D.D.H. GEOMANAGEMENT LTD.

REPORT

ON THE

EXPLORATION POTENTIAL

OF THE

BLACK CRYSTAL PROPERTY
(For assessment purposes)
(Molly 1 -4 and PB 1 - 4)

LOCATED NORTHWEST OF NELSON, B.C.

(Lat. 49 46' North , Long. 117 46.5' West)
(N.T.S. Map Sheet 82 F/13W)

For

MR. PAUL SCHILLER

2303 - 1415 West Georgia Street
Vancouver, B.C.
V6G 3C8

By
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January 13, 1994

422 - 470 Granville Street, Vancouver, B.C. Canada V6C 1V5 • Telephone (604) 681-4413

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SUMMARY

The easily accessible Black Crystal Property is a large graphite deposit held by Mr. Paul Schiller which consists of 4 - 20 unit claims plus 4 internal claims located near the headwaters of Hoder Creek approximately 74 kilometres north of Trail, B.C.

The property is located totally within the central portion of the Valhalla Gneiss Dome which is a domal structure comprised of high metamorphic grade paragneiss structurally overlain and interlayered with thick granitoid sheets. Graphite mineralization in the form of disseminated fine to coarse grained flakes is associated with a locally very coarse grained friable graphitic marble and/or siliceous metasedimentary rock. The graphite occurs along and parallel to the foliation planes and/or metamorphic compositional bands. The friable character of the host rock is critical to the economics of the graphite deposit because it allows the easy release of the coarse grained graphite flakes without abrasion from it host. The depth of the friable intensely weathered zone is unknown but appears to be fairly deep.

Based on a total of 18 samples, 11 of which were 3 metre continuous channel samples, the average arithmetic grade of the deposit is 2.55 percent graphite with a range of 0.39 to 6.95 percent graphite. The 11 sample channel sample had a weighted average grade of 2.55 percent also. The high grade assay (6.95%) is an average of 4 separate samples from the same sample location. The mineralized zone defined to date appears to cover an area 500 by 500 metres and have a minimum thickness of 80 to 100 metres. The geologic resource contained within this volume ranges from 50 to 62.5 million tonnes at an unknown grade. The property is 95 plus percent covered except for along badly sloughed in road cuts, but enough is exposed to safely define a minimum size. All assaying of field samples was done by a "Modified Leco Method" and the metallurgical test results were assayed by the "Double Loss on Ignition Method" with excellent correlation between the two methods.

Metallurgical tests conducted by Process Research Associates Ltd. of Vancouver on the highest grade material (6.95 percent graphite) produced rougher concentrates grading 52.7 at a 98.9 percent recovery and 63.85 percent graphite at a 98.2 percent recovery respectively. Microscopic examination of the concentrates showed excellent liberation of the particles which indicated that the concentrates could be easily up graded to saleable grades by simple gravity means.The rougher concentrates were screened at 48 and 100 mesh to determine a rough size distribution. The test indicated that 10-12 percent of the graphite is coarser than 48 mesh with 37-42 percent between 48 and 100 mesh and 46-53 percent less than 100 mesh. Crucible grade graphite (Highest price product) must have 85 percent carbon and be between 20 and 80 mesh, therefor at least a large percentage of the Black Crystal meet this

criterion.

A two phase exploration program costing $250,000.00 is proposed to confirm the above very favourable initial results.

INTRODUCTION

The firm of D.D.H. Geomanagement Ltd., 422-470 Granville Street, Vancouver, B.C., V6C 1V5 has been requested by Mr. Paul Schiller, 2303 - 1415 West Georgia Street, Vancouver, B.C., V6G 3C8 to supervise and report on the exploration and graphite potential of the Black Crystal property.

This assignment was accomplished by reviewing all published and private data. Actual direct reference to the subject property is very limited since the property essentially represents a new discovery. Results of previous property examinations by other mining companies are not available to the writer. The property was examined by the writer and samples have been submitted for assay and metallurgical testing.

LOCATION, ACCESS AND INFRASTRUCTURE

The Black Crystal graphite deposit (Figures 1 and 2) is located near the headwaters of Hoder Creek in southeastern British Columbia approximately 74 kilometres due north of Trail, B.C.

Access to the property is via a network of logging roads accessed from just north of the village of Passmore on B.C. Highway No.6. The access road follows the Little Slocan River for a distance of 24 kilometres, thence follows Hoder Creek for a distance of 18 kilometres. The road is a well maintained gravel road capable of handling heavy trucks.

The town of Nelson, a service and railroad centre for the area, is approximately 80 kilometres by road from the property.

PROPERTY AND TITLE

The Black Crystal property comprises 84 units contained in 4 modified grid claims and 4 two post claims (See Figure 3). Actual area of claims is equivalent to 84 units because the 4-2 post claims are within the area covered by the modified grid claims. The Molly 1-4 claims are held by an option from Mr. Steve Paszty, 2644 10th Avenue, Castlegar, B.C. to Mr. Paul Schiller. The PB 1-4 claims are registered in Mr. Schiller's name. The claims all lie within the Nelson Mining Division on N.T.S. map sheets 82F/13W and 82F/13E. The claims are listed below:

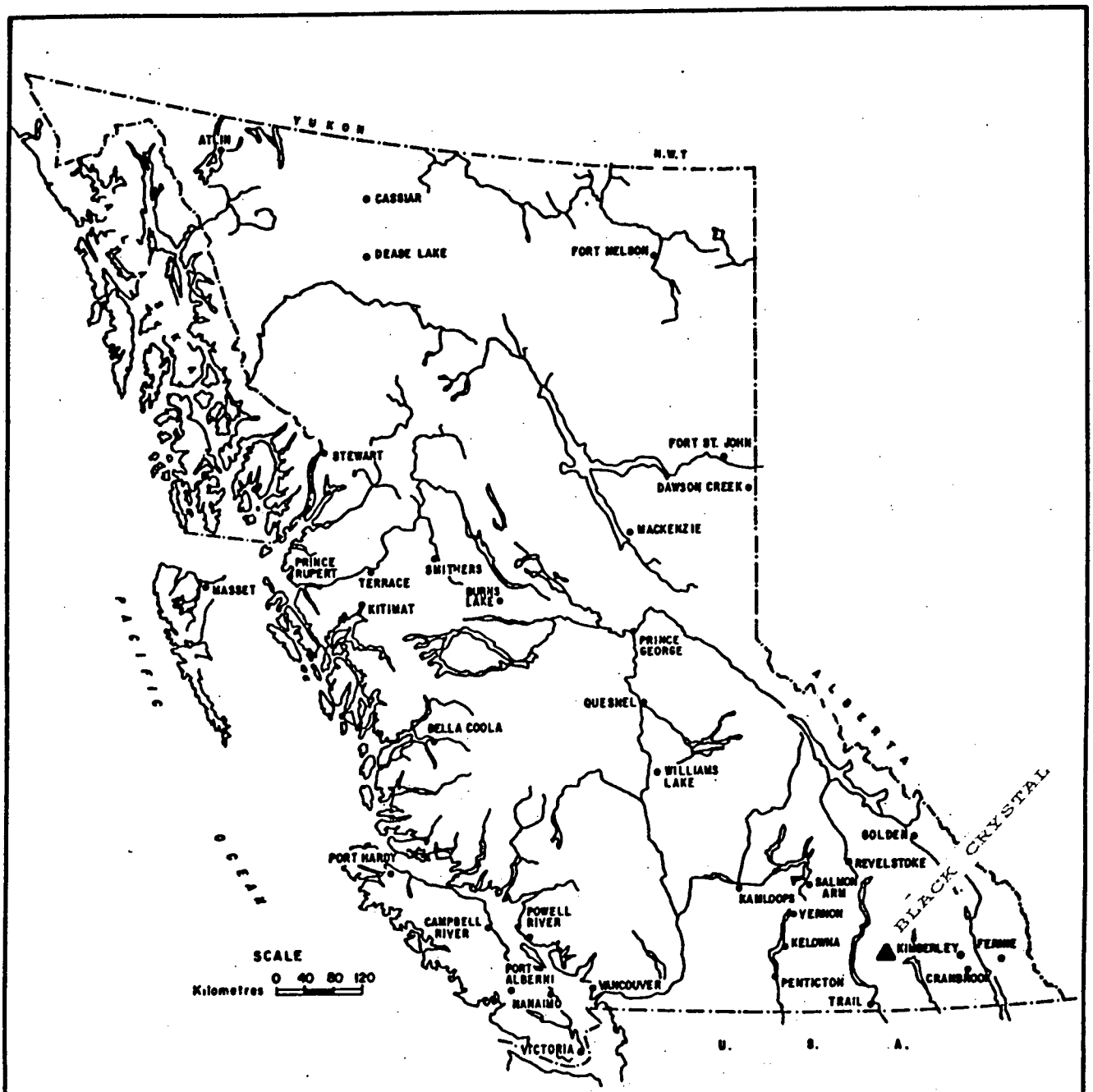

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FIGURE 1

PAUL SCHILLER'S CLAIMS

LOCATION MAP

BLACK CRYSTAL PROJECT

SCALE; as shown

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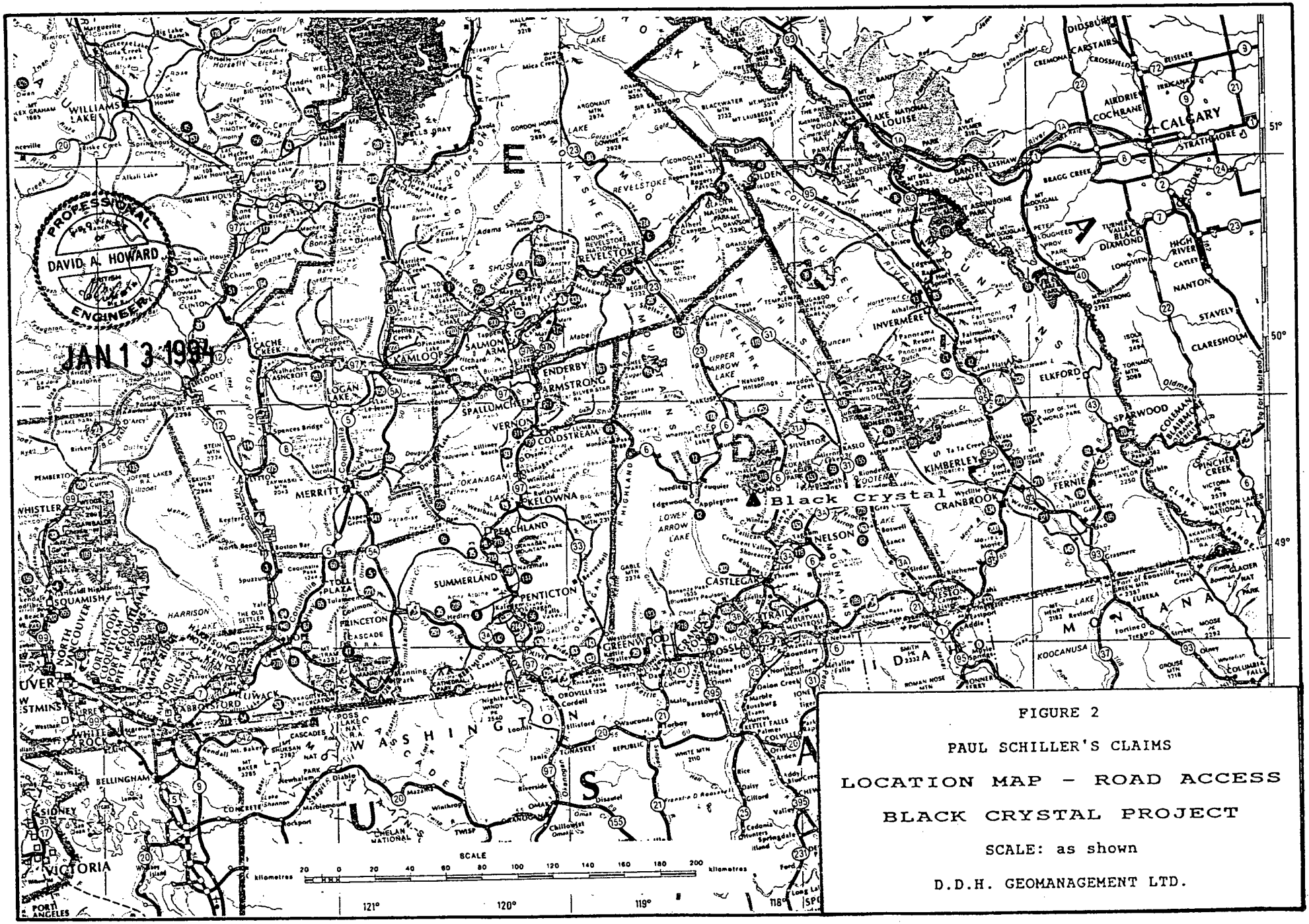

FIGURE 2

PAUL SCHILLER'S CLAIMS

LOCATION MAP - ROAD ACCESS

BLACK CRYSTAL PROJECT

SCALE: as shown

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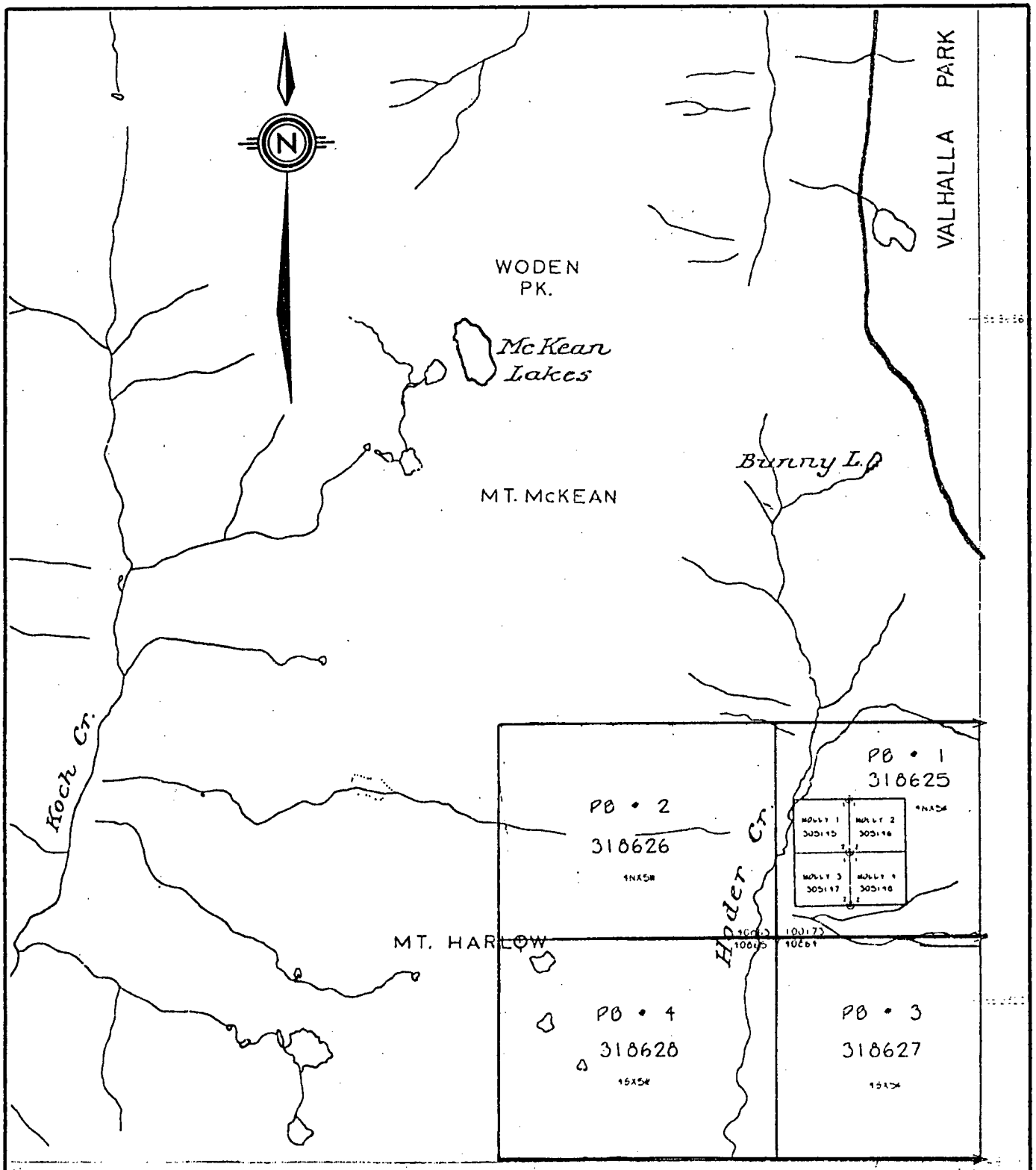

