

WISHBONE HILL
COAL EXPLORATION PERMIT RENEWAL APPLICATION
Permit Number 01-86-795

Wishbone Hill
Exploration Permit Renewal

April 2012
2012 Revisions Are In Bold Italics

TABLE OF CONTENTS

	<u>Page</u>
PREFACE.....	1
PART A – APPLICANT AND EXPLORATION AREA IDENTIFICATION.....	2
NOTICE OF INTENT TO EXPLORE AND EXPLORATION APPLICATION FORM.....	3
1.0 LOCATION OF EXPLORATION AREA	4
PART B – OWNERSHIP AND RIGHT OF ENTRY INFORMATION.....	10
1.0 SURFACE/SUBSURFACE OWNERSHIP AND LEASEHOLDERS.....	11
2.0 RIGHT OF ENTRY	17
PART C – ENVIRONMENTAL RESOURCE INFORMATION	19
1.0 EXISTING ENVIRONMENT.....	20
1.1 TOPOGRAPHY.....	20
1.2 GEOLOGY	20
1.3 SURFACE WATER	21
1.4 VEGETATION.....	22
1.5 SOILS	22
1.6 FISH.....	23
1.7 WILDLIFE.....	23
1.8 ARCHAEOLOGY	24
1.9 THREATENED AND ENDANGERED SPECIES.....	25
1.10 LAND USE.....	25
PART D – EXPLORATION AND RECLAMATION METHODS	27
1.0 METHODS AND PROCEDURES FOR EXPLORATION AND RECLAMATION	28
1.1 ACCESS	28

1.2 TYPES OF ACTIVITIES	29
1.3 METHODS	29
1.3.1 Activities Not Substantially Disturbing the Land Surface.....	29
1.3.2 Activities Substantially Disturbing the Land Surface.....	30
1.4 COAL REMOVAL.....	32
1.5 RECLAMATION PROCEDURES	32
1.5.1 Drill Hole Plugging.....	32
1.5.2 Removal of Facilities and Equipment.....	32
1.5.3 Backfilling and Grading.....	32
1.5.4 Revegetation	33
1.6 TIME FRAME.....	33
1.7 RECLAMATION COST ESTIMATE	33
1.8 REPORTING	36
PART E – EXPLORATION ON LANDS UNSUITABLE FOR MINING.....	39
1.0 AREAS UNSUITABLE FOR MINING.....	40

LIST OF EXHIBITS

EXHIBIT A LEGAL DESCRIPTION OF THE EXPLORATION AREA

LIST OF FIGURES

FIGURE 1 EXPLORATION AREA

MAP 1A EXPLORATION AREA EAST – PROPERTY OWNERSHIP

MAP 1B EXPLORATION AREA WEST – PROPERTY OWNERSHIP

FIGURE 2 COAL LEASE TRACTS

PLATE IV-1 SITE PLAN AND WELL LOCATION MAP

LIST OF TABLES

TABLE 1 BONDING SUMMARY FOR COAL EXPLORATION PERMIT 01-86-795

LIST OF APPENDICIES

APPENDIX A MATERIAL SAFETY DATA SHEETS FOR POTENTIAL DRILLING
FLUIDS

PREFACE

Usibelli Coal Mine, Inc.'s (UCM) coal exploration permit for the Wishbone Hill project (Permit No. 01-86-795) is scheduled to expire on July 7, 2012. In response to the Division of Mining, Land, and Water's (DMLW) request, the following Notice of Intent to Explore and Exploration Application have been prepared to complete the renewal process. The following application addresses the regulatory requirements contained in 11 AAC 90.161 – 11 AAC 90.167 and describes exploration activities that may be conducted during the next two year permit term. A properly executed copy of DMLW's "Notice of Intent to Explore and Exploration Application" form is included in Part A of the application and provides a comprehensive checklist for the informational requirements. Where appropriate, the form references the specific section of the Application that contains the required information. Ownership and right of entry information is presented in Part B, and Part C contains information on environmental resources. Part D presents the exploration and reclamation methods and Part E addresses exploration on lands unsuitable for mining.

PART A – APPLICANT AND EXPLORATION AREA IDENTIFICATION

NOTICE OF INTENT TO EXPLORE AND EXPLORATION APPLICATION FORM

ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING LAND & WATER
COAL EXPLORATION

Notice of Intent to Explore

and

Exploration Application

Notice of Intent

The Alaska Surface Coal Mining Control and Reclamation Act requires that any person who intends to conduct coal exploration which will not substantially disturb the natural land surface complete and file with the Department of Natural Resources a notice of intent to explore. The completion of Parts A (including submission of the required permit fee), B, D, and E of this form will meet these requirements. This form must be received at least thirty (30) days prior to commencement of the exploration.

The Act requires that any person who intends to conduct coal exploration which will substantially disturb the natural land surface must file a complete application for exploration. The completion of Parts A (including submission of the required permit fee), C, D, and E of this form will meet the applicant's submission requirements. The application should be submitted approximately three months prior to the anticipated commencement of exploration.

Substantial disturbance means an impact on land, water, or air resources by activities such as blasting; mechanical excavation (excluding the use of light, portable field equipment); drilling or enlarging coal or water exploratory holes or wells; and construction of roads, structures, trails, aircraft landing and marine docking areas.

Please submit one hard copy and one electronic copy of all application materials as specified by the Department.

Reference: Alaska Statute 27.21.200; 11 AAC 90.161 to 11 AAC 90.167.

PART A: GENERAL INFORMATION Ref: 11 AAC90.161; 11 AAC 90.163

- 1.1 Name of Applicant: Usibelli Coal Mine, Inc.
Contact: Robert Brown
1.2 Address of Applicant: 634 S. Bailey St., Suite 204. Palmer, AK 99654
1.3 Telephone Number: (907) 745-6028
1.4 If applicable, provide the following information for the representative who will be present and responsible for the exploration activities.
1.5 Name of Representative: Robert Brown
1.6 Address of Representative: 634 S. Bailey St., Suite 204. Palmer, AK 99654
1.7 Telephone Number: (907) 745-6028
1.8 Email Address: rob@usibelli.com

2.0 Location of the Exploration

- 2.1 Legal Description (attach additional pages as needed):
See Figure 1, and Exhibit A, Exploration Area.

Table with 6 columns: Township, Range, Section, Aliquot Part, Meridian, Acres. The table is mostly empty with some text in the last row.

- 2.2 Number of Acres in Exploration Area: 8,139.21

- 2.3 Number of Acres of Federal Land (if applicable): 0
- 2.4 USGS 1:250,000 or 1:63,360 Quadrangle Names: Anchorage C-6, Alaska
- 2.5 Distance and Direction to Nearest Community (in miles): Sutton 1 mile
- 2.6 Attach map of exploration site and adjacent area.

3.0 Period of Exploration

- 3.1 Begin (Month/Day/Year): July 7, 2012
- 3.2 End (Month/Day/Year): July 7, 2014

4.0 Ownership of Surface/Subsurface Mineral Estate

If the surface or the mineral estate is owned or leased by someone other than the applicant, answer 4.1 - 4.5, as appropriate (**attach additional pages as needed**).

