

TASEKO MINES LIMITED

FISH LAKE PROPERTY

850948

**AN ENVIRONMENTAL OVERVIEW
AND PERMITTING STRATEGY
FOR THE
FISH LAKE PROPERTY**

Prepared for
TASEKO MINES LIMITED
Suite 1020
800 West Pender Street
Vancouver, B.C.
V6C 2V6

Prepared by
HALLAM KNIGHT PIESOLD LTD.
Suite 658 - 409 Granville Street
Vancouver, B.C.
V6C 1T2

April, 1991

TASEKO MINES LIMITED

FISH LAKE PROPERTY

TABLE OF CONTENTS

| | <u>Page No.</u> |
|---|-----------------|
| 1.0 INTRODUCTION | 1 - 3 |
| 2.0 PROJECT SETTING | 4 |
| 2.1 Physiography | 4 |
| 2.2 Climate | 4 - 5 |
| 2.3 Hydrology | 5 - 7 |
| 2.4 Fisheries | 7 - 9 |
| 2.5 Wildlife | 9 |
| 2.6 Vegetation | 10 |
| 3.0 ANALYSES OF PRINCIPLE PERMITTING ISSUES | 11 |
| 3.1 Land Tenure | 11 - 12 |
| 3.2 Native Land Claims | 12 - 13 |
| 3.3 Access and Power Line Rights-of-Way | 13 - 14 |
| 3.4 Waste Characteristics | 14 - 15 |
| 3.5 Waste Disposal Sites | 15 - 18 |
| 4.0 LEGISLATIVE OVERVIEW | 19 |
| 4.1 Federal Legislation | 19 - 20 |
| 4.2 Provincial Legislation | 20 - 22 |
| 5.0 PERMITTING STRATEGY | 23 |
| 5.1 The Provincial Role | 23 - 25 |
| 5.2 The Federal Role | 25 |
| 6.0 PREPARATION OF THE PROSPECTUS | 26 |

| | <u>Page No.</u> |
|--|-----------------|
| 7.0 STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES | 27 |
| 7.1 Physiography, Soils and Seismicity | 27 - 28 |
| 7.2 Waste Characterization Studies | 28 |
| 7.3 Meteorology | 28 - 29 |
| 7.4 Surface and Groundwater Quality | 29 |
| 7.5 Surface and Groundwater Hydrology | 29 - 30 |
| 7.6 Vegetation and Forestry Resources | 30 |
| 7.7 Wildlife Resources | 30 - 31 |
| 7.8 Fisheries and Aquatic Resources | 31 |
| 7.9 Land Capability and Historic Use | 31 - 32 |
| 7.10 Archaeological and Heritage Resources | 32 |
| 7.11 Socioeconomic Studies | 32 |
| 8.0 STAGE I ENVIRONMENTAL AND SOCIOECONOMIC IMPACT STATEMENT REPORT | 33 |
| 8.1 Development Plan | 33 |
| 8.2 Environmental and Socioeconomic Description | 33 |
| 8.3 Environmental Protection and Waste Management Plans | 33 |
| 8.4 Environmental and Socioeconomic Impact Assessment | 34 |
| 9.0 PUBLIC PARTICIPATION AND INFORMATION PROGRAM | 35 |
| 10.0 OPERATIONAL PERMITS, LICENCES AND APPROVALS | 36 |
| 10.1 Ministry of Energy, Mines and Petroleum Resources Section 6 Approvals (Chief Mine Inspector Approvals) | 36 |
| 10.2 Ministry of Energy, Mines and Petroleum Resources Section 7 Approvals (Chief Mines Inspector Approval) | 36 - 37 |
| 10.3 Ministry of Crown Lands | 37 |
| 10.4 Ministry of Forests | 37 |
| 10.5 Ministry of Environment, Waste Management Branch | 37 |
| 10.6 Ministry of Environment, Water Management Branch | 38 |
| 10.7 Ministry of Health, Health Inspector Approval | 38 |
| 10.8 Federal Department of Transport, Navigable Waters Protection Act | 38 |
| 10.9 Construction and Operating Camp (If Required) | 38 - 39 |
| 11.0 REFERENCES | 40 - 41 |

TASEKO MINES LIMITED

FISH LAKE PROPERTY

1.0 INTRODUCTION

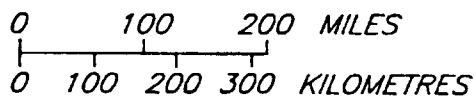
The Fish Lake Property, a porphyry gold-copper deposit, is situated approximately 125 km southwest of Williams Lake, B.C. and approximately 10 km northeast of Lower Taseko Lake at an elevation of approximately 1450 m (Figure 1). Access is via the paved Bella Coola Highway to Lee's Corners, roughly 100 km west of Williams Lake, then 60 km southwest along a government maintained gravel road to the Taseko River. Access to the property is gained by a 10 km branch road which follows southward along the east side of the river and thence eastward to Fish Lake. Elapsed motor vehicle travel time between Williams Lake and the property is approximately 2.5 hours.

The portion of the deposit with grades exceeding 0.20% copper equivalent is roughly circular in shape with a mean diameter of approximately 900 m. The contacts of the deposit are subvertical and extend to a depth of at least 500 m. Current mineable reserve estimates at a 0.40% copper equivalent cutoff grade and within the top 200 m of deposit total 231 million tons at an average grade of 0.24% copper and 0.014 oz gold/ton. The deposit is open at depth and has potential for approximately 500 million tons of mineable reserves at a 0.20% copper equivalent cutoff grade.

This environmental overview evaluation has been prepared for Taseko Mines Limited for purposes of:

- o identifying the principle issues that may influence the permitting of mine development at the Fish Lake site,

TASEKO MINES LTD.
FISH LAKE PROJECT
LOCATION MAP



Mar. 13, 1991

KNIGHT AND PIESOLD LTD.
CONSULTING ENGINEERS

FIGURE I

CAD FILE: \PROJECT\0001\0000 Plot scale 1=1

- o **preparing a permitting strategy for piloting a proposed development at Fish Lake through the Provincial and Federal review (MDRP and EARP), approval and permitting processes.**

Results of this evaluation indicate that there are no major environmental issues that would prevent the development of the Fish Lake Property.

2.0 PROJECT SETTING

2.1 Physiography

The mine project is located within the Chilcotin Ranges subdivision of the Pacific Ranges in the Coast Mountains physiographic region and is flanked by the Fraser Plateau immediately to the north. The boundary between the Chilcotin Ranges and the Fraser Plateau is sharply defined by a narrow transition zone at the 1800 m contour (Holland, 1964). The range between Taseko Lakes and the Fraser River consist of Palaeozoic and Mesozoic sedimentary and volcanic rocks, intruded by small granitic stocks.

Landscape in the Chilcotin Ranges and in the Fish Lake area are the result of post Pleistocene glaciation and generally display low elevation rounded summits and gently sloping areas of undissected upland.

