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**GEOLOGICAL**

**DRILLING & TRENCHING REPORT**

**ON THE MOLLY & PB CLAIMS**

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

**082F071/072/082**

**49°46'00"Lat., 117°46'30"Long.**

**UTM 5513800N, 444700E**

for

**CRYSTAL GRAPHITE CORPORATION**

**Suite 1750 – 999 West Hastings Street**

**Vancouver, B.C.**

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by

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**February 2002**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**26,859**

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## SUMMARY

At the commencement of the field season of 2001 Crystal Graphite Corporation embarked on an exploration program consisting of geological mapping, diamond drilling, trenching and later in the season a further extensive combined trenching/bulk sampling program on it's 100% owned Molly and PB claims, which contain the "Black Crystal" disseminated graphite deposit (Minfile 082F260).

Omineca belt high grade metamorphic rocks of the Valhalla assemblages underlie the property, and are intruded by possible Eocene LadyBird Quartz Monzonite dykes and sills in various locales in the deposit area. Upper amphibolite facies calc-silicate rocks are the host for the disseminated graphite mineralization encountered locally. Numerous discontinuous pegmatitic veins and dykes cut the local rock, appearing to be pene-contemporaneous to the metamorphism, which reportedly culminated during the Late Cretaceous. Two distinct types of calc-silicate rocks which host graphite mineralization of interest are noted here, with the higher grade graphite mineralization being determined to occur in the area of interest as two major discrete, roughly east to westerly trending bands, the most southerly of which appears to have the greatest economic potential.

During 2001's exploration campaign a total of 42-diamond drill holes were drilled on the property for a total of approximately 1895 metres of NQ size hole. The core generated from this program was logged, and prospective zones were split, and analyzed, either at Bondar Clegg in North Vancouver or at CGC's lab facility at Crystal Graphite Corporation's nearby beneficiation plant. A total of 644 samples were generated in the course of the drilling program. Additionally a program of slit trenches was undertaken concurrent to drilling, to evaluate the economic potential of the graphite mineralized glacio-fluvial till, and the in-situ weathered calc-silicate regolith material, which occurs on the property. In total 149 of these trenches were excavated, and 325 samples were taken of the graphite mineralized till, and regolith encountered. A program of check trenching/sampling was conducted during September to ensure the quality of the data generated during the summer program, wherein a further 17 trenches were excavated, and another 43 samples taken. During November a program of linear trenching was undertaken which enabled the company to better estimate the vertical extent of the weathered material, and to extract a further bulk sample for processing at the Koch Creek facility. During this program 1855 metres of trenching were excavated, and approximately 10,000 tonnes of friable calc-silicate mineralized material which had been extricated from the trenches was trucked to Koch Creek for processing. Additionally, a further

approximately 3,000 tonnes was excavated and shipped to Koch Creek from the "Pit" area, which was the site of the year 2000 bulk sample. During this phase of the exploration a further 157 samples were taken, and shipped to Bondar Clegg for analysis.

Based on field observations and analytical results, MDS Mining Consultants of Auckland, New Zealand has produced a resource estimate for the property, and an application for a mine permit is in the process of being submitted to the B.C. Ministry of Energy and Mines. A large low-grade hard rock graphite resource has been established on the property, which is still open down dip and to the northeast. The approximate limits of the southern "pod" of weathered calc-silicate mineralization was defined during the work, while there is still some uncertainty to the size of the "pod" of weathered material which exists at the northern edge of the area of investigation. Concurrent to all this work Crystal Graphite continued work on its Koch Creek Pilot Beneficiation Plant, and the first graphite was produced from material taken during the Year 2000 10,000 tonnes bulk sample during August 2001. As of this date the plant has been substantially completed and work is ongoing to bring the plant to full capability, while fine-tuning the process.

A further exploration program is proposed for the project area, which will better define the northern pod of unconsolidated mineralized material, while some shallow drilling in the area will also determine the viability of future mining operations in this area where present knowledge is limited. Additionally, property scale mapping and prospecting is proposed in order to possibly determine if other areas of interest are located within the claim area, and to finally gain a clear understanding of the geology of the surrounding area. Also, diamond drilling is proposed to increase the confidence level of the resource contained immediately to the south of the area of greatest interest, while exploratory drilling would be done in areas which appear to be prospective from the work done in the initial phase. The complete program is estimated to cost approximately \$582,000.

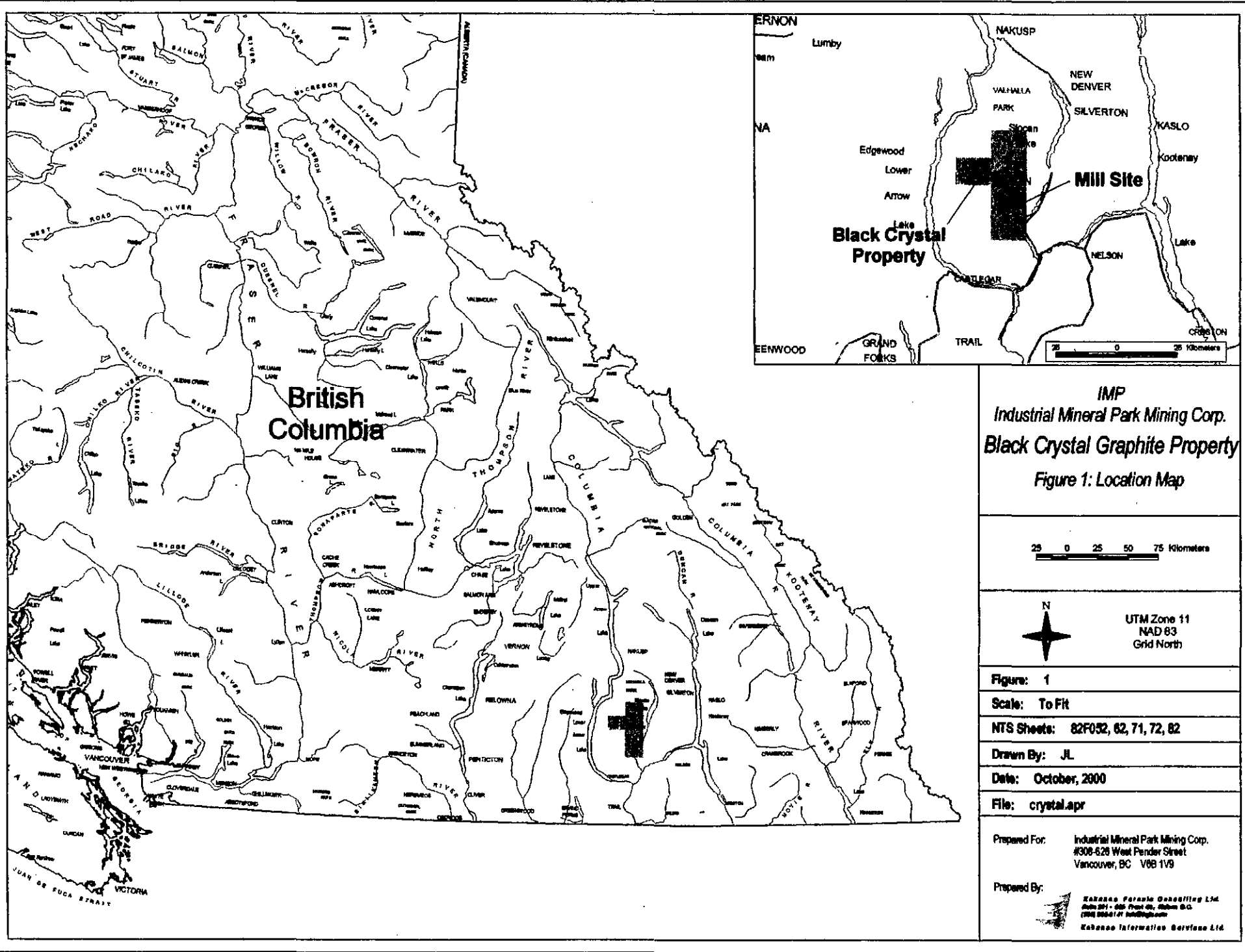
## **INTRODUCTION AND TERMS OF REFERENCE**

The author was retained by Crystal Graphite Corporation to conduct a program of geological mapping, diamond drill core logging, trench sampling and supervision. As time went on the writer became the sole continuing geoscientist on the project, and further responsibility was assumed for all other aspects of the program, including quality control, data compilation, the summarizing of all events of the exploration program in this, and other reports. Initially the work was under the direction of, and shared with Bernhardt Augsten P.Geo., who subsequently left the project at the beginning of September. James Chapman P.Geo. spent the month of September on the property, conducting an overall review of the program, and also carrying out check sampling, prospecting etc. During the advanced trenching program in October and November Linda Lewis P.Geo. assisted with the mapping and sampling, while Ed Craft P.Eng. was responsible for safety, and all other operational aspects of conducting the bulk sample. The exploration program was originally designed by MDS Mining Consultants of Auckland, New Zealand, and modified by field staff where local conditions were not conducive to the implementation of the program as planned. MDS was selected as CGC's geological modeling consultant because of their purported extensive experience of modeling sand and weathered type deposits. From this fieldwork MDS has subsequently estimated the resource contained in the "Black Crystal" Graphite deposit (Minfile 082F260), which is located within the claim area.

This report details all work on the claims from the commencement of field work in May of 2001, until the termination of the linear trenching program at the end of November, and makes recommendations for future work on the property.

## **PROPERTY DESCRIPTION AND LOCATION**

As shown in Figure 2, the property consists of four two-post mineral claims, and six four-post mineral claims for a total of 10 claims, for a net total of approximately 3000





hectares (7410 acres). All claims are contiguous, and the four two-post mineral claims are entirely enveloped by one of the overlying Modified Grid four-post mineral claims. Crystal Graphite Corporation holds a 100% interest in all of these claims. Application has been made to the Crown to convert all four two-post mineral claims which cover the deposit area to mining lease, and it has been indicated that approval has been made, but the documentation has not been received as of yet. During the course of applying for the mining lease the two-post mineral claims have been surveyed by a registered legal surveyor. All claims are depicted on B.C. Energy and Minerals Division, Mineral Titles Branch, Mineral Titles Reference Maps 082F071, 082F072, and 082F082.

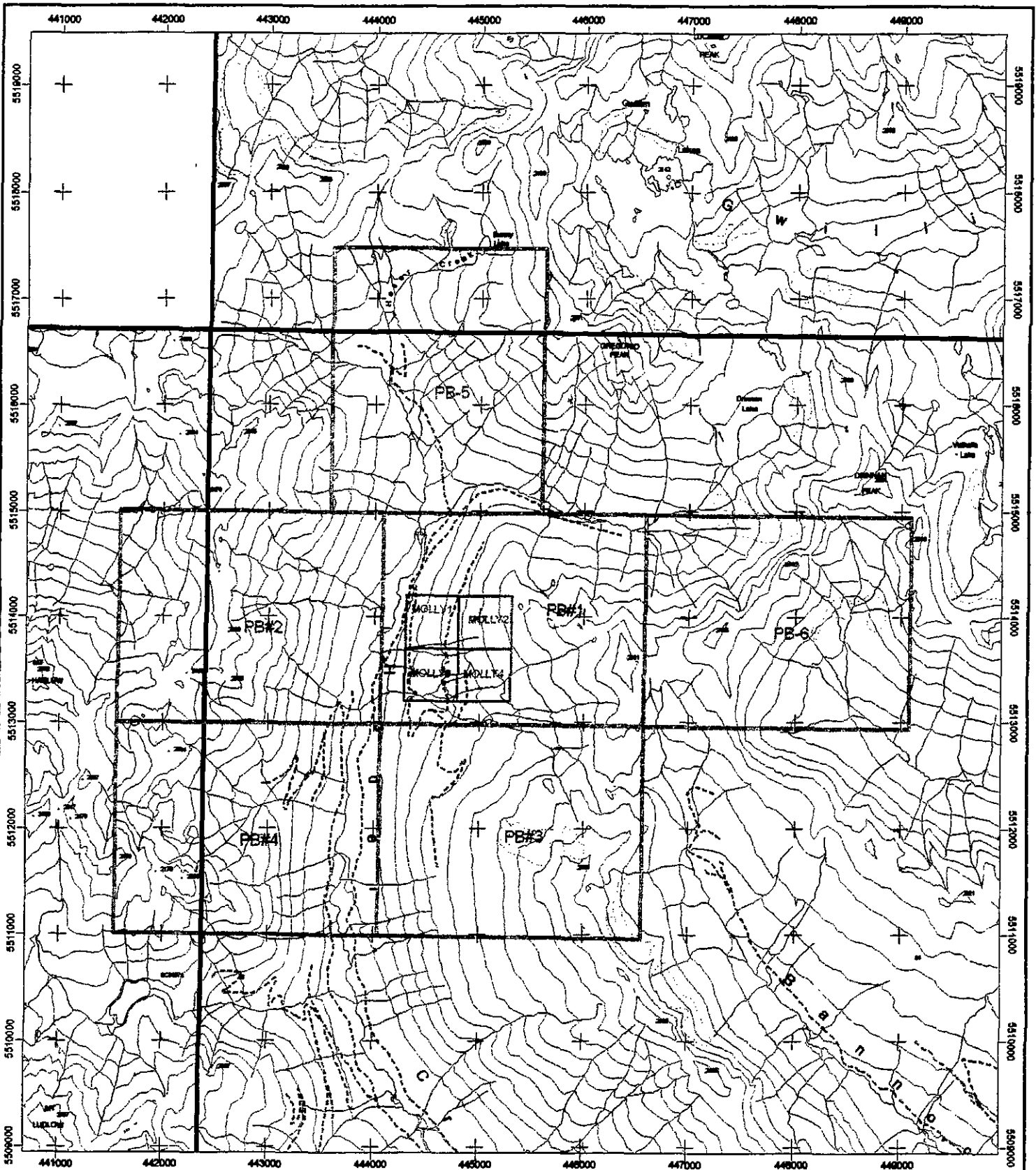
All of the claims are presently in good standing, and the pertinent data is provided in the Table below:

**Table 1: Mineral Claims - Black Crystal Property Slocan Mining Division, BC**

CLAIM	TENURE NO.	CLAIM TYPE	NUMBER OF UNITS	EXPIRY DATE*
MOLLY 1	305145	2 POST	1	Sept. 20, 2012
MOLLY 2	305146	2 POST	1	Sept. 20, 2012
MOLLY 3	305147	2 POST	1	Sept. 20, 2012
MOLLY 4	305148	2 POST	1	Sept. 20, 2012
PB#1	318625	GRID	20	June 28, 2012
PB#2	318626	GRID	20	June 28, 2012
PB#3	318627	GRID	20	June 28, 2012
PB#4	318628	GRID	20	June 28, 2012
PB#5	371670	GRID	20	Sept. 14, 2012
PB#6	371671	GRID	20	Sept. 18, 2012


\* Subsequent to the acceptance of this report for Assessment Credit

The entire property is located within the Slocan Mining Division, British Columbia, and the area of greatest interest on the property is roughly centered at UTM coordinates



UTM Zone 11  
NAD 83  
Grid North

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#308-626 West Pender Street  
Vancouver, BC V6B 1V9

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IMP  
Industrial Mineral Park Mining Corp.  
Black Crystal Graphite Property

Figure 2: Property Map

500 0 500 1000 1500 Meters

Figure: 2

Scale: 1:50,000

NTS Sheet: 82F072

Drawn By: JL

Date: October, 2000

File: crystal.apr

5513800N, and 444700E, or 49°46'00" north latitude, and 117°46'30" longitude, and is approximately 51 kilometres north of Castlegar, or approximately 27.5 kilometres northwest of the village of Passmore. The property is located in the Valhalla Range of the southern Selkirk Mountains, and is displayed on NTS map 82F/13, or Trim maps 082F071, 072 and 082.

## **ACCESSIBILITY, CLIMATE, AND PHYSIOGRAPHY**

The property is accessed from Highway 6 turning west on Passmore Upper Road just south of the village of Passmore, and then turning on to the Little Slokan Forest Service Road (F.S.R.) after approximately 4 kms, which point is signed as kilometre 44 (from Slokan City). It is a further 21.5 kms to the Hoder Creek F.S.R. junction, where one turns onto that road. Alternatively one may leave Highway 6 at Slokan City, traveling southerly on the Little Slokan Road approximately 22.5 kilometres to the Hoder Creek Road junction. From this junction it is approximately 18.5 kilometres to the junction where the Black Crystal access road leaves Hoder Creek Road. It is a further 2.5 kilometres up to the project area. Numerous upgraded roads exist in the general area of the work described herein, and several new exploration trails were constructed during the course of the year 2000, and 2001 work on the property. All roads are in good condition, and with few exceptions are generally passable with two-wheel drive during the snow free periods of the year. Access to other portions of the property may be gained by utilizing the Hoder Creek Road, or alternatively the Bannock Burn F.S.R., which leaves the Little Slokan Road at approximately the 17km mark. Access to the more remote portions of the property, or those which are considerably higher in elevation is best achieved by helicopter, with machines suitable for exploration work being based in both Nelson, and Castlegar. The Koch Creek Plant site is situated on the Koch Creek F.S.R., approximately half a kilometer up from it's junction with the Little Slokan Road, which occurs at approximately the 34.5 kilometre mark. All roads in the general area are well signed.

The property is within the Wet Interior bioclimatic zone. Winter usually extends from November into late April or early May, and considerable snowfall occurs at this time. The property is typically snow free from early June until early to mid November, although this may vary depending on yearly conditions. The short summers can be somewhat rainy at times, although conditions during that season are normally quite conducive to performing fieldwork.

The property is located in steep mountainous country. The area of the work reported herein would probably be best classified as sub-alpine, while the claim block stretches up into alpine terrain on Rinda Ridge. Elevations range from 1370 metres A.S.L. in the Hoder Creek drainage, to highs of 2380 metres A.S.L. on the aforementioned ridge. The area of investigation is covered for the most part by immature Engleman Spruce, and Alpine Fir, having been logged in the late 60's or early 70's. Abundant slide alder is also encountered in this area. There are stands of mature Spruce and Fir elsewhere on the property, while the upper portions of the property are characterized by alpine meadow, where the plant growth is typically grasses and mixed legumes with local scrubby spruce growth.

## **HISTORY**

The Black Crystal area has been the focus of a considerable amount of exploration work, especially within the past several years. The property was originally staked in the early seventies by Mr. Steve Paszty, of Castlegar, B.C., but was allowed to lapse before long. The property lie dormant until 1992 when it was restaked by Mr. Paszty, who subsequently optioned it to Industrial Mineral Park Mining Corporation in July of 1993. Several more claims were staked at this time to increase, and consolidate the land package.

In 1993 a six hole reverse circulation drilling program of 250 metres of drilling was conducted on the property. Some limited surficial geological mapping was also done at

this time. Additionally, a 440 kilogram bulk sample was taken at this point, and subjected to flotation testing.

In 1995 13 diamond drill holes were drilled for a total of 577 metres of NQ diameter drill hole. These holes were drilled in two strings, one along the bottom access road on the way up from the Hoder Creek valley floor, and the other on the road to the present day pit area. Depths ranged from 30 to 92 metres. Also, a 3000 tonne bulk sample was excavated from the property, and hauled to the Koch Creek plant site for eventual beneficiation.

A further diamond drilling campaign was undertaken in 1997, wherein 27 NQ diameter holes were drilled, for a total of 913.8 metres. The core produced from this work was split but only four of the samples produced were analyzed and the rest was not submitted to a laboratory at this time.

In 2000 new investors assumed control of the company, renaming it Crystal Graphite Corporation, and embarking on an aggressive exploration campaign, as well as a multitude of studies into the impact that a mining operation/processing facility would have on the general area. Construction work was resumed on the Plant facilities at the junction of Hoder Creek, and the Little Slocan River. During the fall of 2000 CGC drilled 22 NQ diameter diamond drill holes, for a total of approximately 1181 metres to confirm the results from earlier drilling, and to further the known limits of the deposit. Also, they extracted the remaining 7,000 tonnes from the previous bulk sample of the weathered "regolith" material found locally, and excavated and sampled 27 vertical trenches, in an attempt to further define the extent of the regolithic material, which had been noted to develop where the calc-silicate host rock weathers in-situ. Channel samples were also taken of mineralized rock in the pit area. Petrographic work was done on samples of varying lithologies derived from the drill program in an attempt to better determine the exact lithological nuances of the rocks encountered on the property. In December of that year the samples taken from the 1997 diamond drilling program were finally shipped for analyses.

## **GEOLOGIC SETTING**

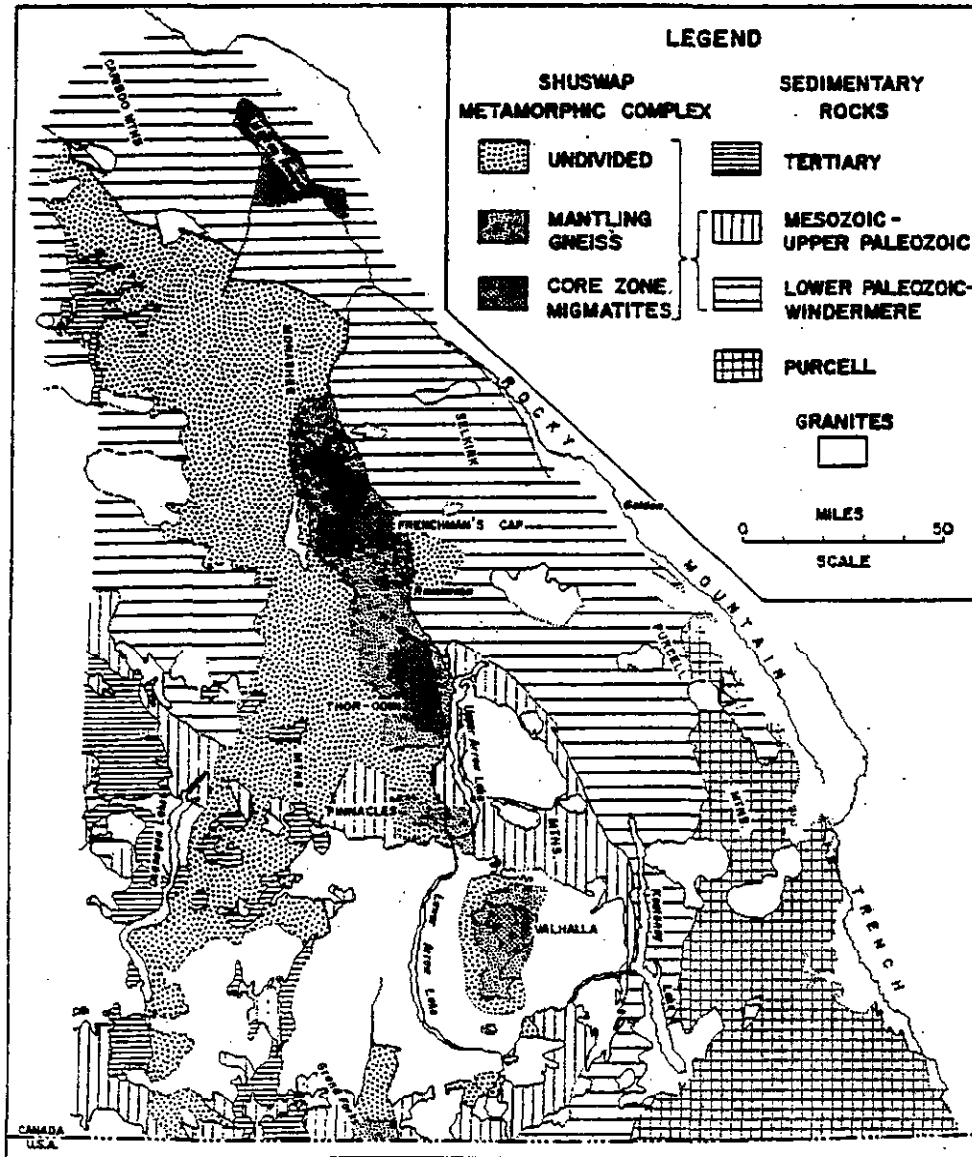
The Black Crystal project is wholly situated within the Omineca Crystalline Belt. This belt along with the Foreland Thrust Belt to the east, the Intermontane Belt immediately to the west, the Coast and Insular belts further outboard make up the five distinct morphogeological provinces, which comprise the Canadian Cordillera. The Omineca Crystalline Belt is best typified as being an area of extensive tectonic uplift which is underlain by metamorphosed miogeoclinal rocks, along with local rocks which were formed in island arc settings, and subsequently accreted to the margin of the ancestral North American Craton during the Jurassic era. The property itself is located within the Valhalla Complex, which is a structural or domal culmination of high-grade metamorphic (upper amphibolite grade) rocks. Foliation and outwardly dipping layering define this 30 x 90km gneiss complex, which is located at the eastern exposed edge of the Shuswap metamorphic complex (Figure 3). Generally the lithologies contained within the complex are divided into three sheet like layers of variably deformed paragneiss and middle Cretaceous to Eocene igneous rocks. Apparently (Carr et al 1987) exhumation along Eocene normal faults have resulted in a "tectonic denudation" which has given rise to the domal shape of the complex. The Valkyr ductile extensional shear zone (which arches over the complex) bounds the complex on all but the eastern margin, where the complex terminates against the easterly dipping Slocan - Champion Lake ductile-brittle normal fault. There are three subculminations within the complex, the project being located on the west central flank of the northernmost of these – the Valhalla dome. The other two subculminations, the Passmore dome, and the Southern Valhalla complex, are lithologically, and structurally distinct from the Valhalla dome.

Lithologically, the Valhalla assemblage on the west flank of the Valhalla dome consists of an approximately 1.5km thick, heterogeneous package of upper amphibolite facies pelitic schist, marble, calc-silicate gneiss, psammitic gneiss, metaconglomerate, amphibolite gneiss, and ultramafic schist (figure 4). The base of the section is comprised of a sequence of conglomerate, calc-silicate gneiss, and marble interlayered with 50 – 100 metre thick units of aluminum poor semi-pelitic schist. The sequence

becomes more carbonate rich moving up in the metamorphic section, with thick marbles and calc-silicate gneisses interlayered with quartzites and sillimanite bearing pelitic schists. It also contains amphibolite gneiss and ultramafic schist, which do not occur in those sections which are structurally lower. The upper portion of the exposed sequence contains 30m thick marble and quartzite layers. Metasedimentary rocks in the core of the Valhalla dome generally consist of psammite, semi-pelitic and pelitic schist, quartzite, marble, and calc-silicate and amphibolite gneiss.

Schaubs and Carr (1988) have tentatively correlated the metamorphic rocks in this region with the sediments of the Lardeau Trough, as observed in the Goat Ranges (Klepacki, 1985), based on bulk composition, order, thickness (although tectonic thinning of up to 60% would have had to have occurred) etc. More specifically they believe that the Rinda Ridge composite unit correlates with the Index Formation of the Lardeau Group while the Rinda marble (unit 9), and Quartzites (unit 10), correlate with the Index Formation, the Badshot Formation, and Hamill Group respectively. Should this correlation be correct, the implication is that the section has been inverted locally.

It is possible that the host of the Black Crystal graphite deposit is, as reported by Bernie Augsten (2001), correlative to Schaubs & Carr's (1998) Rinda marble. While various criteria such as thickness, presence of graphite etc, are consistent with that unit, there is still enough uncertainty to make such a correlation premature. However there is no doubt, based on the proximity to existing local mapping, and overwhelming presence of carbonate in many of the lithologies present on the property that the rocks encountered are in the upper portions of the section as proposed by Schaubs & Carr. One of the curious things about the property is that the abundance of schists reported by Schaubs & Carr locally is not seen here, as all rocks to date have been positively identified through petrological work as being gneissic. Although some of the more pelitic samples could be taken for schists in weathered outcrop, they lack the well developed schistosity, or crenulation cleavage, which is essential for classification as such.



Regional geological setting of the Shuswap Metamorphic Complex in southeastern British Columbia.

FIGURE 3 - REGIONAL GEOLOGY (after Reesor & Moore, 1971)



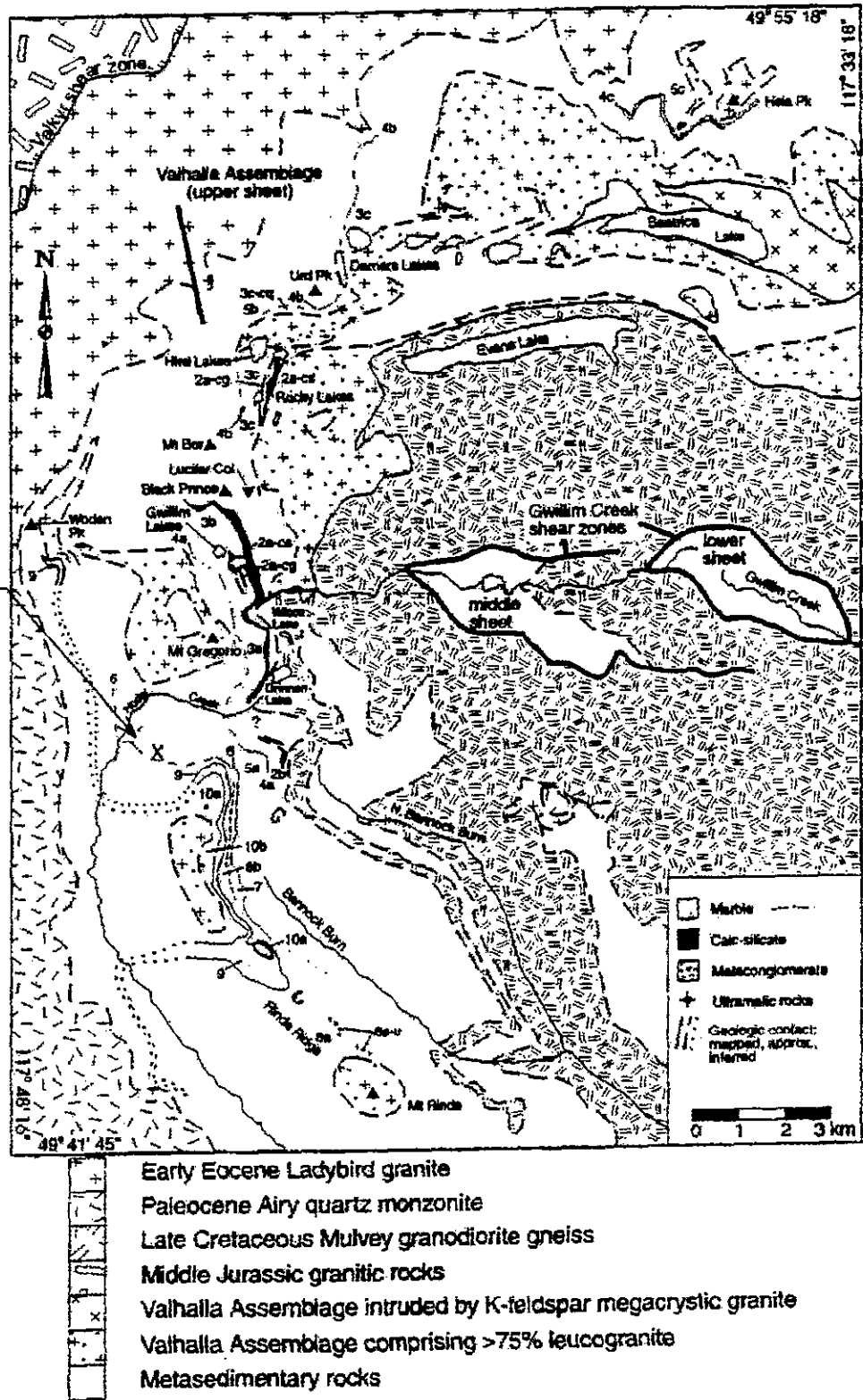
Lithologically, the idealized stratigraphic section (Table 2) is comprised of the following rock types, which are reported from the observed top of the section (oldest protolith - due to probable inversion):

**Table 2: Stratigraphic Section**

UNIT	DESCRIPTION	GROUP?	FORMATION?	AGE?
<b>Biotite/Feldspar/Quartz/ +/-Garnet Gneiss</b>  Hangingwall	Dark brown Moderate to strongly foliated	<b>LARDEAU</b>	INDEX	EARLY PALEOZOIC
<b>Calc-Silicate Gneiss1</b>	Creamy whitish Quartz/Calcium Carbonate rich rock with 2 - 3% disseminated graphite	<b>BADSHOT</b>		EARLY CAMBRIAN
<b>Calc-Silicate Gneiss2</b>	Greyish - green Quartz/Calcium Carbonate rich rock with 3 - 5% disseminated flake graphite			
<b>Quartz</b>  Footwall	Rosy pink massive quartz, locally oxidized, fractured	<b>HAMILL</b>	MOUNT SYMONDS	EOCAMBRIAN
<b>Intercalated Zone</b>	Zone of thin bands of varying metamorphic lithologies			
<b>Biotite/Feldspar/Quartz/ +/-Garnet Gneiss</b>	Dark brown, Moderate to strongly foliated	<b>HORSETHIEF CREEK GROUP?</b>	FAWN LAKE ASSEMBLAGE	NEOPROTEROZOIC

- **Biotite/Feldspar/Quartz/+/-Garnet Gneiss:** Content of constituents varies locally. Occasionally (Drill hole BC0124) may contain sections with up to 3.5% flake graphite. This is the hanging wall variation, and is typically only seen to the south, and the west of the immediate area of interest, although local pods have been noted where the entire section is preserved. As noted above the actual ordering of the contained minerals can vary significantly, and it is often the case it is reported in the order presented above, when actually the subordinates reported are the dominant constituent due to the inherent inclination to overestimate the quantity of platy minerals in any specimen.

**AREA OF  
PROPOSED  
QUARRYING**



**Figure 4 LOCAL GEOLOGY (after Schaub & Carr 1998)**

- **Calc-Silicate Gneiss (Cs1):** One of the two principal graphite-bearing units identified to date on the Black Crystal graphite property. This rock is fine to medium grained, varying in colour from a light to medium grey; to light to medium greenish (diopsidic), grey. This unit is usually weakly to moderately foliated. It is also characterized by a distinctive grainy sucrosic texture. Graphite occurs as disseminated fine to medium grained discrete flakes, while Pyrrhotite/Pyrite is very fine grained, and occurs as disseminations, or in local blebs.

Modal Composition:	Quartz	35 - 40%
	Scapolite	25%
	Clinopyroxene	15%
	Calcite	10 -15%
	K-Feldspar	5%
	Graphite	1.5 - 3%
	Pyrrhotite	1%
	Sphene	1-2%
	Amphibole	<1%
	Apatite	<1%

- **Calc-Silicate Gneiss (Cs2):** The second, and economically most important of the two principal graphite-bearing units on the Black Crystal property. This unit is fine grained, moderately to well foliated, and variable in colour from medium to dark grey to medium greenish grey. This rock also has a grainy sucrosic texture. Aside from the darker colour this rock is also distinguishable from Cs1 because of the presence of very fine-grained, bright emerald green spinel, and often the texture is somewhat distinct as fine elliptical segregations or pods of white (calcite +/- feldspar) minerals have developed. Graphite occurs as discrete disseminated fine-grained euhedral crystals, which are aligned parallel to sub parallel to foliation. Pyrite/pyrrhotite is typically very fine grained, and occurs as disseminations or local small blebs. Cs1 and Cs2 appear to be conformable, although in some instances are seen to be intercalated. The

relationship between the two is presently not understood. It may be possible that factors such as discrete differences in protolith bulk composition may have played an important role in determining those sections, which developed into Cs1 or Cs2.

Modal Composition	Quartz	30%
	Scapolite	30%
	Clinopyroxene	10%
	Calcite	10%
	K-Feldspar	10%
	Graphite	3 - 5%
	Pyrrhotite/pyrite	1 - 2%
	Sphene	1 - 2%
	Amphibole	<1%
	Spinel	<1%
	Apatite	2 - 3%
	Chlorite	trace

- **Quartz:** The Quartz unit forms the footwall of the deposit, although it is not present in all locations. A similar quartz unit has been noted to occur in the extreme eastern portions of the deposit in the hanging wall. The quartz has variable texture, but is often typically moderately to strongly limonite stained, coarse grained, recrystallized, and quite blocky or fractured. Minor sulphides (pyrrhotite) and traces of feldspar and chlorite/hydrobiotite are noted to occur. In many instances a thin conformable pegmatite (10 - 20 cm) has been observed occurring at the top of the quartz unit. The genesis of this quartz unit is somewhat enigmatic.
- **Intercalated Zone:** Not a separate lithology as such, but more correctly a commonly occurring correlatable zone, which is stratigraphically below the footwall quartz. This zone is comprised of thin bands (typically up to .5 metres)

of all the lithologies noted to occur locally on the property, it tends to be variably silicified or quartz flooded.

- **Marble:** Typically pale grey to whitish to pale greenish grey, medium to coarse-grained quartz marble. Tends to be massive to very weakly foliated, and although modal composition can vary considerably, the main constituents are: calcite, quartz and diopside (Clinopyroxene). This rock typically contains < .5% graphite, and < .5% sulphides (pyrrhotite/pyrite/sphalerite).
  
- **Biotite/Feldspar/Quartz +/- Garnet Gneiss:** Much the same as the hanging wall unit noted above.
  
- **Skarn:** Occurs throughout the section, often times adjacent to the Pegmatitic or Quartz Monzonite dykes or sills noted below. It is typically an aphanitic, medium to dark green rock, which is rich in quartz, diopside, and calcite. Somewhat less altered sections of the above lithologies are typically contained within skarn sections.
  
- **Quartz Syenite:** Typically white to pale grey, massive, medium grained felsic rock composed mainly of white feldspar, with lesser grey quartz and minor green mafics. The feldspar is predominantly white k-feldspar (microperthitic?). This rock usually forms small sills or dykes within the metamorphic sequence. In hand specimen it appears to be intrusive, but given the high-grade metamorphism it may very well be derived by partial melting.
  
- **Quartz Monzonite:** Sills, or dykes of this medium grained leucocratic biotitic intrusive which is massive to weakly foliated are noted to occur with the greatest frequency in the northern most area, within the area of interest. Their occurrence in this area may be coincidental, or they may bear some relationship to the genesis of the deposit. Such relationship is not readily apparent presently. They strike roughly east – west, and appear to dip steeply to the

north for the most part, although it is possible that they are locally vertical, or dip steeply to the south. From surface, and drill hole data it has been interpreted that apophyses of quartz Monzonite have radiated from the dykes along foliation planes, as thin Quartz Monzonite lenses or stringers were noted locally in drill holes, which were typically proximal to a larger dyke.

- **Pegmatite:** Medium to coarse grained leucocratic pegmatite comprised principally of feldspar, quartz, and minor biotite, with trace pyrrhotite is noted to occur as "sweats" or discrete dykes throughout the section, invading all of the meta-sedimentary rocks noted above. They appear to be concordant to foliation. A pegmatite swarm has been tentatively identified as occurring on the southern margins of the area of the main focus of investigation (DDH's BC0012 & 13, and BC0137 & 138).
  
- **Lamprophyre:** Occurs as a dark biotite, and pyroxene rich dyke in several drill holes, in various locales on the property, and in one discreet location in the eastern extremes of the area mapped during 2001. The modal constitution of this rock is estimated to comprise of 45% Biotite, 38% Pyroxene, 15% Plagioclase, with trace K-feldspar, and 1% Sphene, and 1% Opaques.