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Modified from claim sheet 82F/13W and 82F/13E

FIGURE 3

PAUL SCHILLER'S CLAIMS

CLAIM MAP

BLACK CRYSTAL PROJECT

SCALE; 1 : 50,000 DATE: OCTOBER 1993

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CLAIM NAME	MIN. TEN. NO.	UNITS	EXPIRY DATE	REG. OWNER
MOLLY - 1	305145	1	9/20/94	S. PASZTY
MOLLY - 2	305146	1	9/20/94	S. PASZTY
MOLLY - 3	305147	1	9/20/94	S. PASZTY
MOLLY - 4	305148	1	9/20/94	S. PASZTY
PB - 1	318625	20	6/28/94	P. SCHILLER
PB - 2	318626	20	6/28/94	P. SCHILLER
PB - 3	318627	20	6/28/94	P. SCHILLER
PB - 4	318628	20	6/28/94	P. SCHILLER

HISTORY

The Black Crystal property was originally discovered and staked (Molly 1-4) by Mr. Steve Paszty of Castlegar, B.C. in the 1960's. The graphite mineralization was exposed in logging road cuts on a steep hillside and along the main haul road that follows Hoder Creek. Mr. Paszty attempted to interest several other mining companies in the property but to no avail. In late 1992, Mr. Paszty contacted Mr. Schiller, who after examining samples of the graphitic material sent to him in Vancouver, decided to conduct a property examination when weather permitted. Prior to the property examination the samples were analyzed and metallurgically tested. On May 27,1993 Mr. Schiller and the writer in the company of Mr. Paszty examined the property and noted its large potential. The property was optioned by Mr. Schiller in July, 1993.

The presence of graphite had been noted by several workers (Little, H.S., 1960, p. 71; Reesor, J.E., 1965, p.20) during regional mapping programs on the Valhalla and Passmore Domes. In these studies, it appears that the graphite occurred as an accessory mineral because no mentioned was made of its abundance. To the writer's knowledge no one except Mr. Paszty did any follow up work. The Black Crystal property thus can be considered a new discovery.

REGIONAL GEOLOGY

The Black Crystal property is located in the south central part of the Valhalla Gneiss Complex. Numerous geologists (Little, H.W., 1960; Reesor,J.E., 1965; Parrish, R.R., 1985; Carr, S.D., 1985) have studied and mapped in the area. Carr, (1985) has expertly summarized the regional geology which is quoted below:

"Valhalla Gneiss complex

Valhalla gneiss complex is a domal structure comprised of high grade paragneiss structurally overlain and interlayered with thick granitoid sheets. Four map units

(Figure 4, this report) have been defined in the complex (after Reesor, 1965). Unit ms, consists of polydeformed sillimanite grade metasedimentary rocks, and generally discordant leucogneiss and pegmatite of uncertain age, disposed in three sheets or slices. In Gwillim Creek, the lower two sheets have ductilely sheared contacts with overlying unit uKgn (Parrish et. al., 1985). Unit uKgn is a melanocratic granodiorite gneiss which has been dated by Parrish (1984) as late Cretaceous. This package of repeated ms and uKgn is overlain by a third sheet of unit ms up to 3 km thick which outcrops around the core of the entire complex. These units are overlain by unit Pgm, a megacrystic quartz monzonite of Paleocene age (Parrish, 1985), and unit PEg, a homogeneous layer of biotite quartz monzonite of Eocene-Paleocene age (Parrish et al., 1985). To the north, unit PEg appears to intrude up-TRms of the Nemo Lakes metasedimentary belt.

General Structure

The rock units which form Valhalla gneiss complex have undergone one of more ductile deformation events. Unit ms is multiply deformed; in the Gwillim Creek area large scale northwest trending folds have been overprinted by a penetrative east-west stretching lineation (See Parrish et al.,1985). The granitoid units vary from massive to foliated to mylonitic in fabric; where deformed, the also commonly exhibit an east-west stretching lineation. The granitoid bodies have a sheetlike configuration, although their original intrusive geometry is unknown. The sheets comprising Valhalla gneiss complex have been arched into two domal culminations in which compositional layering, metamorphic layering and mylonitic foliation dip gently outward from the centres of the culminations, west of Slocan and near Passmore (Figure 5, this report)."

Earlier work

Reesor (1965) defined Carr's (above) unit ms as "Hybrid Gneiss". The "Hybrid Gneiss" is described as a mixture of older metasedmentary gneiss and light coloured leucogranite-gneiss and pegmatite with a few isolated layers and/or elongate boudins up to 100 feet derived from limestone and quartzitic limestone. These limey layers have been metamorphosed to marble and/or calc-silicate rocks which range in composition from coarse grained marble to diopsidic, forsteritic, or graphitic marbles to diopside-plagioclase or diopside-scapolite granulites. It is in one of these calc-silicate units that the Black Crystal deposit is located. Preliminary indications are that the graphitic unit found on the property is much thicker, probably higher grade and covers a greater area than anything described by Ressor or the other workers in the area.

FIGURE 4

PAUL SCHILLER'S CLAIMS

REGIONAL GEOLOGY

BLACK CRYSTAL PROJECT

SCALE: as shown

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LEGEND

TERTIARY

EOCENE OR PALEOCENE

PEg UNIT 4: LEUCOCRATIC BIOTITE QUARTZ MONZONITE

PALEOCENE

Pgm UNIT 3: K-FELDSPAR MEGACRYSTIC BIOTITE-HORNBLENDE QUARTZ MONZONITE

LATE CRETACEOUS

uKgn UNIT 2: MELANOCRATIC BIOTITE-HORNBLENDE AUGEN GRANODIORITE GNEISS INTRUDED BY LEUCOCRATIC GRANITOID VEINS OF UNCERTAIN AGE

MIDDLE JURASSIC

mJgd NELSON BATHOLITH: GRANODIORITE; QUARTZ DIORITE, AND MINOR GRANITE

mJsy NELSON BATHOLITH: HORNBLENDE SYENITE

TRIASSIC

Tsg SLOCAN GROUP: SLATE, ARGILLITE

UPPER PALEOZOIC AND/OR TRIASSIC

uP-Tms NEMO LAKES BELT METASEDIMENTS: POLYDEFORMED SEMI-PELITE AND PELITE, CALCAREOUS SCHIST, AMPHIBOLITE AND ULTRAMAFIC ROCK

PRE-MIDDLE JURASSIC

ms UNIT 1: POLYDEFORMED METASEDIMENTS INTRUDED BY LEUCOCRATIC ORTHOGNEISS AND PEGMATITE OF UNCERTAIN AGE

AGE UNCERTAIN (ORDER DOES NOT IMPLY RELATIVE AGE)

GRANITIC INTRUSIONS: MASSIVE

csy COARSE GRAINED LEUCOCRATIC SYENITE: ¹HORNBLENDE, ²BIOTITE, NO QUARTZ, PORPHYRITIC

hlsy HORNBLENDE LEUCOCRATIC SYENITE: ¹BIOTITE, ²CLINOPYROXENE, MINOR QUARTZ

cgna CASTLEGAR GNEISS LEUCOCRATIC HORNBLENDE-¹BIOTITE GNEISS; CAN HAVE K-FELDSPAR AUGEN, LEUCOCRATIC VEINS AND PEGMATITE, AND QUARTZ POOR PHASES

cgnb HORNBLENDE-²BIOTITE GNEISS: HETEROGENEOUS, AMPHIBOLITE LAYERS AND BOUDINS, GRANITIC LAYERS, LEUCOCRATIC VEINS

di HORNBLENDE DIORITE; ²CLINOPYROXENE, ²BIOTITE, LEUCOCRATIC GRANITOID VEINS, STRONGLY FOLIATED TO MYLONITIC

SLOCAN LAKE FAULT ZONE; HANGINGWALL IS SHADED, (DEFINED, APPROXIMATE, ASSUMED)

DUCTILE SHEAR ZONE

GEOLOGIC CONTACTS; (DEFINED, ASSUMED)

