

S. B. BUTRENCHUK

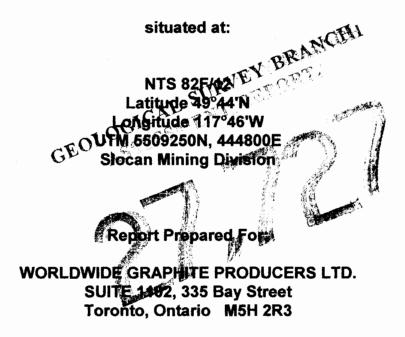
CONSULTING GEOLOGIST

Gold Commissioner's Office VANCOUVER, B.C.

# TECHNICAL REPORT

# ON THE

# SUPERIOR, KOCH AND AMAR PROPERTY



January 2005

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### SUMMARY

In June 2004, the author was engaged by Worldwide Graphite Producers Ltd. to prepare a drilling program for the Superior-Koch-Amar property and to prepare a report to satisfy assessment requirements and also be suitable to meet National Instrument 42-103 standards. Due to the unavailability of a drilling company this work was not done. However, detailed prospecting, sampling and reconnaissance mapping was completed. This work located additional graphite mineralization (Amar Zone) and resulted in the acquisition of the Amar claims.

The Superior-Koch-Amar property has been actively explored from the date of its acquisition in 1997 to the present day. Exploration prior to 2004 has consisted of prospecting, sampling, geophysical surveys, diamond drilling and metallurgical testing. This work has indicated the presence of a graphite resource on the Main Zone that compares favourably with the adjoining Crystal Graphite deposit. Within the Main Zone graphite content is highest in a marble-calc silicate unit.

Metallurgical work to date has indicated that approximately 75% of the graphite is +48 and -48+100 mesh size. This material with additional grinding would be suitable for the fuel cell market. Although exact prices are not known, fuel cell grade graphite sells for approximately \$2,500 per tonne.

During 2004, virtually the whole property, with the exception of the Main Zone, was prospected and sampled. A total of 104 samples were collected and submitted for analyses. Values ranging from less than 1% to in excess of 36% graphite were obtained. This work resulted in the discovery of the Amar Zone. In addition to the above work, reconnaissance mapping at a scale of 1:20,000 was completed on most of the property. A small 3 tonne bulk sample was collected from the Amar Zone and submitted for metallurgical testing. Besides the Main and Amar Zones, high graphite values have been recorded elsewhere on the property. These localities require further evaluation.

Further exploration is required, especially on the Main Zone, to properly define the potential graphite resource that may be present on this property.

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### **GEOLOGICAL REPORT**

### ON THE

### SUPERIOR, KOCH AND AMAR CLAIMS

### INTRODUCTION AND TERMS OF REFERENCE:

In 1998, Worldwide Graphite Producers Ltd., a private company with offices located in Toronto and Vancouver, acquired the interests of a graphite property located in the Slocan area of British Columbia from prospector Horst Klassen. Since that time, the company has spent in excess of \$1,000,000 on exploration. This work has substantiated the presence of graphite throughout the property.

Exploration in 2004 consisted of prospecting and sampling. This work identified new graphite occurrences that resulted in the staking of additional claims. This work was done during the period June 1-December 15, 2004.

In June 2004, the author was asked by the company to prepare a diamond drill program. Because of the unavailability of a drill this work was not done. The author was also commissioned to write the assessment report pertaining to the 2004 exploration program.

The author spent approximately 10 days on the property completing reconnaissance mapping and verifying the prospecting and sampling that had been done by the prospecting crew. This report is based upon the author's own observations, field work done by previous prospecting personnel and from previous reports compiled on behalf of the company. It summarizes the data and makes recommendations for ongoing exploration and development.

#### DISCLAIMER:

Certain opinions expressed in this report are based on certain data and information supplied by Worldwide Graphite Producers Ltd. and various other sources. Unless expressly stated otherwise, any such data and information have not been verified or audited by the author and the author makes no representation as to its accuracy and disclaims all liability with respect thereto.

### PROPERTY DESCRIPTION AND LOCATION:

The Superior-Amar-Koch property, consisting of 89 unsurveyed mineral claims (302 units) registered in the Slocan Mining Division, is situated in the South Valhalla Mountain Range approximately 50 kilometres west of Nelson and 51 kilometres north of Castlegar, British Columbia (Figure 1). Details pertaining to these claims are summarized in Table 1. Worldwide Graphite Producers Ltd., with head office located in Toronto, Ontario, is the registered owner of these claims. The location of these claims are shown on Trim Maps 082F062 and 082F072 (Figures 2 and 3). The Main Zone is located at UTM co-ordinates 445361E and 5506798N.

Access to the property is via the Little Slocan forest service road, a distance of 34 kilometres from Highway #6 at the village of Passmore, or from the village of Slocan on the same Highway for a distance of 22 kilometres. This road is well maintained by Canfor Forest Products. Access to the main showing area is via the Hoder Creek road. This road is suitable for mine haul trucks and is maintained by Crystal Graphite Corp. as well as the forestry company. Most of the remainder of the property is accessible by less well maintained logging roads.

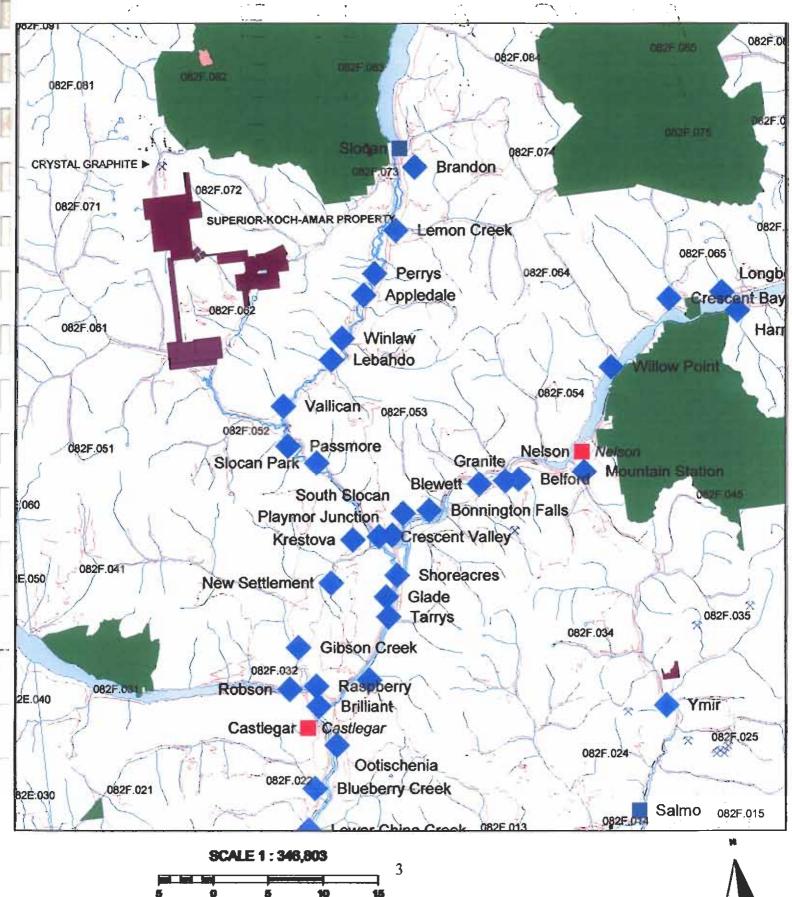
### PHYSIOGRAPHY AND ACCESS:

The Superior-Koch-Amar property is located in an area of moderate to high relief with slopes varying from 37 to 45 degrees. Elevations vary from 1125 to 2600 metres ASL. At lower elevations slopes are covered by mixed deciduous and coniferous forest; at higher elevations slopes consist of alpine meadows with some coniferous forest. The property has been partially logged (Figure 4). Some second growth forest is now present in some of the previously logged areas. Canfor Corporation holds the rights to several cut-blocks in this area.

This part of British Columbia is subject to heavy seasonal rainfall and snowfall. During the period November to March average snowfall is 120 cm. Much of this area is therefore unaccessible by road during the period from late October to late May. If logging operations are ongoing some of the roads may be maintained during the winter months.

Access to the property is via the well maintained Little Slocan forest service road from either the town of Slocan or the village of Passmore on Highway # 6. From Passmore it is a distance of approximately 34 kilometres to the Hoder Creek forest service road. From Slocan it is approximately a distance of 22 kilometres to this same location. The Hoder Creek road is maintained by both Crystal Graphite Corp. and Canfor as it is used to haul ore from Crystal Graphite's graphite mine.