Thickness of the above lithological units varies considerably from location to location, and it is next to impossible to typify. However some generalizations can be made about the widths of some of the units observed locally. Thickness of the hanging wall Biotite/Feldspar/Quartz+/-Garnet Gneiss has not been determined, as the top has not been seen, although to date the thickest intercept of this unit has been in the order of 40 metres. The Cs1 unit has been observed with thicknesses of up to 13 metres, while the Cs2 unit has been observed as occurring from subtle intercalations with Cs1 up to a thickness of approximately 11 metres. The footwall Quartz unit is not present in every location, but where it does occur it is usually in the order of 1 to 2 metres wide, although considerably wider intercepts have been logged. The intercalated zone, if present, has been observed from 1 - 13 metres in thickness, while the marble can be in the order of

11 - 21 metres. Footwall Biotite/Feldspar/Quartz+/-Garnet Gneiss has been noted to occur from 5 metres up to 10+ metres.

Appearances are that the graphite mineralized zone of interest in the general area of proposed quarrying operations presents a near surface, five to fifty meter thick, planar surface which strikes at approximately 130° Azimuth, and dips moderately to the southwest at approximately 35°. Should the northernmost band of Cs2 mineralization (Figure 5) be correlative to the southern band it would indicate that there is cumulative displacement in the order of 30 metres across a fault, or faults which have roughly east – west trending axes, and which have been inferred to occur somewhere between the locations where the two principal bands of Cs2 outcrop. The displacement appears to be primarily dip-slip with the southern plate having moved upwards in relation to the northern plate. Quite possibly pre - emplacement faults were the locus for Quartz Monzonite intrusion. Hence it may be the case that slight movement along several such Quartz Monzonite filled fractures resulted at least in part for the cumulative displacement noted above, as some post emplacement slippage was noted to have occurred on the margins of these dykes locally. All structural data (dips/strikes) taken from the area to date, except for the odd erratic measurement, support the faulted repetition hypothesis, but as of yet no detailed examination has been made of the all data available. Additionally north – south trending faults have been inferred to occur with regular frequency in the area of investigation, with one such fault having been observed during the trenching on the northern end of trench “C”. It presently appears that these faults are both reverse, and normal, possibly with the majority being of the normal variety. The cumulative displacement along these faults apparently results in exaggerated surface elongation of the surface trace of the zone of interest, sub parallel (roughly east – westerly axis) to the local dip of the metamorphic lithostratigraphy.

It became apparent during the course of this investigation that the actual mineral content of the Biotite/Feldspar/Quartz Gneiss unit can vary significantly, and that it is often the case it is reported in the order of predominance mentioned here, when the reported subordinates are actually the dominate constituent. This is due to the inherent

inclination to overestimate the quantity of platy minerals in any given specimen, but also often it is reported in the order above to facilitate correlation, and to simplify, what could be a very complex metastratigraphic sequence, should one decide to delve into too much detail.

## **MINERALIZATION**

Graphite mineralization on the property is almost ubiquitous, occurring at least locally in all rock types except for the Quartz Monzonite intrusives. That being said, however calc-silicate gneisses are the preferred host for the most consistently higher-grade mineralization seen on the property. These calc-silicate gneisses have been split into two groups (Augsten 2001) on the basis of mineralogy (presence or absence of dark, emerald green, fine grained disseminated spinel), texture, colour and concentration of graphite, the second of these groups - "Cs2" locally containing typically in the order of 2 to 5% flake graphite, or organic carbon, (which is hereafter referred to as Fixed Carbon or abbreviated as FC). Graphite occurs as discrete disseminated grains most typically from .5mm to 1mm in diameter. These crystals have developed with a preferred orientation parallel to sub - parallel to foliation. While pyrite is fairly common throughout the section, very fine-grained disseminated pyrite +/- pyrrhotite are common in the graphitic calc-silicate host rock.

A regolith has formed in-situ above both Cs units locally, and also locally there exists a "transition zone" of slightly weathered Cs material, which is less friable than the regolithic zone, but is still somewhat amiable to extraction utilizing only an excavator. Of these two calc-silicate units the weathering is typically more pronounced over the Cs2 unit, and while both of these materials are important economically, the in-situ weathered Cs2 material is of primary importance. In this weathered material the dissolution of calcium carbonate (possibly assisted by the creation of sulphuric acid due to the oxidization of contained sulphides) has caused a substantial loss of cohesion, and hence they are friable and easily extractable. Additionally there is an increase in overall graphite content compared to the parent rock due to the decrease in density,



because of the dissolution of the aforementioned constituent. As this material is sited immediately above the areas proposed for hard rock quarrying it makes a desirable initial target due to the ease of extraction, higher grade, and also the ease of beneficiation. Locally this material can reach combined thicknesses approaching five metres, and in the odd rare location the Cs2 thickness itself can approach that figure.

As alluded to above the regolithic and transition zones are by and large the best targets on the property, as overall organic carbon concentrations quite often are from 3 to 5% FC in the Cs2, and 2 to 3% FC in the Cs1 derived material. Graphite may reach concentrations of 1 to 2% FC in glacio-fluvial till locally, although there are areas where numerous blocks of Cs material comprise boulders or cobbles within the till, and graphite concentrations can be in the 2 to 3% FC range. From the 157 samples taken during the fall 2001 trenching program, which included some mineralized till, Cs1, and Cs2 samples, the numerical average of these was 3.1072% FC. To break this down further the 93 samples of Cs2 material taken returned a numerical average of 3.69% FC, and the 57 Cs1 samples returned a numerical average of 2.00% FC, while the 7 samples of relatively decent graphite mineralized till taken returned an average of 1.30% FC. The simple process of screening out pegmatites, silicified lumps, and other unwanted material prior to processing can bring these reported grades up considerably.

There does appear to be some enrichment of graphite spatially related to the Quartz Monzonite dykes. From the sampling done to date it appears that the Cs2 taken proximal to the northernmost dyke is in the order of 0.5% FC higher than corresponding material from other locales, but at this point the relationship has not been fully studied.

All information to date indicates that the flake graphite present in the Black Crystal deposit is of high quality, and is amiable for usage in a wide range of commercial applications, and it has become apparent from some of the work reported further on in this report, that at least a portion of the flake graphite which may be produced from this area will be suitable for "higher end" applications. XRD analysis by Newman Energy Research Ltd., of Christchurch New Zealand (Newman 2002), has indicated that the

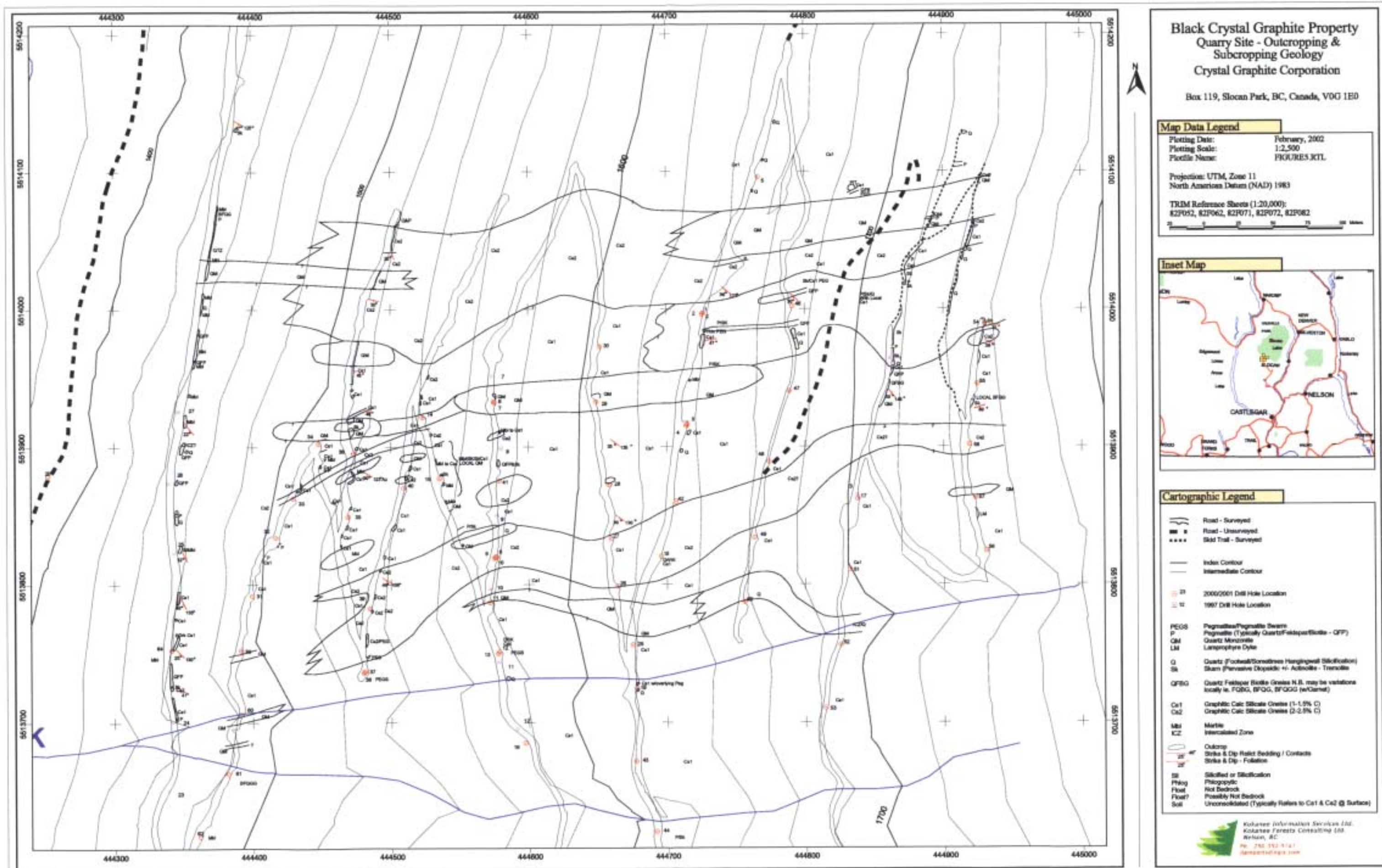
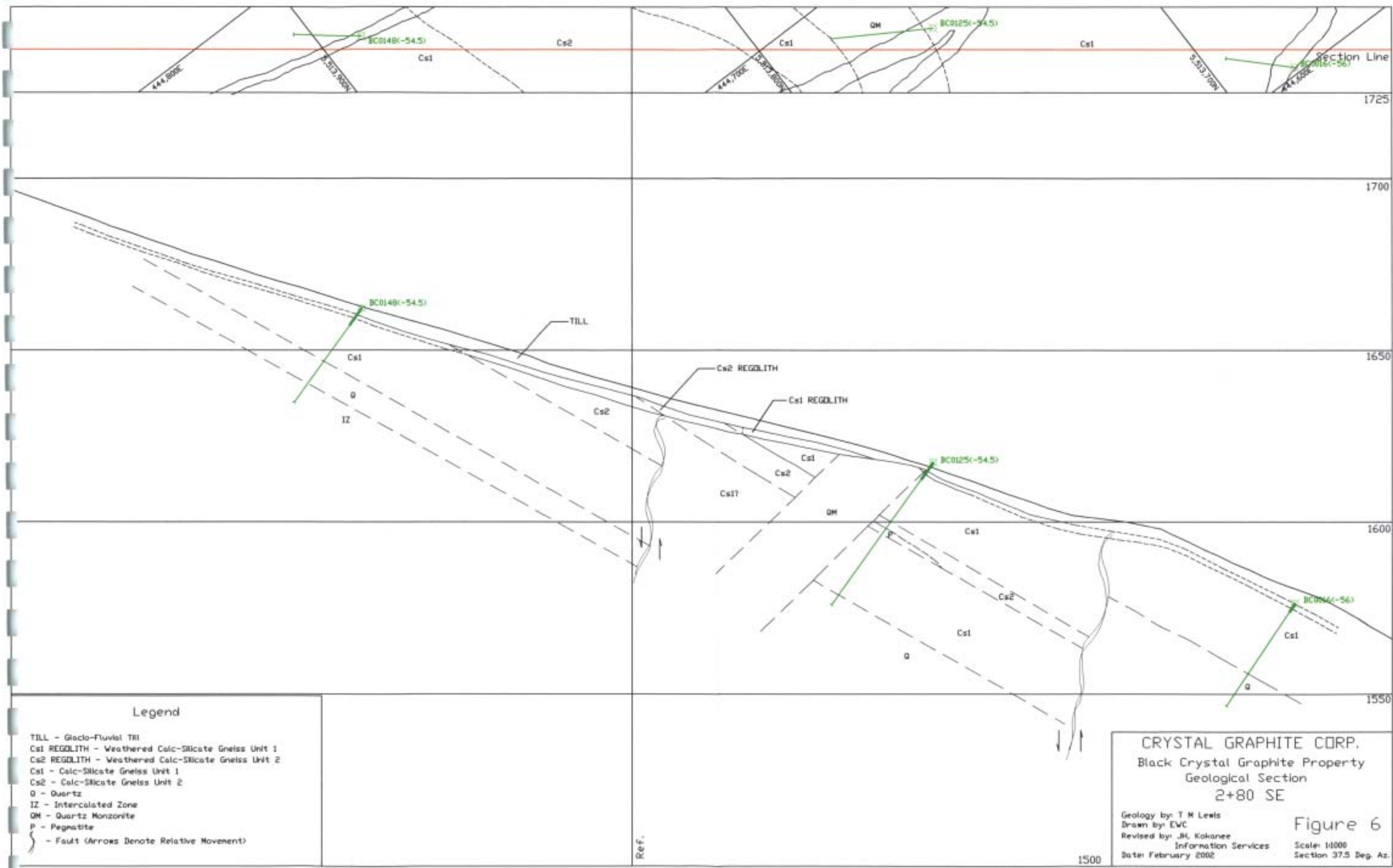


Figure 5 Property Geology

maximum reflectance of this graphite is in the order of 17.8% ( $R_{\text{max}}$  - measured perpendicular to the C-axis of the graphite crystal), and minimum reflectance ( $R_{\text{min}}$ ) is 0.6% which are values which are quite close to those documented (18% -  $R_{\text{max}}$ ) for true (perfect) graphite. Additionally d-spacing (a function of crystalline density) of 3.354 was also determined, which is probably why the Black Crystal graphite reportedly has excellent electrical characteristics, which makes it suitable for use in the construction of fuel cell bipolar plates.

Petrographic observations to date have determined that the CGC graphite flake is relatively undeformed, and also that it is quite pure, exhibiting only the odd inclusion of syndepositional and secondary quartz, with only an insignificant local trace of hematite. At the time of the writing of this report work is still ongoing regarding this and other aspects of the quality of the local graphite.

The disseminated crystalline flake mineralization of interest locally probably is best categorized as a slight departure from Simandl et al's (1995) Category 1 "Graphite Disseminated in Marble", as the host rock is related, but obviously is not a true marble as such. The alternative would be to place it in his Category 2 mineralization, which is "Graphite Disseminated in Quartzite", which is more clearly not the case. Low-grade mineralization, which is definitely the former, is seen on the property at depths below the calc-silicate horizons of interest, while the author has noted the latter form of mineralization elsewhere in the region along what is believed to be the same mineralized trend. Graphite was found to occur in anomalous concentrations in Biotite/Feldspar/Quartz Gneiss locally in outcrop, and also in Quartz/Feldspar/Biotite Gneiss at the top of the section penetrated in diamond drill hole BC0124, which mode of occurrence corresponds with Simandl et al's category 4 - "Graphite Disseminated in Paragneiss". Presently this mode of occurrence is of limited interest, due to the presence of biotite, which could pose some difficulties in separating it from the graphite during processing.



**Legend**

- TILL - Glacio-Fluvial Till
- Cs1 REGDLITH - Weathered Calc-Silicate Gneiss Unit 1
- Cs2 REGDLITH - Weathered Calc-Silicate Gneiss Unit 2
- Cs1 - Calc-Silicate Gneiss Unit 1
- Cs2 - Calc-Silicate Gneiss Unit 2
- Q - Quartz
- IZ - Intercalated Zone
- QM - Quartz Monzonite
- P - Pegmatite
- Fault (Arrows Denote Relative Movement)

**CRYSTAL GRAPHITE CORP.**  
 Black Crystal Graphite Property  
 Geological Section  
 2+80 SE

Geology by: T M Lewis  
 Drawn by: EVC  
 Revised by: JH, Kokanee  
 Information Services  
 Date: February 2002

**Figure 6**  
 Scale: 1:1000  
 Section 37.5 Deg. Az.

Ref.

1500

## **WORK PROGRAM**

Starting in mid-May (with a hiatus from early June until mid-July) a drill campaign was undertaken wherein 42 diamond drill holes were drilled on the property for a total of approximately 1895 metres of NQ diameter hole. Drill holes in the Year 2001 program were drilled at 35° Azimuth and were typically inclined at -57° to the horizontal, which resulted in the holes usually terminating in the -55° range. The first two holes of the program (BC0123 & 124) were drilled to test the down dip continuity of the mineralized horizons, and to test deeper horizons which may also be prospective for containing disseminated, or other commercially interesting graphite mineralization. The bulk of the other holes were drilled with an eye to producing a resource estimate, although some exploratory holes were drilled to gain a better understanding of the geology of some of the peripheral areas. By and large the program was quite successful, and the known limits of the zone were better defined, and extended especially to the south. The core generated from this program was transported to CGC's Hoder Creek facility, where it was logged both geologically, and geotechnically. Percentages of pegmatites or pegmatitic sweats were measured in each sample interval to get an idea of how much pegmatites affect overall grade. A total of 644 samples were generated in the course of the drilling program. A modest check-sampling program was undertaken after the drilling program to determine the validity of the analyses.

Commencing in August 2001 a program of slit trenches was undertaken concurrent to the diamond-drilling program detailed below, to evaluate the economic potential of the graphite mineralized glacio-fluvial till, and in-situ weathered regolith material, which occurs on the property. A total of 149 of these trenches were excavated, and 325 samples were taken of the graphite mineralized till and regolith encountered. These samples were prepped at Crystal Graphite's laboratory, and then sent to Bondar Clegg for analyses. A program of check trenching/sampling was conducted during September to determine the quality of the data generated, and a further 17 trenches were excavated, and another 43 samples taken. Approximately 2.3 kms of exploration trail was constructed in the course of this combined phase of drilling and trenching.

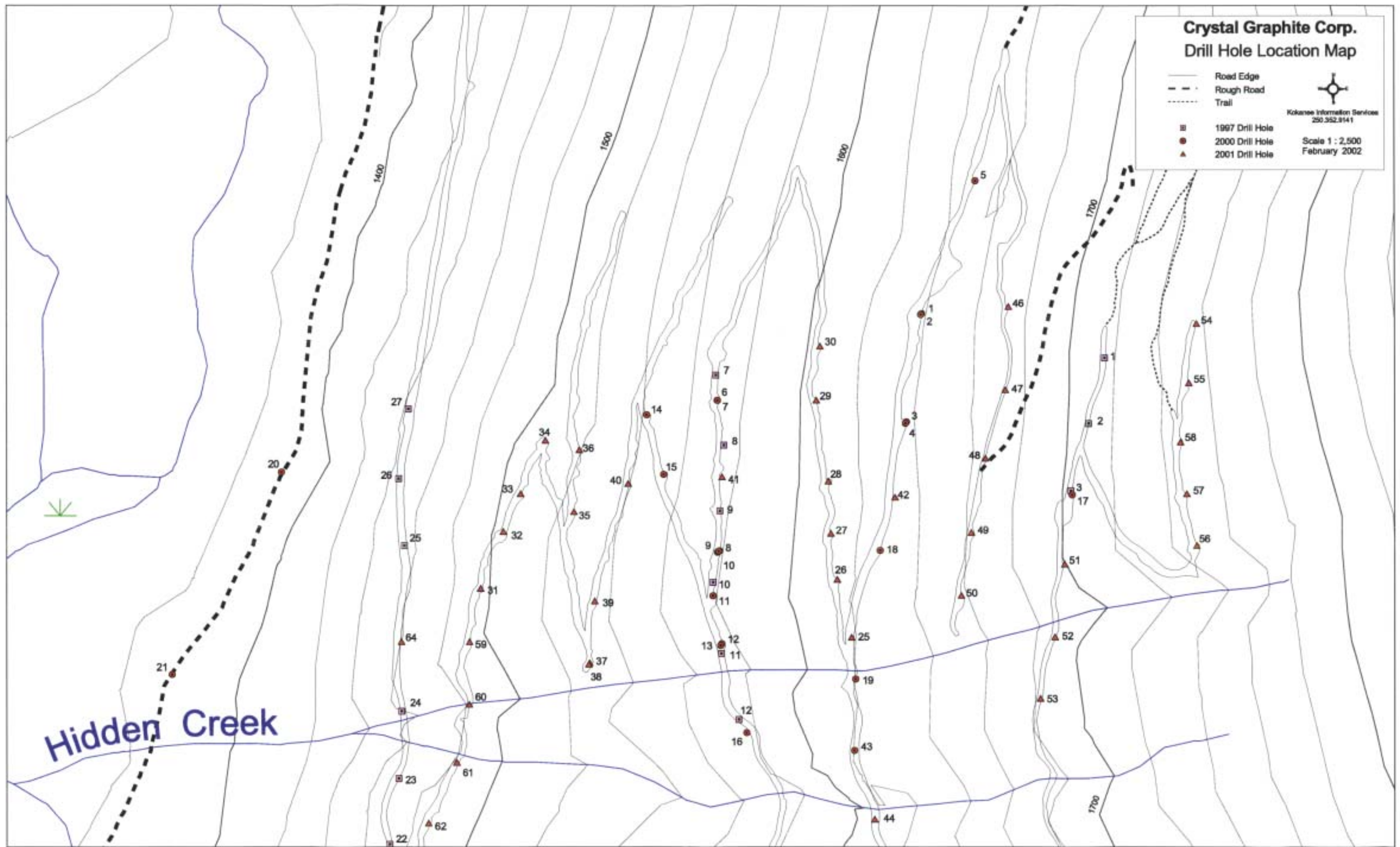


Figure 7 Drill Hole Location Map

During November a program of linear trenching was undertaken which enabled the company to better estimate the vertical extent of the weathered material, and to extract a further bulk sample for processing at the Hoder Creek pilot plant facility. During this program 1855 metres of trench were excavated, and approximately 10,000 tonnes of friable calc-silicate mineralized material were trucked to the Hoder Creek plant for processing. During this phase of the exploration a further 157 samples were taken, and shipped to Bondar Clegg in Vancouver for analysis. Two samples from more prominent pegmatites were sent to Vancouver Petrographic for study to determine if any gem or any other precious, semi precious, or other mineral of interest occurred, as well as four samples being sent to Bondar Clegg for analyses to determine if there were any rare earth elements in the pegmatites, or conversely any deleterious elements which would pose a future environmental hazard. A modest check-sampling program was instituted during the course of the program to determine analytical reliability, and accuracy.

Geological mapping was undertaken starting the beginning of July, and was ongoing throughout the project, ending only at the cessation of the linear trenching program at the end of November. The linear trenching was extremely useful with respect to geological mapping, as outcrop was somewhat sparse in the area, and a real sense of the surficial and near surface lithological pattern, had not been achieved prior to this program.

## **SAMPLING METHOD AND APPROACH**

The bulk of the samples taken from the drill core produced during the Year 2001 drilling program were taken from prospective zones at one metre intervals. In holes BC0123, and BC0124, which were both deeper, exploratory tests, any interval which was mineralized with any appreciable quantities of graphite was sampled, such as the biotite/feldspar/quartz unit mentioned earlier, or the marble unit which is stratigraphically below the calc-silicate units, and which typically has <0.5% disseminated graphite.

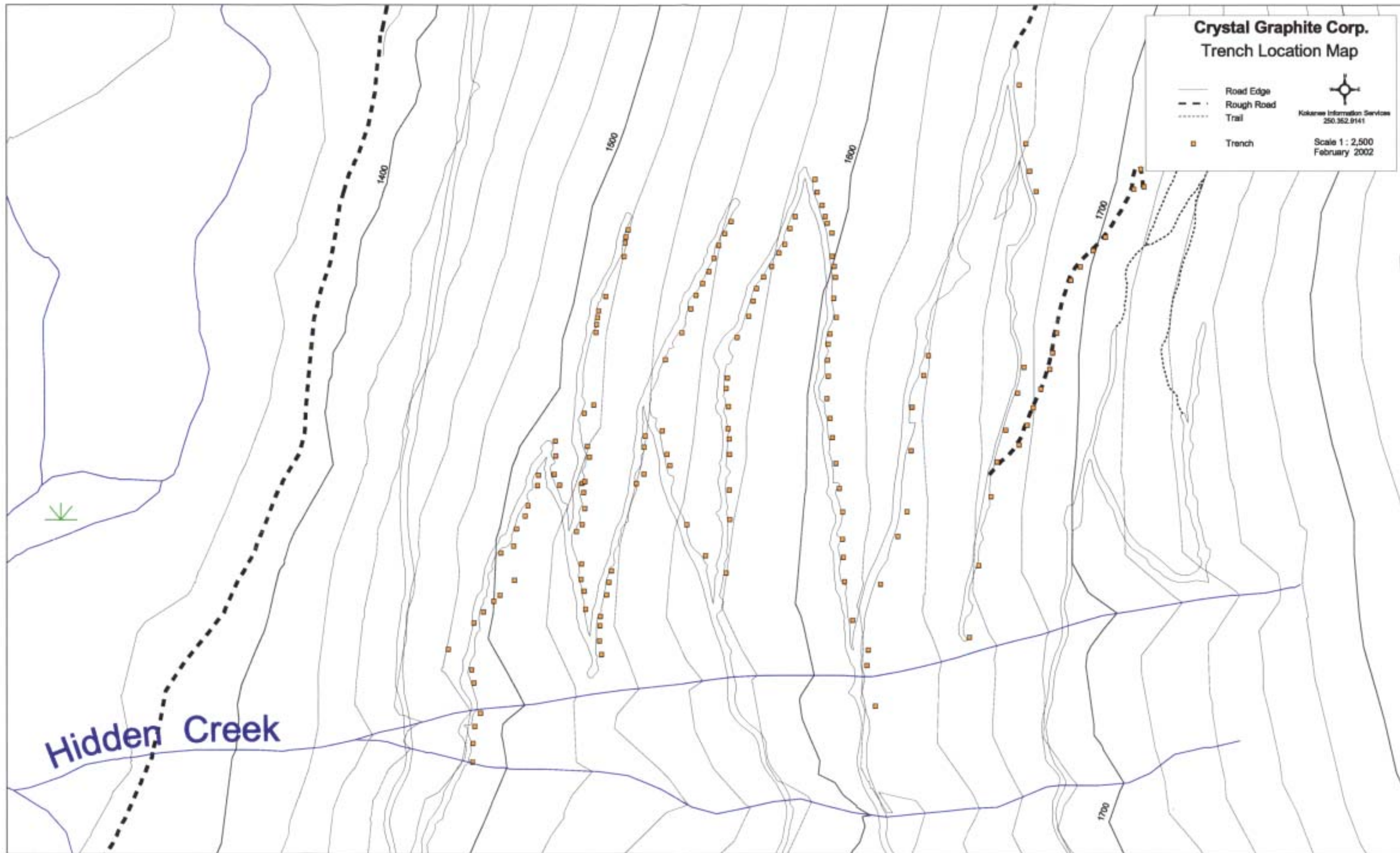


Figure 8 Trench Location Map



During the regular drilling program only the Cs1, and Cs2 units were sampled, as this was the focus of the investigation. Smaller pegmatites, other dykes, skarn, or other poorly mineralized patches or pods were usually included in any sample interval unless they were of sufficient size to break out and treat separately in the logging process.

In the slit-trenching program, samples were taken of all till, and mineralized material encountered in each trench location. Rough channel samples were taken vertically in these trenches, which is sub-perpendicular to the shallowly dipping stratification. Sample widths varied considerably depending on local conditions, but would typically range from 0.5 to 2 metres. Care was taken to ensure samples were taken in homogeneous material, although at times this was near impossible due to the occasional difficulty in determining exact boundaries. During the linear trenching program a few samples were taken of some of the better mineralized till encountered, but by and large most samples were taken of the calc-silicate material, which had weathered in-situ. The comments regarding sampling the slit-trenches above applies to these trenches also. Photographs were taken of the vast majority of all the trenches.

## **SAMPLE PREPARATION, ANALYSES AND SECURITY**

All core and other samples were brought directly from the field by the author, or one of the other consulting geologists mentioned earlier, and placed in CGC's core logging area at the Koch Creek facilities. After geological and geotechnical logging of the drill core, the author or a technician working under the author's direction would break the core into manageable pieces, and split it in half using a core splitter. One half would be placed in a bag while the other half would be put back in its original position in the core box. An identification tag would then be placed in the bag, and a corresponding tag would also be stapled in position in the core box. Photographs were taken of all core, usually but not always as the final step before putting it away in core racks for long term storage. All samples were stored in the core logging facilities until such time as they were handed over to CGC employees, either for preparation at Koch Creek, or for direct shipping to Bondar Clegg in Vancouver.

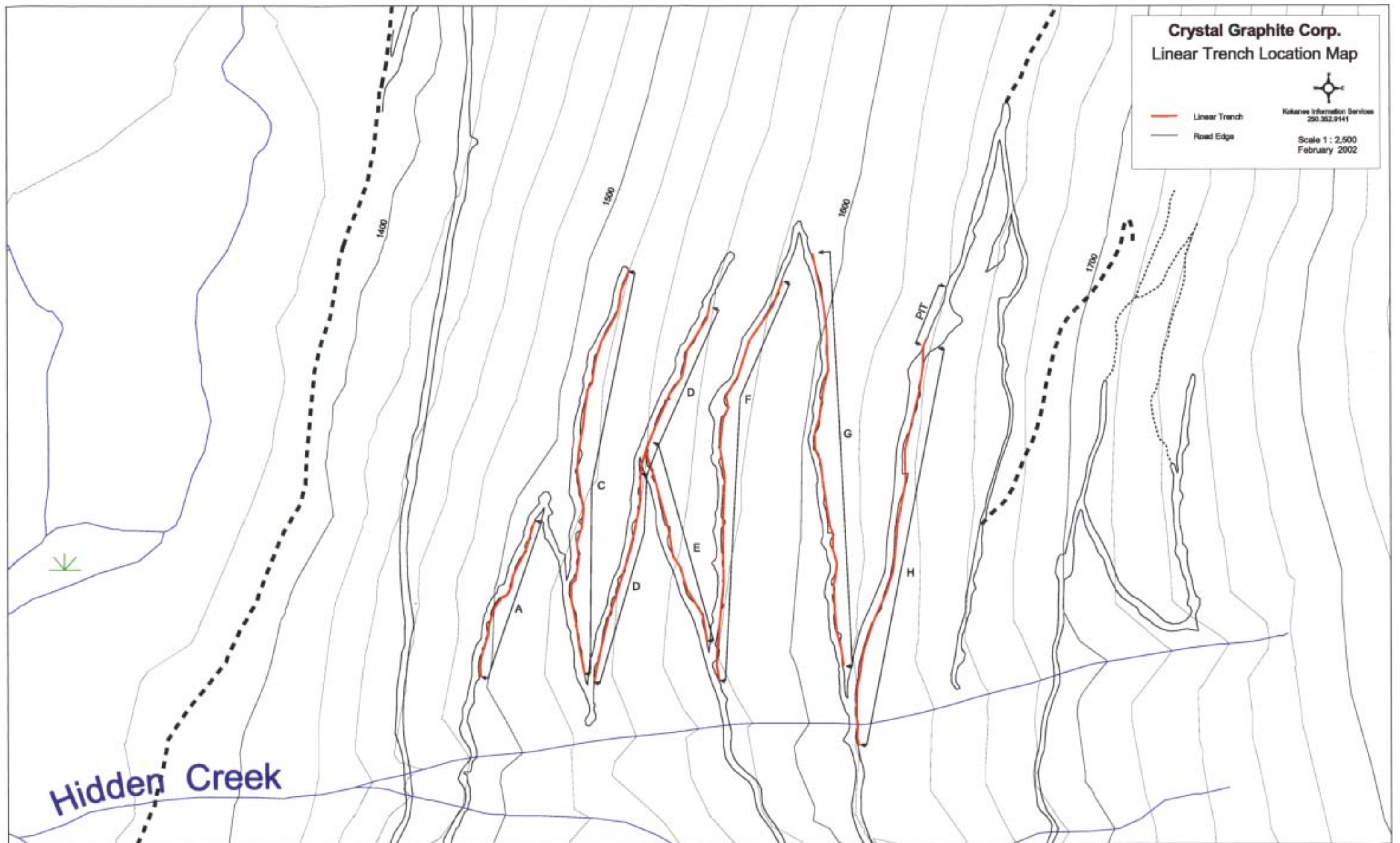


Figure 9 Linear Trench Location Map

Crystal Graphite Corporation installed sample preparation facilities, and a Leco analyzer, and had staff trained by Leco, and Jeff Austin P.Eng. of International Metallurgical and Environmental Inc. of Kelowna, B.C. Staff was instructed in the handling, preparation, and analysis of samples. The first 158 core samples from drilling were all prepped, and analyzed at CGC's facility, and at Bondar Clegg, while all the samples from the slit-trenching program were prepped at CGC's Koch Creek facility, and then sent for analysis at the Bondar Clegg laboratory. It is understood that Mr. Austin of IME had complete responsibility for all aspects of the preparation and analytical work done here at this time. Over time consulting staff were able to convince management that this arrangement was not particularly suitable for the purposes of exploration work, due to security and contamination, as well as perception issues, and management eventually saw the dilemma, and from that point on all samples were sent out to Bondar Clegg in North Vancouver for preparation and analysis.

The protocol for the sample preparation and analytical procedure was standardized between the laboratories used. Samples were first dried and then crushed using a jaw crusher to produce an approximately minus 6 mesh product. This is then riffle split to produce a 200 gram sample, which is then pulverized in a ring and puck pulverizer. The minus 150 mesh material thusly produced is then ready for analysis. The crusher and pulverizer are cleaned with clean quartz sand after every sample preparation to prevent cross contamination between samples. From here the sample material is placed in a Leco crucible, and weighed, and then is immersed in a dilute hydrochloric acid leach, which removes virtually all inorganic carbon. The resulting chloride residue inside the Leco crucible is washed off with de-ionized water after placing the crucible into a suction apparatus. After drying, the crucible containing the leached graphite sample is placed in a Leco 200 analyzer, where it is essentially vaporized in a high-frequency induction furnace at temperatures approaching 1500° C. Combustion at these temperatures is achieved through the introduction of a stream of oxygen. The gasses produced are then passed directly into a cell through which infrared (IR) energy is transmitted. The carbon dioxide produced in vaporizing the sample absorbs IR

energy at a precise wavelength within the IR spectrum, hence through determination of the amount of absorption, the total fixed carbon content of the sample can be calculated by the instrument. As substantially all inorganic carbon has been removed during the preparation phase, the total carbon reported is the organic or fixed carbon which is contained within the sample. The instrument is calibrated at regular intervals with a known carbon standard to ensure that the information displayed is accurate.

It has been the author's observation that quite a disparity can exist from laboratory to laboratory, or from subsequent re-analysis of any given sample at a single laboratory utilizing the Leco method. Howard (1994) noted this problem of assay reliability also, and attributed it primarily to the small sample size. As he pointed out, it is "...unrealistic to think that 1 gram is representative of a tonne of material." Subsequent to CGC personnel's trip to China in December 2001, wherein three producing graphite operations were visited (T. Nunn, P.Eng. personal communication), there has been considerable discussion between various staff of Crystal Graphite over whether or not the Chinese "double loss on ignition" method might be more indicative of grade. Correspondence continues with the Chinese regarding this matter, with grade investigation/analytical work being performed at CGC's laboratory. Independent studies are ongoing and are presently headed by Mr. Peter Gunn, M.Sc. of Christchurch, New Zealand to determine which is the more accurate method. It should be noted that the Chinese graphite operations (T. Nunn, P.Eng. personal communication) only consider in-situ graphite grades as a guide, placing emphasis on visual observation within the quarry as grade control.

Except for trips to the field, the author was on site at the logging/preparation area almost for twenty-four hours a day, for the duration of all the field work reported. Quite often when the author was not on site one of the geologists mentioned earlier in the report would be in the vicinity. An eye was kept open for any tampering or other mishandling of the samples. No evidence was noted of anything untoward occurring, and subsequent analysis of the data generated does not indicate that any great discrepancies exist.

## DATA VERIFICATION

As time went on the author became more involved with all aspects of the exploration program, and it was obvious that it would be desirable to verify the results obtained to date, and in the course of future work. In September seventeen duplicate samples were taken from the remaining core from the 2001 drill program, from intervals which were previously prepped, and or analyzed at CGC's facility, and were resubmitted with new numerical identifiers to Bondar Clegg for analysis. Additionally, in September 17 check slit-trenches were excavated adjacent to trenches done during the summer program, and the 43 samples thusly produced were shipped directly to Bondar, and Acme Analytical in Vancouver. At this point some comparison work was also done wherein identical samples were sent to Bondar, and Acme, and also analyzed in-house. Finally, during the linear trenching program six samples were split, with duplicates being sent to CGC's, and Acme's laboratories. One of these samples was a blank sample which should contain negligible amounts of organic carbon.

There tended overall to be relatively good agreement between all the laboratories, and no great differences were noted, on an overall basis. Having said that, however occasionally a fair amount of difference did sometimes appear in some check sampling assays, but as mentioned in the section above it is the author's experience that a considerable amount of analytical discrepancy is to be expected from laboratory to laboratory, and even from some reruns of the same sample by the same lab. Results have been noted to be distributed fairly evenly both positive and negative from anything prepared and analyzed or prepared only at the Koch Creek facility. No gross error, or other significant overstatement or understatement appears to have been reported by any of the labs used. It should be noted here that CGC's laboratory always ran one, or if results dictated two repeat analyses of all samples submitted, usually with decent agreement. Also the author often spent time in CGC's laboratory, monitoring results as

they became available, and did not see anything which was alarming or which generated any great deal of concern with respect to methodology, reported results etc.