- 4.1 Surface Owner
 - Name: See Part B, Section 1.0
 - Address: _____
 - Telephone Number: _____

- 4.2 Mineral Estate Owner
 - Name: _____
 - Address: _____
 - Telephone Number: _____

- 4.3 Surface Land Leaseholder
 - Lease #: _____
 - Name: _____
 - Address: _____
 - Telephone Number: _____

- 4.4 Mineral Estate Leaseholder
 - Lease #: _____
 - Name: _____
 - Address: _____
 - Telephone Number: _____

- 4.5 Adjacent Surface & Mineral Estate Leaseholders
 - Lease #: _____
 - Name: _____
 - Address: _____
 - Telephone Number: _____

- 4.6 Right to Enter: Provide a statement describing the basis by which the applicant claims the right to enter the land for the purposes of conducting exploration and reclamation, Reference relevant federal, state, and local government prospecting permits or lease documents. Attach copies of supporting documents, as appropriate.

5.0 Fees **Ref: 11 AAC 90.011**

- 5.1 Permit Fee \$500.00 _____ Attach receipt. (Refer to fee schedule below)
Exploration - notice of intent \$100
Exploration- substantial disturbance \$500 + cost of all public notices

PART B: NOTICE OF INTENT TO EXPLORE **Ref: 11 AAC 90.161**

6.0 Intention to Explore

- 6.1 Describe intended exploration activities, including major' pieces of equipment and their use.
- 6.2 Will exploration activities substantially disturb the natural surface of the land?
 YES NO
If yes, proceed to Part C; if no, answer 6.3 and proceed to Part D. (See definition on page 1 of this form.)
- 6.3 Describe practices to be used to protect the environment from adverse impacts resulting from exploration activities.

PART C: EXPLORATION PERMIT APPLICATION **Ref: 11 AAC 90.163;
11 AAC 90.167**

7.0 Exploration Area Description

Note: all technical data in this application must be accompanied by:
1) names of persons and organizations who gathered and analyzed data;
2) dates of data collections and analysis;
3) description of procedures used; and
4) names, addresses and positions of officials of each agency consulted.

- 7.1 Indicate type(s) of surface disturbance: blasting. mechanical excavation Drilling, altering coal or water exploration holes and wells, road or trail construction or modification aircraft landing construction/modification marine docking facility construction/modification construction of structures placement of excavated material or debris on surface other, specify See Part D, Section 1.0
- 7.2 Provide a map of at least a scale of 1:63,360 enlarged 2.5 times (~1:25000), showing the following existing surface features:
 - a. existing roads and trails;
 - b. occupied dwellings and other structures;
 - c. pipelines, airfields and marine docking facilities;
 - d. bodies of water; .
 - e. historic, archeological and cultural features;
 - f. topographic and drainage features; and

g. habitats of endangered or threatened species.

- 7.3 Using existing information, briefly describe, with cross references to the map in 7.2, the surface topography, geology, surface waters, predominant land use, and other physical features.
- 7.4 Using existing information, briefly describe, with cross references to the map in 7.2, vegetation cover and important habitats of fish, wildlife and plants.
- 7.5 Does the exploration area include critical habitat of threatened or endangered species; or species such as eagles, migratory birds or other animals protected by state or federal law; or habitats of unusually high value for fish and wildlife?

YES NO

If yes, describe impact, control measures, management techniques and monitoring methods to be utilized to protect these species and habitats.

- 7.6 Does the exploration area include known archeological resources; or districts, sites, structures or objects listed on the National Register of Historic Places?

YES NO

If yes, identify and describe, and describe protection measures to be implemented.

8.0 Exploration and Reclamation Methods

- 8.1 Provide a map of at least a scale of 1:63,360 enlarged 2.5 times, showing the following exploration and reclamation features (if appropriate, this may be combined with the map required under 7.2):
- the area to be disturbed by exploration and reclamation; .
 - access routes, including new roads, trails or other transportation facilities to be constructed, and existing facilities to be used or modified;
 - proposed excavations and trenches;
 - water or coal exploratory holes to be drilled or altered;
 - earth or debris disposal areas; f. sediment control measures, such as sediment ponds and structures for diverting overland flow, if required; and
 - other exploration or reclamation features.
- 8.2 Provide a description of exploration and reclamation methods and a discussion of how the exploration will comply with the performance standards in 11 AAC 90.167. Cross-referencing the map in 8.1, describe, at a minimum, the following:
- types and uses of equipment;
 - design, construction, maintenance and removal of any proposed new roads, trails or other transportation facilities;
 - alteration and restoration of existing transportation facilities;
 - blasting procedures;
 - earth or debris disposal;
 - backfilling and regrading of all excavations, artificial flat areas, embankments or other disturbed areas to their approximate original contour;
 - topsoil removal, storage and redistribution;
 - seed mix, application rates, seeding method and other procedures to be implemented in the establishment of a vegetative cover on all disturbed areas;
 - procedures for plugging and abandoning exploration holes, boreholes, wells or other exposed underground openings;

- j. procedures and control practices to be implemented to minimize disturbance to the prevailing hydrologic balance, including, if necessary, sedimentation control;
 - k. handling and disposal of known acid-forming or toxic-forming materials, if any; and
 - l. removal of all facilities and equipment.
- 8.3 Provide a time table for each phase of exploration and reclamation including starting and ending date, type of disturbance, area of disturbance, and reclamation measures. **See Part D, Section 1.6**
- 8.4 Give an estimate of the quantity of coal to be removed during the exploration. Specify method used to measure quantity. **See Part D, Section 1.4**
- 8.5 Give a detailed estimate of the cost of reclamation of all areas to be affected by exploration activities. **See Part D, Section 1.7**

PART D: EXPLORATION ON LANDS UNSUITABLE FOR MINING

Ref: 11 AAC 90.165

9.1 Does the proposed exploration area include any area previously designated as unsuitable for all or certain types of mining by the Commissioner of Natural Resources?

YES NO

If yes, respond to 9.2 and 9.3. . .

9.2 Indicate petition name and number: N/A

9.3 Describe the basis for the designation of the area as unsuitable for mining and why exploration in the area is not incompatible with the values or features which led to the designation of the area.

PART E:

The applicant states to the best of his or her knowledge and belief that all statements made in the notice of intent to explore or in the application to explore are true and correct.

Applicant's Name: Alan E. Renshaw Title: Vice President

Address: Usibelli Coal Mine, Inc., PO Box 1000 Healy, AK 99743

Applicant's Signature: [Signature] Date: Mar. 23/12

Subscribed and sworn before me by Alan E Renshaw this the 23 day of March, 2012

Notary Public: Julie Harkcom Shorey My commission expires 12-3-2012



Note: Attach a copy of power of attorney, or resolution of Board of Directors that grants signature authority)

CERTIFICATE OF RESOLUTION

IT IS HEREBY RESOLVED: That the Board of Directors for USIBELLI COAL MINE, INC. authorizes Alan E. Renshaw, V.P. Operations, and Frederick W. Wallis, V.P. Engineering, authority to sign all documents relating to the Alaska Surface Mining Control and Reclamation Act (ASMCRA) on behalf of Usibelli Coal Mine, Inc.

I, A. Kirk Lanterman as secretary of USIBELLI COAL MINE, INC. hereby certify that the Board adopted this Resolution on the 3rd of May, 2010.



A. Kirk Lanterman, SECRETARY
USIBELLI COAL MINE, INC.

1.0 LOCATION OF EXPLORATION AREA

The exploration area encompasses UCM's coal lease holdings in the Wishbone Hill district of the Matanuska Coal Field. These lease holdings include eight State of Alaska coal leases and two coal lease areas with Cook Inlet Region, Inc. (CIRI). Exhibit A provides the legal description and acreage for each individual coal lease and also includes the total acreage within the exploration area. Figure 1, depicts the exploration area boundary and adjacent areas. Map 1A, Exploration Area East – Property Ownership and Map 1B, Exploration Area West – Property Ownership depict existing roads and trails, occupied dwellings and structures, tax parcels and owners of record, bodies of water and other topographic features within and adjacent to the exploration area boundary.

