



New Canamin

RESOURCES LTD

VOLUME I - EXECUTIVE SUMMARY

APRIL, 1995

884104

HUCKLEBERRY PROJECT
MINE DEVELOPMENT CERTIFICATE APPLICATION
APRIL 1995

1.0 PROJECT SYNOPSIS

New Canamin Resources Ltd. is proposing to develop the Huckleberry Property, a porphyry-copper deposit located in west-central British Columbia, approximately 86 km southwest of Houston (Figure 1.1). Current mineable reserves are estimated at 93.9 million tonnes at 0.50% copper, with minor recoverable amounts of gold, silver and molybdenum. The deposit will be accessed by two open pits, the Main Zone and the East Zone (Figure 1.2). Mill design capacity has been set at a nominal 15,500 tonnes per day for the East Zone and 14,000 tonnes per day for the Main Zone to produce 60 million pounds of copper per year over a 17 year mine life. Based on the approval and issuance of a Mine Development Certificate, New Canamin proposes to begin site preparation and construction of the road access and powerline in the fall of 1995 to come into production in mid to late 1997.

The construction phase will create approximately 220 jobs for a period of about 18 months followed by between 180 and 200 full-time positions over the life of the mine. The total capital plus operating budget for the project is roughly \$700 million in 1995 Canadian dollars (CDN\$). Of this, an estimated \$ 196.5 M will be paid in direct wages to British Columbia residents while creating upwards of 3,000 person years of direct employment. Much of the direct benefits of the project are expected to accrue to the local economy. Taxes payable to all levels of government by the Company are projected to total \$ 210 Million.

Two years of baseline environmental studies have been carried out on site, including physiography, soils, meteorology, groundwater, surface water, fisheries, aquatic resources, vegetation, and wildlife. All of this information has been summarized herein, and incorporated into a comprehensive environmental impact assessment for the Huckleberry Project. This assessment predicts potential impacts to the environment during the construction phase, during production and post-closure, as well as proposing mitigation measures, including monitoring programs, a conceptual reclamation plan and mine life spill contingency procedures.

Included in this application is a complete socio-economic study for the Bulkley Valley-Lakes District communities of Burns Lake, Houston, Smithers and smaller communities in between.