## MINERAL RESOURCE ESTIMATES

The bulk of the exploration work on the Black Crystal property, which was performed during 2000 and 2001 was planned with a view to produce resource estimates. Planning for this work was conducted by MDS Mining Consultants of Auckland, New Zealand. Local geologists were responsible for the implementation of the program, with license to alter or amend it when conditions on the ground necessitated changes. From the work performed up to, but not including the Fall 2001 trenching program MDS (2001) produced an Interim Mineral Resource Assessment wherein they calculated that the following resource exists on the property:

**Table 3: Mineral Resource Totals by Category**

<b>Resource Category</b>	<b>Tonnes (t x 1000)</b>	<b>Graphite (% FC)</b>	<b>Graphite (t x 1000)</b>
<b>Insitu Resource – Regolith Zone</b>			
Inferred	0.4	2.68	0.0
Indicated	300.8	2.78	8.4
Measured	711.8	1.27	9.0
Total Insitu	1,013.0	1.72	17.4
<b>Insitu Resource – Hard Rock Zone</b>			
Inferred	856.0	1.59	13.6
Indicated	9,895.7	1.28	126.8
Measured	1,199.8	1.35	16.2
Total Insitu	11,951.5	1.31	156.5
<b>Total Resource</b>			
Inferred	856.4	1.59	13.6
Indicated	10,196.5	1.33	135.1
Measured	1,911.7	1.33	25.4
Total Insitu	12,964.6	1.34	174.1

**Table 4: Resource Estimate Regolith Zone**

Resource Category	Material Type	Volume m3	Tonnes (t)	Density	Graphite (% FC)	Graphite (t)
Inferred	Till	80	130	1.64	1.28	2
	Cs1	70	110	1.54	2.26	2
	Cs2	80	120	1.53	4.57	5
	Total	230	360		2.68	10
Indicated	Till	24,450	40,100	1.64	1.54	616
	Cs1	3,670	5,700	1.54	1.65	94
	Cs2	680	1,000	1.53	4.01	40
	Transition	127,000	254,000	2.00	3.00	7,620
	Total	155,800	300,800		2.78	8,371
Measured	Till	410,330	672,940	1.64	1.20	8,046
	Cs1	15,470	23,800	1.54	1.63	387
	Cs2	9,870	15,100	1.53	3.88	585
	Total	435,670	711,840		1.27	9,019
<b>Total Insitu</b>		<b>591,700</b>	<b>1,013,00</b>		<b>1.72</b>	<b>17,400</b>

**Table 5: Regolith Zone - Material Type Within Classification**

Material Type	Volume m3	Tonnes (t)	Density	Graphite (% FC)	Graphite (tonnes)
Till	434,870	713,170	1.64	1.21	8,664
Cs1	19,200	29,570	1.54	1.63	483
Cs2	10,630	16,260	1.53	3.89	633
Transition	127,000	254,000	2.00	3.00	7,620
<b>Total</b>	<b>591,700</b>	<b>1,013,000</b>		<b>1.72</b>	<b>17,400</b>

**Table 6: Resource Estimate Hard Rock**

Resource Category	Material Type	Volume m3	Tonnes (t)	Density	Graphite (% FC)	Graphite (tonnes)
Inferred	Cs1	160,960	455,570	2.83	1.11	5,066
	Cs2	143,500	400,400	2.79	2.13	8,520
	Total	304,460	855,970		1.59	13,586
Indicated	Cs1	3,349,400	8,464,751	2.83	1.16	98,423
	Cs2	571,580	1,430,994	2.79	1.98	28,331
	Total	3,920,980	9,895,745		1.28	126,754
Measured	Cs1	366,009	1,035,899	2.83	1.24	12,831
	Cs2	58,755	163,926	2.79	2.04	3,347
	Total	424,763	1,199,825		1.35	16,179
<b>Total Insitu</b>		<b>4,225,440</b>	<b>11,951,540</b>		<b>1.31</b>	<b>156,518</b>

**Table 7: Hard Rock Resource by Grade Range**

Grade Range	Volume m3	Tonnes (t)	Graphite (% FC)	Density	Graphite (tonnes)
<0.5	76,570	216,680	0.36	2.83	782
0.5-1.0	919,360	2,601,720	0.83	2.83	21608
1.0-1.5	2,164,450	6,142,360	1.25	2.83	76436
1.5-2.0	739,040	2,080,880	1.68	2.82	34903
2.0-2.5	224,320	626,160	2.20	2.79	13,774
2.5-3.0	43,790	122,180	2.69	2.79	3,286
3.0-3.5	30,130	84,060	3.29	2.79	2,769
3.5-4.0	24,100	67,250	3.76	2.79	2,526
4.0-4.5	3,050	8,500	4.09	2.79	348
4.5-5.0	230	630	4.64	2.79	29
>5.0	400	1,120	5.15	2.79	58
<b>Totals</b>	<b>4,225,440</b>	<b>11,951,540</b>	<b>1.31</b>		<b>156,518</b>



## INTERPRETATION AND CONCLUSIONS

The trenching and diamond drilling programs were successful in increasing the confidence in the geometry, and limits of, as well as defining the extent of graphite mineralization within the area of interest. Additionally the diamond drilling campaign has indicated that a potential further resource lies down-dip from the project area. The slit-trenching program was successful in determining that a large resource of low grade graphite mineralized glacio-fluvial till of almost 450,000 tonnes (MDS 2001), which would be very amenable to extraction, exists in the area of investigation. The linear trenching program determined that two principal areas exist where the graphitic calc-silicate host has been weathered, and which are of primary importance economically.

The diamond drilling program was extremely beneficial in determining those areas of hard rock resource which are of greatest interest economically, at least initially, while indicating and partially delimiting those areas of lesser economic interest, where due to various factors, or conditions one would be best advised not to concentrate ones efforts in the near future. MDS Mining Consultants (MDS, 2001) were able to use this information coupled with the information produced during the Year 2000 drill program, to determine that a total of almost 12,000,000 tonnes of resource exists within the area of investigation. Additionally it was shown that mineralization does occur down-dip to the south of that previously known to occur, as the normal section starting with Cs2 was encountered starting at a depth of 61 metres (all of which was overburden) in drill hole BC0123, which was at the time of drilling roughly 400 metres south of the closest drill hole in the deposit area.

As mentioned above the slit trenching program was quite effective in evaluating the contained resource within the glacio-fluvial till which blankets the area of interest. However at this point there was still quite a bit of uncertainty surrounding the weathered Calc-Silicate resource, as it was felt that a "transition zone" existed which could not be properly evaluated by utilizing slit trenches. Quite often the slit trenches would

terminate in what ultimately turned out to be fairly thin pegmatites, or siliceous zones that halted advancement. At the end of the slit trenching program a full 127,000 tonnes of "Transition Zone" material existed within the Indicated Category (MDS 2001), and it was felt desirable to move as much of that as possible into the Measured Category.

The linear trenching program worked well in providing the necessary insight into the "transition zone", which had been identified during slit trenching efforts in the past year, but which had not been fully explored. As mentioned earlier, this zone along with the other weathered Calc-Silicate material is the single most important target on the property, due to its proximity to surface, the ease with which it could be extracted, and also as it is the highest grade target in the area of investigation. Loss of cohesion, and mass, due to the dissolution of carbonate, which results in an increase in overall percentage of graphite, make this a very appealing target. A revised resource figure with respect to the weathered material, and the "transition zone" has not been determined (subsequent to the completion of the linear trenching program) as of yet. Additionally, considerable information was gleaned with respect to subcropping geology during the execution of this phase of the project.

From the work undertaken it appears that there are two well defined, more or less parallel bands of Cs2 mineralization which outcrop/subcrop, and at least one more which is less well defined which occurs between these two. Interior to these two areas there is a band of Cs1 mineralization, and there is another to the south of the more southerly of the two Cs2 bands. As the observed dips of the two Cs2 units are concordant, and the sections in both areas terminate (for the most part) in the Quartz footwall, and the most northerly Cs2 band is not seen stratigraphically below the southernmost unit, it appears that this repetition is most likely due to displacement along roughly easterly trending fault(s). There is some evidence locally to suggest (local hanging wall quartz unit) the faint possibility of recumbent folding along an easterly trending axis, however the data to date best fits the faulted recurrence theory. This near surface faulted repetition of the zones of interest explains why such a large area of mineralization occurs at or near the surface in the area of interest. It appears

that the bulk of the Quartz Monzonite intrusives occur in the northernmost to central portions of the area of interest, and seem to be less prevalent as one moves southerly.

To date the structure in the area of investigation has not been properly worked out, and all of the controlling factors of mineralization have not been determined. Additional data generation, coupled with a detailed analysis of the data produced to date may very well define the local geometry, and controls on mineralization.

Petrographic work (Harris 2001) on two pegmatite samples, and rare earth element work on four pegmatite samples did not disclose the presence of any gem, precious or semi-precious stones, or rare earth element, or any other material of any economic importance.

In Conclusion:

1. The drilling program has provided overall positive results and the deposit has been better defined, although there is some evidence to suggest that there are limits in certain directions. At this juncture it would be premature to condemn any area locally as not being prospective for hosting at least interesting quantities of Calc-Silicate hosted Graphite mineralization as still more work needs to be done (mapping, structural interpretation etc.) before totally precluding any area from future plans. That being said however it is obvious from the data generated where the highest priority areas lie, as most importantly it has been proven that the deposit does extend down-dip.
2. The slit trenching program was successful in determining that a sizable low-grade resource of graphite mineralized till exists on the property, and that also several areas were quite prospective for hosting economically significant deposits of regolithic or transitional zone mineralization.
3. Outcrop mapping earlier on in the program, and then subcrop mapping during the linear trenching program were effective in producing a map of surficial geology.

4. The linear trenching program conducted in the fall has given an increased understanding of the extent of, and the volume of Calc-Silicate weathered material, although a final volumetric determination has not been made as of the date of this report.

## **RECOMMENDATIONS**

The work described on the property has been generally quite positive to date, and CGC management has decided to proceed to the mine planning, and permitting stage. In support of this forward looking thinking, an exploration program is proposed for the property, which would entail an expenditure of approximately \$580,000. The purposes of this program would be four fold. First to delimit the northern pod of weathered Cs material, and to better define the underlying hard rock mineralization, in the immediate locale, in an effort to increase the confidence level in the resource contained, for ultimate determination if it is a minable target. Secondly, to better define the lateral limits of the southern pod of weathered Cs mineralization. Thirdly to better define, and “prove up” the down dip resource to the south. Fourthly, to explore the claims in the general area, for the continuation of the mineralization seen in the area of interest, and/or determine if more areas of mineralization, exist in the general area.

The initial steps of the program envisioned would entail the construction of exploration trails in the area of both the northern, and southern pods of weathered Cs material. It would probably be most advantageous to start in the vicinity of the southern pod of Cs material, and to try to co-ordinate this work so that it dovetails or compliments any of the activities planned with respect to the proposed mining in this area. Concurrently mapping/prospecting would commence on the property. This will serve several purposes; a) correlate the rocks seen here with those reported regionally, b) determine the property scale geological structure, so that this knowledge may then be applied in an effort to determine any structural controls on mineralization which can lead to a predictive structural model, which then could lead to pinpointing areas which may host

economically significant mineralization, c) locate areas where similar graphite mineralized calc-silicate rocks, or other mineralized lithologies outcrop.

Once the southern pod of mineralization has been delimited in the process of trail/road building it could then be determined if drilling is necessary for any reason to facilitate the commencement of operations in this area. If not, then work would proceed on the northern pod, and after exploration trail construction and the mapping of any exposures uncovered in the process of trail building, drilling would be initiated in this area. Locally the northern pod is overlain by quite a thick blanket of till, hence it is anticipated that drilling alone would be the most cost effective tool for the garnering of information with respect to the weathered zone, and the hard rock mineralization beneath it. It is envisioned that controlled drilling using a diamond drill could provide the required information during penetration of the weathered zone. Excellent recovery is possible during saprolite drilling in weathered climates utilizing a core drill, and can usually be guaranteed by inclusion of a penalty of non-payment for substandard recovery in the contract. However, as this would be a slow process with respect to drilling, an hourly rate, or bonus should also be included in the contract for this work. These holes would be quite shallow – probably only up to 20 metres in depth, and should be terminated immediately in the footwall quartz unit. Because of the delicacy of such an operation a geologist, or other technical person should be on site at all times during drilling. Should sufficient weathered calc-silicate material resource be identified near surface, and should quarry operations be underway concurrently on the southern pod of mineralization, and the equipment available, it may also be advantageous at this juncture to take a bulk sample, or several smaller samples from this general area for metallurgical testing.

At the termination of work in the northern area the small drill which would be most suitable for shallow work of this nature would be demobilized, and a larger drill would be mobilized for work in the southern area where work would commence, drilling definition holes, and all southerly, and lateral step outs as deemed necessary.

Following the termination of drilling in the southern area, and curtailment of the regional exploration, and subsequent to the initial compilation of the data generated during that aspect of the proposed program, the drill would be moved elsewhere on the property for an exploratory drill program in an attempt to tag the mineralized horizon elsewhere. Due to the possible existence of more weathered horizon material a technical person should be on hand for all overburden drilling during this exploratory drilling also, in order to closely monitor the cuttings for any sign of graphite mineralization.

**Table 8: Projected Costs of Proposed Exploration**

**Phase I**

1,000 metres NQ Diamond Drilling @ \$75/m	\$75,000
Mob/demob drilling equipment	\$4,000
Regolith Drilling – 40hrs @ \$100/hour	\$4,000
Geologist	\$21,000
Project geologist	\$24,000
Excavator & Operator	\$20,500
2 - 4 x 4 Pickup Trucks	\$7,200
Helicopter 20 hrs x \$1250/hr	\$25,000
350 Samples @ \$20/sample	\$7,000
2 Assistants @ \$4,000 per month each	\$16,000
Accommodation & Food	\$6,000
Permitting Costs	\$1,000
Shipping	\$1,000
Phone/Fax/Sat Phone	\$1,000
Preliminary reporting/drafting/data analysis	\$3,000
Remediation costs	\$4,000
Fuel/Field Supplies/Equipment Rental	\$5,700
Contingency 15%	\$33,810

**SUBTOTAL PHASE I COSTS \$259,210**

**Phase II**

2500m NQ Diamond Drilling @ \$75/	\$187,500
Mob/Demob drilling equipment	\$5,000
Excavator & Operator	\$20,000
Project Geologist	\$24,000
Technician	\$8,000
2 - 4 x 4 Pickup trucks	\$7,200
Fuel/Field Supplies/equipment rental	\$6,000
Accommodation & Food	\$4,000
Transportation	\$2,000
200 Assays @ \$20/sample	\$4,000
Phone/Fax/Sat Phone	\$1,000
Shipping	\$1,000
Report Preparation & Drafting	\$4,500
Computer Modeling	\$15,000
Remediation/cleanup	\$4,000
Contingency 15%	\$29,320

**SUBTOTAL PHASE II COSTS \$322,520**

**TOTAL ESTIMATED COSTS \$581,730**

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## Statement of Exploration Expenditures

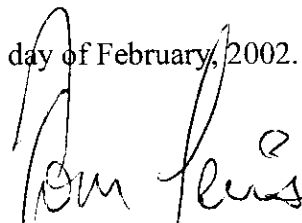
Diamond Drilling 1895m @ \$64.41/m	\$122,073.63
Rental – J.D. 160 L.C. Excavator 5 months (July – Nov) @ 6915.00	\$34,575.00
Insurance on Excavator	\$5,000.00
Simon Schmidt Excavator Operator – Wages July through November	\$19,200.00
Rental – CGC's 235 Excavator – mid Oct through November	\$4,000.00
Chris Craft – Excavator Operator – Wages mid Oct through November	\$6,085.00
Transport – Mob/Demob Drill & Excavators	\$4,000.00
Tom Lewis – Consulting Fees May through August 71 days @ \$325/day	\$23,075.00
September through Mid December 84 days @ \$350/day	\$29,400.00
T. Lewis - 4x4 truck rental May through mid December 155 days @\$60/day	\$9,300.00
Bernie Augsten – Consulting Fees May through August 84 days @ \$350/day	\$29,400.00
B. Augsten - 4x4 truck rental May through August 84 days @ \$60/day	\$5,040.00
Jim Chapman – Consulting Fees September 15 days @ \$350/day	\$5,250.00
J. Chapman - 4x4 truck rental September 15 days @ \$60/day	\$900.00
Linda Lewis – Consulting Fees Mid Oct through November 35 days @ \$350/day	\$12,250.00
Linda Lewis – 4x4 truck rental October through November 35 days @ \$60/day	\$2,100.00
Analytical – 644 rock samples @\$18/sample	\$11,592.00
Analytical – 525 regolith/till samples – Bondar @\$14/sample	\$7,350.00
Fuel	\$3,465.86
Tropari Rental – Mid May through early September	\$3,179.59
Surveying – Intermountain Surveys, Ken Murray, Gordon Stein, KGIS	\$5,500.00
T. Lewis – Report writing February 2002 – 7 days @ \$350/day	\$2,450.00
Shipping	\$631.09
Phone/Fax/Two way Radio Rental/Satellite Phone etc.	\$300.00
Groceries/Meals	\$1,171.50
Drilling & Blasting – Exploration Trail Construction – July 24	\$1,500.00
Drafting	\$300.00
Field Supplies	\$350.00
<b>TOTAL</b>	<b>\$349,438.67</b>

## STATEMENT OF QUALIFICATIONS

I, Thomas M. Lewis of the City of Rossland, in the Province of British Columbia, hereby certify that:

1. I am a consulting mineral exploration geologist, and I reside at #43-891 Monte Vista Drive, Rossland, B.C.
2. I am a graduate of Brandon University, Brandon Manitoba, with a BSc., with a major in Geology (1989).
3. I am a graduate of Mount Royal College, Calgary Alberta with a diploma in Petroleum & Mineral Land Management (1986), and of Fanshawe College, London Ontario with a diploma in Social Sciences, and Humanities (1975).
4. I am a fellow of the Geological Association of Canada.
5. I have worked in various capacities in the exploration field, both for hydrocarbons and mineral resources since 1975, and have been working primarily as a consulting geologist since graduation in 1989.
6. This report is based on actual observations I made while in the course of my duties as a geological consultant, while employed by Crystal Graphite Corporation, or from information obtained from the references cited.
7. I have no direct or indirect interest in Crystal Graphite, or any associated company as of the date of this report, nor do I expect to receive any in the future.

Dated at Slocan Park, British Columbia on this 22<sup>nd</sup> day of February, 2002.



Thomas M. Lewis, B.Sc., FGAC  
Consulting Geologist

**Appendix A: Drill & Trench Logs**

# CRYSTAL GRAPHITE CORPORATION

## FALL 2001 - TRENCH DATA FORM

LOCATION		RD - DATUM		SAMPL	LITH	COMMENTS	UNCONS HEIGHT			
Tr #	M's	Start	End	No.			BASE	Pict #	CS1/2 BLW?	TILL/OB ABV
"H"	15	-1.2	-2.3	3178	Cs2a	Pit - Orangey brown to greyish	Cs2	4	N	1.2
"H"	15	-2.3	-4.3	3179	Cs2b	Pit - With bands to 30 cm of consolidated Cs2	Cs2	4	N	
"H"	20	-1	-1.8	3180	Cs2a	Pit - Medium orange brown - no spinel noted	P	5	N	1
"H"	20	-1.8	-2.9	3181	Cs2b	Pit - With some consolidated - medium grey to rusty orange	P	5	N	
"H"	25	-1.3	-2	3182	Cs1b	Semi-competent with ~ 8% Pegmatite lenses ~ 1 % graphite	P/Sk	6	N	1.3
"H"	30	-0.7	-1.8	3183	Cs1a	Rusty graphitic sand - 1-2% graphite	P	7	N	0.7
"H"	45	-1.3	-2.1	3184	TILL	< .5% disseminated graphite	P/sk	8	N	2.4
"H"	55	-0.5	-2	3185	Cs2	Bucket Chan ~ 4% graphite	P?	16	N	1
	Blank	Blank		3186	TILL	Sand from "borrow pit" across from mill - analytical blank			N	
"H"	105	-0.5	-1.4	3201	Cs1a	Grey/rusty brown with 1 - 2% graphite	Cs2?	9	N	1
"H"	110	0	-1	3202	Cs1a	Grey/rusty brown with 1 - 2% graphite		10	N	1.3
"H"	110	-1	-2.3	3203	Cs2a	Steel grey - oxidized with spinel, 2-3% graphite	Cs2	10	N	
"H"	115	-0.8	-1.8	3204	Cs1a	Med orangey brown with 1 - 2% graphite		11		1.8
"H"	115	-1.8	-3.2	3205	Cs2a	Greenish grey to brown with 5% graphite	Cs2	11	N	
"H"	120	-1.4	-3.2	3206	P	With ~ 10% medium brown weathered Cs1	P	12	N	2.2
"H"	125	-0.7	-1.7	3207	TILL	CS1/OB < 1% disseminated graphite	P	13	N	2.5
"H"	130	-2	-3.2	3208	TILL	CS1/OB < 1% disseminated graphite	Cs1	14	N	4.5
"H"	135	-0.9	-2.8	3209	TILL	CS1/OB < 1% disseminated graphite	Cs1	15	N	2.8
"H"	180	grab	grab	3210	Cs2a	Bucket Channel - Greenish grey - 4% disseminated graphite	Cs2		N?	3.3
"H"	185	-0.9	-2.9	3211	Cs2a	Brownish grey - 5 - 6% graphite	Cs2	20	N	1.9
"H"	195	-0.9	-3.4	3212	Cs2a	Light brownish grey, ~ 8% Pegmatite, 5 - 7% graphite	Cs2	21	N	2.1
"H"	200	-1	-3.7	3213	Cs2a	As above	Cs2	22,23	N	2.5
"H"	205	-0.9	-3.8	3214	Cs2a	As above	Cs2	24,25	N	3.3
"H"	210	-0.7	-2.7	3215	Cs2a	As above		1		4.2
"H"	210	-2.7	-4.2	3216	Cs2a	As above 4 - 6% disseminated graphite	Cs2	2	N	
"H"	215	-2	-3.2	3217	Cs2a	Light brownish grey, 4 - 6% graphite				5.3
"H"	215	-3.2	-4.2	3218	Cs2a	As above	Cs2	3	N	
"H"	220	-1	-2.5	3219	Cs2a	Medium orangish, 4 - 6% graphite				3.5
"H"	220	-2.5	-4.5	3220	Cs2a	As above but more of a brownish grey colour	Cs2	4	N	
"H"	225	-1.2	-2.7	3221	Cs1a	Medium orange brown, 1 - 2% graphite				3.5
"H"	225	-2.7	-4.2	3222	Cs1a	As above - chunky semi-consolidated at base	Cs1	5	N	

"H"	225	-2.7	-4.2	3222	Cs1a As above - chunky semi-consolidated at base	Cs1	5	N	
"H"	235	0	-2.3	3223	Cs2a Cs1 appearance, but trace of spinel present				2.2
"H"	235	-2.3	-3.6	3224	Cs2a/b As above - with pods of semi - cons. Cs2		7		
"H"	235	0	1.2	3225	Cs2a Light orangey grey, 2% graphite	Cs2	6	N	
"H"	240	0	-1	3226	TILL/Cs2 Sample of Cs2 block Till		8		3.2
"H"	240	-1	-2.5	3227	Cs2 Low grade 1 - 2%	QM	9	N	
"H"	245	-0.6	-1	3228	Cs2a Medium orangey brown - 1-2% graphite, trace spinel	QM	10	N	3
"H"	250	-1.2	-1.9	3229	Cs2a/b Cs2/Sk - 20% consolidated, Trace spinel, 1 - 2% graphite	QM	11	N	3.6
"G"	10	-2	-3	3230	Cs2a Medium brown/grey, 2% graphite		14		4
"G"	10	-3	-4.5	3231	Cs2a Light brown/grey, ~3% weathered pegmatite, 2 - 3% graphite	Cs2	15	N	
"G"	15	-2	-4	3232	Cs2a Light brown/steel grey, 3 - 4% graphite		16		4
"G"	15	0	-2	3233	TILL/Cs2 Abundant weathered Cs2 blocks in Till	Cs2	17	N	
"G"	20	-0.5	-2	3234	Cs2a Light brownish/grey, 3 - 4% graphite		18		2
"G"	20	-2	-3.5	3235	Cs2a As above	Cs2	19	N	
"G"	25	0	-1	3236	Cs2a Medium brown grey, 10% pegmatites, 3% graphite		20		1.5
"G"	25	-1	-3	3237	Cs2a/b Light brown/grey, ~3% weathered pegmatite, 2 - 3% graphite	Cs2	21	N	
"G"	30	0	-1	3238	Cs2a With ~ 10% Till mixed in				1.5
"G"	30	-1	-2.7	3239	Cs2a Peg & Silicified pods to 20% -	Cs2		N	
"G"	40	0	-0.7	3240	Cs1a&b Med yellowish-orange 1 -2% graphite - peg & sil lenses to 20%	Cs1		N	1.5
"G"	45	0	1	3241	Cs1a Med yellowish-orange 2% graphite	Cs1		N	1.5
"G"	50	0	1	3242	Cs1a&b Med yellowish-orange 2% graphite	Cs1		N	1.5
"G"	55	0	-1.5	3243	Cs1a&b Med orangey brown 15% consolidated & 15% Peg	Cs1			1.5
"G"	55	-1.5	-3	3244	Cs1a&b Med orangey brown 15% consolidated & 15% Peg	Cs1		N	
"G"	60	0	1	3245	Cs1a Light orangey brown, 2 - 3% graphite		3		1
"G"	60	0	-1.5	3246	Cs1b Light brownish grey, semi consolidated, 2% graphite		4		
"G"	60	-1.5	-3	3247	Cs1b&c Light rusty orangey brown, 1 - 2% graphite	Cs1		N	
"G"	65	-0.5	1	3248	Cs1a&b Med orange brown, 20% pegmatite, 10% consolidated Cs1		5		1.5
"G"	65	-0.5	-2	3249	Cs1b&c As above but 50% semi-consolidated, 20% peg	Cs1	6	N	
"G"	70	0	-1.3	3250	Cs1a&b Med orange brown, 20% pegmatite, 2% graphite		7		1.5
"G"	70	-1.3	-2.8	3251	Cs1b As above with 50% pegmatite & increasingly consolidated	Cs1/P	8	N	
"G"	75	0	1	3252	Cs1a Med orange brown, 8% peg, 1 - 2% graphite		9		1
"G"	75	0	-2	3253	Cs1a Rusty brown, 15% peg, 1% graphite	Cs1/P	10	N	
"G"	80	0	-1	3254	Cs1a Light brown, 1-2% graphite		11		1.5
"G"	80	-1	-2	3255	Cs1a Light brownish grey, 10% peg pods & lenses, 1 - 2% graphite	Cs1	12	N	
"G"	85	0	-2	3256	Cs1b Med orange brown, semi-competant, 1 - 2% graphite	P/Sk	16-20	N	2.5

"G"	117	0	0.7	3257	Cs/Mb1	Sil Cs & 30 cm of Mbl,		21		
"G"	117	0	-1.2	3258	Cs2a	Dark greyish to reddish brown, 5 - 7% graphite, 3% Peg	Cs2	22	N	1.5
"G"	120	0	0.4	3259	Cs/Mb1	Sil Cs & Mbl, similar to 3257		23		
"G"	120	0	-1.2	3260	Cs2a	Dark greyish brown, 5 - 7% graphite, 3% Peg	Cs2	24	N	1
"G"	125	0	1	3261	Cs2a	As above	Cs2	1	N	1.5
"G"	150	0	-2	3262	TILL	< 1% graphite	TILL	4,5	Y	
"G"	170	-2.5	-3.5	3263	Cs1a	Bucket chan - Reddish brown ~2% graphite	Cs1		N	4
"G"	175	-2.5	-4	3264	Cs1a	Bucket chan - 40 cm sil pod within	Cs1	6,7	N	4
"G"	180	2	3.6	3265	Cs1a	Med orange brown with ~ 30% TILL mixed in		8		1.5
"G"	180	0	2	3266	Cs1a/b	Med orange - sandy, 20% consolidated, 2% graphite		9		
"G"	180	0	-2.5	3267	Csa1/b	Bucket channel, 20% consolidated, 2 - 3% graphite	Cs1	10	N	
"G"	185	0	2	3268	Cs2a/b	Med to dark brown, 20% consolidated, 3 - 4% graphite		13		2
"G"	185	0	-1.5	3269	Cs1a?	Orangey brown, no spinel, 4 - 5% graphite		14		
"G"	185	-1.5	-3.5	3270	Cs1a/b/c	Bucket grab - Competency increases with depth, 40%a, 40%b	Cs1	15	N	
"G"	190	0	1.5	3271	Cs2a	Med brownish grey, some foliation		16		1.5
"G"	190	0	-1.7	3272	Cs2a/b	As above, with 20% competent		17		
"G"	190	-1.7	-3.2	3273	Cs1a/b	Bucket chan - Med orange brown, 25% semi-consolidated	Cs1	1	N	
"G"	195	1.5	-1	3274	Cs2a	Med brownish grey, 4 - 5% graphite		2		1.5
"G"	195	-1	-3.5	3275	Cs1a/b	Bucket chan - orange brown, 25% semi-consolidated 4% graphite	Cs1	3	N	
"G"	200	0	1.5	3276	Cs2a	Light to Med brownish grey, 4 - 5% graphite		4,5		1.5
"G"	200	0	-2	3277	Cs2a	Bucket chan - Med orange brown/grey, 40% semi & consolidated		7		
"G"	200	-2	-4.5	3278	Cs1a/b	Bucket chan - Med orange brown, 4 - 5% graphite	Cs1	8	N	
"G"	205	0	-2.5	3279	Cs2a	Bucket chan - Lt to Med brownish/grey, greenish, 4 - 5% graphite		11		2.5
"G"	205	-2.5	-5	3280	Cs2a	Bucket chan - As above - pegmatite layers to 25 cm	Cs1	12	N	
"G"	210	-0.5	-3	3281	Cs2a	Bucket chan - brown grey ~ 5% graphite		18,19		3.5
"G"	210	-3	-5.5	3282	Cs2a/b	Bucket chan - as above, increasing competency towards base	Cs2	20	N	
"G"	215	-1	-3	3283	Cs2a	Bucket chan - As above - Pegmatite noted above persists		1		3.5
"G"	215	-3	-5	3284	Cs2a/b	Bucket chan - As above - Pegmatite noted above persists	Cs2	2	N	
"G"	220	-0.5	-2.7	3285	Cs2a	Light brownish grey - minor Pegmatite, 5 - 6%		3		2.5
"G"	220	-2.7	-4.7	3286	Cs2a	As above	Cs2	4	N	
"G"	225	-0.5	-3.5	3287	Cs2a	Med orangey brown/grey - 25% Pegmatite, ~ 4% graphite	Cs2	5,6	N	2.5
"G"	230	-1	-3.5	3288	Cs2a	As above - decrease in Pegmatite lenses	Cs2	7,8	N	3
"G"	235	-1	2	3289	TILL	Abundant Weathered Cs2 blocks in Till ~ 3% graphite		10		3
"G"	235	-1	-4	3290	Cs2a/b	Med orangey brown Peg lenses to 40 cm, 4 - 5% graphite	Cs2	11	N	
"G"	240	0	-2.5	3291	Till	Abundant weathered Cs2 blocks in Till	Cs2	12,13	N	4.5

"F"	270	-0.5	-1.1	2382	Cs1a	Med orangey brown		3 & 4	N	1.25
"F"	265	-2.5	-1.5	2383	Cs1a	Med orangey brown		3 & 4	N	1.25
"F"	250	-2.4	-1.7	2384	Cs1a	Med orangey brown		3 & 4	N	1
"F"	245	-2.7	-2.1	2385	Cs2	Greyish with 4 - 5% graphite		3 & 4	N	1.25
"F"	239	-0.5	-1.5	3317	Cs2a	Med brownish grey - 4 - 5% graphite	P/Sk?	12	N	1.3
"F"	205	0	-0.6	3316	Cs1	Med orange to reddish brown, 2% graphite	Cs/P	11	N	2
"F"	157	-0.5	-1.1	3315	Cs2a	Med reddish grey - 2 - 3% graphite	Cs2?		N	1.5
"F"	55	-5	-5	3314	Cs2b/c	Bucket grab - from base of trench	Cs2	4	N	6.5
"F"	50	-3.5	-5	3313	Cs1a	Bucket Chan/grab - from base of trench	P		N	5.5
"F"	40	-3	-5.6	3312	Cs1a	Bucket Chan/grab - from base of trench	Cs2		N	5.5
"F"	35	-4	-6	3311	Cs1a	Bucket Chan/grab - from base of trench	Cs2	3	N	6
"F"	30	-5	-5	3310	Cs2b	Bucket Chan/grab - from base of trench	Cs2	2	N	7
"E"	0	-2.4	-1.84	2378	Cs2	Greyish brown with 4 - 5% graphite	Cs2	23	N	1.5
"E"	21	-1.75	0.25	2379	Cs2	Greyish brown with 4 - 5% graphite	Cs2	24	Y ~ 20cm	2
"E"	90	-0.6	0	2380	Cs2	Greyish brown with 4 - 5% graphite	Cs2	25	N	2.25
"E"	120	-1.3	-0.4	2381	Cs1	Laced with abundant pegmatites/pegmatitic sweats	P	25	N	2
"D"	25	-1.4	-0.2	2369	Cs2	Greyish brown with 4 - 5% graphite	Cs2	17	N	1.6
"D"	30	-1	0.5	2370	Cs2	Greyish brown with 4 - 5% graphite		18	N	1.75
"D"	30	-2.5	-1	2371	Cs2	Greyish brown with 3 - 4% graphite	Cs2	18	N	
"D"	35	-1.8	0	2372	Cs2	Greyish brown with 4 - 5% graphite		19	N	1.4
"D"	35	0	1.8	2373	Cs2	Greyish brown with 5 - 6% graphite	Cs2	19	N	
"D"	40	-1.4	1.4	2374	Cs2	Greyish brown with 4 - 5% graphite	Cs2		N	1.5
"D"	45	-1.1	1.1	2375	Cs2	Greyish brown with 4 - 5% graphite	Cs2	20	N	1
"D"	62.5	-1	1.5	2376	Cs2	Greyish brown with 4 - 5% graphite	Cs2	21	N	1
"D"	157.5	-3.3	1.1	2377	Cs2	Bucket Channel - greyish brown with 4 - 5% graphite	Cs2	22	Y ~ 20cm	0.9
"D"	215	0	2	3292	Cs1a	Light yellowish grey, 2 - 3% graphite		14		2
"D"	215	0	-1.5	3293	Cs1b	Light greenish - Mbl bands to 30 cm interlayered with Cs1		15		
"D"	215	-1.5	-2	3294	Cs2a/b	Light greenish grey - semi consolidated, 3 - 4% graphite	Cs2	16&17	N	
"D"	220	0	2.5	3295	Cs2a	Medium reddish brown to grey, 4 - 5% graphite		18		2.5
"D"	220	0	-1.8	3296	Cs2?a	Greenish grey abundant diopside, 2% graphite	Cs2	19	N	
"D"	225	0	-2.5	3297	Cs2a	Light greenish grey - ~ 2% graphite	Cs2	20, 21	N	4
"D"	230	-1	-3.2	3298	Cs1a	Med orangey brown, < .5% graphite	Cs1	22,23	N	5
"D"	235	-1	-3	3299	Cs2a/b	Bucket Channel, 3 - 4% graphite	Cs2/P		N	5.5
"D"	240	-2	-3.1	3300	Cs2a/b	Bucket Channel, 3 - 4% graphite	Cs2	5,6	N	6
"D"	250	-4	-5	3301	Cs2a/b	Bucket Channel, 2 - 3% graphite	P	7	N	8



"D"	255	-1.5	-3.5	3302	Cs2a/b	Bucket Channel, 4 - 5% graphite	Cs2	8,9	N	5
"D"	260	-0.5	-2.3	3303	Cs2a/b	As above	Cs2	12,13	Y ~ 10cm	4
"D"	265	-0.5	-2.7	3304	Cs2a	Light brown to greenish grey, 4 - 5% graphite	Cs2	14,15	N	3.5
"D"	270	-1	-3.2	3305	Cs2a	As above	Cs2	18-20	N	4.5
"D"	275	-1.5	-2.5	3306	Cs2a	Brownish grey - 30cm Peg, 4% graphite	QM	21,22	N	5
"D"	280	-2	-3.5	3307	Cs2a	Brown to greenish grey, Peg 20%, 4% graphite	Cs2	23,24	Y	5.5
"D"	285	-2.5	-6	3308	Cs2a	Bucket channel - Description as above	Cs2	24,25	N	6
"D"	290	-2.5	-5	3309	Cs2a	Light to Med brownish grey, 4 - 5% graphite	Cs2	1	N	5.5
"C"	0	-3.2	-1.1	2386	Cs2 & Cs1	With some pegmatite	Cs1	L16	N	1.75
"C"	5	-2.5	0.7	2387	Cs2 & Cs1	Orange brown with some steel grey	Cs1	L16	N	1.5
"C"	10	-1.8	-0.4	2388	Cs1	Orangey brown with 2 - 3% graphite	Cs1	L16	N	1.25
"C"	15	-2.1	-1.5	2389	Cs1	Orangey brown with 2 - 3% graphite	Cs1	L16	N	1
"C"	20	-2	-1.4	2390	Cs2	Greyish brown with 4 - 5% graphite	Cs1	L16	N	1.5
"C"	75	-3	-1.25	2391	Cs1	Orangey brown with 2 - 3% graphite	Cs1	L17	N	1.5
"A"	30	-1.5	-0.5	2392	Cs1	Orangey brown with 2 - 3% graphite	Cs1	11	N	1.5
"A"	35	-1.75	0	2393	Cs1	Orangey brown with 1 - 2% graphite	Cs1	11	N	1.25
"A"	40	-1.35	0	2394	Cs1	Orangey brown with 2 - 3% graphite	Cs1	16	N	1.5
"A"	50	-1	0.6	2395	Cs1	Orangey brown with 2 - 3% graphite	Cs1		N	1
"A"	60	-2	0	2396	Cs1	Orangey brown with 2 - 3% graphite	Cs1		N	1.8
"A"	70	-1.5	-1	2397	Cs1	Orangey brown with 2 - 3% graphite	Cs1		N	1.8
"A"	105	-2.25	-0.5	2398	Cs2	Greyish brown with 4 - 5% graphite	Cs2	17	N	2
"A"	155	-2.5	-1.5	2399	Cs2	Greyish brown with 4 - 5% graphite	Cs2	1	N	1
"A"	160	-2.5	-2	2400	Cs2	Greyish brown with 4 - 5% graphite	Cs2	1	N	0.5



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
				Sample Interval		Pegmatites	SAMPLE NUMBER
From (m)	To (m)			From (m)	To (m)	Cum. Total (m)	
			<p><u>CS2 cont'd</u></p> <ul style="list-style-type: none"> <li>- Within section there is an amorphous graphite lined fault with Breccia bands 3 – 4 cm wide on either side @ 71.32m's. Fault angle is ~ 70° to core axis.</li> <li>- From 61.55 to 61.74 – band of Biotite Gneiss, weakly foliated @~70° to core axis no CaCo3 in zone</li> <li>- From 65.18 to 66.10 Quartz Feldspar Pegmatite. With partially assimilated Cs2. Also contains stringers which tend to be moderately oxidized, which contain &lt;1% graphite, and &lt;1% pyrite/pyrrhotite</li> <li>- Overall Approximate Composition:</li> <li>- Quartz 50 – 55%</li> <li>- CaCo3 30 – 35%</li> <li>- Scapolite 10 –15%</li> <li>- Graphite 1.5 – 3%</li> <li>- Pyrite/Pyrrhotite &lt;1%</li> </ul>				
72.04	74.50	P	<p><u>QUARTZ FELDSPAR BIOTITE PEGMATITE</u></p> <ul style="list-style-type: none"> <li>- Sheared &amp; friable – with few competent blocks greater than 10cm.</li> <li>- Locally up to 1% pyrite, and pyrrhotite</li> <li>- Locally up to 1% Medium grained graphite</li> <li>- Limonitic weathering</li> <li>- Trace CaCo3</li> <li>- Fractures @ 80°, 70°, and 50° to core axis</li> </ul>	72.04	74.37	2.33	4057
74.50	79.25	QFBG	<p><u>QUARTZ FELDSPAR BIOTITE GNEISS</u></p> <ul style="list-style-type: none"> <li>- Weak to moderately foliated @ ~75° to core axis</li> <li>- Fairly competent</li> <li>- Trace disseminated pyrrhotite</li> <li>- Local thin bands with 1 – 2% disseminated graphite</li> <li>- From 77.78 to 78.22 Calc-Silicate Gneiss band, light grey, medium crystalline, trace pyrite, &lt;1%</li> <li>- Disseminated fine grained graphite</li> </ul>				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
				Sample Interval		Pegmatites
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)	
			<b>QFBG cont'd</b> - Quartz 45%      - Feldspar 35% - Biotite 10%      - Clinopyroxene/Diopside 10% -			
79.25	80.13	P	<b>QUARTZ FELDSPAR PEGMATITE</b> - Creamy grey, coarsely crystalline - Irregular clots of biotite, with associated trace fine grained pyrite - Amorphous Quartz 45% - Smokey Quartz Eyes 15% - Feldspar 40% - Biotite/Pyrite/Other Accessory minerals <1%			
80.13	100.98	M1	<b>MARBLE M1</b> - Locally grades to Csl - Buff to Creamy grey, locally greenish (pervasive epidote in skarn?) - Locally weakly foliated – typically @80° to 90° to core axis - Typically massive, granular with medium grained quartz & calcite crystals - Fine to Medium grained phlogopite, typically in darker, stronger foliated sections - <0.5% disseminated fine to medium grained graphite throughout section with local concentrations between 0.5% and 1% - Pegmatite @ ~98.25m's with marginal skarn mineralization – Actinolite/Tremolite & some quartz present as larger "eyes" - N.B. Oxidation ends @ ~74.50m - Approximate Composition: - CaCO3 60%                      - Quartz 25 – 30% - Diopside 10%                      - Graphite < 1% - Pyrite/Pyrrhotite trace      - Access. Minerals 1 – 2%			