# FIGURE 1: LOCATION MAP



KLOMETERS

TABLE 1: Tenure details: Superior, Koch, Amar Properties, Slocan Mining Division

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Tenure Number	Claim Name	Owner Number	WORLDWIDE GRAPHITE	Map Number	Work Recorded To	Status	Mining Division	Area	Tag Number
413470	SUPERIOR 40	142818	100%	082F072	2005.08.19	Good Standing 2005.08.19	20 SLOCAN	4 un	238572
413471	AMAR 1 AMAR 2	142818 142818	100%	082F062 082F062	2005.06.20 2005.08.20	Good Standing 2005.08.20 Good Standing 2005.08.20	20 SLOCAN 20 SLOCAN	1 ⊔n; 1 ⊔n;	724066M 724067M
413472 413473	AMAR 3	142818	100%	062F062	2005.08.20	Good Standing 2005.08.20	20 SLOCAN	1 บก	724068M
413474	AMAR 4	142818	100%	062F062	2005.08.20	Good Standing 2005.08.20	20 SLOCAN	1 un	724009M
413475	AMAR 5	142618	100%	082F082	2005.08.20	Good Standing 2005.08.20	20 SLOCAN	1 un	724070M
413478 413477	AMAR 6 AMAR 7	142818 142818	100%	082F082 082F082	2005.08.20 2005.08.20	Good Standing 2005.08.20 Good Standing 2005.08.20	20 SLOCAN 20 SLOCAN	1 un 1 un	724071M 724072M
413478	AMAR 8	142818	100%	082F062	2005.08.20	Good Standing 2005.08.20	20 SLOCAN	1 un	724073M
413479	AMAR 9	142818	100%	082F062	2005.08.21	Good Standing 2005.08.21	20 SLOCAN	1 un	724074M
413480	AMAR 10	142818	100%	0825082	2005.08.21	Good Standing 2005.08.21	20 SLOCAN	1 un	724075M
413481 413482	AMAR 11 AMAR 12	142818 142818	100%	082F082 082F082	2005.08.21 2005.08.21	Good Standing 2005.08.21 Good Standing 2005.08.21	20 SLOCAN 20 SLOCAN	1un 1un	724076M 724077M
413900	AMAR 13	142818	100%	062F062	2005.09.01	Good Standing 2005.09.01	20 SLOCAN	1 un	724033M
413901	AMAR 14	142618	100%	062F062	2005.09.01	Good Standing 2005.09.01	20 SLOCAN	1 un	724034M
413902	AMAR 15	142818	100%	082F082	2005.09.01	Good Standing 2005.09.01	20 SLOCAN	1 un	724035M
413903 413904	AMAR 16 AMAR 17	142818 142818	100%	082F062 082F062	2005.09.01 2005.09.02	Good Standing 2005.09.01 Good Standing 2005.09.02	20 SLOCAN 20 SLOCAN	1 un 1 un	724036M 724037M
413905	AMAR 18	142818	100%	082F062	2006.09.02	Good Standing 2005.09.02	20 SLOCAN	1 un	724038M
413906	AMAR 19	142818	100%	082F082	2005.09.02	Good Standing 2005.09.02	20 SLOCAN	1 un	724039M
413907 413908	AMAR 20 AMAR 21	142818 142818	100%	082F062 082F062	2006.09.02 2005.09.03	Good Standing 2005.09.02 Good Standing 2005.09.03	20 SLOCAN 20 SLOCAN	1 un 1 un	724040M 724041M
413909	AMAR 22	142818	100%	082F082	2005.09.03	Good Standing 2005.09.03	20 SLOCAN	1 un	724042M
413910	AMAR 23	142818	100%	082F062	2005.09.03	Good Standing 2005.09.03	20 SLOCAN	1 un	724043M
413911	AMAR 24	142818	100%	062F082	2005.09.03	Good Standing 2005.09.03	20 SLOCAN	tun	724044M 724045M
413912 413913	AMAR 25 AMAR 26	142818 142818	100%	082F062 082F062	2005.09.04 2005.09.04	Good Standing 2005.09.04 Good Standing 2005.09.04	20 SLOCAN 20 SLOCAN	1 un. 1 un	724046M
414353	AMAR 27	142818	100%	082F062	2005.09.20	Good Standing 2005.09.20	20 SLOCAN	3 un	211957
414354	AMAR28	142818	100%	082F062	2005.09.21	Good Standing 2005.09.21	20 SLOCAN	6 un	211958
414355 414438	AMAR 29 AMAR 30	142818	100%	082F082 082F082	2005.09.22	Good Standing 2005.09.22 Good Standing 2006.09.25	20 SLOCAN 20 SLOCAN	12 un	238678 238584
414437	AMAR 31	142818 142818	100%	062F062	2005.09.25 2005.09.25	Good Standing 2005.09.26	20 SLOCAN	9 un 6 un	238585
414438	AMAR 32	142818	100%	0625062	2005.09.30	Good Standing 2005.09.30	20 BLOCAN	6 <b>ม</b> ก	238586
414439	AMAR 33	142818	100%	082F062	2006.09.30	Good Standing 2005.09.30	20 SLOCAN	6 un	238587
414440 415050	AMAR 34 SUPERIOR 50	142818 142818	100%	082F062 082F062	2005.10.02 2005.10.25	Good Standing 2006.10.02 Good Standing 2005.10.25	20 SLOCAN 20 SLOCAN	8 un 16 un	238574 211927
387977	KOCH 2	142818	100%	082F062	2006.04.05	Good Standing 2006.04.05	20 SLOCAN	20 un	212183
387983	KOCH 1	142818	100%	082F082	2006.04.05	Good Standing 2008.04.05	20 BLOCAN	20 un	212182
412470	KOCH 16	142818	100%	0825082	2008.07.23	Good Standing 2008.07.23	20 BLOCAN	4 un	238685
412469 396526	KOCH 14 KOCH 12	142818 142818	100%	082F082 082F082	2008.07.24 2007.09.13	Good Standing 2008.07.24 Good Standing 2007.09.13	20 SLOCAN 20 SLOCAN	5 มูก 8 มก	238566 211919
396527	KOCH 13	142818	100%	0825082	2007.09.14	Good Standing 2007.09.14	20 SLOCAN	8 un	211920
346875	SUPERIOR IX	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	6 un	215826
346876	SUPERIOR X	142818	100%	082F072 082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	3 un	215829
346877 346878	SUPERIOR I SUPERIOR II	142818 142818	100%	082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un. 1 un:	672605M 672604M
346879	SUPERIOR III	142818	100%	062F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	672606M
346880	SUPERIOR IV	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	872607M
346881 346862	SUPERIOR V SUPERIOR VI	142618 142518	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un 1 un	672608M 872609M
346863	SUPERIOR VII	142818	100%	062F072	2012.04.05	Good Standing 2012.04.06	20 SLOCAN	1 un	672610M
346884	SUPERIOR VIII	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	672611M
346885	SUPERIOR XI	142618	100%	062F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	054618M
346886 346887	SUPERIOR XII SUPERIOR XIII	142818 142818	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un 1 un	664619M 664620M
346868	SUPERIOR XIV	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	004621M
346689	SUPERIOR XV	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	064622M
346690	SUPERIOR XVI	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 แก	864623M
346891 346892	SUPERIOR XVII SUPERIOR XVIII	142818 142918	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1un 1un	664624M 664625M
346893	SUPERIOR XIX	142818	100%	062F072	2012.04.05	Good Standing 2012.04.05	20 BLOCAN	1 un	664626M
346894	SUPERIOR XX	142818	100%	062F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	664627M
346895	SUPERIOR XXI	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	610642M
346896 346897	SUPERIOR XXII SUPERIOR XXIII	142818 142818	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un 1 un	610643M 610644M
346898	SUPERIOR XXIV	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	610646M
346899	SUPERIOR XXV	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	672612M
346900 346901	SUPERIOR XXVI SUPERIOR XXVII	142818 142818	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 มก 1 มก	672613M 664628M
346902	SUPERIOR XXVIII	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	664629M
346903	SUPERIOR XXIX	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	627685M
347428 347429	SUPERIOR XXX SUPERIOR XXXI	142818 142818	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un 1 un	627686M 627688M
347430	SUPERIOR XXXII	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN	1 นก	627689M
360029	SUPERIOR XXXIII	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	16 un	215864
360030	SUPERIOR XXXIV	142618	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	20 un	215863
360031 360032	SUPERIOR XXXV SUPERIOR XXXVI	142818 142818	100%	082F072 082F072	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	16 มก 18 มก	215835 215835
365015	MOTHER SUPERIOR	142818	100%	062F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	16 un	210830
390990	AMAR	142818	100%	082F072	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	711055M
390991	GRACIA	142818	100%	062F072	2012.04.05	Good Standing 2012.04.06	20 SLOCAN	1 un	711056M
390992 390993	NISSIM Emile	142818 142818	100%	082F082 082F082	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un 1 un	711057M 711058M
390994	SOLANGE	142818	100%	082F062	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	711059M
390995	DADY	142818	100%	082F082	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	711060M
390996	CLAUDE	142818	100%	062F062	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 แก	711061M
390997 390998	BABETTE GUILA	142818 142818	100%	082F062 082F082	2012.04.05 2012.04.05	Good Standing 2012.04.05 Good Standing 2012.04.05	20 SLOCAN 20 SLOCAN	1 un: 1 un:	711062M 711063M
390999	ELIE	142818	100%	062F062	2012.04.05	Good Standing 2012.04.05	20 SLOCAN	1 un	711064M

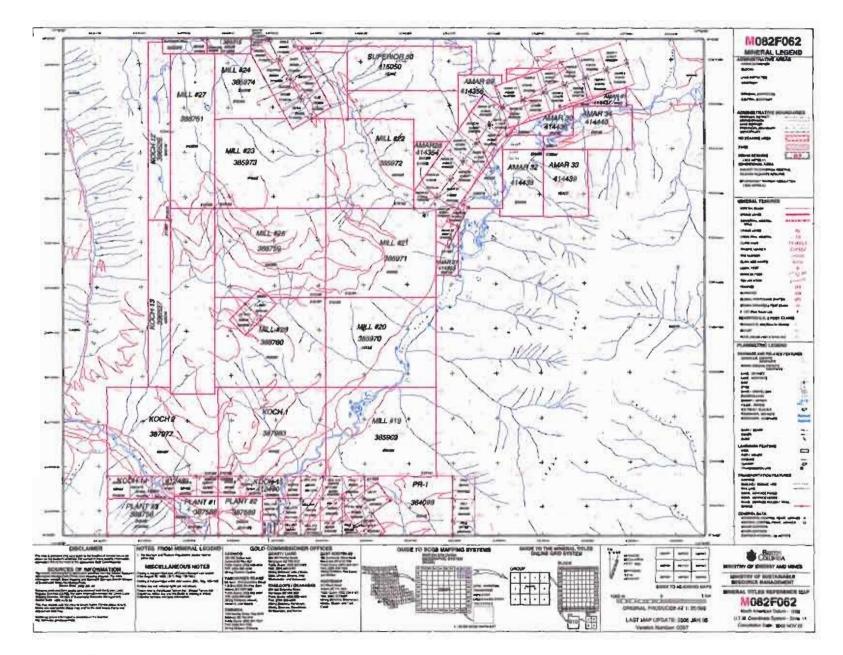


Figure 2: Claim Map: Southern half of the Superior-Koch-Amar Property

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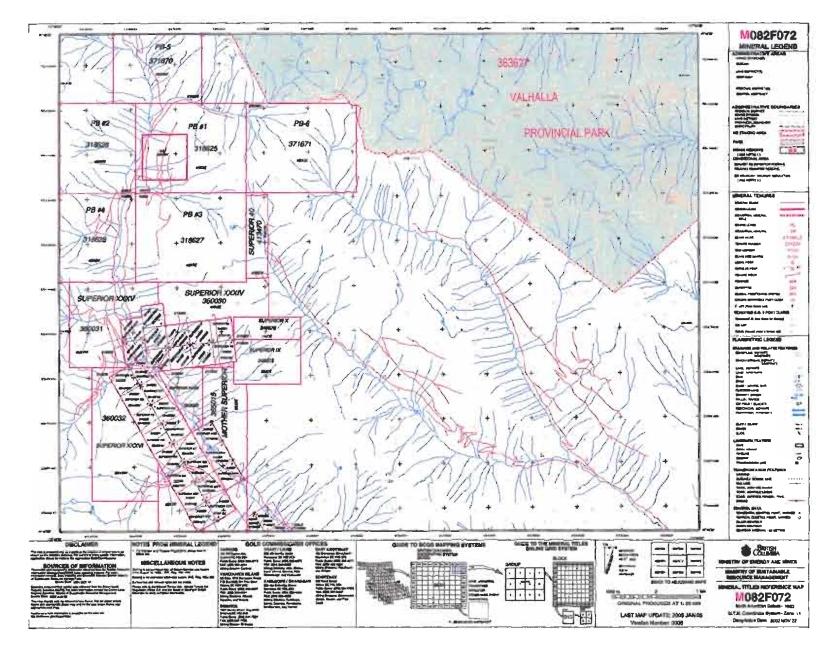


Figure 3: Claim Map: Northern half of the Superior-Koch-Amar Property

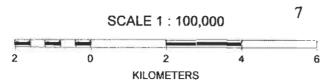
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# FIGURE 4: ORTHOPHOTO FOR SUPERIOR-KOCH-AMAR PROPERTY







### HISTORY:

The history of this area dates back to 1965 when Reesor (1965) first noted the presence of graphite while mapping for the Geological Survey of Canada. In 1996 and 1997 the Superior claims were staked by prospector Horst Klassen who in turn optioned the property to International Mineral Resources Ltd. and its successor Worldwide Graphite Producers Ltd. in 1998. Up until this time there had only been some prospecting and preliminary mapping completed on the property. This work located the Main Zone - a band of marble and calc-silicate rocks containing significant amounts of graphite.

In 1998 samples totaling approximately 100 kilograms were collected from the Main Zone and sent to Lakefield Research for metallurgical study. Pearson, Hofman & Associates Ltd. (1998) supervised this work. Bench scale testing of the material was able to define a flowsheet that could obtain maximum graphitic carbon content with minimal flake damage. Approximately 75% of the graphite in the original feed was recovered in the +48 and in the -48+100 mesh products. A concentration containing 95.5% graphite was produced.

In 1999, a drill program consisting of 9 holes totaling 1331.45 metres was completed in the Main Zone area. This program covered a strike length of 350 metres. Six of the 9 holes drilled intersected significant graphite bearing intervals over widths of 45 to 60 metres (SNC-Lavalin, et al, 2000).

Using results from 1999 drilling, Addie (2000) calculated a graphite resource of 3.4 million tons 1.4% graphite assuming that mining would be done by open-pit. This calculation was updated (Addie, 2001) assuming that mining would be done by benching and selective mining. The graphite resource for the Main Zone was now estimated to be 2.7 million tonnes with a grade of 2.07% graphite. An additional 112,000 tonnes grading 1.45% graphite was contained in the Footwall Zone below three postulated faults, probably in quartz-biotite schist.

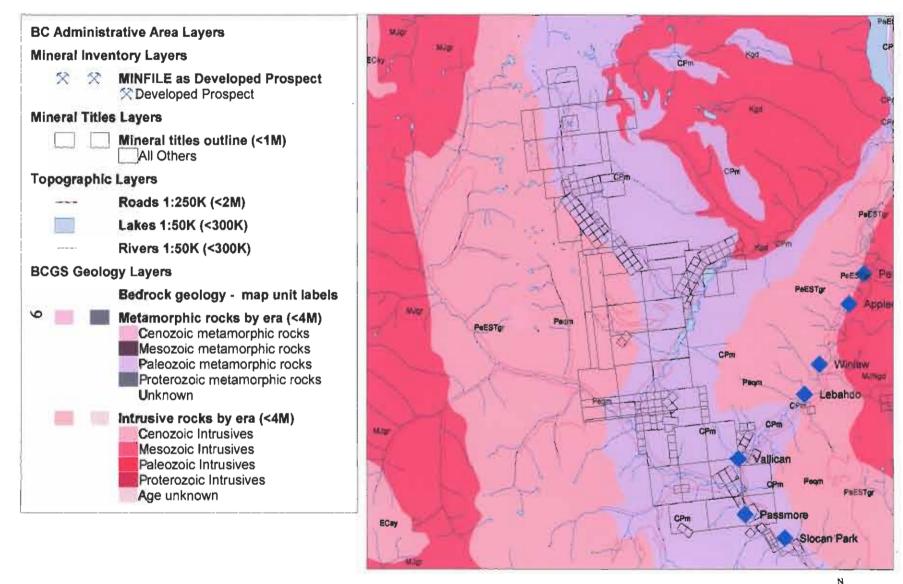
During 2000, VLF-EM surveys were completed in the vicinity of the Main Zone and an additional 90 samples were collected for analyses (Rapski, 2001). Twenty hand trenches were dug in the Main Zone area. Additional exploration was done in 2002 (Cowie, 2003) during which time the Koch mineral claims were staked. The 2004 exploration program consisted of prospecting, sampling, reconnaissance mapping and metallurgical testing of a bulk sample. This work is the subject of this report.

