BLUE PEARL MINING

Davidson Project

Smithers, British Columbia

Davidson Project Description

June 2005

Prepared by:
Rescan™ Environmental Services Ltd.
Vancouver, British Columbia

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Davidson Project Description

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1. SUMMARY

1. Summary

The Davidson molybdenum deposit (formerly known as the Yorke-Hardy deposit), located near Smithers, British Columbia is the largest undeveloped molybdenum deposit in Canada. Molybdenite on Hudson Bay Mountain was first noted in 1944. In 1957, William Yorke-Hardy staked the first claims. The deposit was delineated through extensive drilling programs carried out between 1957 and 1980. Blue Pearl Mining Limited (BPM) acquired 100% control of the Davidson project in April 2005. The mining property consists of six mineral leases and six mineral claims.

BPM is proposing to develop the Davidson deposit as an underground mine and to transport the ore off-site for processing. The Davidson deposit is situated a distance of 2 km into the east side of Hudson Bay Mountain at an elevation of approximately 1000 to 1200 m. The proposed Davidson project will be an underground mine accessible by two adits. The deposit is currently accessed by an existing adit at 1066 m (3500 foot) elevation. A second adit at the 700 m (2300 foot) elevation will be driven and connected to the existing adit by two raises located deep within the mountain. Ore and waste rock will be dropped through these raises to be crushed and loaded for transport at the 700 m elevation. The ore will not be processed on site but will be shipped to an existing operating mine for processing.

The raises will eliminate the need for heavy traffic up and down the face of the mountain. The road up to the existing 1066 m adit and the adit itself will be upgraded. The road upgrade will allow for safe transport of workers and supplies into the mine. The adit will be widened to facilitate access to the deposit by heavy equipment.

Waste rock storage piles will be located at the entrance to the lower 700 m adit. The 700 m adit will not be visible and will be away from residential areas. Both of the adits, the waste rock storage and ancillary facilities will be within the Kathlyn Lake drainage.

The projected capacity of the mine is 2000 tonnes of ore per day, seven days a week. Three options for ore haulage are presently under consideration.

Option (1): The ore will be loaded onto highway trucks at the 700 m adit and hauled to either an existing mill at Endako, which is located 213 km east of Smithers, at Huckleberry Mine located 180 km southeast of Smithers, or at some other destination. The hauling will require 50 to 60 loads per day and an equal number of empty return trips. A reputable trucking company will be contracted to provide safe and proper hauling of the ore.

Option (2): The ore will be hauled by truck to an existing rail siding at Smithers or to a new siding at Kathlyn Lake.

Option (3): The ore will be conveyed directly from the 700 m adit to a new rail siding at Kathlyn Lake.

These options will be reviewed as the project develops.

As part of BPM's water management plan, mine water will be directed to a settling pond at the 700 m adit prior to discharge to the Bulkley River. BPM plans to do what is required to protect aquatic life and agricultural land use in the area. Recent water samples from the project area indicate dissolved molybdenum as the priority element of concern. BPM is investigating options to maintain water quality, including a pipeline and diffuser into the Bulkley River. BPM and its consultants are reviewing treatment technology to control dissolved molybdenum should it be required.

Environmental baseline studies began in April 2005 and will continue through to March 2006. A feasibility study is currently underway. Mine construction is scheduled for late 2006. The estimated mine life will depend on the results of the feasibility study and drilling program to be carried out in late 2005, and future market conditions. Figure 1-3 presents the Davidson project schedule.

1.1 Regional Information

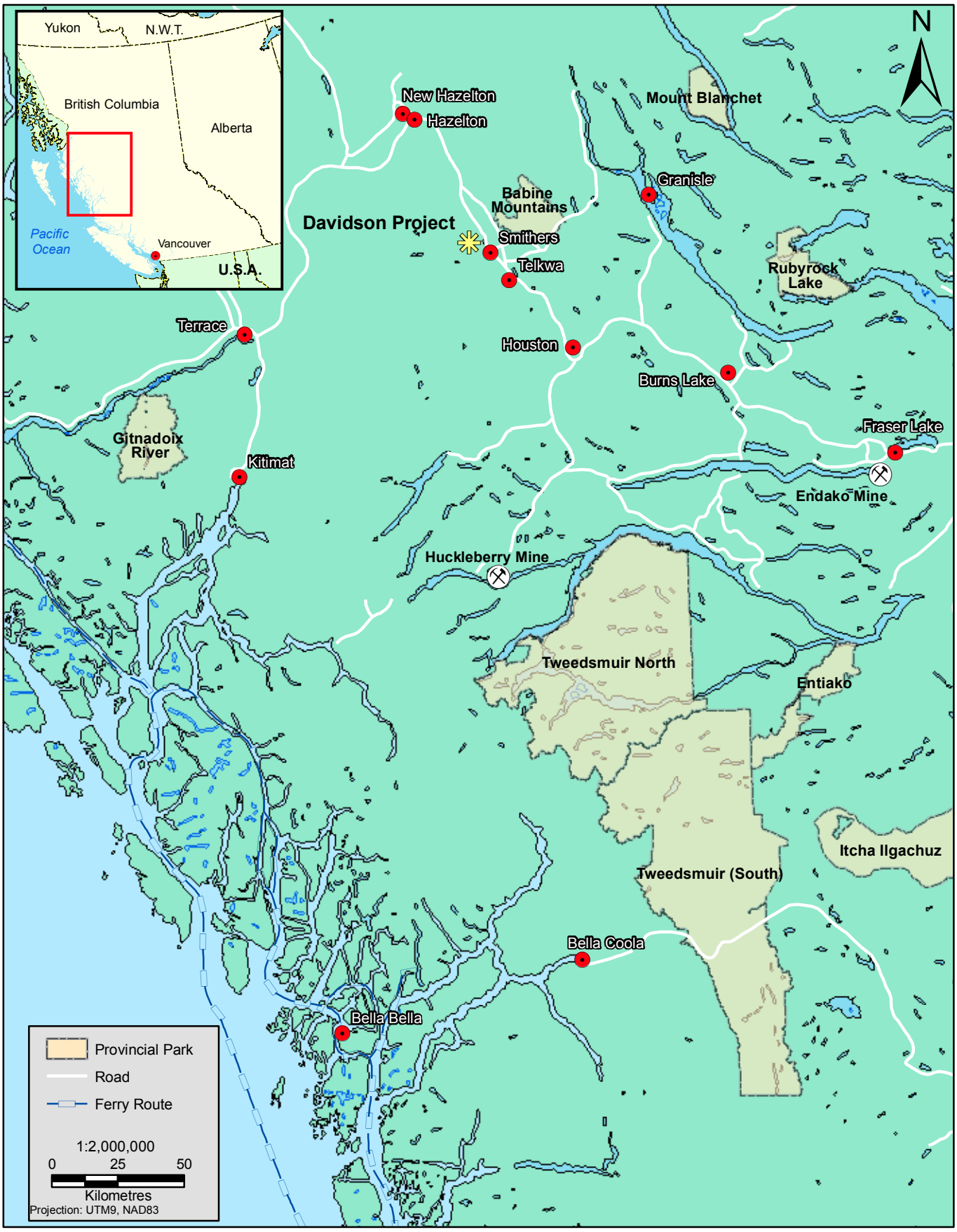
1.1.1 Location

The Davidson molybdenum deposit is located on the east flank of Hudson Bay Mountain, nine kilometres northwest of Smithers in west-central British Columbia (Figure 1-1). The property lies within NTS map sheet 93L/14 and BC Mineral Titles Maps 093L084 and 093L074 at latitude 54° 49' north, longitude 127° 18' west.

The six mineral leases cover 1,631.8 hectares and the six mineral claims cover 2,218.1 hectares as shown in Figure 1-2 and listed in Table 1-1. Hudson Bay Mountain (peak elevation of 2591 meters above sea level) is the dominant topographical feature of the Hudson Bay Range. The Bulkley River, which originates 115 km south of Smithers, flows in a wide valley on the east side of the Hudson Bay Range.

The Kathlyn Glacier (also known as the Hudson Bay Glacier) occupies a cirque on the east side of the Hudson Bay Mountain from which two waterfalls plunge 60 m to the valley below in an area known as Glacier Gulch, an important scenic attraction. The glacier is approximately 900 m wide, 120 m deep and 1.5 km long.

The Davidson deposit is situated approximately 300 to 450 m below surface on the east side of the Hudson Bay Mountain. Access to the deposit for exploration drilling was accomplished via a 2 km horizontal tunnel (adit), the portal entrance of which is at an elevation of 1066 m (3500 feet). The 1066 m adit is accessible via a 4 km switchback road, which branches from the Glacier Gulch Road. The access road has not been used in a number of years and is in need of some repairs.



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Davidson Project General Location

FIGURE 1-1

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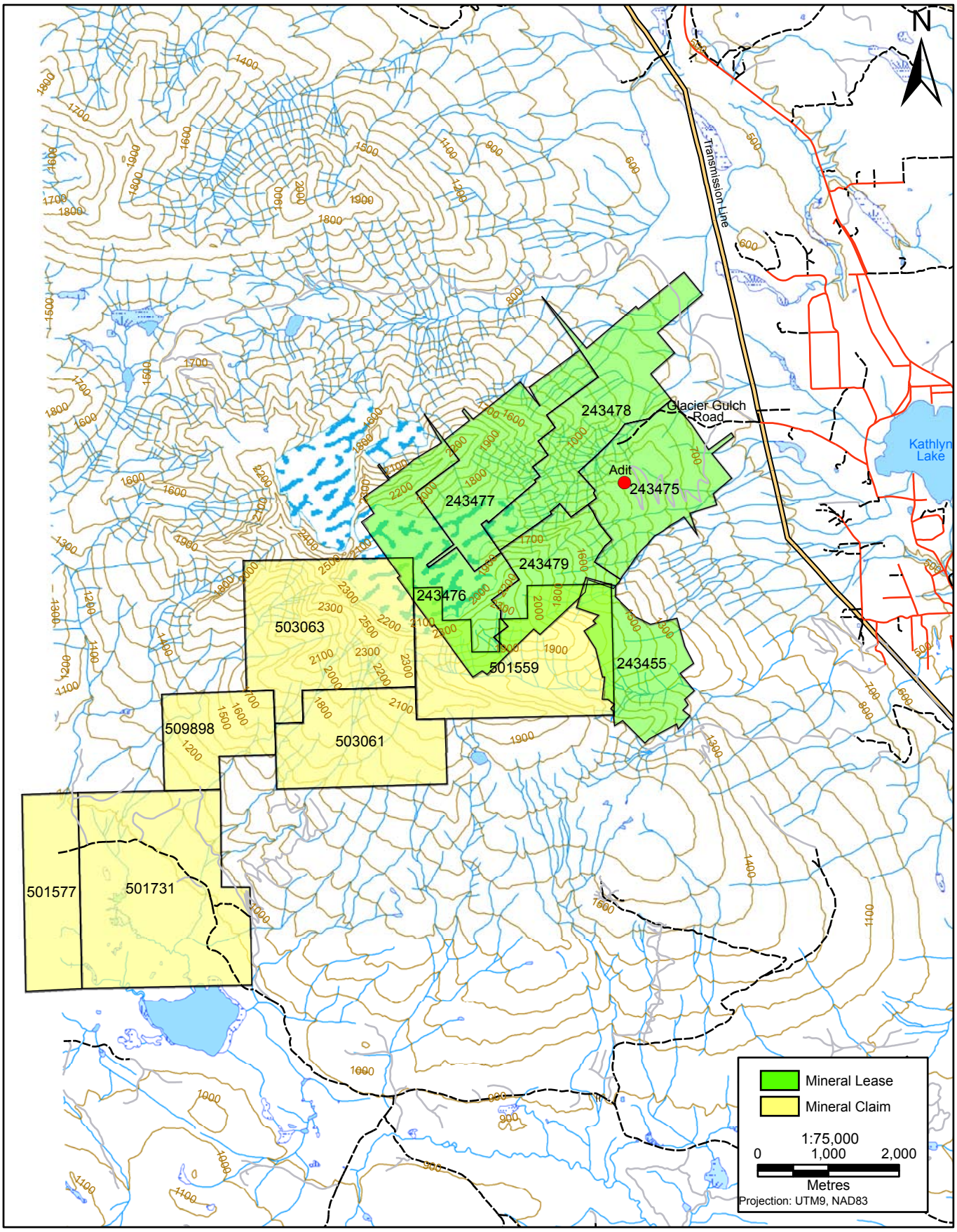

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Davidson Project
Mineral Claims and Mineral Leases

