Mount Klappan Coal Project: February 2006 Update Series

Highlights of Ongoing Wetland Assessment within the Mount Klappan Coal Project Area

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The study of wetland functions is an important part of the ongoing environmental and socioeconomic baseline study and impact assessment for the proposed Mount Klappan Coal project (Project). RTEC began studying wetlands within the Mount Klappan area in 2005 and will continue do to so through 2006. Detailed documents describing baseline wetland conditions along with predicted mine impact and mitigation strategies will be submitted to all levels of government and affected First Nations later this year. The purpose of this document is to highlight results of wetland research conducted in 2005 and briefly describe the work scheduled for 2006.

Wetlands are Important

Wetlands offer many important ecosystem functions. For instance, wetlands can provide critical habitat for both aquatic (*e.g.,* breeding and rearing habitat for Dolly Varden) and terrestrial (*e.g.,* feeding habitat for bears and moose) animals. Wetlands can also play important roles in regional water quality and hydrology.

Fortune Minerals has recognized the value of wetlands to the Mount Klappan area and will follow the federal wetland mitigation process during the development, operation and closure phases of the Project. The federal wetland mitigation process involves the following three steps:

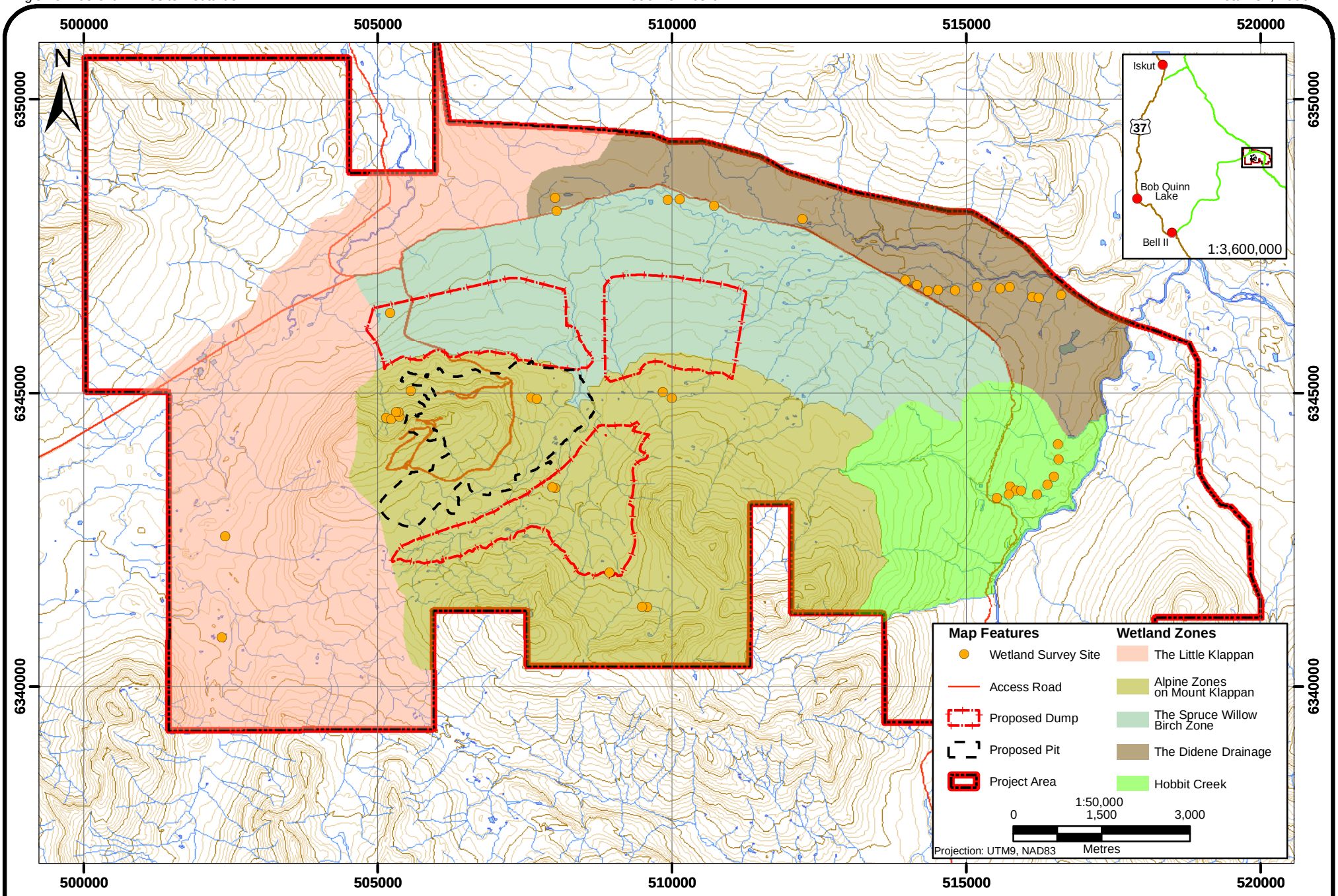
1. Avoidance of wetlands
2. Minimization wetland impacts
3. Compensation for loss of wetland functions