To the west of the property higher peaks in the Coast Range were sculptured by cirque glaciers leaving scalloped north facing slopes. These icefield illustrate the extent of glaciation that took place during the Pleistocene.

2.2 Climate

The Coast Mountains form a barrier to the onflow of moist maritime weather and tend to create a rainshadow effect on the east slopes of the ranges. The mine project is located within this rainshadow. There are few meteorological stations in the Chilko/Taseko region from which to obtain representative data for purposes of planning. Regional climate stations with reasonable data sets include Tatlayoko Lake (elevation 853 m) located 60 km to the northwest of the proposed minesite but still within the Chilko Mountains, Big Creek (elevation 1128 m) located 50 km to the northeast of the minesite but at a lower elevation than the claims area and Alexis Creek (elevation

1219 m) located 70 km to the north of the minesite and is more representative of the Fraser Plateau than the lee side of the Coast Mountains. It is expected that Tatlayoko Lake data better represents climatic conditions at the project site (Table 1).

Mean daily temperatures at Big Creek average 2.0°C and range from -18.9°C in January to 21.5°C in July with extreme minimum of -47°C and extreme maximum of 39°C. Alexis Creek has mean daily temperatures averaging 0.4°C and ranging from -21°C in January to 20°C in July with extreme minimum -50°C and extreme maximum of 32°C. Mean daily temperatures at Tatlayoko Lake average 3.9°C and range from -13°C in January to +23°C in July with extreme minimum of -43°C and extreme maximum of +38°C. Temperatures are generally warmer in the mountains at Tatlayoko Lake than at Big Creek and Alexis Creek. The latter appear to be influenced more by the cold interior climate.

Rainfall can occur in any month at all three stations. Total annual precipitation is 412 mm at Tatlayoko Lake, 336 mm at Big Creek and 464 mm at Alexis Creek. Rainfall peaks in October and November at Tatlayoko Lake while the peak occurs earlier in the year in June, July and August at the other two stations. The maximum rainfall in 24 hours is recorded to be 68 mm in November at Tatlayoko Lake, 45 mm in August at Big Creek and 42 mm in June at Alexis Creek.

Snowfall, which contributes approximately 50% of the total precipitation can occur in all months except June, July and August. Average snow accumulation is expected to be about 0.5 m.

2.3 Hydrology

The project is located within the Taseko River drainage basin which is tributary to the Chilko, Chilcotin and Fraser River systems. The Taseko drainage basin has a northerly aspect with a dendritic drainage pattern consisting of numerous smaller tributaries and the Taseko Lake chain (Upper and Lower Taseko Lakes). Many of these tributaries are glacier fed which accounts for

TABLE 1

**TASEKO MINES LTD.
FISH LAKE PROPERTY**

**TEMPERATURE AND PRECIPITATION
FOR SELECTED STATIONS**

| | Annual Temperature | | | Annual Precipitation | | |
|-----------------------|--------------------|-------------|-------------|----------------------|-------------|--------------|
| | <u>Avg.</u> | <u>Max.</u> | <u>Min.</u> | <u>Rain</u> | <u>Snow</u> | <u>Total</u> |
| TATLAYOKO LAKE | 3.9 | 10.5 | -2.6 | 270.3 | 141.8 | 412.2 |
| BIG CREEK | 2.0 | 9.3 | -5.2 | 196.8 | 138.1 | 335.9 |
| ALEXIS CREEK | 0.4 | 7.8 | -7.0 | 269.7 | 195.2 | 464.1 |

the high silt load in the lakes and streams. The Taseko River extends to the southwest beyond these lakes into rugged mountain terrain and is fed by several tributaries namely: Amazon, Powell, Granite, Battlement, Denian, and Grizwold creek most of which originate in small high alpine glaciers. The Lord River flows from the south and enters Upper Taseko Lake at a commonly shared delta at the lakes south end. Fish Creek drains a small basin containing Fish Lake at an elevation of 1450 m to the northeast of the Taseko River. Fish Creek enters the Taseko River at the 1250 m elevation 15 km north of the outlet of Taseko Lakes. Big Lake is a small lake at the 1300 m elevation which drains to the northeast into the Taseko River at the 1200m elevation.

Water Surveys of Canada maintain several active hydrometric stations in the Chilko and Chilcotin drainage basins, although the Taseko Lake station (08MA03) located at the outlet of Taseko Lake has been discontinued. There is however sufficient regional data available to permit a regional hydrological analysis. The mean annual discharge and unit area runoff figures for the regional hydrometric stations range from 677.6 mm at the outlet of Taseko Lake to 158.5 mm at Chilcotin River below Big Creek. A summary is presented in Table 2.

There is a clearly a decrease in runoff at stations located to the north and east of the Taseko River basin which supports the rainshadow effect experienced by these drainages flowing onto the plateau.

The lack of hydrology data for the Taseko River basin will require the installation of continuous recording stations on these drainages in order to obtain meaningful data for future planning.

2.4 Fisheries

The project is located in the B.C. Ministry of Environment (MOE) Cariboo fisheries management region under the direction of the Williams Lake Regional Office.

TABLE 2
TASEKO MINES LTD.
FISH LAKE PROPERTY
REGIONAL RUNOFF

| <u>Regional Hydrometric Station</u> | <u>Drainage Area</u> | <u>Mean Annual Flow (dam)</u> | <u>Runoff (mm)</u> |
|---|----------------------|-------------------------------|--------------------|
| Big Creek above Ground Log Creek (08MB006) | 232 | 81,500 | 351.3 |
| Big Creek below Graveyark Creek (08MB007) | 1020 | 171,000 | 167.6 |
| Chilcotin River below Big Creek (08MB005) | 19,300 | 3,060,000 | 158.5 |
| Chilcotin River near Redstone (08MB003) | 6,220 | insufficient data | |
| Chilko River at outlet of Chilko Lake (08MA002) | 2,110 | 1,300,000 | 616.1 |
| Chilko River near Redstone (08MA001) | 6,940 | 2,740,000 | 394.8 |
| Taseko River at outlet of Taseko Lake (08MA003) | 1,520 | 1,030,000 | 677.6 |

Sportfish found in the region include: all five species of Pacific Salmon, kokanee, rainbow trout, Dolly varden char, steelhead, whitefish, burbot, and sturgeon. The Chilko and Chilcotin rivers are important salmon spawning and rearing watercourses, in particular, the Chilko Lake Sockeye run is at par with the Adams River run in terms of numbers and importance. The local natives dip the Chilko and Chilcotin rivers for Sockeye due to the abundance of fish in the spawning runs.

The Taseko River is known to be utilized by Chinook salmon, rainbow trout, Dolly varden char and steelhead (radio tagged) and likely by Sockeye salmon (Mr. Jack Leggett, BC MOE, pers comm., March 1, 1991). Fish Lake is well known for its rainbow trout sportfishery primarily because of numbers of fish but not necessarily for their size. Big Lake on the other hand is better known for the size of rainbow trout occupying the lake and is netted regularly by native fisherman. Taseko Lakes and the Taseko River upstream of the Taseko Lakes contains rainbow trout and Dolly varden char however the presence of salmon in this reach is not confirmed.