FIGURE 1-2

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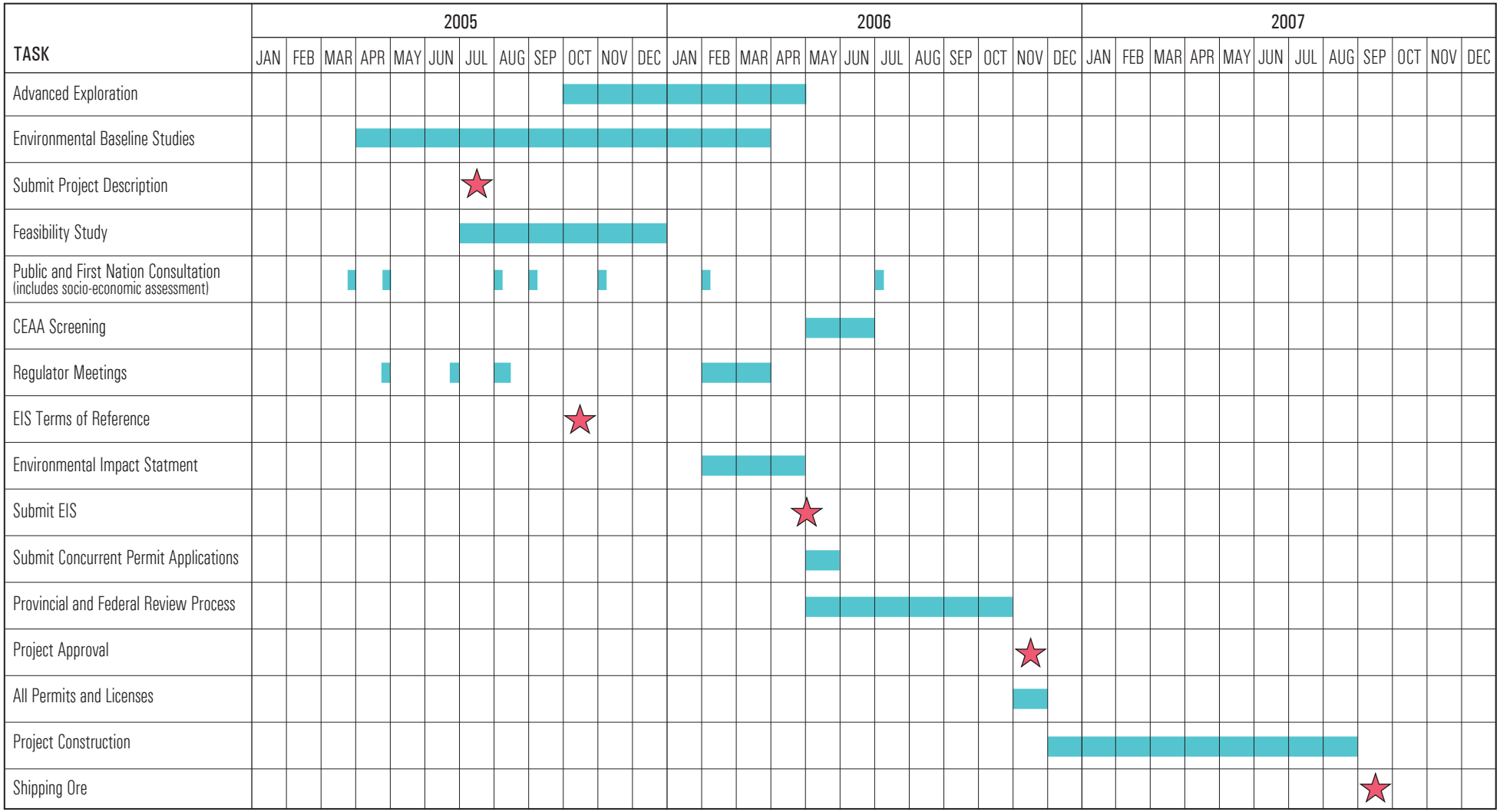

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Davidson Project Development Schedule

FIGURE 1-3

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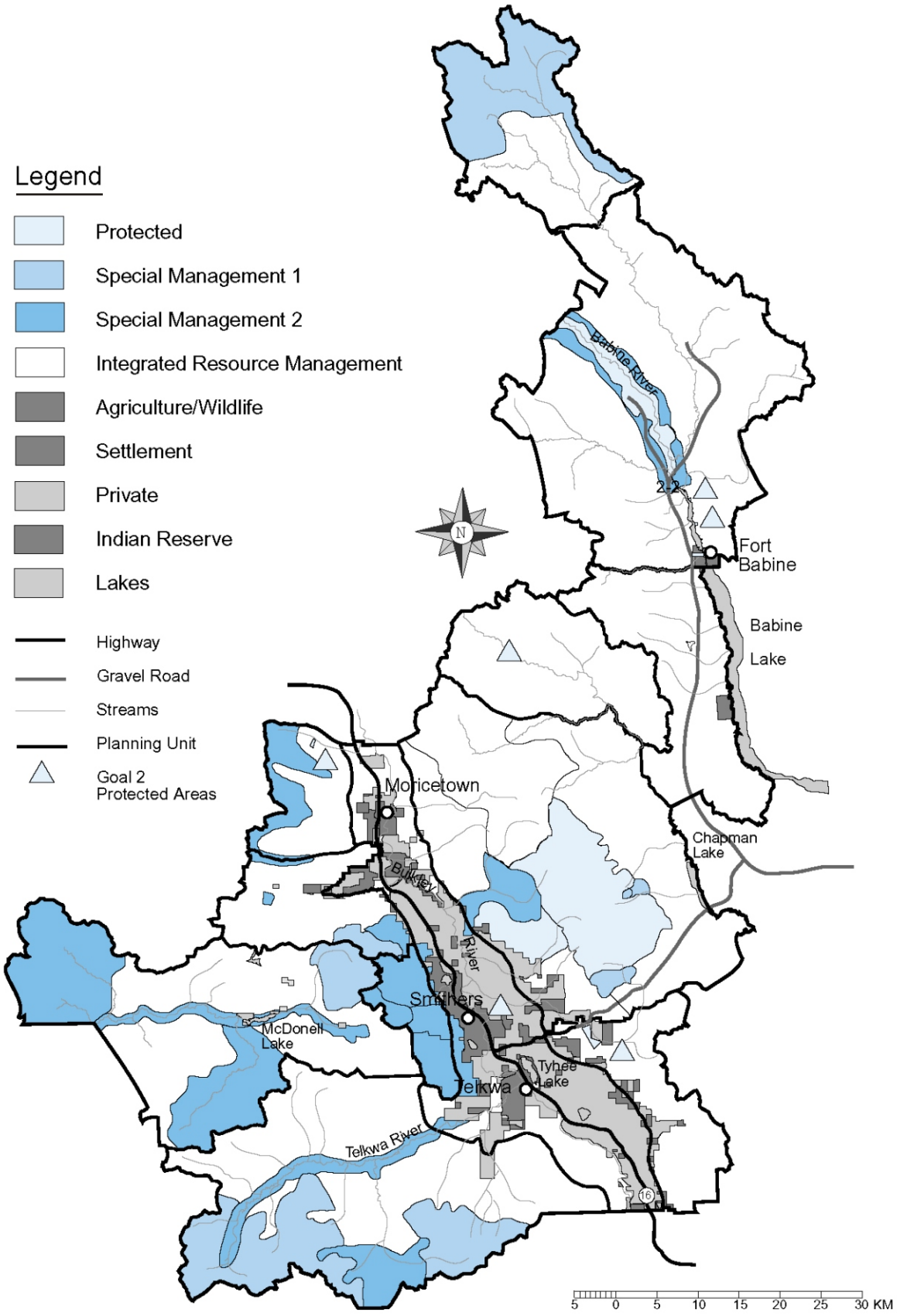
Table 1-1
Mineral Rights — Davidson Project

Tenure Type	Tenure Number	Area (ha)	Anniversary Date	Held in Trust By:
Mineral Lease	243455	214.07	27-June-2006	Donald Davidson
Mineral Lease	243475	288.98	10-Jan-2006	Donald Davidson
Mineral Lease	243476	299.87	10-Jan-2006	Donald Davidson
Mineral Lease	243477	292.78	10-Jan-2006	Donald Davidson
Mineral Lease	243478	342.53	10-Jan-2006	Donald Davidson
Mineral Lease	243479	193.57	10-Jan-2006	Donald Davidson
Total Area		1,631.80		
Mineral Claim	501559	447.47	04-Dec-2005	William Pfaffenberger
Mineral Claim	503063	446.08	04-Dec-2005	William Pfaffenberger
Mineral Claim	503061	298.40	04-Dec-2005	William Pfaffenberger
Mineral Claim	501731	615.73	04-Dec-2005	William Pfaffenberger
Mineral Claim	509898	186.50	04-Dec-2005	William Pfaffenberger
Mineral Claim	501577	223.90	12-Jan-2006	Donald Davidson
Total Area		**2,218.07**		

1.1.2 Land Use

The Davidson project is located within the 760,000 hectare Bulkley Valley Land and Resource Management Plan (BVLRMP), which was approved by cabinet on April 21, 1998 (BC MSRM 1998) (Figure 1-4). The BVLRMP is intended to direct the management of provincial Crown land in the plan area. The BVLRMP identified the following six categories of resource management zones:

1. **Protected**: Area of high ecological, cultural, heritage and/or recreation values. Industrial exploration or extraction is not allowed.
2. **Special Management 1 (SM1)**: Areas designated as SM1 zones exclude all industrial activities except mineral exploration and mining. Timber harvesting is not allowed.
3. **Special Management 2 (SM2)**: Areas designated as SM2 zones allow industrial activity. Industrial activities must be carried out sensitively to ensure that impacts on identified values, such as visual quality, wildlife habitat, recreation or sensitive soils, are minimized.
4. **Integrated Resource Management:** The objective of the Integrated Resource Management Zone is to recognize a full range of resource values and activities, including timber harvesting, mining, grazing, tourism, wildlife and recreation. No single value or activity is identified as having the highest priority for management.



Source: Bulkley Land and Resource Management Plan

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FIGURE 1-4

Bulkley Valley Land and Resource Management Plan Area

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5. **Agriculture/Wildlife:** This zone identifies Crown land in the Agricultural Land Reserve, with good agricultural capabilities and which also has good wildlife habitat. Management direction in this zone is intended to promote agriculture while ensuring that wildlife habitat is also provided.
6. **Settlement:** The Settlement zone is intended to recognize land that has been identified by local government in an Official Community Plan.

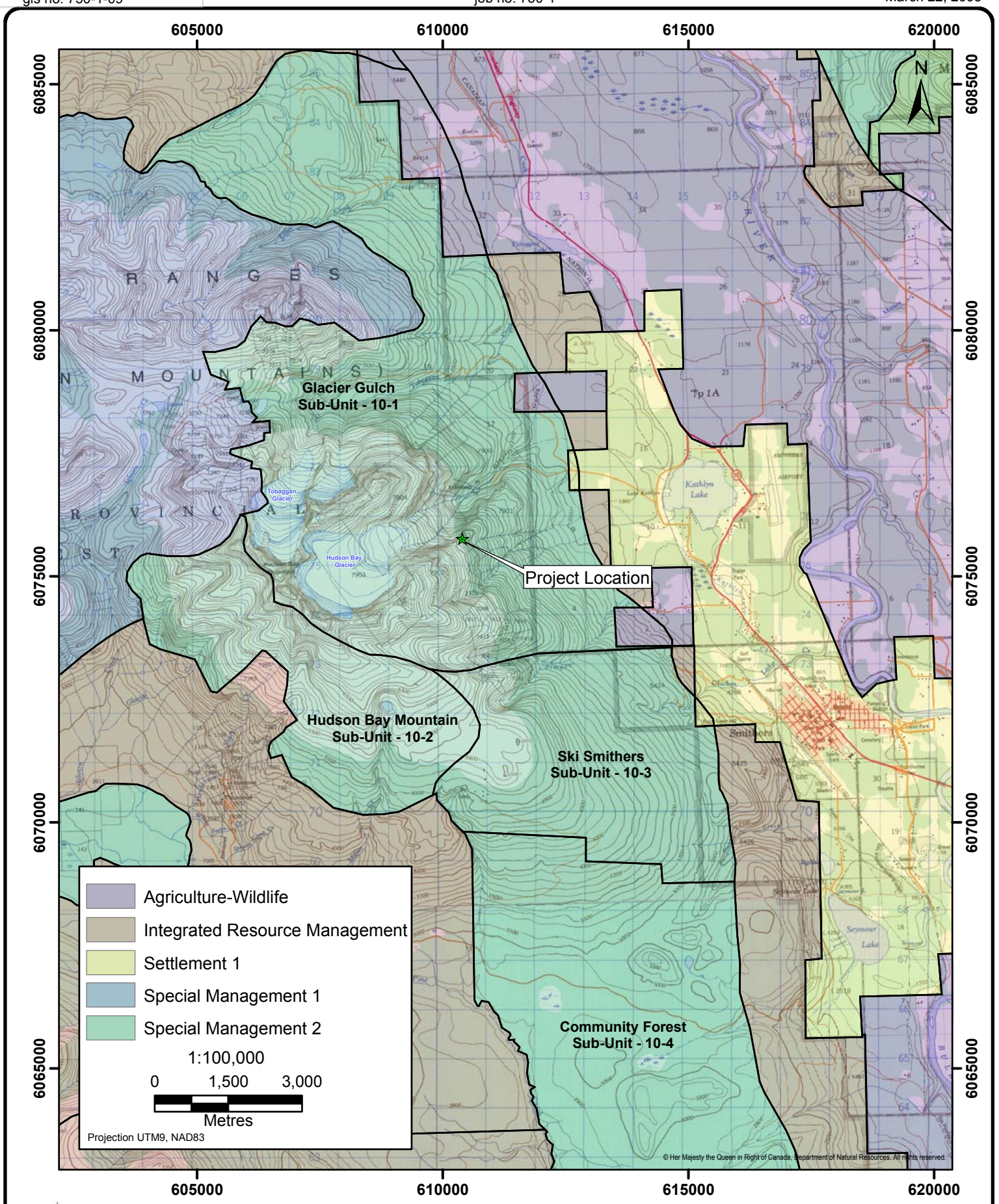
The British Columbia Ministry of Water, Land and Air Protection (WLAP) and Ministry of Forests decided to implement the operational practices in the BVLRMP through Landscape Unit Plans (LUP). Two LUPs based on planning units of the BVLRMP are relevant to the Davidson project: Bulkley Valley Landscape Unit Plan (BVLUP) (BC MSRM 2004); and Kitseguecla/Trout Creek Landscape Unit Plan (KTCLUP) (BC MSRM 1999). There is no LUP for the Hudson Bay Mountain plan area of the BVLRMP. Sections of the KTCLUP cover the Hudson Bay Mountain plan area. A draft of the Bulkley Valley Landscape Unit Plan (BVLUP) was released for public review in October of 2004. The BVLUP presents objectives developed by the Community Resources Board. The KTCLUP was finalized in September of 1999.