In order to follow this process, the location, quantity and quality of wetlands in the proposed Project area needs to be known. Work conducted in 2005 described wetlands at the mine site while the 2006 work will focus on the proposed southern access road.

Mine Site

From July through September, 2005 a field assessment program was carried out to identify and classify the wetlands within the proposed mine footprint (Figure 1). From July 14-18, 2005 an aquatics assessment sampled four wetlands for biological diversity and fish habitat. Field assistance was provided by R.J. Seymour. From July 29 through August 2, 2005 wetlands were classified in accordance with methods outlined by the province of B.C (MacKenzie and Moran, 2004). Aaron Louie and Ella Quock provided field assistance. Will MacKenzie from the Research Branch of the Ministry of Forests provided guidance in the field on classifying Alpine Wetlands. On August 29, 2005 James Malone assisted in establishing wetland monitoring wells and a hydrological survey of the wetlands in the Little Klappan Wetland Zone.

Within the proposed project area five distinct zones were identified to describe how the wetlands fit into the surrounding landscape.



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Mount Klappan Coal Project: Wetland Field Map

RTEC Rescan™

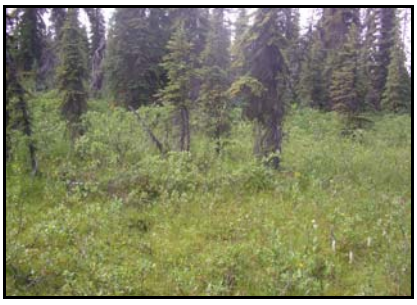
1. The Little Klappan Wetland Zone
   - south, from the project area boundary, north, to where it crosses the rail grade
   - characterized by scrub birch and sedge dominated wetlands
   - comprised of wetlands in the upper Little Klappan watershed

2. Mount Klappan Alpine Wetland Zone
   - south of the project area on the upper slopes of Mount Klappan
   - the majority of mine development is scheduled to be located in this area
   - low willow snow-bed seep wetlands are the most common wetland type
   - in these wetlands surface water, from snow melt, flows in rivulets and infiltrates into the ground
   - comprised of wetlands on Mount Klappan above 1500m elevation

3. The Spruce Willow Birch Wetland Zone
   - area south of the existing rail grade that skirts Mt Klappan
   - the area is gently sloping
   - characterized by patterned wetlands due to the formation of thick sphagnum moss ribs interspersed with pools of surface water
   - comprised of wetlands on the north-facing slope of Mount Klappan below 1500m elevation

4. The Didene Wetland Zone
   - north of the rail grade
   - generally open and does not have any tree cover
   - non-treed wetland complexes are typical of this zone.
   - comprised of wetlands on the south-facing slope bordering the Spatsizi Wilderness Plateau

5. Hobbit Creek Wetland Zone
   - east of the proposed pit site
   - heavily treed
   - sphagnum moss bogs and spruce/horsetail swamps are abundant
   - comprised of wetlands on east-facing slope near Hobbit Creek



Southern Access Road

A preliminary assessment of wetlands along the proposed southern road route was conducted in September 2005. The assessment included a helicopter flight over the road route (see Fish Report) to determine where road realignment was necessary so as to avoid wetland areas.

The head road engineer, Carl Hovey of All North Inc. (who was also along for the flight), was confident that, for the most part, the road could be realigned so as to avoid large (> 1 ha) wetland areas. The only exception is a wetland complex located along Craven Creek. A ground-level assessment of this area identified it as a wetland dominated by willows and sedges. No fish were documented in this wetland (see Fish Report).

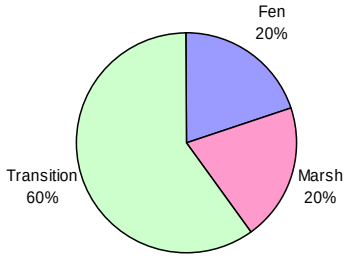
In addition to the Craven Creek wetland complex there are some smaller (< 1ha) wetlands that the road may not be able to logistically avoid. In order to determine the regional effect of wetland loss due to road development, a thorough wetland classification and inventory of the study area will be conducted during the summer of 2006.