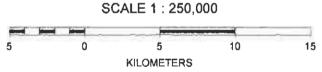
### **GEOLOGICAL SETTING:**

### **Regional Geology:**

Worldwide Graphite's Superior-Koch-Amar property is situated in the Valhalla Metamorphic Core Complex (Figure 5). Rock consists of amphibolite grade or higher paragneisses with some calc-silicate rocks and marble. Also present are augen gneiss and granitoid gneiss.

FIGURE 5: REGIONAL GEOLOGY







The marble and calc-silicate units have been traced along strike for 8 kilometres and have been used as a regional stratigraphic marker horizon. They are host to significant graphite mineralization on the Superior claims and on the adjoining property owned by Crystal Graphite Corp.

### Property Geology:

Underlying most of the Superior-Koch-Amar claims is a sequence of quartz-biotite schists, amphibolite, augen gneiss, marble and calc-silicate rocks (Figure 6). In general these rocks are flat lying or shallow dipping westerly. Pegmatite occurs as lenses of variable size throughout this sequence. Intruding these rocks along the western margin of the property is quartz monzonite.

Graphite is present in graphitic quartz-biotite schist and in marble and calc-silicate rocks. The graphite bearing schists are ubiquitous to most of the property. Graphite content by volume can range up to 20% but generally is less than 5%. Grab samples collected from a number of localities indicate graphite content in excess of 1% C. by weight.

### DEPOSIT TYPE:

Deposits of crystalline flake graphite typically occur as disseminated flakes in metasedimentary rocks of granulite or upper amphibolite facies metamorphism. Host rocks consist of marbles, paragneiss, quartzites and amphibolites. Deposits generally occur as stratiform lenses or are saddle shaped. Economical deposits are several metres thick and hundreds of metres in strike length. Higher graphite grades are commonly located along marble-paragneiss contacts or along other zones that acted as channels for retrograde metamorphic fluids (Simandl and Kenan, 1999).

The median grade and size for crystalline flake graphite deposits is 9.0% F.C. and 2,4000,000 tonnes respectively. Large deposits containing coarse flakes may be economic with grades as low as 4.0% F.C.

There is a close similarity between the ideal model and Worldwide's graphite deposit. Graphite occurs in rocks of upper amphibolite facies. Higher grades are generally associated with marble or calc-silicate rocks.

Tonnage and grade for the Superior graphite deposit fits well into the exploration model.

### MINERALIZATION:

As stated previously in this report, graphite occurs in quartz-biotite schists in variable quantities. This mineralization is best exemplified in the Amar Zone from which a 3 tonne bulk sample was collected in 2004 for metallurgical testing. It also occurs in marble and calc-silicate rocks. This type of mineralization is best exemplified in the Main Zone located on the Superior claims.

Mapping and drilling to date indicate that the Main Zone consists of several well mineralized graphite intervals. Mineralization consists of graphitic (Plate 1) and barren marbles in a unit with overall thickness ranging from 45 to 60 metres thick. The best mineralized interval is approximately 15 metres thick. Graphite grades range from 0.74% to 1.69% graphite; individual samples from the 1999 drilling program range as high as 4.44% graphite. Samples collected for the 1998 metallurgical work contained as much as 7.0% graphite.

Within the marble and calc-silicate rocks graphite occurs as elongated flakes and less commonly as platy flakes. It occurs as subhedral grains ranging in size from 50 microns to 1.2 millimetres in length with an average of 500 microns.

At the Amar Zone graphite is present in quartz-biotite schist that is exposed in a creek bed above a logging road over a stratigraphic interval of at least 20 metres. Graphite occurs as finely crystalline flakes in quantities of 5 to 10% by volume. Below the road pegmatite and schist containing minor graphite are also present.

### **EXPLORATION:**

### 1998-2003 Exploration:

From 1998-2003 exploration work on this property consisted mainly of prospecting and sampling. The majority of this work has been done by Horst Klassen, a prospector residing in Salmo, British Columbia. Additional to this work there was a diamond drill program completed in 1999. Various VLF-EM surveys were also done. In the early stages of exploration a metallurgical study was completed on a 100 kilogram sample collected from the main zone.

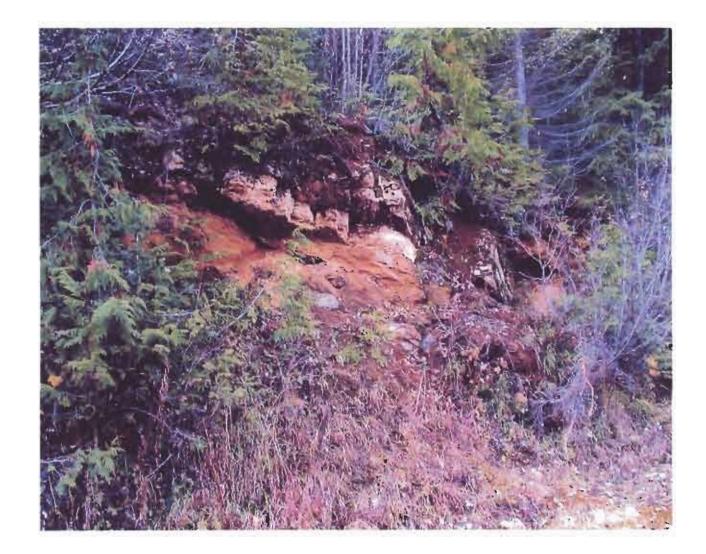
### 2004 Exploration:

In 2004, the area surrounding the Superior Claims was prospected in detail. This work resulted in the discovery of the Amar Zone (Plate 2) and the staking of the Amar claims. Approximately 105 samples were collected and submitted for analyses. Locations for these summarized samples are in Appendix 1. Samples with values higher than 1.0% Carbon are shown on the geology map (Figure 6). Analytical work was done by Ashbury Carbon and Petro Laboratories. The author spent approximately 10 days doing reconnaissance mapping along many of the accessible logging roads as well as in the main mineralized zone. In addition to the above work, a 3 tonne bulk sample (Plate 3) consisting mainly of graphite bearing quartz-biotite schist was collected from the newly discovered Amar Zone and submitted to Crystal Graphite Corp. for metallurgical testing.

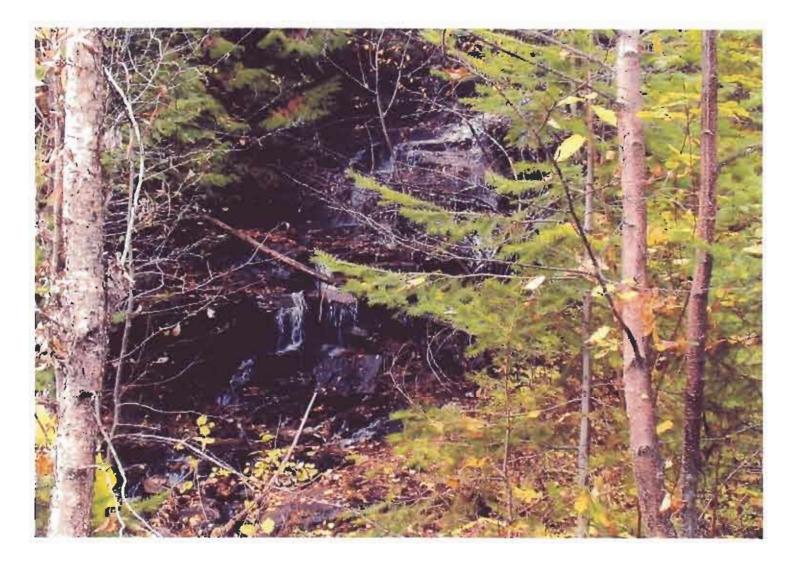
Exploration to date has revealed that graphite is present in most areas of the property in quartz-biotite schists, in marble and calc-silicate rocks in the Main Zone and locally as very coarse flakes in pegmatite. Only the Main Zone and to a lesser extent the Amar Zone have

### PLATE 1: GRAPHITIC MARBLE OUTCROP-MAIN ZONE

1.11



## PLATE 2: AMAR ZONE



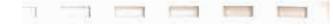


PLATE 3: BULK SAMPLE FROM AMAR ZONE



graphite concentrations high enough to be considered as important targets. There are locations elsewhere on the property where graphite grades are high but where little is known about the areal extent of the graphite and potential as the samples collected were only grab samples.

### DRILLING:

The only drilling done on the property was in 1999 during which time 9 holes totaling 1331.45 metres were drilled. All of the drilling was done on the Main Zone situated on the Superior Claim (Figure 7). Analyses were only completed for 6 of the 9 holes drilled. The drilling was done by Kootenay Exploration Drilling Ltd. under the supervision of SNC-Lavalin Engineers and Constructors (SLE & C, 2000). Pertinent information with respect to the drilling are given in Tables 2 and 3.

This drill program covered approximately 350 metres of strike length on the Main Zone and tested a down dip extension approximately 100 metres below surface exposures. All samples were analyzed by two different laboratories. With a couple of exceptions all analyses were comparable.

### SAMPLE PREPARATION, ANALYSES AND SECURITY:

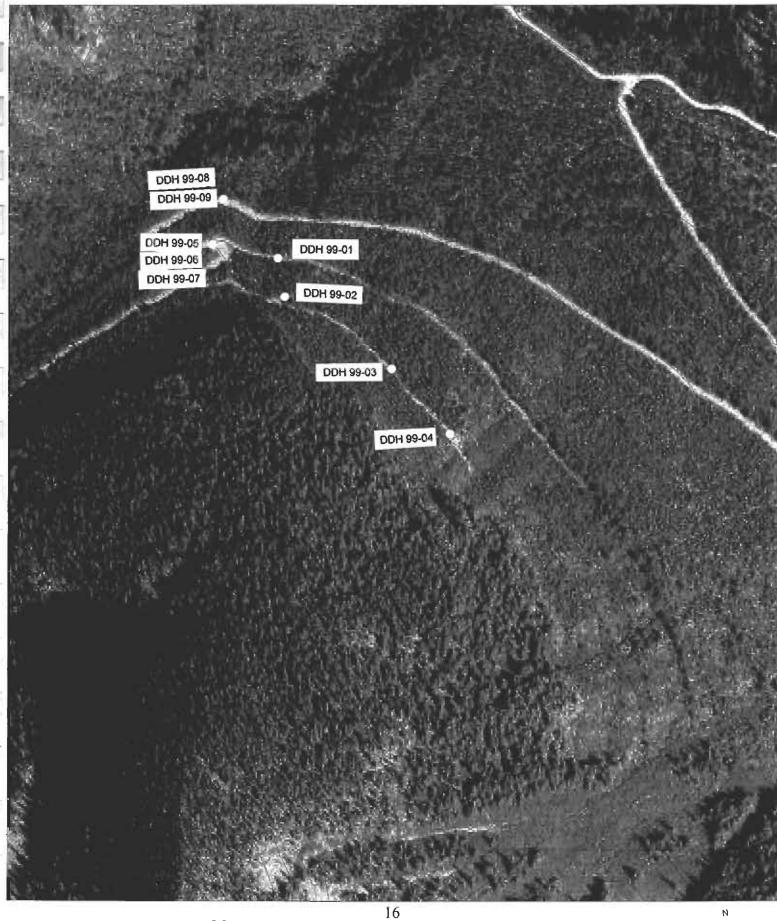
All samples collected during the 2004 exploration work were split in 3 and sent to: Ashbury Carbon, Petro Laboratories in Ontario and Worldwide Graphite's Head Office in Toronto. Graphite (Carbon) was determined by the LECO combustion method. Petro Laboratories, in addition to the LECO method, also did a physical flotation extraction to determine the amount of graphite. Much of Petro's work was supervised by David Amar, President of Worldwide Graphite Producers Ltd. Ashbury Carbon is one of the leading authorities on graphite determination. Results from these two laboratories show a wide discrepancy in graphite content. In addition, in some of the samples there is a wide variation in results obtained from the two methods utilized by Petro Laboratories.