③ LOCATION OF FIGURE

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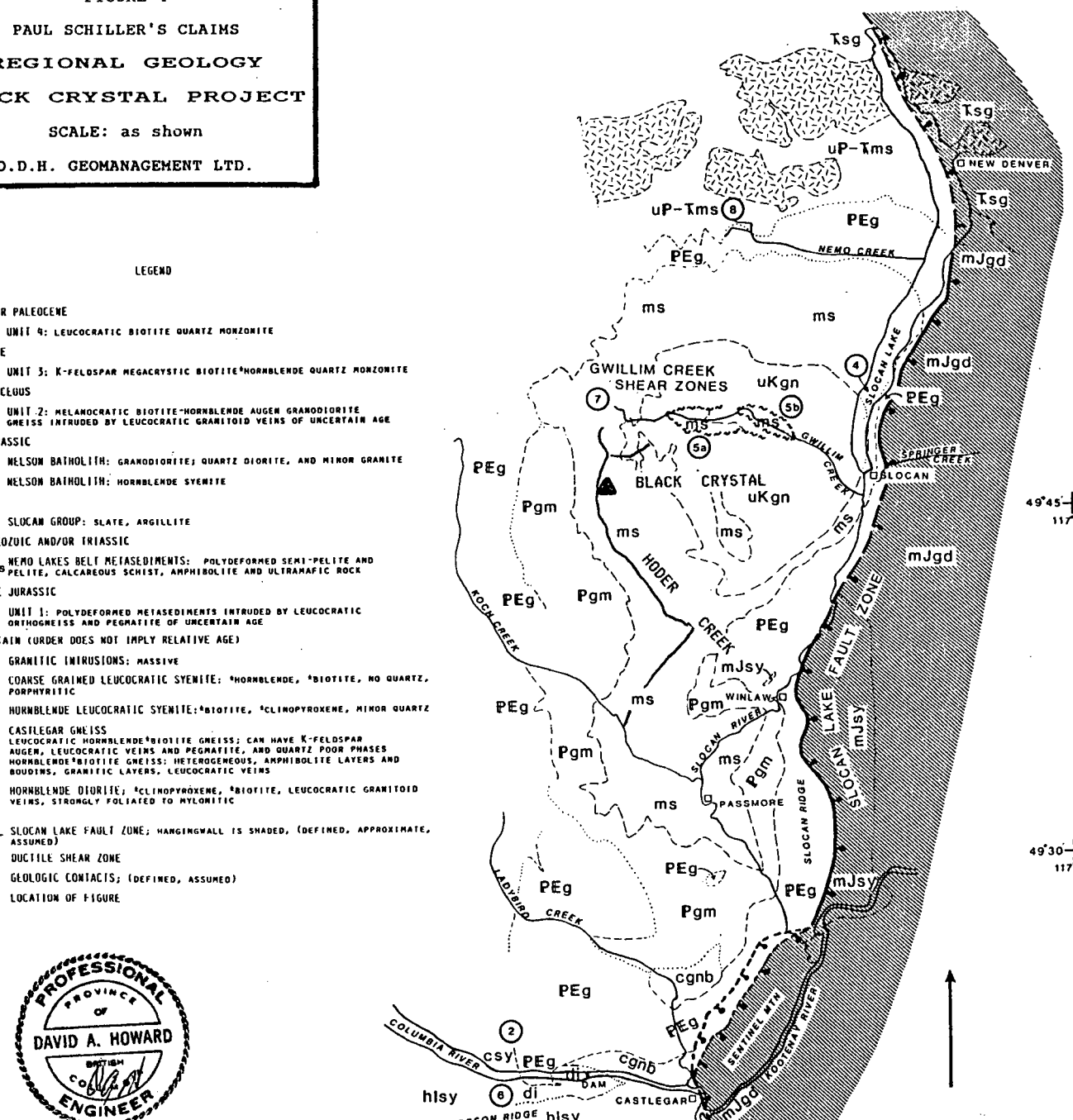
Modified from Parrish R. et al., 1985



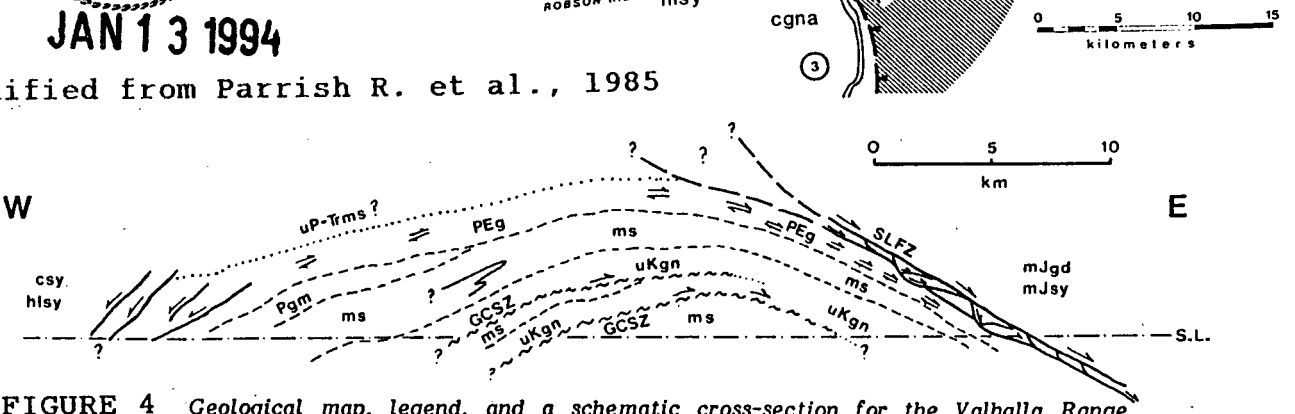


FIGURE 4 *Geological map, legend, and a schematic cross-section for the Valhalla Range, southeastern British Columbia. The east-west cross-section is drawn to represent relations between rock units in the vicinity of Gwillim Creek and Slocan. On the section the west-directed shears on the left (west) side are projected northwards from the Columbia River area.*

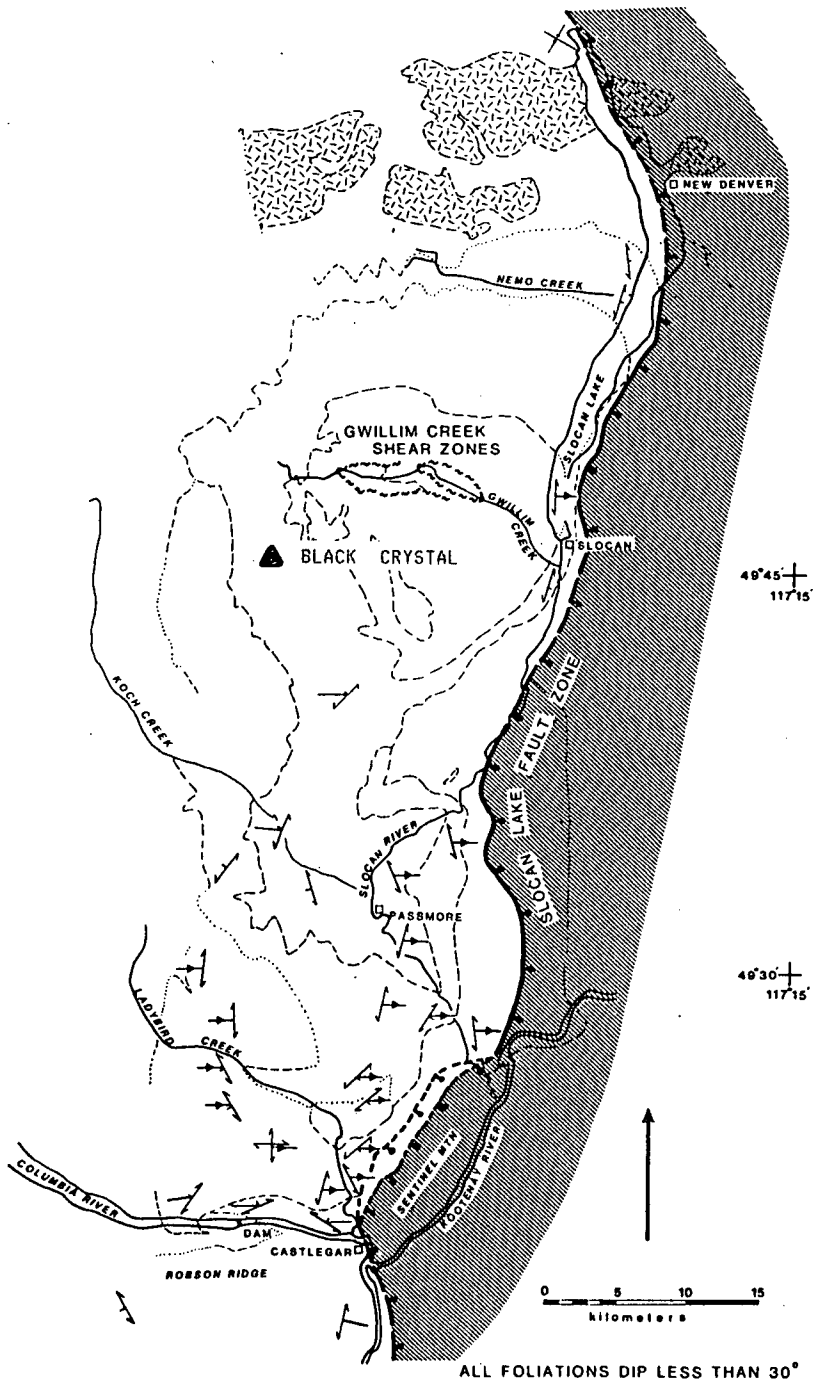


FIGURE 5 *Structure map of Valhalla gneiss complex shows location and sense of shear of kinematic indicators. Data distribution reflects areas studies; for supplementary structural information refer to Reesor (1965).*