2.5 Wildlife

The project is located in the B.C. Ministry of Environment (MOE) Cariboo wildlife management region under the direction of the Williams Lake Regional Office.

Wildlife species known to inhabit the Chilko/Taseko River drainages (management unit 5-4) include: moose, big horn sheep, mountain goat, mule deer, grizzly bear, black bear, cougar, coyote, fox, bobcat, wolverine and martin. Caribou are present in this region, however their presence in the Taseko River drainage basin has not been confirmed. Avian species include: blue, spruce and ruffed grouse, ptarmigan, ducks, coots, snow geese, ross geese, white-fronted geese, canada geese and common snip.

2.6 Vegetation

Logging is actively carried on in the area and is the primary resource industry of the Chilcotin area. Cutblocks in the proposed minesite area are scheduled for logging. Elevation determines the vegetation communities present as illustrated by the four main biogeoclimatic zones found in the area. At lower elevations the Sub-boreal Pine-Spruce Zone extends up the Taseko River valley as far as the north end of Taseko Lakes. Forests in this zone consist of extensive even aged stands of lodgepole pine; the result of an extensive fire history, with a minor amount of spruce regeneration. Lichens and feathermoss dominate the understory although pinegrass and kinnikimick are also present. Ground lichens grow profusely in drier areas providing valuable winter feed for caribou.

The Montane Spruce Zone extend around the periphery of Taseko Lakes to middle elevations. Trees characteristic of this zone include Englemann and hybrid spruce and subalpine fir. Due to past fires, successional forests of lodgepole pine, old age Douglas fir and aspen are common.

The Englemann Spruce-Subalpine Fir Zone occupies higher elevations to timberline in the Chilcotin region. The dominant trees are Englemann spruce, subalpine fir and lodgepole pine. Trees are generally clumped with extensive meadows and open parklands. Lodgepole pine and whitebark pine are common in drier areas and mountain hemlock occurs in wet areas with high snowfall.

Timberline is between 1800 and 1900 m elevations. The Alpine Tundra Zone consists of dwarf shrubs, herbs, mosses and lichens.

ANALYSES OF PRINCIPLE PERMITTING ISSUES

3.0 ANALYSES OF PRINCIPLE PERMITTING ISSUES

In British Columbia there are generally five main environmental and socioeconomic issues that present major hurdles in the government approval process, and which potentially preclude the acquisition of production permits or result in public rejection for a project to proceed:

- o Land Tenure and location relative to Parks, Conservation Areas, Wilderness and Flooding Reserves
- o Access
- o Native Land Claims
- o Nature of the Ore and Waste
- o Waste Disposal

The following subsections provide an overview fatal flaw analyses of these major socioeconomic and environmental issues as they relate to the Fish Lake Property.

3.1 Land Tenure

Land within the mineral potential of the project area is Crown land where subsurface or placer rights have been allocated by way of located mineral claims, Crown Grants or placer leases.

Except for a small Ecological Reserve located on top of Cardif Mountain approximately 10 km northeast of Fish Lake none of the proposed development area is alienated or restricted from mining. There are no known Parks (Federal, Provincial, or Regional), Wilderness or Conservancy Areas, Agricultural or Ecological Reserves, Recreational Areas or other Crown reserves that would affect the Fish Lake Project area.

ANALYSES OF PRINCIPLE PERMITTING ISSUES

B.C. Hydro holds a Flooding Reserve over the low lands encompassing the Holmathko River, Chilko Lake and the Taseko Lakes and portions of the Taseko River downstream of Taseko Lake. However, none of these areas appear to conflict with mineral development in the Fish Lake area. Mining and staking, although potentially subject to conditions, are permitted activities in Flooding Reserves.

The Forest Act was recently amended to authorize the establishment of Wilderness areas within Provincial Forests. Recently, the Ministry of Parks, issued an outline of proposed Wilderness Areas as a planning document for public input (Parks 90). The Fish Lake Property lies well outside the boundaries of a proposed Wilderness Preserve that incorporates parts of Chilko Lake.

Various rights over surface tenure, in the form of Tree Farm licenses, Trapping licenses and grazing rights covering the area have been imparted by the Crown.

3.2 Native Land Claims

In 1973 the Federal government announced, by way of official policy, that it would negotiate all Native Land Claims and outstanding grievances. This policy, now better known as the Comprehensive Land Claims Policy, not only deals with land issues, but also includes access, aboriginal rights, environment and underlying natural resources.

Subsurface resources on settlement lands may be provided for in Claims settlements, particularly in areas close to communities and in critical wildlife habitat, as a means to avoid land use conflicts. The granting of subsurface rights may also be used to provide opportunities for Natives to participate in and benefit from resource development within the Land Claims area. However, the policy does not preclude resource companies from mineral development in Land Claims areas.

ANALYSES OF PRINCIPLE PERMITTING ISSUES

As of March 01, 1991 a total of 19 Statements of Claim (Land Claims) covering virtually all of British Columbia have been registered with and accepted by the Comprehensive Claims Branch of the Department of Indian Affairs and Northern Development and are now entering into Framework Agreements. The government is currently limiting the number of agreements negotiated in any one year.

There are also three Statements of Claim currently under review, and seven anticipated Claims for a total of 29 potential Land Claims. One of the anticipated Claims includes the area historically occupied by the Chilcotin Tribe. Whether or not the property lies within the proposed Chilcotin Tribal Lands will not be known until a Statement of Claim has been registered. As at March 01, 1991 the Chilcotin Tribe had not entered a Statement of Claim.

On the basis of known heritage sites, the majority of Chilcotin occupation was centered around Chilco Lake, Hanceville, Tatla Lake and Kleena Kleene. Historical use of the area for hunting, fishing and food gathering can not be discounted. The closest Indian Reserves are located within the Chilco Lake watershed at the inlet and outlet of Konni Lake approximately 15 km northwest of the Fish Lake property.

While Comprehensive Land Claims include provision for the granting of subsurface rights and Native participation in resource development, the policy does not preclude resource companies from mineral development in Land Claims areas in the future. It should be noted that the Fish Lake property was staked in 1969, prior to establishment of the Comprehensive Land Claims Policy.

3.3 Access and Power Line Rights-of-Way

For purposes of government approval, access, transmission lines and port facilities for a potential

ANALYSES OF PRINCIPLE PERMITTING ISSUES

mine development are now considered components of the mine development and must collectively receive approval as a single application.

Those projects for which access already exists, such as the Fish Lake property, do not need to include the construction of an access road as a component of the project, or undertake comprehensive studies of alternative routes. The environmental impact of upgrading an existing access route is considered a minor issue and relatively straight forward to permit.

Permitting a powerline right-of-way to connect with the B.C. Hydro Soda Creek 230 kv substation 10 km north of Williams Lake, may require baseline studies but is regarded as relatively easy to permit.