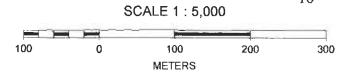
The majority of samples collected on the property have been in the form of grab samples. While indicative of the presence of graphite, this form of sampling does not give an accurate determination of potential grade over any given thickness. All other sampling procedures and quality control are adequate.

### DATA VERIFICATION:

For prospecting work done prior to 2004 the author was unable to completely verify sample locations. Analytical results are assumed to be reliable as these results came from more than one laboratory with little variation in results. Drill core sampled for analyses still retains sample tags in the core boxes. Likewise, sample locations for those samples collected by G. Addie were identified in the field by aluminum tags upon which sample numbers were written. Samples collected in 2004 were verified in the field by the presence

# FIGURE 7: DRILL HOLE LOCATIONS-1999 DRILL PROGRAM





### TABLE 2

### Summary of Significant Analytical Results: 1999 Drilling Program (from SNC Lavelin, et al, 2000)

Hole ID	From m	To m	Width m	Graphite %	nite INCLUDES:			
					From m	To m	Width m	Graphite %
SG99001	48.85	105.00	56.15	0.33	48.85 <b>88.50</b> 102.31	51.95 <b>92.80</b> 105.00	3.10 <b>4.30</b> 2.69	0.93 1.06 1.42
SG99002	87.57	135.90	48.33	1.05	87.57 97.20 <b>108.00</b>	89.77 101.84 <b>135.90</b>	2.20 4.64 <b>27.90</b>	1.24 1.59 <b>1.36</b>
SG99003	8.10	77.10	69.00	0.74	8.10 27.00 35.87 56.90 <b>61.00</b> 95.54	12.33 28.15 48.44 57.72 <b>77.10</b> 97.89	4.23 1.15 12.57 0.82 16.10 2.35	0.98 3.04 0.96 1.13 <b>1.69</b> 1.15
SG99004	13.70	74.65	60.95	0.89	13.70 <b>51.85</b> 65.00 88.77	30.37 <b>74.65</b> 68.25 89.73	16.67 <b>22.80</b> 3.25 0.96	1.43 1.14 0.56 1.24
SG99005	117.10	179.82	62.72	0.31	138.31 <b>163.</b> 7 <b>2</b>	143.51 <b>179.82</b>	5.20 1 <b>6.10</b>	0.80 <b>0.74</b>
SG99006	60.70	120.84	60.14	0.37	60.70 78.76 93.67 <b>101.52</b> 117.74	61.49 82.03 96.19 <b>109.30</b> 120.84	0.79 3.27 2.52 <b>7.78</b> 3.10	1.33 0.72 0.73 <b>1.24</b> 1.09

\*Bold indicates interpreted MZ intersection

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### TABLE 3

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### Specific Gravity Determinations (from SNC Lavelin, et al, 2000)

Hole ID	Sample ID	From m	To m	Rock Type Description	Specific Gravity
SG99001 SG99001 SG99001 SG99001 SG99001 SG99002 SG99002 SG99002 SG99002 SG99004 SG99004 SG99005 SG99005 SG99006	143004 143043 143056 143076 143083 143089 143101 143117 143125 206825 206851 206875 206898 206951	5.80 55.00 71.00 91.50 104.60 136.60 50.00 99.00 111.00 33.82 70.50 57.37 143.87 0.2 67	6.70 56.00 72.00 92.80 105.00 137.60 51.00 100.00 112.00 34.82 71.00 58.61 144.83 94.67	Graphitic Marble Graphitic Marble	2.69 2.78 2.78 2.78 2.86 2.73 2.76 2.79 2.71 2.80 2.76 2.71 2.79 2.75 2.78
SG99006	206975	93.67 131.30	132.30	Graphitic Marble Graphitic Marble	2.70
Average					2.76
SG99002	143106	62.89	63.80	Marble/Biotite Gneiss	2.69
SG99001	143007	8.52	9.50	Pegmatite	2.64
SG99001	143017	15.62	16.10	Biotite Quartz Gneiss	2.65

of flagging and sample numbers.

### ADJACENT PROPERTIES:

The only adjoining property of significance is the Black Crystal property owned by Crystal Graphite Corp. It consists of a large crystalline flake graphite deposit located near the headwaters of Hodder Creek. Both the geological setting and type of deposit is similar to graphite deposits located on Worldwide Graphite's claims.

A resource calculation completed on Crystal Graphite's property indicates the presence of a Measured and Indicated Resource of 848,000 tonnes grading 1.82% F.C. based on a cut-off grade of 0.7% F.C. There is an additional inferred resource of 4.6 million tonnes grading 1.24% F.C. Their present production is coming from the regolith portion of the resource.

Seventy-four percent of Crystal Graphite's production is for use in fuel cells while the remainder is byproducts for other markets. Fuel cell grade graphite presently sells for approximately \$2,500 U.S. per tonne.

### METALLURGICAL WORK:

In 1998 metallurgical testing was done on a 100 kilogram sample collected from well selected samples within the central portion of the graphite bearing calc-silicate rocks and marble. The results of this work showed that 75.2% of the graphite of the original feed was recovered in the +48 and -48 +100 mesh fractions. A concentrate consisting of 95.5% graphite was able to be produced.

In 2004 a 3 ton bulk sample was collected from the Amar Zone. This sample consisted primarily of graphitic quartz-biotite schist. The average fixed carbon content for this sample was 1.25%. A total of 87.0% of the graphite is in excess of 100 mesh size. A concentrate of approximately 90% graphite was able to be produced. Because Crystal Graphite was not set up for small scale bench testing recoveries of graphite were lower than would be expected under proper operating conditions. They however were able to produce a graphite concentrate.

### MINERAL RESOURCE:

To date, the only mineral resource calculation done was by G. Addie (2000, 2001) on the Main Zone located on the Superior Claims. Assuming an open-pit mining operation there is an estimated resource of 3.09 million tonnes at 1.4% F.C.; assuming a mining method of benching and selective mining there is 2.7 million tons with a grade of 2.08% F.C. There is an additional 112,000 tonnes grading 1.42% F.C. in what he terms the footwall zone. A cut-off grade of 1.0% graphite was used.

There has not been a resource calculation done on the Amar Zone primarily because there is insufficient data. No consideration has been given to the regolith that overlies the Main Zone even though it contains visible graphite. Only a very small area of the Main Zone has been tested by diamond drilling. It is reasonable to assume that with additional drilling the resource potential for the Main Zone could be increased substantially.

### OTHER RELEVANT DATA AND INFORMATION:

Natural graphite can be divided into 3 types of material: amorphous, flake and high crystalline. For purposes of this report only the flake graphite will be considered.

Flake graphite occurs in metamorphic rocks in concentrations ranging from 5 to 40%. It occurs as a scaly or lamellar form in limestone (marble), gneisses and schists. Removal of the graphite from the rock is done by froth floatation. The floated product generally contains 80-90% graphite. Further concentration to greater than 98% is accomplished through chemical beneficiation processes.

Graphite has uses as a refractory mineral, in the chemical industry, in electrical appliances and in mechanical applications. Flake graphite is used predominantly in refractory applications and in the production of fuel cells.

Prices for crystalline flake graphite concentrates range from \$230 U.S. to \$750 U.S. per tonne. Prices are affected by ash and carbon content, flake size and flake size distribution. Crystalline flake graphite accounted for approximately 37% of the graphite used in the United States in 2003 (Olson, 2003). Consumption of graphite for use in fuel cells is predicted to increase to 80,000 tons/per year. The price for this material will have to drop approximately \$1,500 per tonne to be competitive with gasoline-powered vehicles. The industry trend is for higher purity and consistency in specifications and applications.

### INTERPRETATIONS AND CONCLUSIONS:

Graphite occurs throughout the Superior-Koch-Amar property in graphitic quartz-biotite schists. It also occurs in significant amounts in marble and calc-silicate rocks in the Main Zone located adjacent to Freida Creek on the Superior claims. Exploration to date has consisted predominantly of reconnaissance mapping, prospecting and sampling. This work has shown that the graphite content can vary considerably from one area to another and within individual stratigraphic units. Better graphite grades are generally associated with marble or calc-silicate rocks. This horizon extends northerly from the Main Zone on the Superior claims to the site of Crystal Graphite's quarrying operations.

In addition there has been some geophysical work and metallurgical testing completed. Drilling has only tested a very small portion of the Main Zone. Based upon the drilling a preliminary graphite resource of 3.09 tonnes grading 1.4% F.C. has been calculated. With additional exploration and drilling, the graphite resource in this area could be substantially increased, especially along strike to the south. Within the Main Zone deposit it may be possible to define zones with better grade mineralization. In addition to the Main Zone, there is the potential for a substantial resource in the quartz-biotite schists as exemplified by the Amar Zone. Graphite grade is lower than those obtained in the marble-calc-silicate unit.

### **RECOMMENDATIONS:**

Additional detailed mapping, sampling and drilling is required on the Main Zone to better define the presence of graphite resource and to test the zone along strike. The objective of this program would be to have sufficient information to substantially increase the size of the graphite bearing zone, to calculate a measured and indicated resource and to develop a preliminary mine plan. Approximately 1,500 meters in 15 drill holes is recommended to test this area in 2005. Detailed mapping, sampling and 500 metres of drilling is recommended for the newly discovered Amar Zone and other areas that are easily accessible in which high graphite content was obtained in samples collected during the 2004 exploration program. Total cost for this program is estimated to be \$250,000.

Report by:

B. Butres

Stephen B. Butrenchuk, P. Geol. January 21, 2005

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# S. B. BUTRENCHUK

CONSULTING GEOLOGIST

### STATEMENT OF QUALIFICATIONS

I, Stephen B. Butrenchuk, of 34 Temple Crescent West, Lethbridge, Alberta, Canada, T1K 4T4, do hereby certify that:

- 1. I am a Professional Geologist, registered in the Province of Alberta and an independent qualified person for purposes of this report.
- I am a graduate of the University of Manitoba with a B.Sc. in Geology 2. (1966) and a M.Sc. in Geology (1970).
- 3. I have been practicing my profession in British Columbia, Quebec, Labrador, Newfoundland, Saskatchewan, United States, Yukon, Northwest Territories and Peru since graduation.
- I am a Fellow of the Geological Association of Canada. 4.
- 5. This report is based upon knowledge of the Property gained from research on previous exploration work done on the property and from personal observations while on the property.
- 6. I have had previous experience supervising exploration programs for Industrial Mineral deposits and have completed a resource calculation for same.
- 7. I have no beneficial interest, either directly or indirectly, in the Superior-Koch-Amar property, nor do I beneficially own, directly or indirectly, any securities of Worldwide Graphite Producers Ltd.

Stephen B. Butrenchuk, P. Geol.

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### STATEMENT OF EXPENDITURES

### SALARIES:

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S. Butrenchuk H. Klassen M. Goldenberg D. Fowler D. Hunt	10.5 days @ \$400/day 156 days @ \$250/day 36 days @ \$166.67/day 6 days @ \$250/day 5 days @ \$150/day	\$ 4,200.00 39,000.00 6,000.00 1,500.00 750.00
REPORT WRITING:		5,500.00
TRUCK (S. Butrenchuk) 2,64	7 km @ \$0.50/km	1,323.50
ACCOMMODATIONS, MEAL	.S	13,125.36
SATELLITE PHONE, EQUIP	MENT	2,120.42
ANALYSES (Petro Laborator	ies, Crystal Graphite)	8,000.00

TOTAL: \$ 81,519.28

**APPENDICES** 

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### APPENDIX 1 SAMPLE LOCATION FOR 2004 EXPLORATION PROGRAM

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Sample No.	Easting	Northing
080401	0446538	5496102
080402	0446538	5496102
804030	0446497	5496081
080404	0446497	5496081
080405	0446497	5496081
080406	0446670	5496294
080407	0446719	5496391
080408	0446714	5496596
080409	0446714	5496596
080410	0446714	5496596
080411	0448714	5496596
080412	0447017	5496900
080413	0447017	5496900
080414	0447111	5497014
Q80415	0446703	5496625
080416	0446676	5496635
080417	0446680	5496615
080418	0446683	5512135
080419	0446683	5512135
080420	0446708	5511964
080421	0446940	5511328
080422	0446953	5511211
080423	0452951	5504108
080424	0452944	5504120
080425	0452425	5503803
080426	0452176	5503585
080427	0452170	5503515
080428	0451893	5503102
080429	0451893	5503102
080430	0444918	5507322
080431	0444884	5507400
080432	0458495	5503774
080433	0460338	5505741

