

**Geology Report**  
**On the**  
**BLACK CRYSTAL GRAPHITE PROPERTY**

**Slocan Mining Division, B.C.**

**NTS - 82F 13 Burton**

**Lat. 49° 47' N - Long 117° 45' W.**

**For**

**IMP INDUSTRIAL MINERAL PARK MINING CORPORATION**

**and**

**BLACK CRYSTAL INC.**

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**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**25,921**

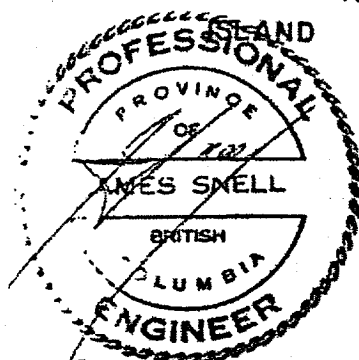
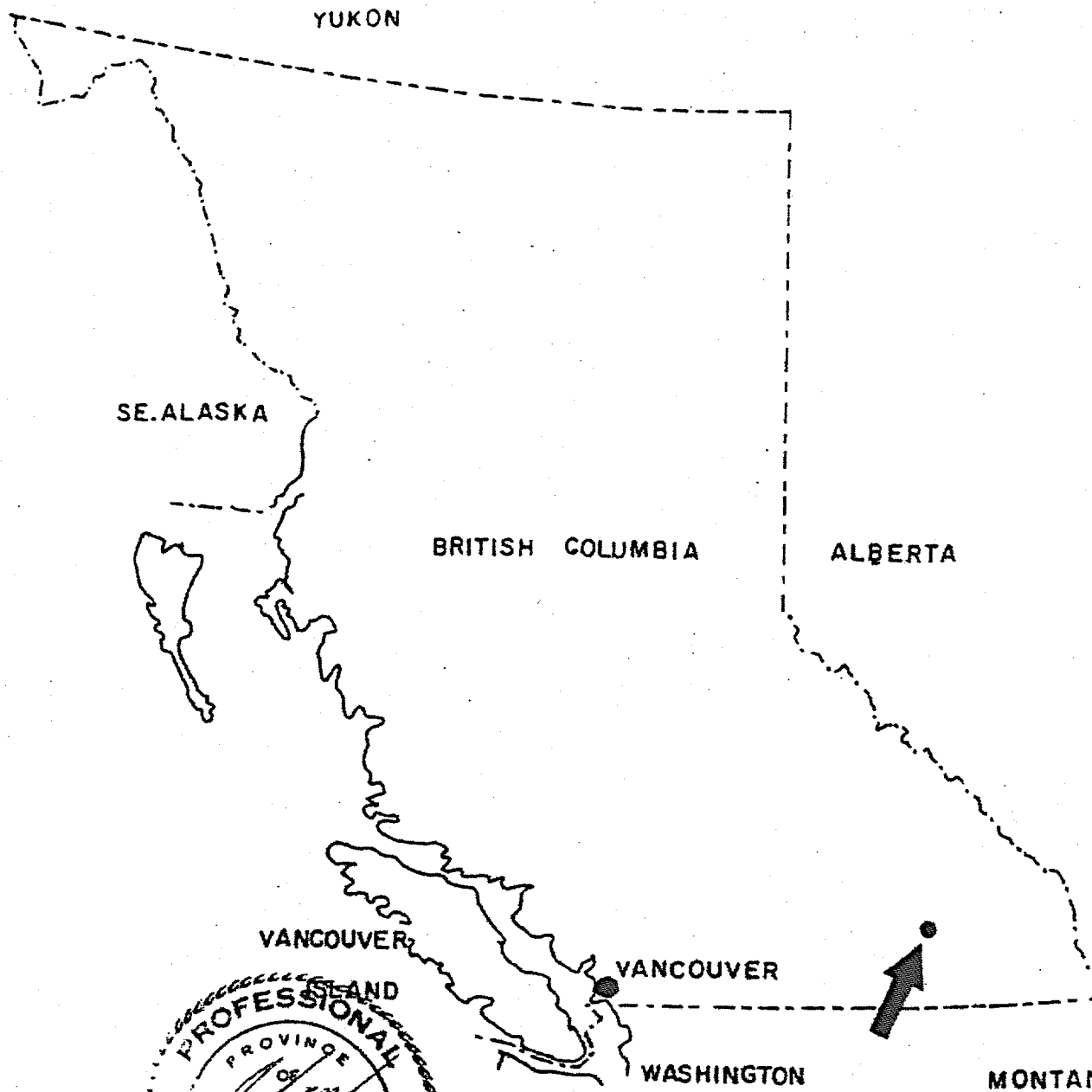
## CONTENTS

	<b>Page</b>
<b>Summary</b>	4
<b>Introduction</b>	7
<b>Property</b>	9
<b>Location and Access</b>	10
<b>Geography</b>	11
<b>History of Previous Work</b>	12
<b>Exploration Program</b>	13
<b>Geology</b>	
Regional Geology	15
Property Geology	16
Geological Legend	17
Parageneysses	18
Economic Metamorphic Unit	19
Lithology and Composition	19
Mineralization	20
<b>Economic Assessment</b>	21
<b>Mineral Resource</b>	23
<b>Conclusions</b>	26
<b>Certificate</b>	
<b>Bibliography</b>	28
<b>Appendix</b>	29

## LIST OF FIGURES

Page

Figure 1	<b>Location Map</b>
Figure 2	<b>Claim Map</b>
Figure 3	<b>Regional Geology Map</b>
Figure 4	<b>Geology – Valhalla Complex</b>
Figure 5	<b>Plan – Resource Survey</b>
Figure 6	<b>Resource Configuration</b>
Figure 7	<b>Resource Configuration – Reduction</b>



# BLACK CRYSTAL GRAPHITE PROPERTY

FIG. 1 LOCATION MAP



## SUMMARY

IMP Industrial Mineral Park Mining Corporation as to 50% and Black Crystal Inc. as to 50% own 84 claim units contained in 4 modified grid-claims of 20 units each and 4 two post claims, all contiguous, 22 kilometers due west of Slocan City in the Valhalla Range, Slocan Mining Division, B.C. The property is accessible by 40 kilometers of good gravel road from Passmore, B.C. in the Slocan Valley, by way of Little Slocan Valley and Hoder Creek Valley.

The property lies within the core of the Valhalla Metamorphic Dome, a moderate to high grade metamorphic structure of upper greenschist facies, schist, paragneiss, marble and amphibolite facies, leucogneiss and orthogneiss, cut by young granite sills.

Flake graphite occurs as individual crystal grains on foliation planes and metamorphic compositional laminations and as disseminations within selective strata of the Hybrid Gneiss Unit of the metamorphic complex. The principal graphite host rocks are coarse grain, granoblastic, graphitic marble, meta-argillite, graphitic biotite schist and paragneiss (greenschist facies).

In 1958, J. Reesor (GSC Bull 129, 1965) conducted field surveys and mapped the favourable graphitic metasediments on Hoder Creek. The graphite deposits were staked by Steve Paszty of Castlegar, B.C. in 1960 (Molly 1-4). The claims were optioned to Paul Schiller, President of the companies in 1993 and subsequently sold to the companies. Between 1993 and 1997 exploration was conducted, including two drill programs on access roads and flotation tests of sampled graphite mineralization.

Exploration conducted in 1998 was for the following specific purposes:

- To define the geology of the deposit;
- To define the limits of favourable host rock and high grade graphite;
- To define the structural configuration;
- To demonstrate the resource potential;
- To define a cost effective drill program, to prove a high grade ore reserve.

Exploration conducted included:

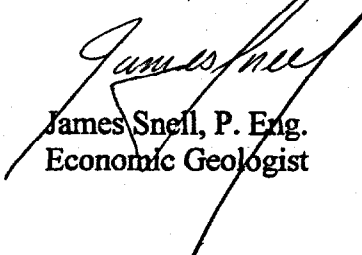
- A survey grid 1" = 100 ft. (30m);
- Geological mapping between HW and FW;
- Geological map of property including access roads;
- Soil sample program using a hand auger;
- Metallurgical tests on composite soil sample and clean bulk sample;
- A survey of slope dip configuration to define tonnage;
- Comprehensive geological report with drawings.

An inferred mineral resource of 97,500,000 tons was established down dip to 1,500ft (450m).

Sample IMP1 – 500 lb. composite soil sample did not respond to flotation due to contamination by organic material. Sample IMP 2 – From 800 lb. bulk sample – collected 108.4 lb. of final graphite concentrate per ton. Sample IMP3 – From 800 lb. bulk sample - collected 107.4 lb. of final graphite concentrate per ton.

It was recommended that the company proceed with the bulk sample program that had been previously initiated and a drill program to prove tonnage for a 10,000 TPD plant.

Respectfully Submitted



James Snell, P. Eng.  
Economic Geologist

## INTRODUCTION

James Snell, P.Eng, Economic Geologist, was retained by the Company in October, 1998 to provide an opinion with respect to the resource potential of the Black Crystal Graphite Deposit and to conduct an exploration evaluation of the property, located in the Slocan Mining Division west of Slocan City in the Valhalla Range. The field work was conducted between October 22, 1998 and the end of the month.