Wetland Area and Classification

Wetland area estimates were derived from Terrain Resource Information Management (TRIM) data sets. Two wetland classes are used in the TRIM system, swamp and marsh. Forested wetlands, such as bogs and open water wetlands are often classified as different features and are not included in the area calculations. Satellite imagery will be used to improve wetland area calculations in 2006. Approximately 1.6% or 275.3ha of the project area is classified as wetlands by TRIM; however it is expected that this area estimate is low.

1. The Little Klappan Wetland Zone
   - more sampling in this area is required in 2006
2. Alpine Wetland Zones on Mount Klappan
   - no classification system of Alpine Wetlands exists in British Columbia
   - wetlands were typically low willow moss-snowbed-seeps or alpine-rivulets
   - locally unique marled pond identified

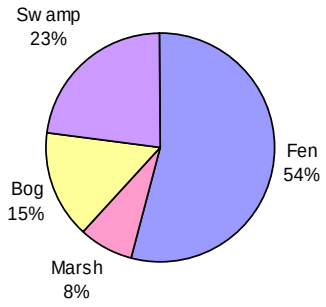
3. The Spruce Willow Birch Wetland Zone
   - shrub-carr transitional sites connect marsh and fen wetlands to forested and alpine ecosystems
   - fens[1] typically patterned
   - soil types dominated by thick-well developed peat
   - more sampling is required in 2006



[1] *Fen refers to a nutrient-medium peat land dominated by sedges and brown moss. Mineral bearing groundwater is within the rooting zone.*

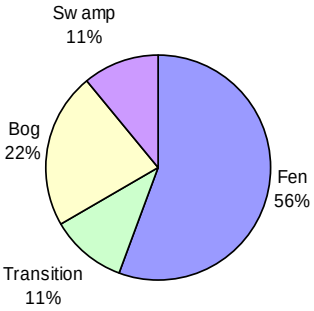
4. The Didene Wetland Zone

   - open areas dominated by fen wetlands
   - forested area near the lower Didene Creek contained more swamps and bogs
   - moose and caribou observed grazing in open areas.



5. Hobbit Creek Wetland Zone

   - open areas dominated by fens and treed areas dominated by bogs
   - shrub transition sites connect wetland areas with upslope ecosystems
   - spruce/horsetail swamps are present in forested areas



Assessment of Wetland Values

Once all the wetlands within the Project area have been classified, an assessment of their relative value on local, regional, and landscape scales will be conducted. This assessment will rely on field data collected within the Project Area as well as published scientific literature and the expertise of RTEC scientists. Traditional knowledge will also be incorporated into the wetland value assessment. A preliminary summary of wetland functions and values is presented below.

A "function" is a specific role; an example is buffering against flood events. The associated value would be protection to property loss. Wetlands reduce the damage caused by flooding by acting as a receiving ground for surface water. In some instances the function and the value are the same. Wetlands provide valuable hunting and recreation areas. Hunting areas are a function of wetlands and hunting is a valued cultural activity.

Functions	Values
Hydrology	
• buffer against flood events • allow continuous recharge of surface water	• protects against property damage caused by flooding • maintains adequate water supplies for human and wildlife consumption and aquatic life
Water Quality	
• remove sediment • store nutrients	• removes sediments deposited by driving the rail grade • maintains good water quality for human and wildlife consumption and aquatic life

Functions	Values
Climate	
• global climate regulation • carbon fixation, and methane equilibrium • micro-climate influence	• preventing and/or reducing property damage • meeting international climate change agreements
Biodiversity and Production	
• habitat for wildlife • hunting and traditional use	• tourism and recreation opportunities • hunting and traditional use

Summary

By August 2006 RTEC will have developed a comprehensive understanding of the values of wetlands within the Project Area. By following the federal wetland mitigation process, Project development will strive to first avoid wetland areas. Where this is not logistically possible, strategies for the minimization of wetland impacts and/or compensation for wetland functional losses will be developed and implemented.

Highlights

- Wetlands are an important ecosystem component of the Mount Klappan area;
- Fortune Coal Limited will follow the federal wetland mitigation process;
- Detailed assessment of wetlands in mine footprint area was conducted in 2005;
- Detailed assessment of wetlands along proposed southern access to be conducted in 2006;
- Valuation of wetland functions to be conducted in 2006; and
- Final baseline assessment and impact assessment will be completed and made available to all levels of government and the affected public, including First Nations in late-2006.