The resource management zones for the Smithers area are shown on Figure 1-5. Unit 10 of the BVLRMP includes Hudson Bay Mountain and is classified as a Special Management 2 (SM2) zone. The Davidson deposit is located in Sub-unit 10-1 within Unit 10. According to the BVLRMP, industrial activity is permitted in SM2 zones provided that potential impacts on visual quality, wildlife habitat, recreation or sensitive soils are minimized. Where impacts occur they will be mitigated through agency review and approval processes.

Sub-unit 10-1 is visible from Smithers, Highway 16 and Ski Smithers. Thus, one of the primary objectives for the area as identified in the BVLRMP, BVLUP and KTCLUP, is the maintenance of the visual qualities. The scenic backdrop of Smithers is critical for local tourism, recreational activities and the quality of life of the local residents. The KTCLUP presents a map showing the visual quality objectives within the project area. This map has been reproduced and presented herein (Figure 1-6). The Davidson project is within an area where the visual quality is to be preserved. The proposed mine plan (Section 3.2) has been designed in such a way to maintain current visual quality.

The maintenance of water quality is another area of concern identified in the BVLRMP, BVLUP and KTCLUP. The eastern slopes of Hudson Bay Mountain form part of the drainage basin of Kathlyn Lake, Glacier Gulch, Toboggan Creek and the Bulkley River. Groundwater flow through the existing adit drains primarily into the headwaters of Kathlyn Creek. Some of this water may make its way into Glacier Gulch Creek, which flows into Toboggan Lake to the northeast and Kathlyn Lake via a flow diversion on Club Creek. A diversion structure was constructed to shunt water from Glacier Gulch to Club Creek to improve Kathlyn Lake water quality.

Two kilometres to the north of the property flows Toboggan Creek, which is the primary water source of the Toboggan Creek fish hatchery. Toboggan Creek is the indicator stream for Upper Skeena Coho stocks and the hatchery program includes work on Upper Bulkley River Coho, one



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Resource Management Zones of the Bulkley Valley Land Resource Management Plan

FIGURE 1-5

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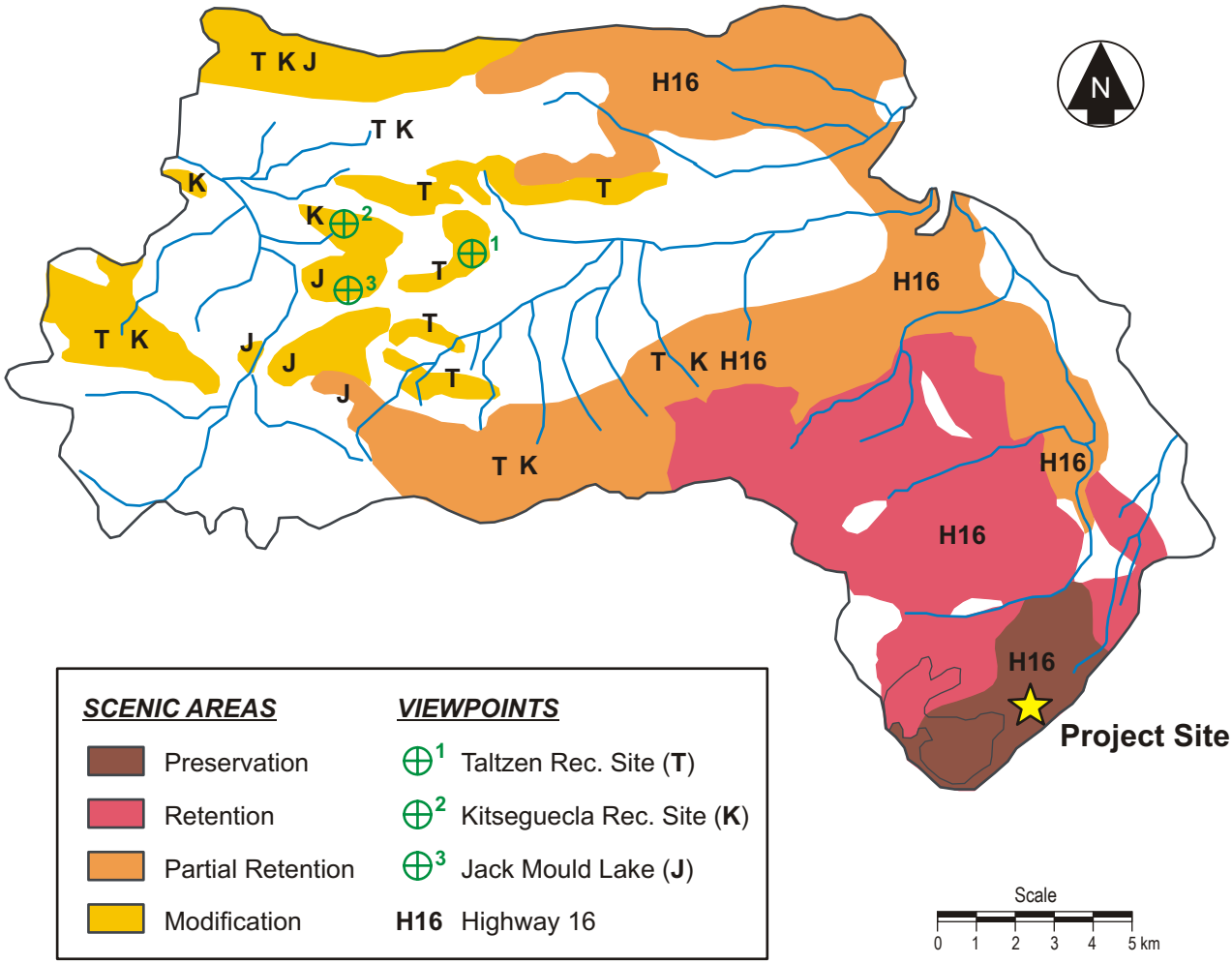

Source: BC Ministry of Sustainable Resource Management

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Visual Quality Objectives (Landscape Unit Trout Creek)

FIGURE 1-6

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of the most serious Coho conservation concerns in British Columbia (DFO 2005b, Donas 2004, BC MSRM 1998, 1999 and 2004). The Davidson project will not be within the Toboggan Creek watershed.

1.1.3 Climate

The climate of the area is characterized by cool summers and cold winters; average temperatures range from -9° C in January to 15° C in July. The average annual snowfall is 2 meters. Rain can occur in any month and ranges from an average low of 6 mm in February to a high of 58 mm in October. The relatively sparse precipitation of the area is due to the shielding effect of the Coast Range mountains. Meteorological data for Smithers has been recorded by Environment Canada since 1971. A summary of selected climate averages and normals for Smithers are shown in Table 1-2.

1.1.4 Ecology

The Bulkley Valley is sparsely tree covered with poplar, pine, spruce and balsam. The lower slopes of the mountains are typically heavily forested while alpine tundra is predominant at higher elevations. This zone is dominated by dwarf shrubs, herbs, mosses and lichens. The alpine tundra has high recreational appeal, and can provide important range for caribou and mountain goats. The tree line is at approximately 1600 m (5200 feet) (BC MSRM 1998, 1999 and 2004).

In 1995, the Ministry of Environment, Lands and Parks identified ten wildlife species as being of management concern in the BVLRMP area, including the giant pygmy whitefish (endangered or threatened), the short-eared owl, American bittern, Swainson's hawk, trumpeter swan, bald eagle, bull trout, wolverine, fisher, and grizzly bear (vulnerable and considered to be at risk). The forested areas of the Davidson project provide habitat for a population of moose, mule deer and white- and black-tailed deer but not for endangered or threatened species (BC MSRM 1998).

The Bulkley Plan Area has several high quality fisheries, with the Babine, Copper and Bulkley rivers designated as classified waters. The Bulkley River, which flows south through the Bulkley valley 5 km east of the property, is a major tributary of the Skeena River system. Large populations of pink salmon, Dolly Varden and cutthroat trout are present. Smaller populations of chinook and coho are considered threatened (Donas 2004).

The most important areas for fish habitat are tributaries to the rivers mentioned above. In general, these tributaries are more important than the main streams in terms of habitat for spawning and rearing. Toboggan Creek, which is located 2 km north of the Davidson project provides habitat for coho and pink salmon, cutthroat trout, Dolly Varden, lamprey (general), longnose sucker, mountain whitefish and rainbow trout. Glacier Gulch Creek is cited by the BC Ministry of Sustainable Resource Management as potential Dolly Varden and rainbow trout habitat but fish were not found during electroshock fishing in 1997. Kathlyn Lake and Toboggan Lake provide habitat for cutthroat and rainbow trout (DFO 2005a, DFO 2005b, DFO 2005c).

Table 1-2
Climate Normals and Averages for Smithers, BC

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Average (°C)	-8.85	-4.9	0	4.8	9.3	12.6	15	14.6	9.9	4.5	-2.3	-7.5	3.9
Daily Maximum (°C)	-4.93	-0.4	5.1	10.8	15.7	18.9	21.6	21.2	15.8	8.8	0.8	-3.8	9.1
Daily Minimum (°C)	-12.74	-9.4	-5.1	-1.3	2.8	6.3	8.4	7.9	4	0.1	-5.4	-11.1	-1.3
Precipitation													
Rainfall (mm)	11.03	6.3	5.9	15.9	35.7	48.8	45.2	42.9	51	57.8	24.6	9.1	354.1
Snowfall (cm)	52.37	27.1	17.1	6.2	0.4	0	0	0	0.2	7.3	38.3	55.2	204
Precipitation (mm)	50.13	26.8	20.4	21.3	36	48.8	45.2	42.9	51.2	64.4	55.6	50.1	512.7
Average Snow Depth (cm)	33.7	36	21	2	0	0	0	0	0	0	6	21	10
Wind													
Speed (km/h)	7.28	7.4	6.9	7.6	7.4	6.8	5.8	5.3	5	6.2	6.7	6.9	6.6
Most Frequent Direction	SE	SE	SE	SE	NW	NW	NW	SE	SE	SE	SE	SE	SE
Bright Sunshine													
Total Hours	45.26	77.2	126.9	176.7	223.6	228.7	246.9	222.4	144.8	87.5	40.7	30.5	1651
% of possible daylight hours	18.53	28.3	34.6	41.8	44.8	44.3	47.6	48	37.8	26.8	16	13.4	33.5

source: **Environment Canada**

1.2 Demographics

1.2.1 Population

A review of British Columbia Statistics information provides population data for the following communities in the region: Kitimat, Hazelton, Terrace, Houston, Smithers and Stewart. No population data were available for Iskut, Dease Lake or Telegraph Creek. Analysis of eight years of data from 1996 to 2003, as presented in Table 1-3, indicate a sizeable population decrease in the region over this time period. Each community has seen a population decrease ranging from 4.1% to 22% (BCStats 2004).