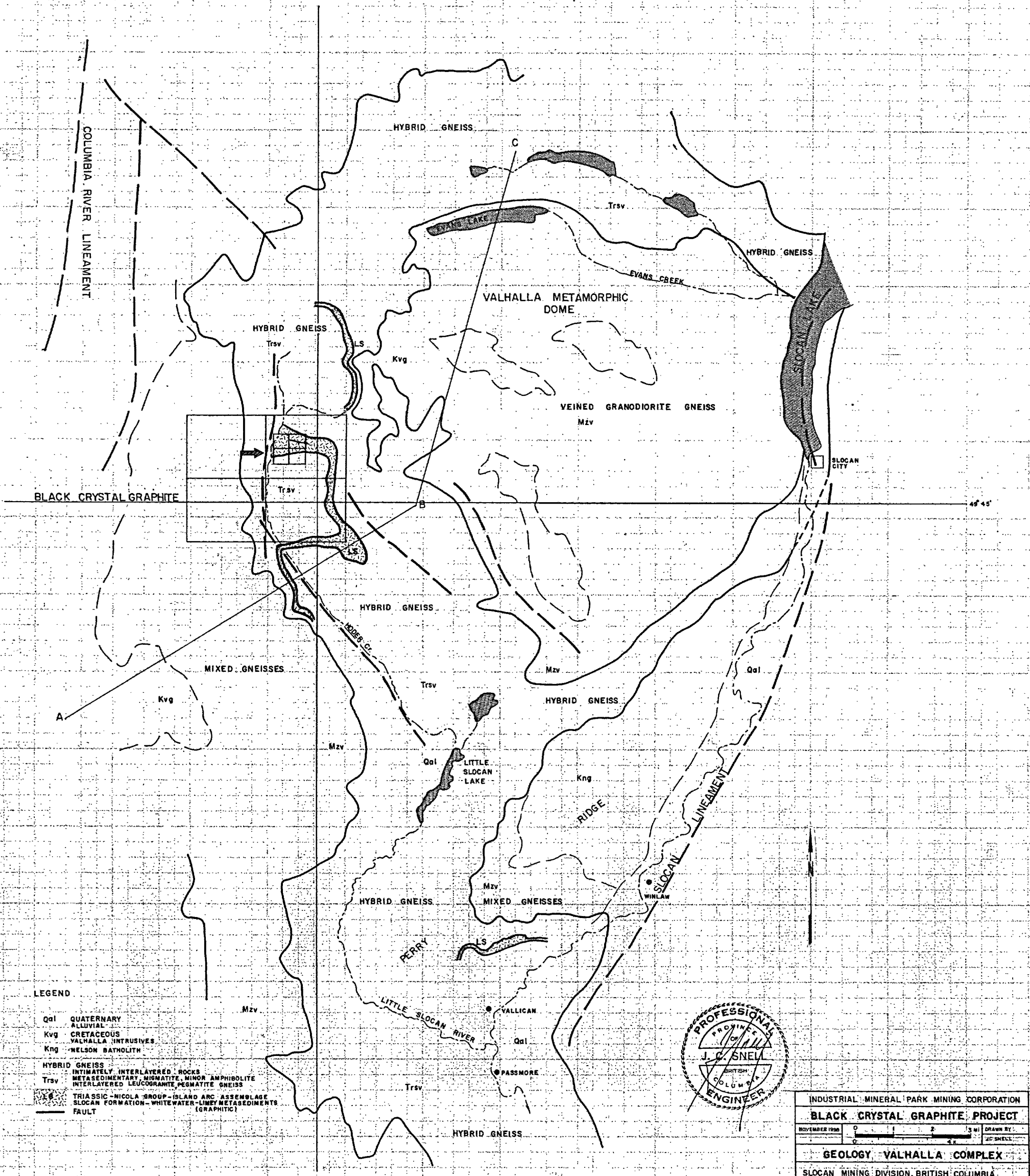
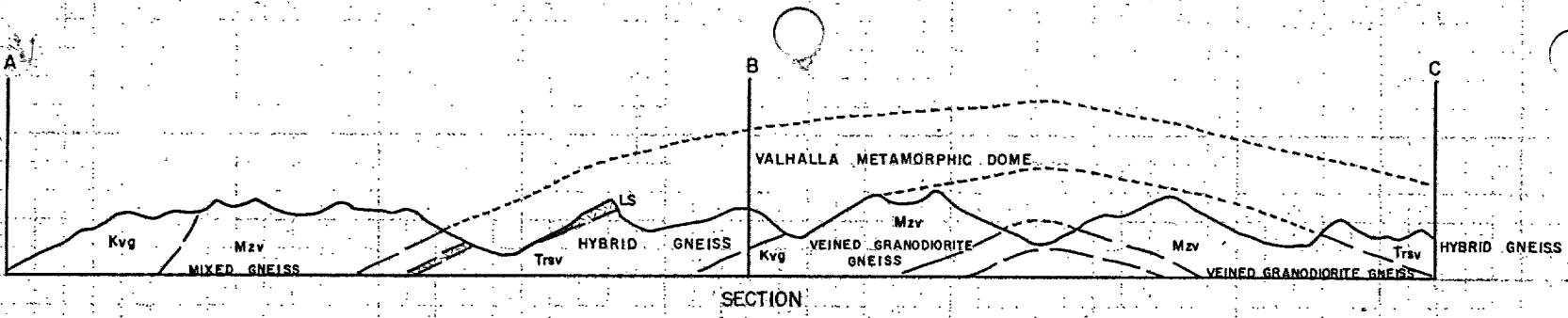
The property had previously been drilled along access roads and a geologic resource of 50,000,000 to 62,500,000 tonnes was determined by D.H. Howard, P.Eng., of Vancouver, and reported February 6, 1996 "Report on the Exploration Potential of the Black Crystal Property".

Howard stated that the – boundary limits – of the deposit had not been defined and recommended further exploration expenditure of \$1,700,000 to further define the deposit. A letter to the Company dated February 14, 1996 from M.H. Sanguinetti, P.Eng. of Vancouver gave an opinion concurring with the conclusions and recommendations made by Howard, P.Eng.

The objective of the 1998 exploration program was to establish the resource potential based on a defined structural configuration according to CIM Reserve Definitions, National Policy 2A, Companion Policy 43-101CP to National Instrument 43-101 Standards of Disclosure. To estimate the economics of a bulk sample program at 1,000 TPD. To design a cost effective drill program based on structural configuration, surveyed in the field.

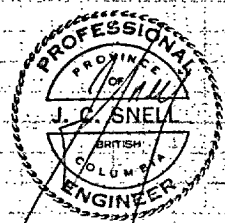


This report describes the results of the geological mapping program and the geochemical soil sample grid survey conducted on the Black Crystal Graphite Property by the writer, for the Company during the period to November 2, 1998 and concluded with a comprehensive Geology Report December 17, 1998. The Mineral Resource was measured in the geological and soil survey independent of the results of the previous drill programs. The Black Crystal Graphite Deposit No. 1 as mapped and plotted by the writer includes in part the geologic resource determined by Howard, of which, in the drilled deposit, wall rock as mapped by Snell was included and accounts for the low grade estimates of the drilled geologic resource determined from dill core. (see Sanguinetti Letter February 14, 1996)

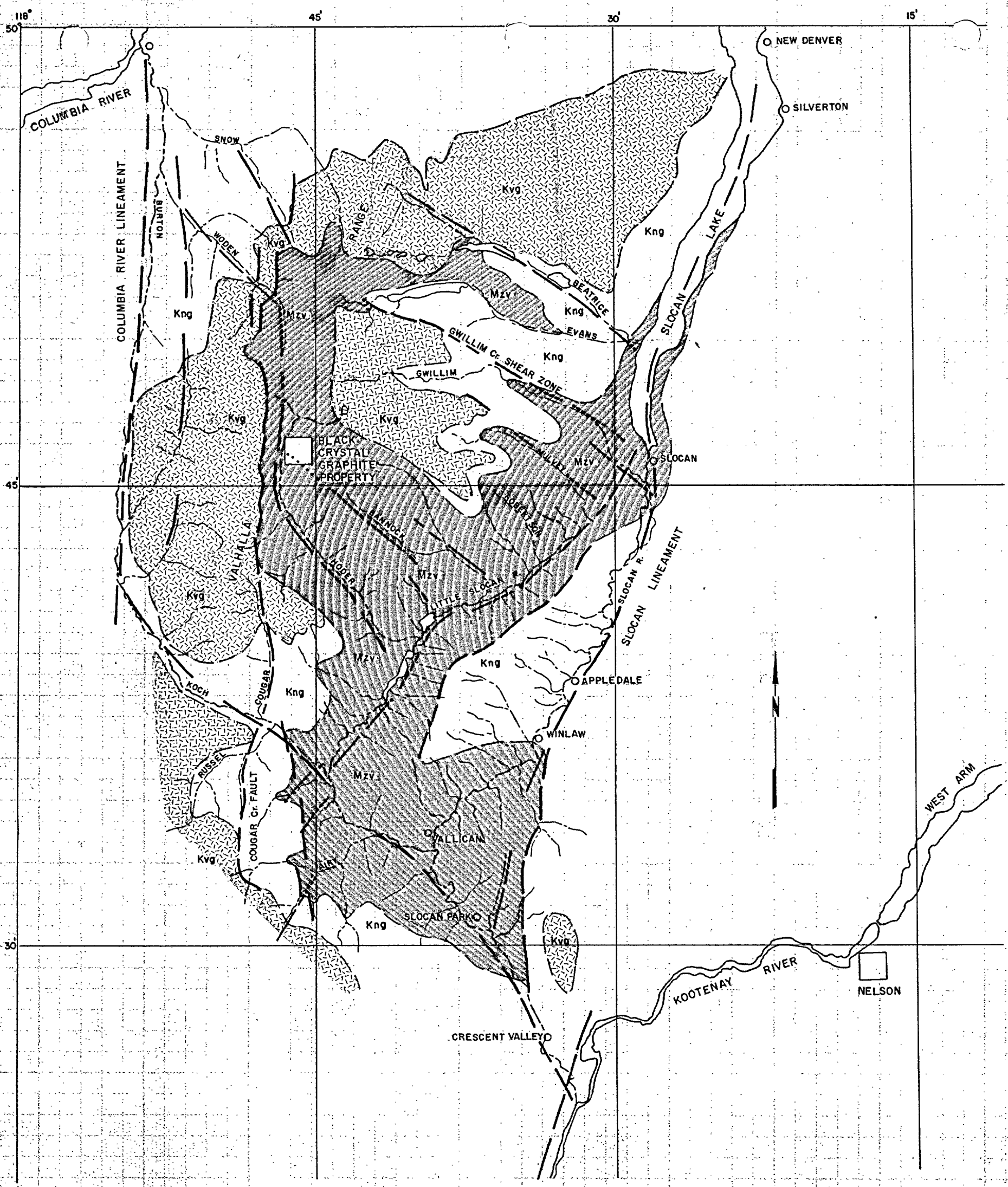


**LEGEND**

- Qal QUATERNARY ALLUVIAL
- Kvg CRETACEOUS VALHALLA INTRUSIVES
- Kng NELSON BATHOLITH
- HYBRID GNEISS INTIMATELY INTERLAYERED ROCKS  
META SEDIMENTARY, MICMATITE, MINOR AMPHIBOLITE  
INTERLAYERED LEUCOGRAHITE PEGMATITE GNEISS
- Trsv TRIASSIC-NICOLA GROUP-ISLAND ARC ASSEMBLAGE  
SLOCAN FORMATION-WHITEWATER-LINDY METASEDIMENTS (GRAPHITIC)
- FAULT



INDUSTRIAL MINERAL PARK MINING CORPORATION			
<b>BLACK CRYSTAL GRAPHITE PROJECT</b>			
NOVEMBER 1958	0 1 2 3 4 5 MI	DRAWN BY:	J.C. SNELL
<b>GEOLOGY VALHALLA COMPLEX</b>			
SLOCAN MINING DIVISION, BRITISH COLUMBIA			
J.C. SNELL B.Sc. M.T.P. Eng. Economic Geologist			FIG 4

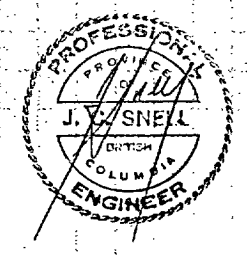


**LEGEND**

**MESOZOIC**

- Kvg** CRETACEOUS-VALHALLA PLUTON  
GRANITE, GRANODIORITE
- Kng** NELSON PLUTON-PORPHYRITIC GRANITE, SYENITE, QUARTZ DIORITE  
PEGMATITE, DIORITE
- Mzv** TRIASSIC-VALHALLA METAMORPHIC COMPLEX  
NICOLA GROUP-KASLO, SLOCAN FORMATIONS  
ANDESITE, ARGILLITE, LIMESTONE, QUARTZITE - TO GREENSCHIST-SILLIMANITE FACIES  
GRAPHITIC BIOTITE GNEISS, MARBLE - BLACK CRYSTAL GRAPHITE DEPOSIT  
HORNBLEND, BIOTITE GNEISS, MELANOCRATIC GRANODIORITE GNEISS (L.CRET.)  
MEGACRYSTIC QUARTZ MONZONITE (PALAEO.), BIOTITE QUARTZ MONZONITE (EOCENE)

- FAULT**
- DRAINAGE**



<b>INDUSTRIAL MINERAL PARK MINING CORPORATION</b>		
<b>BLACK CRYSTAL GRAPHITE PROJECT</b>		
NOVEMBER, 1998		DRAWN BY J.C. SNELL
<b>REGIONAL GEOLOGY MAP</b>		
SLOCAN MINING DIVISION, BRITISH COLUMBIA		
J.C. SNELL - BSc. MT. P.Eng. Economic Geologist	FIG. 3	

## PROPERTY

The Black Crystal Graphite Property consists of 84 claim units contained in 4 modified grid claims and 4 two-post claims. The claim area is equivalent to 80 claim units as the 4 two-post claims have been over-staked by the modified grid claims to eliminate fractions. The Molly 1-4 and the PB 1-4 claims are registered in the name of IMP Industrial Mineral Park Mining Corporation as to 50%. The claims are located in the Slocan Mining Division.