[1] easterly-directed: indicates movement of upper member of shear couple

Modified from Carr, S.D., 1985

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FIGURE 5
PAUL SCHILLER'S CLAIMS
REGIONAL STRUCTURE
BLACK CRYSTAL PROJECT
SCALE; as shown
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PROPERTY GEOLOGY AND MINERALIZATION

The Black Crystal Property is located totally within the central portion of the Valhalla Gneiss Complex which is a domal structure comprised of high grade paragneiss structurally overlain and interlayered with thick granitoid sheets. Geologic mapping (Figure 6) by Reesor (1965), a Geologic Survey of Canada geologist, provides the greatest geologic detail in the area covered by the claims. Note that the "Hybrid Gneiss" of Ressor(1965) is equivalent to unit Ms in mapping by Carr and Parrish and as shown on figures 4 and 5 in this report. Due to time constraints and the amount of cover in the area examined by the writer, the detailed sampling/geologic mapping by the writer is restricted to road cuts on the Molly Claims (See Figure 7).

Ressor's (1965) mapping (Figure 6) shows the western one quarter of the property underlain by Mixed Gneiss (Unit 3) which consists of mainly foliated leucogranodiorite, leucoquartz monzonite and granitic gneiss. The leucogranodiorite-gneiss contains remnants and extensive layers of hornblende granodiorite-gneiss, some metasedimentary gneisses and amphibolite. The eastern three fourths of the property is mainly underlain by undifferentiated "Hybrid Gneiss" (Unit 1) which is defined as intimately interlayered rocks consisting of a metasedimentary fraction with leucogranite-gneiss and pegmatitic interlayers, much migmatite and minor amphibolite. On the eastern boundary of the property is a moderately wide band of marble and/or calc-silicates (Unit 1b). These rocks are derived from limestone or argillaceous quartzitic limestones. Ressor (1965) states that the limey rocks occur in thin layers up to 100 feet thick or as elongate boudins many hundreds of feet long. These rocks range in composition from coarse marble with grain sizes up to 10 millimetres, to diopsidic, foresteritic or graphitic marbles, to diopside-plagioclase or diopside-scapolite granulites. The marble/calc-silicate unit is locally a very prominent unit on this part of the property as it stands out above everything else because of its competency. At the time of this writing it has not been examined but will be first thing in the spring because it is possible that it contains graphite similar to that found on the Molly Claims. The sinuous map pattern (Figure 6) of the marble/calc-silicate unit (Unit 1a) suggests that the unit has undergone intense isoclinal folding and is probably present in a lot more locations on the property than is obvious from the mapping to date (See below for evidence for its presence on the Molly claims).

Mineralization consists of disseminated fine to medium grained (<100 mesh to +48 mesh - Tyler) crystalline graphite which constitutes approximately 1 - 10 percent of the rock. Graphite is present in both graphitic marbles and/or calc-silicates and siliceous metasedimentary rocks which are commonly very friable. The graphite occurs as individual grain crystals along foliation planes and as local disseminations. Under moderate magnification,

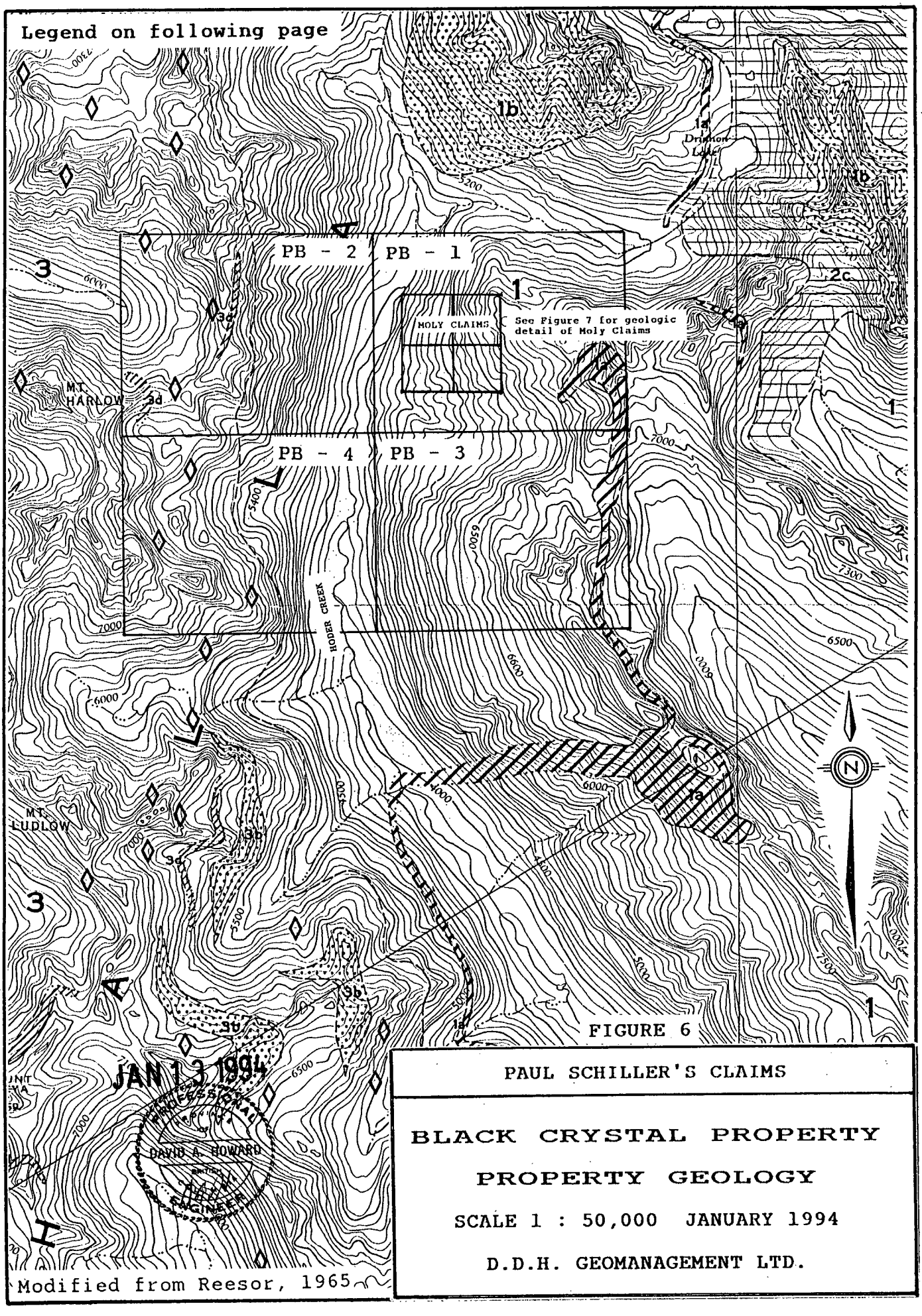

FIGURE 6

PAUL SCHILLER'S CLAIMS

BLACK CRYSTAL PROPERTY

PROPERTY GEOLOGY

SCALE 1 : 50,000 JANUARY 1994

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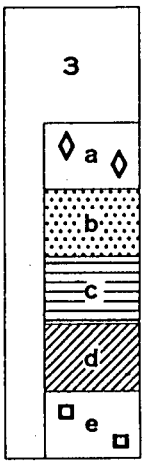
LEGEND

Modified from Reesor, 1965

STRUCTURAL UNITS OF THE GNEISS DOMES

(with no implication of relative age or "stratigraphic" succession)