Table 1-3
Kitimat-Stikine Municipal Population Estimates, 1996-2003

Region	Year								% Change
	1996	1997	1998	1999	2000	2001	2002	2003	from 1996 to 2003
Kitimat	11,564	11,560	11,336	11,163	10,881	10,733	10,578	10,432	-9.8%
Hazelton	363	361	370	368	362	360	360	348	-4.1%
Terrace	13,298	13,417	13,266	13,060	12,849	12,639	12,453	12,373	-7%
Houston	4,098	4,219	4,193	3,988	3,870	3,733	3,593	3,551	-13%
Smithers	5,856	5,869	5,835	5,766	5,738	5,651	5,643	5,513	-5.9%
Stewart	893	829	732	698	692	690	694	701	-22%

Source: B.C. Stats 2004

In demographic terms the population tends to be younger than the B.C. average. In addition to the permanent population of these year-round communities, there is an extensive seasonal population in the area, due to resource industry employment and recreation opportunities (BCStats 2004).

The Davidson project lies within an area that is claimed to be traditional territory of the Wet'suwet'en (Wah Tah Keght and Woos houses). The Wet'suwet'en community of Moricetown, north of Smithers, has an estimated population of 650. It is locally administered by the Band (BC MSRM 1998).

1.2.2 Employment

The forestry, tourism and the public sectors are all important for the area. The mining sector in the Bulkley Plan area has been active in the past with several underground mines producing base and precious metals as well as coal. Although active exploration is ongoing, no mines are currently in operation within the plan area. Forestry, the dominant sector, accounts for 23% of basic sector income in the region. According to the 2001 census the top eight industries by labour force for the Bulkley-Nechako Regional District are:

1. Manufacturing;
2. Agriculture, forestry and hunting;

3. Retail trade;
4. Health care and social assistance;
5. Educational services;
6. Public administration;
7. Accommodation and food; and
8. Construction.

The median total income of $21,706 is close to the BC average of $22,095. Unemployment figures for the region are 11.8%, which is well above the current BC average of 6.2%. The unemployment figure for males between the age of 15 and 24 is approximately 22%, which is noticeably higher than the BC average of 17%.

2. PROJECT INFORMATION

2. Project Information

2.1 Davidson Project

2.1.1 Ownership and Contacts

By agreement dated March 18, 2005 as amended on April 8, 2005, between Fundamental Resources Corporation, Donald Alexander Davidson, Patent Enforcement and Royalties Ltd., and Blue Pearl Mining Ltd. (BPM). BPM controls 100% of the Davidson deposit. Below is the contact information for the proponent and professionals that are associated with the project.

2.1.1.1 Proponent

Blue Pearl Mining

Vancouver Office	Toronto Office	Smithers Office
611-675 West Hastings Street	#500 – 6 Adelaide Street East	1260 King Street, PO Box 729
Vancouver, BC V6B 1N2	Toronto, ON M5C 1H6	Smithers, BC V0J 2N0
Tel: 604-669-1668	Tel: 416-860-1438	Tel: 250-877-6121
Fax: 604-669-2543	Fax: 416-367-0182	Fax: 250-877-6132
Website: www.bluepearl.ca	Website: www.bluepearl.ca	Website: www.bluepearl.ca
Contact: Ken Collison	Contact: Ian McDonald	Contact: pending
Email: kcollison@bluepearl.ca	Email: mcdonald@bluepearl.ca	

2.1.1.2 Consultants

Engineering Contacts

Hatch Ltd.	McIntosh Engineering Inc.
Suite 2200, Oceanic Plaza	Suite 101
1066 West Hastings Street	1438 W. Broadway Road
Vancouver, BC V6E 3X2	Tempe, Arizona, 85282
Tel: 604-689-5767	Tel: 480-831-0310
Fax: 604-689-3918	Fax: 480-730-0317
Website: www.hatch.ca	Website:
Contact: John Shillabeer	Contact: Sandy Watson
Email: jshillabeer@hatch.ca	Email: acwatson@mcintoshengineering.com

Rescan Environmental Services Ltd.	Snowden Group
6th Floor, 1111 West Hastings Street,	550-1090 West Pender Street
Vancouver, BC V6E 2J3	Vancouver, BC V6E 2N7
Tel: 604-689-9460	Tel: 604-683-7645
Fax: 604-687-4277	Fax: 604-683-7929
Website: www.rescan.com	Website:
Contact: Shane Uren	Contact: Andrew Ross
Email: suren@rescan.com	Email: aross@snowden.com

2.1.2 Exploration History

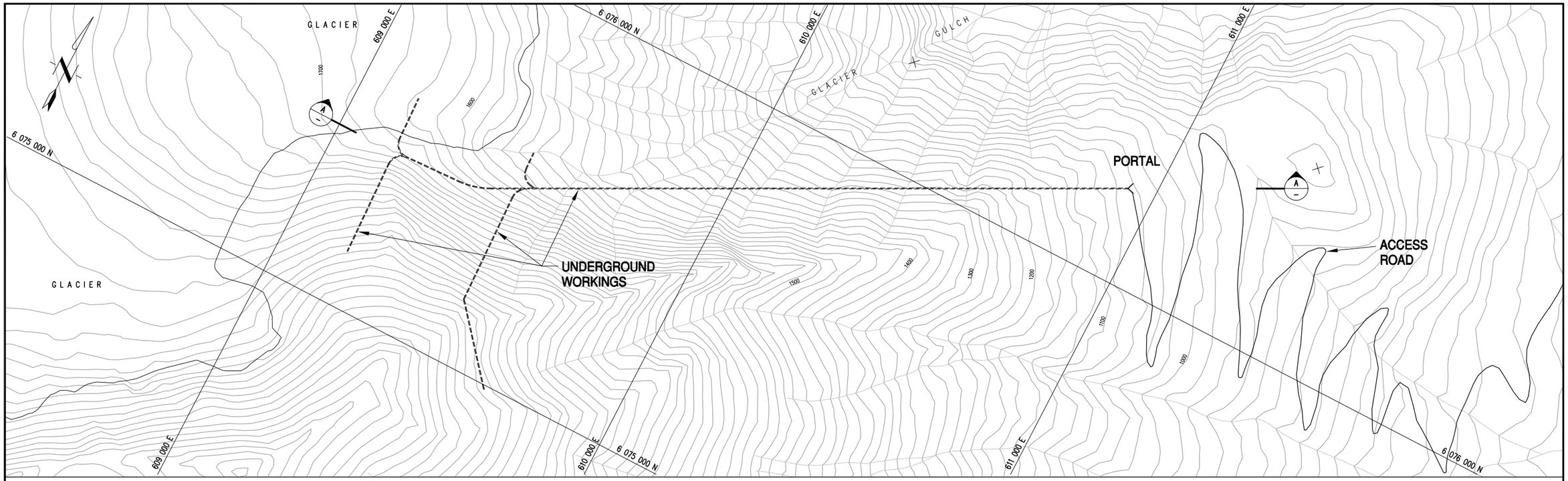
The Davidson molybdenum-tungsten porphyry stockwork deposit occurs near the centre of the 150 km^2 Hudson Bay mineral district, which includes more than 60 silver-gold-base metal veins related to the Hudson Bay quartz monzonite stock that forms the core of Hudson Bay Mountain. The district has historically not been an important source of metals. Exploration began in the early 1900's and while there has been recorded production from several properties, only the Duthie Mine on the back (southwest) side of Hudson Bay Mountain has produced modest quantities of silver, gold, lead and zinc. In addition, a small tonnage of coal was mined from a series of adits at the Lake Kathlyn Coal Mine in Glacier Gulch.

Molybdenum was discovered in an outcrop at the foot of Kathlyn Glacier on Hudson Bay Mountain and first reported by the Geological Survey Canada in 1944. The Davidson project has three predecessor historical names: Hudson Bay Mountain; Glacier Gulch; and Yorke-Hardy. In 1957, the first claims were staked by William Yorke-Hardy. From 1957 to 1959, the property was optioned by American Metal Co. who completed a program of trenching and surface drilling; Amax dropped the option in 1959.

In 1961 the property was again optioned by Amax and surface drilling identified two shallow dipping bodies of molybdenite-scheelite mineralization. By 1964, a total of 41 holes had been drilled from surface, but because of challenging topography, the surface holes could not be placed to adequately define the mineralization and an underground exploration program was planned. In 1964 the project was transferred to Climax Molybdenum Corporation of B.C. and in 1971 Climax purchased the project outright.

In 1966 an adit was collared at an elevation of 1066 m on the east slope of Hudson Bay Mountain. The adit was driven 66° west for 1,700 m, then due west for 220 m. Underground drilling to define the mineralization began in 1967 and continued to 1980. The existing underground workings are shown in plan and section in Figure 2-1. Waste rock from the exploration workings was placed on surface directly east of the 1066 m adit.

Between 1966 and 1980, Climax completed a total of 3,100 m of underground workings and 35,164 m of underground drilling in 124 holes. In aggregate, 165 holes have been drilled totalling 57,780 m (Table 2-1). In addition, Climax undertook two bulk sample raises, geotechnical studies, metallurgical investigations and mine planning studies. No significant work has been carried out since 1980. The portal has been buried to restrict access and no facilities presently remain at the site.



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DWG. NO. | REFERENCE DRAWINGS

NO	DESCRIPTION	BY	DATE

ISSUE/REVISIONS

PROJECT PROCESS CIVIL MECH. STRUCT. PIPING SERVICES ELECT. INSTR.

SECTION:	CIVIL	
SCALE:	1:5000	DATE
DESIGN. BY	---	----
DRAWN BY:	D.L.N.	JUNE 05
CHECK. BY	---	---
APP. BY:	---	---

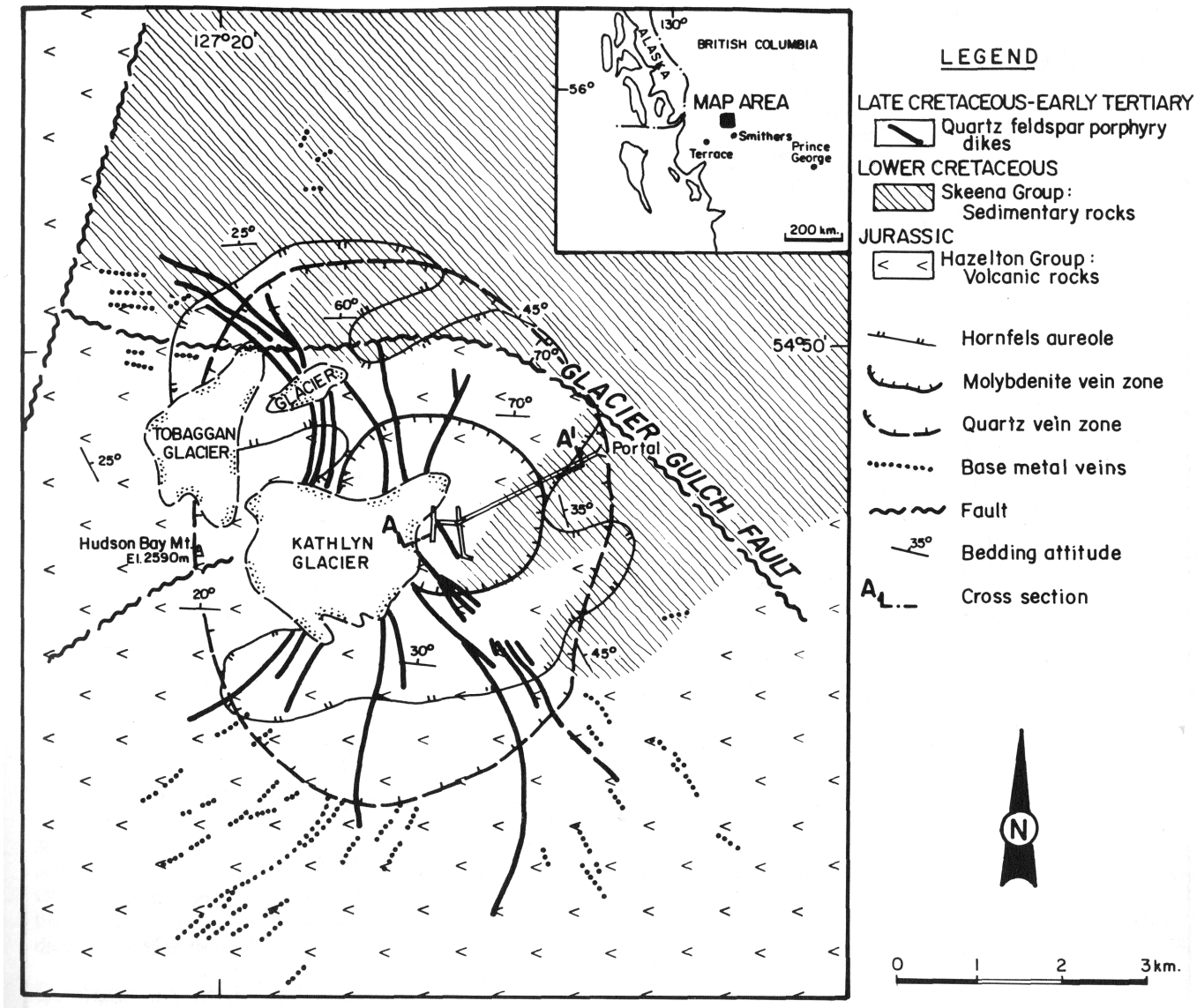
CLIENT: Blue Pearl Mining

HATCH Rescan™

TITLE: FIGURE 2-1
Underground Workings Plan and Section

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
SKA0C001.DWG	319736	SK-A0-C-001	