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)
100.98	145.20	ICZ	<p><u>INTERCALATED ZONE</u></p> <ul style="list-style-type: none"> <li>- Zone of highly variable lithologies, most typically gneisses of varying mineralogic compositions.</li> <li>- The most predominate of these being a pale greenish (pervasive epidote?) weakly to moderately foliated Feldspar/Quartz/Biotite Gneiss with a trace of CaCo<sub>3</sub>. Local patches of skarn mineralization occurs with Actinolite/Tremolite series minerals present.</li> <li>- The second most common lithology is Feldspar/Biotite Gneiss, which is moderately foliated – typical from 70° to 80° from the core axis. Fine to medium grained, irregularly shaped disseminated faint retrograde garnets are present in this section, usually hosted in the first five meters of the contact of the above M1 unit.</li> <li>- Generally &lt; 1% disseminated pyrite/pyrrhotite</li> <li>- Several narrow relatively clean, medium grained marble bands occur in this in this zone, which contain &lt; 0.5% disseminated graphite</li> <li>- Pegmatites of Varying widths are also present, typically being of the Feldspar/Quartz/Biotite variety. The more notable/wider of these being: 108.88 to 110.73 and 139.35 to 141.86</li> </ul>			
145.20	176.20	QFBG	<p><u>QUARTZ FELDSPAR BIOTITE GNEISS</u></p> <ul style="list-style-type: none"> <li>- Medium to dark grey, finely laminated with alternating dark &amp; light bands</li> <li>- Moderately foliated @ 70° to 90° to core axis – most typically 80°</li> <li>- Numerous thin pegmatites typically 5 to 20cm wide, which are quite often conformable of semi-conformable to foliation.</li> <li>- Local sections grading to Quartz/Feldspar/Biotite/Garnet Gneiss which displays medium to coarse grained faint pink retrograde garnets which are disseminated, and locally comprise up to 2% of the mass. Most notable garnetiferous section is from ~161 to 163.75 (which also exhibits noticeable stain with up to .5% stretched augens, and &lt; .5% disseminated fine grained graphite).</li> <li>- Shearing at ~161.63 in a heavy Biotitic zone, adjacent to ~40 cm (up to ~162m) of strong skarn replacement with Actinolite/Tremolite series minerals present.</li> </ul>			

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
176.20	197.86	P	<p><b>PEGMATITE SWARM ZONE</b></p> <ul style="list-style-type: none"> <li>- Zone of abundant pegmatites of typically Feldspar/Quartz/Biotite composition</li> <li>- Contained Quartz/Feldspar/Biotite/Garnet Gneisses tend to be texturally more mottled or spotted than above section with weaker foliation, with increased feldspar/Quartz content as manifest in the increased frequency and width of these gneissic bands.</li> <li>- Garnet content in select sections in this interval is noticeably higher than seen elsewhere, the garnets being typically faint, pink, medium to coarse grained.</li> <li>- Foliation in this zone is typically @ 70° to 80° to the core axis.</li> <li>- Margins of the Pegmatites quite often indistinct, and there appears to be considerable assimilation &amp;/ alteration of the host rock</li> <li>- Bottom of zone (from ~ 197 to 197.86) gradually decreasing alteration due to increasing distance from pegmatite.</li> <li>- Most notable pegmatites: 179.23 to 180.13    182.57 to 183.06    183.93 to 184.80    187.15 to 190.63* *with abundant coarse biotite.</li> </ul>				
197.86	220.00	QFBG	<p><b>QUARTZ FELDSPAR BIOTITE GNEISS</b></p> <ul style="list-style-type: none"> <li>- Dark grey, banded with typical band width &lt;1mm</li> <li>- Moderately to strongly foliated @ 80° to core axis</li> <li>- Typically trace to &lt;0.5% fine grained disseminated graphite</li> <li>- &lt;0.5% disseminated fine grained pyrrhotite</li> <li>- Local trace fine to med grained poorly formed pink anhedral garnet</li> <li>- Typically Consists of: <ul style="list-style-type: none"> <li>- Feldspar 35 – 45%</li> <li>- Quartz 45 – 50%</li> <li>- Biotite 15%</li> <li>- Graphite &lt;1%</li> </ul> </li> <li>- Mica/Phlogopite &lt;1%</li> </ul>				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
			<p><u>QFBG continued</u></p> <ul style="list-style-type: none"> <li>- Feldspar Quartz Biotite Pegmatite from 219.14 to 219.65</li> <li>- Pegmatitic/Digest zone from 212.32 to 214.50</li> <li>- Gouge filled fault @ 218.20 – fault @ 80° to core axis</li> </ul>				
220.00	226.60	P	<p><u>FELDSPAR QUARTZ BIOTITE PEGMATITE</u></p> <ul style="list-style-type: none"> <li>- Texture ranges from medium to coarsely crystalline.</li> <li>- Interval includes silicified/replaced marble? Section with trace CaCo<sub>3</sub>, greyish green (pervasive chlorite/or epidote?) with crystalline texture.</li> <li>- &lt;0.5% Biotite, Trace fine grained pink anhedral garnet, possible trace mica.</li> <li>- 224.40 to 226.60 – coarsely crystalline – pure pegmatite</li> </ul>				
226.60	230.08	P	<p><u>SILICIFIED MARBLE?</u></p> <ul style="list-style-type: none"> <li>- Mottled grey/green, medium to coarsely crystalline</li> <li>- Massive to weakly foliated @90° to core axis</li> <li>- Quartz 75% - Feldspar 20%</li> <li>- Biotite/Mica &lt;1% - Chlorite? 5%</li> <li>- Feldspar occurs as discrete narrow bands</li> <li>- Fractures – sub parallel to core axis – Quartz/ CaCo<sub>3</sub> healed.</li> </ul>				
230.08	264.55	QFBG	<p><u>QUARTZ FELDSPAR BIOTITE GNEISS</u></p> <ul style="list-style-type: none"> <li>- Much like other QFBG seen throughout hole</li> <li>- Foliation 85° to 90° to core axis in upper portions - @ 70° in lower (from ~250m on)</li> <li>- Overall in the neighbourhood of 10 – 15% Pegmatite dykes in section</li> <li>- Contact with Crystalline Marble unit below is gradational &amp; see a decrease in biotite content starting @~263.25</li> <li>- Pegmatite @ 264.17</li> </ul>				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
264.55	271.45	MI	<p><u>MARBLE</u></p> <ul style="list-style-type: none"> <li>- Creamy grey, medium to Coarse grained crypto crystalline</li> <li>- Faint pale green (epidote?) hue</li> <li>- Trace disseminated fine grained graphite</li> <li>- Constituent Minerals:</li> <li>- CaCo<sub>3</sub> 70% Quartz 10%</li> <li>- Diopside 10% Biotite/Phlogopite 1%</li> </ul>				
271.45	290.78	LIZ	<p><u>LOWER INTERCALATED ZONE</u></p> <ul style="list-style-type: none"> <li>- 271.45 to 272.92 Quartz Feldspar Diopside Marble? replacement zone</li> <li>- 272.92 to 275.59 Quartz Feldspar Biotite Gneiss – with Foliation @ ~ 75° to core axis</li> <li>- 275.59 to 281.70 Quartz Feldspar Diopside Marble? replacement zone, local sections trace CaCo<sub>3</sub>, &amp; sections of actual marble locally. Weakly foliated @ 75° to LCA</li> <li>- 281.70 to 290.78 Quartz Feldspar Biotite Gneiss. First 70cm's gradational lithology change from unit above. Finely laminated typically, with sections of coarser banding. Foliation ~85° to core axis.</li> <li>- Bottom 1 meter of this section has abundant (4 – 5%) disseminated fine to medium grained poorly formed pink garnet</li> </ul>				



SURVEY DATA										DRILLING DATA				
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1	221.00	67.36	-53°	-53°	024°	042.5°						DATE DRILLING STARTED		
2	471.02	143.56	-54	-54	025°	043.5°						DATE DRILLING ENDED		
												(ft.)	(m)	
												TOTAL DEPTH	474.00	144.47
												CASING DEPTH	20.00	6.1
												CASING		
												STEEL IN HOLE	No	PL
												LOGGED BY	T. Lewis	
												LOGGING DATE	May 29 - 31/2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
0	6.1		<u>CASING - OVERBURDEN (TO 4.7M)</u>				
6.1	24.7	QFBG	<u>QUARTZ FELDSPAR BIOTITE GNEISS</u> - Light grey, banded, moderately foliated @ 70° to 80° to core axis - Includes section of partial digest/skarn @ ~10.40 to 13.40 with tremolite/actinolite mineralization - Includes graphitic section from 13.40 to 18.40, with 1 - 2% very fine grained disseminated graphite with < 0.5% local disseminated pyrite. - Below 18.4m trace disseminated medium grained poorly developed pink garnet	13.40	14.40	0	4058
				14.40	15.40	0	4059
				15.40	16.40	0	4060
				16.40	17.40	0	4061
				17.40	18.40	0.54	4062
				18.40	19.40	0	4063
24.7	34.15	BQFGG	<u>BIOTITE QUARTZ FELDSPAR GARNET GNEISS</u> - Dark Banded, Moderately foliated @ 80° to core axis				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
				Sample Interval		Pegmatites	SAMPLE NUMBER
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)		
			<b><u>Biotite Quartz Feldspar Garnet Gneiss cont'd</u></b> <ul style="list-style-type: none"> <li>- Abundant (~5%) disseminated med grained pink poorly developed garnet</li> <li>- Faulting/slippage @ 26.00, 30.60, 31.80, &amp; 32.30 - typically parallel to foliation</li> <li>- ~ 5% narrow pegmatites</li> </ul>			0.24	
34.15	46.98	SQFBG	<b><u>SPOTTED QUARTZ FELDSPAR BIOTITE GNEISS</u></b> <ul style="list-style-type: none"> <li>- Partial assimilated zone?</li> <li>- Predominately spotted whitish with, with faint banding, weak foliation @ 75° to core axis</li> <li>- Quartz/Feldspar with &lt; 5% Biotite, &lt; 0.5% pyrite/pyrrhotite, loc diopside, &amp; trace chlorite</li> <li>- Stronger foliation with an increase in Biotite content from 41.00m to 43.50m</li> <li>- * &lt; 5% thin (i.e.: 5 to 10 cm) pegmatitic dykes, contacts often quite indistinct/gradational</li> <li>- Partial alteration of feldspars to clay from 43.75 to 46.94</li> </ul>			*	
46.98	60.40	QFBG	<b><u>QUARTZ FELDSPAR BIOTITE GNEISS</u></b> <ul style="list-style-type: none"> <li>- Banded – alternating whitish thin bands &amp; light brown with greenish tints biotite rich bands</li> <li>- Moderately foliated @ 80° to core axis</li> <li>- Light to moderate alteration of feldspars to greenish clay</li> <li>- Fault @ 56.08m parallel to foliation, similar but wider fault @ 59.13m</li> <li>- Local trace disseminated graphite</li> <li>- Distinct patch of light green clay mineralization @ 55.35m</li> </ul>			2.19	
60.40	61.88	P	<b><u>QUARTZ FELDSPAR BIOTITE PEGMATITE</u></b> <ul style="list-style-type: none"> <li>- Coarsely crystalline with trace limonite weathering</li> </ul>			1.38	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Quartz Feldspar Biotite Pegmatite cont'd</b>  - ~ 10cm section of greenish skarn (diopside, tremolite/actinolite) mineralization				
61.88	73.00	CS2	<b>CALC-SILICATE GNEISS – GRAPHITIC – CS2</b>  - Light grey with greenish tinge, especially in first 1m of section - Very weakly foliated @ 85° to core axis - Fluoresces moderately in 1 <sup>st</sup> meter of the section, and then strongly thereafter - Local sections of limonitic weathering - Darker Section with trace of very fine grained spinel @ 71.42 to 71.67 - Local trace Biotite - patchy - Approximate Composition: - Quartz 40 – 60%                      - CaCo3 20 – 30% - Diopside 10 – 20%                      - Pyrite/Pyrrhotite < 1% - Graphite 1 – 2%	61.88	63.00	0	4064
				63.00	64.00	0	4065
				64.00	65.00	0	4066
				65.00	66.00	0	4067
				66.00	67.00	0	4068
				67.00	68.00	0	4069
				68.00	69.00	0	4070
				69.00	70.00	0	4071
				70.00	71.00	0	4072
				71.00	72.00	0	4073
				72.00	73.00	0	4074
73.00	77.72		<b>SILICIFIED/PARTLY REPLACED ZONE W/INTERIOR PEGMATITE</b>  - Creamy grey silicified , locally mottled greenish - Strongly silicified pegmatite margin from 74.00 to 75.27 - Quartz 70 – 80%                      Diopside 20 - 25% - Pyrite/Pyrrhotite 1%                      Graphite < 0.5% - Biotite Trace                              CaCo3 Trace				
77.72	110.87	MI	<b>GRAPHITIC MARBLE</b>  - Light grey to creamy white with greenish tinge				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Graphitic Marble cont'd</b>	77.92	79.00	0.25	4075
			- Very weakly foliated @ 80° to core axis	79.00	80.00	0	4076
			- < 1% disseminated very fine grained pyrite/pyrrhotite	80.00	81.00	0	4077
			- graphite fine to medium grained – disseminated	81.00	82.00	0	4078
			- From 87m down to bottom of interval tends to host higher graphite concentrations & grades more to CS1	82.00	83.00	0.17	4079
			- Pegmatitic Dyke from 84.76 to 85.75 m – with a trace of graphite – not sampled	83.00	84.00	0	4080
			- Limit of Limonitic weathering on fractures, & in matrix is at ~ 98.80 m	84.00	84.72	0	4081
			- Several sections of "dirty" marble with Mica/Phlogopite	----	----	----	----
			- Haematite/Biotite/Pyritic sections: from 90.48 – 91.30 and 96.40 - 99.00	85.76	87	0	4082
			- Overall very competent with one weak zone with predominate fracturing along foliation planes from 97.00 to 99.00	87	88	0	4083
			- Sample 4101 is visually the highest grade material, possibly grading up to 1%	88	89	0	4084
			- Some sections trend towards "quartzite" with only slight CaCO3 content	89	90	0	4085
			- Overall approximate composition:	90	91	0	4086
			- CaCO3 30 – 90% Quartz 10 – 30%	91	92	0	4087
			- Diopside 5 – 10% Graphite <1%	92	93	0	4088
			- Graphite < .5%	93	94	0	4089
				94	95	0	4090
				95	96	0.10	4091
				96	97	0	4092
				97	98	0	4093
				98	99	0	4094
				99	100	0.15	4095
				100	101	0.06	4096
				101	102	0.04	4097
				102	103	0	4098
				103	104	0	4099
				104	105	0	4100

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>Graphitic Marble Cont'd</u>	105	106	0	4101
				106	107	0	4102
				107	108	0	4103
				108	109	0	4104
				109	110	0.01	4105
				110	110.87	0.04	4106
110.87	144.47	IZ	<u>INTERCALATED ZONE</u>  - Zone of highly variable lithologies - Most typically gneisses of varying mineralogic compositions - Predominate is a pale green/greyish diopside and/or locally actinolite/tremolite rich gneiss - Compositionally Feldspar/Quartz/Biotite +/- CaCO <sub>3</sub> , +/- Diopside, +/- Tremolite -Actinolite, +/- Pyrite - Pyrrhotite, +/- Graphite (typically on a trace a most) - 138.38 to 142.20 Feldspar/Quartz (almost equal proportions) Biotite Gneiss, with a few narrow pegmatites included. Foliation at the top of the section is 70- 80°, while lower in the section foliation is 80 - 90° to core axis - Abundant narrow Feldspar/Quartz/Biotite +/- Tremolite - Actinolite, +/- Pyrite/Pyrrhotite Pegmatitic Dykes. Dykes are typically narrow & sinuous with skarn mineralization adjacent quite often. Most notable are: - 110.40 to 113.00 - very fractured, non-competent - 120.20 to 121.36 - vuggy with haematitic stain				

SURVEY DATA										DRILLING DATA				
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1	161.00	49.07	-55°	-55°	014	032.5°						DATE DRILLING STARTED		
												DATE DRILLING ENDED		
												(ft.)	(m)	
												TOTAL DEPTH	167.00	50.90
												CASING DEPTH	26.71	7.01
												CASING		
												STEEL IN HOLE	No	Ft.
												LOGGED BY	T Lewis	
												LOGGING DATE	June 01 - 02/2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
0	7.01		<u>CASING - OVERBURDEN</u>				
7.01	7.40		<u>QUARTZITIC BOULDER?</u>				
7.40	20.72	Cs1	<b>CALC - SILICATE GNEISS CS1</b> - Light to medium grey. Weakly to moderately foliated @ 80 - 90° to core axis. - Composition varies but overall approximately: - Quartz 35 - 45% - CaCO3 25 - 35% - Scapolite 10 - 15% - Diopside 5 - 10% - Pyrite/Pyrrhotite < 1% - Graphite 1 - 3% - Trace Biotite/Phlogopite - Numerous thin pegmatitic stringers - Several zones of weakness/Oxidization, with considerable pervasive limonite	7.4	8	0	4107
				8	9	0.15	4108
				9	10	0.32	4109
				10	11	0.20	4110
				11	12	0.08	4111
				12	13	0.07	4112
				13	14	0.13	4113
				14	15	0.33	4114









SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	APPROX. EASTING (m)
Collar												APPROX. ELEVATION (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						DATE DRILLING STARTED	July 16/01
1	145	44.19	-55	-55	023	045						DATE DRILLING ENDED	July 17/01
												(ft.)	(m)
												TOTAL DEPTH	160 48.77
												CASING DEPTH	15 4.57
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T. Lewis
												LOGGING DATE	July 18/01

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
FROM (m)	TO (m)			Sample Interval		SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)
0	4.57	CASE	<u>CASING - OVERBURDEN</u>			
4.57	5.70	CS1	<u>CALC - SILICATE GNEISS</u> As 21.30m - cut by two pegmatitic dykes, only total of 30cm of this interval is Cs1			
5.70	8.30	QM	<u>QUARTZ MONZONITE</u> Mottled grey – very weakly foliated < 2% fine grained mafics, biotite, disseminated fine grained pyrite – typically oxidized. Blocky very fractured - clayey fault @ approx 18.30m			

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
From (m)	To (m)			From (m)	To (m)	Cum. Total (m)	
8.30	15.14	CS2	<b>CALC - SILICATE GNEISS</b> Dark grey typically with 2 - 3 % disseminated fine grained graphite - local sections - largely not oxidized. Grades to light grey Cs1 locally (interdigitated?) with no spinel present brecciated section with quartz cement @ top of section adjacent to fault - several thin pegmatitic dykes present -bottom of section ragged with indigitated pegmatite 13.60 - 14.30 graphite possibly up to 4%Overall typically: Quartz 45% CaCo3 30% Scapolite 10% Diopside 10% Pyrite / Pyrrhotite 1%Spinel - trace, oxides 1% Weak to moderately foliated @ 40 - 60° to lca - stronger graphitic section noted above is @ ~ 40°	8	9	0.02	4144
				9	10	0.02	4145
				10	11	0.13	4146
				11	12	0.10	4147
				12	13	0.03	4148
				13	14	0.14	4149
				14	15	0.00	4150
				15	16	0.45	4151
15.14	18.71	SK	<b>SKARN</b> Calc - Silicate Skarn/partial digest zone, with trace thin poorly defined pegmatites. Patches of strong silicification, & Cs1 mineralization (most notable being 18.35 to 18.71) Typically pale grey to creamy, with slight greenish tinge (diopside, and loc tremolite - actinolite mineralization) weakly foliated locally @ 70° to lca. local trace disseminated fine grained graphite				
18.71	21.30	LM	<b>LAMPROPHYRE DYKE</b> Darkish brown with slight greenish tinge, mottled/speckled - biotite/mica 65%, feldspar 25% diopside? 5%, quartz present as fracture filling < 5%,. accessories <2% Top contact with above unit @ 35° to lca, bottom contact faulted. massive no foliation apparent				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
From (m)	To (m)			From (m)	To (m)	Cum. Total (m)	
21.30	41.60	Cs1	<p><b>CALC - SILICATE GNEISS</b></p> <p>Light grey - weakly foliated @ 70 - 80° to lca (steepens to 80° in lower portions of interval)                      Typical constituents: Quartz 45% CaCO3 30% Scapolite 12% Epidote 5% Graphite - fine to locally medium grained disseminated 1 - 2%                      Clay/Soil!!! lined fault @ 34m's @ ~ 10° to lca                      Darker - more graphitic section from ~ 35.7 to 37.7                      Brecciated fault at the top of the section - ends @ ~ 22 m's                      Other faults @ 24m, 25.6m, &amp; fracture @ 5 - 10° to lca from 24.35 to 25m - clay/soil? Filling!!                      30 - 32 m - more properly marble with quartz/epidote &amp; &lt;.5% disseminated fn grained graphite</p>				
40.60	48.77	Q	<p><b>QUARTZ</b></p> <p>Medium grey with some slightly greenish sections &amp; locally rosy/pinkish - coarse crystalline mottled - local sections slight limonitic stain. Local trace CaCO3 on fracture surfaces.                      Local - trace patchy disseminated fine to medium grained graphite. Oxidized disseminated sulphides &lt;1%. Pegmatite from ~ 46.30 to 47.50.                      Silicate with trace CaCO3 w/ ~1% disseminated graphite section@ bottom of hole</p>				
				22	23	0	4152
				23	24	0.05	4153
				24	25	0.06	4154
				25	26	0	4155
				26	27	0.07	4156
				27	28	0.02	4157
				28	29	0	4158
				29	30	0	4159
				30	31	0	4160
				31	32	0	4161
				32	33	0.40	4162
				33	34	0	4163
				34	35	0.03	4164
				35	36	0	4165
				36	37	0	4166
				37	38	0	4167
				38	39	0	4168
				39	40	0	4169
				40	41	0	4170
				41	42	0	4171

SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1	152.00	39.89	-55°	-55°	014	032.5°						DATE DRILLING STARTED	July 17, 2001
												DATE DRILLING ENDED	July 18, 2001
													(ft.) (m)
												TOTAL DEPTH	160.00 48.77
												CASING DEPTH	26.71 7.9
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	July 20/2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
0	7.9	CASE	<u>CASING - OVERBURDEN</u> - possibly in friable Cs2?				
7.9	8.33	P	<u>QUARTZ FELDSPAR BIOTITE PEGMATITE</u>				
8.33	11.30	Cs2	<u>CALC - SILICATE GNEISS</u> Dark Grey, with slight greenish tinge Weakly foliated @ 65° to LCA Limonite on fracture surfaces Friable/weathered from 8.33 to 9.14 with moderate limonitic stain Pegmatite with skarn envelope from 9.14 to ~ 10.20 Local irregular pegmatitic sweats	8.33	9	0.02	4172
				9	10	1.00*	4173
				10	11	0.31*	4174
				11	12	0.67*	4175

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>CS2 continued</u>				
			Composition: Quartz 60 – 70%                      - CaCO3 10 – 20%                      Diopside 5 – 10% Scapolite 10% Pyrite/pyrrhotite ~ 1% disseminated fine grained Graphite 2 – 3 % disseminated fine grained – with some medium grained * in pegmatite column denotes existence of barren skarn developed proximal to pegmatite				
11.30	17.21	SK	<u>CALC – SILICATE SKARN ZONE</u>				
			Pale green – mottled Quartz occurs as patches r segregations Pronounced longitudinal fracture top of section Local crypto crystalline marble patches Faint banding/foliation @ 70° to lca in upper section, @ 80° in lower Abundant diopside, local actinolite/tremolite Transition to Csl below is quite gradual!! < .5% fine to medium grained disseminated graphite				
				12	13	0.00	4176
				13	14	0.00	4177
				14	15	0.09	4178
				15	16	0.00	4179
				16	17	0	4180
17.21	29.13	Csl	<u>CALC – SILICATE GNEISS</u>				
			Light grey with local greenish bands As noted above the transition from the above unit is quite gradual, but foliation and graphite content both increase markedly @ 17.21 Foliation at 75° to lca				
				17	18	0.08	4181
				18	19	0.05	4182
				19	20	0.03	4183
				20	21	0.04	4184
				21	22	0.09	4185
				22	23	0.00	4186
				23	24	0.00	4187







SURVEY DATA										DRILLING DATA				
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1	74.80	22.8	-55°	-55°	018.5°	037°						DATE DRILLING STARTED	July 18, 2001	
												DATE DRILLING ENDED	July 19, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	94	28.65
												CASING DEPTH	22	6.7
												CASING		
												STEEL IN HOLE	No	Ft.
												LOGGED BY	T Lewis	
												LOGGING DATE	July 22/2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
0	6.7	CASE	<u>CASING - OVERBURDEN</u>				
6.7	7.0	CS1	<u>CALC - SILICATE GNEISS - (possible boulder?)</u> Light grey, with greenish tinge, weakly foliated @ 70° to Lca Local blebs of pyrite, & disseminated fine grained pyrite/pyrrhotite up to 1% Disseminated fine grained graphite 1 - 1.5%	6.7	7.0	0.02	4194
7.0	8.1	CS2	<u>CALC - SILICATE GNEISS</u> Dark Grey, with slight greenish tinge Weakly foliated @ 72° to LCA Total only ~ 60cm of Cs2 proper due to 2 thin Pegmatites & 20cm Mbl section from 7.23 to 7.39 Slight oxidation (Limonite) on fracture surfaces	7.0	8.01	0.10	4195

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>Calc - Silicate Gneiss cont'd</u>				
			Quartz 35%, CaCo3 25%, Scapolite 10 - 15%, Diopside 5 - 10%, <1% disseminated pyrite/pyrrhotite, tr bright green Spinel, 2 - 2.5% disseminated fine grained graphite				
8.01	21.30	CS1	<u>CALC - SILICATE GNEISS</u>	8.01	9	0.20	4196
			Light grey, with greenish tinge, weakly foliated @ 70° to Lca	9	10	.02	4197
			Overall fairly competent	10	11	.20	4198
			Quartz 35%, CaCo3 25%, Diopside 15%, Scapolite 10-15%, Graphite 1 - 2% very fine grained disseminated, < 1% disseminated very fine grained pyrite/pyrrhotite	11	12	0	4199
			Few pegmatites present, most notable from ~10.65 - 10.80 & ~ 12.50 - 12.60	12	13	0.05	4200
			Local thin segments of skarn - Tremolite/Actinolite mineralization	13	14	0	4201
			Locally grades to graphitic Marble with some accessory quartz	14	15	0.02	4202
			Sample 4207 Possibly 2 - 2.5% fine grained disseminated graphite	15	16	0	4203
				16	17	0	4204
				17	18	0.04	4205
				18	19	0	4206
				19	20	0	4207
				20	21.3	0.22	4208
				21.3	22	0.50	4209
21.30	24.26	P	<u>FELDSPAR QUARTZ BIOTITE PEGMATITE</u>				
			Massive, coarse crystalline				
			Pale creamy grey				
			Local patches very pale green pervasive mineralization (chlorite/epidote?)				





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
10.93	15.92	SK	<p><b>CALC-SILICATE SKARN</b></p> <p>Pale green, weakly to moderately foliated @ 75° to LCA                      Interval 11.0 – 11.5m is foliated with local moderate limonite along vuggy foliation planes                      All carbonate replaced by silica                      &lt; .5% disseminated fine to medium grained graphite                      Several Pegmatites in section – most notable from 15.24 to 15.81 - Contacts @ ~ 85° to LCA                      Pervasive green – diopside, local sections of bladed Tremolite/Actinolite mineralization</p>				
15.92	19.12	CS2	<p><b>CALC-SILICATE GNEISS</b></p> <p>Light grey with pervasive brownish red limonitic stain throughout                      Lightly foliated @ 85° to LCA                      Siliceous @ top of section – becoming less so downwards                      Overall &lt;1/2% disseminated fine to medium grained graphite                      Thin pegmatite around 16.75m – with thin skarn envelope developed directly above                      Occasional thin darker section with increased graphite content                      N.B. – only see odd spinel in upper portion of interval – spinel increases around 18.10                      Sample 4213 – last 26 cm's of interval – skarn – fairly well developed pale to medium green, with some medium grained Tremolite/Actinolite crystals with trace of graphite                      Graphite concentration from 19.12 down – obviously negligible</p>	15.92	17	0.20	4210
				17	18	0	4211
				18	18.86	0	4212
				18.86	19.12	0	4213
19.12	29.22	QM	<p><b>QUARTZ MONZONITE</b></p> <p>As 2.13 to 10.93 - Weakly foliated @ ~ 75° to LCA                      Medium Grey, somewhat porphyritic textured                      Fairly competent with some longitudinal fractures                      Both contacts @ ~ 70° to LCA</p>				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>Quartz Monzonite cont'd</u>				
			Top 1 ½ to 2 meters less mafic than whole Limonite stain on fractures, and clay alteration of feldspars around 28m Skarn/siliceous zone with thin pegmatite top 75 cm – possible fault immediately below – yellowish clay developed				
29.22	52.54	CSI	<u>CALC-SILICATE GNEISS</u>	48	49	0	4214
			Light grey, very weakly to weakly foliated Foliation appears to be @ 75° to LCA in upper section, & ~ 80° to LCA in the lower portions Upper portion of interval is more of an impure Marble, while the bottom is more correctly a calc-silicate gneiss Diopside present throughout & ranges from 5 – 15% Graphite is fine to medium grained disseminated trace to 5% - overall <.5% Pyrite/Pyrrhotite fine grained, disseminated <.5% Sample 4214 representative of better grade mineralization in this section				
52.54	54.86	QM	<u>QUARTZ MONZONITE</u>				
			As above intervals - Very weakly foliated Thin Feldspar Quartz Biotite pegmatite at top of section				

SURVEY DATA										DRILLING DATA				
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1	92	28.04	55°	55°	18°	36.5°						DATE DRILLING STARTED	July 21, 2001	
												DATE DRILLING ENDED	July 23, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	100	30.48
												CASING DEPTH		7.62
												CASING		
												STEEL IN HOLE	No	Ft.
												LOGGED BY	T Lewis	
												LOGGING DATE	July 28, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
0	7.62	CASE	<b>CASING - OVERBURDEN</b> Drillers noted - strong graphitic mineralization while drilling the surface hole for casing - especially at approximately the 5 meter mark.				
7.40	20.72	CS1	<b>CALC - SILICATE GNEISS</b> Light grey with considerable pervasive pale greenish (diopsidic) hue locally 1 - 1.5% disseminated mainly fine grained graphite with trace medium grained locally Local Tremolite/Actinolite skarn mineralization, typically on margins of pegmatites Whole section pervasive weak skarn mineralization Weakly to moderately foliated @ 85 to 90° to LCA	6.60	8	0.04	4215
				8	9	0.12	4216
				9	10	0.69	4217
				10	11	0.22	4218
				11	12	0.12	4219
				12	13	0.83	4220
				13	14	0.42	4221

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>CS1 cont'd</b>				
			Tight skarn with interior pegmatite @ ~ 8.9 to 10.7 meters	14	15	0.39	4222
			Pegmatites - 12.15 - 14.85 & 14.85 - 17.42	15	16	0.03	4223
				16	17	0.40	4224
17.42	19.93	CS2	<b>CALC - SILICATE GNEISS</b>				
			Medium grey, with distinct greenish tinge (pervasive diopside) with local bands of increased diopside content	17	18	0.09	4225
			Typically weak to moderate foliated @85° to LCA	18	19	0.06	4226
			Trace disseminated fine grained dark green spinel	19	20	0.30	4227
			Slightly oxidized (limonite) locally				
			Obvious skarn mineralization especially bottom 10 cm which contacts QM & has thin pegmatite immediately at contact				
19.93	30.48	QM	<b>QUARTZ MONZONITE</b>				
			Very weakly foliated at 60° to LCA				
			Medium grey with creamy groundmass - local coarse distinct quartz crystals				
			Medium to Coarse grained hypidiomorphic textured				



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1	162	49.38	53	53	15	33.5						DATE DRILLING STARTED	July 24, 2001
												DATE DRILLING ENDED	July 25, 2001
												(ft.)	(m)
												TOTAL DEPTH	170 51.82
												CASING DEPTH	7 2.13
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	July 30, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	2.13	CASE	<u>CASING - OVERBURDEN</u>				
2.13	11.65	CS1	<u>CALC - SILICATE GNEISS</u> Light grey with local darker grey sections, & local pale green hues - pervasive diopside - skarn Weakly to moderately foliated @ 60 - 65° to LCA Oxidization (Limonitic) proximal to fractures down to 9.14m Several smaller (up to 20 cm) pegmatites Vuggy section @ ~ 4m depth Marbly section from ~10.3 to ~11.30 with < .5% graphite Driller mentioned solution cavern @ ~ 2.74 meters	2.13	3	0	4228
				3	4	0	4229
				4	5	0	4230
				5	6	0	4231
				6	7	0	4232
				7	8	0.16	4233
				8	9	0.03	4234

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Calc – Silicate Gneiss cont'd</b>				
			Fairly consistent mineralization but there are several sections with diminished graphite content Graphite 1.5 – 2% down to .5 – 1% disseminated fine grained < .5% disseminated & blebby pyrite/pyrrhotite – fine grained	9	10	0.04	4235
				10	11	0.03	4236
				11	12	0.15	4237
11.65	12.80	CS2	<b>CALC – SILICATE GNEISS</b>	12	13	0.09	4238
			Medium grey with slight greenish tinge Moderately foliated @ ~ 80° to LCA 1.5 – 2% disseminated fine grained graphite, < 1% disseminated fine grained pyrite/pyrrhotite Trace very fine grained disseminated Spinel (very rare) Use colour & graphite content to approximately determine contact with CS1 below N.B. CS2 unit is poorly developed relative to those seen elsewhere	13	14	0.04	4239
12.80	29.72	CS1	<b>CALC – SILICATE GNEISS</b>	14	15	0.08	4240
			As 2.13 to 11.65 See local patches of green mineralization less intense than spinel, but darker than diopside – Chlorite? Pseudo CS2 (i.e. darker, increased graphite content etc) from ~ 22m to ~ 25m Impure Marble with local phlogopite, and <.5% disseminated graphite bottom 30 – 40 cm of section	15	16	0.02	4241
				16	17	0	4242
				17	18	0	4243
				18	19	0.05	4244
				19	20	0	4245
				20	21	0.08	4246
				21	22	0.16	4247
				22	23	0.20	4248
				23	24	0.50	4249

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>Calc – Silicate Gneiss cont'd</u>				
				24	25	0	4250
				25	26	0.51	4251
				26	27	0.35	4252
				27	28	0.08	4253
				28	29	0.09	4254
				29	30	0.33	4255
29.72	30.80	Q	<u>QUARTZ</u> Pale grey to creamy off white, locally pinkish/rose hue Locally blocky & fractured & local patches (~30m depth) strong oxidation, foliated & fractured. Foliation in above patches @ ~ 55° to LCA				
30.80	51.81	IZ	<u>INTERCALATED ZONE</u> Variable lithologies with local quartz flooded areas, some calc silicates (silica rich) locally, with trace graphite Predominate lithology is a pale greenish skarn with local coarse Tremolite/Actinolite – trace CaCO3 on fractures Foliation typically @ 75° to LCA Megacrystic syenite from ~ 39.65 to 40.30 Amorphous graphite section – foliated - @ ~ 32.75 to 34m. Slightly garnetiferous Clay/Carbonate gouge filled fault @ ~ 20° to LCA at ~ 46.50m Local limonite stain on fracture surfaces				

SURVEY DATA											DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID				GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1	68	20.73	-55	-55	17	35.5						DATE DRILLING STARTED	July 25, 2001	
												DATE DRILLING ENDED	July 25, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	76	23.16
												CASING DEPTH	8	2.44
												CASING		
												STEEL IN HOLE	No	Fl.
												LOGGED BY	T Lewis	
												LOGGING DATE	August 01, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	2.44		<b>CASING - OVERBURDEN</b> Casing possibly .6 to .9 meters into competent CS1				
2.44	15.91	CS1	<b>CALC - SILICATE GNEISS</b> Light grey with local slightly greenish tinge Weakly to locally moderately foliated @ ~ 75° to LCA 1 - 1.5% disseminated fine to medium grained graphite < 1% disseminated fine grained pyrite/pyrrhotite Light bluish green mineral (smoky quartz?) @ 4.5 m Pseudo CS2 @ 6.2 - 7.5 m - Darker, increased graphite content, no spinels noted however	1.84	3	0	4256
				3	4	0.04	4257
				4	5	0	4258
				5	6	0.03	4259
				6	7	0	4260
				7	8	0	4261
				8	9	0	4262



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1			NO	TEST								DATE DRILLING STARTED	July 25, 2001
												DATE DRILLING ENDED	July 26, 2001
												(ft.)	(m)
												TOTAL DEPTH	50 15.24
												CASING DEPTH	19 4.88
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 02, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	4.88	CASE	<u>CASING - OVERBURDEN</u>				
4.88	10.39	CS1	<u>CALC - SILICATE GNEISS</u> Light grey with local small patches with greenish (overall very little diopside skarn) tinge Dark more siliceous section at the top of the hole to ~ 5 m depth Rock is weakly foliated to locally recompositionally banded (e.g. @ 9.75 m ) @ 70 - 75° to LCA 1 - 2 % disseminated pyrite/pyrrhotite throughout 20 cm section of coarsely crystalline calcite with <1% coarse 2-3mm phlogopite crystals @ 8.7 m Coarsening of grain size within 20 cm of lower contact, accompanied by weak skarning 1 - 1.5% disseminated fine grained graphite throughout	~ 3.21	4	0	4270
				4	5	0.04	4271
				5	6	0	4272
				6	7	0.03	4273
				7	8	0.05	4274
				8	9	0	4275
				9	10.39	0	4276