Claim Name	Units	Expiry
Molly 1	1	20/9/2005
Molly 2	1	20/9/2005
Molly 3	1	20/9/2005
Molly 4	1	20/9/2005
PB 1	20	28/6/2000
PB 2	20	28/6/1999
PB 3	20	28/6/1999
PB 4	20	28/6/1999

Note: An option agreement has been signed by IMP Industrial Mineral Park Mining Corporation to acquire the remaining 50% interest in the above mineral claims from Black Crystal for 3,000,000 shares of the Company.

## **LOCATION AND ACCESS**

**Lat 49° 47' N – Long 117° 45' W  
NTS – 82F13 Burton**

The Black Crystal Graphite Property is located in the Valhalla Range in the Southern Selkirk Mountains of South Central British Columbia, between the Columbia River on the West and Slocan Lake on the East in the West Kootenay District.

Principal access to the Property is by paved highway 65 km from the airport at Castlegar to Passmore and then from Passmore by good gravel logging road through the Little Slocan Valley and the Hoder Creek Valley for 40 km. Access from Slocan City is by good gravel road through Little Slocan Valley from the North. The property can be reached in summer months by car.

The property is located on the west slope facing Hoder Creek and extends from creek elevation at 1,400 m (4,960 ft) to a ridge on the east at 2,000 m (6,225 ft) elevation. Access on the property is by good logging road and exploration road. The physiography is steep rugged terrain of the central Valhalla Range.

## **GEOGRAPHY**

The Valhalla range consists of high, steep-walled serrated, east-west trending ridges. Local relief is 1755 ft. at Slocan Lake to 9275 ft. at Gladshiem Peak a distance of 6 miles to the west. The core of the Valhalla Complex is centered on the highest part of the Valhalla Range. Reflecting dip foliation outward from the core of the Valhalla Dome, there is a succession of inward facing cliffs rising steeply to gently curving ridges that entirely surround the central core. Each successive cliff is followed by long, gentle outward slopes that are succeeded in turn by more inward facing cliffs. A few small remnants of former extensive mountain glaciers are still found within the central part of the Range. The drainage pattern reflects the domal structure of bedrock. The valley of the Slocan River and the Columbia River only are inhabited. Logging in the drainage basin of Koch Creek and Hoder Creek is the only industry. There is a modern sawmill at Slocan City. Because the local mountains are higher than those to the west, and because prevailing winds are westerly, precipitation is greater than anywhere in B.C. with the exception of the Coast Mountains. Nelson, a city of 50,000 people, has an average annual maximum and minimum temperature of +96°F and -4° below F. Intensive small dairy, fruit and vegetable farming is carried on in the main valleys at lower elevations.

## **HISTORY OF PREVIOUS WORK**

Exploration work in 1993 and 1994 consisted of geological mapping, surface sampling and reverse circulation drilling of 6 holes totaling 250 meters. In 1995, a total of 577 meters of NQ diamond drilling in 13 holes was completed to a maximum depth of 92 meters in the central mineralized area outlined by road outcrops and previous drilling. This work confirmed the presence of graphite mineralization over a surface area of 300 meters by 600 meters, open in three directions and down dip. 50 samples were collected for metallurgical tests, which averaged 3.36% graphite. Construction of the pilot plant for bulk sample flotation was initiated. This facility needs to be completed. In 1996, D.H. Howard, P.Eng. reported on p 1. that a geological resource of 50 to 62.5 million tonnes at an unknown grade, and stated p16 of his report that the exact structural configuration of the mineralized package is impossible to determine because of lack of geologic mapping after the bulk sample was mined. It is proposed for future reference that geologic mapping to determine structural configuration and resulting resource estimate determined therefrom should proceed the drill program; nevertheless, structural configuration was determined during the current program and reported on herein as defined in the Figures enclosed herein.

## **EXPLORATION PROGRAM**

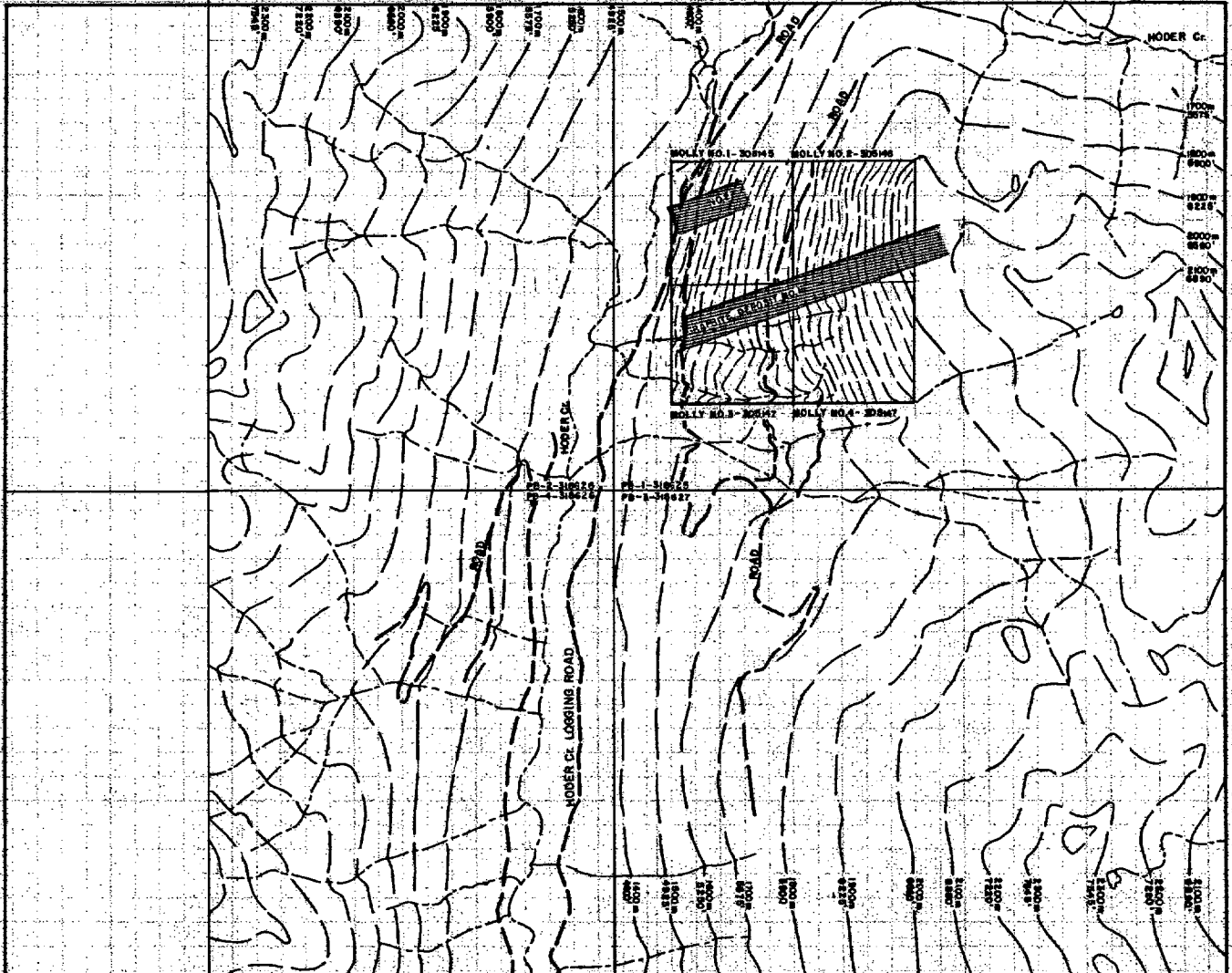
The exploration program was designed to determine the structural configuration of the mineral deposit, a resource estimate based on structural configuration, a grade estimate of the resource, a preliminary economic evaluation, a drill program designed to prove reserves in the structural configuration, cost effective for maximum tonnage at minimum cost. All of these requirements were achieved by the program and reported herein (see Figures).

The program required a field survey from Hoder Creek Valley in the west to the top of the mountain in the east, elevation 1400 m in the west to 2000 m in the east. The existing access roads were surveyed and the favourable carbonaceous metasedimentary unit was identified and defined in the geological survey by mapping the stratigraphic hanging wall and footwall to the top of the mountain. The unit was well defined between Sta 0+00 – 20+00 E at 2000 m elevation. The surface trace of the stratigraphy is subject to dip slope plunge to the south from east to west and does not follow the true strike on surface trace. The high grade interval of 400 ft. wide surface expression is well exposed on the main access road at Sta 16+00W – 6+00 – 9+00 S of the baseline at which location a favourable good grade bulk sample was selected for metallurgical testing and reported on herein. In order to demonstrate the size and potential of the favourable stratigraphy the dip slope was surveyed in to a creek cut exposure at Sta 24+00 S – 22+00W at 1400 m elevation. The favourable graphite bed was therefore determined to be continuous down dip for an elevation difference of 600 m over a true strike length of 1300 m (3900 ft). The true width of the unit at 35° dip averages about 250 ft (75 m). The inferred resource was calculated from surface down dip 1500 ft (450 m) over the true strike length mapped.

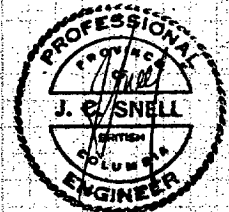


A compass and chain survey grid was established between Sta 0+00 and 20+00 E between the hanging wall and the footwall and soil was sampled at 100 ft intervals with a hand auger in areas of overburden to establish the continuity of graphite mineralization in the topographic low developed over the favourable stratigraphic unit. All samples were combined to form one composite sample for a metallurgical test. This sample did not respond to flotation on account of organic contamination. The program in total did however, define the structural configuration and continuity of graphite mineralization over dimensions reported herein.

A diamond drill program has been recommended located on the hanging wall which when completed will establish the grade for proven and probable reserves of 10 m tons of mineralization available for a quarry operation. Two holes should be drilled from each drill location established at 200 ft (60m) intervals along the hanging wall for 2000 ft (600m). The drill holes will be at - 55° and vertical and will define approximately one million tons per drill section.



117 48



INDUSTRIAL MINERAL PARK MINING CORPORATION	
BLACK CRYSTAL GRAPHITE PROJECT	
0 500 1000 1500 2000 2500 3000	SCALE: 1" = 200 FT.
DRAWN BY: J.C. SNELL	
CLAIM MAP	
SLOCAN MINING DIVISION, BRITISH COLUMBIA	
J.C. SNELL, B.Sc. MT., P.Eng. Economic Geologist	FIG. 2

## **GEOLOGY**

### **Regional Geology**

The Black Crystal Graphite Deposits originated in geologic time in an island arc, marine basin environment where limestone, calcareous argillites and intermittent volcanics, all of which contained carbon to a great degree, were deposited over a long period of geologic time in the Triassic-Jurassic Period. The host rocks have been assigned to the Quesnel Terrane, Nicola Group, Slocan Formation, Whitewater Basal Assemblage of calcareous (limy) strata. Late Jurassic-Early Cretaceous Cordilleran Orogeny resulted in the intrusion of the Nelson Granites of batholithic dimension and the later Valhalla Granites locally in the Valhalla Range. Greenschist facies heat and pressure required, metamorphosed the sedimentary carbon within the intruded marine assemblage to coarse crystalline graphite of inferred economic grade and quality within selective metasedimentary strata within the Valhalla Metamorphic Complex, Hybrid Gneiss Unit which forms a roof pendant of metamorphosed Slocan Formation structurally controlled on the Columbia River Lineament on the west and the Slocan Fault on the east. The graphite deposits within the metasediments are located on the west limb of the regional Slocan Sedimentary Fold.

## PROPERTY GEOLOGY

The stratigraphically controlled Black Crystal Graphite Deposits are located in the core of the Valhalla Metamorphic Dome, a moderate to high grade metamorphic structure of upper greenschist facies, schist, paragneiss and leucogranitic gneiss of amphibolite facies cut by young granitic sills and dykes.