080434	0460207	5505894
080435	0460395	5505959
080436	0454259	5503445
080437	0449979	5511775
090438	0452100	5504000
090439	0450959	5501435
090440	0451070	5501410
090441	0451070	5501410
090442	0450652	5500733
090443	0450839	5501766
090444	0446444	5510575
090445	0448757	5511324
090446	0451197	5498075
090447	0451197	5498075
090448	0453750	5504000
090449	0453750	5504000
090450	0453750	5504000
090451	0453750	5504000
090452	0453750	5504000
090453	0453750	5504000
090454	0453750	5504000
090455	0453750	5504000
090456	0453750	5504000
090457	0453750	5504000
090458	0453750	5504000
090459	0453750	5504000
090460	0453750	5504000
090461	0453750	5504000
090462	0453750	5504000
090463	0453750	5504000
090464	0453750	5504000
090465	0453750	5504000
090466	0453750	5504000
090467	0453750	5504000
090468	0453750	5504000
090469	0453750	5504000

		••••••••••••••••••••••••••••••••••••••
090470	0453750	5504000
090471	0453750	5504000
090472	0453750	5504000
090473	0453750	5504000
090474	0453750	5504000
090475	0453750	5504000
090476	0453750	5504000
090477	0453750	5504000
090478	0453750	5504000
090479	0453750	5504000
090480	0453750	5504000
Q90481	0453750	5504000
090482	0453750	5504000
090483	0453750	5504000
090484	0453750	5504000
090485	0453071	5502141
100486	0452400	5502840
100487	0452400	5503840
100488	0452400	5503840
100489	0452400	5503840
100490	0452400	5503840
100491	0452400	5503840
100492	0452400	5503840
100493	0452400	5503840
100494	0452400	5503840
100495	0452400	5503840
100496	0452400	5503840
100497	0452400	5503840
100498	0452400	5503840
100499	0452400	5503840
1004100	0452400	5503840
1004101	0452400	5503840
1004102	0452400	5503840
100401A	0444188	5499961
100402A	0443720	5499442
100403A	0443720	5499442

### **APPENDIX 2**

### ANALYTICAL RESULTS - 2004 SAMPLES FROM ASHBURY CARBON

### RD#13877 A THRU CCCC

### WORLD WIDE GRAPHITE PRODUCERS LTD

### GRAPHITE CORE SAMPLES

10/29/04

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### CC\ Stephen Riddle, AVT

#### Samples crushed in Jaw

Samples dried at 105 c

#### Carbon based on a calci

ASBURY ID	ORE SAMPLE #	CARBON	ASH	VOLATILE	SULFUR	Moisture
13877A	090451B	0.281	99.719	1.232	0.217	0.952
13877AA	GS060428	0.508	99.492	1.456	0.165	
13877AAA	0904498	0.453	99.547	1.077	0.057	0.553
13877AAAA	0904828	0.230	99.770	1,441	0.134	1.150
13877B	0904538	0.389	99.611	1.562	0.168	0.529
1387788	G808043B	2.041	97.959	2.028	0.62254	0.444
13877888	G\$080424B	0.789	99.211	1.117	0.623	0.270
13877BBBB	090484B	0.129	99.871	1.338	0.222	1,135
13877C	090454B	0.353	99.647	2,170	0.616	0.871
13877CC	G\$08044B	2.399	97.601	2.264	0.313	1.031
13877CCC	G\$080425B	0.484	99.516	1.644	0.236	0.317
13877CCCC	090485B	0.848	99.152	1.266	0.0283	0.543
13877D	090455B	1.220	98.780	1.769	0.307	0.469
13877DD	G\$08045B	1.963	98.037	1.910	0.297	0.538
13877DDD	GS080426B	1.222	96.778	1.020	0.276	0.471
13877E	904568	0.463	99.537	2.037	0.22	0.608
13877EE	GS08046B	13.287	86.713	3.259	0.0166	0.427
13877EEE	G\$080427B	0.468	99.532	2.056	0.321	0.505
13877F	090457B	0.686	99.415	1,455	0.056	1.740
13877FF	G\$08047B	13.297	86.703	2.964	0.0419	0.122
13877FFF	GS080428B	0.909	99.091	2.179	0.215	0.303
13877G	904588	0.668	99.347	2.806	0.236	1.661
13877GG	GS08048B	6.026	93.974	3.933	0.0187	0.117
13877GGG	090463B	0.308	99.692	1.322	0.275	0.825
13877H	090459B	0.649	99.451	18.085	0.699	0.320
13877HH	GS08049B	1.160	98.840	1.459	0.72335	0.213
13877HHH	090464B	0.368	99.632	1.497	0.983	0.822
13877	090460B	0.502	99.498	1.906	0.351	0.317
1387711	GS080410B	7.228	92.772	1.959	0.019311	0.056
13877111	0904658	0.403	99.597	1.335	0.51	0.403
13877J	090461B	0.172	99.828	0.971	0.568	0.143
13877JJ	GS080413B	3.578	96.422	1.898	0.000856	0.097
13877JJJ	090466B	0.352	99.648	0.975	0.233	0.715
13877K	0904628	0.504	99.496	0.842	0.072	0.138

13877KK	GS080429B	1.634	98.366	1.237	0.3729	0.812
13877KKK	0904678	0.348	99.652	0.720	0.433	0.434
13877L	090450B	0.385	99.615	1.572	0.155	0.779
13877LL	080430B	5.005	94.995	1.333	0.104	1.10
13877LLL	090468B	0.570	99.430	1.995	0.605	0.90
13877M	090452B	0.648	99.352	0.953	0.144	0.400
13877MM	080431B	1.117	98.883	1.263	0.74	0.712
13877MMM	090469B	0.596	99.404	1.933	0.74	1.047
13877N	G\$080411B	0.369	99.641	1.242	0.141	0.331
13877NN	080432B	2.547	97.453	0.583	0.122	0.497
13877NNN	090470B	0.495	99.505	1.406	0.122	1.326
138770	GS080412B	0.850	99.150	0.763	0.021	0.241
1387700	0804338	0.546	99.454	1.128	0.03	0.681
13877000	090471B	1.601	98.399	2.174	0.03	0.386
13877P	GS080414B	1.826	98.174	2.280	0.982	1.062
13877PP	80434	0.375	99.625	1.154	0.037	2.700
13877PPP	090472B	0.938	99.062	1.426	0.154	0.706
13877Q	G\$080415B	0.006	99.994	0.422	1.22	0.072
13877QQ	090436B	1.295	98.705	1.860	1.25	0.656
13877QQQ	0904738	0.393	99.607	1.353	0.473	0.719
13877R	GS080416B	8.376	91.624	0.856	0.019	0.058
13877RR	080436B	0.800	99.200	0.948	0.27	0.363
13877RRR	090478	0.642	99.358	0.728	0.57	0.267
138779	GS080417B	0.286	99.714	0.625	0.014	0.119
1387755	0904388	0.044	99.956	1.725	0.611	0.714
13877\$\$\$	090475B	1.397	98.603	0.936	0.579	0.183
138771	GS080418B	0.402	99.598	0.637	0.052	0.140
13877TT	080437B	36.251	63.749	3.299	0.0002	0.026
13877TTT	090476B	0.356	99.644	1.663	0.323	1.249
138770	GS080419B	0.309	99.691	1.281	0.077	0.365
13877UU	090439B	0.204	99.796	0.701	0.148	0.312
13877000	090477B	0.341	99.659	1.415	0.44	0.794
13877V	GS0804208	0.622	99.378	1.453	0.407	0.381
13877///	090440B	1.084	98.916	0.793	0.082	0.304
13877////	090478B	0.254	99.746	0.671	0.795	0.454
13877W	GS080421B	1.624	98.376	0.598	0.0236	0.113
13877WW	090441B	0.321	99.679	0.664	0.03	0.165
13877WWW	090483B	0.346	99.654	1.327	0.156	1.471
13877X	GS080422B	1.829	98.171	2.105	1.0237	0.568
13877XX	090442B	3.663	96.337	0.431	0.031	0.40
13877XXX	090480B	0.289	99.711	0.835	0.737	0.457
13877Y	G\$080423B	1.801	98.199	3.219	0.64	0.725
13877YY	0904438	0.515	99.465	0.432	0.65	0.10
13877YYY	090480B	0.514	99.486	1.159	0.407	0.894
13877Z	G508041B	0.099	99.901	0.762	0.013	0.243
13877ZZ	090448B	0.258	99.742	0.834	0.1188	0.202
3877ZZZ	090461B	0.533	99.467	1.062	0.157	1.517

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CARBON

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VOLATILE SULFUR

ULFUR Moisture

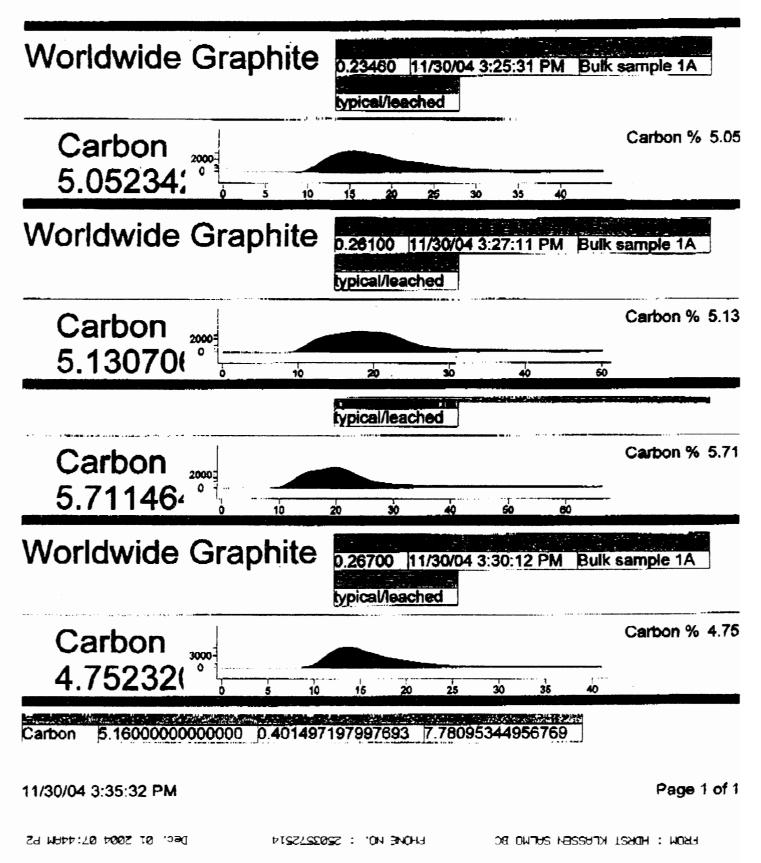
13918\_Wolrdwide\_Graphite\_Produc

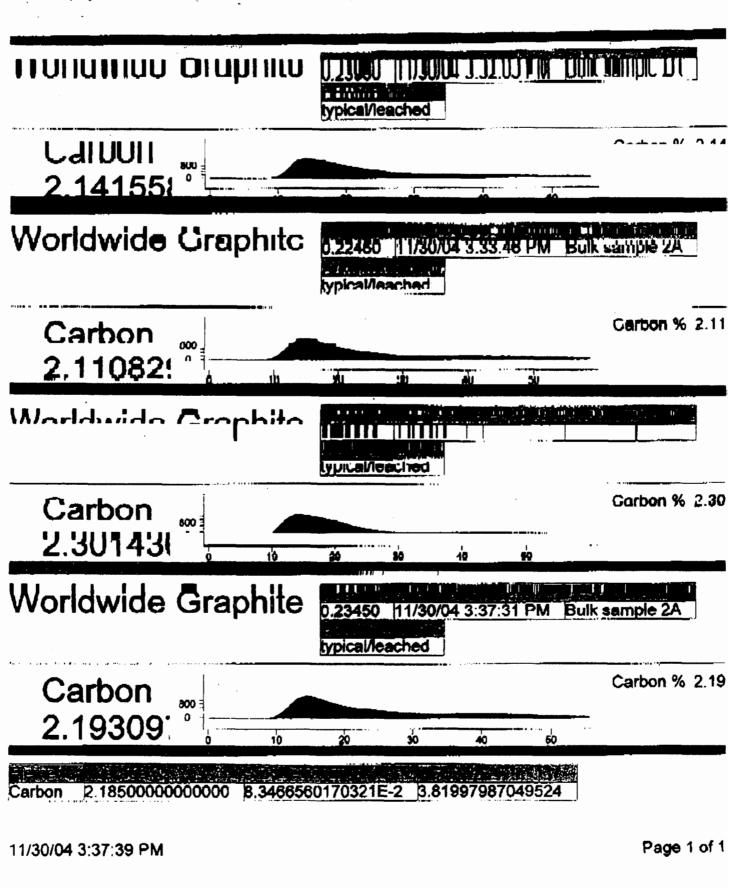
#### RD13918A-Q

11/12/04

		Carbon	Volatile	Moisture	Sulfur	
RD.	Lot	%	%	%	%	Notes:
13918a	10-04-878	0.72	1.95	0.74	.378	
1 <b>3918</b> b	10-04-88B	0.92	0.72	0.25	.991	
13918c	10-04-89B	0.90	1.39	0.84	.609	
13918d	10-04-90B	0.52	0.46	0.23	.504	
139 <b>18</b> e	10-04-91B	1.14	1.34	1.25	.567	
13918f	10 <b>-04-92</b> B	0.69	1.19	0.63	.277	
13918g	10-04-93B	0.49	1.10	0.50	.315	
13918h	10-04-94B	(1.57)	0.61	0.24	.937	
13918i	10-04-958	-71.03	0.39	0.19	1.052	
13918k	10-04-97B	0.40	1.46	0.33	.513	
13918	10-0 <b>4-98B</b>		1.48	0.51	.434	
139 <b>18</b> m	10-04-99B	(1.30)	0.98	0.33	.861	
13918n	10-04-100B	(1.03>	0.42	0.10	.815	
139180	10-04-101B	0.49	1.14	0.29	1.34	
13918p	10-04-102B	0.67	1.90	0.43	.141	
13918q	10-04-103B	$\overline{(1,1)}$	0.74	0.24	.733	

# Worldwide Graphite Producers Ltd.





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#### INTERNATIONAL METALLURGICAL AND ENVIRONMENTAL INC.