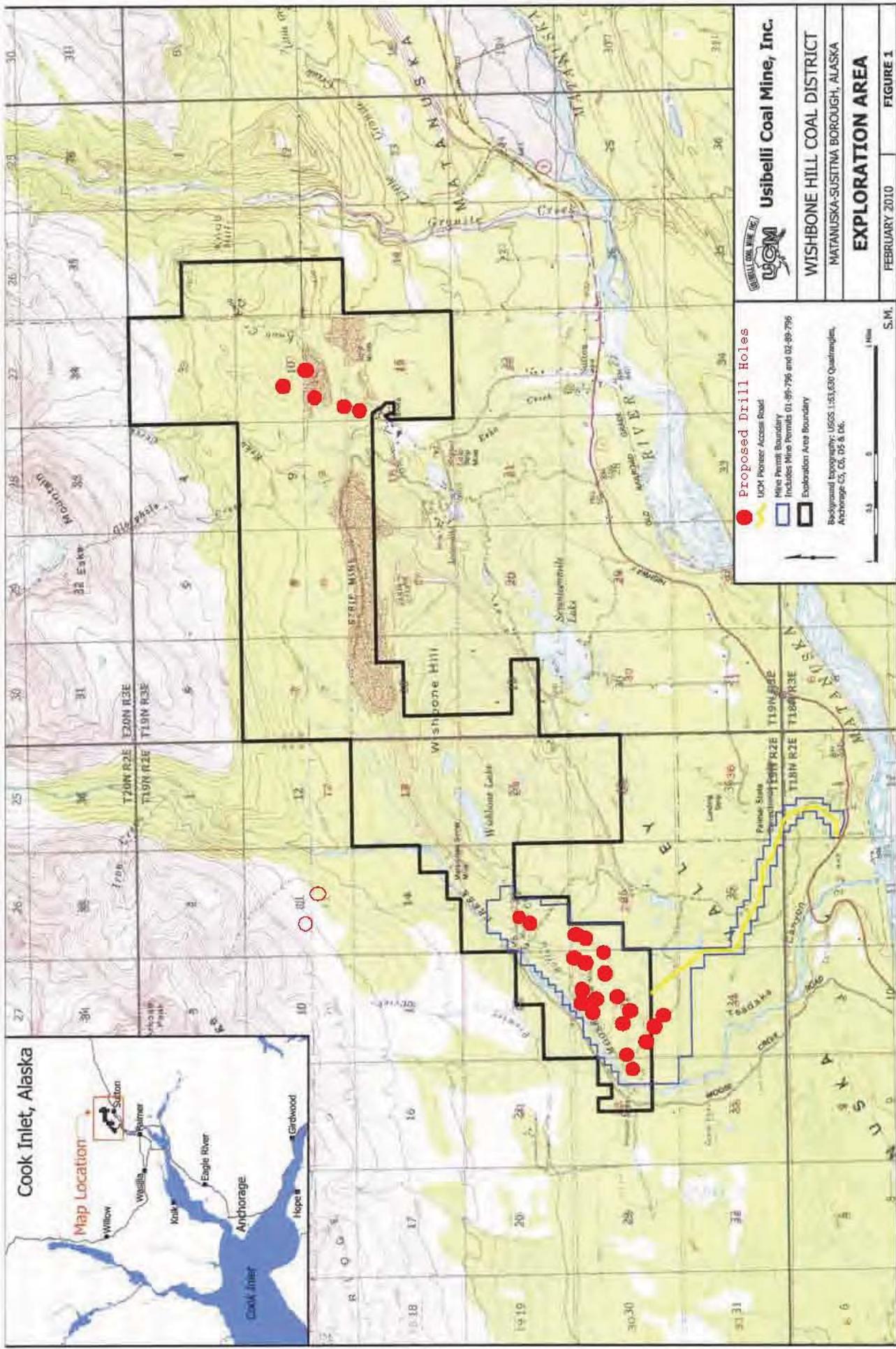
**EXHIBIT A
LEGAL DESCRIPTION OF THE EXPLORATION AREA**

Coal Lease No.	Legal Description	Acreage
ADL 32144	<u>Township 19 North, Range 2 East, S.M.</u> Section 22: S1/2 SW1/4, W1/2 SE1/4 Section 27: N1/2, N1/2 S1/2 Section 28: N1/2 SE1/4, SE1/4 NE1/4, S1/2 SW1/4 NE1/4, NW1/4 SW1/4 NE1/4 <div style="text-align: right;">Total</div>	790.00
ADL 309947	<u>Township 19 North, Range 2 East, S.M.</u> Section 22: E1/2 SE1/4 Section 23: NW1/4, W1/2 NE1/4, N1/2 SW1/4 <div style="text-align: right;">Total</div>	400.00
ADL 23803	<u>Township 19 North, Range 2 East, S.M.</u> Section 13: SW1/4 SW1/4, SW1/4 NW1/4 SW1/4 Section 14: S1/2 NE1/4 SE1/4, SE1/4 SE1/4, S1/2 SW1/4 SE1/4 Section 23: N1/2 NE1/4 NE1/4 <div style="text-align: right;">Total</div>	150.00
ADL 32136	<u>Township 19 North, Range 2 East, S.M.</u> Section 13: NE1/4 SW1/4, NW1/4 SE1/4, SW1/4 NE1/4, N1/2 NW1/4 SW1/4, SE1/4 NW1/4 SW1/4, S1/2 NW1/4 <div style="text-align: right;">Total</div>	230.00
ADL 501267	<u>Township 19 North, Range 2 East, S.M.</u> Section 13: Lots 1 & 2, SE1/4 SE1/4, Unsurveyed Fraction Section 23: SE1/4 NE1/4, S1/2 NE1/4 NE1/4 Section 24: All Section 25: N1/2 <u>Township 19 North, Range 3 East, S.M.</u> Section 18: Lot 4 Section 19: Lots 1, 2, & 4, NE1/4 SW1/4, NW1/4 SE1/4 <div style="text-align: right;">Total</div>	1354.13
ADL 501264	<u>Township 19 North, Range 2 East, S.M.</u> Section 13: NE1/4 SE1/4, SE1/4 NE1/4, N1/2 NE1/4 <u>Township 19 North, Range 3 East, S.M.</u> Section 7: All Section 8: All Section 17: N1/2 N1/2 Section 18: Lots 1 through 3, NE1/4 NE1/4, W1/2 NE1/4, E1/2 NW1/4 <div style="text-align: right;">Total</div>	1869.44

EXHIBIT A (Continued)

Coal Lease No.	Legal Description	Acreage
ADL 501265	<u>Township 19 North, Range 3 East, S.M.</u> Section 3: All Section 9: All Section 10: N1/2 SE1/4, SW1/4, N1/2 Section 16: N1/2 N1/2, Excluding Railroad Right-Of-Way	Total 1999.99
ADL 511534	<u>Township 19 North, Range 3 East, S.M.</u> Section 2: SW1/4 Section 10: S1/2 SE1/4 Section 11: W1/2 Section 15: N1/2 NE1/4	Total 640.00
CIRI West Tract	<u>Township 19 North, Range 2 East, S.M.</u> Section 23: S1/2 SW1/4 Section 26: W1/2 NW1/4	Total 160.00
CIRI East Tract	<u>Township 19 North, Range 3 East, S.M.</u> Section 15: S1/2 NE1/4, N1/2 NW1/4, SE1/4 NW1/4, S1/2, Tracts B, C, & D, ASLS 78-97	Total 545.65
	TOTAL EXPLORATION AREA	8139.21

FIGURE 1
EXPLORATION AREA



USUBELLI COAL MINE, INC.