Flake graphite occurs as individual crystal grains on foliation planes and metamorphic compositional laminations and as dissemination within selective strata of Hybrid Gneiss Unit of the metamorphic complex. The principle graphitic host rocks are coarse grain, granobasaltic, graphitic, marble, meta-argillite, graphitic biotite schist and paragneiss (greenschist) some of which may originally have been volcanic substrata (amphibolite). Low-grade graphite also occurs in the wall rock. As surveyed and mapped by the writer, the wall rock to the economic stratigraphic unit (metasediments) is considered to be amphibolite facies, quartz-feldspar-biotite gneiss, pegmatitic gneiss, and leucogranite, differentiated from carbonaceous, calcareous metasediments that host the high grade graphite deposits No. 1 and No. 2.

Surface decomposition of the calcareous host rocks and the friable character at surface of decomposed graphitic biotite schist provides ideal conditions for mining and recovery of graphite from surface deposits during the Pilot Plant Phase. The surface deposit has a low grind index, which will liberate graphite grains with minimum reduction of graphite grain size. There is approximately 1,500,000 tons of well mineralized, decomposed, bedrock overlying the Black Crystal Graphite Deposit No. 1 available as mill feed at 1000 TPD as observed and surveyed by the writer.

## GEOLOGICAL LEGEND

Qal            Quaternary – gold  
Alluvial sand, gravel, glacial debris

### MESOZOIC - CRETACEOUS

Mzu            VALHALLA METAMORPHIC COMPLEX – Hybrid Gneiss Unit  
Metasediments, volcanics, greenschist to amphibolite facies  
Graphitic marble, foliated graphite biotite schist, paragneiss

Kvg            MID CRETACEOUS – Valhalla Intrusives  
White, foliated, non-porphyritic granite, pegmatite

Kng            LOWER CRETACEOUS – Nelson Batholith  
Porphyritic granite, granodiorite

Trsv           TRIASSIC – **Nicola Group** – Island Arc Assemblage  
Sediments and volcanics  
**Slocan Formation** – calcareous, carbonaceous sediments  
**Basal Section** – Whitewater Strata  
Limestone, calcareous argillite, dark grey to black

## **PARAGNEISSES**

### **Valhalla Metamorphic Complex – Mid Cretaceous**

Paragneisses, which occur in the core of the Nelson Batholith are regarded by the writer to be metamorphosed facies of the Slocan and Kaslo Series. The paragneisses form a dome centered about the Black Crystal Graphite Property on Hoder Creek. The core of the dome is occupied by veined granodiorite gneiss. On the west side of the dome on lower Evans Creek, the northern limb of the dome grades eastward into granite. The eastern limb continues north along the east shore of Slocan Lake and disappears at the mouth of Enterprise Creek. Above the east limb is a thick zone of mylonite. South of the dome the paragneisses form a simple anticline that follows the valley of Little Slocan River, where it plunges southward under Nelson Granite. The maximum thickness of the paragneiss where it is exposed in the valley of Little Slocan River is 6000 ft. The sedimentary rocks from which the paragneisses were derived are in the southern part of the dome, argillaceous and arenaceous in character. To the north, intercalations of limestone occur. The sedimentary rocks have been altered to paragneiss and granite by metasomatic process during Cordilleran tectono-thermal events.

## **ECONOMIC METAMORPHIC UNIT**

### **Hybrid Gneiss – Mid Cretaceous**

In contrast to the 'veined gneiss' which is a mixture of older granodiorite augen gneiss and younger light coloured granitic material, the 'Hybrid Gneiss' is a mixture of metasediments, light coloured leucogranite gneiss and pegmatite. The Hybrid Gneiss occurs at three levels in the Valhalla Gneiss Dome. In the bottom of Gwillim Creek, below the veined gneiss, there is an exposed window of Hybrid Gneiss 5 mi<sup>2</sup> with an exposed thickness of 1500 feet. The main exposures of Hybrid Gneiss occur south and southwest of the core of the Valhalla Dome and overlies the veined gneiss. From the valley at the head of Evans Lake to Passmore, Hybrid Gneiss covers an area of 100 mi<sup>2</sup>. North and east of Valhalla Dome the Hybrid Gneiss is predominantly granitic but structurally continuous with that south of the Dome. Nevertheless, layers and extensive lenses within this region are predominantly metasedimentary. The maximum thickness of the layer south of the veined gneiss is not less than 10,000 feet. Along the eastern edge of Valhalla Dome a much thinner succession not much over 2000 ft thick overlies the veined gneiss. The eastern limit of the Hybrid Gneiss is truncated by crushed and mylonized fractures along the Slocan River Valley.

### **Lithology and Composition**

The Hybrid Gneiss of the southern part of the Valhalla Dome appears to be rather evenly layered with alternating rusty weathering, dark metasedimentary bands and white weathered granitic layers. Along the west limit of the Valhalla Dome, regularly layered rocks grade out into migmatites of breccia, in which the intervening space are filled with leucogranite and pegmatite. The general structural continuity of the dome is maintained and at some localities along strike the layered pattern may again be resumed. North of Valhalla Dome much more

extensive masses of leucoquartzofeldspathic material separated by isolated large remnants of older rocks. These remnants are always penetrated and inter-layered with much pegmatite and granitic material. The rocks of the Hybrid Gneiss are clearly derived from a pre-existing layered sequence consisting of several distinct rock types. The most common are graphite, biotite, quartz, plagioclase paragneiss (schist) with varying proportions of biotite, quartz, plagioclase and graphite. Lesser amounts of quartzite, schist, calc-silicates, marble, amphibolite are scattered locally throughout the Hybrid Gneiss. Light coloured granitic gneiss, leucogranodiorite to leucogranite is everywhere intimately associated with the metasedimentary rocks. Along some horizons and at some localities, gneisses occur that are not clearly granitic or metasedimentary. They are intimately mixed, much deformed migmatites.

#### **MINERALIZATION**

Graphite mineralization consists of disseminated fine to coarse grain (<100 mesh to +19 mesh) crystalline graphite concentrated in the marble and along compositional banded foliation planes in the graphite biotite schist and paragneiss. The graphite grains appear to be free individual grains, which accounts for excellent flotation recoveries. Graphite mineralization in the marble occurs as discrete grains in a more disseminated fashion. In the more siliceous marble the foliation and compositional banding becomes developed and the graphite becomes aligned.



## Sample Program – 1998

1. One bulk sample was taken at bulk sample location 1998 as shown on Figure 5 (roadcut). This sample of 800 lbs. Was hand shoveled into 20 lb. plastic bags for shipment to the test lab.
2. A grid sample program was undertaken with a hand auger and three men. The grid was surveyed at 30m (100 ft.), intervals as shown on Figure 5, Blocks 1-4. The hand auger and a shovel were used to remove surface debris and one 8" x 2" diameter sample was taken at each location at an approximate depth of 18" and placed in a 20lb. sample bag, comprising a composite sample. As shown on Figure 5, each sample was approximately 2 lbs.

Sample Block 1-36

Sample Block 2-35

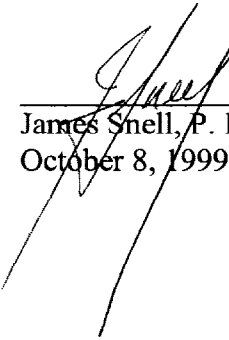
Sample Block 3-16

Sample Block 4-28

Total 115 Sample locations

Samples combined for composite

Weight – 230 lbs.

  
James Snell, P. Eng.  
October 8, 1999



## **ECONOMIC ASSESSMENT**

Composite and bulk samples of the surface deposit were taken by the writer in October 1998 and forwarded for metallurgical tests to International Metallurgical Environmental Company at Kelowna, B.C. Results of all metallurgical work is enclosed in the Appendix. It is estimated that a grade of 1.5% graphite will result in an operating profit. This will be determined by the bulk sample program.

Graphite is an industrial mineral and depends on development of a consistent market for production profitability. At present, approximately 85% of the total annual world consumption of graphite is in the form of inferior artificially manufactured graphite. Graphite is required in an ever-growing list of high technology products that require higher standards of physical properties and chemical purities. Natural graphite mines in the world, of which there are few, are being depleted at a rate of approximately 250,000 tonnes per annum. These deposits are generally in Third World locations with resulting high mining and milling costs with supplies subject to political instability such as China. Most of the offshore deposits were formed by inferior geological processes to the Black Crystal Graphite Deposit with resulting impurities and consequential processing expense. Most of these deposits do not contain in quantity highly desirable coarse crystalline flake graphite, which occurs in abundance at the Company's property. Artificially manufactured graphite from petroleum is expensive to produce and while chemically pure is physically inferior to natural graphite. It is porous, small flake and contains undesirable non-graphitic carbon. Major consumers in the electrode, refractory brick and atomic energy industries require natural graphite with the high physical quality and chemical purity.

Graphite's unique properties and wide range of industrial uses make it a mineral of the future. It is chemically inert and is not affected by corrosive chemicals and temperature extremes. Graphite, therefore, is ideal in the manufacturing of gaskets, packings, brake and clutch plates, etc. Graphite is replacing asbestos because of the real or imagined hazards associated with asbestos. Graphite absorbs energy regardless of the source or wavelength and is ideally suited to the manufacture of sports equipment such as tennis racquets, golf clubs and fishing rods. It is used in the nuclear industry in the manufacture of high temperature reactor components, similarly in the aerospace industry in components for space vehicles and stealth flight. Under extreme temperature conditions, it is used in such products as cryogenic containers, high temperature furnaces and reactor cores. Graphite is an excellent conductor of electricity and is used in brushes for electric motors, electric welding rods, high temperature furnace electrodes and in a wide range of batteries. Graphite is ideal as a lubricant under extreme temperature conditions and exfoliates for the manufacturing of graphite foil and fire retardant paint for the aerospace industry.

## **MINERAL RESOURCE**

### **Graphite Deposit No. 1**

Graphite Deposit No. 1 was surveyed on surface trace for a distance of 5800ft (1750m) representing a true strike length of 3900ft (1200m) and a measurement down dip on the plane of the stratigraphy of a maximum of 3600ft (1100m). For the purpose of defining the Mineral Resource, Section 1500W provided a measured down dip exposure of 1500ft (450m). The true width of favourable stratigraphy was determined at a dip of 35° to average 250ft (75m). The tonnage factor is 15 (estimate). Therefore, the Inferred Mineral Resource measured in the field is 97,500,000 tons (see figures).

Graphite Deposit No. 1 is a well defined, well mineralized stratigraphic unit as observed but no proven grade can be assigned pending drilling and pilot plant bulk sampling. Prior to Phase 1 Pilot Plan operation, 2000ft (600m) of auger drilling and sampling is recommended in order to define target grade, 5% graphite for pit configuration at 1000 TPD. Three hundred thousand tons per year of 5% graphite per ton will be targeted as the Phase II requirement. The inferred grade estimate for the Mineral Resource, Graphite Deposit No. 1 as observed and measured in the field is determined from the results of the tests on bulk samples (see Appendix). The results of these tests ranged in the feasibility grade requirements.

The Mineral Resource potential for Graphite Deposit No. 2 was not measured effectively during the recent field work due to lack of exposure on the strike of the mineral deposit. Graphite Deposit No. 3 has been located but is not as yet prospected. Work on Graphite Deposits No. 2 and No. 3 will be conducted in the summer of 1999 along with the program recommended for Deposit No. 1 as funds are available.

## Grade Determination

1. December 6, 1998  
International Metallurgical and Environmental Inc.  
Metallurgist – Jeff Austin, P.Eng.

Sample – Composite 1: Bulk sample taken by Snell, P.Eng., road cut 1600W. Flotation time of 7 minutes, sufficient to exhaust graphite content in final tails. Composite 1 predicted to contain 4.0% to 4.5% recoverable graphite flotation concentrate represented 3.3% of the original feed weight. Final concentrate grade, percent graphite 97.5%.