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1			NO	TEST								DATE DRILLING STARTED	July 26, 2001
												DATE DRILLING ENDED	July 26, 2001
												(ft.)	(m)
												TOTAL DEPTH	40 12.19
												CASING DEPTH	7 2.13
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	B. Augsten
												LOGGING DATE	Aug 01/2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	2.13	CASE	<u>CASING - OVERBURDEN</u>				
2.13	2.20	QM	<u>QUARTZ MONZONITE - (BOULDER?)</u>				
2.20	3.86	CSI	<u>CALC - SILICATE GNEISS</u>	2.20	3	0.02	4278
			Light to medium grey to pale green	3	3.86	0	4279
			Weakly foliated to locally somewhat compositionally banded, fine grained sucrosic rock				
			2 - 2.5% disseminated fine grained graphite				
			< 1% disseminated fine grained graphite				
			Lower contact sharp & marked by a 15 cm pegmatite & digested rock - contact @ 47° to LCA				



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
3.86	7.00	QM	<p><b><u>BIOTITE QUARTZ MONZONITE?</u></b></p> <p>Medium grained, locally altered equigranular intrusive cut by several pegmatitic sweats &amp; dykes Weak limonitic staining as a pervasive wash through 60% of unit Lower contact @ 50° to LCA</p>				
7.00	10.13	Q	<p><b><u>QUARTZ</u></b></p> <p>With local quartz gneiss patches Medium coarse grained recrystallized quartz with localized ghostlike feldspars giving a pseudo – porphyritic texture Weak pervasive limonitic was through much of the unit Several small sections of coarse Feldspar pegmatite</p>				
10.13	11.09	QM	<p><b><u>BIOTITE QUARTZ MONZONITE</u></b></p> <p>Medium grained equigranular, limonite stained</p>				
11.09	12.19	IZ	<p><b><u>INTERCALATED ZONE</u></b></p> <p>Section of narrow bands of various lithologies, including: Coarse grained quartz – marble Quartz feldspar biotite gneiss Pervasive skarn altered rock</p>				

SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1	62	18.9	-56	-56	18.5	37						DATE DRILLING STARTED	July 26, 2001
												DATE DRILLING ENDED	July 27, 2001
												(ft.)	(m)
												TOTAL DEPTH	70 21.34
												CASING DEPTH	6 1.83
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 04, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
			From (m)	To (m)	Cum. Total (m)	
0	1.83	CASE	<u>CASING - OVERBURDEN</u>			
1.83	7.95	CSI	<u>CALC - SILICATE GNEISS</u>			
			Light grey, weakly to moderately foliated @ 80 - 85° to LCA			
			Numerous small pegmatites & 3 more notable (samples 4282, 4283 & 4284)			
			Overall weakly mineralized with disseminated fine to medium grained graphite which locally averages from .5 to 1% & < 1% disseminated fine grained pyrite/pyrrhotite			
			Patchy pyrite & locally trace of medium grained disseminated graphite in Pegmatites			
			Top of section (to ~4m depth) diopside rich - graphite poor			
			Bottom 30 cm of section graphitic marble with abundant phlogopite			
			Pegmatites often contact parallel to foliation, although contact @ ~ 5.5 m cuts foliation @ ~ 90°			
			1.56	3	0.04	4280
			3	4	0.10	4281
			4	5	0.49	4282
			5	6	0.20	4283
			6	7	0.09	4284
			7	7.95	0.18	4285



SURVEY DATA											DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1		No	Test									DATE DRILLING STARTED	July 27, 2001	
												DATE DRILLING ENDED	July 28, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	50	15.24
												CASING DEPTH	6	1.83
												CASING		
												STEEL IN HOLE	No	Ft.
												LOGGED BY	T Lewis	
												LOGGING DATE	August 04, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG						
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER			
			From (m)	To (m)	Cum. Total (m)					
0	1.83	CASE	<u>CASING - OVERBURDEN</u>							
1.83	7.95	CS1	<u>CALC - SILICATE GNEISS</u>							
			Light grey, top of section pale greenish				1.76	3	0.04	4286
			Weakly to moderately foliated @ 70 - 85° to LCA typically 80 - 85°				3	4	0.10	4287
			Medium coarse to Medium fine grained crystalline				4	5	0.49	4288
			Trace of Spinel (CS2) @ ~ 2.80 only, but overall section lacks typical CS2 characteristics				5	6	0.20	4289
			< 1% disseminated fine grained pyrite/pyrrhotite, blebs of pyrite in upper portion of section				6	7	0.09	4290
			Abundant diopside top of section with 1 - 1.5% disseminated fine to medium grained graphite				7	8	0.18	4291
			Bottom of section lacking in diopside - is darker with increase in fine grained disseminated						GAP	
						9.19	10	0.01	4292	
						10	11	0	4293	
						11	12	0	4294	





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
3.56	8.45	CS2	<p><b>CALC – SILICATE GNEISS</b></p> <p>Dark grey with local slight greenish tinge                      Moderately foliated @ 75° to LCA                      Lower contact with pegmatite @ 50° to LCA                      Slight oxidization @ ~ 4.80 meters                      Solution cavern from 3.93 to 4.57                      Cut by various small (up to 13cm) pegmatitic dykes/sweats                      Only decent CS mineralization in hole as rest is cut by dykes – probably Pegmatite swarm seen in holes BC0012 &amp; BC0013                      Section above solution cavern is more marbly, with lower graphite content, but does contain spinel                      Section immediately below solution cavern (4.57 - ~ 4.90) abundant phlogopite                      Overall graphite content 3 – 3.5%, and occurs as disseminated fine grained flakes                      &lt; 1% disseminated fine grained pyrite/pyrrhotite, with pyrite patches in Pegmatites contained in section</p>	3.56	5	0.07	4295
				5	6	0.32	4296
				6	7	0.05	4297
				7	8.45	0.21	4298
8.45	21.34	P	<p><b>PEGMATITE SWARM</b></p> <p>As seen in BC0012 &amp; BC0013                      Abundant Coarse Quartz/Feldspar/Biotite Pegmatites with intercalated CS2 &amp; Skarn sections                      Majority of rock is Pegmatite (9 meters), followed by CS2 (2.20 meters), and finally 1.50 meters of skarn</p>				

SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1	<u>VERTICAL</u>	<u>HOLE</u>	NO	TEST								DATE DRILLING STARTED	July 30, 2001
												DATE DRILLING ENDED	July 30, 2001
												(ft.)	(m)
												TOTAL DEPTH	13.11
												CASING DEPTH	3.96
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 06, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
			From (m)	To (m)	Cum. Total (m)	
0	3.96	CASE	<u>CASING - OVERBURDEN</u>			
3.96	13.10	P	<u>PEGMATITE SWARM</u>			
			As holes BC0012, BC0013 & BC0137, coarse grained Feldspar/Quartz/Biotite & Quartz/Feldspar/Biotite Pegmatite with local blebs pyrite			
			Locally see thin sections of Dark grey CS2 (foliated @ 60° to LCA) cut by Pegmatite			
			CS2 contacts with Pegmatite sometimes sharp @ 75° to LCA			
			Local trace skarn mineralization			
			Total CS2 – 1.87 meters			
			Total Pegmatite – 9.14 meters			
			No samples			



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		28.04	-55	-55	19	37.5						DATE DRILLING STARTED	July 30, 2001
												DATE DRILLING ENDED	July 31, 2001
												(ft.)	(m)
												TOTAL DEPTH	33.53
												CASING DEPTH	2.13
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 06, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			SAMPLE NUMBER
FROM (m)	TO (m)			From (m)	To (m)	Cum. Total (m)	
0	2.13	CASE	<u>CASING - OVERBURDEN</u>				
2.13	3.68	P	<u>PEGMATITE</u> Feldspar/Quartz/Biotite dyke - Coarse crystalline Local slight oxidized pyrite				
3.68	5.90	CS2	<u>CALC SILICATE GNEISS</u> Dark grey with slight greenish tinge				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
			Cs2 cont'd				
			Weak to moderately foliated @ 85° to LCA Local oxidization (Limonite) on fracture surfaces Trace dark green spinel Local disseminated diopside Graphite fine to medium grade disseminated 2.5 – 3% < 1% disseminated fine grained Pyrite/pyrrhotite				
5.90	15.02	SK	<b>SKARN ZONE</b>				
			Light greenish grey predominantly With local sections of CS1 & pegmatite Very weak to weakly foliated @ 75° to LCA Predominately Diopside/Tremolite/Acrinolite/Quartz/Feldspar/CACO3 Trace graphite – disseminated medium grained – Local up to .5%				
			<b>9.57 – 10.97 – CS1</b>				
			Light grey weakly foliated @ 80° to LCA 1.5 - 2% fine to medium grained disseminated graphite < 1% disseminated pyrite/pyrrhotite – fine grained				
			<b>13.15 – 14.07 – PEGMATITE</b>				
			Quartz/Feldspar/Biotite Pegmatites Coarse crystalline Contacts with Pegmatites Typical Skarp @ 60° or 80° to LCA Transition to CS1 below is gradual but 15 – 15.07 appears to be limit 14.07 – 15 – Marble/Skarn with < .5% disseminated graphite				
				9.52	10.97	0	4301
				14	15	0.12	4302

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
15.07	30.37	CS1	<p><b><u>CALC – SILICATE GNEISS</u></b></p> <p>Light grey greenish weakly foliated @ 85° to 90° to LCA                      Top of section – grades to graphitic Impure Marble                      Unidentified pale blue - green mineral @ 21.50 m's  <b>24.90 – 27.00</b>                      Dark grey foliated increased graphite to approx- 2 –2.5%                      Oxidized fractures in this area                      *Consists of impure marble developed adjacent to pegmatite in sample 4315                      ^Feldspar in this Pegmatite has been altered to Clay/Sericite</p>	15	16	0.13	4303
				16	17	0.03	4304
				17	18	0.02	4305
				18	19	0.00	4306
				19	20	0.07	4307
				20	21	0.03	4308
				21	22	0.06	4309
				22	23	0.03	4310
				23	24	0	4311
				24	25	0.09	4312
				25	26	0	4313
				26	27	0	4314
				27	28	0.19*	4315
				28	29	0.18*	4316
				29	30.37	0.03	4317
30.37	33.53	1Z	<p><b><u>INTERCALATED ZONE</u></b></p> <p>Zone of rapidly changing lithology                      Appears to be moderately silicified                      Only in 30cm of true footwall type rosy quartz – around 30 meters                      Zone ends in a strongly foliated Biotite/Phlogopite                      N.B. This is footwall we see along the trench trail                      To the north- appears influence of whatever caused strong quartz footwall often noted in other holes is waning</p>				



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION
From (m)	To (m)		
			<b>CS1 cont'd</b>
			Major pegmatites: 3.22 – 3.89 – contact @ 55° to LCA 10.27 – 10.83 – contact @ 55° to LCA 11.08 – 12.19 – bottom contact @ 90° to LCA ~20 cm of foliated quartz/monzonite - top of section 12.19 – 13.60 marbly – impure with <.5% graphite 13.60 – 16.60 Darker grey CS1
16.60	21.34	IZ	<b>INTERCALATED ZONE</b>
			Zone of highly variable thinly intercalated lithologies Silicified Typically creamy white spotted Section 19.00 - 20.50 and some beyond of typical rosy pink footwall quartz Some Phlogopite/Sericite locally Gneissic foliation developed @ 55° to LCA Local Blebs pyrrhotite

SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		21.94	-55	-55	19.5	38						DATE DRILLING STARTED	July 31, 2001
												DATE DRILLING ENDED	August 01, 2001
												(ft.)	(m)
												TOTAL DEPTH	24.38
												CASING DEPTH	2.44
												CASING	
												STEEL IN HOLE	No Fl.
												LOGGED BY	T Lewis
												LOGGING DATE	August 06, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
			From (m)	To (m)	Cum. Total (m)		
0	2.44	CASE	<u>CASING - OVERBURDEN</u>				
2.44	19.16	CS1	<u>CALC - SILICATE GNEISS</u>				
			Light grey - Local slightly greenish tinge				
			Weak to moderately foliated - Typically @ 80° - 85° to LCA				
			* in sample number field denotes foliated quartz Monzonite dyke				
			Diopsidic marble 4 - 6 meters. Local strong disseminated Pyrite/Chalcopyrite @ 4.50 meters proximal to Quartz Monzonite dyke				
			2.44	3	0	4331	
			3	4	0.13*	4332	
			4	5	0.23*	4333	
			5	6	0.05	4334	
			6	7	0.04	4335	
			7	8	0.05	4336	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>CS1 Cont'd</u>				
			<1% disseminated fine grain cubic Pyrite/Pyrrhotite	8	9	0.01	4337
			1-1.5% disseminated fine to medium grained disseminated graphite	9	10	0.44	4338
			Becomes darker & more siliceous below 16.50 meters	10	11	0.84	4339
			17.50 - 17.90 - impure marble band - then returns to dark siliceous	11	12	0.10	4340
				12	13	0	4341
				13	14	0.03	4342
				14	15	0	4343
				15	16	0	4344
				16	17	0.06	4345
				17	18	0	4346
				18	19.16	0.35	4347
19.16	24.38	1Z	<u>INTERCALATED ZONE</u>				
			Zone of variable lithology				
			Siliceous light grey - greenish - Local skarn				
			Odd Band of Pyrrhotite with trace Chalcopyrite				
			Local some rosy- Footwall Quartz developed				
			Limonite on fracture surfaces				
			Several coarse Feldspar/Quartz/Biotite Pegmatities				

SURVEY DATA											DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID				GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1		25.00	-54	-54	5	23.5						DATE DRILLING STARTED	August 01, 2001	
												DATE DRILLING ENDED	August 02, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	27.43	
												CASING DEPTH	5.49	
												CASING		
												STEEL IN HOLE	No Ft.	
												LOGGED BY	T Lewis	
												LOGGING DATE	August 07, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	5.49	CASE	<u>CASING - OVERBURDEN</u>				
5.49	25.46	CS1	<u>CALC - SILICATE GNEISS</u> Light grey -Locally greenish tinge Weakly foliated @ 80° to LCA Local thin Pegmatites Quartz/Feldspar/Biotite overall section is fairly clean Few spinals noted at 7.75 meters - very localized- texture & minerals concentrate more in line with CS1	5.49	7	0.17	4348
				7	8	0.04	4349
				8	9	0.10	4350
				9	10	0.16	4351
				10	11	0	4352
				11	12	0	4353
				12	13	0.03	4354



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
		CS1	<b>CS1 Cont'd</b>				
			Pegmatites – 18.16 - 18.60 - Top contact at 40° to LCA- Bottom @ 60° to LCA	13	14	0.09	4355
			Pegmatites – 19 – 19.20 – also 22.69 – 23.10	14	15	0	4356
			Foliated Quartz Monzonite Dyke @ 15.90–16.01 Chloritic alteration	15	16	0.15	4357
			Bottom contact @ 50° to LCA	16	17	0.14	4358
			Foliated Quartz Monzonite Dyke @ 19.58 – 20.49 Chloritic alteration Top contact @60° to LCA	17	18.16	0.05	4359
			Foliated Quartz Monzonite Dyke @ 21.61 – 22.52 Chloritic alteration Top contact @55° to LCA				
			Graphite 1.5% - 2% disseminated fine to medium grained				
			Pyrite/Pyrrhotite <1% disseminated fine grained – local trace medium grained euhedral				
			N.B. No samples taken from 18.16 – 25.60				
			As CS1 (Total of 160cm or 21.5% of material in this section)				
			Is cut by numerous Pegmatites & Quartz Monzonite Dykes				
			Bottom contact @24.50 irregular – but roughly @ 30° to LCA				
			and is marked by a peg which is markedly coarse white feldspar rich proximal to contact with				
			above unit and there is skarn mineralization below – adjacent to contact with below unit.				
25.46	27.13	Q	<b>QUARTZ</b>				
			Rosy Pink – Fracture-block – pronounced long fracture present				
			Moderate Limonite stain				
			Local trace disseminated fine grained graphite				
			Trace disseminated fine grained (partially oxidized sulphides)				

SURVEY DATA										DRILLING DATA				
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE		
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		
Collar												APPROX. EASTING (m)		
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)		
1			NO	TEST								DATE DRILLING STARTED	August 02, 2001	
												DATE DRILLING ENDED	August 02, 2001	
												(ft.)	(m)	
												TOTAL DEPTH	50	15.24
												CASING DEPTH	19	4.88
												CASING		
												STEEL IN HOLE	No	Ft.
												LOGGED BY	T Lewis	
												LOGGING DATE	August 08, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)
0	7.31	CASE	<u>CASING - OVERBURDEN</u>			
7.31	13.55	OB	<u>OVERBURDEN</u> ~ 13.55 is first solid rock in this hole Drillers noted abundant graphite in returns between bottom of casing @ 7.31 & subcrop @ 13.55 Mostly pieces of pegmatite etc recovered in this section - although there are several friable cs1 pieces which survived intact			
13.55	17.55	CS1	<u>CALC - SILICATE GNEISS</u> Light grey with greenish - weakly foliated @ ~ 65° to LCA			

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
			<b>CS1 CONT'D</b>				
			Some solution cavities present- quite oxidized/friable (poor recovery) ~15.50 ~16.90	13.55	15.00	0.15	4360
			Several small Feldspar/Quartz/Biotite Pegmatites noted	15.00	16.00	0.50	4361
			Some thin skarn bands noted proximal to pegmatities	16.00	17.00	0.16	4362
			Graphite disseminated fine to medium grained - 1-1.5%	17.00	18.00	0.12	4363
			Pyrite/Pyrrhotite fine grained disseminated <1%				
17.55	20.63	CS2	<b>CALC SILICATE GNEISS</b>				
			Medium to dark grey – moderately foliated @ 80° to LCA	18.00	19.00	0.10	4364
			Trace fine grain dark spinel	19.00	20.	0	4365
			Disseminated fine grained graphite 2-2.5%	20	21	0.10	4366
			Locally oxidized (Limonite)	21	22	0.04	4367
				22	22.75	0.01	4368
					GAP	PEGMATITE	
20.63	34.99	CS1	<b>CALC SILICATE GNEISS</b>	24.10	25	0	4369
			Light grey – slight greenish tinge	25	26	0.2	4370
			Weak to moderate foliated @ 70 - 75° to LCA	26	27	0	4371
			Moderately oxidized throughout section – strongest between 31 & 33.5	27	28	0	4372
			Some cavities/ solution caving noted @ ~31 & 32	28	29	0.05	4373
			Oxidization disseminated fine grained Pyrite/Pyrrhotite <1%	29	30	0	4374
			Disseminated fine to medium grained graphite 1 – 1.5%	30	31	0.09	4375
				31	32	0.03	4376
				32	33	0.38	4377
				33	34	0.14	4378
				34	35	0	4379





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
8.42	10.22	FQBG	<p><b>FELDSPAR QUARTZ BIOTITE GNEISS</b></p> <p>Moderately foliated @ 40° to LCA                      Alternate light (feldspar/quartz) &amp; dark (biotite) banding                      Thin Pegmatites/Pegmatitic sweats                      Strongly oxidized /Friable Section from ~ 9.50 - 10.22                      Quite broken- Limonite                      Overall moderate oxidization</p>				
10.22	10.65	P	<p><b>PEGMATITE</b></p> <p>Feldspar/Quartz/Biotite Pegmatite                      Partial digest of above Lithology ?? - spotted medium coarse grained</p>				
10.65	30.40	SK	<p><b>SKARN</b></p> <p>Light green – diopsidic – fairly competent rock, occasionally very weakly foliated                      Local clots of Tremolite-Actinolite series mineralization                      Local thin pegmatites up to 30 cm, most typically 5 – 10 cm wide                      Several graphitic mineralized Calc – Silicate sections – all of which are fairly narrow (&lt; 1 meter wide) &amp; contain 3 – 4% disseminated fine grained graphite                      Overall normally the skarn mineralization contains only local traces of disseminated medium grained graphite</p>				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
30.40	37.11	CS1	<p><b>CALC – SILICATE GNEISS</b></p> <p>Light grey – very weakly foliated @ 80° to LCA                      More siliceous than is typical elsewhere &amp; overall diopside content is a bit lower than normal (1 – 2%)                      &lt; 1% disseminated fine grained graphite &amp; &lt; .5% disseminated fine grained pyrite/pyrrhotite                      Local occasional to abundant disseminated phlogopite                      Local thin pegmatitic dykes/sweats                      Local patches of impure marble</p>				
				30.40	32	0.12	4380
				32	33	0.02	4381
				33	34	0.18	4382
				34	35	0.02	4383
				35	36	0	4384
				36	37.11	0	4385
37.11	40.57	QM	<p><b>QUARTZ MONZONITE</b></p> <p>Foliated Quartz Monzonite Dyke                      Light creamy grey – finely crystalline, local coarser crystalline sections                      Grades to pegmatitic bottom 25 cm's – with conspicuous large feldspar formed at bottom contact                      Top 1.2 m's – siliceous/half digested contact zone – not dyke proper</p>				
40.57	42.67	MBL	<p><b>MARBLE</b></p> <p>Coarse grained, light grey – creamy with slight greenish tinge                      Local thin sections of skarn mineralization                      30 cm's of spotted Biotite/Feldspar/Quartz Gneiss included in section</p>				







SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		46.33	-56°	-56°	17°	35.5°						DATE DRILLING STARTED	August 05, 2001
												DATE DRILLING ENDED	August 07, 2001
												(ft.)	(m)
												TOTAL DEPTH	48.77
												CASING DEPTH	1.83
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 16, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	1.83	CASE	<u>CASING - OVERBURDEN</u>				
1.83	15.10	CS1	<u>CALC - SILICATE GNEISS</u>	1.83	3	0.27	4386
			Light grey, slightly greenish, local disseminated oxidized sulphides	3	4	0.36	4387
			Weakly foliated @ 75° to LCA	4	5	0.20	4388
			1 - 1.5% disseminated fine grained graphite	5	6	1.00	4389
			< 1 % disseminated fine grained pyrite/pyrrhotite	6	7	0.19	4390
			Unit dissected by numerous small pegmatites/pegmatitic sweats - largest is from 5.6 - 6.12 which has a dark green strong skarn zone on it's upper contact.	7	8	0.15	4391
				8	9	0.50	4392
				9	10	0.20	4393

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
				Sample Interval		Pegmatites	SAMPLE NUMBER
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)		
			<u>CS1 cont'd</u>				
			Local sections strong haematitic stain	10	11	0.15	4394
			Small solution cavern likely somewhere between 11 & 12 meters, and also between 12 & 13	11	12	0	4395
				12	13	0	4396
				13	14	0	4397
				14	15	0	4398
15.1	25.23	CS2	<u>CALC – SILICATE GNEISS</u>	15	16	0	4399
			Medium to dark grey	16	17	0	4400
			Lightly to moderately foliated @ 65 - 75° to LCA	17	18	0.07	4401
			Overall 2.5 – 3% disseminated fine grained graphite – locally some medium grained	18	19	0.12	4402
			Stronger (3 – 4%) mineralized sections around 19 meters depth & from 24 m's to 25.45 meters	19	20	0	4403
			Trace fine grained dark green disseminated spinel	20	21	0	4404
			Entire section is moderately oxidized, with disseminated oxides throughout, & sections with strong stain on fracture surfaces & pervasive also	21	22	0	4405
			Rock is very friable & incompetent with exception of section 18.75 – 19.50, which section is also darker, more finely laminated & strongly foliated.	22	23	0	4406
				23	24	0	4407
				24	25.23	0.02	4408
25.23	27.18	QM	<u>QUARTZ MONZONITE</u>				
			Light grey/creamy – with mafics forming discrete oriented bands @ roughly 80° to LCA				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
From (m)	To (m)			Sample Interval		Pegmatites
				From (m)	To (m)	Cum. Total (m)
			<p><b>Quartz Monzonite cont'd</b></p> <p>~ 5 cm of green skarn is formed @ top contact with CS2 – contact @ 70° to LCA                      ~ 5 cm of lighter green skarn alteration formed on lower contact which is @ 45° to LCA                      CaCO3 healed fracture @ 26.50 meters @ 20° to LCA</p>			
27.18	36.03	MBL	<p><b>MARBLE</b></p> <p>Light grey slightly greenish – very weakly foliated @ 70° to LCA                      Grades to Calc – Silicate locally – overall medium to coarse grained recrystallized                      &lt;.5% disseminated fine grained graphite                      Competent with some local lateral fractures                      Coupfé of sections of impure marble – phlogopite &amp; slight oxidization</p>			
36.03	41.77	QM	<p><b>QUARTZ MONZONITE</b></p> <p>Foliated Quartz Monzonite – creamy white with mafics elongated &amp; oriented @ 70 - 80° to LCA                      Locally slightly vuggy &amp; locally small sections of pervasive oxidization</p>			
41.77	48.79	IZ	<p><b>INTERCALATED ZONE</b></p> <p>Zone of rapid lithological changes. Typically the lithologies seen are:                      Graphitic Calc – Silicate Gneiss, Skarn, Quartz, Pegmatite, Feldspar/Quartz/Biotite Gneiss                      Overall foliation is @ 60° to LCA</p>			





SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	APPROX. EASTING (m)
Collar												APPROX. ELEVATION (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						DATE DRILLING STARTED	August 08, 2001
1		31.09	-55°	-55°	17°	35.5°						DATE DRILLING ENDED	August 09, 2001
												(ft.)	(m)
												TOTAL DEPTH	33.53
												CASING DEPTH	8.53
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 21, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	8.53	CASE	<u>CASING - OVERBURDEN</u>				
8.53	18.55	CS1	<u>CALC - SILICATE GNEISS</u> Light grey - weakly foliated @ 75° to LCA Local marbly sections which are creamy white with <.5% disseminated fine grained graphite Few small pegmatites & patches of skarn mineralization Disseminated fine grained pyrite/pyrrhotite <1% Disseminated fine grained - local trace medium grained graphite 1 - 1.5% Local oxidized patches (limonite) down to bottom of section	8.74	10	0	4409
				10	11	0.07	4410
				11	12	0.12	4411
				12	13	0.20	4412
				13	14	0.03	4413
				14	15	0.08	4414
				15	16	0.18	4415
				16	17	0.04	4416





SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		33.22	-55°	-55°	21°	39.5°						DATE DRILLING STARTED	August 09, 2001
												DATE DRILLING ENDED	August 10, 2001
												(ft.)	(m)
												TOTAL DEPTH	35.67
												CASING DEPTH	13.71
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 26, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
			From (m)	To (m)	Cum. Total (m)		
0	13.71	CASE	<u>CASING - OVERBURDEN</u>				
13.71	14.60	P	<u>PEGMATITE</u>				
			Feldspar/Quartz pegmatite – trace mafics only Pegmatite proper is only from 14.23 – 14.60 – above this is skarn with pegmatitic stringers				
14.60	34.62	CS1	<u>CALC – SILICATE GNEISS</u>				
			Light grey with local slight greenish tinge – weakly foliated @ 80° to LCA				
			14.60	16	0.20	4418	
			16	17	0.09	4419	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Calc – Silicate Gneiss (CS1) cont'd</b>				
			Pyrite/pyrrhotite < 1% fine grained disseminated	17	18	0.08	4420
			1 – 1.5% disseminated fine grained graphite	18	19	0	4421
			Section includes an ~ 1 meter interval of CS2 mineralization from 16.5 to 17.4 which is darker & has higher graphite content – trace fine grained disseminated spinel, etc.	19	20	0	4422
				20	21	0	4423
				21	22	0.04	4424
				22	23	0.47	4425
				23	24	0.40	4426
				24	25	0	4427
				25	26	0	4428
				26	27	0.08	4429
				27	28	0	4430
				28	29	0	4431
				29	30	0	4432
				30	31	0.01	4433
				31	32	0	4435
				32	33	0.02	4436
				33	34	0.03	4437
				34	34.62	0	4438
34.62	36.61	Q	<b>QUARTZ</b>				
			Pale creamy to rosy/pink – Fractured & somewhat blocky				
			Top .5 m's of section possibly syenite				
			Limonite on fracture surfaces				



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
14.75	22.56	CS2	<b>CALC – SILICATE GNEISS</b> Medium grey with local greenish tinge, moderately foliated @ 70° to LCA Local friable sections with limonitic weathering (15.24, 18.29, & 21) Section ends in a pegmatite/skarn zone, which contact is @ ~ 90° to LCA 2.5 – 3% disseminated fine grained graphite Local marbly sections with <1% disseminated graphite 1% disseminated pyrite/pyrrhotite, mainly fine to very fine grained To 17 meters depth characteristics are more akin to CS1, but do also see trace spinel throughout Friable with poor recovery from 17 to 18.30 meters – re – cased to this point – possible solution caving present also	14.75	16	0.06	4438
				16	17	0	4439
				17	18	0	4440
				18	19	0.07	4441
				19	20	0	4442
				20	21	0	4443
				21	22	0.04	4444
				22	23	0.10	4445
22.56	42.62	CS1	<b>CALC – SILICATE GNEISS</b> Light grey, locally slightly greenish Grades to impure marble locally Foliated @ 70° to LCA Phlogopytic section around 28 meters depth Top of section to ~25 meters – mainly pegmatite/skarn/marble with trace of graphite Pyrite/Pyrrhotite <1% fine grained disseminated Few darker sections with increased graphite, pyrite/pyrrhotite Pegmatite with clusters of unidentified green (possibly garnet) @ ~24 – 24.5 meters	23	24	0.70	4446
				24	25	0.90	4447
				25	26	0.23	4448
				26	27	0.02	4449
				27	28	0.03	4450
				28	29	0.05	4451
				29	30	0.03	4452
				30	31	0.06	4453
				31	32	0.24	4454
				32	33	0	4455
				33	34	0.06	4456
				34	35	0.21	4457

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG				
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)		
			<u>Calc - Silicate Gneiss (CS1) cont'd</u>					
					35	36	0.07	4458
					36	37	0	4459
					37	38	0.25	4460
					38	39	0.14	4461
					39	40	0	4462
					40	41	0	4463
					41	42.62	0	4464
42.62	45.72	Q	<u>QUARTZ</u>					
			Zone of quartz flooding - pink/rosy with limonite stain pervasive & on fracture surfaces					
			Top of zone transitional from above lithology - with thin pegmatite at the very top followed by skarned CS1 with phlogopite & trace graphite with increasing quartz					
			Bottom of this interval (from 44.2 m's on) may possibly be the start of the Intercalated Zone (IZ), or may just be lithological variation within the quartz zone					

SURVEY DATA										DRILLING DATA					
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE		
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)		APPROX. EASTING (m)	
Collar												APPROX. NORTHING (m)		APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)			
1		31.09	-56°	-56°	08°	26.5°						DATE DRILLING STARTED		August 12, 2001	
												DATE DRILLING ENDED		August 13, 2001	
														(ft.)	(m)
												TOTAL DEPTH		33.53	
												CASING DEPTH		5.18	
												CASING			
												STEEL IN HOLE		No	Ft.
												LOGGED BY		T Lewis	
												LOGGING DATE		August 27, 2001	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
			From (m)	To (m)	Cum. Total (m)		
0	5.18	CASE	<b>CASING - OVERBURDEN</b>				
5.18	16.1	CS2	<b>CALC - SILICATE GNEISS</b>				
			Poor recovery @ top of zone – possibly mostly friable CS2 Mostly thin sections of skarn mineralization &/or thin pegmatites recovered in the uppermost portions of the hole Grade probably higher than indicated due to low recovery of the softer (higher graphite grade) material, and exaggeration of the more durable lithologies Above 9 meters depth – no analyses as no graphite mineralization recovered				
			9	10	0.40	4465	
			10	11	0.25	4466	
			11	12	0.05	4467	
			12	13	0.01	4468	
			13	14	0.12	4469	
			14	15	0.15	4470	

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Calc – Silicate Gneiss (CS2) cont'd</b>				
			Medium Grey – moderately foliated @ 70° to LCA 2 – 2.5% disseminated fine grained graphite ~ 1% disseminated pyrite/pyrrhotite				
				15	16	0.02	4471
16.1	31.13	CS1	<b>CALC – SILICATE GNEISS</b>	16	17	0	4472
			Light to medium grey, local slight greenish tinge Foliated @ ~ 75° to LCA Top of zone to ~ 17.3 meters more akin to Marble Overall 1 – 1.5% disseminated fine grained pyrite/pyrrhotite	17	18	0.02	4473
				18	19	0	4474
				19	20	0.11	4475
				20	21	0.26	4476
				21	22	0.21	4477
				22	23	0	4478
				23	24	0	4479
				24	25	0	4480
				25	26	0	4481
				26	27	0.17	4482
				27	28	0.04	4483
				28	29	0.64	4484
				29	30	0.24	4485
				30	31.13	0.07	4486







GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)		
15	16.50	CS2	<p><b>CALC - SILICATE GNEISS</b></p> <p>Medium grey, friable - moderately foliated @ 70° to LCA                      Limonite stain on fracture surfaces &amp; inter-granular also                      Possible fault @ ~ 15.20                      2 - 2.5% disseminated fine grained graphite                      ~1% disseminated pyrite/pyrrhotite</p>	15	16	0	4487
				16	17	0.20	4488
				17	18	0.09	4489
				18	19	0	4490
				19	20	0	4491
				20	21	0.02	4492
				21	22	0	4493
				22	23	0	4494
16.50	33.70	CS1	<p><b>CALC - SILICATE GNEISS</b></p> <p>Light grey, with local greenish tinge, weakly foliated @ 70° to LCA                      Top of section quartz with local pegmatite/Skarn &amp; marble down to ~ 20 meters depth                      ~ 1% graphite in this section, with overall 1.5 - 2% disseminated fine grained graphite                      Patches of oxidization to bottom of section                      &lt; 1% disseminated pyrite/pyrrhotite</p>	23	24	0.02	4495
				24	25	0.47	4496
				25	26	0	4497
				26	27	0.03	4498
				27	28	0.05	4499
				28	29	0	4500
				29	30	0	4501
				30	31	0	4502
				31	32	0	4503
				32	33	0	4504
				33	33.70	0	4505





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
25.40	33.97	QM	<p><b>QUARTZ MONZONITE</b></p> <p>Light grey very weakly foliated (alignment of sparse mafics) @ 80° to LCA                      Local sections of CS2 mineralization included – most notable of which is from ~29.15 – 30.10                      Pegmatite column reflects total QM in each sample                      Top contact fairly sharp @80° to LCA                      Bottom contact less well defined – skarn mineralization amidst QM &amp; Pegmatite</p>	26	27	0.85	4511
				27	28	1.00	4512
				28	29	0.90	4513
				29	30	0.05	4514
				30	31	0.70	4515
				31	32	0.80	4516
				32	33	0.62	4517
				33	34	0.44	4518
				34	35	0	4519
33.97	51.42	CS1	<p><b>CALC – SILICATE GNEISS</b></p> <p>Light grey, with local greenish tinge                      Weakly to moderately foliated @ 70° to LCA                      &lt; 1% disseminated fine grained pyrite/pyrrhotite                      1.5 – 2% disseminated fine grained graphite                      Local sections of moderately coarse graphitic mineralized diopsidic marble                      Pegmatite @ 35.14 to 35.59 – both contacts are sharp - @ 70° to LCA, but from converging directions                      Biotite/Feldspar gneiss zone from 39.62 – 40.30                      Oxidization down to 46 meters</p> <p>@ ~ 42.50 – colour turns to a medium grey &amp; graphite content increases locally to 2.5 – 3.0% - see odd similar thin patches down to ~ 50 meters depth</p>	35	36	0.56	4520
				36	37	0.16	4521
				37	38	0	4522
				38	39	0.11	4523
				39	40	0.14	4524
				40	41	0	4525
				41	42	0	4526
				42	43	0	4527
				43	44	0.10	4528
				44	45	0.03	4529
				45	46	0.28	4530
				46	47	0.08	4531
				47	48	0.08	4532
				48	49	0	4533
				49	50	0.06	4534
				50	51.42	0.20	4535





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<u>Skarn cont'd</u>				
			CS1 patches – foliated weakly @ 80° to LCA – oxidized sulphides Local areas with biotite/phlogopite				
19.05	26.70	CS1	<u>CALC – SILICATE GNEISS</u>	19.05	20	0.06	4536
			Light grey with local slight greenish tinge Weakly to moderately foliated @ 80° to LCA < 1% disseminated pyrite/pyrrhotite – fine grained typically 1.5 – 2% disseminated fine grained graphite	20	21	0.14	4537
				21	22	0.63	4538
				22	23	0.54	4539
				23	24	0.16	4540
				24	25	0.40	4541
				25	26	0	4542
				26	27	0.13	4543
26.70	31.85	CS2	<u>CALC – SILICATE GNEISS</u>				
			Medium grey – weakly to moderately foliated @ 80° to LCA Local trace fine grained dark green spinel 1 – 1.5% disseminated fine grained pyrite/pyrrhotite 2.5 – 3% disseminated fine grained graphite Pegmatites: 26.71 – 26.95, and 29.07 – 29.90	27	28	0	4544
				28	29	0.25	4545
				29	30	0.58	4546
				30	31	0.06	4547
				31	32	0.04	4548
31.85	36.11	CS1	<u>CALC – SILICATE GNEISS</u>	32	33	0.07	4549
			As 19.05 – 26.70 – Foliation increases to 70° to LCA – proximal to QM dyke	33	34	0.28	4550
				34	35	1.00	4551
				35	36	0.12	4552



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
			<u>Calc – Silicate Gneiss (CS1) cont'd</u>				
			Local dirty (impure) marble sections				
			Pegmatite 33.40 – 33.62				
			Quartz Monzonite dyke 33.90 – 35.05 – contacts @ 90° to LCA				
36.11	39.05	CS2	<u>CALC – SILICATE GNEISS</u>	36	37	0	4553
			As above	37	38	0.06	4554
			Foliation @ top of section @ 80° to LCA – angle shallows to 60° to LCA towards the bottom where it contacts QM	38	39.05	0.01	4555
39.05	40.79	QM	<u>QUARTZ MONZONITE</u>				
			Dyke – Top contact @ 60° to LCA				
			Bottom contact is gradational into Marble				
40.79	54.86	MBL	<u>MARBLE</u>				
			Creamy white /cryptocrystalline				
			Local slightly greenish tinge & trace of skarn (other than diopside) mineralization				
			Gradational/ ragged contact 47 0 47.51 to Bluish Feldspar/Quartz Pegmatite – out again @ 49.73				
			(sharp contact @ 90° to LCA				
			< .5% fine grained disseminated graphite				

SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		27.43	-58°	-58°	17.5°	36°						DATE DRILLING STARTED	August 18, 2001
												DATE DRILLING ENDED	August 19, 2001
												(ft.)	(m)
												TOTAL DEPTH	
												CASING DEPTH	30.48
												CASING	3.05
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	August 29, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	3.05	CASE	<u>CASING - OVERBURDEN</u>				
3.05	19.30	CS1	<u>CALC - SILICATE GNEISS</u>				
			Silicified 0 Light grey with local pale green - glossy - appears to be altered by local intrusive Foliated @ 80° to LCA <.5% disseminated pyrite/pyrrhotite ~1% disseminated fine grained graphite Feldspar/quartz pegmatite ~ 10.45 - 12.00 vuggy - quartz crystal growth - local amorphous graphite	7.32	9	0.07	4556
				9	10.45	0.01	4557
						GAP	
				12	13	0.01	4558
				13	14	0	4559
				14	15	0.01	4560