3.4 Waste Characteristics

The most controversial issues surrounding mineral development from a permitting perspective are:

- o losses of heavy metals from tailings supernatant discharge and waste rock dump runoff,
- o acid generation potential of waste rock and tailings,
- o acid rain from roasting off gasses, and
- o use of cyanidation to extract precious metals

Chalcopyrite is the predominant copper mineral within the Fish Lake deposit. Gold occurs in economically important amounts in association with chalcopyrite and pyrite. Silver is of minor economic importance. There are no indication of metals such as mercury, antimony, or cadmium in sufficient quantities to indicate a potential environmental concern.

ANALYSES OF PRINCIPLE PERMITTING ISSUES

The Fish Lake deposit is relatively low in pyrite content, moderately high in carbonate content and as such is expected to have a low propensity for acid generation. On the basis of information published by Ministry of Energy Mines and Petroleum Resources (1976) pyrite content ranges from about 1% to 2% in the eastern side of the ore zone, about 1% in the centre of the ore zone, and well below 1% in the western portion of the ore zone. Overall the main mineralized zone is expected to contain between 1 and 2% pyrite. The higher levels of pyrite generally occur in areas where copper content is highest and would be processed in a milling operation.

Hydrothermal alteration assemblages in the Fish Lake deposit include several species of carbonate mineralization. Gypsum veining is common, in the lower portions of the ore zone and has been partially leached from the upper portions of the orebody by groundwater action.

Although the quantity of carbonate that may be available has not been quantified it would appear that the mineralized zone contains abundant quantities of minerals of carbonate origin to give the ore and waste rock a positive NNP acid-base accounting. Mineralogy suggests that waste rock and tailings will have a positive net neutralization potential and will be acid consuming (non acid generating). Absence of significant oxide mineralization in the Fish Lake deposit supports this conclusion. A battery of tests are required to confirm the acid-base signature at Fish Lake.

The milling process will in all likelihood be limited to conventional copper flotation to produce a copper concentrate with significant gold values. A roasting process and cyanidation of the ore will not be required and as such, eliminates any environmental concerns relating to control over sulphur emissions and use of cyanide in the milling process.

3.5 Waste Disposal Sites

The Ministry of Energy Mines and Petroleum Resources and the Ministry of Environment require

ANALYSES OF PRINCIPLE PERMITTING ISSUES

that proponents of new mine developments submit a "walk away" plan for the secure disposal and reclamation of mine wastes in perpetuity prior to government approval for project development. In some situations mine waste disposal can be a major permitting concern if there is an absence of potential locations suitable for the disposal of wastes, particularly from large tonnage open pit operations which generate large quantities of overburden, waste rock and tailings.

Normally the government request that proponents of a potential development examine several alternative sites. In the case of the Fish Lake property several sites are available. On the basis of a preliminary review, Knight and Piesold Ltd. (1991) identified three potential tailings disposal sites, two of which are in immediate proximity of the ore body (Figure 2). Other sites may be available.

All three alternatives are considered viable from an legislative perspective, with Site 1 being judged the most environmentally acceptable from a permitting standpoint. Taseko Mines Limited holds or controls mineral claims at all three sites.

Site 1, Located above Fish Lake will require that: tailings dams be seismically engineered, tailings seepage be recovered before entering Fish Lake and tailings supernatant be recycled in the milling process or treated to acceptable levels before release to the Taseko River watershed.

Site 2, Fish Lake: will require Ministerial Approval to use Fish Lake for disposal of tailings. This option would be more difficult to permit and would require compensation in the form of replacement of recreational and fish habitat at other locations or alternatively the return of the completed open pit as replacement habitat. Water management and treatment would be major considerations.

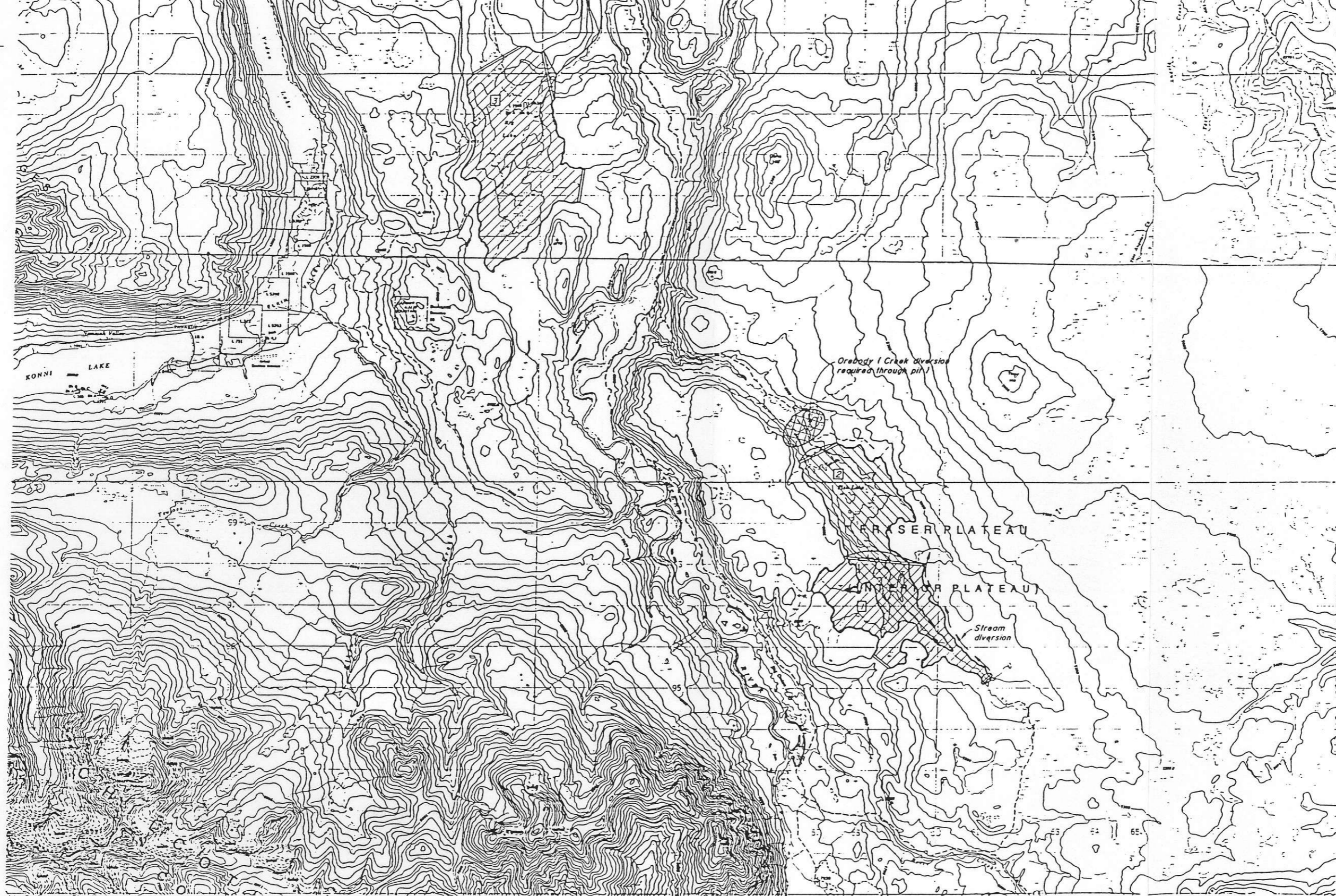
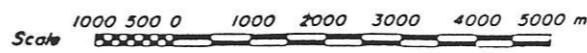