WISHBONE HILL COAL DISTRICT

MATANUSKA-SUSTITNA BOROUGH, ALASKA

EXPLORATION AREA

Proposed Drill Holes

- Proposed Drill Holes
- UCM Pioneer Access Road
- Mine Permit Boundary (Includes Mine Permits 01-98-796 and 02-98-796)
- Exploration Area Boundary

Background Topography: USGS 1:50,000 Quadrangles, Anchorage G5, G6, D5 & D6.

Scale: 0 5 1 Miles

S.M.

FEBRUARY 2010

FIGURE 1

MAP 1A
EXPLORATION AREA EAST – PROPERTY OWNERSHIP

USIBELLI COAL MINE
EXPLORATION AREA EAST
PROPERTY OWNERSHIP
MAP 1A

LEGEND

- Exploration Area East
- Property Ownership
- Water
- Streams
- Highways
- Other

Scale

0 100 200 300 400 500 Feet

North Arrow

Notes

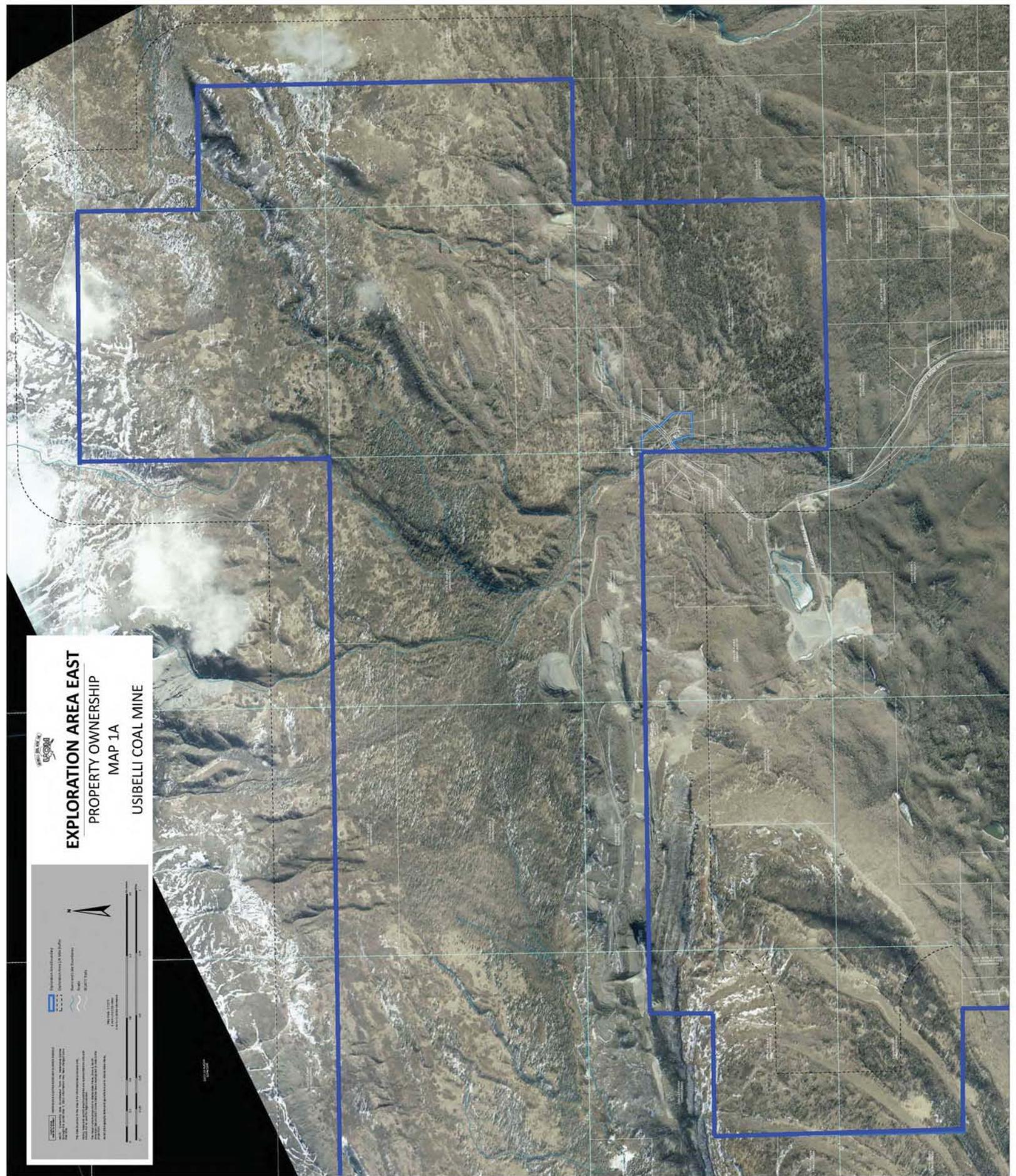
1. This map was prepared by the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT.

2. This map was prepared by the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT.

3. This map was prepared by the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT.

4. This map was prepared by the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT.

5. This map was prepared by the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT, which is a component of the USIBELLI COAL MINE PROJECT.



MAP 1B
EXPLORATION AREA WEST – PROPERTY OWNERSHIP

PART B – OWNERSHIP AND RIGHT OF ENTRY INFORMATION

1.0 SURFACE/SUBSURFACE OWNERSHIP AND LEASEHOLDERS

Information relative to the surface owner, mineral estate owner, surface land leaseholder, and mineral estate leaseholder is provided for each of the coal leases within the exploration area. Figure 2, Coal Lease Tracts, depicts the location, as well as the surface and mineral ownership, for each of the coal lease tracts.

ADL 32144

Surface Owner – Entire Lease Area
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – That portion lying in Section 28, T19N, R2E, S.M
Mental Health Trust Land Office
718 L Street
Anchorage, Alaska 99501
(907) 269-8658

Mineral Estate Owner – Remaining Portion of Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 309947

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 23803

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 32136

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 501267

Surface Owner – Entire lease tract excluding the SW1/4 NW1/4, N1/2 NW1/4, Section 13, T19N, R2E, S.M.
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Owner - SW1/4 NW1/4, N1/2 NW1/4, Section 13, T19N, R2E, S.M.
Stephanie J. Nispel, Bailey & Randy Bailey
HC 31, Box 5152
Wasilla, Alaska 99654

Mineral Estate Owner – That portion lying in Sections 18 and 19, T19N, R3E, S.M
Mental Health Trust Land Office
718 L Street
Anchorage, Alaska 99501
(907) 269-8658

Mineral Estate Owner – Remaining Portion of Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.