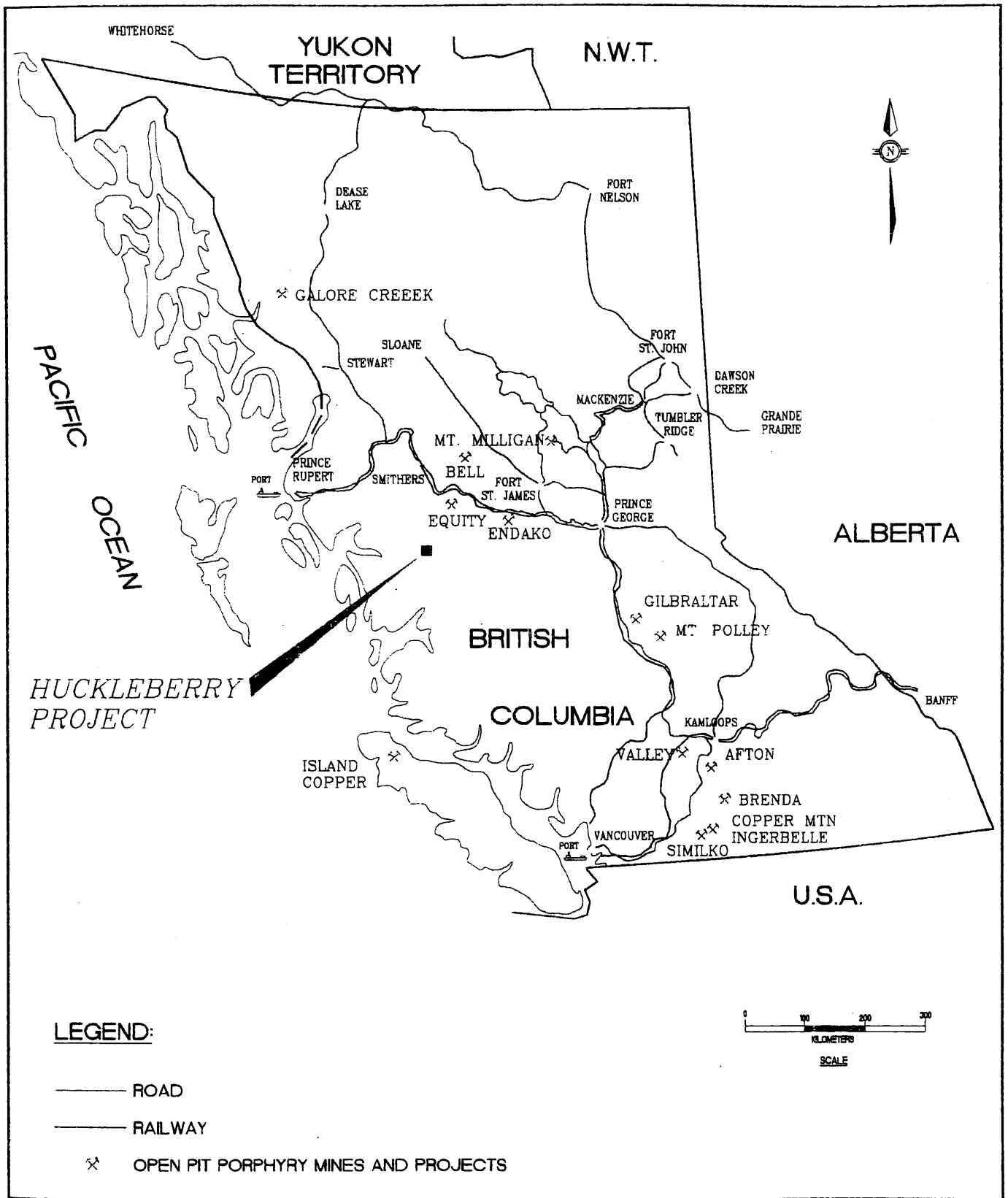
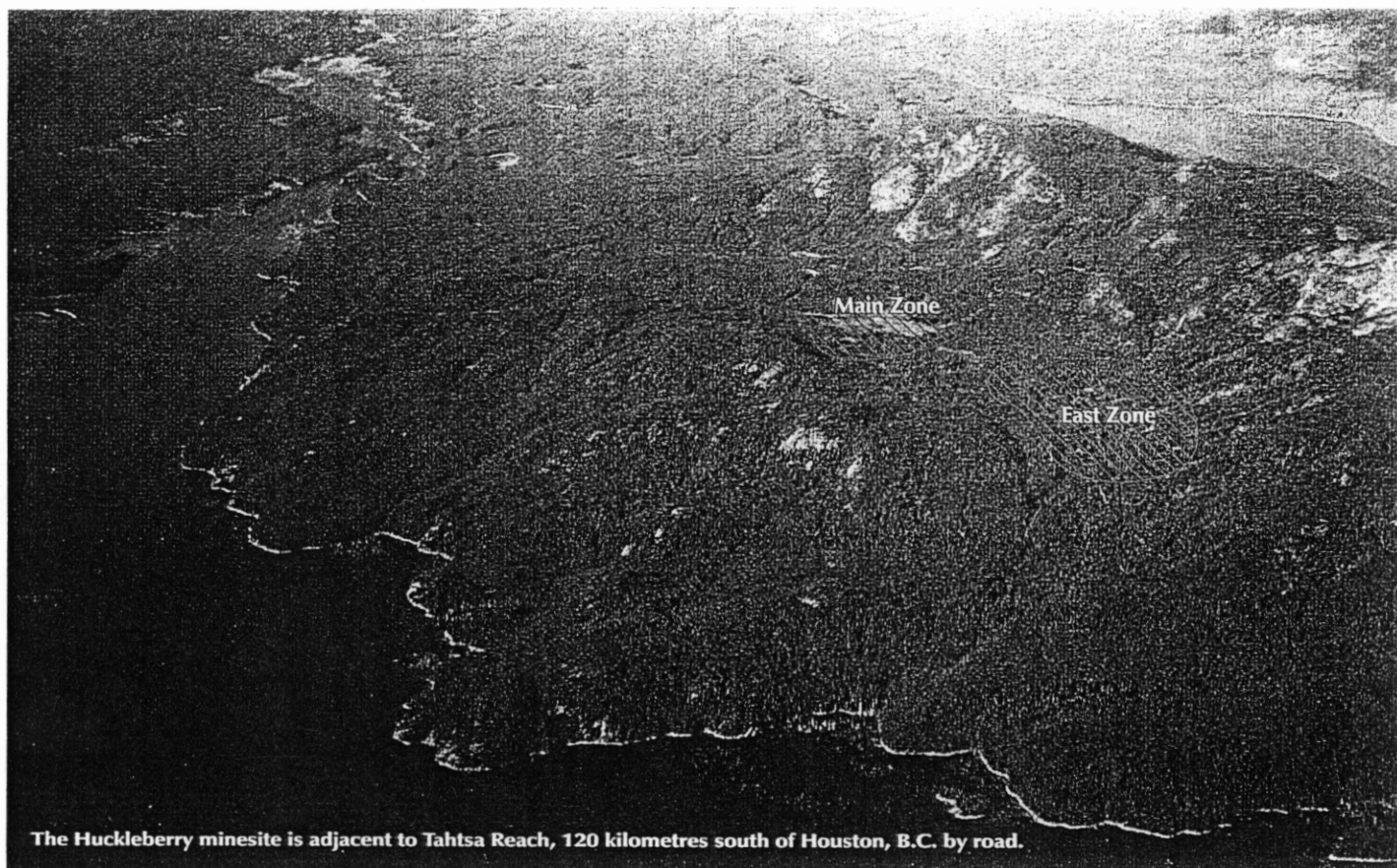