FIGURE 2



| | | | |
|--|-----|--|----------|
| KNIGHT AND PIESOLD LIMITED CONSULTING ENGINEERS - VANCOUVER, B.C. | | TASEKO MINES LTD. | |
| | | FISH LAKE PROPERTY | |
| | | PRELIMINARY ASSESSMENT OF TAILINGS STORAGE ALTERNATIVES | |
| DESIGNED | JPH | DRG. NO. | 1730.001 |
| DRAWN | RDT | SCALE | REV. |
| CHECKED | | DATE | |
| APPROVED | | | |

| DRG NO | DESCRIPTION | REV. | DATE | DESCRIPTION | APPROVED | REV. | DATE | DESCRIPTION | APPROVED |
|--------|--------------------|------|------|-------------|----------|------|------|-------------|----------|
| | REFERENCE DRAWINGS | | | REVISIONS | | | | REVISIONS | |

ANALYSES OF PRINCIPLE PERMITTING ISSUES

Site 3, **Big Lake**: consists of a depression and small lake on the west side of the Taseko River, and would also require Ministerial Approval for tailings disposal. This lake supports rainbow trout which are netted by local native fishermen as well as being important for recreational fishing. The main concerns would relate to seepage recovery and water management and treatment if supernatant could not be recycled to the milling process. Road relocation and off-site compensation for lost fisheries would be required.

There are adequate areas for overburden and waste rock disposal immediately north of Fish Lake. Minor concerns with waste rock disposal relate to control of nitrogen losses from explosives and reclamation of dump surfaces.

4.0 LEGISLATIVE OVERVIEW

The Fish Lake Project will be subject to both Federal and Provincial legislative requirements.

The BNA Act of 1867 now the Constitutional Act of 1867 does not specifically assign legislative powers for environmental protection to either Provincial or Federal governments. Consequently, Canada's environmental legislation consists of a patchwork of both Federal and Provincial legislation in which the number of Federal and Provincial statutes dealing with environmental protection in Canada is in excess of fifty. Those acts which are most relevant to the Fish Lake Project are as follows:

4.1 Federal Legislation

The principle Federal legislation dealing with environmental protection are the:

- o Canadian Environmental Protection Act
- o Fisheries Act
- o Transportation of Dangerous Goods Act
- o International Boundary Waters Treaty Act
- o International Rivers Improvement Act

The Canadian Environmental Protection Act empowers the Governor-in-Council (Cabinet) to prescribe, control, limit and set regulations on the manufacture, use, storage, transport and disposal of toxic substances and air emissions, and empowers the Governor-in-Council to require plans, specifications, studies and submission of samples. For the Fish Lake Project this Act will be used to require the development of an Environmental Impact Assessment Report (EIA). This report will be the same report as the Stage I Environmental Impact Report prepared for the B.C. Mine Development Steering Committee.

LEGISLATIVE OVERVIEW

The most broad reaching environmental protection provisions are contained within Sections 34, 35 and 36 of the Fisheries Act, one of Canada's oldest pieces of legislation. In essence the Act controls the discharge of substances that would render the receiving environment deleterious to fish, fish habitat or the use by man of fish that frequent the water. The Fisheries Act empowers the Governor-in-Council to set regulations prescribing deleterious substances. With respect to the mining industry, the Metal Mining Effluent Regulations and Guidelines prescribe limits for discharges from base metal mines. Where there are no specific regulations (i.e. gold mines using the cyanidation process) the general provisions of the Fisheries Act concerning discharge of a deleterious substances apply.

The Transportation of Dangerous Goods Act restricts the handling or transport of dangerous goods unless all applicable safety requirements are complied with and all the containers and means of transport comply with all safety standards.

Mines located within, have discharges to, or propose alterations to watersheds which cross international boundaries are subject to provisions of the Boundary Waters Treaty Act and International River Improvements Act and provisions of the International Pacific Salmon Fisheries Commission. These acts provide for international cooperation to ensure limitation of transboundary movement of pollutants and changes in the hydrological regimes of international waters. The Fish Lake Project is not located within an international watershed consequently, provisions of these legislation are not directly applicable.

4.2 Provincial Legislation

The relevant legislation in British Columbia relating to the environmental protection and the mining industry are as follows:

LEGISLATIVE OVERVIEW

- o Mine Development Assessment Act
- o Waste Management Act
- o Environment Management Act
- o Workers Compensation Act
- o Water Act
- o Mines Act

The new Mine Development Assessment Act (Bill 59) formalizes the Provinces Mine Development Review Process (MDRP) established in 1984. The review process is administered jointly by the Ministry of Energy, Mines and Petroleum Resources and the Ministry of Environment who may appoint independent assessment panels to conduct inquiries or public hearings on any application.

The act ensures that both mine site and dedicated off-site infrastructure (access roads, rail heads and ocean terminals) are subject to a detailed impact assessment, with an acceptable environmental protection plan required in all cases. The Mine Development Certificate replaces Approval-in-Principle granted under the previous process and Mine Operation Certificates will be required to construct and operate all mine components including access roads. This legislation is directly applicable to the Fish Lake Project and will cover both the mine site and new or upgraded access.

Provision has been included for joint federal and other jurisdictional reviews, public consultation, media activities, and the recovery of costs for certification procedures, panel assessments and public hearings.

The Waste Management Act regulates the introduction of wastes into any aspect of the environment and requires that no person in the course of conducting industry, trade or business to cause or allow waste to be introduced into the environment. The Act also provides for the handling, storage and disposal of Special Wastes and the preparation of Spill Contingency Plans.

LEGISLATIVE OVERVIEW

The Environment Management Act is far reaching and empowers the Minister to manage, protect and enhance the environment. Under the Act the Minister may require an environmental impact assessment from a proponent of a mine development that may have a detrimental impact on the environment. This Act is directly applicable to the Fish Lake Project.

Under the Water Act proponents of new mine developments are required to obtain Water Licenses for the use, storage and diversion of water for use in process, fire protection, hydroelectric development and domestic services. Approvals are required for installation of culverts, stream crossings and work in or about a stream.

The environmental protection provisions contained within the new Mines Act (1989) spans the entire spectrum of mine development from exploration to abandonment. It empowers the Minister and the Chief Inspector of Mines to require plans and specifications for the protection and reclamation of the land and watercourses adjacent to an operation during exploration, construction and decommissioning phases of a mine development and the return of all lands to a level of productivity not less than existed prior to mining. The Minister is also empowered to require the submission of plans and specifications for the construction and operation of tailings impoundments and waste rock dumps, not only for safety reasons but also to ensure the control of acid rock drainage and seepage to groundwater.

