed for Usibelli's Healy Creek Prospect.

I. Roads

Access to the Healy Creek Prospect will use existing roads previously permitted for coal mining by ADNR Mining Resources Section under the Healy Valley Coal Exploration Permit (#E-0603). UCM also holds numerous ADNR Coal Leases and rights of way in the area with leaseholder rights which cover road use and maintenance activities. Use of the existing infrastructure and the avoidance of off-road travel will minimize impacts to the environment as there will be no new ground disturbance. To the extent UCM uses land to which it already has a property interest for exploration under this exploration license, it will be considered use under the license, subject to the terms of the license and all applicable laws and regulations.

J. Airstrips

No airstrips are proposed for Usibelli's Healy Creek Prospect.

K. All Other Facilities and Equipment

Travel will occur on existing roads, trails, and bridges. Access across Healy Creek is made possible by a twin-span bridge recently installed by the DNR Abandoned Mine Lands Program that will be removed after reclamation work on the south side of Healy Creek is complete (no later than 2023).

L. Rehabilitation Plan

UCM's Plan states that reclamation for the facilities constructed in association with the project are dependent upon testing results of the 2014 well and economic viability of the exploratory well program. Should the results from the testing of the well indicate that the well is viable for economic profitability, the facilities will be used for development, subject to UCM acquiring the appropriate regulatory permits, submissions for development, and operations. If results of well testing deem otherwise and development activities are not necessary, UCM will reclaim infrastructure at the well pad. The level of restoration will be determined in conjunction with Alaska DNR (Proposed Plan Section 11.0).

The Division notes that UCM's exploration license specifies that "[a]t the option of the state, all improvements such as roads, pads, and wells must either be abandoned and the sites rehabilitated by the licensee to the satisfaction of the state, or be left intact and the licensee absolved of all further responsibility as to their maintenance, repair, and eventual abandonment and rehabilitation." The decision to require rehabilitation, and the degree of rehabilitation that will satisfy the state, is a decision for the Commissioner in office at the time of abandonment. Given the Commissioner's authority under the license, UCM should anticipate that it may be required to fully and completely remove all improvements and rehabilitate the land on which they were placed.

The Division further notes that at this early stage of the project, rehabilitation is sufficient. The Division expects that rehabilitation plans will become increasingly more specific as the project progresses.

M. Operating Procedures Designed to Minimize Adverse Effects

UCM's exploration license is subject to mitigation measures set forth in the June 28, 2010 Healy Basin Gas Only Exploration License Final Finding of the Director. UCM addressed these mitigation measures in the application process.

All Plan applicants must complete a mitigation measure analysis form demonstrating that each mitigation measure is satisfied or inapplicable to its proposed Plan, or that the applicant is seeking an exception. The 2010 Healy Basin Gas Only mitigation measures allow for the Division to grant an exception if the applicant shows that compliance with the measure is not practicable or that the applicant will undertake an equal or better alternative to satisfy the intent of the mitigation measure.

UCM completed the mitigation measure analysis for the 2010 Healy Basin Gas Only mitigation measures and no exceptions were requested. However, in addressing Mitigation Measure A.1v and comments related to that measure, UCM responded that a monitoring plan is not necessary. The Division will treat this response as a request for an exception to Mitigation Measure A.1v requiring a monitoring plan.

The director may grant exceptions to these mitigation measures. Exceptions will only be granted upon a showing by the licensee that compliance with the mitigation measure is not practicable or that the licensee will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Requests and justifications for exceptions must be included in the plan of operations.

UCM is proposing to drill a single vertical well located approximately seven miles from the nearest residence and no monitoring plan given the limited nature of the activities at the project location. The intent of the mitigation measure is to minimize impacts to residential, commercial and recreational areas from substantial activities. The limited nature, scope and proposed project location serve to generally avoid the impacts for which the monitoring plan was intended. The Division therefore grants an exception to this mitigation measure. A monitoring plan may be required for future project amendments.

N. Communication and Training

The proposed Plan describes UCM's training programs for personnel that will include communication procedures, safety training, and wildlife interaction and avoidance training. Additionally, an Emergency Preparedness Plan was provided in appendix D of the Exploration License Plan of Operations application package for potential emergencies such as spills of hazardous materials.

V. CONSIDERATION OF LEASE PLAN OF OPERATIONS REQUIREMENTS UNDER 11 AAC 83.158 (c).

A. Full Payment of Damages to the Surface Owner 11 AAC 83.158(c)

This project occurs on State of Alaska lands. Chapter seven of the Healy Basin Gas Only Exploration License Final Finding of the Director under Governmental Powers section I.(2) and the terms of the license provides for surface rehabilitation to the State's satisfaction. There should be minimum reclamation required from the exploration project. All infrastructure for the Healy Creek Prospect will be located on top of a previously established airstrip.

B. Plan Sufficiency 11 AAC 83.158(d)

A proposed plan must include statements, maps, or drawings setting forth (1) the sequence and schedule of operations; (2) the projected use requirements directly associated with the proposed operations; (3) plans for rehabilitation; (4) a description of operating procedures to prevent or minimize adverse effects on natural resources and concurrent uses of the area (11 AAC 83.158(d)).

As summarized above in section IV, Proposed Operations, UCM's proposed Plan provide the Director with sufficient information available at this time to determine the surface use requirements and impacts directly associated with the proposed operations. The Plan describes the nature, location, and timing of the proposed activities, as well as provides information sufficient for DNR, based on its expertise, to understand the potential impacts to the surface. It provides a schedule and maps. The Plan and supporting materials also demonstrate consistency with the mitigation measures, which were designed to minimize adverse impacts. The Plan also addresses rehabilitation. The Plan thus satisfies the requirements for a plan under 11 AAC 83.158(d).

C. Exploration License Bond 11 AAC 82.945

The State owns the surface and mineral estate of the proposed project area identified in the Plan for exploration drilling. Full payment of damages to the surface owner incurred by exploration in the exploration license area (ADL 390606) is covered under chapter seven of the Healy Basin Gas Only Exploration License Final Finding of the Director under Governmental Powers section I.(2) and the terms of the license. There should be minimum reclamation required from the exploration project. All infrastructure for the Healy Creek Prospect will be located on top of a previously established airstrip.

VI. CONSULTATION WITH OTHER GOVERNMENT ENTITIES

In reviewing the proposed Plan, the Division considered the fact that UCM may require approvals from different Agencies for other elements of its project. Although mentioned in the Plan and above, in section IV Proposed Operations, these aspects of the project are not operations being approved by this decision and the Division offers no opinion on whether an agency should or should not approve these activities.

In addition to reviewing the approvals required by different Agencies, as they relate to this decision, the Division provided an Agency review and comment opportunity for the activities considered for authorization under this decision. The following government entities were notified on July 1, 2014 for comment on the Plan: Alaska Department of Fish and Game, Alaska (ADFG) Department of Environmental Conservation, Alaska Oil and Gas Conservation Commission (AOGCC), DNR Parks OHA Review Compliance, the Review and Compliance Program of the Office of History and Archaeology, Division of Mining Land and Water, Office of Project Management and Permitting, the Denali Borough and the Division of Oil and Gas.

The comment deadline was 4:30 pm Alaska time on July 10, 2014. On July 2, 2014 the Alaska Department of Fish and Game requested an extension for the comment period due to limited personnel staff reviewing the project, the comment period was extended five days ending 4:30 pm Alaska time on July 15, 2014. Comments were received by ADFG and AOGCC. The Division, UCM, and commenting agencies modified the Plan to the satisfaction of the commenting agencies. Agency comments and UCM's responses are summarized in Appendix A. The Plan was modified to incorporate the Agency comments. The modified Plan was then publicly noticed.

VII. PUBLIC NOTICE

Public notice of the Plan and opportunity to comment was published in the Anchorage Daily News and Fairbanks Daily News Miner on July 18, 2014 with a deadline for comments of August 18, 2014 at 4:30 pm Alaska time. Additionally, a copy of the notice was posted on DNR's web site and public notices were mailed to the following post offices: Denali National Park and, Healy post offices. Comments were received and considered by the Division. The Division received a modified Plan from UCM on August 25, 2014, and this decision approves this modified Plan. UCM made these modifications to address concerns raised in public comments. The modifications did not alter the scope of the Plan. Copies of the modified Plan will be provided to commenters along with this decision. Public comments and the Division's and UCM's responses are summarized in Appendix B.