Figure 1.1 Location map for the Huckleberry Project in British Columbia, Canada.



The Huckleberry minesite is adjacent to Tahtsa Reach, 120 kilometres south of Houston, B.C. by road.

Figure 1.2 The Huckleberry minesite adjacent to Tahtsa Reach, 120 kilometers by road south of Houston, BC.

1.1 OVERVIEW

This Application for a Mine Development Certificate, or Project Report, is presented in 8 volumes. Volume I, the present volume, is the Executive Summary. This provides an overview of the entire Huckleberry Project in brief. Volume II is the Project Description which presents the mine plan, the waste and tailings disposal plans, the water management plan, and generally describes the infrastructure of the project. Volume III describes the environmental setting and presents the two years of baseline environmental data collection at Huckleberry to date. Volume IV describes the access corridor to the mill site, including a description of habitats along the road corridor. Volume V is the environmental impact assessment of the project, predicting effects on the water quality of the receiving environment and proposing mitigation measures. Volume VI is a regional socioeconomic analysis of the Bulkley Valley - Lakes District region, and the proposed impacts of a mining development on the northern community structure. Volumes VII and VIII are appendices to the text in the previous volumes.

This application for a Mine Development Certificate follows the submission of a Pre-Application for a Mine Development Certificate filed by New Canamin Resources Ltd. in September 1994. The issues and recommendations laid out in the Terms of Reference received by New Canamin from government agencies as a result of the review of the Pre-Application have been fully addressed within this document.

New Canamin does not anticipate any new issues to arise out of the review of this Application for a Mine Development Certificate. A summary of changes incorporated into this Application are as follows:

- The sequence of mining will be East Zone Phase I and II, Main Zone Phase I and II (ultimate), and the East Zone Phase III (ultimate). This sequence allows for maximum resource extraction and prevents sterilization of the East Zone pit due to back-filling.
- By decreasing pre-production mining of waste rock and overburden, and accessing higher-grade ore earlier in the mine life, the mine economics have been improved.
- Plans for a low-grade ore stockpile have been eliminated.
- Pit benches will increase from 8 m to 12 m in height.
- Increased throughput of "softer" East Zone ore at a nominal milling rate of 15,500 tonnes per day during Phase I and II. Increased throughput of "harder" Main Zone ore at 14,000 tonnes per day.

3.0 MINING

3.1 MINE PLAN

The mineral inventory of the Huckleberry Project in-situ proven and probable reserves are presented (Table 3.1).

Table 3.1 The Huckleberry Project in-situ proven and probable mineral inventory.

CUTOFF GRADE	EAST ZONE		MAIN ZONE	
	t x million	Grade % Cu	t x million	Grade % Cu
0.30	108.4	0.484	53.7	0.445
0.40	75.2	0.542	29.5	0.527
0.50	40.1	0.625	14.2	0.615

Mineable ore reserves are based upon a Whittle 4-D Lerch Grossman analysis by Kilborn Engineering Pacific Ltd., using preliminary economic parameters provided by Nilsson Mine Services (NMS) and the geological block model developed by Gary Raymond, P.Eng.