Mixed gneisses: *mainly foliated leucogranodiorite, leucoquartz monzonite, and granitic gneiss (in places garnetiferous); leucogranodiorite-gneiss contains remnants and extensive layers of hornblende granodiorite-gneiss; some metasedimentary gneisses and amphibolite*

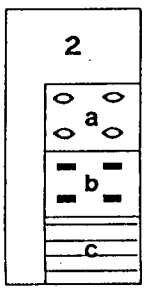
With inclusions of hornblende granodiorite-gneiss (containing augen of potash feldspar)

Hornblende granodiorite-gneiss (with augen of potash feldspar)

3b veined with leucogranodiorite and leucogranitic veins

Granular and gneissic rocks of metasedimentary origin

Quartz monzonite and leucoquartz monzonite, well foliated with megacrysts of potash feldspar

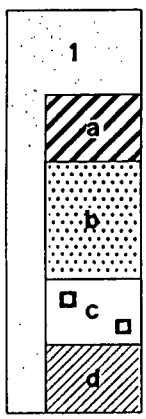


Veined granodiorite-gneiss: *chiefly an augen granodiorite-gneiss veined with leucogranodiorite, leucogranite, and pegmatite*

With augen of potash feldspar

With hornblende

With fifty per cent or over leucocratic veins



Hybrid gneiss: *intimately interlayered rocks consisting of a metasedimentary fraction with leucogranite-gneiss and pegmatitic interlayers, much migmatite, minor amphibolite*

Marble and/or calc-silicates

Layers and lenses with over seventy-five per cent of quartzofeldspathic rocks ranging in composition from leucogranodiorite to granite and pegmatite, and in texture from massive to mildly foliated to gneissic (all boundaries are gradational and arbitrary with surrounding hybrid gneiss)

With megacrysts of potash feldspar

Garnet-hornblende augen gneiss; some garnetiferous leucogranite-gneiss, and some amphibolite

Heavily drift covered area . . . . . .

Fault (defined, approximate, assumed) . . . . . ~~~~ ~~ ~ ~

Note: for sections along lines A-B, C-D, E-F, G-H, R-S-T, U-V, and W-X, see Figure 26

Geology by J. E. Reesor, 1958-60

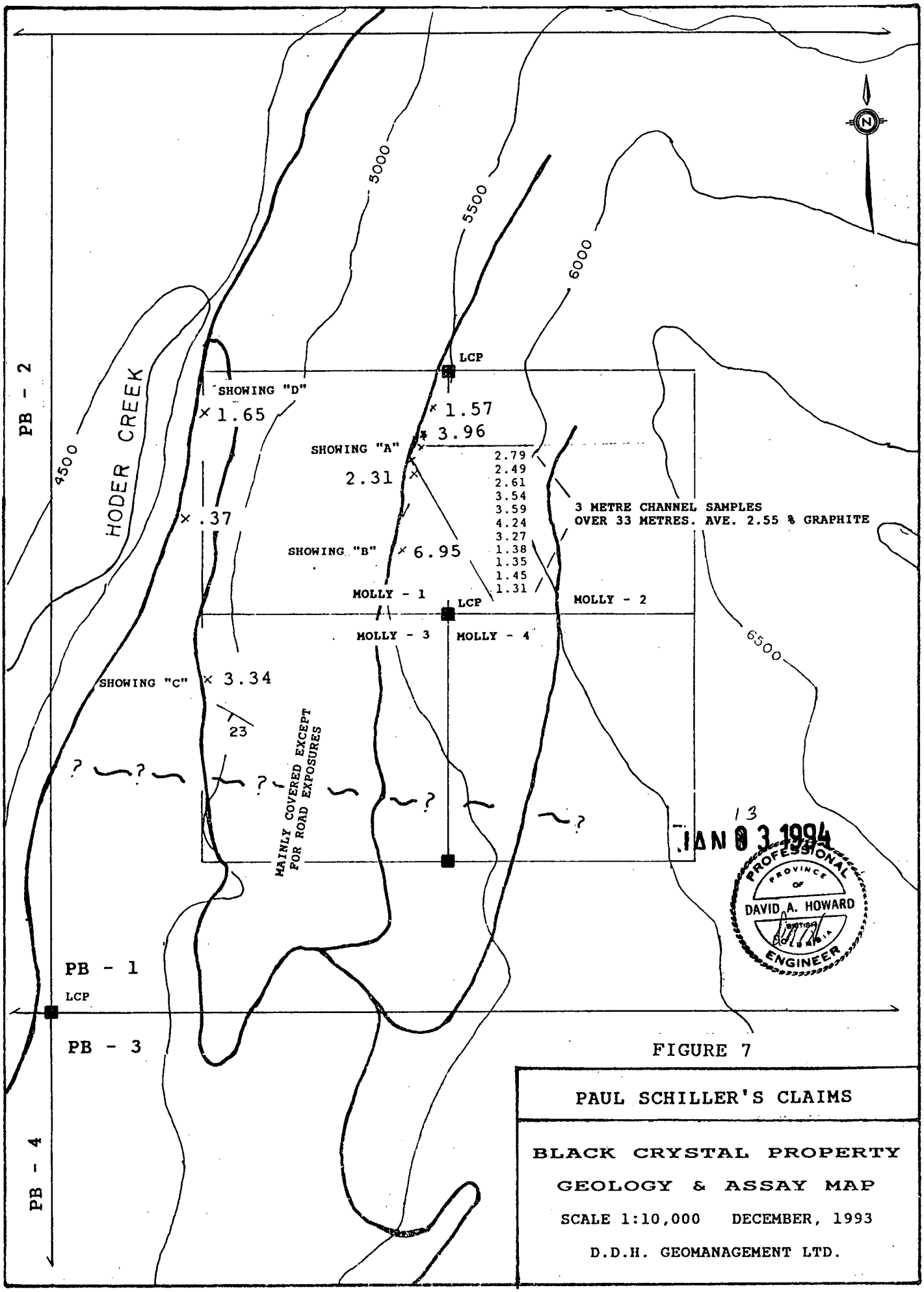


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FIGURE 7

PAUL SCHILLER'S CLAIMS

BLACK CRYSTAL PROPERTY

GEOLOGY & ASSAY MAP

SCALE 1:10,000 DECEMBER, 1993

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the individual grains appear to be free of other mineral inclusions which probably accounts for the excellent recoveries obtained in the metallurgical tests (See below).

Figure 7 shows the results of a very limited geologic/sampling program conducted on two of the Molly claims on November 11, 1993. The intent of the program was to have a dozer clean all of the road cuts so they could be mapped and sampled prior to winter. Unfortunately, mechanical problems with the dozer prevented the program from being completed. About all that was done was a partial cleaning of the road from the south boundary of Molly - 1 to approximately 100 metres south of the north boundary of Molly - 1. Despite not having good exposures of outcrop along the road, it was possible to collect enough "in place material" for assay and metallurgical testing and to appreciate the large size of the deposit.

All of Molly 1 and probably most of Molly 3 is underlain by either graphitic marble and/or graphitic metasedimentary rocks with the contact relationships between the two rock types being undefined for the present. The outcrops between showing "A" and showing "B" is a mix of the two rock types continuously exposed over 300 metres. Contact relationships in this area are clouded by the fact that all of the rock is intensely weathered and very friable. The material is essentially an in-place sand with most of its rock fabric still discernible. This friable character is ideal for the recovery of graphite because the material has such a low grinding index and as a result will liberate its graphite grains with only minimal reduction in graphite grain size. The depth of the friable zone is unknown, but it is the writers opinion that the weathering is quite deep.

The outcrop at Showing "C" differed from the upper showings ("A" and "B") in that the rock was very competent and has compositional banding. The rock at this location consists of bands of fine to medium grained, well foliated thinly laminated biotite(?)-graphite-quartz-feldspar schist and band of medium to coarse grained moderately foliated graphite-quartz-feldspar gneiss. A sample consisting of approximately equal parts of the above rock types graded 3.34 percent graphite as determined by the modified Leco method. The graphitic rocks at this location have a foliation and banding strike of 120 degrees and dip 23 degrees southwest which is consistent with the regional strike for the area. Without direct comparison of Unit 1a with the rocks in the known mineralized area, it is impossible to know whether they are the same unit or different units. On comparison from a distance, it appears that Unit 1a (See Figure 6) is much more competent because it stands up as a prominent rib whereas the graphitic schist/gneiss in the Molly claim area is quite recessive and is easily weathered. It is possible that the relatively soft nature of the rock in the mineralized area is a characteristic of a different horizon (say near the base of the unit) in Unit 1a and the fact that it is very

soft would account for its not outcropping in other areas where Unit 1a is exposed. The fact that previous mapping by government geologists have not drawn attention to the presence of graphite except for the casual reference to its occurrence in Unit 1a suggests that the Black Crystal deposit is rather unique.