VIII. FINDINGS AND DECISION

Having considered the proposed project and based on the foregoing discussion and consideration of issues, the Division makes the following findings:

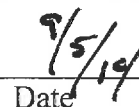
1. The Plan provides sufficient information, based on reasonably available data, for the Division to determine the surface use requirements and impacts directly associated with the proposed operations.
2. The Plan includes statements, maps, or drawings setting forth the sequence and schedule of operations, projected use requirements, description of operating procedures, and a plan of rehabilitation designed to prevent or minimize adverse effects on natural resources.
3. Approval of this Plan is in the State's best interest.
4. To protect the State's interest, the Division finds that it is necessary to amend the Plan to incorporate the following Conditions of Approval:
 - a. The applicant shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this approval by the applicant, its contractors, subcontractors and their employees.

- b. The applicant shall inform and ensure compliance with any and all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.
- c. Amendments and modifications to this Plan require advance notice and must be approved in writing by the DNR.
- d. The Commissioner of the DNR may require that an authorized representative be on-site during any operations conducted under this approval. This stipulation is required to ensure that the Divisions of Oil and Gas and Mining, Land and Water meet their statutory responsibilities for monitoring activities taking place on state-owned lands.
- e. A Status Report for the activities conducted under this approval must be filed with this office on May 1 and November 1 each year, from the date this approval is issued and until a Completion Report is filed with the Division. If a lessee requests an assignment, a status report must also be submitted during the assignment process. Failure to file in a timely manner may result in revocation of this approval. The completion report shall contain a statement describing clean-up activities conducted, the method of debris disposal, and a narrative description of known incidents of surface damage.
- f. Notification. The applicant shall notify the DNR of all spills that must be reported under 18 AAC 75.300 under timelines of 18 AAC 75.300. All fires and explosions must be reported to DNR immediately. The DNR 24 hour spill report number is (907) 451-2678; the fax number is (907) 451-2751. The Department of Environmental Conservation (DEC) oil spill report number is (800) 478-9300. DNR and DEC shall be supplied with all follow-up incident reports.
- g. A certified As-Built survey of the improvement shall be provided within one year of placement of the improvement. This As-Built must be submitted in both electronic and physical format.
- h. The Alaska Historic Preservation Act (AS 41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any state-owned historic, prehistoric (paleontological) or archaeological site without a permit from the commissioner. All state permits require consultation with the State Historic Preservation Office (SHPO) (907 269 8722) so that consultation per section 106 of the National Historic Preservation Act may proceed. Should any sites be discovered during the course of field operations, activities that may damage the site will cease and the Office of History and Archaeology in the Division of Parks and Outdoor Recreation (907-269-8721) shall be notified immediately.

Based upon the Plan, supporting information provided by the applicant and the Division's review, applicable statutes and regulations, consultation with other government agencies, public comments, and the above findings related to that Plan, the Division hereby approves the Plan.



W.C Barron
Director
Division of Oil and Gas

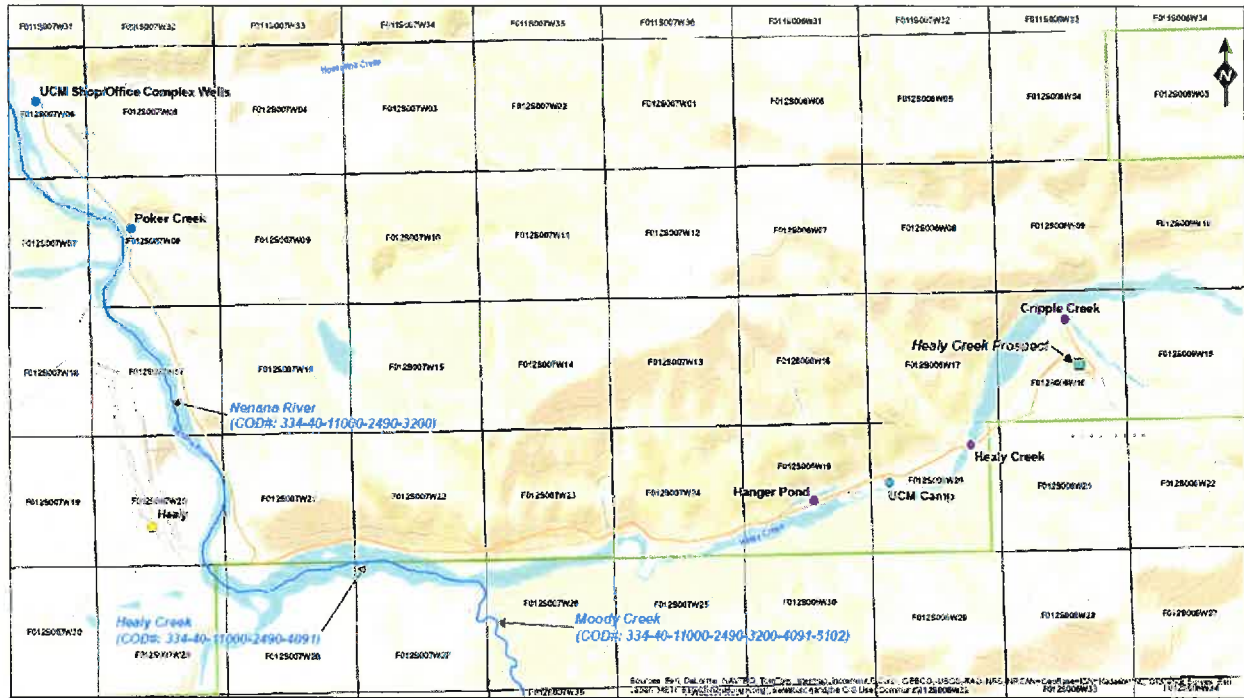


Date

Appeal

An eligible person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of issuance of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Attachment 1



Appendix A

<i>ADF&G Comments</i>	<i>Applicant Responses</i>
<p>On Page 2, 1.3.2 Land Status the Plan of Operations refers to the Tanana Basin Area Plan, which has been superseded by the Yukon Tanana Area Plan (YTAP). It has also been referenced incorrectly in other sections of the Plan.</p>	<p>Reference to the Area Plan will be updated.</p>
<p>Page 3, 1.6 Access: This section should mention that access across Healy Creek is made possible by a twin-span bridge recently installed by the DNR Abandoned Mine Lands Program that will be removed after reclamation work on the south side of Healy Creek is complete (no later than 2023).</p>	<p>Reference to the bridge will be added to the document.</p>
<p>Page I 7, Table 4: Under ADF&G Public Safety Permit, the Regulation box should include black as well as brown bears and not include Arctic foxes.</p>	<p>Black bears will be included and Arctic foxes deleted on the Public Safety Permit.</p>
<p>Mitigation Measures Page 9 of 18, A.2.e: Usibelli's Wildlife Interaction Plan for this exploration project is currently under review by ADF&G. As their plans finalize for this exploratory work, it is important that this plan become more specific to the drill rig and other onsite facilities and features that will actually be in place, including types and locations of secure food and garbage storage, whether or not an armed bear guard will be appointed, and what measures will be employed to prevent feeding of wildlife or ensure proper camp hygiene.</p>	<p>The Wildlife Interaction Plan will be revised as the program is finalized. The following issues are noted in the Plan of Operations but will be more strongly clarified in the Wildlife Interaction Plan.</p> <ul style="list-style-type: none"> • There is no camp facility at this site or any other facilities or features. All employees are local or staying in local hotels in Healy and drive in daily to the site. • Lack of camp and kitchen facilities will minimize food storage and garbage to sack lunches which will be removed at the end of each shift. • Wastes will be removed daily. • No armed bear guards are planned at this time.

Appendix B

The Division received comments during the public notice period from the Denali Borough (DB), Resource Development Council for Alaska, Inc. (RDC), and the Denali Citizens Council (DCC). The Division has considered all of these comments and provides the following responses. It was determined by the Division on 8/23/14 that removing erroneous references and clarifying the plan of operations would not change the project scope and thus determined that a revised Plan of Operations could be submitted by Usibelli Coal Mine, Inc (applicant) for the Healy prospect as shown in Attachment 1. A clean Plan of Operations was submitted to the Division by the applicant on 8/25/14 and will be distributed to commenters.