Sample – Composite 2: Bulk sample of all auger samples taken by Snell, P.Eng. on the east 2000 feet of Graphite Deposit No. 1.

Composite 2 was observed to contain a significant volume of organic material. Four tests were conducted with Composite 2, significant volumes of graphite were observed in the tailings after long flotation times of 45 minutes. Final concentrate grade was therefore not calculated.

2. December 2, 1998  
UBC Mineral Processing Laboratory  
Metallurgist, Dusan Milojkovic, M.Sc., Dipl.Eng.

Sample IMP1: Final rougher concentrate for this sample is somewhat lower grade since it was not re-cleaned. This sample contained a lot of clay and wood chips. Fine graphite was lost in tails. This is the same sample as Composite 2 December 8, 1998. Due to organic content in bulk samples, IMP1 is not representative.

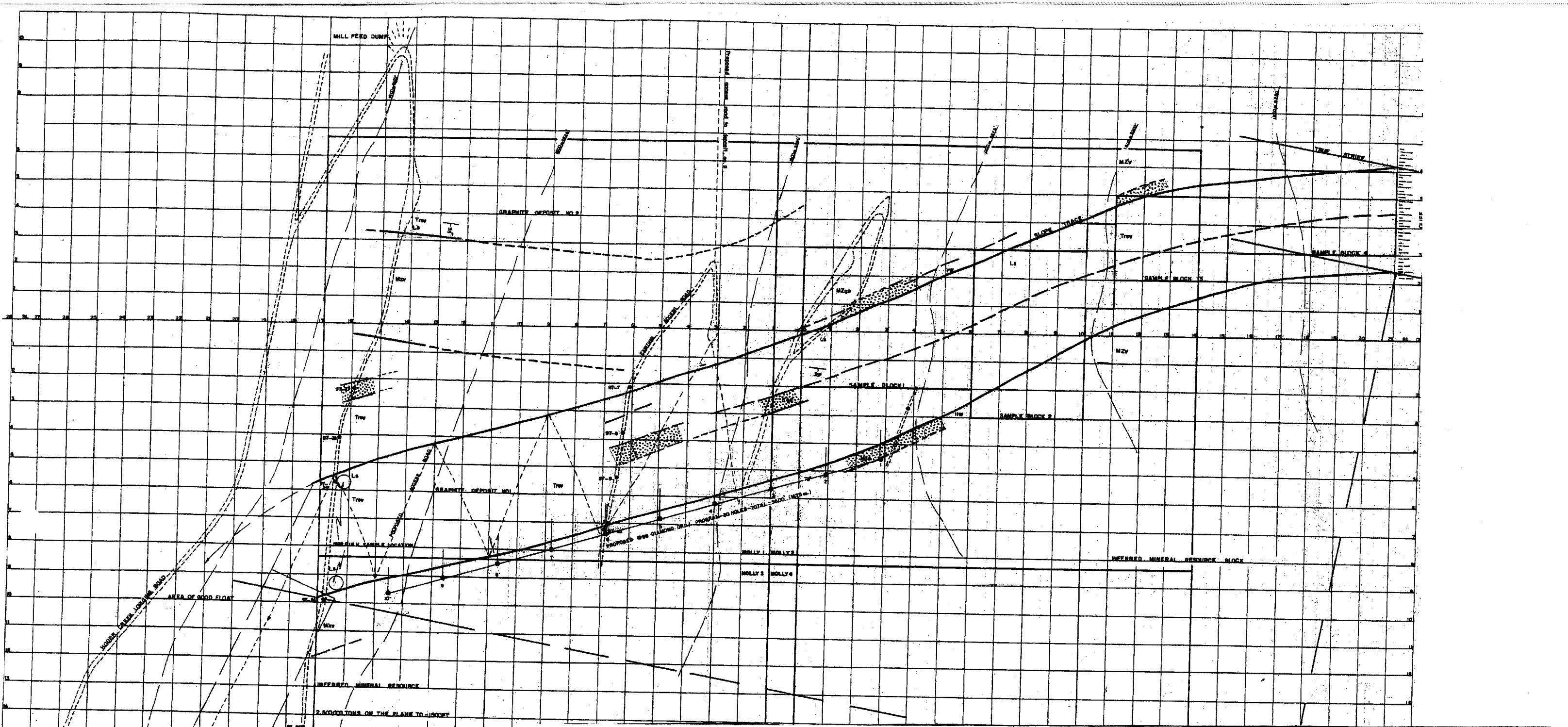
Sample IMP2: Bulk sample taken by Snell, P.Eng. from road cut at 1600W. Final graphite concentrate 5.42%. Sample floats easily and was cleaned twice. Graphite content of concentrate was not provided.

Sample IMP3: Bulk sample taken by Snell, P.Eng., from road cut at 1600W. Final graphite concentrate 5.30%. Graphite content of concentrate was not provided.

## CONCLUSIONS

Exploration and metallurgical tests completed to date and the apparent demand indicate that the project should proceed to Phase I – Pilot Plant Production at a predetermined rate of 1000 TPD. Three hundred thousand tons of mill feed will be required per year which is readily available from surface deposits within the defined configuration of Graphite Deposit No. 1. Four years supply of mill feed approximately 1,500,000 tons will be available for mill feed from decomposed bedrock inclusive in Graphite Deposit No. 1. The target grade of 5% graphite should produce 50 tons of automotive grade graphite per day, 15,000 tons per year (300) days which should find a ready market at 95% graphite for the automotive and refractory industries. The 1000 TPD Pilot Plant has been under construction intermittently as funds were available and is approximately 70% complete. With the addition of required equipment, Phase II can be completed within a few months following funding.

A requirement for the project is the ability to market product at 95% minimum carbon graphite in order to command a good price for the Company product. There is virtually no risk at defining a supply of mill feed of approximately 4% to 5% graphite at a rate of 250,000 tons per year. Reliability of supply and quality of product will be essential to maintaining consumer satisfaction. The mine and mill need to function effectively. Value of the concentrate will be determined by flake, size, degree of crystallinity (toughness), graphitic carbon content and type and quantity of impurities. The common limiting parameters are carbon content, the diameter of the flakes, degree of crystallinity, type of impurities and ash content.

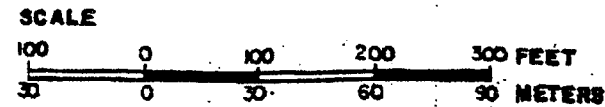


**PROPOSED - DRILL PROGRAM CRITERIA**

LENGTH	3000 FT.
WIDTH	600 FT.
THICKNESS	250 FT.
TF	15
TONS	30,000,000
LINES	16
HOLES /LINE	4
TOTAL HOLES	64
HOLE LENGTH	400 FT.
TOTAL FOOTAGE	25,600 FT.
PRODUCTION OBJECTIVE	3,000,000/year

**LEGEND**

- MESOZOIC**
- CRETACEOUS VALHALLA INTRUSIVES GRANTE, DIORITE
  - TRIASSIC-NICOLA GROUP ISLAND ARC ASSEMBLAGE
  - GREENSCHIST, LIMY METASEDIMENTS GRAPHITIC BIOTITE SCHIST, MARBLE
  - BIOTITE GNEISS-WALL ROCK VALHALLA METAMORPHICS
- ROAD
  - FAULT
  - DRILL HOLE
  - PROJECTED CONTACT
  - CONTOUR
  - DRAINAGE



INDUSTRIAL MINERAL PARK MINING CORPORATION

**BLACK CRYSTAL GRAPHITE PROJECT**

December 1988 DRAWN BY JCSNELL

**PLAN-RESOURCE SURVEY**

SLOCAN MINING DIVISION, BRITISH COLUMBIA

J.C. SNELL B.Sc. MT. P. Eng. Economic Geologist FIG. 5



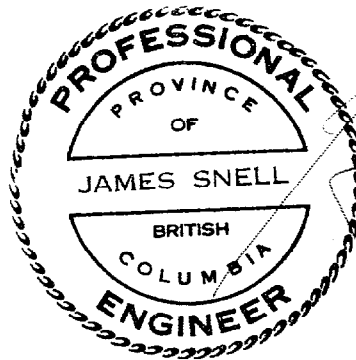
It is concluded that the demand for high quality natural graphite products will increase substantially in the future and that the Black Crystal Graphite Deposit has the capacity and quality to meet this demand in North America. Therefore, Phase II should proceed forthwith, and as markets are secured and quality of product assured, increased production can be undertaken to meet the expected demand. It is projected that a production rate of 10,000 TPD could be achieved dependent on consumer demand for value added products. It is concluded that a future high capacity concentrator would be located at the quarry site on Hoder Creek when the graphite deposits are developed. Operating Profit from the Bulk Sample Program could be utilized to fund the Phase III Drill Program, all of which would be subject to consumer demand.

## CERTIFICATE

I, James Snell, with business address in Vancouver, British Columbia, Canada hereby certify that:

1. I am an Economic Geologist engaged in mineral exploration and consulting.
2. I am a graduate of The Provincial Institute of Mining, Haileybury, Ontario, Canada, 1959 – Mining Technologist Degree.
3. I attended The Colorado School of Mines, Denver, Colorado, USA (1960 – 1961).
4. I am a graduate of the Alaska School of Mines, University of Alaska, Fairbanks, Alaska, USA 1964 – Bachelor of Science Degree in Geology.
5. I am a Registered Professional Engineer of the Province of British Columbia, Canada since 1975. Registration No. 10170.
6. I was requested by the President of IMP Industrial Mineral Park Mining Corporation to examine, survey, map and sample the Black Crystal Graphite Property, Slocan Mining Division, B.C. in October 1998 and to complete a comprehensive evaluation of the property and Geology Report with recommendations.
7. I have come to the conclusions outlined herein.
8. I have no direct or indirect interest in IMP Industrial Mineral Park Mining Corporation or in the Black Crystal Graphite Property at the date of this report.

Dated at Vancouver, British Columbia on the 26 day of May, 1999.



*James Snell*  
**James Snell, B.Sc., MT, P.Eng.**  
Geological Engineer

## **BIBLIOGRAPHY**

1. **Carse, D., Senior Associate CERA, 1998, Crystal Graphite Spreadsheet**
2. **Howard, D., P.Eng., 1996, Report on the Exploration Potential of The Black Crystal Property.**
3. **Little, H.W., 1960, GSC Memoir 308  
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4. **Monger, J., Hutchison, W., 1971, GSC Paper 70 – 33  
Metamorphic Map of the Canadian Cordillera**
5. **Parish, Carr, Brown, 1985, GSC Paper 85 – 1A, pg. 1  
Valhalla Gneiss Complex, Southeast British Columbia**
6. **Reesor, J., 1965, GSC Bulletin 129  
Structural Evolution and Plutonism in Valhall Gneiss Complex, British Columbia**
7. **Sanguinetti, M., P.Eng., 1996, Letter to Paul Schiller**
8. **Sleeman, B., P.Eng., 1998, Summary Black Crystal Graphite**

**Property, Mapping, Field Work, Sampling and Geological Survey**

October, 1998 – January, 1999

Geologist – 11 days/\$350 per day	\$ 3,850.00
Assistants (2) – 9 days/\$150 ea. per day	\$ 2,700.00
Hand Auger 60cm bayonet mount	\$ 386.24
Travel and gas	\$ 1,260.00
Hotel, Food and Miscellaneous	\$ 1800.00
Engineers reports and maps	\$ 4,260.00
Typing, Printing reports and maps	\$ 960.00
Trucking of ore to laboratory	\$ 2,000.00
Metallurgical test work	\$ 3,095.97
Supervision & travel	<u>\$ 3,200.00</u>
Subtotal	\$23,512.21
Paul Schiller, PAC	<u>\$ 8,487.79</u>
<b>TOTAL</b>	<b><u>\$32,000.00</u></b>

**APPENDIX**

Dusan Milojkovic, M.Sc. Metallurgy, Dipl. Eng.