A total of 18 samples were collected from various locations along the road (See figure 7). Showing "A" represented a continuous 33 metre sample (11 - 3 metre samples) averaging 2.55 percent graphite with a range of 1.31 to 4.24 percent graphite. Showing "A" contained both carbonate rich samples and very siliceous samples, but at this writing, it is not known which were which. All of the sampled material was very friable, deeply weathered and soft, but appeared to harden up a little with depth.

The area between Showing "A" and Showing "B" was essentially covered except for one location which assayed 2.31 percent graphite. Showing "B" (Figure 7) represents a poorly exposed outcrop of very friable, siliceous, rather limonitic material which assayed 6.95 percent graphite based on 4 samples taken from progressively deeper sites at the same location. The dozer had not reached this point so the sample is from a fairly shallow depth. Just south of Showing "B" the overburden thickens and changes character to more glacial derived rather than residual. This glacial type overburden is continuous along the road between Showing "B" and Showing "C"

The Showing "D" trench probably did not reach bedrock although the material did not appear to have been transported. Material from this trench assayed 1.65 percent graphite which is within the lower range of sample grades from Showing "A". The samples from this site are very friable and soft and resembled those from "A". The importance of this sample location is not the grade, but if the graphitic material is close to being in place, it then indicates a minimum dimension for the deposit of 500 metres by 500 metres. The thickness of the deposit is unknown, but rough estimate based on a cross section using the strike and dip defined at Showing "C" and topography indicates that the minimum thickness to be 80 to 100 metres thick. The minimum geologic resource from these dimensions using a specific gravity of 2.5 is indicated to be in the 50 to 62.5 million ton range at an unknown grade.

The trench at Showing "D" is definitely in transported overburden and as such can be disregarded for the present.

The arithmetic average for all samples from all the showings including the single overburden sample is 2.55 percent graphite which compares exactly with the weighted average of the channel sampled Showing "A".

All field samples were assayed (Appendix A) by a "modified

leco method" to prevent any loss of ultra fine grained graphite that might be present. The "classical leco method" involves pre-heating the sample to 600 degrees centigrade to remove any organic carbon and/or carbonate carbon prior to placing it in the Leco Analyzer. The classical leco method often oxidizes the very fine graphite during the pre-heat stage. The "modified method" involved using a nitric acid wash to remove any organics, sulphur, calcium carbonate and soluble iron followed by a hydrofluoric acid wash to remove the silica. The sample is then analyzed by the "leco" method without the pre-heat step to determine carbon content. A comparison of 2 leco assays and calculated head assays for the same samples show good correlation. The calculated assays based on double loss of ignition procedure used on the flotation product are approximately 15 percent higher (See metallurgical report in Appendix B).

METALLURGICAL TESTING

Metallurgical tests were conducted by Process Research Associates Ltd., 9145 Shaughnessy Street, Vancouver, B.C. on two samples (9018-3 and 9018-4) from the highest grade showing (Showing "C"). The purpose of these tests was to confirm assay grades and to provide data on the physical character of the graphite, size distribution, over all recoveries and potential product grade.

The test procedure (Appendix B) consisted of screening and crushing sample, flotation using Dowfroth 250 and Varsol as a promoter, leaching the concentrate with hydrochloric acid to remove carbonate and/or iron and assaying the rougher concentrate.

The rougher concentrates from 9018-3 and 9018-4 graded 52.7 at a 98.9 percent recovery and 63.85 percent graphite at 98.2 percent recovery respectively. The only difference between the two tests was that 9018-4 was floated 4 minutes longer and used 17 grams/tonne more Varsol. Microscopic examination of the concentrate showed excellent liberation of the individual graphite grains which indicates that it can be easily cleaned further by further flotation and/or a gravity method such as tabling to produce a high grade product. Proof of the excellent liberation characteristics of the graphite is shown by the high grade of the rougher concentrates and the high recoveries.

The rougher concentrates were screened at 48 mesh and 100 mesh to determine a rough size distribution of the graphite (See Appendix B). The test indicated that 10-12 percent of the graphite was greater than 48 mesh which is considered coarse grained for graphite. Approximately 37-42 percent of the graphite is between 48 and 100 mesh with the remainder less than 100 mesh. It should be noted that the graphite associated with carbonate rich rocks appeared to be coarser grained, at least locally, and that it is

easier to liberate graphite from carbonates than siliceous rocks.

The above samples appear to have been collected from a siliceous portion of the deposit. During the leaching step of the metallurgical test it was noted that carbonate did not appear to be present but approximately 10 percent of the sample was dissolved as soluble iron. The iron (limonite) is present as a weathering product of probably biotite or some other mafic mineral.

Since an unknown portion of the deposit is associated with carbonate rich rock, a test of the more calcareous material was made to determine possible carbonate content for future use of reject tailings material as agriculture lime. The test involved dissolving of 25.5 grams of sample in hydrochloric acid and weighing the residue. The test indicated that 88.6 percent of the sample was dissolved. Previous assays of similar material indicated that the material contained approximately 2 percent iron which would also be dissolved, therefore the tailings product from this material would assay about 86 percent limestone prior to flotation of the graphite. It appears possible that with a simple gravity method such as a hydrocyclone it would be possible to up grade the lime content of the tailings material to 95 percent calcium carbonate.

CONCLUSIONS AND RECOMMENDATIONS

The Black Crystal Property, in the writer opinion has an excellent potential for becoming a major graphite deposit based on its indicated size, grade, ease of mining, ease of milling and the coarse grained flake size of the graphite.

The high content (10-12 percent) of coarse flake graphite makes this property particularly attractive because this is the highest price graphite. Magagascan crucible grade coarse grain graphite must have a minimum of 85 percent carbon and be between minus 20 mesh and plus 80 mesh particle size (Taylor,1992).

From an environmental prospective graphite is an inert nontoxic substance requiring only dust control to meet regulatory requirements even in mining unfriendly British Columbia.

The proposed two phase exploration program is one of deposit definition rather than pure exploration. Admittedly the boundary limits of the deposit have not been defined but the data available to date indicates that it is a very large deposit with an overall high average grade. The proposed program will define higher grade areas where further definition can take place as required.

The Phase 1 exploration program will consist of cleaning and widening all existing roads with a large dozer to expose in place mineralization in the high bank followed by a detailed geologic

mapping, sampling and assaying. The layout of sampling will be based on the geologic mapping results that will pay particular attention to differentiating the silicate and carbonate sections. It is felt that the carbonate rich sections will contain the coarsest grain size graphite.

The Phase 2 program will consist of definition reverse circulation and/or diamond drilling to block out the deposit and to determine more reliable grade figures. It is the writer's opinion that reverse circulation drilling is preferable to diamond drilling because the friable nature of the rock will cause core recovery problems and the sample size of diamond drill core is very much smaller than that of reverse circulation drilling. Two bridges on the existing access road need replacement prior to bringing heavy drill equipment to the site. There is a possibility that the B.C. Government may pay for replacement of the bridges, but at this point in time the phase 2 program must assume that they will be responsible for the bridge replacement.

PERSONNEL TIME DISTRIBUTION

(MOLLY 1 - 4, PB 1 - 4)

D.A. Howard, M.Sc., P.Eng.

Field:	Geologic mapping and sampling.	3 days
Office:	Research and report writing.	5.5 days
Period:	Nov. 10, 1993 - Jan. 14,1994	

A.D. Drummond, Ph.D., P.Eng.

Field:	Geologic mapping and sampling	3 days
Period:	Nov. 10, 1993 - Nov. 13, 1993	

Maria Mastalerz, Ph.D. University of B.C.

Time and Charges included in invoice

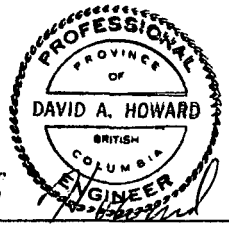
Jim MacNeil Cat operator

Time and charges included in invoice

COST STATEMENT

D.D.H. Geomanagement Ltd.	$4922.00
A.D. Drummond, Ph.D., P.Eng. D.A. Howard, M.Sc., P.Eng.	
Process Research Associates Ltd.	$3200.00
Jim MacNeil - Cat and Mob/demob Charges	$2500.00
University of British Columbia	$ 480.00
Dr. Maria Mastalerz	
Acme Analytical Laboratories Ltd.	$ 669.00
Total amount expended	$11771.00

Respectfully submitted,



D.A. Howard, M.Sc., P.Eng.
D.D.H. Geomanagement Ltd.