P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 501264

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – That portion lying in Section 17 ,18 , and SW1/4 SE1/4,SE1/4
SW1/4 of Section 8, T19N, R3E, S.M
Mental Health Trust Land Office
718 L Street
Anchorage, Alaska 99501
(907) 269-8658

Mineral Estate Owner – Remaining Portion of Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 501265

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – That portion lying in Section 10, and E1/2, NW1/4, S1/2 S1/2
SW1/4 of Section 9, T19N, R3E, S.M
Mental Health Trust Land Office
718 L Street

Anchorage, Alaska 99501
(907) 269-8658

Mineral Estate Owner – Remaining Portion of Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

ADL 511534

Surface Owner – Entire Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Mineral Estate Owner – That portion lying in Section 11, T19N, R3E, S.M
Mental Health Trust Land Office
718 L Street
Anchorage, Alaska 99501
(907) 269-8658

Mineral Estate Owner – Remaining Portion of Lease
State of Alaska
550 West 7th Ave, Suite 1070
Anchorage, Alaska 99501
(907) 269-8503

Surface Leaseholder – Entire Lease
None

Mineral Estate Leaseholder – Entire Lease
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

CIRI WEST TRACT

Surface Owner – S1/2 SW1/4, Section 23, W1/2 NW1/4, Section 26, T19N, R2E, S.M.
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

Mineral Estate Owner – Entire West Tract
Cook Inlet Region, Inc.
2525 C Street, Suite 500
Anchorage, Alaska 99509
(907) 274-8638

Surface Leaseholder – Entire West Tract
None

Mineral Estate Leaseholder – Entire West Tract
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

CIRI EAST TRACT

Surface Owner – Entire East Tract excluding the north 960 feet of the easterly 1815 feet of the NW1/4, Section 15, T19N, R3E, S.M.
Cook Inlet Region, Inc.
2525 C Street, P.O. Box 93330
Anchorage, Alaska 99509
(907) 274-8638

Surface Owner – The north 960 feet of the easterly 1815 feet of the NW1/4, Section 15, T19N, R3E, S.M.
Matanuska Susitna Borough
350 E. Dahlia Avenue
Palmer, Alaska 99645
(907) 745-4801

Mineral Estate Owner – Entire East Tract
Cook Inlet Region, Inc.
2525 C Street, Suite 500
Anchorage, Alaska 99509
(907) 274-8638

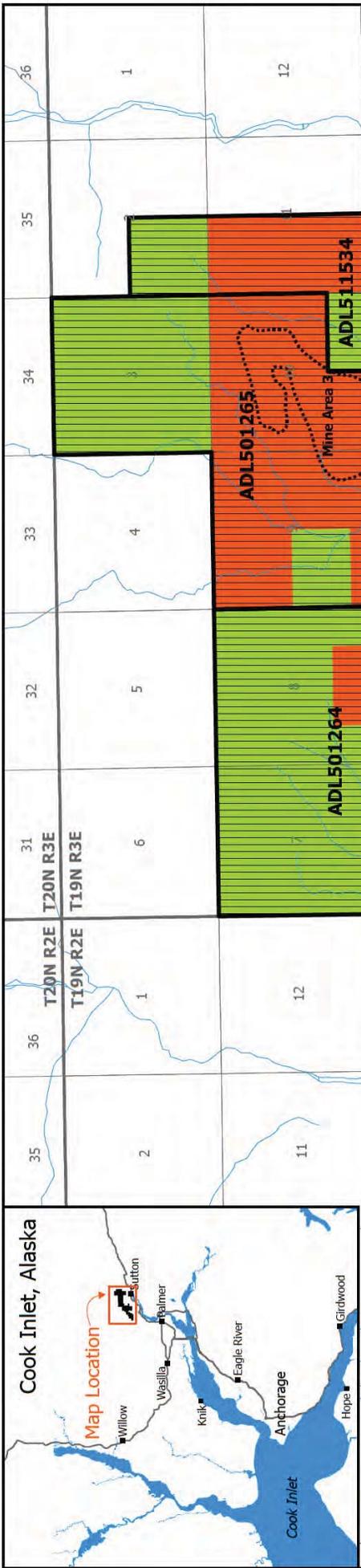
Surface Leaseholder – Entire East Tract
None

Mineral Estate Leaseholder – Entire East Tract
Usibelli Coal Mine, Inc.
P. O. Box 1000
Healy, Alaska 99743
(907) 683-2226

2.0 RIGHT OF ENTRY

UCM's state and private coal leases provide the right to enter the surface estate of the exploration area and conduct coal exploration activities. The only exceptions include a 40 acre parcel of land in the N1/2 NW1/4, Section 15, T19N, R3E, S.M. and another 120 acre parcel in the SW1/4 NW1/4, N1/2 NW1/4, Section 13, T19N, R2E, S.M. The surface rights for the 40 acre tract are owned by the Matanuska Susitna Borough and the surface estate of the 120 acre parcel is privately owned by the Baileys (see Figure 2, Coal Lease Tracts). Prior to conducting exploration activities on these parcels, permission to access the land will be obtained from the land owners and provided to the DMLW.

FIGURE 2
COAL LEASE TRACTS



Note: ADL501267 extends under all other coal lease tracts shown in Section 13, T19N R2E.

		Usibelli Coal Mine, Inc.	
		WISHBONE HILL COAL DISTRICT	
		MATANUSKA-SUSTITNA BOROUGH, ALASKA	
		COAL LEASE TRACTS	
		FEBRUARY 2010	
		FIGURE 2	

PART C – ENVIRONMENTAL RESOURCE INFORMATION

1.0 EXISTING ENVIRONMENT

Pursuant to 11 AAC 90.163(a)(2) the following sections contain a brief description of the existing environment and are based on available information. The available information was derived from the environmental baseline reports contained in Part C of UCM's Surface Coal Mining Permit Application. These detailed reports contain references and also identify the parties that were responsible for data collection and report preparation. A hard copy of the surface coal mining permit application is on file with the DMLW in their Anchorage office.

1.1 TOPOGRAPHY

Wishbone Hill is the dominant topographic feature within the exploration area. This feature is a prominent conglomerate-capped hill that occupies the central portion of the Wishbone Hill coal district. Although there are steep slopes within the vicinity of Wishbone Hill, a large portion of the exploration area consists of rolling hills. Glaciation is responsible for the current topography including many of the glacial and sedimentary deposits found at lower elevations. Elevations within the exploration area range from approximately 800 to 2000 feet above sea level.

1.2 GEOLOGY

The present day Matanuska Valley is a narrow structural trough 5 to 10 miles wide and 50 miles long where upper Mesozoic and Tertiary sedimentary rocks have been down-dropped along faults and sharp flexures. Older and more resistant rocks of the Talkeetna and Chugach Mountains flank the valley on the north and south sides, respectively. The sedimentary rocks in the valley generally have been complexly faulted, tilted and folded. The Wishbone Hill coal district lies in the western or lower portion of the Matanuska Valley structural trough and typifies the valley's structurally complex geology.

The district is composed of moderately to highly deformed clastic rocks of Tertiary age. The Matanuska formation of upper Cretaceous age presumably underlies the district; however, it is only exposed in a few localities. The Tertiary system is comprised of three nonmarine

formations known in descending order as the Tsadaka, Wishbone, and Chickaloon formations. The Tsadaka formation consists of several hundred feet of coarse granite-cobble-rich conglomerate with occasional sandstone and siltstone lenses. Thick sequences of massive to poorly stratified conglomerate beds, lenticular sandstone and siltstone beds, and a few thin lenses of claystone make up the Wishbone formation. Within the district, the maximum thickness of this formation is 1,800 to 2,000 feet. The Chickaloon formation is comprised of approximately 5,000 feet of interbedded conglomerate, sandstone, siltstone, claystone, shale, and many coal beds.