14955 20th Ave. Surrey, B.C., V4A 8E9

Ph. : Home (604) 541-8332, Work (604) 522-9877 Ext. 132

To: Mr. Paul Schiller, President, IMP Industrial Mineral Park Mining Corp.

Fax: (604) 632-4336 (total 4 pages)

Date: 2-Dec-98

Re: Test Work Results

Paul,

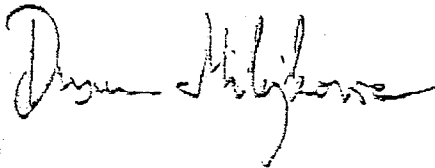
Please, note the results from the test work conducted at UBC Mineral Processing Laboratory on the three samples of IMP graphite ore.

The results represent weight percentages of each product. You may want to assay them for a complete graphite balance. The last two concentrates are high grade, while the first one (Final Rougher Concentrate - IMP1) is somewhat lower grade since it was not recleaned.

Reagents used: Pine Oil - frother, Sodium Silicate - clay dispersant.

Actual dosages are rather standard and can be provided if required.

Respectfully submitted,



p.s. Please instruct Ward to pick up the test work samples.

Test #: IMP1 Test Date: 1-Dec-08

Product # Product Wt, gms %Wt Description

Product #	Product	Wt, gms	%Wt	Description
1	1st Cleaner Tails	1.19	0.12	This is the sample with a lot of clay and wood chips (Sample #2 at IME). It is completely decomposed, no grinding required.
2	Final Rougher Concentrate	20.08	2.01	
3	1st Cleaner Tails	17.70	1.77	Additional clay removal and refloat yielded concentrate and low graphite in tails.
4	Clay Reject	329.32	32.93	
5	Final Tails	631.71	63.17	Fine graphite in tails remains lost with clay reject, affecting the actual graphite head.
6	Feed	1000.00	100.00	

Test #

IMP2

Test Date: 2-Dec-98

Product #

Product

Wt, gms %Wt

Description

Product #	Product	Wt, gms	%Wt	Description
1	Final Graphite Concentrate	55.60	5.42	This is the sample provided at the testing date. No clay, floats easily, two cleaning stages Grinding required since it is still lumpy. Crumbles easily.
2	2nd Cleaner Tails	2.20	0.21	
3	1st Cleaner Tails	39.40	3.84	
5	Final Tails	928.40	90.52	
6	Feed	1025.60	100.00	



Test #: IMP3 Test Date: 2-Dec-98

Product # Product Wt, gms %Wt

Description

Product #	Product	Wt, gms	%Wt	Description
1	Final Graphite Concentrate	51.91	5.37	This is the composite # 1 at IME. It is not completely decomposed, so grinding was required. After clay removal, it floats though somewhat slower than IMP2.
2	2nd Cleaner Tails	1.12	0.12	
3	1st Cleaner Tails	8.03	0.83	
4	Clay Reject	126.85	13.12	
5	Final Tails	778.70	80.58	
6	Feed	938.61	100.00	

**INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.**

13 - 2550 Acland Road, Kelowna, B.C., Canada, V1X 7L4, Telephone: (604) 491-1722, Facsimile: (604) 491-1723

**INVOICE**

December 8, 1998

Invoice No.: 99386  
GST No.: 898084686

Paul Schiller - President  
Industrial Mineral Park Mining Corp.  
#200 - 626 West Pender St.  
Vancouver, B.C.

Re: Billing for Metallurgical Test Work on the Graphite Flotation.

Dear Paul,

The following costs are being invoiced for completion of metallurgical test work on the Graphite samples from your facilities. Final results are attached.

Metallurgical Technian costs 24 hours @ \$69	\$1656
Reporting/Engineering costs 4 hours @ \$85	\$340
Sub-total	\$1996
GST	<u>\$139.72</u>
Invoice Total	\$2135.72

Thank-you for the opportunity to provide this service.

Yours very truly,



Jeffrey B. Austin, P.Eng. - President  
International Metallurgical and Environmental Inc.

INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.

13 - 2550 Astland Road, Kelowna, B.C., Canada, V1X 7L4. Telephone: (250) 491-1722. Facsimile: (250) 491-1723

December 8, 1998

Mr. Paul Schiller - President  
 Industrial Mineral Park Mining Corporation  
 200 - 626 West Pender Street  
 Vancouver, B.C.

Dear Paul,

International Metallurgical and Environmental Inc. has completed flotation test work using two samples of graphite bearing materials provided by Industrial Mineral Park Mining Corporation. This letter outlines the results of the flotation test work.

Two different samples were provided for flotation testing using a flotation process defined by Industrial Mineral Park Mining Corporation. The process used in these tests involved a stage of de-sliming the ground ore followed by simple roughing flotation of the graphite material and two stages of dilution cleaning. A schematic flowsheet of the process is shown below in Figure 1.

Testing of the two samples showed a marked difference in the response of the two samples due to the degree alteration of the host rock, as well as the presence of organic material in one of the samples.

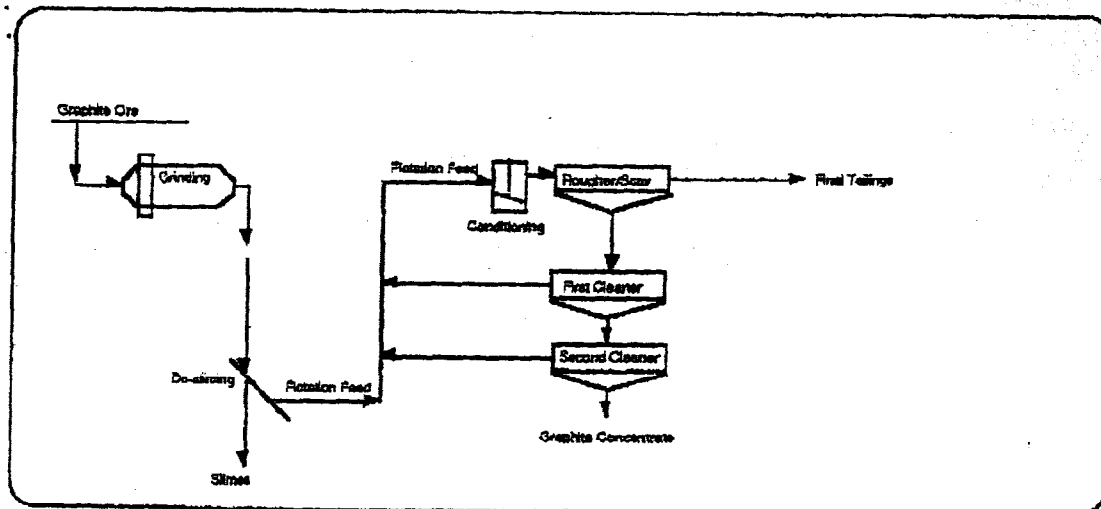


Figure 1. - Process Flowsheet used in Graphite Flotation and Upgrading.

## INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.

13- 2550 Acland Road, Kelowna, B.C., Canada, V1X 7L4. Telephone: (250) 491-1722. Facsimile: (250) 491-1723

At the request of Industrial Mineral Park Mining Corporation, flotation test work was started with Composite sample 2. Results are summarized in the following table for the 4 flotation tests conducted at International Metallurgical and Environmental Inc.

Table 1  
Summary of Graphite Flotation Test Work

Test Number	Sample	Final Concentrate Weight Weight Percent	Final Concentrate Grade Percent Graphite
100	Comp. 2	Not completed	-
101	Comp. 2	0.70	-
102	Comp. 2	0.60	-
103	Comp. 1	3.30	97.5
104	Comp. 2	Conc. not cleaned	-

These initial test results using Composite 2, resulted in tailings samples which contained significant volumes of un-recovered graphite. The flotation concentrate produced in tests 100, 101 and 102 was estimated to be very high grade, however it appears that a significant portion of the graphite was residing in the tailings of the batch flotation test. Based on visual observations of the feed sample composite 1 and the tailings sample, the content of organic material in the form of plant roots and plant debris is nearly twice that of the observed graphite content.

The ground samples were subject to a short batch grind in a laboratory rod mill and the ground ore de-slimed on a 38 micron screen. The use of a screen to de-slime the ore prior to flotation is preferred over decanting, in order to effectively remove fine particulate material. The plus 400 mesh material (38 micron) material was used for flotation testing. The minus 400 mesh material was filtered, dried and reported as a slime fraction in all of the attached balances. The slimes typically represented 22 to 26 percent of the original feed sample weight. Composite 2 was observed to contain a significant volume of organic material which reported to the plus 400 mesh fraction.

The flotation time used in attempting to recover graphite from Composite 2 was extended to approximately 45 minutes, attempting to exhaust the residual graphite from the final tailings. In all 4 tests conducted with Composite 2, significant volumes of graphite was observed in the tailings even after these very long flotation times.

The use of additional de-sliming in test 104 and the inclusion of sodium silicate as a clay dispersant did not result in accelerated graphite flotation.

A single flotation test was conducted using Composite 1, and this material displayed a significantly different flotation response. The rate and volume of graphite flotation was much higher with Composite 1 compared to Composite 2. Flotation times of 7 minutes were sufficient to exhaust the graphite content of the final tailings. Within composite 1, there was no visible organic material of the sort observed in Composite 2. Composite 1 is predicted to contain 4.0 to 4.5 percent recoverable graphite to an excellent grade product. The open circuit test 103 produced a flotation concentrate which represented 3.3 percent of the original feed weight.


**INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.**

13 - 2550 Acland Road, Kelowna, B.C., Canada, V1X 7L4. Telephone: (250) 491-1722, Facsimile: (250) 491-1723

Based on the different response of the two samples submitted for testing, it is recommended that the flotation response of the sample Composite 2 be discounted and considered to be non-representative of the graphite ore.

If you have any questions, please call.

Yours very truly,



Jeffrey B. Austin, P.Eng. - President  
International Metallurgical and Environmental Inc.

**International Metallurgical and Environmental Inc.  
Flotation Test Summary**

Project: I.M.P.  
 Test No. Flot 101  
 Test Sample: Met comp 2  
 Test Objectives: Graphite flotation  
 Primary grind: 4 min; % passing 200 mesh

**Metallurgical Balance**

Sample	Wt. %
<b>Slimes</b>	<b>23.4</b>
Graphite Concentrate	0.7
3rd Cleaner Tail	0.2
2nd Cleaner Tail	0.9
1st Cleaner Tail	12.7
Graphite Scavenger Concentrate	2.0
Flotation tails	60.1
Calculated Head	100
Assayed Head	

Flotation test 101

Cumulative Metallurgical Balance

Sample	Wt. %
Slimes	29.4
Graphite Concentrate	0.7
2nd Cleaner Concentrate	0.9
1st Cleaner Concentrate	1.9
Graphite Rougher Concentrate	14.6
Graphite Scavenger Concentrate	2.0
Flotation tails	60.1

International Metallurgical and Environmental Inc.  
 Flotation Test Reagent Schedule

Project: I.M.P  
 Flotation Test: 101  
 Sample: Metallurgical composite #2  
 Test Objectives: Preliminary scoping test for Graphite recovery  
 Primary Grind: 4 min, % passing 200 mesh

Stage	pH	Pineoil g/t	MIBC g/t	Process	
				Cond min	Froth min
Grind				4	
<b>Rougher/Scav</b>					
Graphite Rougher	7.9	14	14	5	8
Graphite Scavenger			7		2
<b>Cleaners</b>					
Regrind				5	
1st Graphite Cleaner	7.4			1	6
2nd Graphite Cleaner	7.8			1	5
3rd Graphite Cleaner				1	4