Almost all operational permits, licenses and approvals are issued by the Province. However, the Federal agencies are interveners in the review of all permit applications and administer their legislation through the Provincial permitting process.

5.0 PERMITTING STRATEGY

In British Columbia, the Province acts as the lead agency for administering the permitting of new mine developments. Federal agencies work within the Provincial review process to enact their legislation. This is termed the "One-Window-Approach" and is structured such that the proponent is only required to produce one comprehensive impact assessment that meets the requirements of all levels of government.

The proposed strategy for permitting the Fish Lake Project would be as follows:

- o Step 1 - Preparation of a Prospectus to the B.C. Mine Development Steering Committee,
- o Step 2 - Conducting the necessary Stage I Environmental and Socioeconomic Baseline Studies,
- o Step 3 - Preparation of a Comprehensive Stage I Environmental and Socioeconomic Impact Statement for a Mine Development Certificate
- o Step 4 - Acquisition of all necessary production permits, licenses and approvals.

5.1 The Provincial Role

In British Columbia, The Mine Development Review Process is the Province's standard review mechanism for mining proposals and is administered by the newly-created Cabinet Committee on Sustainable Development, co-chaired by the Ministries of Regional and Economic Development and Environment, and contains representatives from 12 other Ministries.

The overall goal of the Mine Development Review Process is to ensure that all projects are technically sound and publicly acceptable and that all environmental socioeconomic and community issues have been adequately addressed. At the same time it attempts to expedite reviews, resolve

PERMITTING STRATEGY

resource conflicts, facilitate decision-making and ensure that the proposed development can be moved through the permitting process and minimize project delays.

In B.C. the Mine Development Steering Committee requires that proponents of new mine developments first register their projects with the Committee. This involves the submission of a brief project overview or "Prospectus" outlining environmental and social concerns and the socioeconomic and environmental studies to be undertaken prior to development taking place.

The Prospectus is circulated to numerous agencies within the federal and provincial governments for initial comment. Returned comments are generally a list of requirements or study terms of reference for the proponent to address in the Stage I Report.

Stage I Environmental and Socioeconomic Studies are designed to provide site specific information to a level of detail to satisfy the Stage I Report Environmental Impact Statement requirements. They are designed recognizing the need to fill data gaps revealed by a compilation of existing regional information. Environmental requirements for the 1990's requires that proponents on new mining developments prepare detailed environmental impact assessments for government agency review before even tacit approval can be secured. They are also important in the determination of the mitigative measures necessary to minimize environmental impacts and to ensure project Mine Development Certificate (Approval-in-Principle). For example, operations contemplating use of a lake for tailings and waste rock disposal, incorporation of on-site hydroelectric power, tailings supernatant discharge, use of hydrometallurgical reagents or construction of road access must comply with the provisions of all the foregoing legislation.

Preparation of the Socioeconomic and Environmental Impact Statement Report requires considerable interface at the engineering and design phase of the project to ensure that all the pollution control facilities and impact assessments are accurately documented. The report entails a detailed project design, baseline environmental data, waste management plans, water management

plans and an accurate assessment of the impacts. If the Stage I Report is not properly prepared or contains significant data gaps, the proponent will be required to prepare a Stage II Report which could result in major project delays and significant additional costs.

A "Public Participation and Information Program" is an expected component of the Stage I Submission. Government agencies look to see that the proponent of a mine development has undertaken such a program to ensure that Government Approval-in-Principle is not granted in isolation of public acceptance of the project; specifically local communities which may be affected by the project. Native Indian concerns must also be addressed since their input will be solicited during the review process.

All projects, including those waived through Stages I and/or II, must pass through Stage III, the Permitting Stage.

5.2 The Federal Role

The Federal Department of Environment, who act as a clearing house for legislation administered by the Department of Fisheries and Oceans and Inland Waters Directorate implement Federal legislation concerning mining through the Provincial Mine Development Steering Committee and Provincial Permitting Processes.

6.0 PREPARATION OF THE PROSPECTUS

The B.C. government requires that proponents of new mine developments first register their projects with the Mine Development Steering Committee (MDSC). This involves the submission of a brief project overview or "Prospectus" that contains a section outlining environmental and social concerns and the environmental work to be undertaken prior to development taking place. If the proposed field program is deemed adequate, the proponent will only be required to produce a Stage I Submission (considered the fast track approval process) and waved through any Stage II requirements to Stage III, the Permitting Stage.

The Prospectus should be prepared by the proponent's engineering and environmental consultants in conjunction with the company who would be responsible for preparing the sections dealing with history, geology, reserves, mine plan, and mill plan, to ensure that the fast track approach is secured. This is particularly important if the proponent is on a critical schedule and within budget restrictions.

The Prospectus is circulated to numerous agencies within the federal and provincial governments for initial comment. These comments are generally a list of requirements for the proponent to address in the Stage I Report. It is important that representatives of the company and their consultants then meet with the MDSC to discuss these requirements in detail and to negotiate any necessary changes. This will ensure that what is being requested is reasonable, cost effective and relevant to the project. It will also assist in eliminating the need for any follow-up studies following the review of the Stage I Report by the Federal and Provincial government agencies involved.

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

7.0 STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

Stage I Studies are designed to provide site specific information to a level of detail to satisfy the Stage I Report requirements. They are designed recognizing the need to fill data gaps revealed by a compilation of existing regional information. They are also important in the determination of the mitigative measures necessary to minimize environmental impacts and to ensure project approval (Mine Development Certificate). The exact government requirements in this regard will not be known until the company receives the government commentary (list of requirements) on the Prospectus. However, the following provides an outline of what is normally expected for Stage I Studies.

7.1 Physiography, Soils and Seismicity

A generalized mapping of soils and surficial geology of the study area should be presented at a scale of approximately 1:50000 on NTS topographic base using E.L.U.C. terrain classification system. General surficial features and soils resources should be identified and followed up by ground proofing.

A ground survey of the mine and mill site areas should be conducted to assess the stability of the adjacent slopes, particularly adjacent to proposed facilities. All occurrences of rock scree, snow slide activity, slope scouring, colluvial material, and any other indications of slope instability should be plotted on a site map. Available bore hole log data should be examined for evidence of "loose ground", fracturing, buried wood, or other such evidence.

Typical samples of local soil (morainal and fluvial) materials should be collected and sample locations recorded on a site map. These samples should be submitted to a competent soils laboratory for analyses.

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

The Stage I Report should include a report covering field collections, method of soil analyses, a discussion covering soil textures, a full interpretation of soil chemistry, fertilizer and lime requirements for future reclamation.

Historical information on seismicity for the mine site area should be obtained and an estimate of the experienced shock intensity for the actual mine site in terms of ground acceleration and velocity, and a prediction on future events, in terms of probability, including duration, horizontal displacements and intensity should be generated (Earth Physics Branch of the Pacific Geoscience Centre at Sidney, B.C.).