The mineable coal beds of the Chickaloon formation are generally confined to the upper 1,400 to 1,800 feet of the formation and are situated in four rather well defined coal beds. The individual groups of coal beds are known in descending order as the Jonesville, Premier, Eska, and Burning Bed. Within a given group, the thickness and quality of individual beds may vary within relatively short distances because of the complex structure.

1.3 SURFACE WATER

Perennial streams, intersecting portions of the exploration area, include Moose and Eska Creeks. These streams are tributary to the Matanuska River and have watersheds that are steep and relatively long and narrow.

Typical stream flow is generated from precipitation, snowmelt, and glacial meltwater. Flows vary seasonally with peak flows occurring in spring and early summer due to snowmelt and breakup and in late summer and early autumn due to rainstorms. Periods of lowest flow occur in winter when precipitation falls as snow and when little surface runoff occurs. Mid-summer low flows are usually sustained by effluent ground water flows and melt water from the perennial snow pack.

The dominant erosion mechanisms within the basins are mass wasting and mechanical erosion processes associated with freeze/thaw activity acting on bare rock on high, steep, and unforested

mountain slopes. In the forested areas at lower elevations, erosion of surfacial soils by rainfall and snow melt runoff occurs.

The only natural lake within the exploration area is Wishbone Lake. During periods of high runoff, Wishbone Lake drains into Moose Creek via Buffalo Creek. Buffalo Creek is a small sub-basin within the Moose Creek watershed and only flows intermittently

1.4 VEGETATION

The majority of the vegetation on the exploration area has been affected by a variety of disturbances including but not limited to fire, timber management, wildlife habitat improvements, mining, and recreational activities. The dominant vegetation types include paper birch/aspen, paper birch/white spruce, young birch, poplar, alder/ willow, and lowland and upland meadows. Understory vegetation is very similar among the forest types and is dominated by grasses and forbs. The vegetation types are fairly common and most of the plant species occur throughout the state. Moose have heavily browsed most shrubs in the area and caused many of the birch trees to assume a shrub growth form.

1.5 SOILS

The Wishbone Hill area is a prominent topographic upland within the lower Matanuska Valley. It is separated from the Talkeetna Mountains to the north, by a broad valley drained by the tributaries of Moose and Eska Creeks. Sharply incised valleys of Moose and Eska Creeks comprise the west and east sides of Wishbone Hill. On the south, it is flanked by a broad undulating sand and gravel glacial outwash surface about 800 feet in elevation. The main Wishbone Hill upland is underlain by very gravelly, sandy loam glacial till. A surface mantle of wind deposited loess overlies both the glacial out wash and till surfaces. This loess material is derived primarily from fluvial deposits within the upper Matanuska River Valley. The surface mantle also contains a small admixture of volcanic ash. The convex upland position of Wishbone Hill and the very thick and coarse glacial deposits both contribute to well drained conditions on the exploration area.

A detailed Order 1-2 soil survey has been conducted on the area where exploration activities are planned. This survey includes a map delineating soil mapping units and a description of the mapping units and soil series as well as chemical and physical data. A complete copy of the report is contained in Chapter XI of UCM's Wishbone Hill Surface Coal Mining Permit Application.

1.6 FISH

As previously discussed in Section 5.3, the main bodies of water within the exploration area are Moose Creek, Wishbone Lake, and Eska Creek. Species of fish found in these waters include coho and chinook salmon, Dolly Varden, rainbow trout, and slimy sculpin. Chum and sockeye salmon are not known to spawn in the Creeks but have been seen holding in the mouth of the streams during their migration up the Matanuska River.

Fishing for chinook salmon is prohibited in Moose Creek and the numbers of other salmon species are too low to provide significant fishing opportunity. Sport fishing is primarily limited to catches of Dolly Varden .

Wishbone Lake is a popular fishery and is stocked annually with fingerling rainbow trout. It is currently regulated as a catch-and-release, fly fishing only area. The intent of the restrictions is to establish a high quality trophy fish area for use by a particular segment of the angling community.

1.7 WILDLIFE

Large mammals that are likely to occur within the exploration area include moose, brown bear, and black bear. Moose are clearly the most important species from the standpoint of human utilization. They also play a significant role in predator-prey relationships of species requiring large land areas for a habitat base. Black bears are very common throughout south central Alaska

and are tied closely to forested areas. Brown bears are very common in portions of the bordering Talkeetna Mountains.

Fur bearers potentially occurring within the exploration area include wolf, wolverine, fox, coyote, lynx, marten, mink, beaver, land otter, and weasels. Of these, wolves, wolverine, and coyote range widely in search of prey and would be expected to occasionally wander through the exploration area.

During the summer months, the most abundant migratory birds that are expected to frequent the exploration area include were the Dark-eyed Junco, Yellow-rumped warbler, Orange-crowned warbler, Blackpoll Warbler, Swainson's Thrush and Alder Flycatcher. Around the margin of water bodies, common goldeneyes and common mergansers are likely to occur.

Upland game birds that may occur on the exploration area include spruce grouse, ruffed grouse, and willow ptarmigan. Spruce grouse are generally found in open spruce and aspen shrub stands while willow ptarmigan and ruffed grouse frequently utilize tall shrub cover.

Two important species of raptors including the peregrine falcon, a classified endangered species (Endangered Species Act of 1973, as amended, 16 U.S.C. Sec. 1531, et seq.) and the bald eagle, a specially protected species (Bald Eagle Protection Act of 1940, as amended) and designated as an important species by the ADNR Commissioner, are seasonal visitors in the region. American peregrine falcons may occasionally be found in the area between mid-April and September. The Cook Inlet Region is within the southern fringe of their breeding range and nesting pairs may occasionally be present but no nests have been reported near the exploration area.

Bald eagle habitat occurs throughout the Cook Inlet area. Most nest sites are located in large trees in coastal areas, along rivers, or large lakes. Bald eagles in Alaska are not listed as an endangered species.

No bald eagle nests have been recorded within or immediately adjacent to the exploration area.

1.8 ARCHAEOLOGY

In March 1989, a cultural resource survey and inventory report was completed on the permit areas associated with surface coal mining permit numbers 01-89-796 and 02-89-796. This study did not identify any previously unknown cultural resource sites and further determined that three known historic sites (Buffalo, Premier, and Baxter Mines) within the current exploration area no longer possessed any significant data. The State Historic Preservation Officer (SHPO) agreed with the findings of the study and granted clearance to proceed with development work.

Concerning those portions of the exploration area that are outside the approved cultural resource survey area, no activities are planned that would require clearance from the SHPO.

1.9 THREATENED AND ENDANGERED SPECIES

Vegetation studies that have been conducted within and adjacent to the exploration area have not identified any threatened and endangered species on the Federal list. Past disturbance and the commonness of the vegetation types would make the possibility of finding any threatened or endangered species very low. The State of Alaska does not list plant species.

During previous aquatic baseline surveys of Moose and Buffalo Creeks, no threatened or endangered fish species were encountered. The Alaska Department of Fish & Game is not aware of any endangered fish in the streams on the exploration area.

The Federal list of threatened and endangered bird species includes: American peregrine falcon, Aleutian Canada goose, Short-tailed albatross, Eskimo curlew, Spectacled eider, and Steller's eider. Of these, the Eskimo curlew and Short-tailed albatross are on the Alaska State endangered species list. The American peregrine falcon, Aleutian Canada goose, and Spectacled eider are classified by the State as "species of special concern". Based on previous studies, the only species that may pass through the area is the American peregrine falcon.