- All roughers and scavengers were completed using a 5.0l cell.
- All cleaners were completed using a 1.1l cell.
- Sample deslimed on 400 mesh prior to flotation



International Metallurgical and Environmental Inc.  
Flotation Test Summary

Project: I.M.P.  
Test No. Flot 102  
Test Sample: Met composite #2  
Test Objectives: Graphite flotation  
Primary grind: 4 min; % passing 200 mesh

Metallurgical Balance

Sample	Wt. %
Slimes	21.6
Graphite Concentrate	0.6
3rd Cleaner Tail	0.3
2nd Cleaner Tail	0.6
1st Cleaner Tail	2.8
Flotation tails	74.3
Calculated Head	100
Assayed Head	

Flotation test 102

Cumulative Metallurgical Balance

Sample	Wt. %
Silmes	21.6
Graphite Concentrate	0.6
2nd Cleaner Concentrate	0.8
1st Cleaner Concentrate	1.5
Graphite Rougher Concentrate	4.1
Flotation tails	74.3

### International Metallurgical and Environmental Inc. Flotation Test Reagent Schedule

Project: I.M.P  
 Flotation Test: 102  
 Sample: Metallurgical composite #2  
 Test Objectives: Preliminary scoping test for Graphite recovery  
 Primary Grind: 4 min, % passing 200 mesh

				Process	
Stage	pH	Pineoil g/t	Dowfroth g/t	Cond min	Froth min
Grind				4	
<b>Rougher/Scav</b>					
Graphite Conc 1	7.9	14	7	5	5
Graphite Conc 2		14		5	5
Graphite Conc 3		7	7	5	5
Graphite Conc 4		7	7	5	5
Graphite Conc 5		7	7	5	5
Graphite Conc 6				5	5
Graphite Conc 7		7		5	5
Graphite Conc 8				5	5
Graphite Conc 9		14		5	5
<b>Cleaners</b>					
1st Graphite Cleaner	6.9			1	10
2nd Graphite Cleaner				1	8
3rd Graphite Cleaner				1	6

- All roughers and scavengers were completed using a 5.0l cell.
- All cleaners were completed using a 1.1l cell.
- Sample deslimed on 400 mesh prior to flotation

International Metallurgical and Environmental Inc.  
Flotation Test Summary

Project: I.M.P.  
Test No. Flot 103  
Test Sample: Metallurgical composite #1  
Test Objectives: Graphite flotation  
Primary grind: 6 min; % passing 200 mesh

Metallurgical Balance

Sample	Wt. %
Slimes	19.5
Graphite Concentrate	3.3
2nd Cleaner Tail	0.3
1st Cleaner Tail	1.4
Flotation tails	75.6
Calculated Head	100

**Flotation test 103**

**Cumulative Metallurgical Balance**

<b>Sample</b>	<b>Wt. %</b>
<b>Slimes</b>	<b>19.5</b>
<b>Graphite Concentrate</b>	<b>3.3</b>
<b>1st Cleaner Concentrate</b>	<b>3.6</b>
<b>Graphite Rougher Concentrate</b>	<b>4.9</b>
<b>Flotation tails</b>	<b>75.6</b>

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**International Metallurgical and Environmental Inc.  
Flotation Test Reagent Schedule**

Project: I.M.P

Flotation Test: 103

Sample: Metallurgical composite #1

Test Objectives: Preliminary scoping test for Graphite recovery

Primary Grind: 6 min, % passing 200 mesh

Stage	pH	Pineoil g/t	MIBC g/t	Process	
				Cond min	Froth min
Grind				6	
<b>Rougher/Scav</b>					
Graphite Rougher	7.9	14		5	4
Graphite Scavenger		7		3	3
<b>Cleaners</b>					
Regrind				2	
1st Graphite Cleaner	8.3		7	1	6
2nd Graphite Cleaner	8.1			1	5

- All roughers and scavengers were completed using a 5.0l cell.
- All cleaners were completed using a 1.1l cell.
- Graphite Conc and Scavenger were reground in a rod mill with a 10 kg charge
- Sample deslimed on 400 mesh prior to flotation

International Metallurgical and Environmental Inc.  
Flotation Test Summary

Project: I.M.P.  
Test No. Flot 104  
Test Sample: Metallurgical composite #2  
Test Objectives: Graphite flotation  
Primary grind: 6 min; % passing 200 mesh

Metallurgical Balance

Sample	Wt. %
- 400 mesh	26.8
Slimes	1.2
Graphite Concentrate 1	0.9
Graphite Concentrate 2	1.0
Graphite Concentrate 3	0.7
Flotation tails	96.2
Calculated Head	100

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Flotation test 104

Cumulative Metallurgical Balance

Sample	Wt. %
- 400 mesh	26.8
Slimes	1.2
Graphite Concentrate 1	0.9
Graphite Concentrate 2	1.9
Graphite Concentrate 3	2.6
Flotation tails	96.2

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International Metallurgical and Environmental Inc.  
Flotation Test Reagent Schedule

Project: I.M.P

Flotation Test: 104

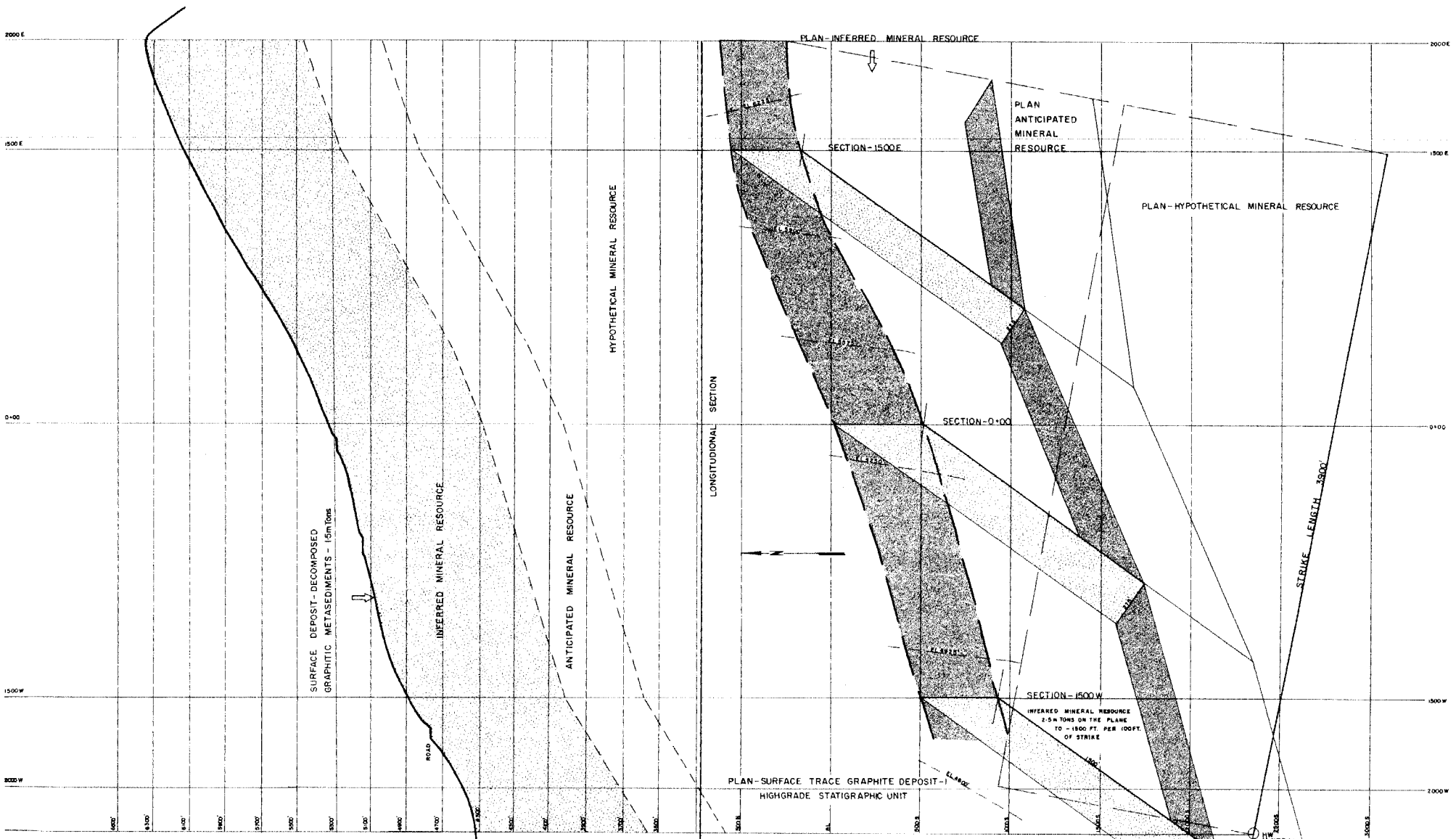
Sample: Metallurgical composite #2

Test Objectives: Preliminary scoping test for Graphite recovery

Primary Grind: 6 min, % passing 200 mesh

Stage	pH	Pineoil g/t	Sodium Silicate g/t	MIBC g/t	Process	
					Cond min	Froth min
Grind					6	
<b>Rougher/Scav</b>						
Graphite Conc 1	7.9	14	14		5	10
Graphite Conc 2		14	14		1	8
Graphite Conc 3		14			1	8
<b>Cleaners</b>						

- All roughers were completed using a 5.0l cell.
- Sample was screened on 400 mesh prior to desliming
- Sample was deslimed by decanting prior to flotation



**BLACK CRYSTAL GRAPHITE DEPOSIT NO.1**

**RESOURCE CALCULATION CRITERIA**

- HOST - STRATIGRAPHIC UNIT
- TRIASSIC - NICOLA GROUP (REGIONAL METAMORPHISM TO GREENSCHIST FACIES IN L. CRETACEOUS)
- KARLO-SLOGAN FORMATIONS
- ANDERITE TO SAPPHIRE BIOTITE SCHIST
- LIMESTONE-AMIBLITE TO GRAPHITIC MARBLE
- WALL DOR - VALHALLA METAMORPHIC COMPLEX - HORNBLEND BIOTITE GNEISS

**PROVEN GRADE - TO BE DETERMINED**

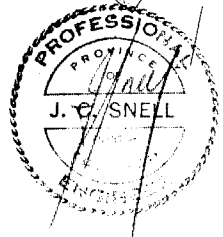
- STRIKE LENGTH - 3900' (CONTINUOUS MAPPED DEPOSIT)
- AVERAGE WIDTH - 250' (DIP 95°)
- 1500' DOWN DIP ON THE PLANE
- TONNAGE FACTOR - 15
- SURFACE GRAPHITE DEPOSIT - L4000' W 400' D15' - TONNAGE FACTOR 15 - TONS 15-M