Comments on Clarifications and Corrections

Comment 1 (DB): Section 1.3.3 A. makes reference to prohibited areas. There are no currently codified prohibited areas.

Comment 2 (DB): Section 10.2 states the borough requires a training program for project personnel. The Denali Borough imposes no such training requirements.

Applicant Response to Comments 1-2: UCM: Received comments 8/21/14 - Revised the Plan of Operations to remove erroneous references to prohibited areas and clarify that the training requirements were listed within the ADNR Mitigation Measures Analysis item 8.c.- Resubmitted revised Plan of Operations to ADNR 8/25/14.

Division Response to Comments 1-2: Comment and corrections by UCM noted.

Comment 3 (DCC): “The applicant may be a lessee for terms of the Coal Mine, but not for this Plan of Operations. The following areas in the plan of operations should be made more clear:

Lease or License

- 1) In cover letter: “on their Healy Basin Gas-only Lease”
- 2) The heading of Section 1.3 (Table of Contents, p. 1) of the Plan: “Section 1.3: Leased Property Location and Land Status”
- 3) Numerous references in the permit application (first page of the two-page application).
- 4) Sections 1.3.1 and 4.1 (p. 2 and 5) of the Plan states that the site is “within active coal UCM leases targeted for future mining.”

Our understanding is that Usibelli is permitted to explore for coal in this same area under a “Permit to Conduct Exploration” for the “Healy Valley Coal Exploration Project.” Is there also a lease in place?

Applicant Response to Comment 3: UCM: Received comments 8/21/14 - replaced "lease" with reference to the license as appropriate within the Plan of Operations- Resubmitted Plan of Operations to ADNR 8/25/14.

UCM holds Coal Expiration Permit HV E-0603 and several Coal Leases in this area.

Division Response to Comment 3: UCM's use of the term "lease" was in error and has been corrected. DNR public noticed the applicable components of this plan of operations for the Healy Creek Prospect necessary for Usibelli to explore for shallow gas within the Healy Basin Exploration License Area. Usibelli's proposal is within the exploration license area and DNR evaluated this plan of operations when considering the criteria set forth in 11 AAC 83.158 for operations, including the public interest, the state's interest and conservation of natural resources for the Healy Creek Prospect.

Comment 4 (DCC): Update and clarify scheduling. An amended schedule should be included in the final plan.

Applicant Response to Comments 4: UCM: Received comments 8/21/14 - revised schedule within the Plan of Operations - Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 4: Comment and update by UCM noted. The Division has reviewed the Plan based on the revised schedule. This decision does not approve any operations prior to the date of this Plan approval.

Comment 5 (DCC): Section 1.2 (p. 1) of the Plan suggests, "Exploration would continue for two summer seasons." Yet for 2014, exploration activities will not begin until the fall.

Applicant Response to Comments 5: UCM: Received comments 8/21/14 - issue clarified in the Plan of Operations as summer/fall - Resubmitted revised Plan of Operations to ADNR 8/25/14. Explanation: the 2014 activities will begin in late August or early September. This is consistent with the reference to the summer season. Fall does not begin until September 23. However the cited reference has been revised to ensure that it references activity in summer/fall should the program extend past September 23.

Division Response to Comment 5: Comment and clarification by UCM noted. Considering the references to specific months in the Plan, adding the term "Fall" provided clarification not an expansion of the scope of the Plan.

Comment 6 (DCC): Section 3 (p. 4) of the Plan states: "drilling will begin in early August and run through October of 2014." Our understanding is that no activities related to gas exploration are permitted until this Plan is approved. Considering the comment deadline of August 18, and the time it will take for the DOG to review public comments, the start date will need to be updated.

Applicant Response to Comments 6: UCM: Received comments 8/21/14 - revised schedule in the Plan of Operations - Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 6: Comment and clarification by UCM noted. The Plan was drafted before the notice was provided, triggering the timeline for public comments. This decision does not approve any operations prior to the date of this Plan approval.

Comment 7 (DCC): Section 3 of the Plan also states: “reclamation will be completed by October 31, 2014.” The same date for completion of reclamation is used for 2015. This end date conflicts with a statement made in the Mitigation Measure Analysis (p. 10): “No work will be started between October 15th and April 30.”

Applicant Response to Comment 7: UCM: Received comments 8/21/14 -Clarified answer in the revised Mitigation Measures Analysis: Healy Basin. Revised version submitted with the revised Plan of Operations 8/25/14.

Explanation: the mitigation measure that states that no work will be started October 15- April 30. Reclamation is an extension of the exploration work started prior to October 15. Additionally, the comment is in the context of a mitigation measure for work within 1/2 mile of a known bear den. There are no known bear dens within 1/2 mile of the exploration pad. If an occupied bear den is discovered, mobile activity will avoid the area by 1/2 mile unless approved by ADNR/ADF&G.

Division Response to Comment 7: Comment and clarification by UCM noted.

Comment 8 (DCC): Whether or not any activities would occur outside of a single 150’x150’ well pad is unclear. Section 1.3 (p. 1) of the Plan states “The proposed exploration activities would take place on a 150 ft. by 150 ft. footprint...”

Comment 9 (DCC): Sections 1.4 and 2 (p. 3 and 4) of the Plan reference two sites, the “Healy Creek site” and “Cripple Creek” site. What is the Cripple Creek site?

Comment 10 (DCC): Section 4.2 of the Plan states: “The well pads for both the 2014 and 2015 programs will be staked by the project engineer on an existing fill area previously used as an airstrip...” Yet the rest of the paragraph refers to a single well pad.

Applicant Response to Comments 8-10: UCM: Received Comments 8/21/14 - clarified within the Plan of Operations that activities will occur within one 150 ft by 150 ft pad in 2014 and up to three 150 ft by 150 ft pads in 2015 - Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation: The text varies between referencing singular and plural wells depending on whether the discussion was related to 2014 activity or to combined 2014 and 2015 activity, or referencing typical pad construction that could be applied to all pads. This has been better clarified. The Cripple Creek site was under consideration at one time, until a final decision was made to work at the Healy Creek site in 2014. Reference to the Cripple Creek site in this document was in error it has been deleted as it is not part of the proposed project in this Plan of Operations.

Division Response to Comments 8-10: Comment and clarification by UCM noted. This decision approves the one well to be drilled in 2014. Additional information outlining the proposed operations for the 2015 wells will need to be submitted to the Division for review and approval prior to commencing operations.

Comment 11 (DCC): Update references to the now defunct Tanana Basin Area Plan (pages 1, 2, and Table of Contents). There is a revised state plan, adopted on Jan 3, 2014, entitled the Yukon-Tanana Area Plan (YTAP), which identifies preferred “surface uses” in this area.

Comment 12 (DCC): This particular area is classified in the YTAP as both Coal and Habitat. The “multiple use” classification (as referenced in Section 1.3.2, p. 2, of the Plan of Operations) is not a classification that is part of the YTAP hierarchy of classifications.

Comment 13 (DCC): The YTAP classification applies to surface uses only, and the entire plan acknowledges that Oil and Gas subsurface use is present and cannot be prevented except by legislative designation. That is different from “allowing” that use, since land classification under this plan does not deal with subsurface uses and cannot “allow” or “disallow” them. This is an important distinction that should be clarified in the language of the Plan of Operations (page 2).

Applicant Response to Comments 11-13: UCM: Received comments 8/21/14 - revised the Plan of Operations to reference the more current Yukon-Tanana Area Plan, and the current land use classifications. References to allowed uses have been removed. - Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comments 11-13: Comment and clarification by UCM noted.

Comment 14 (DCC): Clarify the intent for disposal of produced water. There are conflicting statements regarding produced water and wastewater disposal. We are opposed to surface disposal or other recycling of produced water, and provide additional comments related to this below.

Comment 15 (DCC): The Mitigation Measure Analysis (p. 4) states: “There is no surface discharge of produced water. Produced water will be stored until the end of operations and then re-injected into the same formation.”

Comment 16 (DCC): Section 8.2.2.1 (p. 12) of the Plan states: “Production water will be stored until drilling is completed and re-injected into the same formation.”