1.10 LAND USE

Land uses that occurred within the exploration area between 1900 and 1970 were largely related to coal development. The first underground mine was developed near the western portion of the exploration area in 1916. As mining operations expanded in the vicinity of the eastern portion of the exploration area, the towns of Jonesville and Sutton resulted. Although there are no active coal mines or occupied structures within the exploration area today, there is still continued interest in exploration and coal mine development.

As land use plans developed, the state legislature designated a portion of the lower Matanuska Valley as the Matanuska Valley Moose Range (MVMR). This legislatively designated area was established in 1984 to “maintain, improve, and enhance moose populations and habitat and other wildlife resources of the area and to perpetuate public multiple use of the area including fishing, grazing, forest management, hunting, trapping, mineral and coal entry development, and other forms of public use”. The entire exploration area is situated within the boundaries of the MVMR.

Most of the exploration area is within state-owned public land that is either in an undisturbed natural condition or has been disturbed by past coal mining or more recent logging activities. Public access is available to the area by state-maintained roads including the Buffalo Mine Road in the west and the Jonesville Road in the east. Current land uses include commercial timber harvesting, personal use firewood cutting, Christmas tree cutting, coal exploration and development work, mined land reclamation, and recreational activities.

PART D – EXPLORATION AND RECLAMATION METHODS

1.0 METHODS AND PROCEDURES FOR EXPLORATION AND RECLAMATION

Coal exploration work will be performed to 1) better define the complex geology, 2) find additional recoverable coal reserves, 3) define surface mineable reserve areas, and 4) better understand the chemical and physical characteristics of the coal. The information obtained from the exploration programs will ultimately be used to determine the feasibility of developing the coal resources within the exploration area. Since geology is not an exact science, the scope of work for the exploration activities may vary and will be refined as data is collected and evaluated. The types of activities and methods that will be used to complete the exploration work are outlined in the following sections.

1.1 ACCESS

The Glenn Highway, a major year-round asphalt road connecting the Anchorage/Palmer Highway with the Richardson Highway, passes approximately 2 to 3 miles south of the exploration area. Access to the western portion of the area has been provided by the construction of an exploration trail along the corridor of the proposed mine access road that was authorized under surface mining permit numbers 01-89-796 and 02-89-796 (see Figure 1, Exploration Area). A gate has been constructed on the *improved* trail near the intersection with the Glenn Highway to control public access. In the eastern portion of the area, the Jonesville Road provides access and connects with the Glenn Highway at the town of Sutton.

Access within the exploration area itself is provided by a rather extensive network of roads and trails that resulted from past mining and exploration work, forestry activities, and recreational uses. In certain segments of these roads, minor grading may need to be performed to eliminate ruts created by recreational activities and forestry work. Encroaching vegetation may have to be trimmed in other segments to allow safe passage. To prevent potential trail degradation, low-ground-pressure tracked vehicles will be used to transport the drilling equipment to the exploration sites as necessary. Where trails and soil conditions are adequate then heavy equipment may be used for access.

In areas where access is limited, existing trails will be extended to reach the desired locations. A small dozer in the size range of a Cat D-4 or Komatsu D-37 will be used to clear a path approximately 8 to 10 feet wide. The vegetative mat and topsoil will be salvaged and reapplied when the trail extensions are reclaimed. Wherever possible, the vegetative root mat will be left in place to enhance the rapid reestablishment of native vegetation. The alignment will attempt to avoid large trees and other obstructions. If steeper hillsides are encountered, the trails will follow the contour wherever possible. No stream crossings will be required.

1.2 TYPES OF ACTIVITIES

The exploration program will involve two categories of activities: 1) activities that will not substantially disturb the land surface (11 AAC 90.161) and 2) activities that will substantially disturb the land surface (11 AAC 90.163). Specific activities that are being proposed under each of these categories are outlined below.

ACTIVITIES NOT SUBSTANTIALLY DISTURBING THE LAND SURFACE

- Geologic Mapping
- Use of existing trails/roads

ACTIVITIES SUBSTANTIALLY DISTURBING THE LAND SURFACE

- Access Trails
- Drill Sites
- Exploration Drilling

1.3 METHODS

1.3.1 Activities Not Substantially Disturbing the Land Surface

GEOLOGIC MAPPING – The surfacial and structural geology of the exploration area may be mapped in the field using aerial photographs and topographic maps. Coal seam outcrops or other exposed geologic features identified during the mapping may be surveyed to provide more

precise locations. Vehicular travel will be limited to existing roads and trails. Most of the mapping and survey work will be done on foot.

1.3.2 Activities Substantially Disturbing the Land Surface

ACCESS TRAILS – The methods for constructing access trails within the exploration area were previously discussed in Section 1.1. As stated in this section, if grading is necessary, the vegetative mat and topsoil will be salvaged and reapplied when the trail extensions are reclaimed. **Any ruts created by tracked or wheeled vehicles that break the vegetated soil mat will be filled.**

DRILL SITES – An area roughly 50 feet long by 40 feet wide will be required to set up the drilling equipment. **Each drill site will be bonded for this 50'x 40' area. However, the estimated actual substantial disturbance of the topsoil layer is expected to be no greater than about 400 sq. feet per drill site on average.** Wherever possible, drill sites will be located on relatively flat terrain to avoid having to excavate a level area for the drilling equipment. Excess vegetation will be removed to provide an adequate working area. If leveling is required, a small dozer in the size range of a Komatsu D-37 will be used to create a useable area. Where ever possible, the vegetative root mat will be left in place to enhance the rapid reestablishment of native vegetation.

EXPLORATION DRILLING – To achieve the objectives outlined in Section 1.0, UCM anticipates drilling approximately **25** exploration holes within the exploration area (see Figure 1). If moved, or additional holes are required, the DMLW will be notified in advance of drilling.

A Schramm T64 or similar type drill rig will be used to drill the exploration holes. The surface gravels will be cased with 6 inch steel casing to protect the integrity of the hole during drilling and latter removed, if feasible. Beyond the gravels, reverse circulation drilling will be used to reach the top of the coal seam. The coal seams will be cored with an HQ size (2.4 inch O.D.) core barrel to obtain samples for laboratory testing. The maximum hole depth will be in the

range of 350 – 400 feet and the anticipated total drilling footage will be approximately **8,750 – 10,000** feet.

In some cases, drilling muds may be needed to provide lubrication for the drill bit and to enhance recovery of drill cuttings. The typical drilling fluid will contain water and a bentonite powder mix to create a wall cake inside the hole and help maintain circulation in zones where soft sediments occur. Material Safety Data Sheets (MSDS) for a number of different types of non-toxic material that may be used for drilling fluid are contained in Appendix A.

Regarding fueling and spill prevention plans, fuel will be purchased off-site on a daily basis and delivered to the site. Before a piece of equipment is refueled, a 4’x4’x8” high poly liner will be laid on the ground to catch any spills or drips that may occur. The liner will contain oil/fuel absorbent pads that will be collected and discarded off-site if fuel is spilled. Poly liners will also be placed under the drilling equipment to catch any oil that may potentially leak from the equipment during drilling operations.

Approximately 4,500 gallons per day of water will be required for the drilling activities. This relatively small quantity of water will be obtained under a Temporary Water Use Permit from the DMLW. The primary water take points are old abandoned mining pits within the exploration area and are discussed in the Application for Temporary Use of Water that is on file with the DMLW **(TWUP A2012-31)**.

If adverse down-hole problems are not encountered, drill holes may be geophysically logged by a properly licensed individual. Log data may include resistivity, gamma, density, and caliper.