**LONGITUDINAL SECTION  
INFERRED MINERAL RESOURCE**

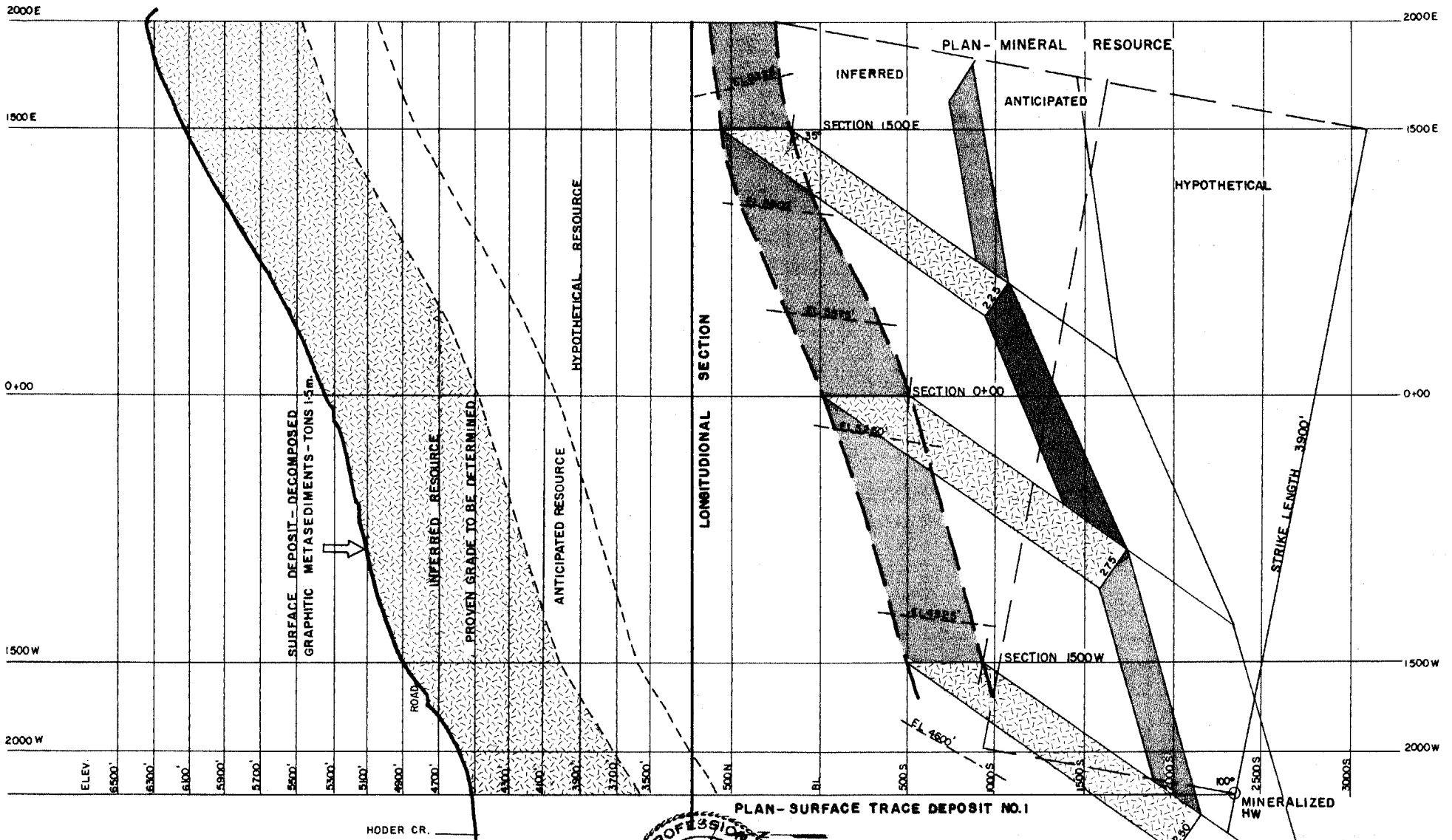
**EXPLORATION PROJECTION - 10,000TPD**

**PLAN  
INFERRED MINERAL RESOURCE**

Appendix 19C  
 Definitions For Mineral Resources  
 (Based on the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Reserve Definitions)  
 Mineral Resource  
 Mineral Reserve  
 Proven Reserve  
 Probable Reserve  
 Possible Reserve  
 Potential Reserve  
 Speculative Reserve  
 Unproved Reserve  
 Unproven Reserve  
 Unassessed Reserve  
 Unallocated Reserve  
 Unexplored Reserve  
 Unexploited Reserve  
 Unexplored Reserve  
 Unexploited Reserve  
 Unexplored Reserve  
 Unexploited Reserve



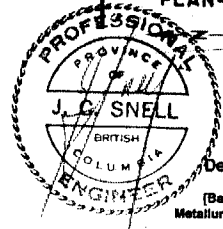
INDUSTRIAL MINERAL PARK MINING CORPORATION			
<b>BLACK CRYSTAL GRAPHITE PROJECT</b>			
DECEMBER 1988	0	200	400
RESERVE CONFIGURATION			
SLOCAN MINING DIVISION, BRITISH COLUMBIA			
J.C. SNELL, B.Sc. M.T., P.Eng., Economic Geologist	FIG. 6		



LONGITUDINAL SECTION - MINERAL RESOURCE  
 BLACK CRYSTAL GRAPHITE DEPOSIT NO1  
 SURFACE GRAPHITE DEPOSIT - L4000'xW400'xD15' - TONNAGE FACTOR 15 - TONS 1.5m

GRAPHITIC STRATIGRAPHIC UNIT  
 TRIASSIC-NICOLA GROUP  
 KASLO-SLOCAN FORMATIONS  
 ISLAND ARC ASSEMBLAGE  
 REGIONAL METAMORPHISM TO GREENSCHIST FACIES IN L.CRETACEOUS  
 GRAPHITE BIOTITE SCHIST  
 GRAPHITIC MARBLE

INFERRED MINERAL RESOURCE 2.5 m TONS ON THE PLANE TO -1500 FT. PER 100 FT. OF STRIKE

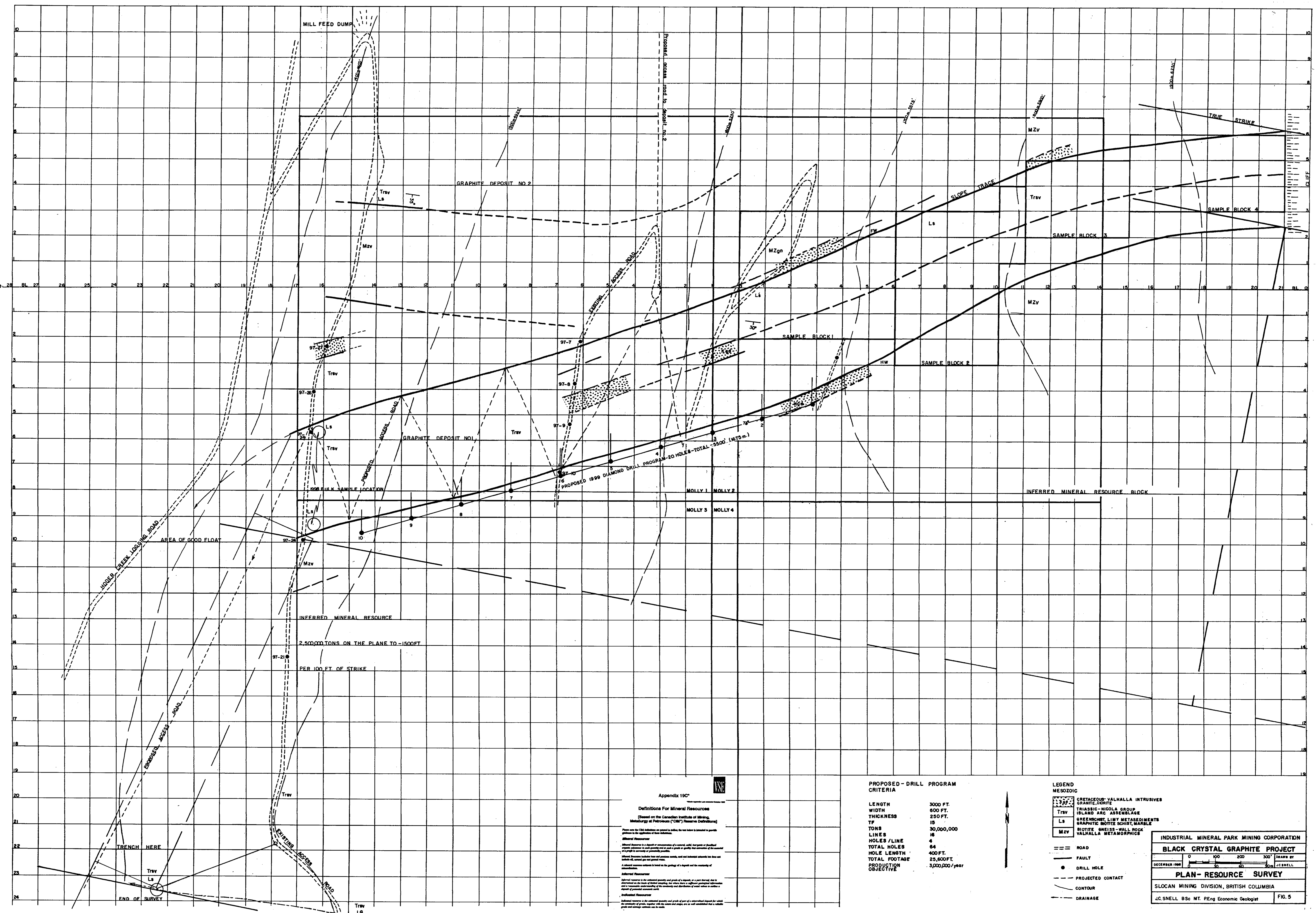


Appendix 19C\*

Definitions For Mineral Resources  
 [Based on the Canadian Institute of Mining, Metallurgy at Petroleum ("CIM") Reserve Definitions]

Please note the CIM definitions are printed in italics; the text below is intended to provide guidance in the application of these definitions.  
**Mineral Resource:**  
*Mineral Resource is a deposit or concentration of a natural, solid, inorganic or fossilized organic substance in such quantity and of such a grade or quality that extraction of the material as a profit is currently or potentially possible.*  
 Mineral Resource includes base and precious metals, coal and industrial minerals but does not include oil, natural gas and ground water.  
 A mineral resource estimate is based on the geology of a deposit and the continuity of mineralization.

INDUSTRIAL MINERAL PARK MINING CORPORATION			
<b>BLACK CRYSTAL GRAPHITE PROJECT</b>			
DECEMBER 1998	400	0	800ft. DRAWN BY
	100	0	JC SNELL
<b>RESOURCE CONFIGURATION</b>			
SLOCAN MINING DIVISION, BRITISH COLUMBIA			
JC SNELL B.Sc. MT. P.Eng. Economic Geologist			FIG. 7



Appendix 19C<sup>1</sup>

**Definitions For Mineral Resources**  
 (Based on the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Reserve Definitions)

These are the CIM definitions used herein to define the terms used in this report in accordance with the requirements of the CIM.

**Inferred Resource**  
 Mineral resources that are based on geological evidence and are not based on a sufficient quantity or quality of data to be classified as a higher category of mineral resource.

**Measured Resource**  
 Mineral resources that are based on a sufficient quantity or quality of data to be classified as a higher category of mineral resource.

**Indicated Resource**  
 Mineral resources that are based on a sufficient quantity or quality of data to be classified as a higher category of mineral resource.

**PROPOSED - DRILL PROGRAM CRITERIA**

LENGTH	3000 FT.
WIDTH	600 FT.
THICKNESS	250 FT.
TP	15
TONS	30,000,000
LINES	16
HOLES / LINE	4
TOTAL HOLES	64
SOLE LENGTH	400 FT.
TOTAL FOOTAGE	25,600 FT.
PRODUCTION	3,000,000/year
OBJECTIVE	

**LEGEND**

**MESOZOIC**

- CRETACEOUS-VALHALLA INTRUSIVES
- GRANITE, DIORITE
- TRIASSIC-NICOLA GROUP
- ISLAND ARC ASSEMBLAGE
- GREENISH-LIME METASEDIMENTS
- GRAPHITIC MARBLE SCHIST, MARBLE
- BIOTITE-ANORTHITE-WALL ROCK
- VALHALLA METAMORPHICS

**ROAD**

- FAULT
- DRILL HOLE
- PROJECTED CONTACT
- CONTOUR
- DRAINAGE

INDUSTRIAL MINERAL PARK MINING CORPORATION

**BLACK CRYSTAL GRAPHITE PROJECT**

DECEMBER 1998

**PLAN - RESOURCE SURVEY**

SLOCAN MINING DIVISION, BRITISH COLUMBIA

J.C. SNELL B.Sc. M.T. P.Eng. Economic Geologist

FIG. 5