Comment 17 (DCC): Section 8.2.4 (p. 13) of the Plan states: “There is no surface discharge of produced water. Produced water will be stored until the end of operations and then re-injected into the same formation.”

Comment 18 (DCC): Table 3 (p. 14) of the Plan states that production water will be: “Recycled for drilling muds or dust control and/or reinjection into the formation at the end of drilling.”

Comment 19 (DCC): It is unclear what differentiation is made between Production Water and Produced Wastewater. Please explain.

Comment 20 (DCC): The Healy Basin Final Best Interest Finding (p. 8-4) states, “Surface disposal of produced water is not allowed unless ADEC determines the discharge will meet state water quality standards. An NPDES permit would also be required for surface disposal.” Yet we did not see any reference to an ADEC determination of water quality or a NPDES permit.

Applicant Response to Comments 14-20: UCM: Received comments 8/21/14 -Throughout the Plan of Operations the terms produced water and production wastewater were changed to production water for consistency of terms. It was also clarified throughout the Plan of Operations that there will be no surface discharge of production water. Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation: Production water will not be used for dust control. Recycling of production water was retained - it is recycled within the drilling muds and reused within the well. This is not a surface discharge. Therefore an APDES permit is not required and a Water Management Plan is not required.

Division Response to Comments 14-20: The Plan does not propose surface discharge of production water. The potential recycling of production water is for drilling muds. The Plan addresses appropriate disposal of drilling muds, in compliance with mitigation measures. In reviewing the proposed Plan, the Division considered the fact that Usibelli will require approvals of other elements of its project from different state and federal agencies. Although mentioned in the Plan, these aspects of the project are not operations being approved by this decision and the Division offers no opinion on whether an agency should or should not approve these activities.

The Alaska Department of Environmental Conservation (if required) will review and approve an Oil Discharge Prevention and Contingency Plan to protect the environment from oil releases and assure financial responsibility in case of a release. AS 46.04.030; 18 AAC 75.

Comment 21 (DCC): A water management plan is required to be in the Plan of Operations if surface disposal of produced water is proposed (A.1.a.vii, p. 4 of Mitigation Measure Analysis). Yet the Mitigation Measure Analysis suggests that this is not needed, because no surface disposal is being proposed.

Applicant Response to Comment 21: UCM: Received comments 8/21/14 -Throughout the Plan of Operations the terms produced water and production wastewater were changed to production water for consistency of terms. It was also clarified throughout the Plan of Operations that there will be no surface discharge of production water. Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation: Production water will not be used for dust control. Recycling of production water was retained - it is recycled within the drilling muds and reused within the well. This is not a surface discharge. Therefore an APDES permit is not required and a Water Management Plan is not required.

Division Response to Comment 21: The Plan does not propose surface disposal of production water. Mitigation Measure A(1)(a)(vii) prohibits surface disposal of produced water unless ADEC determines that the discharge will meet state water quality standards and the director has approved the water management plan. Drilling waste disposal is specifically regulated under 18 AAC 60.430. Design and monitoring requirements for drilling waste disposal facilities are identified in 18 AAC 60.430(c) and (d), respectively.

Comment 22 (DCC): General corrections needed in Plan of Operations. Correct spelling errors in Section 1.2 (p. 1): “Activities” should be “Activities”; Section 1.6 (p. 3, p. 12 of Mitigation Measure Analysis): “cross county” should be “cross country”; Section 5.1 (p. 6): “on an previously” should be “on previously”; Section 5.2 (p. 7): “a existing” should be “an existing”; Section 6.2 (p. 9): “form the mine” should be “from the mine”; 8.1.2 (p. 11): “remained” should be “remainder”; 9.5.1 (p. 15): “personell” should be “personnel.”

Applicant Response to Comment 22: UCM: Received comments 8/21/14 - The cited typos and spelling errors listed by DCC have been corrected in the Plan of Operations. Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 22: Comment and typographical corrections noted.

Comment 23 (DCC): Clarify details on waste and waste disposal.

Where exactly will drilling waste (including treated muds and cuttings) be disposed of? We support the use of existing infrastructure and solid waste disposal sites, but it is unclear where drilling muds and cuttings will ultimately end up. The Solid Waste Permit #SWZA046-15, approved in 2010, “authorizes the disposal site to be located at different places with the Poker Flats and Two Bull Ridge mining areas.” We assume this is the “landfill” that is referred to by this Plan, but are unclear on whether this meets the standards outlined in 18 AAC 60.430. How will or have these sites been reported, and how may the public request these reports and locations of drilling waste disposal sites? Will the “enclosed containers” for inert waste (Section 8.2.1, p. 12) be bear proof? What is the capacity for storage of produced water? If the amount exceeds the capacity of tank storage before end of project, is there a contingency plan?

Will secondary containment be used for tanks used to store produced water on site, as has been proposed for drilling mud and cuttings? We would like secondary containment to be used. What is the capacity for storage of drilling mud and cuttings? If the amount exceed the capacity on-site, is there a contingency plan? Are Material Safety Data Sheets available to be appended to the Plan or referenced at an online source, rather than simply being posted at the site?

Applicant Response to Comment 23: UCM: Received comments 8/21/14 - These comments refer to issues covered in the ADEC Temporary Drilling Waste Treatment and Storage Plans-The Plan of operations has been revised to reference the ADEC Plans and the pertinent regulations. Resubmitted Plan of Operations to ADNR 8/25/14.

Explanations:

There are several listed options for disposal - site selection depends on waste characteristics. Wastes that are disposed in the UCM landfill will meet the standards for inert waste listed in 18AAC 60.005(e) and in the ADEC Temporary Drilling Waste Treatment and Storage Plans. Containers will meet the containment requirements of 18AAC 60.430 (a). There are no listed standards for bear proof containers. Contingency storage tanks are available from Rain for Rent as needed and can be transported to site on short notice. If on-site storage of drilling waste exceeds storage capacity, wastes will be transported to the ADEC approved lined waste treatment pit at the UCM Landfill. Maintenance and posting of MSDS is covered in Mitigation Analysis item 4f attached to the Plan of Operations. Materials used at site are subject to change. It is not required nor necessarily representative to attach MSDS sheets to the Plan of Operations.

Division Response to Comment 23: ADEC has statutory responsibility and regulatory authority over these actions. ADEC implements and coordinates several federal regulatory programs in addition to state laws, with which the licensee is obligated to comply.

Public Notice and Coordination

Comment 24 (DCC): Improvements to the Public Process. Provide comprehensive information along with the permit application. Numerous plans and permits were referenced in the Plan of Operations, and included in the permit application to the DOG. Yet the DOG failed to provide copies of these permits and plans as part of the public notice. DCC has requested copies of these various plans from the Department of Fish and Game, Department of Environmental Conservation, Division of Mining, Land and Water (Water Resources), and Alaska Oil and Gas Conservation Commission. Following is a list of documents referenced in this Plan but not provided to the public: ADEC Treatment and Temporary Storage of Drilling Waste Plan ADNR Temporary Water Use Permit Application for Healy Creek, Cripple Creek, and Hangar Pond, ADNR water authorizations for Poker Creek, the UCM Camp Well and UCM shop/office complex, ADF&G Title 16 Fish Habitat Permit for Healy Creek, Cripple Creek, Poker Creek and Hanger Pond, ADF&G Public Safety Permit Application, ADEC Spill Prevention Control and Countermeasures Plan (for UCM), ADEC Temporary Waste Disposal Plan, ADEC Air Quality Minor Permit (MG1).

Applicant Response to Comment 24: UCM Response: The Plan of Operations presents a consolidated list of permit applications required for the Healy Creek Exploration project in Section 12. Table 4. This list provides the public with a transparent and organized record of related permitting information and lists the appropriate agency to contact for copies of any documents of interest. Permits undergo a process of revision during development to ensure clarity and compliance with relevant environmental regulations; obtaining copies of documents from the appropriate agency of authority ensures the recipient of current and accurate information.