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)
			<b>Calc – Silicate Gneiss cont'd</b>			
			Local zones of increased oxidization – most notable @ ~ 16.50 meters			
			Sampled two best looking intervals in diamond drill hole			
19.30	30.48	PM	<b><u>PARTIAL MELT ZONE</u></b>			
			Dyke swarm or possible ragged edge of an intrusive i.e. zone of interdigitating fingers of varying phases of a central intrusive			
			Section from top @ 19.30 meters:			
			- foliated Quartz Monzonite to ~ 20 m's			
			- 1.5 meters of quartz & a bit of CS1 – very blocky			
			- thin Feldspar/Quartz/Biotite dyke			
			- 2 meters skarn/silica zone - Quartz			
			- @ ~ 24 meters Feldspar/Quartz/Biotite - foliated intrusive – very weakly foliated -			
			gradational transition to foliated (strongly) feldspar/quartz rock – which appears to be			
			feldspar flooded – local patchy green garnet (poorly developed retrograde)			
			- foliation @ ~35° to LCA			



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
23.50	31.19	CS2	<b>CALC SILICATE GNEISS</b>  Dark grey –moderately foliated @ 80° to LCA 1-1.5% disseminated fine grained pyrite/pyrrhotite – 2.5-3% disseminated fine grained graphite Top of section – moderate limonite weathered – below 24m local trace limonite weathered Trace disseminated fine grained spiral Several small bands of marble Several small pegmatites Quartz/Feldspar/dyke (syrinite) 26.20 – 28.70 Several sections of higher grained graphite: @ ~ 29m 2x15cm bands, & @ 30.02 – 31.19 5-5.5% overall				
				23	24	0	4565
				24	25	0	4566
				25	26	0	4567
				26	27	0.80	4568
				27	28	1.00	4569
				28	29	0.50	4570
				29	30	0	4571
				30	31.19	0.10	4572
31.19	32.92	PEG	<b>PEGMATITE</b>  Pegmatite/Foliated Quartz Monzonite Dyke & local skarn patches				
32.92	43.48	CS1	<b>CALC - SILICATE GNEISS</b>  Light grey slight greenish with local patches More intense green (skarn) mineralization Weakly foliated @ 80° to LCA Local patches impure marble 1-1.5% disseminated fine grained graphite bottom of section becomes siliceous towards contact with pegmatites	32.92	34	0	4573
				34	35	0	4574
				35	36	0	4575
				36	37	0	4576
				37	38	0	4577
				38	39	0	4578
				39	40	0	4579
				40	41	0.07	4580
				41	42	0.03	4581
				42	43.48	0.04	4582



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		37.18	BAD	TEST								DATE DRILLING STARTED	September 04, 2001
												DATE DRILLING ENDED	September 05, 2001
												(ft.)	(m)
												TOTAL DEPTH	39.62
												CASING DEPTH	11.62
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	September 07, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	11.62	CASE	<b>CASING – OVERBURDEN</b> Casing only to 3.05 – good recovery of boulder & pebble till				
11.62	15.15	QM	<b>FOLIATED/QUARTZ/MONZONITE</b> Greyish –creamy – weakly foliated mafics Becomes pinkish Quartz unit towards bottom of interval				
15.15	25.49	CS2	<b>CALC – SILICATE GNEISS</b> Light to dark grey –weak to moderately foliated @ 80° to LCA Oxidized throughout interval – weak to locally strong 21 – 22 meters – extremely friable sand – little graphite recovered	15.15	16	0	4583
				16	17	0.14	4584
				17	18	0.03	4585

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)		
			<b>CS2 CONT'D</b>				
			(Abundant Graphite annulus of hole – good returns throughout hole) No physical boundary @ bottom - i.e. abruptly passes into CS1 Marble sections 18.30 –19, 20.30 – 20.50, 24.70 – 25.00 Coarsely crystalline with only trace graphite Pyrite/Pyrrhotite ~1% disseminated - Graphite (overall) 2-3% fine grained disseminated	18	19	0.01	4586
				19	20	0.16	4587
				20	21	0	4588
				21	22	0	4589
				22	23	0.25	4590
				23	24	0.23	4591
				24	25	0.15	4592
25.49	35.39	CS1	<b>CALC - SILICATE GNEISS</b>	25	26	0	4593
			Light grey local pale greenish Weakly foliated @ 85° to LCA 1.5 –2% disseminated fine grained graphite <1% disseminated fine grained pyrite/Pyrrhotite- local blebs Bottom of section increasingly siliceous Local sections marbly with < .5% disseminated graphite Patches of oxidization to bottom of interval	26	27	0.18	4594
				27	28	0.25	4595
				28	29	0.09	4596
				29	30	0	4597
				30	31	0	4598
				31	32	0.05	4599
				32	33	0	4600
				33	34	0	4601
				34	35	0.02	4602
				35	35.39	0	4603
35.39	39.62	Q	<b>QUARTZ</b>				
			Rosy/Pink Quartz Local sections very weakly foliated – slightly schistose-sericitic				



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM		MINE
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		32.31	-55°	-55°	BAD	TEST						DATE DRILLING STARTED	September 05, 2001
												DATE DRILLING ENDED	September 06, 2001
												(ft.)	(m)
												TOTAL DEPTH	34.74
												CASING DEPTH	6.10
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	September 08, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
0	14.00	CASE	<b>CASING - OVERBURDEN</b> Casing only to 6.1 meters but overburden (mainly Quartz Monzonite boulders) to 14.00 meters				
14.00	22.05	CS2	<b>CALC - SILICATE GNEISS</b> Medium grey - weakly foliated @70° to LCA Top of section moderately oxidized - local short sections of weak oxidization CS2 terminates @ bottom contact with 15cm oxidized pegmatite dyke- contact @ 60° to LCA 25cm pegmatite @ 20.55 - top contact @ 70° to LCA bottom ~ 35° to LCA Graphite - 2.5 - 3% disseminated fine grained Pyrite/Pyrrhotite ~ 1% disseminated fine grained Trace dark green spinel	14	15	0	4604
				15	16	0	4605
				16	17	0.05	4606
				17	18	0	4607
				18	19	0.08	4608
				19	20	0	4609
				20	21	0.30	4610
				21	22	0.01	4611





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
				Sample Interval		Pegmatites	SAMPLE NUMBER
From (m)	To (m)		From (m)	To (m)	Cum. Total (m)		
7.06	26.04	CS1	<b>CALC-SILICATE GNEISS</b> Light grey to greenish grey Weakly foliated @ 80° to LCA Local abundant diopside 1% disseminated fine grained pyrite/pyrrhotite – local patches medium grained pyrite 1.5 – 2% disseminated fine grained graphite Local thin pegmatites/ pegmatitic sweets Major pegmatite ~ 15.50-16.20cm – dark grey skarn @ bottom Major pegmatite ~ 18.30-20.20cm Above pegmatites possibly leucocratic granites with pegmatites intruding Major pegmatite ~ 20.80-21.50	7	8	0.53	4624
				8	9	0.05	4625
				9	10	0	4626
				10	11	0.05	4627
				11	12	0.04	4628
				12	13	0	4629
				13	14	0.14	4630
				14	15	0.20	4631
				15	16	0.52	4632
				16	17	0.60	4633
				17	18	0.74	4634
				18	19	0.70	4635
				19	20	1.00	4636
				20	21	0.29	4637
				21	22	0.48	4638
				22	23	0	4639
				23	24	0	4640
				24	25	0.20	4641
				25	26	0.15	4642
26.04	36.94	MBL	<b>MARBLE</b> White/grey impure with <1% disseminated graphite Coarse grained granular, local greenish skarn patches, local disseminated Phlogopite	26	27	0	4643
				27	28	0.16	4644
				28	29	0.15	4645
				29	30	0	4646



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		27.43	-56°	-56°	02°	20.5°						DATE DRILLING STARTED	September 07, 2001
												DATE DRILLING ENDED	September 08, 2001
												(ft.)	(m)
												TOTAL DEPTH	30.48
												CASING DEPTH	2.13
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	September 12, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
FROM (m)	TO (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
			From (m)	To (m)	Cum. Total (m)		
0	2.13	CASE	<u>CASING - OVERBURDEN</u>				
2.13	9.07	P	<u>PEGMATITE</u>				
			Feldspar/Quartz/Biotite Pegmatite				
			Creamy white, coarse granular				
			Weak limonitic stain on fracture surfaces, local pervasive stain				
			Thin sections of CS2 mineralization from ~ 6.15 - 6.30 & 6.40 - 6.50				

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
9.07	12.28	CS1	<p><b>CALC - SILICATE GNEISS</b></p> <p>Light grey, locally slightly greenish Weakly foliated @ 80° to LCA Local thin pegmatites &amp; also thin patches of skarn mineralization 1 - 2 % disseminated fine grained graphite &lt; 1% disseminated fine grained pyrite/pyrrhotite</p>	9.07	10	0.56	4654
				10	11	0.35	4655
				11	12.28	0.14	4656
12.28	17.72	QM	<p><b>QUARTZ MONZONITE</b></p> <p>Very weakly foliated - often foliation not particularly evident Local patches of porphyritic quartz/feldspar Not much in the line of biotite or other mafics throughout Local patches where sparse mafics have been altered to chlorite Some local skarn patches</p>				
17.72	18.15	CS2	<p><b>CALC - SILICATE GNEISS</b></p> <p>Medium grey Moderately foliated @ 80° to LCA 2 - 2.5% disseminated fine grained graphite 1 - 1.5% disseminated fine grained pyrite/pyrrhotite Local blebs of pyrrhotite</p>	17.72	18	0.03	4657







GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
12.80	21.41	LG	<p><b><u>LEUCOCRATIC GRANITE</u></b></p> <p>Creamy white to light grey                      Quartz/Feldspar – local disseminated biotite                      Local patches of diopsidic skarn mineralization                      Zenoliths (up to 15 cm) of CS2 @ top of interval                      Numerous Quartz healed fractures – varying orientations                      Slight clay alteration of feldspars @ ~ 18 meters                      Pegmatitic @ bottom (last 1.5 meters) of interval                      Local trace disseminated fine grained graphite</p>				
21.41	23.91	CS2	<p><b><u>CALC – SILICATE GNEISS</u></b></p> <p>Medium grey, very weakly foliated @ ~ 80° to LCA                      Strong (4 – 5%) disseminated fine grained graphite                      1 – 1.5% disseminated fine grained pyrite/pyrrhotite                      Pegmatite 22.44 – 23.15 top contact @ 80° to LCA – both top &amp; bottom contacts ragged                      Bottom of interval becomes impure marble (phlogopytic), skarned also locally</p>	21.41	22.44	0.02	4665
				22.44	23.91	0.08	4666
23.91	39.05	CS1	<p><b><u>CALC – SILICATE GNEISS</u></b></p> <p>Light grey, weakly foliated @ 70 - 80° to LCA                      Local greenish tinge, often with segregations of graphite                      Top of section poorly mineralized, Abundant diopside skarn &amp; abundant thin leucocratic                      Pegmatites</p>	25.95	27	0.12	4667
				27	28	0	4668
				28	29	0.19	4669
				29	30	0.12	4670





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval		Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)	
			<b>Biotite Feldspar Quartz Gneiss cont'd</b>				
			Pale green siliceous skarn developed bottom 40 – 50 cm of section				
			Local disseminated pyrite/pyrrhotite – often associated with dykes				
			Local sericitic sections – typically in locales which are slightly schistose – typically with < . 5% fine grained, disseminated graphite associated				
			Overall trace local disseminated fine grained graphite				
			Dyke/skarn/Digest zone 21.10 - ~ 29.50 meters				
31.28	34.25	CS2	<b>CALC – SILICATE GNEISS</b>				
			Medium grey, moderately foliated @ ~ 80° to LCA	31.28	32	0.21	4680
			Siliceous – quartz flooded	32	33	0.13	4681
			Occasional poorly developed fine grained disseminated dark green spinel	33	34.25	0.07	4682
			~ 1% disseminated fine grained pyrite/pyrrhotite				
			Local sections (to 08 cm's) of impure crystalline marble				
34.25	39.72	P	<b>PEGMATITE</b>				
			Whitish with local dark mafic clots (biotite) – predominately felsic				
			Pale green skarn 38.50 – 38.90				
			Some digest/mixing @ contacts				
			Top contact @ ~ 70° to LCA. Bottom @ 55°				





GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
15.86	23.91	FQBG	<p><b>FELDSPAR QUARTZ BIOTITE GNEISS</b></p> <p>Light grey – very weakly foliated @ 60 - 70° to LCA                      Local clots biotite                      Trace disseminated fine to coarse grained pink poorly formed garnet</p>				
23.91	26.82	BFQG	<p><b>BIOTITE FELDSPAR QUARTZ GNEISS</b></p> <p>As 8.53 – 15.86</p>				
26.82	30.62	QM	<p><b>QUARTZ MONZONITE</b></p> <p>Whitish, light grey, very weakly foliated with mafics forming faint bands                      Foliation @ 60 - 70° to LCA                      Local bands of BFQG                      Local patches pink coarse grained poorly formed garnet</p>				
30.62	33.20	BFQG	<p><b>BIOTITE FELDSPAR QUARTZ GNEISS</b></p> <p>As 8.53 – 15.86 &amp; 23.91 – 26.82</p>				
33.20	48.25	FQBG	<p><b>FELDSPAR QUARTZ BIOTITE GNEISS</b></p> <p>Weakly foliated to locally strongly foliated (areas of increased biotite content) @ 65° to LCA</p>				



GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
				Sample Interval		Pegmatites	SAMPLE NUMBER
From (m)	To (m)			From (m)	To (m)	Cum. Total (m)	
			<b>Feldspar Quartz Biotite Gneiss cont'd</b>				
			Locally "spotted"				
			Trace local pegmatites to of section – several larger (up to .5 m's) toward bottom of interval				
			Local trace pervasive pale green skarn mineralization				
48.25	53.94	BFQG	<b>BIOTITE FELDSPAR QUARTZ GNEISS</b>				
			As 8.53 – 15.86 & 23.91 – 26.82 & 30.62 – 33.20				
			Several small pegmatites & pegmatitic sweats				
			Foliated Quartz Monzonite dyke @ ~51.95 – 52.78				
53.94	63.78	SK	<b>SKARN</b>				
			Pale green – massive – pervasive skarn – with several dykes intruding				
			53.94 – 55.20 Coarse grained pegmatite dyke with clots of dark green Tremolite/Actinolite				
			58.58 – 59.14 Foliated quartz Monzonite dyke				
			61.08 – 63.78 “ “ “ “				
63.78	66.28	CS1	<b>CALC – SILICATE GNEISS</b>	63.78	65	0	46.92
			Light to dark grey, moderately foliated @ 80° to LCA	65	66	0	46.93
			Local patches of impure marble	66	66.28	0	46.94
			< 1% disseminated fine grained pyrite/pyrrhotite				
			1 – 1.5% disseminated fine grained graphite				
			Local limonitic weathering on fractures (prominent fracture parallel to LCA @ top of interval)				



SURVEY DATA										DRILLING DATA			
SURVEY	DEPTH		DIP		TRUE AZIMUTH			GRID			GRID SYSTEM	MINE	
	(ft.)	(m)	True		Degrees	Minutes	Seconds	SYSTEM	NORTHING (m)	EASTING (m)	ELEVATION (m)	APPROX. NORTHING (m)	
Collar												APPROX. EASTING (m)	
Down Hole	(ft.)	(m)	Read	True	Read	True						APPROX. ELEVATION (m)	
1		28.04	-55°	-55°	21°	39.5°						DATE DRILLING STARTED	September 13, 2001
												DATE DRILLING ENDED	September 14, 2001
												(ft.)	(m)
												TOTAL DEPTH	30.48
												CASING DEPTH	2.13
												CASING	
												STEEL IN HOLE	No Ft.
												LOGGED BY	T Lewis
												LOGGING DATE	September 16, 2001

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG		
FROM (m)	TO (m)			Sample Interval	Pegmatites	SAMPLE NUMBER
				From (m)	To (m)	Cum. Total (m)
0	2.13	CASE	<u>CASING - OVERBURDEN</u>			
2.13	3.31	MBL	<u>MARBLE</u> Creamy grey – whitish – coarse crystalline Impure – Local trace disseminated graphite Pegmatite ~ 2.50 – 3.00			
3.31	7.79	QM	<u>QUARTZ MONZONITE</u> Light grey – very weakly foliated			

GEOLOGICAL INTERVAL		LITHO CODE	LITHOLOGICAL DESCRIPTION	SAMPLE LOG			
From (m)	To (m)			Sample Interval	Pegmatites	SAMPLE NUMBER	
				From (m)	To (m)	Cum. Total (m)	
			<u>Quartz Monzonite cont'd</u>				
			Bottom of interval – Quartz with some sections with increased mafics - which display crenulated foliation				
7.79	8.25	LM	<u>LAMPROPHYRE DYKE</u>				
			Blackish – Porphyritic (Black biotite groundmass – with white clayey/feldspar phenocrysts) Local greenish tinge (chlorite) which has permeated the feldspars to give them a pale green tinge Some folding/crenulation				
8.25	8.99	Q	<u>QUARTZ</u>				
			Pinkish/Rosy - massive, with local blocky fracturing, and local limonitic weathering Some light grey foliated sections - crenulated				
8.99	10.85	LM	<u>LAMPROPHYRE DYKE</u>				
			As Above - Local pronounced porphyritic texture				
10.85	13.85	Q	<u>QUARTZ</u>				
			Pinkish/Rosy - massive With local blocky fracturing Limonitic weathering				



TR #	FR	TO	LITH	DESCRIPTION
28	0	0.2	ORG	black organic litter horizon
28	0.2	0.4	BHZ	dark brown B-horizon with heavy rootlet development; minor graphite in this layer
28	0.4	1	TILL	khaki-coloured silty-pebbly till with <0.5% disseminated graphite; includes minor rusty lenses of weathered CS1
28	1	1.45	CS1/MARBLE	weathered CS1/marble - includes 25-30% coarse partially weathered subcrop, less than 1.5% graphite
29	0	0.15	ORG	
29	0.15	1.1	TILL	thin poorly developed B-horizon grading into a yellow-brown sandy till with very little pebbles/cobbles; better than typical graphite at 0.7% with local high spots
29	1.1	2.05	CS2/CS1	beige to brown completely weathered CS2 +/- CS1; material reduces to a medium sand-like consistency, locally includes nodules of non-weathered pegmatites to 3-4%
29	2.05	3.05	CS2/CS1	similar to above with 3.5 to 4% C; also includes 5% qtz/bsp nodules - pegmatite remnants
29	3.05	4.8	CS2/CS1	similar to above grading into relatively hard but still somewhat weathered CS2; Excavator is having a hard time digging beyond this point. Bedrock is a light medium grey CS2.
30	0	0.2	ORG	
30	0.2	0.5	BHZ	no comments; B-horizon grades into till below
30	0.5	1.05	TILL	silty till; bedrock at 1.05 consists of <0.3% diss 'C'; looks like a biotite qtz monzonite with pegmatite.
31	0	0.2	ORG	
31	0.2	1.65	TILL	poorly developed B-horizon on top of yellow-brown till with 15% +3/4" pebbles and cobbles, overall <0.3% graphite.
32	0	0.15	ORG	
32	0.15	0.3	BHZ	
32	0.3	0.75	TILL	sandy graphite-rich till with <0.5% graphite
32	0.75	3.3	CS2	well-weathered CS2 with variable +3/4" material varying from <0.5% to 10-15%. Graphite varies from <2.5% to 4%; get some lenses of a dark grey to khaki-coloured clay-rich material near the bottom, bedrock appears to be a qtz-fsp pegmatite
33	0	0.1	ORG	
33	0.1	0.5	BHZ	includes a distinctive white 5cm ash layer (may represent a historic volcanic ash?)
33	0.5	3.6	TILL/CS2	essentially a till horizon with sections of transported weathered clasts of CS2; overall graphite = 1%; 25% +3/4" material, bedrock is CS2.
34	0	0.15	ORG	
34	0.15	0.35	BHZ	
34	0.35	1.85	TILL	tight yellow-brown sandy-pebbly till with 10% +3/4" material, overall graphite=<0.5%
34	1.85	2.85	CS1/CS2?	completely weathered CS1/CS2? Reduced to a fine to medium sand; 3.5-4% graphite.
34	2.85	3.85	CS2	completely weathered CS2; 3.5-4% graphite. Bedrock is CS2
35	0	0.2	ORG	
35	0.2	0.7	BHZ	
35	0.7	1.7	TILL	mixture of silty/pebbly till with some transported CS1 or CS2; overall graphite=<1%.
35	1.7	4.6	CS2	completely weathered CS relict laminations, 3-4% graphite; possible interlaminations of CS1; bedrock is CS2.
36	0	0.35	ORG	
36	0.35	0.65	BHZ	
36	0.65	1.65	TILL	silty pebbly till with 10-15% +3/4"; <0.3% graphite.
36	1.65	2.65	TILL/CS1	mixture of silty/pebbly till and weathered CS1; overall graphite 1-1.5%.
36	2.65	3.85	CS2	completely weathered CS2; 4% graphite.

37	0	0.2	ORG	
37	0.2	0.7	BHZ	
37	0.7	2.7	TILL	yellow sandy/pebbly to boulder till; 30% +3/4"; <0.3% graphite;
37	2.7	3.7	CS1/CS2	predominantly weathered CS1 +/- CS2; 2.5 - 3.5% graphite; <0.5% +3/4"
37	3.7	4.7	CS2	weathered CS2 with 3.5 - 4% graphite; bedrock is CS2 with pegmatites.
38	0	0.25	ORG	
38	0.25	0.65	BHZ	
38	0.65	0.85	TILL	Bedrock at 85cm. Mostly pegmatite with intermittent CS1 bedrock. No significant unconsolidated material in this trench.
39	0	0.1	ORG	
39	0.1	0.3	BHZ	
39	0.3	4.1	TILL	sandy/pebbly till with <5% +3/4" material; variable graphite from <0.5 to 1.5% due to the scattered presence of transported clasts of weathered CS2.
40	0	0.1	ORG	
40	0.1	0.7	BHZ	heavy root development and some (<0.5%) graphite
40	0.7	1.3	CS1?	reddish brown sandy-textured weathered CS1; this is a discontinuous layer; 2.5 - 3% graphite.
40	1.3	2.4	TILL	silty clay/boulder pebble till with small pockets of weathered CS2/CS1; Overall graphite <0.5%; 15% +3/4"; bedrock is quartz and pegmatite.
41	0	0.2	ORG	
41	0.2	0.7	BHZ	
41	0.7	1.6	TILL	yellow brown silty/boulder till with pockets of weathered CS2; overall 'C' = <0.7%; +3/4" = 15%
41	1.6	2.2	CS2	completely weathered CS2 to an orange/brown colour and sandy consistency; 'C' = 3-4%; bedrock is CS2 with pegmatitic swaths
42	0	0.2	ORG	
42	0.2	0.7	BHZ	
42	0.7	1.3	TILL	yellow brown silty/boulder till with trace graphite
42	1.3	1.8	CS2	weathered CS2 to a reddish/brown sandy textured material with 3-4% graphite; bedrock is CS2
43	0	0.3	ORG	
43	0.3	1.4	TILL	silty clay boulder till with +30% +3/4" material; minor narrow 20 cm weathered zone with graphite at bedrock interface; Overall 'C' = <0.3%; bedrock is a coarse graphitic marble with pegmatitic swaths.
44	0	0.3	ORG	
44	0.3	1.1	TILL	yellow/brown sandy/pebbly till with <0.7% graphite; 10% +3/4" material.
44	1.1	2	CS2	partially weathered CS2 with about 2% graphite.
45	0	0.2	ORG	
45	0.2	0.4	BHZ	
45	0.4	2.4	TILL	sandy pebbly till with 15% +3/4"; also sporadic patches of weathered CS1 and CS2 boulders; overall 'C' = <0.2%.
45	2.4	3.4	TILL/CS1	similar to till unit above but includes about 65% transported weathered CS1 with 1.5 to 2% graphite
45	3.4	4.5	CS1	more or less completely weathered CS1 with 10% hard nodules of same composition; bedrock is CS1; 2-2.5% graphite.
46	0	0.25	ORG	
46	0.25	0.5	BHZ	
46	0.5	1.5	TILL	sandy silty till with <0.2% diss. Graphite; 10% +3/4"

46	1.5	2.5	TILL/CS1	similar to till above but also includes 35-40% transported boulders of weathered CS1; overall 'C'=1-1.2%
46	2.5	4.7	CS1	weathered CS1 with 1.5 to 2.0% graphite; 5% pegmatite swaths; bedrock still weathered at 4.7 metres;
47	0	0.15	ORG	
47	0.15	0.35	TILL	
47	0.35	1.25	CS1	partially weathered CS1 ; approximately 80cm of pretty hard rock and 30cm really weathered; 1.5 - 2% graphite.
48	0	0.15	ORG	
48	0.15	0.4	BHZ	
48	0.4	0.9	TILL	orange pebbly silty clay till with ~0.5% graphite; bedrock is a quartz monzonite, although immediately to the south bedrock changes to CS1; see picture #18 roll #1.
49	0	0.15	ORG	
49	0.15	0.45	BHZ	
49	0.45	1.75	TILL	mixture of glacial till and transported weathered CS2+/- CS1; till has a fine sandy texture with 15% +3/4" pebbles and cobbles; overall graphite <1%; bedrock is pegmatite with CS1
50	0	0.15	ORG	
50	0.15	0.85	BHZ	
50	0.85	1.45	TILL	silty pebbly till with 20% +3/4"; <0.3% graphite.
50	1.45	4.45	CS1	completely to partially weathered CS1 with minor CS2, where completely weathered reduced to a sandy texture; overall graphite 2-3%; near bottom a 10cm clay seam; Note: weathering continues at depth but too dangerous to sample.
51	0	0.25	ORG	
51	0.25	0.6	BHZ	
51	0.6	2.6	TILL	yellowish brown silty till with 15-20% +3/4" ; 0.3 to 0.7% graphite; section includes some pockets of weathed CS2/CS1;
51	2.6	3.6	CS1	predominantly weathered CS1 with 1.5 to 2% graphite; bedrock at 3.6m is relatively hard weathered CS1 which may be mineable; section cut by a broken up 40cm pegmatite.
52	0	0.25	ORG	
52	0.25	0.55	BHZ	
52	0.55	1.9	TILL	sandy boulder till with trace graphite
52	1.9	5.1	CS1	weathered CS1 with about 2% graphite, most is weathered to a coarse sand-like texture with some large slightly harder segments which would break up; gets harder downsection; 5-7% pegmatite nodules;
53	0	0.2	ORG	
53	0.2	0.9	BHZ	
53	0.9	1.9	TILL	mixture of poorly sorted silty pebbly till with pockets of weathered CS1/CS2?; overall graphite <1%;
53	1.9	2.7	CS1	mostly weathered CS1 with pockets of till, also small segments of pegmatite and narrow bands of feldspar qtz biotite garnet gneiss; overall 'C'=<1.5%; bedrock is CS1
54	0	0.3	ORG	
54	0.3	0.95	TILL	sandy pebbly till with trace graphite; weathered bedrock at 0.95.
54	0.95	3.75	CS1	weathered insitu CS1 with minor weathered marble and 20% pegmatites. Overall 'C' = 1.5 to 2%
55	0	0.2	ORG	
55	0.2	0.5	BHZ	
55	0.5	1.5	TILL	yellow brown sandy boulder till with ~0.3% graphite, also 20% +3/4"
55	1.5	3	CS1/SK/P	bedrock with weakly skarn and pematite lenses interspersed with completely weathered CS1 layers; overall graphite in you include resistant layers is <1%. Within weathered material only graphite = 1.5 to 1.7%. This sequence continues at depth but difficult to dig
56	0	0.15	ORG	
56	0.15	0.4	BHZ	



56	0.4	1.9	TILL	yellow brown giving way to brown boulder/pebble till, <0.5% diss. Graphite; 25% +3/4".
56	1.9	3.1	CS1	weathered CS1 with an yellow/orange to deep red colour; very loose friable material; 1% fine to medium grained disseminated graphite.
56	3.1	3.3	CS1	Bedrock; friable CS1, light grey to reddish brown ; 1-1.5% disseminated fine to medium grained graphite. Includes sulphides.
57	0	0.2	ORG	
57	0.2	0.45	BHZ	
57	0.45	2.4	TILL	orange brown till with 40-60% +3/4"; <0.5% graphite with up 1% graphite in weathered boulder.
58	0	0.1	ORG	
58	0.1	0.13	ASH	
58	0.13	0.43	BHZ	yellow-brown with some organic content
58	0.43	1.8	TILL	medium brown to yellow orange boulder till; trace diss. Graphite (fine grained); 60% +3/4"; last 20cm graphite content of 0.5%; bedrock is a graphitic marble.
59	0	0.05	ORG	
59	0.05	0.2	BHZ	
59	0.2	2.2	TILL	boulder till with 30% +3/4"; <0.5% diss. Graphite; local red patches with increased graphite; silt and pebble content increases downward; clayey gouge at bottom;
59	2.2	3.2	P	pegmatite bedrock
60	0	0.05	ORG	
60	0.05	0.35	BHZ	reddish brown with trace diss. Graphite
60	0.35	1.3	TILL	brown to yellowish brown boulder till with 40% +3/4" up to cobble size
60	1.3	4.2	CS1	weathered CS1 now a mottled yellowish brown with local patches of reddish brown; uniform friable material with 1 - 1.5% graphite; rare pebble and clay patch; thin pegmatite at 3.8m.
61	0	0.2	ORG	
61	0.2	0.6	BHZ	
61	0.6	3.2	TILL	orange brown to yellow brown sandy till with 10-25% +3/4" pebbles and cobbles; rare patches of weathered CS1/CS2, overall 'C' = <0.5%
62	0	0.25	ORG	
62	0.25	0.85	BHZ	
62	0.85	1.75	TILL	mixture of silty clay +/- pebble till with pockets of reddish-brown CS1; overall 'C'=<0.7%
63	0	0.1	ORG	
63	0.1	0.2	BHZ	
63	0.2	1.2	TILL	silty sandy till with 35% +3/4"; <0.3% graphite.
63	1.2	2.2	TILL	till with a transported section of CS1; 1 - 1.5% graphite;
63	2.2	4.2	CS1	semi-consolidated, partially weathered CS1; at 2.7m becomes more competent but still can be mined with machine; at 3.8m material has a texture of silty clay with low graphite; overall graphite 1.5%.
64	0	0.25	ORG	
64	0.25	0.45	BHZ	
64	0.45	1.45	TILL	yellowish brown silty pebbly till with 5-7% +3/4".
64	1.45	2.25	CS1	weathered CS1 with lenses of unweathered pegmatite; 'C' = 1.5 - 2%.
65	0	0.3	ORG	
65	0.3	0.6	BHZ	
65	0.6	1.5	TILL	orange sandy/pebbly till; root penetrations to 1.5m; overall 'C'=<0.2%

65	1.5	2.3	CS1	weathered CS1 with a 35cm thick lens of qtz fsp pegmatite and weathered fsp-biotite gneiss, overall 'C' = 2 - 2.5%; bedrock is CS1 with 1.5% graphite
66	0	0.15	ORG	
66	0.15	0.35	BHZ	
66	0.35	1.85	TILL	yellowish brown fine sandy till with 20-25% +3/4" pebbles and boulders; <0.3% graphite overall
66	1.85	3.35	CS1	completely weathered CS1 to an orange yellow medium sand with 2 - 2.2% graphite
67	0	0.2	ORG	
67	0.2	0.45	BHZ	
67	0.45	1.55	TILL	yellow brown silty clay boulder till; trace graphite
67	1.55	2.55	CS2	completely weathered CS2 with 3 - 3.5% graphite
67	2.55	3.45	CS1	completely weathered CS1 with 2-3% graphite; also 15% pegmatite swells, sills and dikes; Note: weathering probably continues at depth but tough digging because of pegmatite layers
68	0	0.25	ORG	
68	0.25	0.55	BHZ	
68	0.55	2.15	TILL	yellow brown silty clay boulder till; trace graphite; 15% +3/4"
68	2.15	4.85	CS2	completely to partially weathered CS2 with 10-15% pegmatites; 3-3.5% graphite.
69	0	0.15	ORG	
69	0.15	0.9	BHZ	B horizon has <0.7% graphite (not sampled)
69	0.9	1.4	TILL/FAULT	50cm of till with fault gouge, below this point fault breccia and fault gouge; fault @ 354/55E
70	0	0.1	ORG	
70	0.1	0.7	BHZ	
70	0.7	0.95	TILL	boulder silty clay till with some intermixed transported weathered CS2; overall 'C' = <1%; 35-40% +3/4"
70	0.95	1.65	CS2	completely weathered reddish brown CS2 with 3-4% graphite; rootlets completely penetrate this horizon
70	1.65	2.45	Q/P	broken up qtz unit with some pegmatite and minor consolidated non-weathered CS2
70	2.45	3.45	CS2	variably weathered CS2 with 3-4% graphite surrounded by fault gouge; it is actually part of the fault zone.
71	0	0.15	ORG	
71	0.15	1.2	TILL	pretty much boulder till from base of the organics; there is a 1-2cm ash layer below organics; there is some transported CS material; overall 'C' = <0.5%; 30% +3/4"
71	1.2	2.2	CS2	weathered CS2 starts as a lighter coloured material and becomes darker near bottom of section; trace dark green spinel; 2-3% graphite; bottom 10cm of sample is a weathered pegmatite;
71	2.2	3.7	CS2	dark orange brown oxidized weathered CS2 with local pegmatite swells and dikes to 2cm; 2-3% graphite; roots extend down to 3.2
72	0	0.2	ORG	
72	0.2	0.7	BHZ	
72	0.7	3.5	CS1/CS2	reddish brown completely weathered CS1 +/- CS2; overall graphite 2 - 3.5%; bedrock at 3.5 is skarned CS1/CS2?
73	0	0.15	ORG	
73	0.15	2.35	CS2	completely weathered CS2 with 4-5% graphite; overall colour reddish brown to orange brown due to oxidation of sulphides. Sequence cut by two 5-10cm pegmatite dikes. Pegmatite comprise 5% of rock mass; bedrock is CS2
74	0	0.15	ORG	
74	0.15	0.35	BHZ	
74	0.35	0.7	TILL	yellow brown silty pebbly till with 15% +3/4"
74	0.7	2.5	CS2	completely weathered CS2 with 4-4.5% graphite; prominent green spinels;

74	2.5	3.5	CS2	partially weathered, somewhat hard CS2; still can be mined as a soft material; 3-4% graphite; zone may continue deeper but encountered some pegmatites which inhibit digging and sampling
75	0	0.1	ORG	
75	0.1	0.35	TILL	yellow brown boulder silt till; <0.5% graphite
75	0.35	2.85	CS2	weathered CS2 with first 80cm almost developing into a B-horizon soil, 3.5 - 4.5% graphite; major root development to 1.35.
76	0	0.15	ORG	
76	0.15	0.4	BHZ	
76	0.4	1.6	TILL	yellow/orange sandy pebbly till with 25% +3/4"; trace graphite; bedrock at 1.6 metres. Bedrock is a medium to coarse weathered marble with 1% graphite. This marble is intruded by several fsp-qtz pegmatite sweats (See sample #2132)
77	0	0.05	ORG	
77	0.05	0.35	BHZ	
77	0.35	3.35	TILL	variable till from yellowy sandy till with locally trace pebbles near top (+3/4") to boulder till with coarse grained sandy matrix 60% +3/4" .Trace graphite in till. Pegmatite outcrop
78	0	0.05	ORG	
78	0.05	0.55	BHZ	
78	0.55	1.95	TILL	brown yellow silty to sandy till with trace +3/4" . 0.5% graphite. See marble boulder? At bottom
79	0	0.05	ORG	
79	0.05	0.2	BHZ	
79	0.2	2.9	TILL	orange pebbly sandy till with +3/4" . 0.5% disseminated graphite with increase to 1% near bottom.
79	2.9	4	CS1	orange weathered CS1 with 1.5 to 2% disseminated graphite. Bedrock is a pegmatite though
80	0	0.05	ORG	
80	0.05	0.3	BHZ	
80	0.3	2.3	TILL	orange yellow till with 25-45% +3/4" . 0.5 to 1% graphite with increase near bottom. Pegmatite boulders increase near the bottom 50cm
80	2.3	3.1	CS1	orange weathered CS1 with 1.5 to 2% disseminated graphite. Also abundant pegmatite.
81	0	0.05	ORG	
81	0.05	0.85	TILL	orange brown till with <0.5% disseminated graphite. 10% +3/4"
81	0.85	1.6	CS1	weathered CS1 with abundant pegmatite sweats. 1-1.5% disseminated graphite; 20% +3/4" . below this point material is a dark grey clay with trace graphite
82	0	0.05	ORG	
82	0.05	1.3	TILL	dark brown till with abundant (65%) pebbles, cobbles (10%) in overall 25% +3/4" . Trace disseminated graphite.
82	1.3	3.3	CS1	light orange sandy weathered CS1 with 1% disseminated graphite; local pegmatite sweats.
83	0	0.05	ORG	
83	0.05	0.15	BHZ	
83	0.15	1.55	TILL	orange yellow pebble till with occasional boulder/cobble. 10% +3/4" . 0.5% disseminated graphite. Roots to 1 metre depth.
83	1.55	2.35	TILL	25% +3/4" . <0.5% disseminated graphite. Light grey brown till.
84	0	0.05	ORG	
84	0.05	0.15	BHZ	
84	0.15	1.5	TILL	light to darker brown, clayey with trace of disseminated graphite. 30% +3/4"
84	1.5	3.3	TILL	as above with an increase in the frequency of weathered CS1 boulders. .5% disseminated graphite. 30% +3/4"
85	0	0.15	ORG	

85	15	0.45	BHZ	
85	0.45	1.85	TILL	pebble till - brown with less than .5% disseminated graphite. Slightly clayey towards bottom of sample. 10% +3/4"
85	1.85	3.25	TILL	boulder till - light brown with abundant clasts from pebble to boulder size. 60% +3/4". Clayey sandy matrix with <.5% disseminated graphite
86	0	0.15	ORG	
86	0.15	0.35	BHZ	
86	0.35	2.4	TILL	pebble till - sandy matrix with occasional boulder - grades to a boulder till below 150 with increase in clay. Ends in a pegmatite. Less than .5% disseminated graphite
87	0	0.1	ORG	
87	0.1	0.45	TILL	boulder till - brown clayey with abundant pegmatite pebbles/boulders. Ends in pegmatite. Graphite less than .5% disseminated
88	0	0.2	ORG	
88	0.2	0.8	TILL	
88	0.8	1.15	CS1	weathered CS1 - possibly in-situ. 1.5 - 2.0% disseminated fine grained graphite
89	0	0.25	ORG	
89	0.25	0.5	BHZ	
89	0.5	1.15	CS1	weathered CS1 - orange becomes brownish ~ 30 cm into interval. Partially competent - clayey last 25cm. Ends in a Mbl - graphite 1.5 - 2%. +3/4" = < 10%
90	0	0.1	ORG	
90	0.1	0.45	BHZ	
90	0.45	2.75	TILL	orange/yellow. 25% +3/4". Trace disseminated graphite
90	2.75	4.6	CS2	weathered CS2 - orange. Local trace disseminated spinel. 2.5 - 3% disseminated graphite. Trace pegmatite. <.5% +3/4" trench did not "bottom" out - simply became too deep & unstable to safely sample
91	0	0.1	ORG	
91	0.1	5.1	TILL	orangey brown - abundant boulders - trace disseminated graphite. 50% +3/4"
91	5.1	5.8	CS2	weathered CS2 with trace spinel - dark orangey. 2.5 - 3.0% disseminated graphite. Trace pegmatite sweats. Trench "bottomed out" in competent CS2
92	0	0.1	ORG	
92	0.1	1.7	TILL	brownish with trace disseminated graphite. Abundant pebbles, local boulders. 30% +3/4"
92	1.7	3.3	TILL	as above
92	3.3	4.6	CS2	weathered, with 2.5 - 3% disseminated graphite. Trench "bottomed out" in competent CS2
93	0	0.05	ORG	
93	0.05	0.15	BHZ	
93	0.15	2.15	TILL	boulder till 60% +3/4" - trace disseminated graphite
93	2.15	4.15	TILL	pebbly with occasional boulder 15% +3/4" - trace disseminated graphite
93	4.15	5.45	CS2	weathered CS2 - dark brown/grey, locally oxidized ~2% disseminated graphite ~15% pegmatite/sweats. Trench bottomed out in competent CS2
94	0	15	ORG	
94	15	35	BHZ	
94	35	135	TILL	boulder till with decomposed CS1 boulders. Graphite .5 - 1% disseminated. 30% +3/4" - overall orangey/reddish
94	135	235	TILL	as above
94	235	395	TILL	as above - increase in weathered pegmatite @ ~320
95	0	12	ORG	