99/99/99 99:99
315601STD.DWG
BORREC1-0



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Geologic Map of Hudson Bay Mountain to Show Rock Types, Mineral Zoning and the Yorke-Hardy (Davidson) Deposit (from Atkinson, 1995)

FIGURE 2-2

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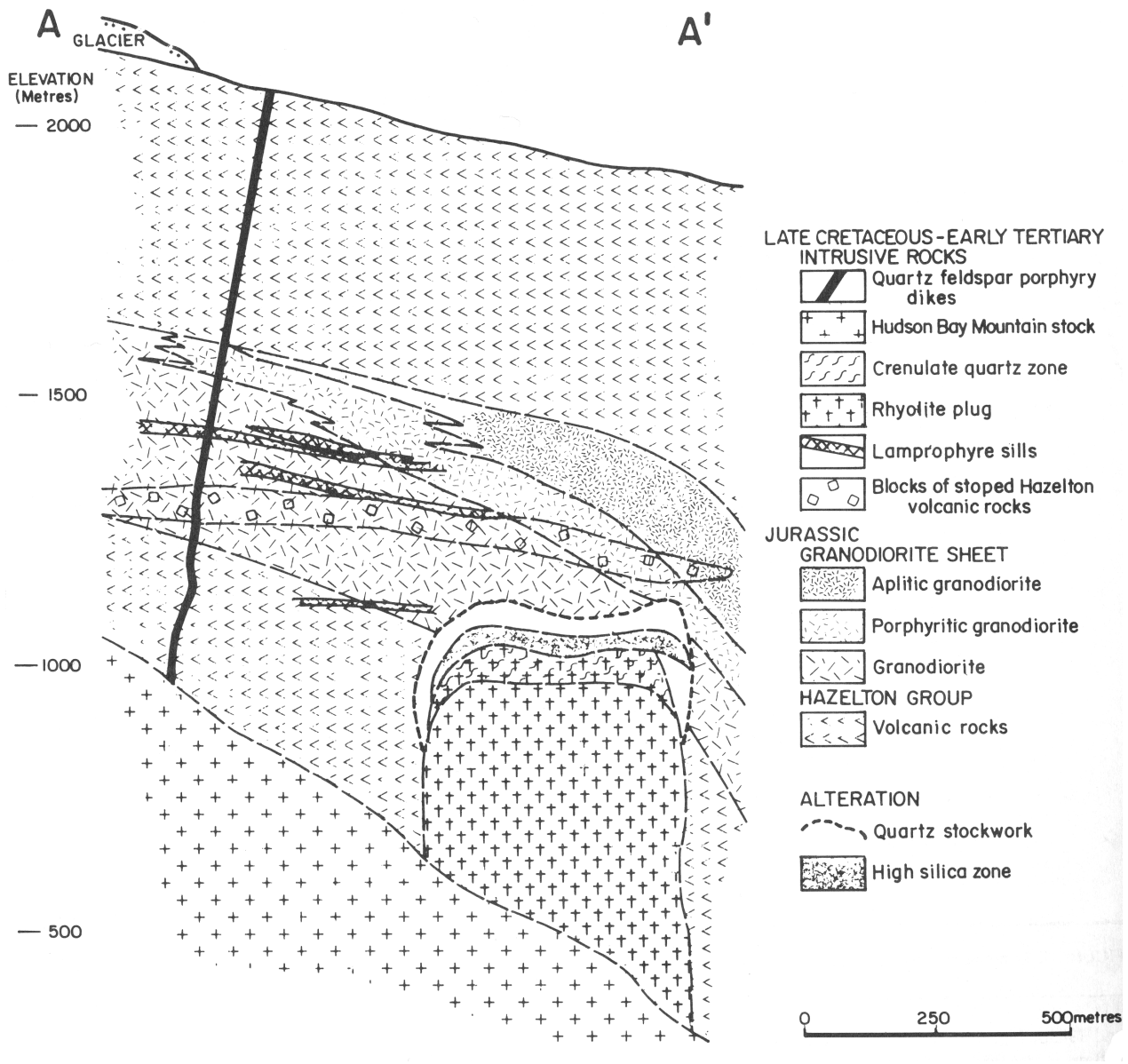

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Geologic Cross Section A-A' of the Yorke-Hardy (Davidson) Deposit to Show Rock Types and Alteration (from Atkinson, 1995)

FIGURE 2-3

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In 1996 Climax sold the property and all related assets to Donald A. Davidson. In 1997 Mr. Davidson optioned the property to Verdstone Gold Corporation and Molycorp Gold Corporation, which option was abandoned in 1999. In 2001, Fundamental Resources Corporation acquired an option on 50% of the property. In April 2005, BPM acquired control over 100% of the project under terms of a vending agreement with Mr. Davidson and Fundamental Resources Corporation. The exploration database has been remarkably well-preserved by Mr. Davidson. Virtually all drill core, assay data, maps, and other records from inception of exploration is stored in Mr. Davidson's warehouse in Smithers.

Table 2-1
Summary of Drilling at Davidson Property

Year	Operator	# of Holes		ID Numbers	Total (feet)	Total (metres)
1958	AMAX	11	Surface	1-11	6,320	1,927
1961-1964	Climax	30	Surface	12-41	67,871	20,690
1967-1968	"	31	Underground	42-72	41,841	12,755
1970	"	19	Underground	73-90; 82A	14,157	4,316
1971	"	49	Underground	91-139	41,111	12,532
1972-1973	"	5	Underground	140-144	7,341	2,238
1979-1980	"	20	Underground	145-165	10,902	3,323
Total		**165**			**189,543**	**57,780**

2.1.3 Geology

The Davidson deposit lies within the Intermontane Belt of sedimentary, volcanic, and intrusive rocks of the Canadian Cordillera. Figures 2-2 and 2-3 (from Atkinson 1995) illustrate the geology of Hudson Bay Mountain and the Davidson (Yorke-Hardy) deposit, as well as the underground workings.

The deposit is 2.5 km across and extends to depths of more than 2 km. Jurassic volcanic rocks of the Hazelton Group exposed on the south flank of Hudson Bay Mountain include mafic to felsic flows, tuff, breccia and lesser mudstone, conglomerate and limestone. The Hazelton rocks are overlain by Early Cretaceous Skeena Group sedimentary rocks (greywacke, sandstone and mudstone with coal seams) exposed on the east flank of the mountain.

A concealed granodiorite sheet of late Jurassic age intrudes the volcanic sequence (see Figure 2-1). The large sheet is subdivided into an upper aplitic granodiorite, a central porphyritic granodiorite, and a basal granodiorite. The granodiorite sheet is the host for the highest grade molybdenum. The sheet contains blocks of stoped Hazelton volcanics. Lamprophyre dikes crosscut both the granodiorite and volcanics. A rhyolite plug intrudes the Hazelton rocks and the base of the granodiorite sheet, and is truncated by the Early Tertiary-Late Cretaceous (67-73 million years) Hudson Bay Mountain stock. The rhyolite plug is oval shaped and at its upper

contact are quartz stockworks and a high silica zone that crosscuts well-defined chill and crenulate quartz band zones. The stock is relatively unmineralized and represents the culmination of hydrothermal and intrusive activity at Davidson. The waning stages of the hydrothermal system are characterized by radial, late stage quartz porphyry dikes and quartz, pyrite, base/precious metal and carbonate veins.

Molybdenite in the Davidson deposit occurs in three modes: 1) early stockwork veins ranging from hairline to 5 mm in width, containing most of the molybdenum; 2) high grade zones comprising sets of banded veins up to 1 m wide of fine-grained, quartz + molybdenite ± pyrite ± scheelite; and 3) high grade zones corresponding to pegmatitic quartz veins up to 10 cm wide containing blades and rosettes of molybdenite up to 5 cm long. Scheelite, occuring mainly in the banded veins, is the principal tungsten mineral although wolframite and powellite are also present.

2.1.4 Resource Estimates

Several resource estimates have been completed. In 1981 R.C. Steininger of Climax utilized all drill holes and a sectional technique on cross sections spaced 100 ft apart to estimate, at a 0.2% MoS_2 cut-off, 22.7 million tons grading 0.401% MoS_2. A tonnage conversion factor of 12.12 ft^3/ton was used for this calculation. The same year, A. Noble of Amax Technical Services calculated a resource within the same 0.1% MoS_2 shell used by Steininger. For this estimate, Noble used kriging, a 12.5 ft^3/ton tonnage factor and 50×50×50 ft blocks. At a 0.2% MoS_2 cutoff Nobel calculated a resource of 53.3 million tons grading 0.275% MoS_2.

In 1998 G.H. Giroux completed a kriged estimate using the same data base of 165 drill holes, a larger mineralized shell, a 50×50×25 ft block model and a tonnage conversion factor of 12.5 ft^3/ton. At 0.2% MoS_2 cutoff, a measured plus indicated resource of 77.63 million tons grading 0.286% MoS_2 was estimated.

G.H. Giroux completed another resource estimate for BPM in February 2005 (Giroux, 2005), in accordance with the definitions and requirements of National Instrument 43-101. The same parameters and data base from the 1998 estimate were utilized, except that a tonnage conversion factor of 12.05 ft^3/ton was used based on a compilation of extensive historic specific gravity measurements.

Giroux highlighted two estimates based on cut-off grades for two possible underground mining scenarios as shown in Table 2-2. The 0.2% MoS_2 cut-off might correspond to a bulk mining approach with onsite processing facilities while the 0.3% MoS_2 cut-off might reflect a more selective mining approach involving direct shipping of ore to an existing off-site processing facility.

Table 2-2
Measured Plus Indicated Resource - Davidson Deposit

Cut-off Grade (% MoS_2)	Tons (million)	MoS_2 %	WO_3%
0.20	82.98	0.295	0.035
0.30	25.45	0.424	0.037

3. PROJECT DEVELOPMENT

3. Project Development

This section presents an overview of the conceptual plan for the development of the Davidson deposit. The emphasis is on the technical aspects of the construction, operation and decommissioning of the mine. Environmental and community concerns pertaining to the development of the mine are discussed in Section 4.

3.1 Authorizations Required

Key authorizations/approvals are required from the provincial government and possibly the federal government. Local governments, First Nations and stakeholders will also be consulted throughout the permitting process. The project review process is driven by the provincial government through the Environmental Assessment Office (EAO) with the federal involvement dictated by the Canadian Environmental Assessment Act (CEAA).

3.1.1 Provincial Process

The recently revised provincial process is summarized in the following steps:

1. A Project Description is submitted to the EAO in Victoria to determine whether or not the Environmental Assessment (EA) Act applies. Based on the scope of the Davidson project, this is likely. The Province would then issue a Section 10 order indicating an EA certificate is required. Notification of the proposed project is provided to relevant provincial and federal agencies as well as affected First Nations and local government officials, and the general public.

2. A project site tour is conducted to identify key issues and concerns of provincial and federal government agencies, local governments and First Nations (*e.g.* Wet'suwet'en Nation).

3. A Section 11 order is issued to the Proponent identifying the scope of the EA and how it will be conducted. The Proponent will then develop the terms of reference (TOR) identifying all data needs to be met in the Application. The public and affected First Nations are then consulted for their input on the draft TOR, prior to government approval.

4. The Application (EA) is undertaken by the Proponent and submitted for review by relevant government agencies, affected First Nations and local government to ensure the approved TOR has been complied with.

5. The EAO prepares an Assessment Report for submission to relevant Ministers for a final decision approval on the development plan.

Authorizations or permits required from the provincial government will include:

- Mines Act permit including reclamation plan;
- explosives licence;
- waste management permits for liquid effluent, air emissions, sewage and refuse;

- water licence;
- special use permit – access road; and
- licence to cut – Forestry

The above list is not all inclusive. There are a number of other licences, permits and approvals required to develop and operate the mine in an environmentally safe manner.

3.1.2 Federal Process

Federal permits may be required for the project. Three federal triggers include impacts on fisheries habitat or resources, obstruction of navigable waters and the storage of explosives on site.