Division Response to Comment 24: When the Division reviews a Plan of Operations, it takes into account that other agencies will review and approve certain activities and reviews approvals issued by those agencies. But the approvals of other state and federal agencies are subject to their own separate processes. To the extent those approvals are

subject to public notice, it is for the appropriate agency to provide. Providing secondary notice by attaching another agency's application or decision to a Plan of Operations notice would only create confusion. Attaching other agencies' applications or decisions could also confuse the public into thinking that the Division is taking public comment on those materials. For a publicly noticed Plan of Operations, the Division takes public comments on that Plan. This Plan provides notice of the other required agency approvals and the public have the ability to obtain copies from the appropriate agency.

Comment 25 (DCC): These documents discuss details that were not available in the Plan of Operations. Instead, these topics (including drilling waste management and rehabilitation or reclamation) were deferred to these other various plans and permits. Leaving these details out of the Plan, and making the attachments to the Plan unavailable to the public shrouds this project in secrecy. If the State of Alaska would like its own citizens to trust that it is making decisions that are indeed in the Best Interest of the state and its residents, there should be no reluctance to share this information.

Applicant Response to Comment 25: see above.

Division Response to Comment 25: Applications to or approvals from other agencies are not attachments to a Plan, they are separate government approvals subject to their own processes and procedures. These separate applications and decisions are available from the appropriate agency. The Plan contains the information required for a Plan of Operations.

Comment 26 (DCC): Expand opportunities for public involvement. Future Plans should include a public meeting, scheduled in Healy, and noticed at the time that the Plans are noticed. This comports with best practice in the Enforceable Standards developed for Mat-Su CBM (including notice to municipal governments, local libraries and post offices), and goes a long way to ensure public trust. In the case of the Plan of Operations for Healy Creek, no meeting was scheduled at the time of notice. After several requests that it happen, a representative of Usibelli appeared at a Borough Assembly meeting in Anderson, not the best place for a meeting dealing with activities near Healy. Prior to this, the operator appeared content with notifying the Borough Assembly and Planning Commission and promising a "tour" of the facility after the Plan of Operations approval. It is important to consider that although this is a relatively limited project on lands already disturbed by prior activities, it still takes place on state lands, which under the Alaska Constitution are owned by all citizens and subject to the best interests of all citizens. This is a high bar, and all we ask here is that the Plan of Operations respect this high bar by being as scrupulous, accurate and clear as possible.

Applicant Response to Comment 26: UCM: Public involvement for gas exploration in the Healy Basin has been extensive leading up to and through the public review of the Healy Creek Exploration Project Plan of Operations. UCM originally applied for shallow gas leases to support coal bed methane exploration in Healy Basin. When the shallow gas lease program was repealed and the exploration license program was implemented, UCM opted not to continue under grandfathered provisions, but apply for the gas exploration license instead. UCM felt that the license program, because it included requirements for a Best Interest Finding, provided

greater public involvement and a more transparent process. These public process requirements have been met. The presentation provided to the Assembly on August 13, 2014 was not a spontaneous appearance, it was a planned presentation included in the Assembly agenda published in advance of the meeting, and included in the borough meeting notification process posted throughout the borough in advance of the meeting. Additionally, a public poster session was set up outside the Assembly meeting and manned by three UCM staff and one consultant before, during, and after the meeting and was also noticed in Assembly agenda. UCM previously provided written notification to the borough on May 14, 2014 of its intent to proceed with the Healy Creek #1 exploration activities, and noted its intent to hold an informational meeting open to both borough officials and the public, well in advance of the subsequent submission of the POO application, DNR Public Notice period, Assembly presentation and the public poster session. The venue for the August meeting was set by the Assembly well in advance of this project as the meeting scheduled to occur during the DNR's public comment period. The Assembly rotates meetings monthly throughout the borough, with the Anderson venue being an approximate half hour drive from Healy, that was also a venue utilized for public meetings during the extensive preceding PBIF, FBIF and borough gas exploration ordinance review processes. The Mayor initiated contact with UCM staff in advance of the Assembly meeting about a possible has asked for a tour of the UCM facilities, similar to tours provided by other local constituents to the mayor and the Assembly, in follow-up to a conversation the Mayor had with UCM President Joe Usibelli earlier in the summer. UCM is open to providing the tour at the Mayor's and the Assembly's convenience. This request was not specifically tied to this Plan of Operation or project.

Division Response to Comment 26: Requests to change the statutory requirements for public notice and comment should be directed to the legislature.

Approvals/Permits/Access

Comment 27(DCC): Clarify the number of drill sites and/or wells this Plan authorizes, and provide their specific location.

Comment 28 (DCC): Section 1.2 (p. 1) of Plan states “Activities would consist of drilling exploration wells...” but then suggests that only one well is proposed in the following sentence: “The project includes all construction and other activities necessary to access, drill and flow-test one vertical exploration well...”

Comment 29 (DCC): Sections 2 and 5.1.2 (p. 4 and 7) of the Plan mentions that 1-3 additional exploration wells may be drilled in 2015 included in this plan of operations, or will there be an additional Plan of Operations?

Comment 30 (DCC): In Section 12 (p. 17, Table 4), a reference is made to “drilling of two exploratory wells.”

Applicant Response to Comments 27-30: UCM: Received Comments 8/21/14 - clarified within the Plan of Operations that one well will be drilled in 2014 and 1 - 3 additional wells may be drilled in 2015 throughout the document - Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comments 27-30: Comment and clarification by UCM noted. This modification clarified a point of potential confusion, but did not expand the scope of the Plan as it was provided to the public for review. Additional information outlining the proposed operations for the 2015 wells will need to be submitted to the Division for review and approval prior to commencing operations.

Comment 31 (DCC): Update references to the Denali Borough Code. It should be understood that the Denali Borough does not have a complex land management system. Its only ordinance on gas development contains a setback stipulation with respect to gas development infrastructure's separation from private land. There are no "prohibited areas" (see p. 2 of this Plan) for gas exploration within the license area west of the highway. These were removed from Denali Borough Code in 2008.

Applicant Response to Comment 31: UCM: Received comments 8/21/14 - removed erroneous references to prohibited areas within the Plan of Operations- Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 31: Comment and corrections by UCM noted.

Comment 32 (DCC): Clarify status of surface and subsurface ownership in areas that exploration activities would occur (including access routes and water withdrawal sites).

At a Denali Borough Assembly meeting (August 13, 2014), a map was presented that showed detailed surface ownership (including Alaska Mental Health Trust Land). It would be helpful if that, more detailed, map could be included in this Plan. This map identified the section where drilling is proposed (F012S006W, Section 16) as Public School Trust Land. It would be helpful if the state could provide a description of what this status means and what (if any) differences exist in the management of Public School Trust Lands.

Applicant Response to Comment 32: UCM: Received comments 8/21/14 - The wall map is not in a suitable format nor required for inclusion in the Plan of Operations.

Division Response to Comment 32: Exploration licenses are issued for State-owned subsurface, so the subsurface at issue for the exploration license Plan is owned by the State. Surface ownership is discussed above. The map UCM provided and that is included as Attachment 1 to this decision provides the information required by 11 AAC 83.158. The School Trust Lands affect approximately 179,403 acres, which include sections 16 and 36 surveyed under the rectangular net at Statehood; Territorial Grant - 1 at Merrill Field; and ANILCA sec. 906(b) lands. These lands were acquired for the benefit and support of public schools. Management of these lands is to be in compliance with Department Order 143.

Comment 33 (DCC): Clarify the status of access along the road that travels up Healy Creek.

According to mitigation measures (A.1.a.ii), analysis of access issues should include: “Consideration of public access granted under RS 2477 and other established rights-of-way.” Yet there is no specific information on established right-of-ways included in this Plan. Is access on the road (via the bridge over Healy Creek) to Healy Site #1 or travel through and past the site along the road to Cripple Creek limited, restricted, or allowed? Will this status change at times? According to the Alaska Mapper program there are no easements that travel directly to these airstrips where Healy Site #1 would be located. Please specify the status of access, including easement or right-of-way permit numbers. Matanuska Telephone Association holds ADL 47986 (1969), which is the closest right-of-way to the Healy Site #1 on the state’s public database, but even this does not connect with the airstrip. Usibelli holds ADL 24520 (1964), but this route stays north of Healy Creek, and according to the case file, was assigned to DNR to manage for public access in 1984. Usibelli also holds ADL 23976 (YEAR), which is along the road where access is restricted by gate (marked as Mental Health Trust), which according to the case file was assigned to DNR for public use in 1984.