Upon completion of the drilling work, each drill hole will be surveyed to provide accurate locations. In addition to coordinates, the surface elevation of each drill hole will also be determined.

1.4 COAL REMOVAL

Small amounts of coal may be taken from core samples and/or cuttings for quality analyses.

1.5 RECLAMATION PROCEDURES

Reclamation will be an integral part of the exploration program and will be implemented in a contemporaneous manner. The following sections describe the procedures that will be used to reclaim the disturbances resulting from the exploration activities.

1.5.1 Drill Hole Plugging

When a drill hole has been completed or a monitoring well is no longer needed, the surface casing (if present) will be cut off approximately three feet below the ground surface. The hole will be filled with dry cuttings or sand to within 12 feet of the surface. A mixture of 20% bentonite, 20% dry cement, and 60 % cuttings or sand will be used to fill the next 10 feet of hole. The top 2 feet will be filled with topsoil or overburden material. While filling the last 12 feet, a 4"x 4" x 4' piece of treated lumber will be placed in the hole to permanently mark the location. The post will be positioned so that approximately 6 inches protrudes above the surface. Each drill hole will be surveyed to establish coordinates for future reference.

1.5.2 Removal of Facilities and Equipment

Upon completion of the exploration activities, all equipment and supplies will be removed from the exploration area. No permanent or temporary field camps will be used. A conscientious effort will be made to avoid any littering and to clean up each site after drilling is completed.

1.5.3 Backfilling and Grading

In areas where clearing work was done, a backhoe will be used to regrade and level the site. The surface will be dressed with topsoil and graded to blend with the surrounding topography. If necessary, water bars or ditches may be established to provide adequate drainage.

1.5.4 Revegetation

All disturbed areas will be fertilized and seeded to ensure optimum revegetation. A 20/20/10 fertilizer will be applied to the graded areas with a manually operated spreader at a rate of 300 pounds per acre. Next a seed mixture containing 50% Arctared red fescue and 50% Nortran tufted hairgrass will be manually broadcasted at a rate of 50 pounds per acre. If Nortran is not available, then either Norcoast Bering hairgrass or Nugget bluegrass will be used instead. These revegetation procedures were developed in consultation with the University of Alaska, Agricultural and Forestry Experiment Station and the Division of Agriculture, Plant Materials Center and are intended to meet the objectives of the management plan for the Matanuska Valley Moose Range.

1.6 TIME FRAME

Pursuant to 11 AAC 90.165, the initial permit term will be two years. During each year, exploration activities may start as early as April 1 and extend through the end of November. For the 2012 program work should start around the first part of July and be completed by November 30, 2012. For the 2013 program work should start as early as May 1 and be completed by November 30, 2013. For the 2014 program work should start as early as April 1 and be completed by the end of the exploration permit term, or later depending on the permit renewal.

1.7 RECLAMATION COST ESTIMATE

Drill hole plugging and the reclamation of any disturbances associated with the drill sites and trail extensions will require two people and a backhoe working approximately 3 hours to reclaim each follows: drill hole location and trail extension. Thus, **25** drill sites will require 3 days of

work plus one half day for mobilization and demobilization. Therefore, the equipment and personnel cost for the drill holes are as follows:

<i>Item</i>	<i>\$/Hour</i>	<i>Hours</i>	<i>Cost</i>
<i>Operator</i>	<i>\$52.24</i>	<i>78</i>	<i>\$4,075</i>
<i>Laborer</i>	<i>\$45.39</i>	<i>78</i>	<i>\$3,540</i>
<i>Komatsu WB 150 Backhoe + Fuel</i>	<i>\$54.75</i>	<i>78</i>	<i>\$4,271</i>
		<i>Subtotal</i>	<i>\$11,886</i>

It is estimated that the work covered under the exploration permit will disturb approximately *1.8* acres or less. This figure assumes up to *1.2* acres for the drill sites, and up to *0.6* acres for potential trail extensions. Based on a seeding rate of 30 lbs/acre and a price of *\$11.53*/ pound the cost would be *\$346*/acre for seed. With an application rate of 300lbs per acre for fertilizer and a price of *\$.60*/pound, the cost would be *\$180*/acre for fertilizer. Based on the assumptions discussed above, the cost for seed and fertilizer are summarized below.

<i>Item</i>	<i>\$/Acre</i>	<i>Acres</i>	<i>Cost</i>
<i>Seed</i>	<i>\$346</i>	<i>1.8</i>	<i>\$623</i>
<i>Fertilizer</i>	<i>\$180</i>	<i>1.8</i>	<i>\$324</i>
		<i>Subtotal</i>	<i>\$947</i>

Miscellaneous supplies and equipment will include cement/bentonite and a pickup truck for transportation to and from the exploration area. It is assumed that the pickup will be required for *22* days at a cost of \$100/day and the cement/bentonite will cost *\$700*, for a total of *\$2,900*.

The total reclamation cost for the planned 2012-14 exploration activities is summarized below:

<i>Equipment and Personnel</i>	<i>\$11,886</i>
<i>Seed and Fertilizer</i>	<i>\$947</i>
<i>Miscellaneous Supplies and Equipment</i>	<i>\$2,900</i>
<i>TOTAL</i>	<i>\$15,733</i>

The total reclamation liability under Coal Exploration Permit Number 01-86-795 is summarized in Table 1. Outstanding liability includes the plugging and abandonment of 37 groundwater monitoring wells and the removal of fencing around two previously constructed vegetation test plots. The locations of the existing monitoring wells are shown on Plate IV-1 and Figure 1. The remaining disturbance from the 1999 trenching program is included under the 2012 reclamation cost estimate. The **40.5%** that is applied to the total cost estimate includes **25%** for contractor profit and overhead, **6%** management fee, and a contingency.

TABLE 1	
BONDING SUMMARY FOR COAL EXPLORATION PERMIT 01-86-795	
	Liability
<u>Outstanding Reclamation Liability</u>	
Removal of Fences on Revegetation Test Plots Labor – 16 Hrs X \$45.39/Hr	\$726
1998 Drilling Program Fertilizing & Seeding 0.47 acres x \$550/acre	\$260
1999 Trenching Program Fertilizing & Seeding 4.2 acres x 525/acre	\$2,258
Plug & Abandon Water Monitoring Wells 37 Wells X \$400/Well	\$14,800
<u>2012-14 Exploration Program</u>	
Drilling Work (Includes the remaining disturbance from the 1999 trenching program)	\$15,733
Subtotal	\$33,777
40.5% for Contingency and Indirect Costs	\$13,680
TOTAL	\$47,457

As shown on Table 1, the total reclamation liability under Coal Exploration Permit No. 01-86-795 is currently at **\$47,457**. Under a CD and UCM's Self-Bond and Indemnity Agreement, **\$39,293** is currently posted for Coal Exploration Permit number 01-86-795 thus leaving a

deficiency of **\$8,164**. Therefore, upon approval of this renewal application, UCM will move forward with the planned exploration activities with posting an additional **\$8,164** in bonding.

1.8 REPORTING

An annual report will be submitted to the DMLW by January 31st each year for exploration activities that occurred the previous year. This report will discuss the types of exploration activities performed during the previous year and will include a map depicting the location of any new access trails and completed drill holes. *The completion report will also show the TD, date, spud, and plugged, how the well was P&A'd, and if it was left for a monitoring well, how it was completed.*

PLATE IV-1
SITE PLAN AND WELL LOCATION MAP