Impacts on fisheries will be driven by water quality management on the site. The property is located at the headwaters of Kathlyn Lake drainage. Flow from Kathlyn Lake combines with Chicken Creek before entering the Bulkley River, which supports populations of trout, salmon and other fish species. Fish species of the Bulkley River have not shown deleterious effects to molybdenum. The expected molybdenum concentrations from water through the mine site will likely not pose any risks to fish of the Bulkley River.

Obstruction of navigable waters is not expected to be an issue as the streams on the site are small and there are no recorded observations of any vessels, including canoes and kayaks, due to the shallow nature and small seasonal flows of the streams.

The underground mine will require drilling and blasting on a regular basis. Explosives will be delivered to the site and then will be stored underground.

3.1.3 Project Schedule

Environmental baseline studies began in April 2005 and will continue through March 2006. Feasibility studies began in June 2005 and will continue into 2006. Feasibility studies include haul options, mine layout and mine development. Work on an environmental impact statement is scheduled to begin in 2005 with submission to the EAO by the end of the second quarter in 2006. Completion of the environmental assessment process is anticipated by late 2006. Mine construction will follow upon receipt of the environmental certificates.

3.2 Mine Plan

BPM is proposing the construction of an underground mine to gain access to the high grade molybdenite (MoS_2) ore of the Davidson deposit. The Davidson project is anticipated to produce 2000 tonnes of ore per day. The development plan does not include a processing facility as the ore will be hauled off-site for processing at an existing milling facility, possibly at Endako, Huckleberry, or some other facility.

3.2.1 Current Site Access

The present access to the property is via Kathlyn Lake road (from Highway 16) to the Glacier Gulch Road and, at elevation 630 m, to a 4 km long switchback access road leading to the 1066

m adit. The current access route has a number of sharp turns and provides relatively poor access to Highway 16.

3.2.2 Mine Development

Development of the mine will commence with the enlargement of the existing 1066 m adit to improve access to the ore body by personnel and equipment. Concurrently, a second adit will be driven at about the 700 m elevation. This lower adit will be connected by ore and waste passes to the 1066 m adit. The ore and waste will be conveyed out the 700 m adit to the haul truck load-out.

A new road will be constructed from the 700 m adit. Various options are being considered for ore haulage to a processing facility by road or rail. One option is the construction of a new access road that would connect to the existing power line right-of-way then continue south. The access road would connect to Slack Road or an existing road south of Smithers. Figure 3-1 shows the proposed ancillary facilities. The switchback road that runs from Glacier Gulch road to the 1066 m adit will be upgraded to allow for transportation of mining equipment, supplies and employees during operation of the mine.

If ore is to be railed to an offsite processing facility, then a new road will be required to run to a rail siding at Kathlyn Lake or Smithers.

Other development will consist of mine levels required to access the ore and ramps connecting these levels, lunchrooms, a maintenance garage with warehouse and other openings required for mine operations.

3.2.3 Mining Method

The ore will be mined using an efficient bulk mining method with mining levels spaced every 50 to 100 meters. The size of the stopes (excavations in the ore) will vary depending on the shape of the ore zone to be mined. The ore will be drilled with 6 to 8-inch diameter blast holes which will be loaded with either ANFO or slurry explosives to break the ore. The ore will be hauled to the ore pass by a scooptram (low profile front-end loader) or loaded into a truck and then hauled to the ore pass.

3.2.4 Ore Crushing

The ore will be crushed with either a single stage of crushing or a double stage, depending on the size required by the processing facility. The crusher(s) will be located underground and will not be audible or visible from outside the mine.

3.2.5 Waste Rock

Underground mines do not produce large volumes of waste rock as the only source of waste rock is the development of the underground openings used to access the ore body. The waste rock underground will be hauled to the waste pass and then conveyed out the lower 700 m adit. This material will be stored on surface in a temporary storage area and then either used for building roads, to maintain underground roads, sold as aggregate, or placed as backfill in mined out stopes. Its use or uses will be determined by the results of the acid rock drainage and metal

leaching testing to be carried out and by the needs of the project. Waste rock from the initial development on the 1066 level will be placed on the existing waste storage areas situated near the 1066 m adit.

3.2.6 Mine Ventilation

Part of the mine development program is establishing a ventilation circuit to provide fresh air to the workforce. The expected circuit would include fresh air, with natural gas heaters to warm the air in the winter, entering the mine through the 1066 m adit and being distributed throughout the mine. The exhaust air will be vented to surface through an exhaust raise located south of the 1066 adit. Placement of the exhaust fan used to draw air through the mine will be based on practical needs, but will be located underground to minimize any noise impacts generated from its operation.

3.2.7 Mine Water

The portal at 1,066 m elevation leading to the existing underground development is estimated to produce between 50 and 100 L/s of water. This water drains down the mountain side and eventually reaches the Bulkley River. Historic and recent water quality analysis of the underground discharge indicates that dissolved molybdenum is the priority element of concern. Table 3-1 provides the underground mean water quality from two recent samplings (April and May 2005).

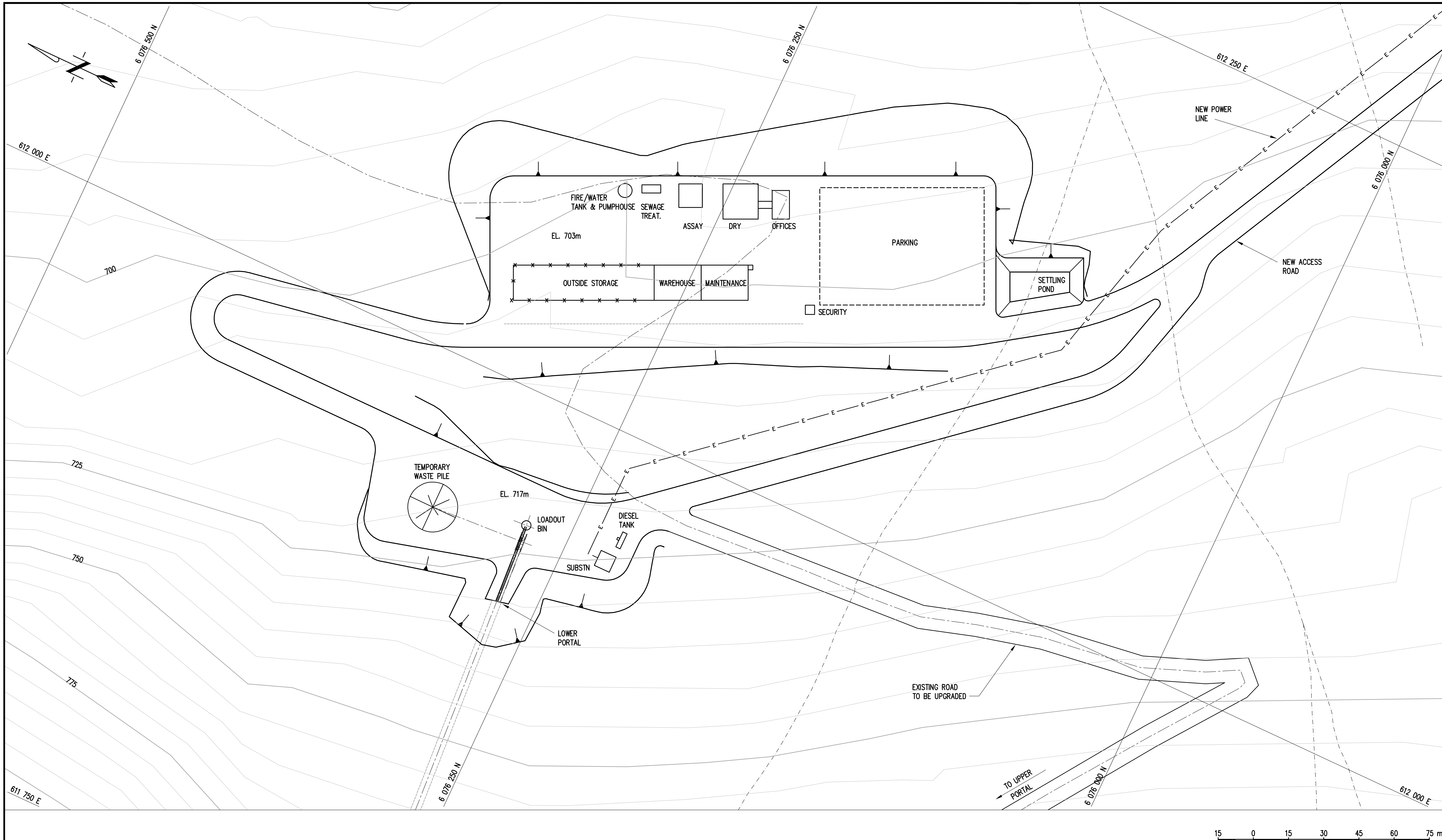
For comparative purposes the long-term average water quality in the Bulkley River (BC MOE 1966-76) is presented in Table 3-2. The flow in the Bulkley River near Smithers (Water Survey of Canada, 1915-1921) has a mean of 208 m^3/s with a recorded maximum of 1190 m^3/s and a minimum 19.9 m^3/s.

Comparing the maximum estimated flows from underground based on the present conditions with the Bulkley River minimum flows, a dilution of 200 times exist. The average dissolved molybdenum concentration from the portal discharge is 3.43 mg/L and when diluted in the Bulkley River the worst case concentration in the river is approximately 0.022 mg/L which is well below the CCME receiving water aquatic guideline of 0.073 mg/L. At mean flow in the Bulkley River and maximum portal flow the concentration would be 0.007 mg/L.

Molybdenum concentrations and flow rates are likely to rise during operations. Initially BPM plans to construct a pipeline to transport the clarified mine water from the mine to the Bulkley River. The HDPE pipeline would be buried along the proposed ore haul road and then along Slack road to the area adjacent to the Smithers sewage plant located along the Bulkley River. The discharge to the river would be through a diffuser. The preliminary pipeline route is shown in Figure 3-2. BPM and its consultants are reviewing treatment technology to control dissolved molybdenum, so they will be prepared if levels rise, requiring treatment.

The effect of dissolved molybdenum varies depending on the receptor. For example the receiving water criteria for aquatic life is 0.073 mg/L compared to 0.5 mg/L for livestock and 0.01-0.05 mg/L for irrigation.

BPM plans to do what is required to protect aquatic life and agricultural use in the area.



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DWG. NO.	REFERENCE DRAWINGS

PROJECT	PROCESS	CIVIL	MECH.	STRUCT.	PIPING	SERVICES	ELECT.	INSTR.	NO	DESCRIPTION	BY	DATE
										ISSUE/REVISIONS		

PROJECT	PROCESS	CIVIL	MECH.	STRUCT.	PIPING	SERVICES	ELECT.	INSTR.	NO	DESCRIPTION	BY	DATE
										ISSUE/REVISIONS		

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SCALE:	1:750	DATE
DESIGN. BY	---	----
DRAWN BY:	D.L.N.	JUNE 05
CHECK. BY	---	---
APP. BY:	---	---