Applicant Response to Comment 33: UCM: Received comments 8/21/14 - The Plan of Operations addresses site access in Section 1.6. The language in this section has been revised to clarify that the project is within pre-existing UCM right of ways, licenses, surface and coal leases and permits that are closed to the public. Mitigation measure A.1.a.ii has been clarified to state that public access was considered when the right of ways, licenses, leases, and permits were established and that no new changes to public access have occurred in relation to this project. A Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 33: Comment and clarification by UCM noted.

Comment 34 (DCC): The Healy Valley Coal Exploration Project Exploration Permit (#E-0603, dated August 6, 2013, condition 11) states: “It has been brought to the attention of DMLW that there are questions regarding valid surface access to the lease area. If needed, appropriate legal right-of-way access must be acquired prior to accessing the site for road based exploration projects.” What were these surface access questions, and how were they legally resolved? What is the “UCM Land Use permit” (mentioned in Section 4.1, p. 5), that “covers road maintenance activities”?

Applicant Response to Comment 34: UCM: Received comments 8/21/14 - UCM restricts public access up the Healy Valley with a locked gate located at Suntrana. The use of this area is somewhat limited compared to other areas in the basin that have access open to the public. UCM operates cooperatively with local hunters and works with ADF&G directly to recommend modifications to the local hunting regulations and areas based on UCM's evolving mining operations in various areas throughout the basin. The brushing of the roads and airstrips were conducted under Healy Exploration Permit HV E0603. The Plan of Operations has been revised to list this permit. -Resubmitted the Plan of Operations on 8/25/14.

Division Response to Comment 34: The Division received a formal letter from the applicant dated 8/25/2014 from the ADNR/DMLW outlining surface access to the license area. Provided below is an excerpt from letter dated 8/25/2014 regarding valid surface access:

“DMLW has conducted an additional review of UCM right of entry for the Healy Valley Exploration Permit. In this review the Division found that access within the exploration area is granted by the following Coal Leases: ADL 22721, ADL 16926, ADL 16927, ADL 327217, ADL 50699, MHT 940087, and MHT 9400281. Additionally access from the Healy Power Plant to the gate at Suntrana Creek is along a public easement (ADL 23976). The above referenced coal leases and easements provide valid access to the exploration area.”

Comment 35 (DCC): Our understanding is that activities related to oil and gas development should not be undertaken until a Plan of Operations has been approved. The Final BIF (p. 7-1) states: “These require the licensee to prepare plans of operations that must be approved by DO&G before the licensee may commence any activities. Except for uses and activities appearing on the list in 11 AAC 96.020, the licensee must prepare a plan of operations and obtain all required approvals and permits for each phase of exploration, development, or production before implementation of that activity.” This was not the case, with at least one well pad area cleared as early as spring of 2014. Generally allowed uses include brushing of up to 5 feet wide for trails or survey lines, but certainly this large of an area would not generally be allowed.

Applicant Response to Comment 35: UCM: Received comments 8/21/14 - The brushing of the roads and airstrips were conducted under Healy Exploration Permit HV E0603. This has been further clarified in the revised Plan of Operations. Resubmitted Plan of Operations on 8/25/14.

Division Response to Comment 35: State land subject to an oil and gas lease or exploration license are subject to concurrent use. Here, one of the concurrent uses happens to be by UCM under different property interests — a gas only exploration license as well as a coal exploration permit and coal leases. UCM has not conducted activities under its gas only exploration license prior to this Plan approval. As UCM noted, the activities discussed in the comment were conducted under its coal exploration permit. By using improvements that it has already installed under other permits or leases, UCM is minimizing surface impacts for its exploration license.

Comment 36 (DCC): Water should not be appropriated or disposed of under permits obtained for coal exploration. It is inappropriate to obtain water for a gas exploration project under existing coal mine permits. Usibelli should be required to acquire permits for water use separate from those already authorized for coal exploration and mining activities. If water currently authorized for use associated with coal mining is to be used for gas exploration, we request that DNR condition approval for this Plan on formal amendments to existing water authorizations (related to mining) before water is used from these sources for coalbed methane exploration activities. Otherwise we do not see how using this water complies with authorized use.

Applicant Response to Comment 36: UCM: Received comments 8/21/14 - TWUP A2014-87 specifically authorizes water withdrawal for the Healy Creek Coal Bed Methane Exploration Project from Healy Creek, Cripple Creek and Hangar Pond. The TWUP also requires the listing of potential alternative sources; coal exploration water sources were listed as potential alternative sources only. The Plan of Operations has been revised to clarify this language. Resubmitted Plan of Operations to ADNR 8/25/14.

Division Response to Comment 36: Comment and UCM's clarification noted.

Comment 37 (DCC): As explained above, the Plan is contradictory about whether produced water (or produced wastewater) will be re-injected, recycled, or disposed of at the surface. Neither a water management plan nor an NPDES permit have been referenced in this application, but the Final BIF (p. 8-4 and Mitigation Measure # A.1.a.vii) states that they are required. Thus, surface disposal should not be authorized.

Applicant Response to Comment 37: UCM: Received comments 8/21/14 -The Plan of Operations was revised to clarify that there will be no surface discharge of production water. - Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation: Production water will not be used for dust control. Recycling of production water was retained - it is recycled within the drilling muds and reused within the well. This is not a surface discharge. Therefore an APDES permit is not required and a Water Management Plan is not required.

Division Response to Comment 37: Comment and UCM's clarification noted. Surface disposal of produced water is regulated by the Alaska Department of Environmental Conservation.

Comment 38 (DCC): There is an immense body of evidence that produced waters can contain "potentially harmful pollutants, including salts, organic hydrocarbons (sometimes referred to simply as oil and grease), inorganic and organic additives, and naturally occurring radioactive material (NORM)." This report also points out that, "applying wastewater onto land surfaces increases the risk that pollutants will be washed into nearby water bodies or leach into groundwater." This risk increases when application rates are high, or if application takes place close to rainfall events or snowmelt. Considering the potential pollutants contained in produced water, and the numerous streams that Usibelli roads traverse, we urge the state not to allow surface disposal. If the state chooses to allow surface disposal, it our understanding is that it must require a water management plan, a water quality monitoring program, a description of the treatment of produced water, and NPDES permit. We do support the recycling of produced water during drilling, or the reinjection of produced water after operations have concluded, so long as the depth of its use is proven to not be in proximity to freshwater aquifers, and that the movement of injected fluids into freshwater sources will not occur.

Applicant Response to Comment 38: UCM: Received comments 8/21/14 -The Plan of Operations was revised to clarify that there will be no surface discharge of production water. - Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation: Production water will not be used for dust control. Recycling of production water was retained - it is recycled within the drilling muds and reused within the well. This is not a surface discharge. Therefore an APDES permit is not required and a Water Management Plan is not required.

Division Response to Comment 38: Comment and UCM's clarification noted. Surface disposal of produced water is regulated by the Alaska Department of Environmental Conservation. Well construction and subsurface reinjection of produced water will conform to Alaska's statutes and regulation.

Best Interest Findings

Comment 39: Several conditions required in the Healy Basin Final Best Interest Finding (Final BIF) are inadequately covered in this Plan. In addition the Final BIF (p. 7-2) states: "When it considers a plan of operations, ADNR often requires stipulations, in addition to the mitigation measures developed through the best interest finding. These additional stipulations address site-specific concerns directly associated with the proposed project. The license stipulations and the terms and conditions of the license are attached to the plan of operations approval and are binding on the licensee." We hope that the DOG will consider our comments and questions in comparison to the promises in the Final BIF, and consider additional mitigations as necessary.

Division Response to Comment 39: The commenter did not specify what it means by "conditions" or what conditions it contends are not adequately addressed by the Plan. The Final BIF does contain mitigation measures, which apply to the license. UCM has demonstrated that the Plan complies with the mitigation measures. This decision imposes additional stipulations, which are set out above.

Comment 40: Provide the distance between other areas of interest in Relative Distances of Interest (p. 2 and Figure 2). How far is the site from Healy Creek and Cripple Creek? Have the flood plains of these creeks been identified? How far is the site from the flood plains of these creeks? How far is the site from residential property or recreational cabins? How far is the site from prehistoric, historic or archaeological sites?