#### **Graphite Analysis**

#### Introduction:

This procedure is used to determine the graphite content of a sample. The procedure is a two stage process based on total carbon analysis. An assumption is made regarding the occurrence of carbon bearing minerals in this procedure, in that they are either acid soluble carbonates or graphite. The presence organic carbon in the form of plant matter or soil can render this procedure inaccurate.

It is necessary to wash samples in diluce acid in order to eliminate any carbonates from samples prior to total carbon analysis. A Leco carbon analyzer is used for total carbon analysis.

#### Reagents:

Dilute HCl - about 8-10 ml of HCl to 500 ml of boiling DI water. Reagent grade acetone

#### Procedure:

- Weigh accurately 0.010 g = 0.250 g sample into a loco crucible. (Sample weight may be altered depending on expected graphite content.)
- 2) Connect crucibles to filtering apparatus.
- Rinse with acctone then rinse with small amounts of dilute acid. (small amount of liquid is used to ensure the graphite does not climb up and over top of crucible)
- 4) Repeat step 3 until fizzing stops completely.
- 5) Final rinse is with accione to push the graphite down into the bottom of crucible.
- 6) Dry in oven at 100 degrees for 20-25 minutes.

Now the samples are ready for carbon analysis using the LECO analyzer. The total carbon value obtained from the LECO analysis is reported as the graphic content

Include suitable standards and quality control samples.

#### **APPENDIX 3**

\*

#### ANALYTICAL RESULTS FROM BULK SAMPLE ON AMAR ZONE CRYSTAL GRAPHITE CORP.

CRYSTAL GRAPHITE CORPORATION P.O. Box 119, Slocan Park, BC, Canada V0G 2E0 Tet: 250-226-7819 Fax: 250-226-6784 email:cgcope@crystalgraphite.com. **ANALYSIS REPORT** DATE 30/11/2004 TIME 11:40 AM LOT # 2004 BULK SAMPLE PROPERTY Crystal Graphile Corporation **REQUESTED BY** Worldwice Grephite SAMPLE Sample #1 Fixed cerbosc 1.25% INITIAL WEIGHT 1629.30 grams SIZING METHOD Rotap 10 minutes SCREEN APERTURE WEIGHT ON PERCENT ON CUILS CUNK % FIXED SCREEN SCREEN RETAINED FINER CARBON mech microns 3/4" 0.00 0.0 0.0 100.0 19.0mm 3/8" 9.5mm 99.42 6.1 6.1 100.0 1.31% 3 mesh 166.59 10.2 93.9 16.3 1.57% 6.73mm 230.56 83.7 4 mesh 4.75mm 14.2 30.5 1.34% 6 mesh 3,36mm 193.44 11.9 42.4 69.5 1.66% 8 mesh 2.36mm 146.37 9.0 57.6 0.98% 51,3 10 mesh 97.14 6.0 48.7 1.68mm 67.3 0.89% 12 mesh 1.40mm 37.79 2.3 42.7 59.6 1.07% 20 mesh 850um 63.57 5.1 64.7 40,4 1.30%E 131.36 72.8 45 mech 35.3 1.39%E 36**5 um** 8.1 300um 33.29 27.2 50 mesh 2.0 74.8 1.879 78,45 4.8 79.7 25.1 65 mesh 212um 2.18% 80 mesh 27.93 1.7 81.4 20.3 1.97% 180um 100 mesh 149um 88.91 5.6 86.8 18.6 1.42% 214.44 13.2 Pan 13.2 100.0 1.46%

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FROM : HDRST KLASSEN SALMD BC

FROM 416-367-8334

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#### **APPENDIX 4**

#### ANALYTICAL RESULTS - 2004 SAMPLING PETRO LABORATORIES

PAGE 04



### Petro Laboratories Inc.

1295 Matheson Blvd. E., Mississauga, Ontario L4W 1R1 Canada Tel: (905)361-2388 Fax: (905)361-2411

#### Laboratory Report

Worldwide Graphite Products Ltd.

335 Bay Street, Suite 1102 Toronto, Ontario M5H 277

Lab no.: 8650-1 to 24 Date reported: Dec 3,2004 Sample in: Oct 26,2004

#### Attention: Mr. David Amar

Lab no. Sample ID.		Graphite content, % weight ( by LECO method)	Graphite content, % weight (by Floatation method)
8650-	0804-		
1	1C	0.00	0.00
2	2Ç	0.43	0.05
3	3C	1.44	0.12
4	4C	1.18	2,38
5	5C	2.05	0.92
6	6C	1.37	0.11
7	7C	1.35	0.11
8	8C	0.11	0.15
9	90	0.78	0.20
10	10C	0.10	0.04
11	11C	0.11	0.08
12	12C	0.50	0,13
13	13C	0.31	0.49
14	14C	1.17	0.23
15	15C	0.07	0.01
16	16C	0.21	0.00
17	17C	0.33	0.07
18	18C	0.25	0.03
19	19C	0.13	0.04
20	20C	0.18	0.11
21	21C	0.79	0.28
22	22C	0.35	0.68
23	23C	1.55	0.04
24	24C	0.29	0.08

Al tests performed by Netro Laboratories will be conducted in neurodame with the ASTM manderia and sized Finland Government pelmocal standards. But neither if air its employees that be responsible for any loss or demogn resolved directly or indirectly from any default, envir or ombalon.



### Petro Laboratories Inc.

1295 Matheson Blvd. E., Mississauge, Onterio L4W 1R1 Cenada Tel: (905)361-2388 Fax: (905)361-2411

#### Laboratory Report

Worldwide Graphite Products Ltd.

335 Bay Street, Suite 1102 Toronto, Ontario MSH 2T7 Lab no.: 8650-25 to 48 Date reported: Dec 3,2004 Sample In: Oct 26,2004

#### Attention: Mr. David Amar

Lab no. 8650-	Sample ID.	Graphite content, % weight ( by LECO method)	Graphite content, % weight (by Fleatation method)
25	0804-25C	0.28	0.13
26	0804-26C	0.19	0.06
27	0804-27C	0.47	0.21
28	0804-28C	0.14	0.04
29	0804-290	1.33	0.20
30	0804-3C	0.48	0.11
31	0804-31C	2.04	0.03
32	0804-32C	0.12	0.09
33	0804-33C	0.48	0.06
34	0804-340	0.18	0.19
35	0804-35C	0.96	0.18
36	0804-36C	0.75	0.08
37	0804-37C	0.02	0.01
38	0904-38C	0.24	0.10
39	0904-39C	0.04	0.16
40	0904-40C	0.07	0.09
41	0904-41C	0.13	0.03
42	0904-42C	0.73	0.47
43	0904-43C	0.27	0.05
44	0 <b>904-44</b> C	2.39	0.02
45	0904-45C	0.21	0.23
46	0904-46C	0.49	0.47
47	0904-47C	0.19	0.05
48	0904-48C	0.22	0.01

All torts performed by Peter Laboratorius will be conducted in accordance with the ASTA standards and strict Padenti Government setuncel standards, but noishes it not its employees shall be esponsible for any less or durings resulted directly or indexed y from any default, area or omistion.



### Petro Laboratories Inc.

1295 Matheson Blvd. E., Mississauga, Ontario L4W 1R1 Canada Tel: (905)381-2388 Fax: (905)361-2411

#### Laboratory Report

Worldwide Graphite Products Ltd. 335 Bay Street, Suite 1102 Toronto, Ontario M5H 2T7 Lab no.: 8650-49 to 72 Date reported: Dec 3,2004 Sample In: Oct 26,2004

#### Attention: Mr. David Amar

Lab no. Sample ID.		Graphite content, % weight ( by LECO method)	Graphite content, % weight (by Floatation method)
8650-	0904-		
49	49C	0.14	0.01
50	50C	0.45	0.08
51	51C	0.42	0.07
52	52C	0.06	0.11
53	53C	0.37	0.16
54	54C	0.33	0.07
55	55C	0.47	0.25
56	56C	0.50	0.14
57	57C	0.38	0.03
58	58C	0.43	0.01
5 <b>9</b>	59C	0.28	0.02
60	60C	0.21	0.10
61	61C	0.44	0.13
62	62C	0.74	0.15
63	63C	0.23	0.11
64	<del>64</del> C	0.10	0.08
65	65C	0.18	0.19
66	66C	0.17	0.13
67	67C	0.38	0.20
68	68C	0.34	0.14
69	69C	0.36	0.15
	70C	0.27	0.06
	71C	0.47	0.12
	72C	0.12	0.27

All tests performed by Petro Laborstories will be conducted in accordance with the ASTM standards and strict Federal Government technical standards but neither it nor its employees shall be conjustable for any loss or dumage resulted cirectly or indirectly from any default, error or objession



### Petro Laboratories Inc.

1295 Matheson Blvd. E., Mississauga, Ontario L4W 1R1 Canada Tel: (905)361-2388 Fax: (905)361-2411

#### Laboratory Report

Worldwide Graphite Products Ltd.

335 Bay Street, Sulte 1102 Toronto, Ontario M5H 2T7 Attention: Mr. David Amar Lab no.: 8650-73 to 85 Date reported: Dec 3,2004 Sample in: Oct 26,2004

Lab no, Sample ID.		Graphite content, % weight ( by LECO method)	Graphice content, % weight (by Floatation method)
8650-	0904-		
73	73C	0.24	0.11
74	74C	0.29	0.12
75	75C	0.69	0.21
76	76C	0.48	0.05
77	77C	0.18	0.06
78	78C	0.18	0.06
79	79C	0.15	0.13
80	80C	0.26	0.07
81	81 <u>C</u>	0.69	0.05
82	82C	0.14	0.14
83	83C	0.27	0.12
84	84C	0.24	0.07
85	85C	0.32	0.13

Tested by: A.C. (chemist) Member of ASTM JS:A.S.

Approved By : Clark James Szeto, B.Sc. Chief Chemist

All tests performed by Petro Laboratories with be conducted in accordance with the ASTM some and sories Poderal Oncomment restables and reader to a some any local standards but acides a tandards for a provided directly or indirectly from any default, error or omission.

PAGE 08



### Petro Laboratories Inc.

1295 Matheson Blvd. E., Mississauga, Ontario L4W 1R1 Canada Tel: (905)361-2388 Fax: (905)361-2411

#### Laboratory Report

#### Worldwide Graphite Products Ltd.

335 Bay Street, Suite 1102 Toronto, Ontario MSH 2T7 Lab no.: 8650-86 to 105 Date reported: Dec 3,2004 Sample In: Oct 26,2004

#### Attention: Mr. David Amar

Labino.	Sample ID.	Graphits content, % weight ( by LECO method)	Graphite content, % weight (by Floatation method)
8650-			
86	10/04/87A	0.22	0.20
87	10/04/68A	0.09	0.08
88	10/04/89A	0.19	0.10
89	10/04/90A	0.39	0.17
90	10/04/91A	0.53	0.19
91	10/04/92A	0.11	0.10
92	10/04/93A	0.10	0.10
93	10/04/94A	0.62	0.22
94	10/04/95A	0.08	0.08
95	10/04/96A	1.64	0.33
96	10/04/97A	0.22	0.22
97	10/04/98A	0.65	0.21
98	10/04/99A	0.14	0.12
<b>9</b> 9	10/04/100A	0.10	0.10
100	10/04/101A	0.09	0.09
101	10/04/102A	0.12	0.12
	10/04/103A	0.37	0.11
	HS-0408-01A	0.20	0,01
104	HS-0408-01B	0.01	0.00
· · · · · · · · · · · · · · · · · · ·	HS-0408-01C	0.00	0.00

Tested by: A.C. (chemist) Member of ASTM JS:A.S.