The ore will be mined at a fixed cutoff grade of 0.300% copper over the life of the mine. There will be no low-grade ore stockpiled. The overall strip ratio for waste rock to ore is 0.72 : 1. The mine plan has been developed to minimize the amount of rehandle to the process facility and to avoid stockpiling in an already tight minesite footprint. Elevated head grades are still possible in the initial years of the mine life by scheduling a high value starter pit - the East Zone Phase I. The East Zone II pit is developed while Phase I is providing the high grade ore. Overburden stripping is scheduled to be used in road and dam construction at Tailings Management Facility 2 (TMF2) site. Waste from East Zone Phase I and Phase II is scheduled to be placed in TMF2.

The Main Zone Phase I pit will be developed in Year 5 and mined with a scheduled overlap of the Main Zone Phase II pit through to Year 10. The Main Zone Phase II Pit is scheduled to be completed in Year 13. Overburden till from Main Zone will also be used in construction. Peat will be moved to TMF2. Non-reactive waste rock will be hauled as required to construction sites such as the East Plug dam. Potentially reactive waste rock will be placed underwater in TMF2.

The East Zone Phase III Pit will be developed when mining of the East Zone Phase II Pit has been completed. Stripping and waste rock removal will take place during the time when the major ore

source is the Main Zone Pit. The East Zone Phase III Pit will be delayed because the Main Zone has a more favourable strip ratio and because the logistics of Phase III development are simplified and safer if there are no operations below the narrow Phase III pushback. Waste from Phase III will be placed in TMF2 until it is possible to begin to backfill the Main Zone. The mining sequence is described fully in Section 4 of Volume II - Project Description.

3.2 ULTIMATE PIT LIMITS

The Huckleberry Project ore reserves have been calculated using an 8 m bench height. The inter-ramp design wall slope is 52°. In the East Zone, wide berms have been left near the pit crest allowing access to the upper levels of the pit and effectively flattening the wall slope near the perimeter of the pit. The maximum wall design height on the East Zone pit is 360 m. The maximum wall design height on the Main Zone pit is 224 m.

The disturbed surface area encompassing the East Zone will be approximately 24 hectares. Once the East Zone is mined-out, however, 28 hectares will be permanently flooded and 21 hectares of the north wall of the East Zone will be exposed. Research into ensuring the prevention of acid rock drainage from exposed pit walls will be on-going throughout the mine life. The Main Zone surface area prior to disturbance is approximately 16 hectares. When the Main Zone is mined-out, it will be part of the permanently flooded Main Zone/TMF2 lake, covering 137 hectares.

3.3 MINING OPERATIONS

The Huckleberry copper deposits will be mined by conventional drill and blast open pit mining methods, using rotary blasthole drills, mass excavators, shovels, and 86 tonne capacity rear-dump haulage trucks, supported by a fleet of auxiliary mining and mobile equipment. Ore will be hauled from the mine area to the primary crushing facility at the plant site. Waste will be hauled to the waste dumps in the Tailings Management Facility 2, and later backfilled into the mined-out Main Zone pit.

The mine will operate around the clock, 7 days per week, through a 4 days on - 4 days off schedule of 12 hour shifts.

4.0 ORE PROCESSING AND METALLURGY

4.1 METALLURGY

The ore in both Main and East Zones is typical for a porphyry copper deposit with the majority of the copper occurring as chalcopyrite. This chalcopyrite is found mostly in fine fractures but can also occur as blebs or disseminations. Bornite and malachite are found occasionally but are not economically significant. Molybdenum in the form of molybdenite and low values of gold and silver are found throughout both deposits.

Huckleberry ore has a simple metallurgy and good recoveries of 90-95% copper resulting in a copper concentrate containing 27% copper. A relatively coarse grind is required. The concentrate contains no constituents which would be penalized by a smelter.

The East Zone ore differs from the Main Zone ore only in that lime is required in addition to potassium amyl xanthate and Dowfroth 250 in order to achieve adequate metallurgy. Copper recovery was also marginally lower for the East Zone ore, than for the Main Zone.

A separate molybdenum flotation circuit was added to the mill design in 1994. At a projected 50% recovery rate, this will result in an estimated total 6,174 tonnes of molybdenum recovered from the ore over the life of the mine. Molybdenum concentrate will be filtered, dried and stored prior to packaging. The molybdenum concentrate will be shipped to Endako or elsewhere for further processing.

Gold and silver values will be separated from the copper concentrate at the smelter.