Applicant Response to Comment 40: UCM: Received comments 8/21/14 - Revised Page 2 of the Plan of Operations to address additional distance concerns- Resubmitted Plan of Operations to ADNR 8/25/14.

Explanation:

Distance of the well from Healy and Cripple Creeks as listed in Section 4.2 is a minimum of 500 ft from Healy and Cripple creeks. This has been added to Section 1.3.4. The relation of the site to floodplains and creeks is reflected in the Plan revisions addressing distances and differences in elevation between the exploration site and Healy and Cripple creeks and the Nenana River. Distance to residential property is listed in the second bullet: Approximately 3-4 miles to the closest residential land located near old Suntrana."

The distance to prehistoric, historic or archeological sites was not provided because the site is on previously disturbed lands with minimal potential for presence of prehistoric, historic or archeological sites. No research was required or conducted.

Division Response to Comment 40: All plan of operations applicants must complete a mitigation measure analysis form demonstrating that each mitigation measure is satisfied or inapplicable to its proposed plan, or that the applicant is seeking an exception. The Division may grant an exception if the applicant shows that compliance with the measure is not practicable or that the applicant will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Since the well at is at setback distance greater than 500 feet of all fish bearing water bodies and 1,500 feet of all current surface drinking water sources, additional measures will not be required for surface waters at the Healy Creek Prospect.

The Division included the Alaska State Historic Preservation Office / Office of History and Archaeology in our agency review process and the following response was provided to our office by the states Archaeologist, Review and Compliance Coordinator:

“We have reviewed the subject project. There are no known or previously-recorded cultural resource sites in that immediate area. Given that the project involves very limited to no new surface disturbance and is located on a previously-disturbed airstrip, we believe that a finding of “no historic properties affected” is appropriate for the project.

Please note that only a very small portion of the State has been surveyed for cultural resources and therefore, the possibility remains that previously unidentified resources may be located within the project area. Should unidentified archaeological resources be discovered in the course of the project, we request that work be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4) or Alaska Landmarks status in consultation with our office.”

Additionally, under the Findings and Decision section of this document under VIII 4(h) there is a specific stipulation addressing historic and archeological sites notification.

Comment 41 (DCC): Clarify status of archaeological surveys in the area.

Although mitigations (#7) require different information for prehistoric, historic and archaeological sites, it is unclear whether there are any known sites of this nature in this area. Although we understand that this site uses existing roads for access, and the well pad is being constructed on or adjacent to the airstrip, surely there have been surveys of the area that document where archaeological resources exist. It would be helpful to identify these areas in this Plan in order for the public to fully understand the status of the site, whether or not it is in an area that has been previously disturbed by mining activities.

Applicant Response to Comment 41: UCM: Received comments 8/21/14 - The Healy Creek Exploration Program is conducted on previously disturbed lands where there is minimal potential for the existence of prehistoric, historic or archeological sites. UCM was therefore not required to conduct historical research and does not have the information to identify areas where archeological resources exist.

Division Response to Comment 41: The Division included the Alaska State Historic Preservation Office / Office of History and Archaeology in our agency review process and the following response was provided to our office by the states Archaeologist, Review and Compliance Coordinator: “We have reviewed the subject project. There are no known or previously-recorded cultural resource sites in that immediate area. Given that the project involves very limited to no new surface disturbance and is located on a previously-disturbed airstrip, we believe that a finding of “no historic properties affected” is appropriate for the project. Please note that only a very small portion of the State has been surveyed for cultural resources and therefore, the possibility remains that previously unidentified resources may be located within the project area. Should unidentified archaeological resources be discovered in the course of the project, we request that work be interrupted until the resources have been evaluated in terms of the National Register of Historic Places eligibility criteria (36 CFR 60.4) or Alaska Landmarks status in consultation with our office.”

Comment 42 (DCC): Include a Monitoring Plan to address Mitigation Measure requirements. According to the Final BIF (p. 4-1), “Numerous environmental baseline studies have been conducted for UCM surface mining permits. These permits contain extensive public information on pre-mining soils, ground water, surface water, vegetation, wildlife, archeological resources, and cover significant portions of the license area...This information should be considered in future permitting.” We would like to see a monitoring plan that incorporates the existing baseline information (which has already been compiled), and plans to monitor during and after gas exploration.

Applicant Response to Comment 42: UCM: Received Comments 8/21/14 - There is no site-specific basis for a monitoring plan. This is addressed in the Plan of Operations through the Mitigation Analysis: Healy Basin that is attached to the Plan.

Explanation: The highly limited nature of this project, in duration and extent of activity - including the shallow depth of the well, does not justify monitoring. There are no new ground disturbances, which is applicable in the sense that there are no new disruptions to vegetation, wetlands, or habitat to monitor, there are no surface water discharges. The project meets setbacks from streams to prevent sedimentation, there is no disposal of cuttings or muds at the site, the project is not introducing the use of toxics - all drilling additives are not petroleum based. AOGCC has determined it is unlikely for drilling at this site to intercept flowing oil. The project is sufficient distance from residence and public facilities to negate any visual or noise impacts.

Division Response to Comment 42: The license is subject to all applicable state and federal statutes and regulations in effect on the date of issuance of the license. Drilling waste disposal is specifically regulated under 18 AAC 60.430. Design and monitoring requirements for drilling waste disposal facilities are identified in 18 AAC 60.430(a)(1)(C) and (D),:

“(C) plans and material specifications to be used in the construction of any lined containment structure to be used for temporary storage;
(D) methods to be used to prevent the discharge of drilling waste leachate to the land or water of the state;

Since Usibelli is not proposing to discharge waste into a waste storage cell at the well site location the Division will not require Usibelli to develop a monitoring plan for the Healy Creek Prospect.

Comment 43 (DCC): One mitigation measure (A.1.a.v) clearly states that: “A monitoring plan will be tailored to the specific situation and potential impacts of proposed activities.” This includes potential impacts to water quality and quantity, potential noise or visual impacts, proximity to sensitive habitats or use areas, and potential impacts to fish or wildlife populations. In addition, the Final BIF and the YTAP define further standards (see below). Yet in the Mitigations Review Analysis (p. 4) it is proposed that such a monitoring plan is not necessary. Whether or not a monitoring plan is applicable to this project is not adequately presented in the text of the plan, and we maintain that a monitoring plan should be included, and will not likely be onerous because of the data that has already been collected and is being collected near this site. It should not matter whether or not this is in an area that has been previously disturbed by mining activities.

Applicant Response to Comment 43: UCM: Received Comments 8/21/14 - There is no site-specific basis for a monitoring plan. This is addressed in the Plan of Operations through the Mitigation Analysis: Healy Basin that is attached to the Plan.

Explanation: The highly limited nature of this project, in duration and extent of activity - including the shallow depth of the well, does not justify monitoring. There are no new ground disturbances, which is applicable in the sense that there are no new disruptions to vegetation, wetlands, or habitat to monitor, there are no surface water discharges. The project meets setbacks from streams to prevent sedimentation, there is no disposal of cuttings or muds at the site, the project is not introducing the use of toxics - all drilling additives are not petroleum based. AOGCC has determined it is unlikely for drilling at this site to intercept flowing oil. The project is sufficient distance from residence and public facilities to negate any visual or noise impacts.

Division Response to Comment 43: See Division response above.

Comment 44 (DCC): Also, to suggest that noise impacts are not applicable if there are not concentrations of people nearby is to presume that the impacts of noise are only significant in the human context. Yet the YTAP (p. 2-18) states: “Uses that are likely to produce levels of acoustical or visual disturbance sufficient to disturb calving, rutting, or post-calving aggregations that cannot be seasonally restricted should not be authorized in these areas. Uses may be authorized in these areas at other times of the year. DNR authorizations shall include seasonal restrictions on activities that would produce significant acoustical or visual disturbance during sensitive periods.” In the Unit Description for this parcel (P-51), it states: “The area is an important caribou wintering ground and it is also important for moose calving, rutting, and wintering habitats.” The Final BIF echoes this, showing that caribou use this area in the winter (Map 4.3, p. 4-17), that moose use this area in the winter and for calving and rutting (Map 4.4, p. 4-18). These are sensitive periods that YTAP requires the state to address; yet no visual or acoustic monitoring is included in this Plan.