CERTIFICATION

I, David A. Howard, of the City of Vancouver, Province of British Columbia, hereby certify as follows:

1. I am a geologist residing at 9040 Glenallan Gate, Richmond, B.C., with an office at 422-470 Granville Street, Vancouver, B.C.

2. I am a registered Professional Engineer of the Province of British Columbia. I graduated from Montana State University in 1964 and from the University of Washington in 1967.

3. I have practised my profession continuously since June, 1966.

4. I am the author of this report which is based on personal knowledge of the property and from data contained in the files of D.D.H. Geomanagement Ltd.,private reports and government publications.

5. This report may be utilized for development of the property provided that no portion may be used out of context in such a manner as to convey a meaning which differs from that set out in the whole.

7. Consent is hereby given to Mr. Paul Schiller to use or reproduce this report or any part of it for the purposes of development of the property, or related to the raising of funds.

Dated at Vancouver, B.C. this 13th day of January, 1994.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
DAVID A. HOWARD

David A. Howard, M.Sc., P.Eng.

REFERENCES

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APPENDIX A

Assays

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

D.D.H. Geomanagement Ltd. File # 93-3301

422 - 470 Granville St., Vancouver BC V6C 1V6

SAMPLE#	C/TOT %	C/GRA %	CO2* %	SAMPLE gm
Z 9023	2.27	1.57	1.66	1265
Z 9024	3.50	2.52	1.89	1495
Z 9025	5.89	4.74	2.38	1285
Z 9026	5.60	4.61	2.22	1190
RE Z 9026	5.57	4.74	1.57	-
Z 9027	3.48	2.79	2.02	1200
Z 9028	3.30	2.49	2.09	1275
Z 9029	6.16	2.61	12.30	985
Z 9030	5.50	3.54	6.40	1480
Z 9031	6.13	3.59	8.55	1150
Z 9032	5.41	4.24	3.95	1310
Z 9033	4.32	3.27	3.46	1275
Z 9034	4.16	1.38	9.37	1195
Z 9035	2.09	1.35	2.12	1365
Z 9036	2.08	1.45	1.76	1395
Z 9037	2.21	1.31	2.25	1115
Z 9038	4.17	1.14	11.03	515
Z 9039	3.39	1.06	7.96	1630
Z 9040	2.91	2.31	1.86	1680
Z 9041	7.10	5.52	3.30	1545
Z 9042	8.14	7.02	2.51	1770
Z 9043	8.97	7.76	2.87	1330
Z 9044	8.86	7.51	3.07	2175
Z 9045	3.78	3.34	.72	630
Z 9046	3.62	1.65	5.45	585
Z 9047	.61	.37	.33	1880

CO2* - TOTAL C MINUS C REMAINED AFTER 15% HCL LEACHING. TOTAL C BY LECO.
GRA/C - BY HNO3 & HF LEACHED.
- SAMPLE TYPE: SAND Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: NOV 16 1993 **DATE REPORT MAILED:** Nov 25/93 **SIGNED BY.** D. Toye ...D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

APPENDIX B

METALLURGICAL TESTS

Process Research Associates Ltd.

Process Research Associates Ltd.
9145 Shaughnessy Street, Vancouver, B.C. V6P 6R9
Telephone: (604) 322-0118 Fax: (604) 322-0181

January 13, 1994

The Quinto Mining Corporation
Suite 606-626 West Pender Street
Vancouver, B.C.
V6B 1V9

Attention: Mr. Paul Schiller, President

Dear Mr. Schiller:

Re: Results of graphite flotation test on black crystal ore sample

Flotation tests were performed on samples 9018-3 and 9018-4 to concentrate graphite. The results of the tests are attached which show that good rougher flotation grades and excellent recoveries were achieved. Microscopic examination of the concentrates indicated that they could be cleaned further to produce high grade concentrates. Methods that could be used to clean the products include cleaning stages of flotation (possibly following a short re-grind) and gravity concentration (tabling).

The agreement between the calculated and measured head grades indicates that the analytical procedures are accurate. The low grade samples were analyzed by Acme using a Leco procedure. The high grade sample analyses were performed by Chem Met Consultants who used a double loss on ignition (D.L.O.I.) procedure. The following shows the results of the D.L.O.I. analyses (performed in duplicate).

Sample	Moist. %	HCl Sol. %	Volatile %	Ash %	Carb. %
F1 R.Conc.	0.94	10.6	0.50	36.1	52.8
F1 R.Conc.	0.91	10.7	0.54	36.2	52.6
F2 R.Conc.	0.86	9.61	0.53	25.8	64.1
F2 R.Conc.	0.83	9.42	0.59	26.4	63.6

According to the assayer, the HCl soluble portion of the samples did not fizz as would be expected of carbonates. He observed a lot of iron being dissolved (brown colour in solution) and therefore thought the HCl soluble component was some form of ferric oxide.

If you have any questions concerning the results, please call me.

Sincerely yours,
Process Research Associates Ltd.

Bernhard Klein

Bernhard Klein, Ph.D.
Senior Metallurgist

TESTWORK PROCEDURE

Test No: 93-041 F1 Date: 20-Dec-93

Purpose: Initial bench flotation scoping test on sample 9018 - 3.

STAGE	TIME (Minutes)	ADDITIONS	
		g/tonne	REAGENT
Crushing (only large lumps by hand)			
Grind (2 kg)	5		Half the rod charge
Flotation			Natural pH = 4.8
Rougher float	9	77 24	Varsol DF 250

SIZE DISTRIBUTION

SAMPLE NO : 93-041 F1 Head

Size Fraction (Tyler mesh)	Individual Percentage Retained	Cumulative Percentage Passing
35	0.0	100.0
48	1.8	98.2
65	3.8	94.4
100	17.6	76.8
150	27.8	49.0
200	18.2	30.8
270	10.0	20.8
325	4.6	16.2
400	2.0	14.2
Undersize	14.2	

MATERIAL BALANCE

Project no : 93-041
Test no : F1

Date : 12/20/1993

Sample description : 9018 - 3

Products	Weight (g)	Weight (%)	Assay C (%)	% Distribution C
Rougher Conc	308.2	16.7	52.70	98.9
Final Tails	1541.2	83.3	0.12	1.1
Calculated head	**1849.4**	**100.0**	**8.88**	**100.0**
Assay head			**7.76**	

SIZE DISTRIBUTION

SAMPLE NO : 93-041 F1
Rougher Conc

Size Fraction (Tyler mesh)	Individual Percentage Retained	Cumulative Percentage Passing
48	10.9	89.1
100	37.7	51.4
Undersize	51.4	

TESTWORK PROCEDURE

Test No: 93-041 F2 Date: 20-Dec-93

Purpose: Initial bench flotation scoping test on sample 9018 - 4.

STAGE	TIME (Minutes)	ADDITIONS	
		g/tonne	REAGENT
Crushing (only large lumps by hand)			
Grind (2 kg)	5		Half the rod charge
Flotation			Natural pH = 4.9
Rougher float	13	94	Varsol
		24	DF 250

SIZE DISTRIBUTION

SAMPLE NO : 93-041 F2 Head

Size Fraction (Tyler mesh)	Individual Percentage Retained	Cumulative Percentage Passing
35	0.0	100.0
48	1.5	98.5
65	3.9	94.6
100	18.2	76.4
150	27.8	48.6
200	17.4	31.2
270	9.9	21.4
325	4.4	16.9
400	2.9	14.0
Undersize	14.0	

MATERIAL BALANCE

Project no : 93-041
Test no : F2

Date : 12/20/1993

Sample description : 9018 - 4

Products	Weight (g)	Weight (%)	Assay C (%)	% Distribution C
Rougher Conc	246.2	13.4	63.85	98.2
Final Tails	1595.0	86.6	0.18	1.8
Calculated head	1841.2	100.0	8.69	100.0
Assay head			7.51	

TOTAL P.07

Process Research Associates Ltd.

SIZE DISTRIBUTION

SAMPLE NO : 93-041 F2
Rougher Conc

Size Fraction (Tyler mesh)	Individual Percentage Retained	Cumulative Percentage Passing
48	12.3	87.7
100	41.8	45.9
Undersize	45.9	