Approved By : James Szeto, B.Sc Chief Chemist

All trate performent by Pates Laboratories with a sendenced in accordance with the ASTM standards and varies Folical Coversment (scienced randourds, burneither is consist employees shall be responsible for any lass or demain conduct directly or indirectly from any default, error or unimism



### Petro Laboratories Inc.

1295 Matheson Bivd. E., Mississauga, Ontario L4W 1R1 Canada Tel: (905)361-2366 Fax: (905)361-2411

#### Laboratory Report

Worldwide Graphite Products Ltd, 335 Bay Street, Suite 1102 Toronto, Ontario M5H 217 Attention: Mr. David Amar

Lab no.: 8650 Date reported: Dec 3,2004 Sample in: Oct 26,2004

Re: Rock samples from Vancouver for graphite content determination.

Sample Preparation - The rock samples from 50 cm to 300 cm are crushed and grinded to fine powder.

They were treated with sulphuric add to removed all the inorganic carbonate. After drying, the graphite content is determined by using the LECO carbon analyzer. The percentage of graphite also reported by the use of Floatation method. In the Floatation method, a 500 gram size sample was placed in a 1 litre breaker of water, stirred and mixed. The sample was left settled for the graphite to float on the surface of the water. The graphite content was reported after filtering through the filter paper.

Tested by: A.C. (chemist) Member of ASTM JS:A.S.

pproved Bv armes Szeto, B.Sc. Chief Chemist

### Metallurgical Testing of World Wide Graphite ProducersValhalla Graphitic Material Deposits

by

Crystal Graphite Corporation Staff



15 January 2005

Edward J. Nunn, P. Eng. Vice President - Operations

Suite 1750-999 West Hastings St., Vancouver, BC Canada V6C 2W2 T: 604 681 3060 F: 604 682 4886 www.crystalgraphite.com

#### Metallurgical Testing of World Wide Graphite's Valhalla Graphitic Material Deposits

#### Introduction:

Mr. David Amar, President, of World Wide Graphite Producers, through their contractor/consultant Mr. Horst Klassen approached Crystal Graphite Corporation (CGC), if they would process a three tonne bulk sample to produce a flake graphite concentrate. Edward J. Nunn, P. Eng., V.P. Operations of CGC agreed to process the sample if paid at cost +15%.

This sample consisted of three tonnes of graphitic material brought to the CGC plant site by Horst Klassen in super-sacs.

CGC personnel involved in processing this sample were:

Victor Learmonth	- Operations superintendent
Victor Jones	- Flotation operator
Ron Hamling	- Plant equipment operator
Tracy Anderson	- Lab technician

**Crystal Graphite Corporation:** CGC is a public company listed on the NASD Bulletin Board, symbol CYTGF, and the CNQ, symbol CYTG. CGC produces flake graphite from its deposit in the West Kootenay, near Nelson, British Columbia, Canada approximately 95 kilometers north of the USA/Canada border. The Company's processing plant produces high purity graphite primarily for the fuel cell bi-polar plate market.

#### **Processing:**

<u>Crushing equipment</u>: Pacific Crusher 6 X12 (modified to crush material down to one centimeter).

Crushing was performed by Horst on the days of Nov. 23, 24, 25 and 29. This process was somewhat hindered due to the moisture content and fines in the material.

<u>Milling equipment</u>: Denver 4' X 18" rod mill (a temporary feed system was constructed and a launder and pump from the concentrating table to handle the discharge.)

<u>Rougher flotation equipment</u>: Denver #8 sub "A" flotation cells (bank of four). The tailings discharge line was changed in order to capture the tailings so that they could be stored separately for evaluation of recovery. The graphite concentrate was collected in plastic pails.

The milling and rougher flotation were carried out in one step Nov 30 /04 and took from 8:00 AM to 6:00 PM. Reagents were added with the mill feed and consisted of 0.5 liter Pine oil total and 25 ml. of MIBC total. Personnel dedicated to this process were Horst and Ron feeding material into mill, Vic L operating flotation cells. Vic J kept feed material available, checked reagent feed, and watched other areas such as mill discharge, pump performance and tails collection but was not totally dedicated to this process. The rod mill performed extremely well and had no trouble breaking down all of the crushed material to the correct size for the flotation process. The graphite concentrate collected was approximately 67% with a recovery of approximately 80%. This is inline with previous tests carried out with CGC graphitic material using this equipment and also very close to results from the IME lab that tested CGC material. Due to the low grade of the graphitic material only about 30 liters of concentrate was produced.

<u>Column flotation</u>: A two inch column made on site for testing small sample amounts was used.

The column was tested using CGC graphite concentrate with a similar purity ratio in order to tune it properly. Sodium silicate was added (25 ml) to the mixing tank at this point to suppress non graphitic particles. The test column performed better than expected with an initial upgrade from 67% to 85.5% and further upgrades achieving 87% and finally 90%. This process was carried out Dec 7, 8 and 9 /04 with Vic L operating and Horst assisting. Vic J was available on an as needed basis and assisted for about 2 hours total. Horst supplied a small pump more suited to handle a small sample. The concentrate was recirculated and a tailings collection system modified with good results. Tailings were collected and saved for further upgrading. Tailings test showed they were 45% carbon

Laboratory: Carried out drying and testing

Graphite concentrate was tested at all stages of processing. The "wave table" was unavailable at this time for further upgrading. The graphite concentrate of 90% unleached produced up to this point was requested to be shipped out as is. HCl leech tests showed that this graphite sample would have increased in purity by about 1.9%. The sample shipped out was not leached. The sample was dried, bagged and left the CGC site Dec 13/04. Lab work was done by Tracy Anderson taking 3 days total.

NOTE: There was a very strong odor produced during leaching and drying.

Refer to the Appendix for detailed quality results.

#### **Processing of Concentrate Tailings**

The concentrate tailings remaining from the column work were milled using the 10"X 14" lab rod mill on Dec. 15/04. A small amount of pine oil (5 ml) as well as sodium silicate (10 ml) was added to the mixing tank at this point. These tailings were then processed Dec 15, 16 and 21/04 using the Denver #7 sub "A" flotation cells (bank of four) that increased the grade from 45% to 67% the first pass and 71% to 87% in following passes. Some further attempts were made to extract more graphite from the "new" tailings using the lab rod mill and Denver #7 flotation cells during these processes. The concentrate of 87% was then leached in a 10% HCl solution. This work was done by Vic L. and Vic J. with a total of 8 hours each total.

A 2'X 4' Wave table was acquired Dec. 28/04 and after testing with some CGC material the World Wide sample was processed Dec. 29/04. This took 3 passes to achieve satisfactory results and the tailings produced were considered no longer workable in order to reach a goal of 95% purity in the final product. These decisions were based on microscope work in an order to keep lab costs down and save plant time. Vic Learmonth has had previous experience using this wave table, is trained in use of the lab equipment and has a great deal of experience on the microscope involving graphite analysis. A final grade of 95.5% fixed carbon was achieved with the only noticeable contaminants being biotite. This sample was dried, bagged and left the CGC plant site Jan 11/04. This work was done by Vic L. and Horst taking 8 hours total.

Photographs: Refer to the Appendix

- 1. Pacific crusher
- 2. Denver 4'X 18" rod mill
- 3. Test column tails discharge
- 4. Test column concentrate recovery
- 5. Horst and Ted observing test column
- 6. graphite flotation from test column
- 7. Denver #7 flotation cell system
- 8. Denver #8 flotation cell system

9. Close up of #7 cells recovering graphite

10. Rod mill

11. Crushed material

12. Tailings sample

13. Wave table operating

14. Wave table separation of "sand"

15. Laboratory Leco test system

16. Laboratory dryer and HCl leach station

17. CGC production plant

18. Interior of plant

19. Typical graphite flakes (300X microscope) Note - from CGC file

20,21,22,23. Example of petrographic work (from CGC file)

#### Conclusions:

- 1. The crushing and grinding of the bulk sample material was similar to results experienced by Crystal Graphite Corporation's (CGC) Black Crystal flake graphite deposit material which is classed as good to excellent.
- 2. The bulk sample material had excellent flotation characteristics especially with use of flotation columns.
- 3. Graphite flake size varied between 45 mesh to 200 mesh with 3.2% of the flakes finer than 200 mesh.
- 4. CGC's laboratory was able to upgrade the bulk sample concentrate grade by 1.93% with the use of dilute hydrochloric acid (HCl).
- 5. Graphite recovery using the CGC plant was 80%.
- 6. The final bulk sample fixed carbon grade was 90%. With use of HCl this grade would be increased to 92%.
- 7. The concentrate contained approximately 5% biotite mica which can not be removed with the CGC processing system. The Black Crystal deposit does not contain mica.
- 8. The Main Zone grab sample had excellent fixed carbon grade averaging 5.16%. This material is very similar to the Black Crystal deposit CS2 zone grade and characteristics.
- 9. A second grab sample from Koch Face had a fixed carbon grade of 2.25%.
- 10. Combining the concentrate tailings upgrade sample and the initial sample (Dec 13/04) together and leaching and tabling both should have produced a 96-97% sample.

**Recommendations:** 

- 1. A bulk sample of the Main Zone should be excavated and processed in the CGC processing plant.
- 2. Petrographic work should be done on samples to determine the mineralogy so that optimal processing, recovery and grade can be developed.
- 3. Use and independent laboratory (CGC uses SGS in Vancouver) to determine Mineral Analysis of Ash.

Appendix

P.O. Box 119, Slocan	Park, BC, Canad	a V0G 2E0			
Tel: 250-226-7819	Fax: 250-226-67	04 email:cgcop	s@crystalgraphite	e.com.	
	ANALY	SIS REPOI	<b>~T</b>		
DATE	29/11/2004	·			
TIME	11:40 AM			-	
LOT #	2004 BULK SAM			-	
PROPERTY	Crystal Graphite				
REQUESTED BY	Worldwide Grap		1	-	
SAMPLE	Sample #1	1		Fixed carbon:	
INITIAL WEIGHT	546.00	grams		TAGE CELDUIT.	
SIZING METHOD	Rotap		minutes		
	Totap	10			
SCREEN	APERTURE	WEIGHT ON	PERCENT ON	CUM.%	CUM.%
mesh	microns	SCREEN	SCREEN	RETAINED	FINER
3/4"	19.0mm	35.52	6.5	6.5	100.1
3/8"	9.5mm	21.62	4.0	10.5	93.6
3 mesh	6.73mm	23.93	4.4	14.8	89.6
4 mesh	4.75mm	23.69	4.3	19.2	85.3
6 mesh	3.36mm	14.61	2.7	21.9	80.9
8 mesh	2.36mm	44.57	8.2	30.0	78.2
10 mesh	1.68mm	123.45	22.6	52.6	70.1
12 mesh	1.40mm	37.64	6.9	59.5	47.5
20 mesh	850um	103.92	19.0	78.6	40.6
45 mesh	355um	41.18	7.5	86.1	21.5
50 mesh	300um	45.09	8.3	94.4	14.0
65 mesh	212um	17.72	3.2	97.6	5.7
80 mesh	180um	8.18	1.5	99.1	2.5
100 mesh	149um	2.91	0.5	99.6	1.0
Pan		2.55	0.5	100.1	0.5
Total		546.58	100.1		
ested by:			Approved by:		

Size fractions and grades of 2004 bulk sample #1 graphitic material (5pages)

• .