7.2 Waste Characterization Studies

Representative samples of ore, tailings, waste, hanging wall and footwall rock should be collected and characterized for Acid Generating Potential (Acid-Base Accounting) and physical and chemical testing to support a tailings and waste rock disposal strategy (Waste Management Plan) and to assess the potential for acid mine drainage.

7.3 Meteorology

There are only a few widely spaced meteorological stations in the Fish Lake region from which data can be compared. These stations are not sufficiently close to the project site for the government to have absolute confidence in the required projections. Consequently, a meteorological station consisting of a maximum and minimum thermometer and rain gauge should be established at the site to obtain the necessary baseline data for a Stage I Report.

These data should be refined for the Stage I Report, by interpolating existing data and site-specific data, by selected paired adjustment and data reconstruction techniques for application to the mine site. These data can also be used in the preparation of a regionalization of hydrology for

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

predicting mean, maximum and minimum unit area runoff scenarios.

7.4 Surface and Groundwater Quality

A baseline water quality program consisting of monthly sampling over a minimum one year period should be initiated and all samples submitted to a competent approved laboratory for prescribed list of analyses and levels of detection. The selection of sample sites depends on access, proposed facilities siting and on government requirements.

Analyses should include physical parameters such as conductivity, turbidity, pH, alkalinity, suspended and dissolved solids, but not exclusive to these, nutrients including nitrates, nitrites and phosphates, cyanide and a variety of total and dissolved metals.

Samples of groundwater should be obtained where possible from springs and producing drill holes and submitted together with surface water samples for comprehensive analyses.

7.5 Surface and Groundwater Hydrology

Water Survey of Canada (1980) operate only a few surface water flow gauging stations in the region. Since there are no long-term records of flow for the watersheds adjacent to the Fish Lake Property, a hydrology program should be established which consists of two components: a one-year collection of data for the main site drainages and an examination of regional data to allow extrapolation of these site-specific data into long-term records for engineering and design (availability for process, domestic and fire protection, culverts, tailings impoundments and water treatment ponds) and in support of Water Licence Applications.

The regionalization of hydrology is a comparison of nearby long-term records coupled with climatic information and site specific data. This approach provides a basis for extrapolation of on-

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

site data for estimates of average and extreme annual discharges, estimation of flood recurrence intervals, minimum flow recurrences, and unit area discharges.

Automatic water level recorder(s) should be installed and stream flows should be metered over a full hydrological cycle in order to develop reliable rating curves, ie; during maximum runoff periods, low summer flows and fall and during low winter flows.

Information from geotechnical and groundwater investigations, relating to tailings dam design, foundation investigations or piezometer installations should be gathered and included in the Stage I Report.

7.6 Vegetation and Forestry Resources

Major vegetation communities should be plotted on 1:50,000 NTS topographical maps from stereo-examinations and interpretation made for wildlife habitat suitability, forestry capability and reclamation species. This mapping should incorporate information gathered by the B.C. Surveys and Resource Mapping Branch and the Canada Forestry Service.

A ground proofing survey and assessment should be conducted, consisting of transect documentation of understorey and ground cover species. Larger tree should be identified and measured to verify airphoto interpretation of Forestry resources.

7.7 Wildlife Resources

A wildlife habitat survey should be undertaken during the summer, fall and winter periods to document representative habitat units and available (food) vegetation resources. Surveys should include wildlife observations, feces counts, and recording of game trails, dens, nests, licks, and other important features. Wildlife habitat description, assessment of ungulate range, status of

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

furbearers and predators, and location and description of any particularly sensitive areas should be documented to satisfy government requirements. Studies should also incorporate existing data from various government information sources including trapping harvests and hunter returns.

7.8 Fisheries and Aquatic Resources

The Taseko River and its tributaries support runs of resident and anadromous fisheries which are extremely important to both the federal Department of Fisheries and Oceans and the Provincial Fish and Wildlife Branch. As such Fisheries and Oceans Canada will have significant interest in the project and the provincial Fish & Wildlife Branch will have a major interest in the protection of the watershed and the systems resident sports fishery.

Fish sampling and fish habitat assessments should be conducted on the mine site watershed to identify areas of spawning, over-wintering, rearing, inaccessibility and food production. However, emphasis in the Stage I Report should not be restricted to the immediate mine site area and should include relevant tributaries of the property and the Taseko system as a whole. Some fish from site investigations should be retained for metal analyses.

A baseline survey of benthic organisms (fish food organisms) and periphytic algae should be conducted during the summer and fall study periods. Population abundance and species composition should be determined and related to watershed productivity and water quality.

A baseline survey of stream sediments should be completed and include analyses of a range of metals of the minus 200 mesh fraction.

7.9 Land Capability and Historic Use

An assessment of the property's historic use and resource capability should be documented. This

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC BASELINE STUDIES

evaluation should include present land use and tenure, agriculture, forestry, hydroelectric power development, recreation, hunting, fishing, guiding, and trapping.

7.10 Archaeological and Heritage Resources

A review of the potential archaeological and heritage resources should be undertaken by a qualified archaeologist. This study should also include a review of existing information in government files as well as other sources such as local museums and provincial archives. A mandatory site visit by a professional archaeologist is recommended in the Fish Lake situation since regional Natives Bands may claim historic occupation.

7.11 Socioeconomic Studies

This component of study is of major interest to at least three provincial government agencies, federal Department of Indian Affairs, service communities and Regional Districts.

Even though the project is relatively remote, a study should be undertaken to detail community populations, demographics, levels of employment, and housing availability of those communities that may be affected. Interviews should be held with appropriate provincial and municipal agencies to document availability of community services such as schools, medical services, cultural and recreational programs, police and fire protection. Information on community infrastructure, commercial and industrial sectors, communications and transportation should be described. Interviews should be held with appropriate provincial and municipal authorities regarding municipal finances and regional finances, including property and educational tax bases.

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC IMPACT STATEMENT REPORT

8.0 STAGE I ENVIRONMENTAL AND SOCIOECONOMIC IMPACT STATEMENT REPORT

The Stage I Report is comprised of four main components as follows:

8.1 Development Plan

This section of the report includes specifics on project history, geology, mineralization, ore reserves, conceptual mine plan, metallurgy, milling process, tailings disposal and ancillary facilities. These sections of the report should be prepared by the proponent's engineering consultants or staff and incorporated into the overall Stage I Report.

8.2 Environmental and Socioeconomic Description

The Stage I Environmental and Socioeconomic Description components should be generally prepared by consultants gathering the baseline data and are responsible for ensuring that all field acquired data and field studies are properly reported and correctly interpreted.

8.3 Environmental Protection and Waste Management Plans

This section of the Stage I Report is devoted to Waste Management, Water Management, Spill Contingencies, Monitoring, and a Conceptual Reclamation Plans. The preparation of these sections is developed in conjunction with the engineering consultants and are not finalized until potential design conflicts and future commitments are resolved by management staff. This is usually at the feasibility stage.