Applicant Response to Comment 44: UCM: Mitigation Measure 1(b) iii is the only listed Mitigation Measure requirement for noise impacts, it states "Measures to be used to mitigate potential noise impacts associated with facilities and compressor stations will be considered on a site-specific basis. The operator will provide an analysis of the noise impacts on residential and commercial users of the proposed project area, and sensitive public facilities including community or institutional buildings." UCM responded that the mitigation measure was not applicable citing distances from Healy and residents, and no use of compressors for this project. The site-specific simplicity and limited nature of this project, including the lack of compressors and the lack of winter operations, does not justify additional considerations for wildlife.

Division Response to Comment 44: Considering proximity to residential and commercial buildings is relevant to assessing potential noise impacts on humans. It does not suggest that potential noise impacts to wildlife are irrelevant, nor does the Division consider them to be. Given the limited nature of the proposed activities, as well as their timing and duration, the Division did not conclude that additional stipulations for noise or visual impacts were necessary to protect the State's interest.

Comment 45 (DCC): Monitoring should include: (1) Baseline acoustical data and noise monitoring (see Final BIF, p. 8-2: “the licensee is required to prepare a monitoring plan that considers potential noise.”); (2) Surface water quantity and quality should be reported, both baseline data, and monitoring data during and after exploration activities. Reporting should also include the quantity of water used for exploration activities, timing and location; (3) The Final BIF (p. 8-6) states, “AOGCC also requires that a coalbed methane operator conduct baseline testing of potentially affected wells and establish a monitoring program. The data is available to the public.” It seems logical to include this groundwater monitoring as part of this monitoring plan, and we assume that there is already extensive water monitoring conducted at nearby existing wells that could easily be incorporated here.

Applicant Response to Comment 45: Addressed earlier regarding monitoring program.

Division Response to Comment 45: The AOGCC is the agency with authority to require baseline testing and monitoring programs for wells. All operations subject to AOGCC oversight will conform to Alaska's statutes and regulations. The Division granted an exception to Mitigation Measure A 1 a.v.

Comment 46 (DCC): We encourage the State of Alaska to provide that extra measure of oversight on these activities that was developed during extensive public process in the Final Enforceable Standards for Development of State Owned Coalbed Methane Resources in the Matanuska-Susitna Borough (2004). While we are aware that these standards were developed for a certain region of the state, we were promised that they would be tailored for the Healy project

Applicant Response to Comment 46: UCM: Designed - not in Mat Su, not applicable - if to be applied elsewhere would go through a statewide review. UCM was promised tailored to Denali Healy Basin = done so in BIF.

Division Response to Comment 46: DNR imposed the mitigation measures it determined were appropriate for this license area in the Final BIF. The Division considered the need for additional stipulations to protect the State interest and has included those stipulations above.

Facilities and Operations

Comment 47 (DCC): It seems prudent to include monitoring of seismic activity in order to identify any increase in seismic activity that could be related to gas exploration or future development activities.

Applicant Response to Comments 47: Addressed earlier regarding monitoring program.

Division Response to Comment 47: This comment was provided to AOGCC and its response was "All operations subject to AOGCC oversight will conform to Alaska's statutes and regulations".

Comment 48 (DCC): Monitoring should occur until reclamation is complete, and after reclamation for a defined period of time to ensure that any changes to conditions or resources are fully understood and recorded.

Applicant Response to Comments 48: Addressed earlier regarding monitoring program.

Division Response to Comment 48: All operations subject to AOGCC oversight will conform to Alaska's statutes and regulations. As discussed above an exception was granted to mitigation measures A 1 a.v for a monitoring plan.

Comment 49 (DCC): According to 11 AAC 83.158 (d)(3), an application for a plan of operations must include "plans for rehabilitation of the affected leased or licensed area after completion of operations or phases of those operations."

Our understanding of this language is that the licensee will identify in the Plan of Operations what is eventually planned to restore the site after each phase, including exploration. We realize that reclamation or rehabilitation will depend on the results of exploration, but think that it is reasonable to require more details on the expectations for rehabilitation.

Applicant Response to Comment 49: UCM: Received comments 8/21/14 - The Plan of Operations discusses reclamation on p. 17, Section 11. Language has been clarified to include that the well will be plugged and abandoned if/when there is no further exploration or production to be conducted at the well. Resubmitted the Plan of Operations to ADNR on 8/25/2014.

Explanation: The simplicity of the reclamation plans reflects the simplicity and minimal disturbance of the exploration program. All exploration activity is being conducted on previously disturbed lands. The well pad is on an inactive private airstrip that is being maintained under the coal exploration permit for access to the UCM coal leases.

Division Response to Comments 49: The Division is satisfied with the degree of specificity at this early stage of the project after considering the temporary nature of the proposed activities. At this stage of the project, the applicant proposes to plug and abandon the well pending the results. The Division expects that the rehabilitation plan will become increasingly more specific as the project progresses.

Physical Characteristics / Geology

Comment 50 (DCC): The Plan's only mention of Geophysical Hazards is that there are no geophysical hazards in the area (p. 3 of Plan, p. 2 of Mitigation Measure Analysis). Yet the Healy Creek Fault is identified as 1.5 miles away. We assume there has been extensive geophysical data collected in this area related to coal mining operations, although none of this data is presented in the plan. Earthquakes in a growing number of states have been linked to wastewater reinjection wells and wells that are being hydraulically fractured. Recent requirements passed in Ohio include the installation of seismic monitoring equipment for sites located within 2 miles of an active fault. Although Alaska has no such rule, it may be a good practice to consider, particularly during reinjection of produced water, or at later phases if hydraulic fracturing is introduced. This would allow for wells to be shut down during times of seismic activity, and improve the safety of workers at the site. We understand this may be considered unnecessary at this time, but should be something that the operator and state consider, particularly if seismic activity increases.

Applicant Response to Comment 50: UCM: Received comments 8/21/14 - There are no State requirements for seismic monitoring.

Division Response to Comment 50: There are currently no State requirements for seismic monitoring. All operations subject to AOGCC oversight will conform to Alaska's statutes and regulations. In UCM response to Mitigation Measure A 1.a.vi it states that no hydraulic fracturing will occur.

Support for Project

Comment 51 (RDC): The Resource Development Council for Alaska, Inc. (RDC) is writing to comment in support of Usibelli Energy (UE) plans to drill up to four gas wells on an abandoned airstrip at the Healy Creek Prospect necessary to explore for shallow gas within the Healy Basin Exploration License Area. RDC is an Alaskan business association comprised of individuals and companies from Alaska's oil and gas, mining, forest products, tourism and fisheries industries. RDC's membership includes Alaska Native Corporations, local communities, organized labor, and industry support firms. RDC's purpose is to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources. It is a policy of RDC to support efforts to diversity Alaska's energy sources, as well as support utilization of Alaska's coal resources for value-added industries and power generation. Alaska's coal resources are immense, and coal bed methane (CBM) is a clean and affordable alternative to traditional energy resources. Alaska's CBM deposits are large enough to supply each household with gas for the 50 years. The Healy Basin CBM exploration project is located on state lands within the Healy Exploration License, and has a high potential for shallow biogenic coal bed methane and shallow gas. The proposed exploration is compatible with the Yukon Tanana Area Plan, which designates the area for multiple-use and allows for oil and gas exploration. If the CBM is ultimately utilized by Usibelli Coal Mine, Inc., it would provide power to the mine facilities resulting in reduced demand on the Alaska Intertie system. According to the UE, the drilling program will result in no new ground disturbance, and depending on the volume of the supply, could result in CBM in excess of UE's needs for in-state use. Further, CBM production would provide other benefits, including new jobs in rural and urban areas, and additional tax income to the state.

Division Response to Comments 51: Comment noted.

Comment 52 (DB): The Denali Borough finds this Plan of Operation in compliance with borough code. Furthermore, we appreciate the consideration given private property owners in locating this exploration site on state-owned mineral estates east of the Nenana River.

Division Response to Comments 52: Comment noted.

Comment 53 (DB): The public presentation under consideration in section 10.1 was provided to the Denali Borough Assembly at the August 13, 2014 regular meeting. This public communication outreach is widely appreciated.

Division Response to Comments 53: Comment noted.