95	12	30	BHZ	
95	30	230	TILL	orangey brown boulder till - trace disseminated graphite, 25 - 30% + 3/4"
95	230	430	TILL	as above
96	0	5	ORG	
96	5	25	BHZ	
96	25	155	TILL	pebble till, with occasional boulder, brownish with trace graphite 10% +3/4"
96	155	355	TILL	as above, with an increase in CS1 boulders - 20% +3/4"
97	355	435	CS1	weathered or possible till with numerous CS1 boulders. Local pegmatitic boulders
98	0	10	ORG	
98	10	210	TILL	boulder till, trace graphite - clayey at bottom of sample interval. 20% +3/4"
98	210	440	TILL	as above. Increase in +3/4" fraction to ~35%. Increase graphite to <0.5%. Bottom 30 cm CS2 boulder or possibly bedrock
99	0	0.05	ORG	
99	0.05	0.2	BHZ	
99	0.2	3.2	TILL	boulder till/talus; blocks to 0.5 metre; 60% +3/4"; locally boulders of weathered CS1 and CS2; hard digging
100	0	0.05	ORG	
100	0.05	0.45	BHZ	
100	0.45	2.75	TILL	boulder till with occasional blocks to 20cm; 25% +3/4"; local weathered CS1 and CS2 boulders; overall <0.5% graphite.
100	2.75	3.75	CS1	weathered CS1; 1.5 - 2% disseminated graphite; trench bottomed in CS1
101	0	0.1	ORG	
101	0.1	0.3	BHZ	
101	0.3	2.6	TILL	boulder till with pegmatite boulders locally, 20% +3/4"; <0.5% disseminated graphite
101	2.6	3.4	CS2	dark grey oxidized CS2 with trace spinel; 2-3% disseminated fine grained graphite; friable material;
102	0	0.05	ORG	
102	0.05	0.2	BHZ	
102	0.2	1.2	TILL	boulder till with 20% +3/4. <1% disseminated graphite
102	1.2	2.2	TILL	abundant weathered CS1 boulders; graphite locally to 2%; 30% +3/4";
103	0	0.1	ORG	
103	0.1	0.35	BHZ	
103	0.35	1.15	TILL	boulder till with 20% +3/4"; <0.5% disseminated graphite
103	1.15	2.5	CS1	weathered CS1 with 1-2% disseminated graphite; abundant (40%) weathered pegmatite
104	0	0.05	ORG	
104	0.05	0.25	BHZ	
104	0.25	0.85	CS2	weathered CS2, red with pegmatites and local grey clay
105	0	0.05	ORG	
105	0.05	0.85	CS1	1.5-2% disseminated graphite
106	0	0.05	ORG	

106	0.05	0.2	BHZ	
106	0.2	1.7	TILL	boulder till with trace graphite; becomes clayey at 1 metre, trench bottomed in competent CS1
107	0	0.1	ORG	
107	0.1	0.25	BHZ	
107	0.25	1.55	TILL	boulder till with trace CS1 boulder, silty clayey; <0.5% disseminated graphite; 20% +3/4"
108	0	0.1	ORG	
108	0.1	0.25	BHZ	
108	0.25	1.3	TILL	boulder till, clayey, 30% +3/4"; <0.5% disseminated graphite; bottom in foliated quartz monzonite.
109	0	0.2	ORG	
109	0.2	0.4	BHZ	
109	0.4	1.7	TILL	boulder till; clayey, 15% +3/4". Bottom in quartz
110	0	0.05	ORG	
110	0.05	0.25	BHZ	
110	0.25	4.25	TILL	boulder till; 60% +3/4", trace disseminated graphite
110	4.25	5.05	CS1	weathered CS1; 1.5% disseminated graphite
111	0	0.05	ORG	
111	0.05	0.2	BHZ	
111	0.2	4.2	TILL	yellow boulder till; 40% +3/4", trace disseminated graphite
112	0	0.1	ORG	
112	0.1	0.3	BHZ	
112	0.3	3.6	TILL	boulder till with trace to <0.5% disseminated graphite; 30% +3/4"; increase in weathered CS1 boulders between 1.8 and 3.6m; also increase in clay down trench.
113	0	0.05	ORG	
113	0.05	0.3	BHZ	well-developed
113	0.3	4.3	TILL	yellow orange boulder till with 40% +3/4"; <0.5% disseminated graphite but increasing towards bottom of trench
114	0	0.1	ORG	
114	0.1	0.25	BHZ	
114	0.25	2.25	TILL	boulder till with 30% +3/4"; 10% of boulders are CS1 and CS2;
114	2.25	4.5	TILL	boulder till with 40% +3/4"
114	4.5	5	CS1	light grey weathered CS1 with 1.5 - 2% graphite
115	0	0.05	ORG	
115	0.05	0.2	BHZ	
115	0.2	4.2	TILL	boulder till with 40% +3/4"; increase in weathered graphitic boulders towards 2.25 metre; from 2.25 to 4.2 graphite decreases
116	0	0.2	ORG	
116	0.2	0.3	BHZ	
116	0.3	4.1	TILL	boulder till with locally CS1 boulders; 30% +3/4"; <0.5% graphite
117	0	0.1	ORG	

117	0.1	0.2	BHZ	
117	0.2	3.3	TILL	boulder till with 30% +3/4"; <0.5% graphite; first 20cm pebbly
118	0	0.1	ORG	
118	0.1	0.2	BHZ	
118	0.2	2.9	TILL	boulder till with abundant large boulders; 45% +3/4"; <0.5% disseminated graphite; increase clay downwards
119	0	0.5	ORG	
119	0.5	0.15	BHZ	
119	0.15	2.05	TILL	boulder till; frequent large boulders; 30% +3/4"; trace graphite
119	2.05	3.95	TILL	pebble till; 10% +3/4"; trace graphite;
120	0	0.05	ORG	
120	0.05	0.6	TILL	55cm road construction till???, originally 5cm organics and 15cm B-horizon
120	0.6	3.6	TILL	orange yellow till with boulders of CS1; 20% +3/4"; <0.5% graphite; from 2.6 to 3.6 increase in graphite to <1% and increase in number of weathered CS boulders
120	3.6	4.5	CS2	dark orange red weathered CS2; 2.5 - 3 % disseminated graphite;
121	0	0.2	ORG	
121	0.2	0.45	BHZ	
121	0.45	1.55	SAND	brownish sand; <5% +3/4"; <0.5% disseminated graphite
121	1.55	2.55	TILL	boulder till with 10% +3/4"; <1% disseminate graphite; some weathered CS1 boulders
121	2.55	3.65	TILL	boulder till with abundant CS boulders; dark grey clay matrix; 1-2% graphite; fault?? Somewhat of a nebulous zone.
122	0	0.1	ORG	
122	0.1	0.25	BHZ	
122	0.25	1.4	TILL	yellowish brown boulder till; trace graphite; trace +3/4"
122	1.4	2.4	TILL	boulder till; <0.5% graphite; 20% +3/4"
122	2.4	3.4	TILL	boulder till; clayey matrix; abundant CS boulders; <1% disseminated graphite as in TR #121
123	0	0.1	ORG	
123	0.1	0.3	BHZ	
123	0.3	0.7	TILL	brownish boulder till with 10% +3/4"; trace graphite;
123	0.7	1.6	CS2	weathered CS2; grey/reddish colour; sandy; slightly competent; 2-2.5% graphite
123	1.6	2.5	CS2	weathered CS2 as above with 25% pegmatite
123	2.5	3.4	CS2	weathered CS2 as above with 10% pegmatite; reddish oxidation; more competent than from 0.7 to 2.5
124	0	0.1	ORG	
124	0.1	0.3	BHZ	
124	0.3	2.3	TILL	light grey boulder till with 25% +3/4"; trace graphite
124	2.3	3.8	TILL	sandy boulder till with local clay; <1% disseminated graphite; pegmatite/quartz boulders; 20% +3/4"
124	3.8	4.8	CS2	reddish purple grey ; trace pegmatites; slightly competent
125	0	0.1	ORG	
125	0.1	0.3	BHZ	

125	0.3	1.1	TILL	boulder till with 10% +3/4"
125	1.1	3.1	CS2	grey sandy CS2 with 2-3% graphite; abundant pegmatites; 10% +3/4"
125	3.1	3.9	CS2	purple/reddish to grey; more competent; 2-3% disseminated graphite
126	0	0.1	ORG	
126	0.1	0.3	BHZ	
126	0.3	1.4	TILL	boulder till with trace graphite; 15% +3/4"
126	1.4	3.4	CS1	light brown sandy; 1-1.5% disseminated pegmatites; locally thin pegmatites
127	0	0.15	ORG	
127	0.15	0.45	BHZ	
127	0.45	1.5	TILL	grey clayey boulder till, 20% +3/4", <0.5% graphite
127	1.5	3.5	TILL	light brownish sandy till with 10% +3/4"; trace graphite, locally cobbles
128	0	0.1	ORG	
128	0.1	0.3	BHZ	
128	0.3	0.4	ORG	
128	0.4	0.5	BHZ	
128	0.5	2.5	TILL	moderately brown boulder till; 20% +3/4"; <0.5% graphite
129	0	0.15	ORG	
129	0.15	0.35	BHZ	
129	0.35	2.35	TILL	dark brown boulder till with trace disseminated graphite; 20% +3/4"
129	2.35	3.45	CS2	dark grey purple; 2-3% disseminated graphite
130	0	0.2	ORG	
130	0.2	0.5	BHZ	
130	0.5	2.5	TILL	boulder till; 20% +3/4"; medium brown colour; bottoms in quartz monzonite dike
131	0	0.15	ORG	
131	0.15	0.5	BHZ	
131	0.5	2.6	TILL	boulder till with 15% +3/4"; medium brown colour; bottoms in hard CS1; towards bottom several CS boulders; graphite <1%
132	0	0.1	ORG	
132	0.1	0.4	BHZ	
132	0.4	2	TILL	light to medium brown boulder till with sandy to locally clay matrix; <0.5% disseminated graphite; <0.5% +3/4"; CS boulders near base
132	2	3.1	CS1	light brown, locally greyish CS1; 1-1.5% disseminated graphite; clay rich locally
133	0	0.15	ORG	
133	0.15	0.35	BHZ	
133	0.35	1.45	TILL	light brown, locally clayey, boulder till; 10% +3/4"; <0.5% graphite
133	1.45	1.85	CS1	light brown CS1; 1-1.5% graphite; ends in pegmatite
134	0	0.1	ORG	
134	0.1	0.25	BHZ	



134	0.25	1.85	TILL	light brown boulder till, 0.5-1% disseminated graphite in upper 70cm; <0.5% below 0.95m. 20% +3/4"
134	1.85	2.35	CS1	light brown locally slightly grey; trace pegmatite; 1-1.5% disseminated graphite;
135	0	0.1	ORG	
135	0.1	0.25	BHZ	
135	0.25	1.05	TILL	light brown boulder till; 20% +3/4"; <0.5% graphite
135	1.05	1.85	CS1	light brown CS1 with trace pegmatite; 1.5% disseminated graphite
136	0	0.05	ORG	
136	0.05	0.2	BHZ	
136	0.2	0.7	TILL	pebble till with 10% +3/4"; <0.5% graphite
136	0.7	2.7	TALUS	transported blocks of weathered CS2; graphite 2-3%, ends in pegmatite
137	0	0.1	ORG	
137	0.1	0.3	BHZ	
137	0.3	2.3	TILL	boulder till with 20% +3/4"; 1% graphite - content increases with depth
137	2.3	4.3	TILL	talus boulder till; large blocks of transported CS; with boulders of pegmatite etc. 2-3% graphite; 20% +3/4"
138	0	0.05	ORG	
138	0.05	0.25	BHZ	
138	0.25	1.75	TILL	light brown boulder till with 15% +3/4"; <0.5% graphite
138	1.75	3.75	TILL	boulder talus till with large blocks of transported CS with blocks of pegmatite etc. 2-3% graphite; 15% +3/4"
139	0	0.1	ORG	
139	0.1	0.3	BHZ	
139	0.3	1.1	TILL	sandy with locally boulder till; 0.5-1% graphite; 10% +3/4"
139	1.1	3.2	TILL	boulder till - mostly pegmatite with locally blocks of weathered CS; 10% +3/4"
140	0	0.1	ORG	
140	0.1	0.3	BHZ	
140	0.3	1.8	TILL	boulder till with 25% +3/4"; trace disseminated graphite
140	1.8	3.8	TILL	boulder till with 30% +3/4"; <0.5% disseminated graphite
141	0	0.1	ORG	
141	0.1	0.3	BHZ	
141	0.3	1.7	TILL	boulder till; 15% +3/4"; trace disseminated graphite
141	1.7	3.4	TILL	boulder till; 25% +3/4"; trace disseminated graphite
142	0	0.1	ORG	
142	0.1	0.25	BHZ	
142	0.25	2.05	TILL	boulder till with 20%+3/4"; trace disseminated graphite; clay rich at bottom
142	2.05	4.05	TILL	boulder till with large boulder of weathered CS; <0.5% disseminated graphite; 30% +3/4"
143	0	0.1	ORG	
143	0.1	0.3	BHZ	

143	0.3	1.4	TILL	grey clay-rich boulder till, trace graphite; 20% +3/4";
143	1.4	3.4	TILL	as above with <0.5% graphite; 20% +3/4";
144	0	0.1	ORG	
144	0.1	0.3	BHZ	
144	0.3	2.4	TILL	boulder till with 30% +3/4"; clay-rich and reddish; <0.5% disseminated graphite
144	2.4	3	CS2	weathered CS2
145	0	0.05	ORG	
145	0.05	0.3	BHZ	
145	0.3	2.3	TILL	boulder till with 20% +3/4"; clay-rich; trace graphite;
145	2.3	3.3	TILL	boulder till, sandy; <0.5% graphite
146	0	0.1	ORG	
146	0.1	0.3	BHZ	
146	0.3	1.9	TILL	brown partly clay,sandy, boulder till with 15% +3/4"; trace to <0.5% graphite at bottom;
146	1.9	3.9	CS1	weathered CS1; very friable; trace green spinel; variable colour from grey/brown to limonitic; 2-2.5% graphite
147	0	0.1	ORG	
147	0.1	0.35	BHZ	
147	0.35	2.05	TILL	light brown, slightly clay-rich, boulder till; becomes sandy and increasing graphite to bottom; 20% +3/4"
147	2.05	3.65	CS2	medium brown to dark grey weathered CS2 with 2-2.5% disseminated graphite; slightly competent.
148	0	0.05	ORG	
148	0.05	0.2	BHZ	
148	0.2	2.4	TILL	grey brown boulder till with some clay content especially at surface; 20-25% +3/4"; <0.5% graphite;
148	2.4	3.1	CS2	weathered CS2 or possible large boulder; dark grey/purple; 2-2.5% disseminated graphite
149	0	0.05	ORG	
149	0.05	0.2	BHZ	
149	0.2	1.45	TILL	medium brown/grey boulder till; clay; 30%+3/4"; trace graphite
149	1.45	2.75	TILL	as above; slightly less clay; <0.5% graphite; 20% +3/4"
150	0	0.05	ORG	
150	0.05	0.2	BHZ	
150	0.2	0.7	TILL	medium brown/grey boulder till with some clay; 30% +3/4"; trace graphite; bottoms in skarn
151	0	0.05	ORG	
151	0.05	0.15	BHZ	
151	0.15	1.45	CS1	light brown to yellow (limonitic) friable CS1; trace pegmatite; 5% +3/4"; 1-1.5% graphite; Note: slumped area with previous manmade disturbance
152	0	0.05	ORG	
152	0.05	0.25	BHZ	
152	0.25	1.75	CS1	light brown slightly limonitic friable CS1 with trace pegmatite; 1-1.5% graphite;
153	0	0.1	ORG	

153	0.1	0.3	ORG	
153	0.3	3	TILL	boulder till, skarn and quartz monzonite boulders; sandy matrix; trace graphite; 30-40% +3/4" and increasing with depth
154	0	0.1	ORG	
154	0.1	0.3	BHZ	
154	0.3	1.9	TILL	brownish boulder till with sandy matrix; locally minor clay; 30% +3/4"; trace disseminated graphite; bottom in skarn
155	0	0.1	ORG	
155	0.1	0.3	BHZ	
155	0.3	1.5	TILL	till similar to TR#154; bottoms in quartz monzonite.
156	0	0.15	ORG	
156	0.15	0.35	BHZ	
156	0.35	2.05	TILL	light brown sandy till with local clay, trace graphite; bottomed out in skarn
157	0	0.3	TILL	medium brown till; 20% +3/4"; <0.5% graphite; Note: surface previously stripped
157	0.3	2.2	CS1	friable; including competent blocks up to 30%; 1-1.5% graphite;
158	0	3.9	CS1	medium brownish pretty competent CS1; slightly oxidized; 1-1.5% disseminated graphite
159	0	0.1	ORG	
159	0.1	0.3	BHZ	
159	0.3	2.3	CS1	partly weathered, light brown CS1 with local competent sections; 1% graphite; 40% +3/4"
160	0	0.1	ORG	
160	0.1	0.5	BHZ	
160	0.5	3.8	TILL	boulder till with clay matrix, locally sandy; 40% +3/4"; trace graphite;
161	0	0.1	ORG	
161	0.1	0.5	BHZ	
161	0.5	2.5	TILL	light brown sandy pebble till with <0.5% disseminated graphite; 10% +3/4" increasing to 20% from 1.5 to 2.5m; also increasing clay content from 1.5 to 2.5m.
162	0	0.1	ORG	
162	0.1	0.3	BHZ	
162	0.3	1.8	TILL	light brown sandy pebble till; <0.5% disseminated graphite; 10% +3/4";
162	1.8	3.3	TILL	boulder till with 50% +3/4"; <1% graphite
163	0	3	TILL	pebbles/boulder till; <0.5% graphite; 20% +3/4"
164	0	10	ORG	
164	10	25	BHZ	
164	25	150	TILL	boulder till, sandy 1st 30cm, boulder size & clay content increase below 30cm, < 5% graphite, 30% +3/4"
165	0	10	ORG	
165	10	25	BHZ	
165	25	150	TILL	boulder till, light brown, sandy, <.5% graphite, 2-% +3/4"
165	150	300	CS1	psuedo cs2, darkish grey, oxidized, local purphsh, 3-4% graphite
166	0	10	ORG	

166	10	110	TILL	boulder till, sandy matrix, trace graphite, 40% +3/4"
167	0	10	ORG	
167	10	30	BHZ	
167	30	110	TILL	boulder till, medium brown/orangey, sandy with graphite increasing downwards, 10% +3/4"
167	110	260	TILL	CS1 boulder till? Doesn't appear to be in-situ CS1 10% +3/4", sandy matrix, 1 - 2% graphite
168	0	10	ORG	
168	10	25	BHZ	
168	25	205	TILL	boulder till, medium to dark brown, 20% +3/4", graphite < 5% increasing proximal to contact with CS1
168	205	260	CS1	slightly competent - orangey, 1.5 - 2% graphite
169	0	10	ORG	
169	10	35	BHZ	
169	35	145	TILL	boulder till, medium brown/slightly yellow, < 5% graphite increasing downwards, 15% +3/4"
169	145	245	CS1	slightly competent - orangey, 2.5 - 3% graphite
170	0	10	ORG	
170	10	15	BHZ	
170	15	165	TALUS	pegmatite/quartz monzonite with weathered CS1 & CS2 matrix boulder talus, 30% +3/4", 4 - 5% graphite
170	165	315	CS2	slightly competent - grey/purple, 4 - 5% graphite
171	0	10		
171	10	30		
171	30	130	CS2	reddish, slightly competent, relic stratification starts @ ~80cm, 3 - 4% graphite
171	130	230	CS2	orangey/purple/grey, 4 - 5% graphite
171	230	380	CS2	as above
172	0	10	ORG	
172	10	30	BHZ	
172	30	90	TILL	boulder till, sandy matrix with CS2 boulders, trace pegmatite, 25% +3/4", 2 - 3% graphite
172	90	240	CS2	weakly indurated, bulk of material not friable, trace pegmatite, 2.5 - 3% graphite
173	0	10	ORG	
173	10	30	BHZ	
173	30	200	TILL	boulder till, medium brown, 10% +3/4", < 5% graphite
174	0	10	ORG	
174	10	150	TILL	boulder till, sandy matrix to 50cm, then clayey - hardpan, brown, 10% +3/4", < 5% graphite
174	150	310	CS2	brownish red, abundant pegmatites & pegmatitic veins, 3 - 3.5% graphite
175	0	10	ORG	
175	10	30	BHZ	
175	30	180	TILL	boulder till, light brown, local slightly yellowy, pebbly towards bottom, 15% +3/4", < 5% graphite
176	0	10	ORG	

176	10	25	BHZ	
176	25	175	TILL	boulder till, brownish, < 5% graphite
176	175	290	CS2	grey/brown, friable, 3 - 4% graphite
151-A	0	15	ORG	
151-A	15	72	BHZ	? B Horizon & Boulder till - medium to dark brown with 1% graphite, 20% +3/4"
151-A	72	105	CS1	CS1- yellow brown with whitish layers, sucrosic regolith 2 - 3% graphite
148-A	0	5	ORG	
148-A	5	20	BHZ	
148-A	20	140	TILL	boulder till, grey - dark brown with clay rich zones, trace - 1% graphite
148-A	140	240	TILL	boulder till, grey - dark brown with clay rich zones, trace - 1% graphite, local Cs1 boulders
148-A	240	310	TILL	boulder till, grey - dark brown with clay rich zones, Cs1 & Cs2 boulders, with 5 - 7% graphite in Cs2 boulders, spinel
146-A	0	20	ORG	
146-A	20	60	BHZ	
146-A	60	190	TILL	boulder till, predominately Cs1 & Cs2 boulders, minor clay, 5 - 10% +3/4"
146-A	190	290	CS2	Cs2 completely weathered, < 10% +3/4"
146-A	290	370	CS2	Cs2 weathering decreasing to bedrock @3.70 m's, 60% +3/4"
127-A	0	15	ORG	
127-A	15	40	BHZ	
127-A	40	140	TILL	boulder till
127-A	140	240	TILL	boulder till
127-A	240	340	TILL	boulder till
127-A	340	440	CS2	Cs2 - weathered, approximately 40% +3/4" - friable
128-A	0	10	ORG	
128-A	10	50	BHZ	
128-A	50	250	TILL	boulder till on pegmatite, graphite @ contact
134-A	0	10	ORG	
134-A	10	25	BHZ	
134-A	25	185	TILL	boulder till
134-A	185	245	TILL	boulder till, pegmatite @ base
141-A	0	15	ORG	
141-A	15	30	BHZ	
141-A	30	170	TILL	boulder till
141-A	170	300	TILL	boulder till, overlying CS - < 1% graphite
117-A	0	10	ORG	
117-A	10	20	BHZ	
117-A	20	170	TILL	boulder till

117-A	170	330	TILL	boulder till
110-A	0	10	ORG	
110-A	10	25	BHZ	
110-A	25	225	TILL	boulder till
110-A	225	425	TILL	boulder till
103-A	0	10	ORG	
103-A	10	35	BHZ	
103-A	35	115	TILL	boulder till
103-A	115	250	TILL	boulder till - transitional to CS1
103-A	250	325	CS1	CS2 - 10% +3/4"
95-A	0	10	ORG	
95-A	10	30	BHZ	
95-A	30	230	TILL	boulder till
95-A	230	430	TILL	boulder till
91-A	0	10	ORG	
91-A	10	260	TILL	boulder till, bottom 30 cm Cs2
91-A	260	510	TILL	boulder till
91-A	510	580	CS2	bottomed in competent Cs2
29-A	0	15	ORG	
29-A	15	110	BHZ	with trace graphite
29-A	110	205	CS2	
29-A	205	305	CS3	
29-A	305	435	CS4	partially competent
32-A	0	15	ORG	
32-A	15	30	BHZ	
32-A	30	75	TILL	boulder till
32-A	75	175	CS2	weathered
32-A	175	250	CS2	weathered
32-A	250	330	CS2	weathered Cs2 & pegmatite - bedrock @ bottom
41-A	0	20	ORG	
41-A	20	70	BHZ	
41-A	70	160	TILL	boulder till
41-A	160	220	CS2	Cs2 minor weathering on bedrock
62-A	0	25	ORG	
62-A	25	85	BHZ	
62-A	85	175	TILL	till with weathered Cs1 basal 10 cm

51-A	0	25	ORG	
51-A	25	60	BHZ	
51-A	60	160	TILL	till
51-A	160	260	TILL	till with Cs1 cobbles
51-A	260	320	CS1	weathered Cs1 with pegmatite @ base

TRENCH #	FROM	TO	SAMP_NO	LENGTH	C %
28	0.2	0.4	2000	0.2	1.63
28	0.4	1	2001	0.6	1.29
28	1	1.45	2002	0.45	1.78
29	0.15	1.1	2003	0.95	5.95
29	1.1	2.05	2004	0.95	6.97
29	2.05	3.05	2005	1	3.63
29	3.05	4.8	2006	1.75	3.64
30	0.2	1.05	2007	0.85	1
31	0.2	1.65	2008	1.45	0.79
32	0.3	0.75	2009	0.45	7.26
32	0.75	1.75	2010	1	2.19
32	1.75	2.5	2011	0.75	7.1
32	2.5	3.3	2012	0.8	1.04
33	0.5	1.5	2013	1	2.15
33	1.5	2.5	2014	1	1.2
33	2.5	3.6	2015	1.1	2.14
34	0.35	1.35	2016	1	1.87
34	1.35	1.85	2017	0.5	2
34	1.85	2.85	2018	1	2.96
34	2.85	3.85	2019	1	3.3
35	0.7	1.7	2020	1	2.14
35	1.7	2.7	2021	1	2.01
35	2.7	3.7	2022	1	2.59
35	3.7	4.6	2023	0.9	3.37
36	0.65	1.65	2024	1	1.3
36	1.65	2.65	2025	1	2.06
36	2.65	3.85	2026	1.2	2.58
37	0.7	1.7	2027	1	0.55
37	1.7	2.7	2028	1	0.84
37	2.7	3.7	2029	1	2.25
37	3.7	4.7	2030	1	3.81
38	no sample			#VALUE!	
39	0.3	1.3	2031	1	2.71
39	1.3	2.3	2032	1	2.51
39	2.3	3.3	2033	1	1.93
39	3.3	4.1	2034	0.8	2.18
40	0.7	1.3	2035	0.6	2.45
40	1.3	2.4	2036	1.1	1.43
41	0.7	1.6	2037	0.9	2.09
41	1.6	2.2	2038	0.6	6.14
42	0.7	1.3	2039	0.6	1.19
42	1.3	1.8	2040	0.5	6.13
43	0.3	1.4	2041	1.1	1.64
44	0.3	1.1	2042	0.8	2.52
44	1.1	2	2043	0.9	3.02
45	0.4	1.4	2044	1	0.35
45	1.4	2.4	2045	1	0.36
45	2.4	3.4	2046	1	0.78
45	3.4	4.5	2047	1.1	2.05



46	0.5	1.5	2048	1	0.57
46	1.5	2.5	2049	1	2.03
46	2.5	3.5	2050	1	1.2
46	3.5	4.7	2051	1.2	1.69
47	0.35	1.25	2052	0.9	1.01
48	0.4	0.9	2053	0.5	1.11
49	0.45	1.75	2054	1.3	1.84
50	0.85	1.45	2055	0.6	1.18
50	1.45	2.45	2056	1	3.18
50	2.45	3.45	2057	1	2.61
50	3.45	4.45	2058	1	3.02
51	0.6	1.6	2059	1	2.11
51	1.6	2.6	2060	1	1.49
51	2.6	3.6	2061	1	2.37
52	0.55	1.55	2062	1	0.72
52	1.55	1.9	2063	0.35	0.81
52	1.9	2.9	2064	1	1.68
52	2.9	3.9	2065	1	1.32
52	3.9	5.1	2066	1.2	1.59
53	0.9	1.9	2067	1	1.24
53	1.9	2.7	2068	0.8	1.86
54	0.3	0.95	2069	0.65	0.76
54	0.95	1.95	2070	1	2.48
54	1.95	2.95	2071	1	3.91
54	2.95	3.75	2072	0.8	3.46
55	0.5	1.5	2073	1	1.09
55	1.5	3	2074	1.5	2.19
56	0.4	1.9	2075	1.5	1.23
56	1.9	3.1	2076	1.2	2.32
56	3.1	3.3	2077	0.2	1.19
57	0.2	1.2	2078	1	1.66
57	1.2	2.4	2079	1.2	1.13
58	0.13	1.8	2080	1.67	1.15
59	0.2	1.2	2081	1	0.72
59	1.2	2.7	2082	1.5	1.16
60	0.35	1.3	2083	0.95	0.57
60	1.3	2.3	2084	1	2.29
60	2.3	3.3	2085	1	1.61
60	3.3	4.2	2086	0.9	1.67
61	0.6	1.6	2087	1	1.13
61	1.6	2.6	2088	1	0.52
61	2.6	3.2	2089	0.6	0.38
61	3.2	3.7	2090	0.5	3.29
62	0.25	1.75	2091	1.5	1.38
63	0.2	1.2	2092	1	0.6
63	1.2	2.2	2093	1	2.07
63	2.2	3.2	2094	1	1.76
63	3.2	4.2	2095	1	0.87
64	0.45	1.45	2096	1	0.98
64	1.45	2.25	2097	0.8	2.76

65	0.6	1.5	2098	0.9	0.44
65	1.5	2.3	2099	0.8	3.55
66	0.35	1.85	2100	1.5	1.33
66	1.85	2.85	2101	1	1.7
66	2.85	3.35	2102	0.5	2.1
67	0.45	1.55	2103	1.1	0.84
67	1.55	2.55	2104	1	4.06
67	2.55	3.45	2105	0.9	2.85
68	0.55	1.55	2106	1	0.38
68	1.55	2.15	2107	0.6	0.19
68	2.15	3.15	2108	1	3.59
68	3.15	4.15	2109	1	3.69
68	4.15	4.85	2110	0.7	2.78
69	0.9	1.4	2111	0.5	1.46
70	0.7	0.95	2112	0.25	1.02
70	0.95	1.65	2113	0.7	3.9
70	2.45	3.45	2114	1	3.98
71	0.15	1.2	2115	1.05	3.32
71	1.2	2.2	2116	1	3.74
71	2.2	3.7	2117	1.5	3.79
72	0.7	1.7	2118	1	2.45
72	1.7	2.7	2119	1	2.37
72	2.7	3.5	2120	0.8	2.73
73	0.15	1.15	2121	1	8.57
73	1.15	2.35	2122	1.2	9.03
74	0.35	0.7	2123	0.35	1.95
74	0.7	1.7	2124	1	5.99
74	1.7	2.5	2125	0.8	4
74	2.5	3.5	2126	1	3
75	0.1	0.35	2127	0.25	1.32
75	0.35	1.35	2128	1	5.36
75	1.35	2.35	2129	1	6.11
75	2.35	2.85	2130	0.5	5.09
76	0.4	1.6	2131	1.2	0.29
76	1.6	1.8	2132	0.2	0.41
77	0.35	1.4	2133	1.05	1.88
77	1.4	3.35	2134	1.95	1.28
78	0.55	1.95	2135	1.4	1.29
79	0.2	1.2	2136	1	0.92
79	1.2	2.9	2137	1.7	3.3
79	2.9	4	2138	1.1	3.38
80	0.3	1.3	2139	1	0.96
80	1.3	2.3	2140	1	1.07
80	2.3	3.1	2141	0.8	2.63
81	0.05	0.85	2142	0.8	1.76
81	0.85	1.6	2143	0.75	2.07
82	0.05	1.3	2144	1.25	1.16
82	1.3	2.3	2145	1	0.75
82	2.3	3.3	2146	1	1.01
83	0.15	1.55	2147	1.4	1.86

83	1.55	2.35	2148	0.8	0.82
84	0.1	1.5	2149	1.4	1.04
84	1.5	3.3	2150	1.8	1.44
85	0.45	1.85	2151	1.4	0.93
85	1.85	3.25	2152	1.4	0.7
86	0.37	2.4	2153	2.03	1.02
87	0.55	1.35	2154	0.8	0.78
88	0.8	1.15	2155	0.35	1.28
89	0.5	1.15	2156	0.65	1.84
90	0.45	2.75	2157	2.3	0.31
90	2.75	4.6	2158	1.85	2.11
91	0.1	5.1	2159	5	0.39
91	5.1	5.8	2160	0.7	3.98
92	0.1	1.7	2161	1.6	0.33
92	1.7	3.3	2162	1.6	0.3
92	3.3	4.6	2163	1.3	3.62
93	0.15	2.15	2164	2	3.78
93	2.15	4.15	2165	2	0.24
93	4.15	5.45	2166	1.3	0.26
94	0.35	1.35	2167	1	0.8
94	1.35	2.35	2168	1	0.59
94	2.35	3.95	2169	1.6	0.47
95	0.3	2.3	2170	2	0.22
95	2.3	4.3	2171	2	0.42
96	0.25	1.55	2172	1.3	0.3
96	1.55	3.55	2173	2	0.9
96	3.55	4.35	2174	0.8	0.79
97	0.2	2.2	2175	2	0.68
97	2.2	4.2	2176	2	0.75
98	0.1	2.1	2177	2	0.25
98	2.1	4.4	2178	2.3	0.97
99	0.2	3.2	2179	3	0.29
100	0.45	2.75	2180	2.3	1.4
100	2.75	3.75	2181	1	2.17
101	0.3	2.6	2182	2.3	1.16
101	2.6	3.4	2183	0.8	6.51
102	0.2	1.2	2184	1	1.03
102	1.2	2.2	2185	1	1.16
103	0.35	1.15	2186	0.8	1.56
103	1.15	2.5	2187	1.35	2.25
104	0.25	0.85	2188	0.6	5.43
105	0.05	0.85	2189	0.8	2.96
106	0.2	1.7	2190	1.5	0.53
107	0.25	1.55	2191	1.3	0.71
108	0.3	1.3	2192	1	0.73
109	0.4	1.7	2193	1.3	0.71
110	0.25	4.25	2194	4	0.22
110	4.25	5.05	2195	0.8	0.74
111	0.2	2.2	2196	2	0.42
111	2.2	4.2	2197	2	0.21

112	0.3	1.8	2198	1.5	1.82
112	1.8	3.6	2199	1.8	0.28
113	0.3	2.3	2200	2	0.4
113	2.3	4.3	2201	2	1.09
114	0.25	2.25	2202	2	1.68
114	2.25	4.5	2203	2.25	0.42
114	4.5	5	2204	0.5	2.05
115	0.25	2.25	2205	2	1.2
115	2.25	4.2	2206	1.95	0.32
116	0.3	2.2	2207	1.9	0.56
116	2.2	4.1	2208	1.9	0.35
117	0.2	1.7	2209	1.5	0.58
117	1.7	3.3	2210	1.6	0.62
118	0.2	1.55	2211	1.35	1.2
118	1.55	2.9	2212	1.35	0.88
119	0.15	2.05	2213	1.9	0.68
119	2.05	3.95	2214	1.9	0.68
120	0.6	2.6	2215	2	1.14
120	2.6	3.6	2216	1	2.9
120	3.6	4.5	2217	0.9	2.68
121	0.45	1.55	2218	1.1	2.84
121	1.55	2.55	2219	1	1.85
121	2.55	3.65	2220	1.1	2.64
122	0.25	1.4	2221	1.15	1.75
122	1.4	2.4	2222	1	1.61
122	2.4	3.4	2223	1	0.79
123	0.3	0.7	2224	0.4	0.96
123	0.7	1.6	2225	0.9	4.14
123	1.6	2.5	2226	0.9	2.44
123	2.5	3.4	2227	0.9	2.95
124	0.3	2.3	2228	2	0.85
124	2.3	3.8	2229	1.5	1.23
124	3.8	4.8	2230	1	5.3
125	0.4	1.1	2231	0.7	1.59
125	1.1	3.1	2232	2	2.12
125	3.1	3.9	2233	0.8	2.35
126	0.3	1.4	2234	1.1	0.9
126	1.4	2.4	2235	1	0.82
126	2.4	3.4	2236	1	0.61
127	0.45	1.5	2237	1.05	0.53
127	1.5	2.5	2238	1	0.57
127	2.5	3.5	2239	1	0.56
128	0.5	2.5	2240	2	0.47
129	0.35	2.35	2241	2	1.4
129	2.35	3.45	2242	1.1	7.74
130	0.5	2.5	2243	2	0.93
131	0.5	2.6	2244	2.1	0.8
132	0.4	2	2245	1.6	1.5
132	2	3.1	2246	1.1	1.79
133	0.35	1.45	2247	1.1	1.75

133	1.45	1.85	2248	0.4	1.81
134	0.25	1.85	2249	1.6	2.24
134	1.85	2.35	2250	0.5	1.67
135	0.25	1.05	2251	0.8	0.84
135	1.05	1.85	2252	0.8	1.71
136	0.2	0.7	2253	0.5	1.61
136	0.7	2.7	2254	2	3.87
137	0.3	2.3	2255	2	2.86
137	2.3	4.3	2256	2	2.66
138	0.25	1.75	2257	1.5	2.86
138	1.75	3.75	2258	2	2.24
139	0.3	1.1	2259	0.8	2.21
139	1.1	3.2	2260	2.1	0.46
140	0.3	1.8	2261	1.5	0.34
140	1.8	3.8	2262	2	0.79
141	0.3	1.7	2263	1.4	0.41
141	1.7	3.4	2264	1.7	0.31
142	0.25	2.05	2265	1.8	0.85
142	2.05	4.05	2266	2	0.73
143	0.3	1.4	2267	1.1	0.23
143	1.4	3.4	2268	2	0.84
144	0.3	2.4	2269	2.1	0.78
144	2.4	3	2270	0.6	3.7
145	0.3	2.3	2271	2	0.25
145	2.3	3.3	2272	1	1.13
146	0.3	1.9	2273	1.6	2.13
146	1.9	2.9	2274	1	3.31
146	2.9	3.9	2275	1	4.6
147	0.35	2.05	2276	1.7	1.29
147	2.05	2.85	2277	0.8	6.74
147	2.85	3.65	2278	0.8	5.02
148	0.2	1.4	2279	1.2	0.59
148	1.4	2.4	2280	1	0.72
148	2.4	3.1	2281	0.7	4.42
149	0.2	1.45	2282	1.25	0.39
149	1.45	2.75	2283	1.3	1.81
150	0.2	0.7	2284	0.5	0.43
151	0.15	1.45	2285	1.3	2.04
152	0.25	1.75	2286	1.5	2.36
153	0.3	3	2287	2.7	0.65
154	0.3	1.9	2288	1.6	0.59
155	0.3	1.5	2289	1.2	0.98
156	0.35	2.05	2290	1.7	0.31
157	0	0.3	2291	0.3	3.2
157	0.3	2.2	2292	1.9	0.84
158	0	1.9	2293	1.9	3.15
158	1.9	3.9	2294	2	1.74
159	0.3	1.3	2295	1	0.6
159	1.3	2.3	2296	1	0.33
160	0.5	3.8	2297	3.3	0.28