STAGE I ENVIRONMENTAL AND SOCIOECONOMIC IMPACT STATEMENT REPORT

8.4 Environmental and Socioeconomic Impact Assessment

This Section of the report deals with potential positive and negative impacts on the environment, nearby communities and local, regional and provincial economics.

PUBLIC PARTICIPATION AND INFORMATION PROGRAM

9.0 PUBLIC PARTICIPATION AND INFORMATION PROGRAM

A "Public Participation and Information Program" is an important component of the Stage I Submission. Government agencies look to see that the proponent of a mine development has undertaken such a program to ensure that Government approval is not granted in isolation of public acceptance of the project, specifically the local communities affected by the project. A public information program also ensures that future licence applications are not unnecessarily stalled due to intervention by objectors which in turn can result in costly public hearings or political intervention.

The program outlined below is recommended for a project such as the Fish Lake Project and provides an opportunity for interested persons to obtain information about the project and contribute their views in a positive manner so that the proposed development is understood and accepted by most of those affected by it:

- o Preparation of a social profile of each community that may be affected to determine the issues to be addressed
- o Preparation and publication of an introductory description of the project in the local press with a response coupon
- o Organize and hold a series of "Open Houses" so that those interested can talk with company representatives
- o Preparation of a brief report summarizing the results in a manner useful for submission and inclusion in the Stage I Report. Identify the requirements for follow-up activities as needed

It should be noted that the "Open House" approach is strongly recommended over the more formal approaches since it is useful, effective and non-confrontational.

OPERATIONAL PERMITS, LICENCES AND APPROVAL

10.0 OPERATIONAL PERMITS, LICENCES AND APPROVALS

Normally a new mining operation will require approximately 20 major and 40 minor permits, licenses and approvals before construction can commence. Many of them require advertising, posting, application fees, proof of posting, supporting documentation, and extensive follow-up. The following is a preliminary list of construction and operational permits, licenses and approvals that may be required following receipt of a Mining Development Certificate:

10.1 Ministry of Energy, Mines and Petroleum Resources

Section 6 Approvals (Chief Mines Inspector Approvals)

- o Open Pit Mine Plan, including pit walls, blasting, equipment, in-pit haul roads, berms, benches, etc. (Report and Drawings)
- o Waste Rock Disposal Plan, including dump stability, geotechnical assessment, acid generation control, reclamation, etc. (Report and Drawings)
- o Haul Roads, including traffic control plan
- o Mill and Ancillary Facilities, construction drawings including rough excavation, concrete foundations, structural steel, cladding, electrical and plumbing, etc.
- o Tailings Disposal, including geotechnical assessment on dam, seepage control, water management, control of acid generation and reclamation, etc. (Report and Construction Drawings)
- o Access Roads
- o Water Collection, Diversions and Settling Systems

10.2 Ministry of Energy, Mines and Petroleum Resources

Section 7 Approvals (Chief Mines Inspector Approval)

- o Reclamation Plan and Five Year Plan Report. Regional Reclamation Advisory

OPERATIONAL PERMITS, LICENCES AND APPROVAL

Committee

- o **Reclamation Bond**

10.3 Ministry of Crown Lands

- o **Claims taken to Mineral Lease**
- o **Borrow Pits**
- o **Access Road Right-of-Way across Crown Lands**
- o **Powerline Right-of-Way across Crown Land**
- o **Surface rights to specific areas, mill, pit, pump stations (if required)**
- o **Performance Bonds, Release Indemnity Agreements and Insurance Coverage for the above as required.**

10.4 Ministry of Forests

- o **Licence to Cut**
- o **Burning Permits (if required)**
- o **Special Use Permits covering Rights-of-Way**

10.5 Ministry of Environment, Waste Management Branch

- o **Waste Management Permit-Refuse (Domestic and Inert)**
- o **Waste Management Permit-Emissions (Vents, Hoods, Dust Scrubbers, Diesel Generators, etc.)**
- o **Waste Management Permit-Effluent (Tailings Disposal to the Tailings Impoundment, Tailings Supernatant Decant, Mine Water Settling Pond, Septic Tank Effluent to the Tailings Impoundment, Plant Site Runoff Settling Pond, etc.**

OPERATIONAL PERMITS, LICENCES AND APPROVAL

10.6 Ministry of Environment, Water Management Branch

- o Water Licence (Filed, Posted, Fees, Proof of Posting) covering the diversion of Domestic, Fire Protection and Mill Process water from adjacent watersheds, the construction of a storage dams. A separate Water Licence may be required for water storage
- o Approvals covering diversions around the tailings disposal area, diversions around the open pit, and diversions around the plant site
- o Approvals covering the various culverts around the plant site
- o Approvals for the Access Road, including culverts, upgraded bridges, and the main access road

10.7 Ministry of Health, Health Inspector Approval

- o Water source and the water distribution system
- o Food Premises Permit for a Kitchen Facility (if required)

10.8 Federal Department of Transport, Navigable Waters Protection Act

- o Approval to construct bridge crossings

10.9 Construction and Operating Camp (If Required)

- o Mines Inspector Approval
- o Waste Management Branch for sewage disposal
- o Waste Management Branch for refuse disposal
- o Water Management Branch for temporary water supply
- o Health Inspector Food Premises Permit

OPERATIONAL PERMITS, LICENCES AND APPROVAL

- o Health Inspector Approval for Water Supply**
- o Electrical Inspector Approval**
- o Fire Marshals Approval**

11.0 REFERENCES

B.C. Ministry of Forests, 1988. Biogeoclimate Zones of British Columbia. Map. Victoria.

Council of Forest Industries of British Columbia, 1988. Native Indian Land Claims in British Columbia: A Background Paper.

Environment Canada, 1980. Canadian Climate Normals, 1951 - 1980. Volumes 1 - 9. Ottawa: Atmospheric Environment Service.

Holland, S.S. 1964. Landforms of British Columbia, a physiographic outline. B.C. Department of Mines and Petroleum Resources, Bulletin No. 48.

Indian and Northern Affairs Canada, 1985. Living Treaties: Lasting Agreements. Report of the Task Force to Review Comprehensive Claims Policy.

Indian and Northern Affairs Canada, 1987. Comprehensive Land Claims Policy.

Indian and Northern Affairs Canada, 1989. British Columbia- Comprehensive Land Claims (map).

Inland Waters Directorate, 1989. Historical Streamflow Summary of British Columbia. Ottawa: Resources Branch, Water Survey of Canada.

Knight and Piesold Ltd., 1991. Preliminary Assessment of Tailings Storage Options (Figure 1730.001).

Ministry of Energy Mines and Petroleum Resources, 1976. Geology in British Columbia. Fish Lake Deposit (920/5E), W.J. McMillan.

REFERENCES

Ministry of Native Affairs, 1990. Native Affairs Minister Seeks Endorsation of Findings (Press Release).