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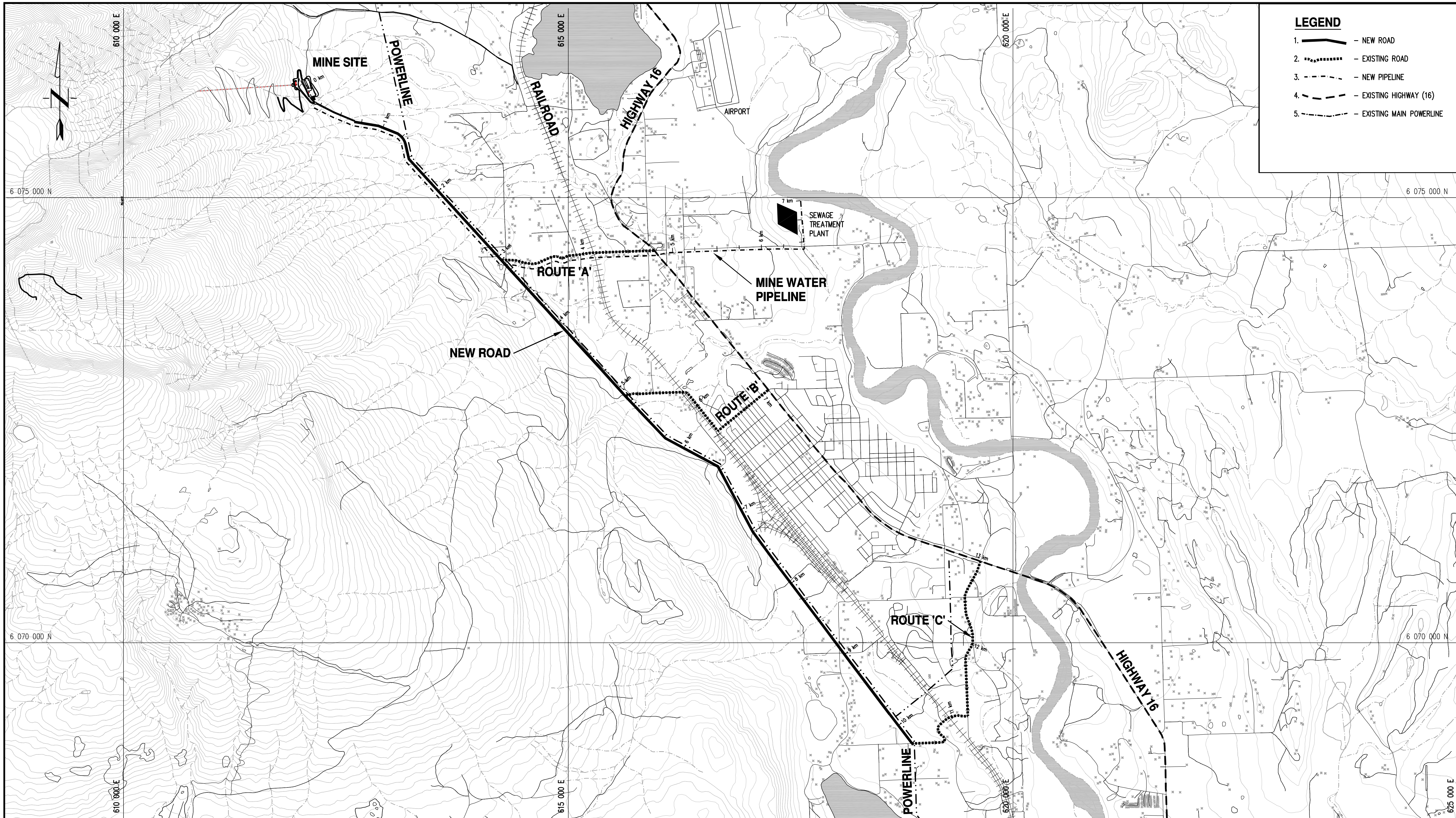
FIGURE 3-1

Surface Plan Layout for the Davidson Project

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
SKA0C005.DWG	319736	SK-A0-C-005	



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315901STD.DWG BDRREV-0 ??/??/?? ??:??

DWG. NO.	REFERENCE DRAWINGS

PROJECT	PROCESS	CIVIL	MECH.	STRUCT.	PIPING	SERVICES	ELECT.	INSTR.	NO	DESCRIPTION	BY	DATE
										ISSUE/REVISIONS		

PROJECT	PROCESS	CIVIL	MECH.	STRUCT.	PIPING	SERVICES	ELECT.	INSTR.	NO	DESCRIPTION	BY	DATE
										ISSUE/REVISIONS		

SECTION:	CIVIL	
SCALE:	1:20 000	DATE
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DRAWN BY:	D.L.N.	JUNE 05
CHECK. BY	---	---
APP. BY:	---	---

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FIGURE 3-2
Proposed Pipeline to the Bulkely River and Haul Options

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
SKA0C003.DWG	319736	SK-A0-C-003	

Table 3-1
Davidson Adit Water Quality (April and May 2005)

Physical Tests	April	May
Colour (CU)	<5.0	<5.0
Conductivity (uS/cm)	398	429
Total Dissolved Solids	256	207
Hardness CaCO3	178	192
pH	7.91	7.66
Total Suspended Solids	1.5	1.5
Turbidity (NTU)	1.89	0.81
Dissolved Anions		
Acidity (to pH 8.3) CaCO3	2.2	2.3
Alkalinity-Total CaCO3	65.0	82.6
Bromide Br	<0.050	<0.050
Chloride Cl	2.22	1.91
Fluoride F	1.07	1.08
Sulphate SO4	126	135
Nutrients		
Ammonia Nitrogen N	<0.020	<0.020
Total Kjeldahl Nitrogen N	<0.050	<0.050
Nitrate Nitrogen N	0.0099	0.0050
Nitrite Nitrogen N	<0.0010	0.0010
Total Nitrogen N	<0.056	<0.056
Total Phosphate P	0.0072	0.0040
Total Metals		
Aluminum T-Al	0.0615	0.0079
Arsenic T-As	0.0753	0.0717
Cadmium T-Cd	0.000506	0.000791
Calcium T-Ca	61.8	69.8
Chromium T-Cr	<0.00050	<0.00050
Cobalt T-Co	0.00016	0.00005
Copper T-Cu	0.00194	0.00104
Iron T-Fe	0.126	0.069
Lead T-Pb	0.000025	0.000025
Magnesium T-Mg	4.78	5.01
Mercury T-Hg	<0.000050	<0.000050
Molybdenum T-Mo	3.43	3.52
Nickel T-Ni	<0.00010	<0.00010
Phosphorus T-P	<0.30	<0.30
Selenium T-Se	<0.0010	<0.0010
Silicon T-Si	4.53	3.73
Silver T-Ag	<0.000010	<0.000010
Sodium T-Na	10.1	8.6
Sulphur T-S	42.7	43.0

(continued)

Table 3-1
Davidson Adit Water Quality (April and May 2005)

Physical Tests	May	April
Tungsten T-W	<0.50	<0.50
Uranium T-U	0.00293	0.00347
Zinc T-Zn	0.0051	0.0067
Dissolved Metals		
Aluminum D-Al	0.0209	<0.0050
Arsenic D-As	0.0566	0.0544
Cadmium D-Cd	0.000537	0.000651
Calcium D-Ca	63.4	68.9
Chromium D-Cr	<0.00050	0.00054
Cobalt D-Co	0.00015	<0.00010
Copper D-Cu	0.00066	0.00046
Iron D-Fe	0.015	0.015
Lead D-Pb	<0.000050	<0.000050
Magnesium D-Mg	4.89	4.86
Molybdenum D-Mo	3.48	3.37
Mercury D-Hg	<0.000050	<0.000050
Nickel D-Ni	<0.00010	<0.00050
Phosphorus D-P	<0.30	<0.30
Selenium D-Se	<0.0010	<0.0030
Silicon D-Si	4.26	3.63
Silver D-Ag	<0.000010	<0.000010
Sodium D-Na	9.6	8.3
Sulphur D-S	40.8	40.5
Tungsten D-W	<0.50	<0.50
Uranium D-U	0.00299	0.00345
Zinc D-Zn	0.0042	0.0043
Organic Parameters		
Total Organic Carbon C	1.53	<0.50

Results are expressed as milligrams per litre except where noted.

Table 3-2
Bulkley River Water Quality, 1966-1976

Physical Tests		Max.	Min.	Mean
Colour	Apparent (ACU)	55	<5	<14
	True (TCU)	40	5	18
	TAC (TAC)	31	<1	<LI12
Conductivity (µS/cm)		188	47	66.9
Total Dissolved Solids		120	30	51.4
Hardness		81.1	21.3	30.8
pH		7.9	7.3	7.5
Total Suspended		327	2.4	58.6
Turbidity		96	0.9	13.0

(continued)

Table 3-2
Bulkley River Water Quality, 1966-1976 (Completed)

Dissolved Metals	Max.	Min.	Mean
Dissolved Anions			
Alkalinity-Total	82	20.7	30.0
Chloride	6.8	0.1	0.8
Fluoride	<0.1	<0.05	*
Sulphate	5.2	>1	3.9
Nutrients			
Ammonia Nitrogen	<0.1	<0.005	<0.045
Total Kjeldahl Nitrogen	0.25	0.03	0.10
Nitrate/Nitrite Nitrogen	0.14	<0.005	<0.045
Total Nitrogen	0.27	0.03	0.12
Total Phosphate	0.25	<0.003	<0.036
Total Metals			
Cadmium	<0.0005	<0.0005	<0.005
Calcium	10.2	9.7	10.0
Chromium	0.008	<0.005	<0.006
Copper	0.014	<0.001	<0.007
Iron	11.3	0.2	3.3
Lead	<0.01	<0.001	*
Magnesium	1.6	0.9	1.2
Mercury	<0.00005	<0.00005	<0.00005
Molybdenum	0.0007	<0.0005	<0.0006
Nickel	<0.01	<0.01	<0.01
Phosphorus	0.25	<0.003	<0.036
Zinc	0.018	<0.005	<0.010
Dissolved Metals			
Aluminum	0.03	0.03	0.03
Calcium	21.1	6.9	10.0
Chromium	<0.005	<0.005	<0.005
Copper	0.004	<0.001	<0.002
Iron	0.1	<0.001	<0.065
Lead	0.017	<0.001	<0.003
Magnesium	6.9	0.74	1.97
Mercury	<0.00005	<0.00005	<0.00005
Phosphorus	0.02	<0.001	<0.004
Silicon	12.8	3.1	5.3
Sodium	6.1	0.7	1.6
Zinc	0.016	<0.001	<0.005

Results are expressed as milligrams per litre except where noted.

3.2.8 Manpower

The production crews typically work 8 hour shifts, 2 or 3 per day and 5 days per week, with a much reduced workforce required on weekends. The major skills required are heavy equipment operators, diesel and hydraulics mechanics, electricians and other specialty skills in much smaller numbers. There will be personnel trained in first aid on site whenever there are crews at work. Also, the mine will train personnel in mine rescue.

3.2.9 Ancillary Facilities

As the ore will be processed off site, the surface facilities required for the Davidson project are much less than those normally required for a mining operation. In addition, a number of facilities will be placed underground to minimize surface impacts. Anticipated surface facilities are as follows:

- Office for administrative and supervisory personnel;
- Changeroom facilities for personnel (130 person dry) to change into their work clothes before going underground and to shower after their shift is complete;
- Maintenance shop and garage to store and maintain equipment required on surface and to carry out major repairs on underground equipment;
- Security office and gate to control access to the site;
- Temporary waste rock storage area (15,000 m^2);
- Potable water tank and water treatment plant to supply water to the office and changehouse and for fire protection;
- Diesel fuel storage (5000 L) and dispensing facility for surface vehicles and to provide capacity to allow fuel to be pumped to a facility underground;
- Weigh scale at the haul truck loadout;
- Electrical substation;
- Sewage treatment plant to treat effluent from the office, changehouse and underground; and
- Parking lot for employees' and visitor's vehicles.

Locations of facilities as shown in Figure 3-1 are approximate; field locations will be determined in the Feasibility Study.

3.2.10 Explosives

Mine development and production will be carried out by drilling holes in the rock and then blasting with ANFO or with slurry in wet areas. Blasting materials including caps, primer, ANFO, or slurry, and other necessary materials that will be stored underground in facilities constructed at the time the site is developed. The facilities will be built to meet both Federal and Provincial regulations. Caps, primers, and other high explosives will be stored separately.

ANFO will be stored in bags to accommodate the specific blast design in effect at any given time.

3.2.11 Ore Haulage

A number of hauling options will be considered in the feasibility study. One option (Option 1) is to construct a new road from the 700 m adit to Highway 16. The road would follow BC Hydro's right-of-way to the west of Smithers and connect to Highway 16 south of the city (Route 'C' in Figure 3-2). This option would eliminate the need for haul trucks to travel through Smithers. Other alternatives to connect to Highway 16 from the hydro right-of-way are routes 'A' and 'B' in Figure 3-2. From Highway 16 the haul route would then continue to a processing facility. The processing facility of choice is the Endako mine. Consideration is being given to using the Huckleberry mine as well.

A second hauling option (Option 2) is to use both truck and rail to transport the ore for processing. Ore would be loaded on trucks at the 700 m adit and driven on a purpose built road to a newly constructed load-out facility (rail siding) at the existing railway near Kathlyn Lake. From the load-out ore would be transported by rail and then by truck to a processing plant. A second load-out facility and a short connecting road would also be needed at the plant end.

A third option is to transport the ore via a conveyor system to a load-out facility (as per option 2) at the railway. A second load-out facility and connecting road would also be required to reach the processing plant.

3.2.12 Decommissioning

Decommissioning of the site will include reclamation of the disturbed areas and removal of structures. The reclamation will be primarily land shaping, contouring, topsoil replacement and revegetation. All structures on the site will be removed and the foundations buried under fill. After contouring and topsoil replacement is accomplished, the soil will be prepared for planting by ripping or disking and then seeded and mulched. Ongoing reclamation of the mine area will be conducted as a normal part of mine operation throughout the life of the mine.

4. ENVIRONMENT AND COMMUNITY

4. Environment and Community

Below is a discussion of the potential impacts of the Davidson project on the local environment and community. Although an attempt was made to evaluate the impacts in an objective manner, BPM realizes that such evaluations are inherently subjective. Thus, the discussion below is intended to provide the basis for a discussion among stakeholders. A process of regulatory and public consultation is required to accurately quantify and qualify the possible impacts and to identify how best to mitigate the impacts.