161	0.5	1.5	2298	1	3.02
161	1.5	2.5	2299	1	1.1
162	0.3	1.8	2300	1.5	1.87
162	1.8	3.3	2301	1.5	0.25
163	0	3	2302	3	2.46
164	25	175	2303	150	0.34
165	125	150	2304	25	0.62
165	150	300	2305	150	1.93
166	10	110	2306	100	0.21
167	30	110	2307	80	0.63
167	110	260	2308	150	0.66
168	25	205	2309	180	0.44
168	205	250	2310	45	0.56
169	35	145	2311	110	0.6
169	145	245	2312	100	1.84
170	15	165	2313	150	4.83
170	165	315	2314	150	3.73
171	30	130	2315	100	6.02
171	130	230	2316	100	4.83
171	230	380	2317	150	5.87
172	30	90	2318	60	5.21
172	90	240	2319	150	3.93
173	30	200	2320	170	0.91
174	10	150	2321	140	0.69
174	150	310	2322	160	5.9
175	30	180	2323	150	0.38
176	25	175	2324	150	0.46
176	175	290	2325	115	2
151-A	15	72	2326	57	1.65
151-A	72	105	2327	33	0.65
148-A	20	140	2328	120	0.82
148-A	140	240	2329	100	1.28
148-A	240	310	2330	70	1.49
146-A	60	190	2331	130	2.92
146-A	190	290	2332	100	2.34
146-A	290	370	2333	80	2.47
122-A	40	140	2334	100	1.88
122-A	140	240	2335	100	3.44
122-A	240	340	2336	100	1.98
122-A	340	440	2337	100	2.12
128-A	50	250	2338	200	1.1
134-A	25	185	2339	160	2.88
134-A	185	245	2340	60	1.86
141-A	30	170	2341	140	1.02
141-A	170	300	2342	130	0.84
117-A	20	170	2343	150	1.06
117-A	170	330	2344	160	0.86
110-A	25	225	2345	200	0.55
110-A	225	425	2346	200	0.69
103-A	35	115	2347	80	1.58

103-A	115	250	2348	135	1.67
103-A	250	325	2349	75	1.83
95-A	30	230	2350	200	0.57
95-A	230	430	2351	200	0.54
91-A	10	260	2352	250	0.28
91-A	260	510	2353	250	1.71
91-A	510	580	2354	70	1.18
29-A	15	110	2355	95	5.72
29-A	110	205	2356	95	5.44
29-A	205	305	2357	100	1.75
29-A	305	435	2358	130	1.76
32-A	30	75	2359	45	2.28
32-A	75	175	2360	100	3.27
32-A	175	250	2361	75	1.48
32-A	250	330	2362	80	0.76
41-A	70	160	2363	90	1.27
41-A	160	220	2364	60	2
62-A	85	175	2365	90	1.86
51-A	60	160	2366	100	1.25
51-A	160	260	2367	100	0.7
51-A	260	320	2368	60	1.85

**Appendix B: Analytical Results**





BONDAR CLEGG

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01397.0 ( COMPLETE )

DATE RECEIVED: 30-JUL-01

PROJECT: NONE GIVEN

DATE PRINTED: 1-AUG-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 CG4058		3.67
P4 CG4059		3.51
P4 CG4060		3.10
P4 CG4061		2.30
P4 CG4062		1.02
P4 CG4063		1.19
P4 CG4064		1.60
P4 CG4065		1.87
P4 CG4066		2.43
P4 CG4067		2.27
P4 CG4068		1.99
P4 CG4069		0.69
P4 CG4070		0.11
P4 CG4071		1.54
P4 CG4072		1.56
P4 CG4073		2.45
P4 CG4074		1.32
P4 CG4075		0.32
P4 CG4076		0.21
P4 CG4077		0.35
P4 CG4078		0.26
P4 CG4079		0.18
P4 CG4080		0.20
P4 CG4081		0.28
P4 CG4082		0.10
P4 CG4083		0.16
P4 CG4084		0.23
P4 CG4085		0.41
P4 CG4086		0.34
P4 CG4087		0.14
P4 CG4088		0.22
P4 CG4089		0.14
P4 CG4090		0.29
P4 CG4091		0.29
P4 CG4092		0.09
P4 CG4093		0.14



CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01517.0 ( COMPLETE )

DATE RECEIVED: 09-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 15-AUG-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4103		0.46
P4 4107		2.29
P4 4108		1.37
P4 4109		1.67
P4 4110		0.86
P4 4111		2.04
P4 4112		2.78
P4 4113		1.55
P4 4115		1.67
P4 4116		1.70
P4 4117		1.00
P4 4118		1.78
P4 4119		1.06
P4 4120		1.08
P4 4121		1.63
P4 4122		2.62
P4 4124		1.65
P4 4125		2.19
P4 4126		3.79
P4 4128		1.28
P4 4129		1.13
P4 4130		1.15
P4 4131		1.10
P4 4132		1.55
P4 4133		1.46
P4 4134		1.66
P4 4135		1.67
P4 4136		1.95
P4 7500		1.62
P4 7501		1.60
P4 7502		1.55
P4 7503		1.56
P4 7504		1.49
P4 7505		1.51
P4 7506		1.54
P4 7507		1.60
P4 7508		1.57
P4 7509		1.58



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CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01571.0 ( COMPLETE )

DATE RECEIVED: 15-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 22-AUG-01

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SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4137		2.21
P4 4138		2.70
P4 4139		2.24
P4 4140		1.45
P4 4141		1.48
\$0 4142		
\$0 4143		
P4 4144		1.48
P4 4145		1.47
P4 4146		1.12
P4 4147		1.67
P4 4148		2.02
P4 4149		6.72
P4 4150		3.37
P4 4151		0.38
P4 4152		1.29
P4 4153		1.38
P4 4154		1.52
P4 4155		1.41
P4 4156		1.12



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CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01567.0 ( COMPLETE )

DATE RECEIVED: 15-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 21-AUG-01

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SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4157		1.27	P4 4197		1.15
P4 4158		1.57	P4 4198		1.24
P4 4159		1.25	P4 4199		1.57
P4 4160		0.27			
P4 4161		1.02			
P4 4162		0.66			
P4 4163		1.37			
P4 4164		1.06			
P4 4165		1.90			
P4 4166		2.02			
P4 4167		1.84			
P4 4168		1.64			
P4 4169		1.47			
P4 4170		1.44			
P4 4171		0.15			
P4 4172		3.86			
P4 4173		0.42			
P4 4174		2.60			
P4 4175		1.58			
P4 4176		0.10			
P4 4177		0.56			
P4 4178		1.15			
P4 4179		1.02			
P4 4180		0.51			
P4 4181		1.05			
P4 4182		1.30			
P4 4183		1.51			
P4 4184		1.79			
P4 4185		1.72			
P4 4186		1.56			
P4 4187		2.01			
P4 4188		2.24			
P4 4189		1.50			
P4 4190		1.43			
P4 4191		1.40			
P4 4192		0.63			
P4 4193		0.34			
P4 4194		1.61			
P4 4195		2.42			
P4 4196		0.85			



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CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01568.0 ( COMPLETE )

DATE RECEIVED: 15-AUG-01

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DATE PRINTED: 17-AUG-01

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SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4200		1.24
P4 4201		1.43
P4 4202		1.39
P4 4203		1.47
P4 4204		1.50
P4 4205		1.57
P4 4206		1.24
P4 4207		2.36
P4 4208		1.45
P4 4209		0.09
P4 4210		0.99
P4 4211		1.61
P4 4212		2.42
P4 4213		0.50
P4 4214		0.72
P4 4215		1.23
P4 4216		1.34
P4 4217		0.43
P4 4218		0.35
P4 4219		0.85
P4 4220		0.16
P4 4221		0.24
P4 4222		0.44
P4 4223		1.06
P4 4224		0.73
P4 4225		1.51
P4 4226		1.72
P4 4227		1.64
P4 4228		1.05
P4 4229		1.49
P4 4230		0.65
P4 4231		1.48
P4 4232		1.30



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CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01569.0 ( COMPLETE )

DATE RECEIVED: 15-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 21-AUG-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4233		1.17
P4 4234		1.35
P4 4235		0.95
P4 4236		1.54
P4 4237		1.49
P4 4238		2.53
P4 4239		2.11
P4 4240		1.95
P4 4241		2.00
P4 4242		1.57
P4 4243		1.46
P4 4244		1.88
P4 4245		1.19
P4 4246		1.23
P4 4247		1.47
P4 4248		2.08
P4 4249		1.31
P4 4250		2.92
P4 4251		1.31
P4 4252		1.03
P4 4253		1.47
P4 4254		1.88
P4 4255		0.94
P4 4256		1.48
P4 4257		1.36
P4 4258		1.57
P4 4259		1.93
P4 4260		2.27
P4 4261		2.24
P4 4262		1.58



CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01570.0 ( COMPLETE )

DATE RECEIVED: 15-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 21-AUG-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4263		1.55
P4 4264		1.48
P4 4265		1.60
P4 4266		1.37
P4 4267		2.10
P4 4268		1.16
P4 4269		0.18
P4 4270		2.83
P4 4271		1.48
P4 4272		1.47
P4 JGR 1		4.29
P4 JGR 8		1.63
P4 TAILING POND		7.25



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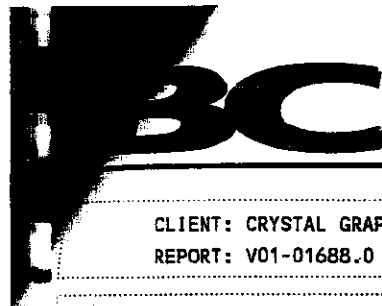
CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01659.0 ( COMPLETE )

PROJECT: NONE GIVEN  
 DATE RECEIVED: 23-AUG-01  
 DATE PRINTED: 30-AUG-01  
 PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4273		1.44
P4 4274		1.97
P4 4275		1.76
P4 4276		1.19
P4 4277		2.02
P4 4278		1.46
P4 4279		1.53
P4 4280		1.15
P4 4281		1.56
P4 4282		0.98
P4 4283		1.00
P4 4284		1.74
P4 4285		1.18
P4 4286		1.66
P4 4287		1.44
P4 4288		1.52
P4 4289		1.52
P4 4290		1.81
P4 4291		1.00
P4 4292		1.59
P4 4293		1.98
P4 4294		0.46
P4 4295		1.56
P4 4296		1.62
P4 4297		3.47
P4 4298		2.98
P4 4299		3.78
P4 4300		0.47
P4 4301		3.99
P4 4302		1.33
P4 4303		1.00
P4 4304		1.38
P4 4305		1.27
P4 4306		1.28
P4 4307		1.20
P4 4308		1.88
P4 4309		1.60
P4 4310		1.58
P4 4311		1.63
P4 4312		1.70

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4313		2.11
P4 4314		2.61
P4 4315		0.80





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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01688.0 ( COMPLETE )

DATE RECEIVED: 29-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 7-SEP-01

PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
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P4 4104		0.41
P4 4105		0.24
P4 4106		0.16
P4 4114		0.22
P4 4123		0.65

P4 4127		0.36
P4 4142		0.59
P4 4143		0.17
P4 4331		1.25
P4 4332		0.80

P4 4333		0.23
P4 4334		0.86
P4 4335		1.92
P4 4336		1.50
P4 4337		2.04

P4 4338		0.99
P4 4339		0.57
P4 4340		1.63
P4 4341		1.62
P4 4342		1.54

P4 4343		1.74
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CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01755.0 ( COMPLETE )

DATE RECEIVED: 06-SEP-01

PROJECT: NONE GIVEN

DATE PRINTED: 10-SEP-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4365		3.11
P4 4366		2.15
P4 4367		1.46
P4 4368		2.25
P4 4369		1.13
P4 4370		1.50
P4 4371		1.32
P4 4372		1.11
P4 4373		1.69
P4 4374		1.56
P4 4375		2.48
P4 4376		1.05
P4 4377		0.39
P4 4378		0.76
P4 4379		0.26
P4 4380		1.47
P4 4381		1.49
P4 4382		1.07
P4 4383		0.56
P4 4384		0.54
P4 4385		1.09
P4 4386		0.63
P4 4387		0.62
P4 4388		0.63
P4 4389		0.10
P4 4390		0.06
P4 4391		0.91
P4 4392		0.75
P4 4393		0.70
P4 4394		0.94
P4 4395		1.00
P4 4396		1.01
P4 4397		0.86
P4 4398		0.90
P4 4399		2.15
P4 4400		2.74



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01679.0 ( COMPLETE )

DATE RECEIVED: 27-AUG-01

PROJECT: NONE GIVEN

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PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 2156		1.84	P4 2196		0.42
P4 2157		0.31	P4 2197		0.21
P4 2158		2.11	P4 2198		1.82
P4 2159		0.39	P4 2199		0.28
P4 2160		3.98	P4 2200		0.40
P4 2161		0.33	P4 2201		1.09
P4 2162		0.30	P4 2202		1.68
P4 2163		3.62	P4 2203		0.42
P4 2164		3.78	P4 2204		2.05
P4 2165		0.24	P4 2205		1.20
P4 2166		0.26	P4 2206		0.32
P4 2167		0.80	P4 2207		0.56
P4 2168		0.59	P4 2208		0.35
P4 2169		0.47	P4 2209		0.58
P4 2170		0.22	P4 2210		0.62
P4 2171		0.42	P4 2211		1.20
P4 2172		0.30	P4 2212		0.88
P4 2173		0.90	P4 2213		0.68
P4 2174		0.79	P4 2214		0.68
P4 2175		0.68	P4 4316		1.32
P4 2176		0.75	P4 4317		1.81
P4 2177		0.25	P4 4318		1.16
P4 2178		0.97	P4 4319		1.15
P4 2179		0.29	P4 4320		1.21
P4 2180		1.40	P4 4321		1.25
P4 2181		2.17	P4 4322		1.42
P4 2182		1.16	P4 4323		1.54
P4 2183		6.51	P4 4324		1.73
P4 2184		1.03	P4 4325		0.87
P4 2185		1.16	P4 4326		2.41
P4 2186		1.56	P4 4327		1.73
P4 2187		2.25	P4 4328		1.88
P4 2188		5.43	P4 4329		2.40
P4 2189		2.96	P4 4330		1.97
P4 2190		0.53			
P4 2191		0.71			
P4 2192		0.73			
P4 2193		0.71			
P4 2194		0.22			
P4 2195		0.74			



CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01774.0 ( COMPLETE )

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PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 CGC2303		0.34	P4 4421		0.46
P4 CGC2304		0.62	P4 4422		1.00
P4 CGC2305		1.93	P4 4423		1.36
P4 CGC2306		0.21	P4 4424		1.52
P4 CGC2307		0.63			
P4 CGC2308		0.66			
P4 CGC2309		0.44			
P4 CGC2310		0.56			
P4 CGC2311		0.60			
P4 CGC2312		1.84			
P4 CGC2313		4.83			
P4 CGC2314		3.73			
P4 CGC2315		6.02			
P4 CGC2316		4.83			
P4 CGC2317		5.87			
P4 CGC2318		5.21			
P4 CGC2319		3.93			
P4 CGC2320		0.91			
P4 CGC2321		0.69			
P4 CGC2322		5.90			
P4 4401		4.07			
P4 4402		3.54			
P4 4403		3.45			
P4 4404		2.67			
P4 4405		3.29			
P4 4406		3.00			
P4 4407		3.25			
P4 4408		6.60			
P4 4409		0.90			
P4 4410		1.09			
P4 4411		1.62			
P4 4412		0.92			
P4 4413		1.43			
P4 4414		1.68			
P4 4415		1.55			
P4 4416		1.66			
P4 4417		1.75			
P4 4418		0.76			
P4 4419		2.09			
P4 4420		2.52			



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION

PROJECT: NONE GIVEN

REPORT: V01-01803.0 ( COMPLETE )

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PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4341		0.88	P4 4465		0.53
P4 4342		1.86	P4 4466		0.67
P4 4343		2.41	P4 4467		1.16
P4 4344		1.70	P4 4468		3.96
P4 4345		2.05	P4 4469		0.24
P4 4346		0.16	P4 4470		0.69
P4 4347		0.11	P4 4471		4.19
P4 4348		0.57	P4 4472		0.72
P4 4349		1.59	P4 4473		1.13
P4 4350		2.14	P4 4474		1.67
P4 4425		0.50	P4 4475		1.08
P4 4426		1.06	P4 4476		0.89
P4 4427		1.50	P4 4477		1.34
P4 4428		1.54	P4 4478		1.66
P4 4429		1.52	P4 4479		1.54
P4 4430		1.59	P4 4480		1.85
P4 4431		1.87	P4 4481		2.56
P4 4432		2.11	P4 4482		1.29
P4 4433		2.33	P4 4483		1.39
P4 4434		1.32	P4 4484		0.62
P4 4435		1.63	P4 4485		1.08
P4 4436		1.46	P4 4486		1.77
P4 4437		1.51	P4 4487		2.46
P4 4438		1.36	P4 4488		1.44
P4 4439		1.22	P4 4489		1.77
P4 4440		2.92	P4 4490		0.90
P4 4451		0.59	P4 4491		0.42
P4 4452		0.99	P4 4492		1.00
P4 4453		1.61	P4 4493		1.51
P4 4454		1.01	P4 4494		0.98
P4 4455		1.29	P4 4495		1.37
P4 4456		1.39	P4 4496		0.66
P4 4457		1.31	P4 4497		1.42
P4 4458		1.34	P4 4498		0.98
P4 4459		1.54	P4 4499		1.25
P4 4460		1.23	P4 4500		1.54
P4 4461		1.44			
P4 4462		2.11			
P4 4463		2.18			
P4 4464		1.70			

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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
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PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 4501		1.64	P4 4541		0.58
P4 4502		1.89	P4 4542		0.94
P4 4503		1.64	P4 4543		1.04
P4 4504		1.44	P4 4544		2.66
P4 4505		1.91	P4 4545		3.04
P4 4506		1.42	P4 4546		1.78
P4 4507		0.76			
P4 4508		1.73			
P4 4509		1.04			
P4 4510		0.87			
P4 4511		0.54			
P4 4512		0.08			
P4 4513		0.54			
P4 4514		2.10			
P4 4515		1.55			
P4 4516		0.89			
P4 4517		0.11			
P4 4518		0.16			
P4 4519		1.94			
P4 4520		0.88			
P4 4521		0.52			
P4 4522		1.23			
P4 4523		1.63			
P4 4524		0.56			
P4 4525		0.72			
P4 4526		1.35			
P4 4527		2.22			
P4 4528		2.18			
P4 4529		2.32			
P4 4530		0.84			
P4 4531		2.36			
P4 4532		1.96			
P4 4533		2.84			
P4 4534		2.42			
P4 4535		1.33			
P4 4536		0.65			
P4 4537		1.02			
P4 4538		0.47			
P4 4539		0.50			
P4 4540		0.74			

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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01834.0 ( COMPLETE )

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PAGE 1 OF 4

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
D2 4547		2.76	D2 4587		2.91
D2 4548		2.17	D2 4588		1.71
D2 4549		0.80	D2 4589		2.52
D2 4550		0.57	D2 4590		2.29
D2 4551		0.04	D2 4591		1.50
D2 4552		1.44	D2 4592		3.55
D2 4553		2.06	D2 4593		2.44
D2 4554		2.89	D2 4594		0.44
D2 4555		5.15	D2 4595		0.80
D2 4556		0.20	D2 4596		1.40
D2 4557		0.16	D2 4597		1.51
D2 4558		0.46	D2 4598		1.37
D2 4559		0.37	D2 4599		1.45
D2 4560		0.28	D2 4600		1.68
D2 4561		2.08	D2 4601		1.68
D2 4562		1.45	D2 4602		1.80
D2 4563		0.67	D2 4603		0.60
D2 4564		1.64	D2 4604		2.06
D2 4565		2.03	D2 4605		1.89
D2 4566		1.98	D2 4606		1.41
D2 4567		3.98	D2 4607		2.12
D2 4568		0.67	D2 4608		1.35
D2 4569		0.11	D2 4609		1.82
D2 4570		2.54	D2 4610		1.71
D2 4571		2.90	D2 4611		4.28
D2 4572		4.49	D2 4612		0.94
D2 4573		1.43	D2 4613		0.52
D2 4574		1.48	D2 4614		1.05
D2 4575		1.72	D2 4615		1.23
D2 4576		1.62	D2 4616		1.28
D2 4577		1.51	D2 4617		2.10
D2 4578		1.46	D2 4618		1.60
D2 4579		1.80	D2 4619		1.20
D2 4580		1.56	D2 4620		1.42
D2 4581		1.03	D2 4621		2.21
D2 4582		1.46	D2 4622		0.84
D2 4583		1.70	D2 4623		0.86
D2 4584		1.05	D2 4624		0.86
D2 4585		1.73	D2 4625		1.53
D2 4586		1.32	D2 4626		1.43

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Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01834.0 ( COMPLETE )

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PAGE 2 OF 4

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
D2 4627		1.10			
D2 4628		1.26			
D2 4629		1.47			
D2 4630		0.89			
D2 4631		1.69			
D2 4632		1.28			
D2 4633		0.17			
D2 4634		0.18			
D2 4635		0.12			
D2 4636		0.03			
D2 4637		0.18			
D2 4638		0.82			
D2 4639		0.84			
D2 4640		0.94			
D2 4641		0.94			
D2 4642		1.87			
D2 4643		0.43			
D2 4644		0.65			
D2 4645		0.44			
D2 4646		0.36			
D2 4647		0.62			
D2 4648		0.56			
D2 4649		0.36			
D2 4650		0.47			
D2 4651		0.38			
D2 4652		1.15			
D2 4653		0.79			
D2 4654		1.25			
D2 4655		0.87			
D2 4656		1.99			
D2 4657		3.60			
D2 4658		1.39			
D2 4659		1.36			
D2 4660		1.36			
D2 4661		0.86			
D2 4662		0.57			





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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01872.0 ( COMPLETE )

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PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
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P4 4663		0.26
P4 4664		0.24
P4 4665		4.36
P4 4666		3.37
P4 4668		0.14

P4 4669		0.25
P4 4671		0.56
P4 4672		1.01
P4 4674		1.52
P4 4675		1.77

P4 4677		1.03
P4 4678		0.93
P4 4680		2.76
P4 4681		3.29
P4 4683		0.43

P4 4684		0.92
P4 4686		0.76
P4 4687		0.83
P4 4689		0.91
P4 4690		0.80

P4 4692		1.93
P4 4693		1.61



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION

PROJECT: NONE GIVEN

REPORT: V01-01904.0 ( COMPLETE )

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DATE PRINTED: 2-OCT-01

PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
------------------	------------------	--------------

D2 4667		2.37
D2 4670		0.84
D2 4673		1.41
D2 4676		0.85
D2 4679		1.15

D2 4682		4.59
D2 4685		0.50
D2 4688		0.39
D2 4691		0.51
D2 4694		1.94

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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01618.0 ( COMPLETE )

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PAGE 1 OF 4

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 2000		1.63	P4 2040		6.13
P4 2001		1.29	P4 2041		1.64
P4 2002		1.78	P4 2042		2.52
P4 2003		5.95	P4 2043		3.02
P4 2004		6.97	P4 2044		0.35
P4 2005		3.63	P4 2045		0.36
P4 2006		3.64	P4 2046		0.78
P4 2007		1.00	P4 2047		2.05
P4 2008		0.79	P4 2048		0.57
P4 2009		7.26	P4 2049		2.03
P4 2010		2.19	P4 2050		1.20
P4 2011		7.10	P4 2051		1.69
P4 2012		1.04	P4 2052		1.01
P4 2013		2.15	P4 2053		1.11
P4 2014		1.20	P4 2054		1.84
P4 2015		2.14	P4 2055		1.18
P4 2016		1.87	P4 2056		3.18
P4 2017		2.00	P4 2057		2.61
P4 2018		2.96	P4 2058		3.02
P4 2019		3.30	P4 2059		2.11
P4 2020		2.14	P4 2060		1.49
P4 2021		2.01	P4 2061		2.37
P4 2022		2.59	P4 2062		0.72
P4 2023		3.37	P4 2063		0.81
P4 2024		1.30	P4 2064		1.68
P4 2025		2.06	P4 2065		1.32
P4 2026		2.58	P4 2066		1.59
P4 2027		0.55	P4 2067		1.24
P4 2028		0.84	P4 2068		1.86
P4 2029		2.25	P4 2069		0.76
P4 2030		3.81	P4 2070		2.48
P4 2031		2.71	P4 2071		3.91
P4 2032		2.51	P4 2072		3.46
P4 2033		1.93	P4 2073		1.09
P4 2034		2.18	P4 2074		2.19
P4 2035		2.45	P4 2075		1.23
P4 2036		1.43	P4 2076		2.32
P4 2037		2.09	P4 2077		1.19
P4 2038		6.14	P4 2078		1.66
P4 2039		1.19	P4 2079		1.13



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
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PAGE 2 OF 4

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
P4 2080		1.15	P4 2120		2.73
P4 2081		0.72	P4 2121		8.57
P4 2082		1.16	P4 2122		9.03
P4 2083		0.57	P4 2123		1.95
P4 2084		2.29	P4 2124		5.99
P4 2085		1.61	P4 2125		4.00
P4 2086		1.67	P4 2126		3.00
P4 2087		1.13	P4 2127		1.32
P4 2088		0.52	P4 2128		5.36
P4 2089		0.38	P4 2129		6.11
P4 2090		3.29	P4 2130		5.09
P4 2091		1.38	P4 2131		0.29
P4 2092		0.60	P4 2132		0.41
P4 2093		2.07			
P4 2094		1.76			
P4 2095		0.87			
P4 2096		0.98			
P4 2097		2.76			
P4 2098		0.44			
P4 2099		3.55			
P4 2100		1.33			
P4 2101		1.70			
P4 2102		2.10			
P4 2103		0.84			
P4 2104		4.06			
P4 2105		2.85			
P4 2106		0.38			
P4 2107		0.19			
P4 2108		3.59			
P4 2109		3.69			
P4 2110		2.78			
P4 2111		1.46			
P4 2112		1.02			
P4 2113		3.90			
P4 2114		3.98			
P4 2115		3.32			
P4 2116		3.74			
P4 2117		3.79			
P4 2118		2.45			
P4 2119		2.37			



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01658.0 ( COMPLETE )

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DATE PRINTED: 31-AUG-01 PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
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P4 2133		1.88
P4 2134		1.28
P4 2135		1.29
P4 2136		0.92
P4 2137		3.30

P4 2138		3.38
P4 2139		0.96
P4 2140		1.07
P4 2141		2.63
P4 2142		1.76

P4 2143		2.07
P4 2144		1.16
P4 2145		0.75
P4 2146		1.01
P4 2147		1.86

P4 2148		0.82
P4 2149		1.04
P4 2150		1.44
P4 2151		0.93
P4 2152		0.70

P4 2153		1.02
P4 2154		0.78
P4 2155		1.28



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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01689.0 ( COMPLETE )

DATE RECEIVED: 29-AUG-01

PROJECT: NONE GIVEN

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PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
------------------	------------------	--------------

P4 2215		1.14
P4 2216		2.90
P4 2217		2.68
P4 2218		2.84
P4 2219		1.85

P4 2220		2.64
P4 2221		1.75
P4 2222		1.61
P4 2223		0.79
P4 2224		0.96

P4 2225		4.14
P4 2226		2.44
P4 2227		2.95
P4 2228		0.85
P4 2229		1.23

P4 2230		5.30
P4 2231		1.59
P4 2232		2.12
P4 2233		2.35
P4 2234		0.90

P4 2235		0.82
P4 2236		0.61
P4 2237		0.53
P4 2238		0.57
P4 2239		0.56

P4 2240		0.47
P4 2241		1.40
P4 2242		7.74
P4 2243		0.93

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# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01959.0 ( COMPLETE )

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DATE PRINTED: 5-OCT-01

PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
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R2 3151		3.72
R2 3152		3.93
R2 3153	WENGLANDS	3.78
R2 3154	CL	3.94
R2 3155	SAMPLES	4.22

R2 3156		3.50
R2 3157		3.71
R2 3158		3.97
R2 3159		2.18
R2 3160		2.72

R2 3161		2.83
R2 3162		2.13
R2 3163		2.06
R2 3164		0.92
R2 3165		0.96

R2 3170		0.20
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BONDAR CLEGG



# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01999.0 ( COMPLETE )

DATE RECEIVED: 05-OCT-01

PROJECT: NONE GIVEN

DATE PRINTED: 12-OCT-01

PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
R2 3167		4.64
R2 3169		6.71



BONDAR CLEGG



# Geochemical Lab Report

CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01999.0 ( COMPLETE )

DATE RECEIVED: 05-OCT-01

PROJECT: NONE GIVEN

DATE PRINTED: 12-OCT-01

PAGE 3 OF 3

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
3167		4.64
Duplicate		4.63



P. 02/02

FAX NO. 6042531716

OCT-17-2001 WED 12:41 PM ACME ANALYTICAL LAB

ACME ANALYTICAL LABORATORIES LTD.  
(ISO 9002 Accredited Co.)

852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE(604)253-3158 FAX(604)253-1716



GEOCHEMICAL ANALYSIS CERTIFICATE



Crystal Graphite Corporation File # A103506

P.O. Box 119, Little Stoc, Stocan Park BC V0G 2E0 Submitted by: Jim Chapman

SAMPLE#

C/GRA  
%

SI	<.02
3166	4.11
3168	6.64
RE 3168	6.57
STANDARD CSB	1.59

---  
 - GRA/C GROUP 2A - 600 DEG. C IGNITION, 15% HCL LEACHING, RESIDUE BY LECD.  
 - SAMPLE TYPE: ROCK R150 60C  
Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: OCT 4 2001

DATE REPORT MAILED:

*Oct 17/01* SIGNED BY: *C. Toy*

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Data *h* FA



CLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01958.0 ( COMPLETE )

DATE RECEIVED: 03-OCT-01

PROJECT: NONE GIVEN

DATE PRINTED: 9-OCT-01 PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
D2 1001		1.48
D2 1002	<i>CO2</i>	1.05
D2 1003		1.00
D2 1004	<i>CO2</i>	0.94
D2 1005	<i>CO2</i>	1.50
D2 1006		0.96
D2 1007		1.38
D2 1008		2.04
D2 1009		1.16
D2 1010		3.34
D2 1011		1.65
D2 1012		2.01
D2 1013		1.42
D2 1014		0.96
D2 1015		0.48
D2 1016		1.42
D2 1017		1.42
D2 1018		2.22
D2 1019		1.34
D2 1020		0.42
D2 1021		1.30
D2 3139		0.14
D2 3140		0.46

(ISO 9002 Accredited Co.)

GEOCHEMICAL ANALYSIS CERTIFICATE

Crystal Graphite Corporation File # A104264

P.O. Box 119, Little Stoc, Slokan Park BC V0G 2E0



SAMPLE#	C/GRA %
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SI	<.02
2369	1.57
2386	2.52
3186	.02
3245	1.52
3272	2.82
3283	3.26
STANDARD CSB	1.35

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 ---  
 ---  
 - GRA/C GROUP 2A - 600 DEG. C IGNITION, 15% HCL LEACHING, RESIDUE BY LECD.  
 - SAMPLE TYPE: SAND P150

DATE RECEIVED: DEC 5 2001

DATE REPORT MAILED: Dec 13/01

SIGNED BY: *C. Leong* O. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

P. 02/02

FAX NO. 6042531716

DEC-17-2001 MON 10:45 AM ACME ANALYTICAL LAB



CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-02429.0 ( COMPLETE )

DATE RECEIVED: 07-DEC-01

PROJECT: NONE GIVEN

DATE PRINTED: 21-DEC-01

PAGE 1 OF 2

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
T2 2369		1.70	T2 3186		0.11
T2 2370		1.69	T2 3201		3.79
T2 2371		2.91	T2 3202		3.56
T2 2372		1.89	T2 3203		5.96
T2 2373		2.45	T2 3204		2.44
T2 2374		2.23	T2 3205		8.88
T2 2375		2.80	T2 3206		0.45
T2 2376		2.37	T2 3207		1.40
T2 2377		3.53	T2 3208		0.90
T2 2378		4.38	T2 3209		0.76
T2 2379		7.98	T2 3210		4.47
T2 2380		6.08	T2 3211		7.06
T2 2381		1.64	T2 3212		6.71
T2 2382		3.02	T2 3213		4.93
T2 2383		2.24	T2 3214		3.71
T2 2384		2.41	T2 3215		3.42
T2 2385		3.45	T2 3216		4.07
T2 2386		2.92	T2 3217		5.89
T2 2387		1.90	T2 3218		6.52
T2 2388		3.26	T2 3219		3.48
T2 2389		2.05	T2 3220		3.73
T2 2390		6.07	T2 3221		2.26
T2 2391		2.55	T2 3222		2.79
T2 2392		1.49	T2 3223		3.39
T2 2393		1.59	T2 3224		4.02
T2 2394		1.84	T2 3225		3.70
T2 2395		2.65	T2 3226		4.01
T2 2396		2.71	T2 3227		3.88
T2 2397		2.40	T2 3228		2.22
T2 2398		4.40	T2 3229		1.68
T2 2399		3.47	T2 3230		1.57
T2 2400		1.09	T2 3231		3.06
T2 3178		1.23	T2 3232		5.57
T2 3179		1.29	T2 3233		1.40
T2 3180		1.42	T2 3234		4.73
T2 3181		1.30	T2 3235		3.43
T2 3182		1.30	T2 3236		3.77
T2 3183		1.31	T2 3237		3.02
T2 3184		0.47	T2 3238		3.01
T2 3185		2.32	T2 3239		3.15



CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-02429.0 ( COMPLETE )

DATE RECEIVED: 07-DEC-01

PROJECT: NONE GIVEN

DATE PRINTED: 21-DEC-01

PAGE 2 OF 2

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT	SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
T2 3240		1.05	T2 3280		2.72
T2 3241		1.62	T2 3281		3.50
T2 3242		0.74	T2 3282		3.99
T2 3243		1.45	T2 3283		3.91
T2 3244		1.66	T2 3284		3.19
T2 3245		1.71	T2 3285		4.15
T2 3246		1.80	T2 3286		4.18
T2 3247		1.17	T2 3287		1.35
T2 3248		1.43	T2 3288		2.97
T2 3249		1.18	T2 3289		2.53
T2 3250		1.73	T2 3290		2.59
T2 3251		0.55	T2 3291		2.45
T2 3252		1.89	T2 3292		1.20
T2 3253		0.79	T2 3293		1.54
T2 3254		2.50	T2 3294		3.77
T2 3255		1.39	T2 3295		4.38
T2 3256		0.93	T2 3296		1.42
T2 3257		3.37	T2 3297		1.61
T2 3258		9.68	T2 3298		2.10
T2 3259		3.47	T2 3299		3.90
T2 3260		7.83	T2 3300		2.78
T2 3261		7.38	T2 3301		2.23
T2 3262		0.61	T2 3302		4.39
T2 3263		1.65	T2 3303		3.59
T2 3264		1.93	T2 3304		3.49
T2 3265		1.31	T2 3305		3.54
T2 3266		2.18	T2 3306		3.53
T2 3267		2.49	T2 3307		3.49
T2 3268		3.39	T2 3308		2.10
T2 3269		3.00	T2 3309		3.75
T2 3270		3.53	T2 3310		4.50
T2 3271		4.75	T2 3311		2.78
T2 3272		3.07	T2 3312		2.98
T2 3273		2.65	T2 3313		1.96
T2 3274		3.91	T2 3314		2.20
T2 3275		3.29	T2 3315		3.80
T2 3276		7.05	T2 3316		1.78
T2 3277		2.90	T2 3317		4.80
T2 3278		3.48			
T2 3279		5.15			

Geochemical  
Lab ReportCLIENT: CRYSTAL GRAPHITE CORPORATION  
REPORT: V01-01726.0 ( COMPLETE )

DATE RECEIVED: 31-AUG-01

PROJECT: NONE GIVEN

DATE PRINTED: 7-SEP-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
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P4 CGC2285		2.04
P4 CGC2286		2.36
P4 CGC2287		0.65
P4 CGC2288		0.59
P4 CGC2289		0.98

P4 CGC2290		0.31
P4 CGC2291		3.20
P4 CGC2292		0.84
P4 CGC2293		3.15
P4 CGC2294		1.74

P4 CGC2295		0.60
P4 CGC2296		0.33
P4 CGC2297		0.28
P4 CGC2298		3.02
P4 CGC2299		1.10

P4 CGC2300		1.87
P4 CGC2301		0.25
P4 CGC2302		2.46
P4 CGC4344		1.67
P4 CGC4345		2.19

P4 CGC4346		2.00
P4 CGC4347		1.25
P4 CGC4348		1.70
P4 CGC4349		1.64
P4 CGC4350		1.66

P4 CGC4351		1.14
P4 CGC4352		1.29
P4 CGC4353		1.46
P4 CGC4354		1.34
P4 CGC4355		1.62

P4 CGC4356		1.62
P4 CGC4357		1.33
P4 CGC4358		1.39
P4 CGC4359		1.26
P4 CGC4360		0.52

P4 CGC4361		1.02
P4 CGC4362		1.10
P4 CGC4363		1.83
P4 CGC4364		2.18

Bondar Clegg Canada Limited

130 Pemberton Avenue, North Vancouver, BC, V7P 2R5, Canada

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CLIENT: CRYSTAL GRAPHITE CORPORATION  
 REPORT: V01-01835.0 ( COMPLETE )

DATE RECEIVED: 18-SEP-01

PROJECT: NONE GIVEN

DATE PRINTED: 20-SEP-01

PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
T1 2323		0.38
T1 2324		0.46
T1 2325		2.00
T1 2326		1.65
T1 2327		0.65
T1 2328		0.82
T1 2329		1.28
T1 2330		1.49
T1 2331		2.92
T1 2332		2.34
T1 2333		2.47
T1 2334		1.88
T1 2335		3.44
T1 2336		1.98
T1 2337		2.12
T1 2338		1.10
T1 2339		2.88
T1 2340		1.86
T1 2341		1.02
T1 2342		0.84
T1 2343		1.06
T1 2344		0.86
T1 2345		0.55
T1 2346		0.69
T1 2347		1.58
T1 2348		1.67
T1 2349		1.83
T1 2350		0.57
T1 2351		0.54
T1 2352		0.28
T1 2353		1.71
T1 2354		1.18
T1 2355		5.72
T1 2356		5.44
T1 2357		1.75
T1 2358		1.76
T1 2359		2.28
T1 2360		3.27
T1 2361		1.48
T1 2362		0.76

SAMPLE NUMBER	ELEMENT UNITS	C Org PCT
T1 2363		1.27
T1 2364		2.00
T1 2365		1.86
T1 2366		1.25
T1 2367		0.70
T1 2368		1.85