4.2 METAL PRODUCTION

The daily mill production rate is estimated to be 15,500 tonnes per day in Phase I of the East Zone, and 14000 tonnes/day in the Main Zone. The project will require the impoundment of approximately 68 million tonnes of mine tailings generated by the milling process, and the storage of the waste rock produced in mining the ore. It is estimated that over the 17 year life, the Huckleberry Project will produce 427,636 tonnes of copper, 2,865 Kg gold, 191,000 Kg silver and 6,174 tonnes of molybdenum.

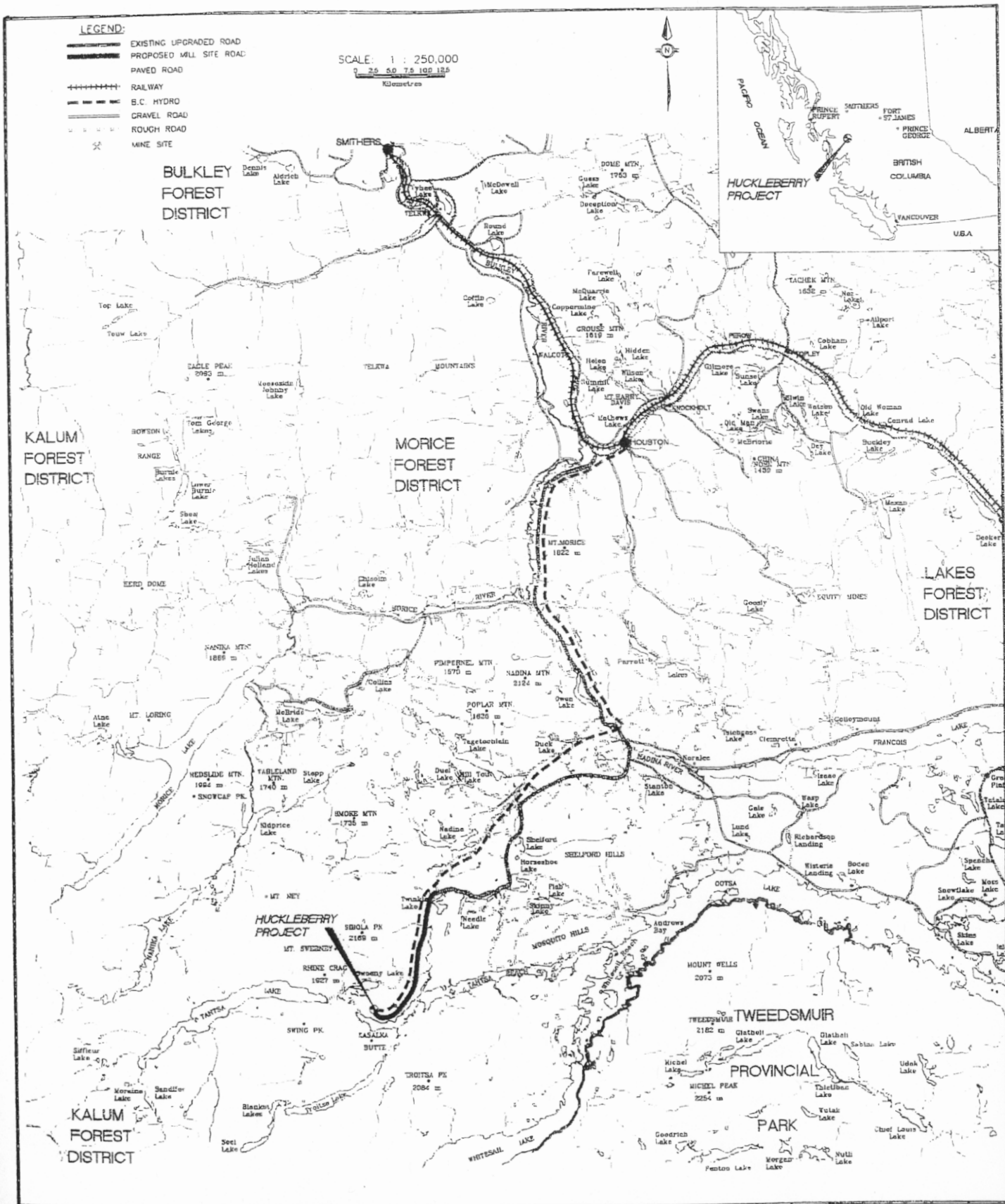


Figure 6.1 Road access to the Huckleberry Project south-southwest of Houston, BC