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.27350	Worldwide Graphite	1.19	11/30/04	2004 Bulk sample	typical/leached
			10:01:59 AM		
0.26660	Worldwide Graphite	0.937	11/30/04	2004 Bulk sample	typical/leached
	•		10:05:49 AM	•	
0.26160	Worldwide Graphite	1.47	11/30/04	2004 Bulk sample	typical/leached
			10:08:08 AM	-	
0.26320	Worldwide Graphite	1.04	11/30/04	2004 Bulk sample	typical/leached
			10:10:58 AM		
0.27350	Worldwide Graphite	1.09	11/30/04	2004 Bulk sample	typical/leached
			10:12:52 AM		
0.26210	Worldwide Graphite	1.09	11/30/04	2004 Bulk sample	typical/leached
			10:14:47 AM		
0.26430	Worldwide Graphite	1.22	11/30/04	2004 Bulk sample	typical/leached
			10:16:44 AM		
0.25440	Worldwide Graphite	1.09	11/30/04	2004 Bulk sample	typical/leached
			10:18:34 AM		· ·
0.25680	Worldwide Graphite	1.24	11/30/04	2004 Bulk sample	typical/leached
			10:20:24 AM		
0.27470	Worldwide Graphite	1.11	11/30/04	2004 Bulk sample	typical/leached
			10:22:18 AM		
0.30340	Worldwide Graphite	1.56	11/30/04	2004 Bulk sample	typical/leached
0.05040			10:24:26 AM		
0.25610	Worldwide Graphite	1.65	11/30/04	2004 Bulk sample	typical/leached
0.00000			10:27:30 AM		
0.32930	Worldwide Graphite	1.26	11/30/04	2004 Bulk sample	typical/leached
			10:29:25 AM		

 Element
 Average
 Std. Deviation
 RSD

 Carbon
 1.22669230769231
 0.212251181628193
 17.3027237798113

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.22730	Worldwide Graphite	1.39	11/30/04 10:39:20 AM	3/8"	typical/leached
0.25610	Worldwide Graphite	1.53	11/30/04 10:42:13 AM	3/8"	typical/leached
0.30930	Worldwide Graphite	1.01	11/30/04 10:44:03 AM	3/8"	typical/leached
0.25140	Worldwide Graphite	1.61	11/30/04 10:52:23 AM	3 mesh	typical/leached
0.24330	Worldwide Graphite	1.45	11/30/04 10:55:11 AM	3 mesh	typical/leached
0.23720	Worldwide Graphite	1.65	11/30/04 10:57:07 AM	3 mesh	typical/leached
0.23370	Worldwide Graphite	1.06	11/30/04 10:58:50 AM	4 mesh	typical/leached
0.25030	Worldwide Graphite	1.34	11/30/04 11:11:55 AM	4 mesh	typical/leached
0.24170	Worldwide Graphite	1.62	11/30/04 11:13:49 AM	4 mesh	typical/leached
0.23600	Worldwide Graphite	2.02	11/30/04 11:44:25 AM	6 mesh	typical/leached
0.25760	Worldwide Graphite	1.36	11/30/04 11:46:19 AM	6 mesh	typical/leached
0.22820	Worldwide Graphite	1.57	11/30/04 11:48:20 AM	6 mesh	typical/leached
0.25550	Worldwide Graphite	1.13	11/30/04 11:50:03 AM	8 mesh	typical/leached
0.25820	Worldwide Graphite	0.795	11/30/04 11:52:18 AM	8 mesh	typical/leached
0.23020	Worldwide Graphite	1.00	11/30/04 11:53:58 AM	8 mesh	typical/leached
0.22740	Worldwide Graphite	0.871	11/30/04 11:55:59 AM	10 mesh	typical/leached
0.23190	Worldwide Graphite	0.815	11/30/04 11:57:37 AM	10 mesh	typical/leached
0.24700	Worldwide Graphite	0.985	11/30/04 11:59:26 AM	10 mesh	typical/leached
0.23340	Worldwide Graphite	1.47	11/30/04 12:01:28 PM	12 mesh	typical/leached
0.24480	Worldwide Graphite	0.826	11/30/04 12:03:56 PM	12 mesh	typical/leached
0.22540	Worldwide Graphite	0.914	11/30/04 12:06:10 PM	12 mesh	typical/leached

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.22560	Worldwide Graphite	1.63	11/30/04 12:15:43 PM	20 mesh	typical/leached
0.21830	Worldwide Graphite	1.00	11/30/04 12:17:52 PM	20 mesh	typical/leached
0.21590	Worldwide Graphite	1.27	11/30/04 12:20:05 PM	20 mesh	typical/leached
0.27060	Worldwide Graphite	1.28	11/30/04 12:21:55 PM	45 mesh	typical/leached
0.22750	Worldwide Graphite	1.47	11/30/04 12:24:04 PM	45 mesh	typical/leached
0.21310	Worldwide Graphite	1.41	11/30/04 12:25:54 PM	45 mesh	typical/leached
0.23130	Worldwide Graphite	1.40	11/30/04 12:27:52 PM	50 mesh	typical/leached
0.22800	Worldwide Graphite	1.76	11/30/04 12:29:20 PM	50 mesh	typical/leached
0.27950	Worldwide Graphite	2.45	11/30/04 12:31:00 PM	50 mesh	typical/leached
0.22500	Worldwide Graphite	2.61	11/30/04 12:32:51 PM	65 mesh	typical/leached
0.26120	Worldwide Graphite	1.79	11/30/04 12:34:12 PM	65 mesh	typical/leached
0.22980	Worldwide Graphite	2.14	11/30/04 12:36:12 PM	65 mesh	typical/leached
0.20770	Worldwide Graphite	2.24	11/30/04 12:37:56 PM	80 mesh	typical/leached
0.23280	Worldwide Graphite	1.81	11/30/04 12:39:34 PM	80 mesh	typical/leached
0.27650	501-024	3.38	11/30/04 12:41:12 PM	standard	3,35 fixed carbon
0.21030	Worldwide Graphite	1.87	11/30/04 12:42:51 PM	80 mesh	typical/leached
0.23010	Worldwide Graphite	1.42	11/30/04 12:46:11 PM	100 mesh	typical/leached
0.22990	Worldwide Graphite	1.51	11/30/04 12:48:04 PM	100 mesh	typical/leached
0.25200	Worldwide Graphite	1.32	11/30/04 12:49:43 PM	100 mesh	typical/leached
0.23790	Worldwide Graphite	1.77	11/30/04 12:51:52 PM	Pan	typical/leached
0.24910	Worldwide Graphite	0.881	11/30/04 12:53:40 PM	Pan	typical/leached

Mass	Name	Carbon	% Analysis D	)ate	Description	Comments
0.22160	Worldwide Graphite	1.16	11/30/04 1	2:55:19	Pan	typical/leached
			PM			

 Element
 Average
 Std. Deviation

 Carbon
 1.48806976744186
 0.526304022013931

 RSD
 35.3682356519278

### Carbon 3 1.48806

1/11/05 12:26:55 PM

<b>lass</b>	Name	Carbon %	Analysis Date	Description	Comments
).08760	Worldwide	85.4	12/7/04 3:49:48 PM	typical	column#1
).08580	Worldwide	85.6	12/7/04 3:51:40 PM	typical	column#1

Element	Average	Std. Deviation	
Carbon	85.5000000000000	0.141421356238853	
RSD			
0.165405	095016202		



Testing of graphite concentrate from column work showing increase during several upgrades (3pages)

1/11/05 12:25:08 PM

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Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08120	Worldwide	89.0	12/9/04 1:18:26 PM	upgrade	column#1
0.08340	worldwide	88.1	12/9/04 1:22:29 PM	upgrade	column#1
0.08270	worldwide	90.0	12/9/04 1:29:23 PM	upgrade	column#1
0.08090	worldwide	88.7	12/9/04 1:33:14 PM	upgrade	column#1
0.08450	worldwide	88.8	12/9/04 1:35:44 PM	upgrade	column#1
0.08510	worldwide	83.8	12/9/04 3:31:05 PM	upgrade	column#1
0.08690	worldwide	87.9	12/9/04 3:34:02 PM	upgrade	column#1
0.07390	worldwide	87.3	12/9/04 3:39:52 PM	upgrade	column#1

Element	Average	Std. Deviation	RSD
Carbon	87.950000000000	1.86164289962354	2.11670596887270

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08240	Worldwide	89.3	12/14/04 8:35:38 AM	upgrade	test column
0.08280	Worldwide	90.4	12/14/04 8:37:10 AM	upgrade	test column
0.08520	Worldwide	89.2	12/14/04 8:42:08 AM	upgrade	test column
0.08490	Worldwide	89.8	12/14/04 8:50:08 AM	upgrade	test column
0.08670	Worldwide	91.0	12/14/04 8:52:36 AM	upgrade	test column
0.08020	Worldwide	88.7	12/14/04 9:03:48 AM	upgrade	test column
0.08510	Worldwide	89.5	12/14/04 9:05:43 AM	upgrade	test column

Element	Average	Std. Deviation
Carbon	89.7000000000000	0.7788888096370466
RSD		
0.868325	5636979338	



Crystal Gra P.O. Box 119, Slo			2E0		
Tel: 250-226-7819				anhite com	
101. 250-220-7015	Fax. 250-220-0		gcops@ciystalgi	aprine.com	
والمواسب محاجب والمروي ومستقد الموالي المار مستعمل والمراحات المحمول والمراجع المستعمل والمسوعة المستعم		SIS REPO			······································
	ANAL	JIJ REFU			
and a second and a s	44.5 0004				
·	14-Dec-2004				
TIME	11:30 AM			ļ.	
LOT #					
PROPERTY	CGC Black Cry	stal Deposit			
REQUESTED BY	Worldwide Grap	hite	Column Test		•
SAMPLE	-45 mesh to +20	00 mesh	Fixed Carbon:	90.0%	Leco Method
INITIAL WEIGHT	68.22		Hcl leach	1.93%	
SIZING METHOD	Rotap - Tyler	10 minutes			
SCREEN	APERTURE	WEIGHT ON	PERCENT ON	CUM.%	CUM.%
mesh	microns	SCREEN	SCREEN	RETAINED	FINER
45	355	9.50	13.9	13.9	100.0
50	300	8.87	13.0	26.9	86.1
65	212	7.74	11.3	38.3	73.1
80	180	20.81	30.5	68.8	61.7
100	149	10.09	14.8	83.6	31.2
150	106	7.47	10.9	94.5	16.4
200	75	1.56	2.3	96.8	5.5
Pan	· · ·	2.18	3.2	100.0	3.2
Total	·····	68.22 A	100.0		
		1 1/1			

Size fractions and overall grade of graphite for sample sent out Dec. 14/04

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08810	Worldwide	65.1	12/7/04 10:09:23 AM	typical 1.25% carbon	flotation#1
0.08360	Worldwide	69.6	12/7/04 10:13:20 AM	typical 1.25% carbon	flotation#1

Carbon	67.3500000000000	3.18198051533946
nan		0.10100001000010

67.3500(<sup>60.5</sup> 67.3500(<sup>67.5</sup>

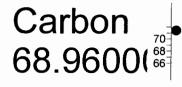
Carbon

Testing of graphite concentrate tailings upgrading in Denver #7 flotation cells after being processed in the lab rod mill which had feed grade of 45%. (3 pages)

1/11/05 12:26:00 PM

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08480	Worldwide	71.4	12/7/04 12:02:01 PM	typical 1.25% carbon	flotation#1
0.08460	Worldwide	70.7	12/7/04 12:04:57 PM	typical 1.25% carbon	flotation#2
0.08270	Worldwide	72.0	12/7/04 12:06:16 PM	typical 1.25% carbon	flotation#2
0.09030	Worldwide	65.2	12/7/04 12:08:06 PM	typical 1.25% carbon	flotation#3
0.09050	Worldwide	65.5	12/7/04 12:09:53 PM	typical 1.25% carbon	flotation#3

Element	Average	Std. Deviation
Carbon	68.960000000000	3.32911399624587
RSD .		
4.827601	50267673	

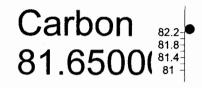


1/11/05 12:25:49 PM

Page 1 of 1

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08500	Worldwide	82.3	12/14/04 2:59:36 PM	tails recovery	test cells
0.08540	Worldwide		12/14/04 3:01:13 PM		

Element	Average	Std. Deviation
Carbon	81.6500000000000	0.919238815542156
RSD		
1.125828	331052315	



1/11/05 12:24:28 PM

Mass	Name	Carbon %	Analysis Date	Description	Comments
0.08390	Worldwide	96.1	1/11/05 9:22:28 AM	tabled	final
0.08540	Worldwide	96.1	1/11/05 9:33:06 AM	tabled	final
0.08280	Worlwide	94.3	1/11/05 9:44:14 AM	tabled	final

Element	Average	Std. Deviation
Carbon	95.50000000000000	1.03923048453983
RSD		
1.088199	946025113	

Final results of the concentrate tailings upgrade processes

1/11/05 12:22:46 PM

Carbon 95.5000(<sup>95.6</sup> 94.4