4.1 Environmental Protection

4.1.1 Visual Impacts

The BVLRMP, BVLUP AND KTCJUP have identified impacts on the visual quality of Sub-unit 10-1 as an area of high priority. There are four areas of the mine development that could be visible from locations in the areas surrounding the property such as Highway 16:

1. The moisture laden warm air exhausting from the mine ventilation raise.
2. The ancillary facilities.
3. The access road from the site to the entry point on Highway 16.
4. The existing 1066 m adit and access road.

The moist air from the mine ventilation will primarily be visible during the winter months when the ambient temperature of the mine is higher and the air from the mine holds more moisture than the outside air.

The 1066 m adit and waste rock storage area are well below the tree line and are not visible from Highway 16 or other view points situated at lower elevation. Visual impacts caused by the ancillary facilities and the 700 m adit are expected to be low as they too are to be constructed far below the treeline in a flat area.

The access road will alter the appearance of the landscape by clearing shrubs and vegetation on the existing power line right-of-way. It is the opinion of BPM that the visual impacts from this activity will be minor; firstly because the road will run along an existing corridor in the landscape and secondly because the road is concealed by surrounding trees and will therefore only be visible from higher elevations. Periodic watering of the road during the dry summer months will minimize deposition of fugitive dust on the surrounding vegetation.

4.1.2 Water Quality

The maintenance of water quality is another high priority area identified by the BVLRMP for Sub-unit 10. Maintaining water quality is important for protecting local water supply for wildlife, livestock and humans and protection of fish habitat. Numerous wells and water licenses are located throughout the residential areas in and around Smithers.

The primary area of concern associated with water quality impacts caused by the mining operation is runoff from the property. Groundwater currently flows through the rock and out the existing 1066 m adit. Rain falling on exposed areas holding ore or waste rock or dust from the mining operation could potentially cause metal leaching or even acid rock drainage (ARD), although all information to date suggests that neither the ore nor the waste rock are acid producing.

Water quality samples collected from runoff affected by historic exploration activities in 1992, 1993, 1994 and 1998 show elevated levels of molybdenum, which exceed the current BC standards for livestock and human use. The physiological effects of molybdenum are discussed in Section 4.2. The pH value of the affected runoff was slightly above neutral, which indicate a low potential for ARD. A comprehensive metal leaching and ARD study will be completed by an expert in the field to determine the properties of the different rock and minerals that will be mined and to identify a proper management plan. The results from this study will dictate what measures will be implemented to protect the water quality in and around the project area.

The current mine plan has mine water piped directly to the Bulkley River for discharge. Discharge into the Bulkley River will improve current conditions by by-passing livestock and residential areas. Fish species of the Bulkley River have shown no adverse effects to elevated levels of molybdenum.

4.1.3 Recreation

The BVLUP identifies the general area along Glacier Gulch Road as important for recreational activity. Accordingly, unobstructed access should be ensured along that road. The Glacier Gulch area is used by many local residents and tourists for year-round recreation. The area is situated at the door step of commercial RV parks, campgrounds, angling lodges, bed and breakfasts, and local hotels. The Glacier Gulch area boasts scenic views, picnic areas and adventure hiking. Glacier Gulch Road provides good access to Twin Falls hiking trail and recreational areas. Maintaining the Glacier Gulch area in its current state will be fundamental to any development strategy (BC MSRM 2004).

There are no plans to situate any of the mine infrastructure or ancillary facilities within the Glacier Gulch area.

4.1.4 Noise

There are a few project activities that could result in increased noise levels; blasting of the ore body, transporting the ore offsite and operating an exhaust fan to ventilate the mine. All operating activities will be carried out in such a way so as to minimise any noise above current background levels. Blasting near surface to enlarge the 1066 m and 700 m adits will be relatively short term. Blasting of the ore body will take place some 2000 m into the Hudson Bay Mountain. Access to the ore body will be via the existing 2 km horizontal 1066 m adit. Residual noise at the entrance to the 1066 m adit is expected to be negligible given the distance of travel.

As the exhaust fans will be located underground the likelihood of any noise impacts is minimal. Feasible mitigation measures will be implemented to reduce residual noise should the need arise.

Transporting the ore will require the use of 40-tonne highway hauling trucks or potentially a conveyor system. The proposed hauling route is via a newly constructed road to and then along the BC Hydro right-of-way. The right-of-way is generally isolated from residential areas. Trees will help reduce traffic noise and/or operating noise. There will be a degree of noise associated with ore transport; however, all alternatives will require the construction of a road. Every attempt will be made to build the road as far from residences as possible to minimize impacts.

4.1.5 Traffic Safety

The truck haul option will require 50 to 60 truckloads per day, which will travel along Highway 16. Traffic safety concerns will be addressed by constructing the access to Highway 16 to maximize visibility with appropriate warning signs. A reputable trucking company will be contracted to carry out the hauling of the ore.

4.1.6 Wildlife and Fish

The Davidson project is unlikely to cause disruption of wildlife or fish habitat in any significant way. However, a proper assessment of possible impacts will be prepared. Initially, the primary concern regarding wildlife and fish is impact on water quality, discussed above.

4.2 Physiological Effects of Molybdenum

4.2.1 Molybdenum and Humans

Molybdenum is an essential micro-nutrient for human health and well being. The essential safe and adequate daily dietary intake of molybdenum is 0.075 to 0.250 mg/day and can be sufficiently obtained through a well-balanced diet (NRC, 1989). Molybdenum concentrations in the body are maintained by homeostatic mechanisms. Excess molybdenum is excreted via the kidneys and does not accumulate in body tissues. Ingestion of high concentrations of molybdenum can lead to increased molybdenum and copper excretion in urine and increased serum uric acid (CanTox, 1998). The rate of intake of molybdenum would have to exceed 1.5 mg Mo/day to over-load the homeostatic processes for molybdenum, assuming intake of 0.075 to 0.25 mg Mo/d from diet and 2L of drinking water with a Mo concentration of 0.6 to 0.7 mg/L (CanTox, 1998).

There is no Health Canada guideline for molybdenum in drinking water; however the B.C. water quality objective is 0.25 mg/L.

4.2.2 Effects on Livestock

Molybdenum is a co-factor required for the proper functioning of metalloenzymes such as xanthine oxidase and flavoprotein enzymes. Livestock fed on forage crops grown in soils with high concentrations of molybdenum can experience a response called molybdenosis. Molybdenosis in cattle is characterized by diarrhoea accompanied by weight loss, changes in hair colour, anorexia and lameness. Affected livestock can recover if moved to forage crops with a normal molybdenum level or by adding micronutrient copper to their diet (Chappell and McKee, 1998).

Several studies have examined the potential effect of molybdenum on deer and moose. Deer fed diets containing up to 200 ppm Mo dry weight suffered no adverse effects from molybdenum exposure. Mule deer and white-tailed deer are up to 100 times less sensitive to molybdenosis than are cattle, based on direct feeding studies, and moose are expected to be similar (Chappell and McKee, 1998). Moose and deer near the Endako molybdenum mine in B.C. have not shown evidence of molybdenosis (Chappell and McKee, 1998). As deer and moose have large ranges in which to feed and can obtain forage and water from a variety of areas, concern for elevated concentrations of molybdenum in these animals is small.

4.2.3 Molybdenum in Aquatic Systems

Molybdenum is part of the required enzyme systems associated with the nitrogen fixation in algae and larger aquatic plants. Molybdenum can be limiting to phytoplankton growth in aquatic systems and increases can lead to algal blooms provided nitrogen is not limited in the system. Molybdenum can accumulate in plant tissues and can be toxic to aquatic organisms; however, its toxicity is poorly understood.

Aquatic organisms are comparatively resistant to molybdenum salts with adverse effects on growth and survival usually appearing only at water concentrations >50 mg Mo/L (US DOI, 1989). Bio-concentration of molybdenum by certain species of aquatic algae and invertebrates – up to 20 grams of Mo/kg dry weight – has been recorded without apparent harm to the accumulating organism; however, the hazard potential to upper trophic organisms (such as waterfowl) that may feed on bio-concentrators is not yet clear (US DOI, 1989) .

4.3 Socio-economic Impact

The Davidson project will provide significant influx of capital through employment and the use of support services and suppliers in the local area.

4.3.1 Employment and Workforce

The construction phase of the Davidson project is estimated to require 200 to 250 persons depending upon the number of contractors on site at any given time and the schedule for completion of mine development.

The total workforce for the Davidson project during the operation of the mine is projected to be approximately 150 to 200 persons with a maximum of approximately 60% of the total workforce at the site at any given time. The workforce will be distributed in the following categories:

Category	
management/administration	23%
mine maintenance	20%
mining operation	31%
truck operations	26%
Total	**100%**

A significant percentage of the required workforce will come from surrounding communities with the remaining personnel consisting of persons moving into the local communities to work at the mine. Approximately 20% of the projected workforce will consist of specialized personnel that will be required to be brought into the area.

4.3.2 First Nations

The Davidson property is located within the traditional territory of the Wet'suwet'en people. Within the Wet'suwet'en traditional territory there are five clans:

- Gilseyhu (Big Frog)
- Laksilyu (Small Frog)
- Gitdumden (Wolf/Bear)
- Laksamshu (Fireweed)
- Tsayu (Beaver)

All clans have representation within the Wet'suwet'en organization and make general group decisions based on common consensus. The Wet'suwet'en have established departments that work in the following areas: Land and Resources, Fisheries and Wildlife, Human and Social Services and Treaty Negotiations.

Discussions have been initiated with the Wet'suwet'en to ensure their involvement in the Davidson project from beginning through to completion. Discussions regarding environmental issues, employment and training opportunities and joint ventures have already taken place and will continue.

4.4 Public Consultation

4.4.1 Consultations to Date

Several meetings have been held concerning the development of the Davidson project. The first meetings were held March 4, 2005 in Smithers, B.C. with government regulators and Wet'suwet'en representatives. The purpose of the meeting with regulators was to introduce the project and obtain feedback as to the possible project issues and environmental monitoring requirements. The government regulators provided reference material and historical information related to development in the area.

BPM organized subsequent meetings in Smithers to initiate the process of First Nation and public involvement with the potential development of the Davidson project:

- April 19 – Smithers Town Council
- April 20 – Wet'suwet'en Chiefs; Bulkley Valley Community Resource Board
- April 21 – Smithers and District Chamber of Commerce (advertised general public meeting, approximately 150 people in attendance)

The purpose of these meetings was to inform the various groups of the proposed development of the Davidson property and obtain feedback on the project. The general project concept was well received by all groups. Key environmental and aesthetic concerns that were raised are incorporated into the project development strategy outlined in this document.

BPM has opened an office in Smithers to serve as an information centre and local point of contact for the community.

References

Atkinson, D. 1995. The Glacier Gulch (Hudson Bay Mountain or Yorke-Hardy) Porphyry Molybdenum-Tungsten Deposit, West-Central British Columbia. In CIM Special Volume 46, pp 704-707.

BC Ministry of Sustainable Resource Management Skeena Region. 1998. Bulkley Land and Resource Management Plan.

BC Ministry of Sustainable Resource Management. 1999. Trout Creek/Kitseguecla Landscape Unit Plan.

BC Ministry of Sustainable Resource Management. 2004. Bulkley Valley Landscape Unit Plan.

BCStats. 2004. 2001 Census Profile of British Columbia's Regions Bulkley-Nechako Regional District. BC Stats On-line Report: http://www.bcstats.gov.bc.ca/data/cen01/profiles/59051000.pdf.

CanTox. 1998. The Relevance to Human Health of Concentrations of Molybdenum (and other parameters) in Trepanier Creek.

Chappell and McKee. 1998. Potential Effects of Molybdenum in Trepanier Creek on Deer and Moose. Ref. 20747.1.

Department of Fisheries and Oceans - Fisheries Information Summary System. 2005a. FISS Report - Toboggan Creek.

Department of Fisheries and Oceans - Fisheries Information Summary System (2005b). FISS Report - Kathlyn Lake.

Department of Fisheries and Oceans - Fisheries Information Summary System. 2005c. FISS Report - Glacier Gulch Creek.

Donas, B. 2004. Community Projects - Toboggan Creek. Fisheries and Oceans Canada (DFO) Website: http://www-heb.pac.dfo-mpo.gc.ca/community/dir/donas_e.htm.

Giroux Consultants Ltd. 2005. A Resource Evaluation of Yorke-Hardy Molybdenum-Tungsten Deposit. Vancouver, BC. Amended February 16, 2005.

NRC. 1989. Recommended Dietary Allowances. 10th Edition. National Academy of Sciences. Priting and Publishing Office, Washington, DC.

U.S. Department of the Interior, Fish and Wildlife Service. 1989. Molybdenum hazards to fish, wildlife, and invertebrates: a synoptic review.